

July 28, 2022

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American Jewish University  
15600 Mulholland Drive  
Los Angeles, California 90077

*Via email: [adrian.breitfeld@aju.edu](mailto:adrian.breitfeld@aju.edu)*

**Subject: 2022 Monitoring Report**  
American Jewish University, Brandeis-Bardin Campus  
1101 Peppertree Lane  
Brandeis, California

Dear Mr. Breitfeld:

GSI Environmental Inc. (GSI) has prepared this letter to document the 2022 surface soil, sediment, spring water, and fruit sampling conducted on behalf of the American Jewish University (AJU) at the Brandeis-Bardin Campus of AJU located at 1101 Peppertree Lane in Brandeis, California (the Site or Campus; 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). This letter provides a summary of the sampling activities conducted by GSI in 2022, analytical testing results of media samples, and our evaluation of the analytical data regarding potential environmental impacts at the Site.

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 that is 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 (COCs) 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 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, in 2020, and 2021. No evidence of chemical impacts from the SSFL were detected from any of these events (GSI, 2019, 2020 and 2021).<sup>1</sup>

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<sup>1</sup> <https://www.aju.edu/about-aju/our-campuses/brandeis-bardin-safety-data>

## **2022 Sampling Program**

Samples were collected from Campus high-use and drainage areas; available crop samples (lemon and orange) also were collected. The 2022 sampling locations and sample analyses are presented on Table 1. Sampling methodologies and analytical testing methods were consistent with those of previous sampling events, as most recently described in the GSI 2021 report.<sup>2</sup>

## **Analytical Testing Results**

Laboratory analytical results are tabulated in Tables 2 through 7 and summarized below by area. Laboratory reports are included as Attachments A through C.

### ***Data Validation***

The analytical results were reviewed in accordance with USEPA-published guidance. Results between the reporting limit and detection limit for a compound are flagged with a “J” to indicate the result is an estimation. A data validation summary is presented as Attachment D. All sample results are considered usable, and data quality is judged to be adequate for the intended purpose.

### ***Screening Criteria***

Analytical results are evaluated by comparison to health-based screening levels and, when available, background values of compounds observed at the SSFL. Screening levels and background values for each constituent are presented with the analytical results on Tables 2 through 7.

### ***High Use Area Sample Results***

Soil samples from high use areas within the Main Campus were collected at Terry Field, the Kids’ Cabins, Gan Field, CIT Cabins, Alpine Tower, and Hidden Valley Camp. The general sample locations are shown on Figures 3 and 4; results are discussed below.

### **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 Attachment A. 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 appear consistent with natural conditions and do not indicate migration of contaminants from the SSFL or other anthropogenic sources.

### **Radionuclide Results**

Analytical results for radionuclides are tabulated on Table 3, and laboratory data report is included in Attachment A. In each of the samples, radionuclides were either not detected above their respective minimum detectable concentrations or were lower than published background levels and health-based screening levels. These results appear consistent with natural conditions and do not indicate migration from the SSFL or other anthropogenic sources.

### ***Upgradient Drainage Area Sample Results***

This section summarizes analytical results for the sediment and spring water samples collected from upgradient drainages near the southern boundary of the Site, which is adjacent to the buffer zone (designated as the Northern Buffer Zone, or NBZ) between SSFL and the Site. Sampling locations are shown on Figures 5 through 10.

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<sup>2</sup> GSI Environmental Inc., 2021, 2021 Monitoring Report, American Jewish University, Brandeis-Bardin Campus, 1101 Peppertree Lane, Brandeis, California, 24 August.

### Metals and Perchlorate Results

Analytical results for metals and perchlorate in sediment samples are tabulated on Table 2; laboratory data reports are included in Attachment A. In sediment samples, all analyzed 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. These results are consistent with natural conditions and do not indicate migration from the SSFL or other anthropogenic sources.

Analytical results for metals and perchlorate in spring and surface water samples are tabulated on Table 4. Laboratory data reports are included in Attachment B. Barium, chromium, copper, lead, vanadium, and zinc were detected in one or more water samples at concentrations well below their respective health-based screening levels. Perchlorate was detected at the analytical method detection limit in one spring/seep sample from location OS1. The detected concentration of perchlorate in this water sample was 0.002 milligrams per liter (mg/L), which is below the health-based screening level for this compound. Location OS1 is located near the central-southern Site boundary. This monitoring location consists of an artesian well monitored annually by National Aeronautics and Space Administration (NASA) and designated as monitoring well RD-68A and RD-68B. The most recently available NASA annual monitoring report dated May 27, 2021<sup>3</sup> does not report a detection of perchlorate at this location.

Overall, the analytical results for spring and surface water samples appear consistent with previous results and do not indicate migration from the SSFL or other anthropogenic sources.

### Radionuclide Results

Analytical results for radionuclides in sediment and water samples are tabulated on Tables 3 and 5, and laboratory data reports are included in Attachments A and B. In sediment, spring water, and surface water samples, no radionuclides were detected above their respective published background levels and health-based screening levels. The results appear consistent with natural conditions and do not indicate migration from the SSFL or other anthropogenic sources.

### ***Fruit Sample Results***

Consistent with past events, fruit samples were obtained from trees with ripe fruit at the time of sampling, to the extent available. GSI collected lemon and orange samples from the Main Campus Area; sampling locations are shown on Figure 11. No avocado, apple, or grapefruit were available on Site during the May 2022 sampling event. GSI also purchased one lemon and one orange from a local grocery store to serve as references. Analytical results for metals and perchlorate for both the on-Site and reference samples are tabulated on Table 6, and results for radionuclides are on Table 7. Laboratory data reports are included in Attachment C.

Antimony, barium, copper, selenium, and zinc were detected in the on-Site fruit samples at concentrations consistent with the concentrations of the same metals in the reference fruit samples (Table 6).<sup>4</sup> No other metals were detected in the samples. Concentrations of selenium in the on-Site lemon sample was slightly greater than its risk-based screening level. However, as noted in the data validation summary presented in Attachment D, the detections of selenium are estimates as this constituent was detected in the method blank and the reported concentrations in the samples are within 10 times the detection limit. A similar concentration of selenium was also observed in the off-Site reference orange sample. Concentrations of all other tested metals

<sup>3</sup> NASA, 2021, SSFL NASA Area I LOX and Area II, Groundwater Monitoring Report, Third Quarter 2021, May 27.

<sup>4</sup> 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.

were well below their respective fruit-specific risk-based screening levels and reference sample concentrations.

Perchlorate was detected in both the on-Site and reference orange samples at concentrations well below the risk-based screening level for this fruit.

Radionuclides were not detected in fruit samples above their respective minimum detectable concentrations. The minimum detectable concentrations for each radionuclide were below their respective risk-based screening levels.

Both individually and collectively, the analytical results for metals, perchlorate, and radionuclides for fruit samples appear consistent with natural conditions and do not indicate the presence of on-Site chemical impacts from the SSFL or other anthropogenic sources.

### Conclusions

Results from the 2022 sampling event are consistent with analytical testing of media that has occurred at the Brandeis-Bardin campus since 1991. Analytical results of samples taken in high-use areas, in drainage channels located at the border between the campus and the NBZ, and from fruit grown on Site appear consistent with natural conditions and do not indicate impacts from the SSFL or other anthropogenic sources.

Should you have any questions regarding the information presented herein, please contact either of the undersigned.

Sincerely,  
GSI Environmental, Inc.



Matthew Goerz  
Senior Scientist



Susan Gallardo, PE  
Principal Engineer

### Attachments:

- 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
  
- 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 OS357-W and BP-SED-1
- Figure 6 Sampling Location RR MDF-SED-1
- Figure 7 Sampling Locations 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

Attachment A. Analytical Laboratory Reports – Soil and Sediment Samples

Attachment B. Analytical Laboratory Reports – Water Samples

Attachment C. Analytical Laboratory Reports – Fruit Samples

Attachment D. Data Validation Summary

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

Sampling Location	Campus Area	Sample Type	Analyses <sup>1</sup>				
			Metals <sup>2</sup>	Perchlorate <sup>2</sup>	Strontium-90 <sup>3</sup>	Tritium <sup>3</sup>	Cesium-137 <sup>3</sup>
			6010B and 7471A	314.0	905.0	GL-RAD-A-002 or 906.0 <sup>4</sup>	901.1 (water), DOE HASL 300, 4.5.2.3/Ga-01-R (soil and sediment)
<b>High Use Area Samples</b>							
HV-1	Hidden Valley Camp	Soil	X	X	X	X	X
HV-2		Soil	X	X	X	X	X
HV-SED-1		Sediment	X	X	X	X	X
TF-1	Terry Field	Soil	X	X	X	X	X
KC-1	Kids' Cabins	Soil	X	X	X	X	X
GF-1	Gan Field	Soil	X	X	X	X	X
CIT-1	CIT Cabins	Soil	X	X	X	X	X
AT-1	Alpine Tower	Soil	X	X	X	X	X
<b>Drainage Samples</b>							
OS1-W	Downstream from OS1 and SSFL	Water	X	X	X	X	X
OS1-SED-1		Sediment	X	X	X	X	X
OS3-W	Spring OS3	Water	Not Sampled <sup>5</sup>				
OS357-W	Springs OS3, 5, and 7	Water	X	X	X	X	X
BP-SED-1	Downstream from the burn pit portion of the SSFL	Sediment	X	X	X	X	X
RRMDF-SED-1	Downstream from the reactor and RMDf portions of the SSFL	Sediment	X	X	X	X	X
SRE-SED-2	Downstream from the sodium reactor portion of the SSFL	Sediment	X	X	X	X	X
SRE-W		Water	X	X	X	X	X
OS8-SED-1	Downstream of Spring OS8	Sediment	X	X	X	X	X
OS8-W		Water	X	X	X	X	X
OW-SED-1	Old Well Camp area	Sediment	X	X	X	X	X
<b>Fruit Samples</b>							
AV-1	Avocado Grove	Avocado	Not Sampled - No Fruit Present				
A-1	Fruit Orchard	Apple	Not Sampled - No Fruit Present				
G-1		Grapefruit	Not Sampled - No Fruit Present				
L-1		Lemon	X	X	X	X	X
O-1		Orange	X	X	X	X	X
AV-2	Grocery Store	Avocado	Not Sampled - No Corresponding On-Site Sample				
A-2		Apple	Not Sampled - No Corresponding On-Site Sample				
G-2		Grapefruit	Not Sampled - No Corresponding On-Site Sample				
L-2		Lemon	X	X	X	X	X
O-2		Orange	X	X	X	X	X

**Notes:**

1. Methods shown are U.S. Environmental Protection Agency methods, except as noted.
2. Samples analyzed by Eurofins Calscience of Irvine, except for fruit samples, which were analyzed by GEL Laboratories of Charleston, SC.
3. Samples analyzed by GEL Laboratories of Charleston, SC.
4. Soil/sediment samples analyzed using method GL-RAD-A-002; fruit samples were analyzed using EPA Method 906.0.
5. A sample was collected from a point (OS357-W) downstream of springs OS3, OS5, and OS7 rather than collect a sample from a single spring.

**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, California

Sample Location Name	Sample Name	Matrix	Date Collected	Title 22 Metals <sup>1</sup>																	Per-chlorate <sup>3</sup>	NDMA <sup>4</sup>
				Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Copper	Lead	Mercury <sup>2</sup>	Molybdenum	Nickel	Selenium	Silver	Thallium	Vanadium	Zinc		
mg/kg																						
<b>High Use Area Samples</b>																						
HV-1	HV-1-190422	Soil	4/22/2019	<1.8 UJ	<b>6.9</b>	<b>100</b>	<b>0.54</b>	<0.44	<b>15</b>	<b>5.9</b>	<5.3	<b>5.0</b>	<0.014	<1.8	<b>9.4</b>	<3.5	<0.88	<1.8	<b>29</b>	<b>62</b>	<0.039	–
	HV-1-200603		6/3/2020	<10 UJ	<b>5.4</b>	<b>62</b>	<0.50	<0.50	<b>11</b>	<b>3.5</b>	<b>7.4</b>	<b>4.0</b>	<0.020	<2.0	<b>6.5</b>	<3.0	<1.5	<10	<b>20</b>	<b>47</b>	<0.040	–
	HV-1-210526		5/26/2021	<b>19</b>	<b>5.0</b>	<b>66</b>	<b>0.86</b>	<0.20	<b>12</b>	<b>3.6</b>	<b>6.6</b>	<b>4.5</b>	<0.039	<2.0	<b>6.4</b>	<2.0	<0.49	<2.0	<b>20</b>	<b>46</b>	<0.040	–
	HV-1-220511 <sup>5</sup>		5/11/2022	<0.93	<b>4.8</b>	<b>68</b>	<b>0.11 J</b>	<b>0.12 J</b>	<b>11</b>	<b>3.6</b>	<b>6.6</b>	<b>4.5</b>	<0.0077	<0.74	<b>6.5</b>	<1.4	<0.089	<0.83	<b>19</b>	<b>45</b>	<0.020	–
HV-2	HV-2-190422	Soil	4/22/2019	<1.9 UJ	<b>5.5</b>	<b>77</b>	<b>0.37</b>	<0.47	<b>18</b>	<b>5.7</b>	<5.6	<b>12</b>	<b>0.017</b>	<1.9	<b>11</b>	<3.7	<b>1.8</b>	<1.9	<b>30</b>	<b>64</b>	<0.040	–
	HV-2-200603		6/3/2020	<10 UJ	<b>3.3</b>	<b>48</b>	<b>0.56</b>	<0.51	<b>13</b>	<b>3.8</b>	<b>8.1</b>	<b>8.4</b>	<0.020	<2.0	<b>8.5</b>	<3.0	<1.5	<10	<b>21</b>	<b>43</b>	<0.040	–
	HV-2-210526		5/26/2021	<b>21</b>	<b>4.5</b>	<b>58</b>	<b>0.90</b>	<b>0.20</b>	<b>15</b>	<b>4.2</b>	<b>10</b>	<b>14</b>	<0.039	<2.0	<b>9.2</b>	<2.0	<b>1.4</b>	<2.0	<b>23</b>	<b>50</b>	<0.200	–
	HV-2-220511 <sup>5</sup>		5/11/2022	<0.93	<b>4.5</b>	<b>54</b>	<b>0.84</b>	<b>0.094 J</b>	<b>14</b>	<b>4.0</b>	<b>7.1</b>	<b>9.5</b>	<b>0.0089 J</b>	<0.76	<b>8.8</b>	<1.4	<b>1.1</b>	<b>0.92 J</b>	<b>21</b>	<b>48</b>	<0.100	–
HV-SED-1	HV-SED-1-190422	Sediment	4/22/2019	<1.4 UJ	<b>3.8</b>	<b>53</b>	<0.29	<0.36	<b>11</b>	<b>3.8</b>	<4.3	<b>7.5</b>	<0.016	<1.4	<b>6.7</b>	<2.9	<0.71	<1.4	<b>21</b>	<b>42</b>	<0.040	–
	HV-SED-1-200603		6/3/2020	<10 UJ	<b>3.1</b>	<b>53</b>	<0.50	<0.50	<b>11</b>	<b>3.7</b>	<b>8.5</b>	<b>9.3</b>	<b>0.024</b>	<2.0	<b>7.1</b>	<3.0	<1.5	<10	<b>22</b>	<b>44</b>	<0.040	–
	HV-SED-1-210526		5/26/2021	<b>17</b>	<b>3.9</b>	<b>47</b>	<b>0.75</b>	<0.20	<b>11</b>	<b>3.2</b>	<b>7.1</b>	<b>8.9</b>	<0.039	<2.0	<b>6.7</b>	<2.0	<0.50	<2.0	<b>19</b>	<b>43</b>	<0.039	–
	HV-SED-1-220511 <sup>5</sup>		5/11/2022	<0.91	<b>3.1</b>	<b>42</b>	<b>0.055 J</b>	<b>0.15 J</b>	<b>9.0</b>	<b>3.2</b>	<b>6.4</b>	<b>6.9</b>	<0.0075	<0.73	<b>6.1</b>	<1.4	<b>0.19 J</b>	<0.82	<b>17</b>	<b>39</b>	<0.020	–
TF-1	TF-1-190422	Soil	4/22/2019	<1.1 UJ	<b>4.6</b>	<b>110</b>	<b>0.34</b>	<0.27	<b>16</b>	<b>7.1</b>	<b>13</b>	<b>9.7</b>	<0.015	<1.1	<b>10</b>	<2.1	<0.53	<1.1	<b>35</b>	<b>50</b>	<0.040	–
	TF-1-200603		6/3/2020	<10 UJ	<b>5.3</b>	<b>88</b>	<0.50	<0.50	<b>16</b>	<b>6.3</b>	<b>19</b>	<b>8.5</b>	<0.020	<2.0	<b>11</b>	<3.0	<1.5	<10	<b>34</b>	<b>52</b>	<0.040	–
	TF-1-210526		5/26/2021	<b>17</b>	<b>5.6</b>	<b>84</b>	<b>1.0</b>	<b>0.20</b>	<b>20</b>	<b>7.6</b>	<b>21</b>	<b>11</b>	<0.039	<2.0	<b>13</b>	<2.0	<0.5	<2.0	<b>39</b>	<b>55</b>	<0.200	–
	TF-1-220510 <sup>5</sup>		5/10/2022	<0.90	<b>4.5</b>	<b>89</b>	<b>0.19</b>	<b>0.16 J</b>	<b>13</b>	<b>5.6</b>	<b>15</b>	<b>7.8</b>	<0.0083	<0.72	<b>9.9</b>	<1.3	<0.087	<0.81	<b>29</b>	<b>44</b>	<0.20	–
KC-1	KC-1-190422	Soil	4/22/2019	<1.8 UJ	<b>5.6</b>	<b>75</b>	<b>0.44</b>	<0.45	<b>18</b>	<b>6.8</b>	<b>8.6</b>	<b>9.6</b>	<0.016	<1.8	<b>12</b>	<3.6	<0.89	<1.8	<b>36</b>	<b>64</b>	<0.040	–
	KC-1-200603		6/3/2020	<10 UJ	<b>5.9</b>	<b>60</b>	<0.50	<0.50	<b>16</b>	<b>4.9</b>	<b>10</b>	<b>8.8</b>	<0.020	<2.0	<b>2.8</b>	<3.0	<1.5	<10	<b>32</b>	<b>46</b>	<0.040	–
	KC-1-210527		5/27/2021	<b>13</b>	<b>4.4</b>	<b>49</b>	<b>0.75</b>	<0.20	<b>14</b>	<b>4.5</b>	<b>8.2</b>	<b>9.6</b>	<0.039	<2.0	<b>8.3</b>	<2.0	<0.49	<2.0	<b>27</b>	<b>49</b>	<0.039	–
	KC-1-220511 <sup>5</sup>		5/11/2022	<0.94	<b>5.5</b>	<b>61</b>	<b>0.85</b>	<b>0.064 J</b>	<b>17</b>	<b>6.0</b>	<b>10</b>	<b>10</b>	<0.0075	<b>1.00 J</b>	<b>11</b>	<b>2.7</b>	<b>0.44 J</b>	<0.86	<b>34</b>	<b>55</b>	<0.099	–
GF-1	GF-1-190422	Soil	4/22/2019	<1.8 UJ	<b>4.0</b>	<b>64</b>	<b>0.37</b>	<0.45	<b>15</b>	<b>5.6</b>	<b>6.0</b>	<b>8.6</b>	<b>0.015</b>	<1.8	<b>9.7</b>	<3.6	<0.91	<1.8	<b>31</b>	<b>80</b>	<0.040	–
	GF-1-200603		6/3/2020	<10 UJ	<3.1	<b>30</b>	<0.51	<0.51	<b>6.1</b>	<b>1.9</b>	<b>4.5</b>	<2.0	<0.020	<2.0	<b>3.8</b>	<3.1	<1.5	<10	<b>13</b>	<b>27</b>	<0.040	–
	GF-1-210527		5/27/2021	<b>12</b>	<b>2.9</b>	<b>41</b>	<b>0.62</b>	<b>0.21</b>	<b>10</b>	<b>3.7</b>	<b>7.3</b>	<b>5.7</b>	<0.038	<2.0	<b>6.7</b>	<2.0	<0.50	<2.0	<b>22</b>	<b>60</b>	<0.200	–
	GF-1-220512 <sup>5</sup>		5/12/2022	<0.91	<b>1.8 J</b>	<b>28</b>	<b>0.38</b>	<b>0.090 J</b>	<b>6.7</b>	<b>2.3</b>	<b>4.6</b>	<b>3.4</b>	<b>0.0095 J</b>	<0.71	<b>4.3</b>	<1.3	<0.085	<0.79	<b>14</b>	<b>39</b>	<0.20	–
CIT-1	CIT-1-190422	Soil	4/22/2019	<1.7 UJ	<3.3	<b>38</b>	<0.33	<0.41	<b>9.0</b>	<b>2.9</b>	<b>5.1</b>	<b>5.5</b>	<0.016	<1.7	<b>5.5</b>	<3.3	<0.83	<1.7	<b>15</b>	<b>45</b>	<0.040	–
	CIT-1-200603		6/2/2020	<10 UJ	<3.0	<b>32</b>	<0.51	<0.51	<b>9.8</b>	<b>2.5</b>	<b>7.1</b>	<b>5.8</b>	<0.020	<2.0	<b>5.8</b>	<3.0	<1.5	<10	<b>16</b>	<b>44</b>	<0.040	–
	CIT-1-210525		5/25/2021	<b>12</b>	<b>2.7</b>	<b>44</b>	<b>0.63</b>	<0.20	<b>12</b>	<b>3.9</b>	<b>8.9</b>	<b>8.7</b>	<0.039	<2.0	<b>7.4</b>	<2.0	<0.49	<2.0	<b>21</b>	<b>52</b>	<0.200	–
	CIT-1-220510 <sup>5</sup>		5/10/2022	<0.90	<b>2.5</b>	<b>42</b>	<b>0.14 J</b>	<b>0.18 J</b>	<b>10</b>	<b>3.7</b>	<b>7.4</b>	<b>8.5</b>	<0.0080	<0.72	<b>6.5</b>	<1.3	<0.087	<0.81	<b>19</b>	<b>47</b>	<0.50	–
AT-1	AT-1-190422	Soil	4/22/2019	<1.2 UJ	<b>4.4</b>	<b>110</b>	<b>0.50</b>	<b>0.31</b>	<b>19</b>	<b>7.8</b>	<b>9.8</b>	<b>9.0</b>	<0.016	<1.2	<b>14</b>	<2.5	<0.62	<1.2	<b>38</b>	<b>44</b>	<0.039	–
	AT-1-200603		6/3/2020	<10 UJ	<b>15</b>	<b>31</b>	<0.50	<0.50	<b>36</b>	<b>2.5</b>	<b>11</b>	<b>2.7</b>	<0.020	<2.0	<b>4.9</b>	<3.0	<1.5	<10	<b>15</b>	<b>39</b>	<0.040	–
	AT-1-210527		5/27/2021	<b>14</b>	<b>4.4</b>	<b>65</b>	<b>0.81</b>	<b>0.24</b>	<b>17</b>	<b>5.0</b>	<b>12</b>	<b>8.1</b>	<0.038	<1.9	<b>9.4</b>	<1.9	<0.48	<1.9	<b>28</b>	<b>43</b>	<0.400	–
	AT-1-220512 <sup>5</sup>		5/12/2022	<0.90	<b>5.7</b>	<b>50</b>	<b>0.63</b>	<b>0.16 J</b>	<b>15</b>	<b>4.3</b>	<b>11</b>	<b>6.5</b>	<0.0080	<0.75	<b>7.8</b>	<b>1.4 J</b>	<0.090	<0.84	<b>24</b>	<b>44</b>	<0.50	–
<b>Drainage Sediment Samples</b>																						
BP-SED-1	BP-SED-1-190613	Sediment	6/13/2019	<9.9 UJ	<b>11</b>	<b>52</b>	<0.50	<0.50	<b>11</b>	<b>2.3</b>	<b>4.5</b>	<b>5.7</b>	<b>0.032</b>	<2.0	<b>6.2</b>	<3.0	<1.5	<9.9	<b>21</b>	<b>42</b>	<0.040	–
	BP-SED-1-200602		6/2/2020	<10 UJ	<b>11</b>	<b>43 J</b>	<0.51	<0.51	<b>10</b>	<b>3.3</b>	<b>6.5</b>	<b>7.7</b>	<b>0.022</b>	<2.0	<b>6.8</b>	<3.0	<1.5	<10	<b>19</b>	<b>37</b>	<0.040	–
	BP-SED-1-210525		5/25/2021	<b>21</b>	<b>12</b>	<b>51</b>	<b>0.89</b>	<0.2	<b>11</b>	<b>3.8</b>	<b>6.4</b>	<b>9.3</b>	<0.038	<2.0	<b>7.6</b>	<2.0	<0.50	<2.0	<b>22</b>	<b>45</b>	<0.039	–
	BP-SED-1-220510 <sup>5</sup>		5/10/2022	<0.91	<b>9.9</b>	<b>50</b>	<b>0.061 J</b>	<b>0.13 J</b>	<b>10</b>	<b>3.8</b>	<b>6.5</b>	<b>8.0</b>	<b>0.052</b>	<0.73	<b>7.1</b>	<1.4	<0.087	<0.82	<b>20</b>	<b>40</b>	<0.020	–
RRMDF-SED-1	RRMDF-SED-1-190613	Sediment	6/13/2019	<10 UJ	<b>4.2</b>	<b>63</b>	<b>0.54</b>	<0.50	<b>10</b>	<b>2.1</b>	<b>5.2</b>	<b>6.4</b>	<b>0.018 J</b>	<2.0	<b>5.7</b>	<3.0	<1.5	<10	<b>21</b>	<b>53</b>	<0.040	–
	RRMDF-SED-1-200602		6/3/2020	<10 UJ	<3.0	<b>60 J</b>	<0.50	<0.50	<b>9.5</b>	<b>3.2</b>	<b>7.4</b>	<b>6.7</b>	<0.020	<2.0	<b>6.5</b>	<3.0	<1.5	<10	<b>19</b>	<b>48</b>	<0.040	–
	RRMDF-SED-1-210525		5/25/2021	<b>20</b>	<b>3.4</b>	<b>71</b>	<b>0.97</b>	<b>0.21</b>	<b>12</b>	<b>4.1</b>	<b>7.1</b>	<b>8.3</b>	<0.04	<2.0	<b>7.7</b>	<2.0	<0.50	<2.0	<b>23</b>	<b>49</b>	<0.039	–
	RRMDF-SED-1-220510 <sup>5</sup>		5/10/2022	<0.98	<b>2.3</b>	<b>50</b>	<b>0.050 J</b>	<b>0.15 J</b>	<b>9.6</b>	<b>3.1</b>	<b>6.5</b>	<b>6.6</b>	<b>0.016 J</b>	<0.78	<b>6.0</b>	<1.5	<0.094	<0.88	<b>18</b>	<b>47</b>	<0.020	–
SRE-SED-1	SRE-SED-1-190613	Sediment	6/13/2019	<10 UJ	<b>4.3</b>	<b>51</b>	<b>0.51</b>	<0.50	<b>7.9</b>	<b>2.1</b>	<b>3.2</b>	<b>6.8</b>	<0.020	<2.0	<b>4.1</b>	<3.0	<1.5	<10	<b>20</b>	<b>47</b>	<0.040	–
	SRE-SED-2-200603		6/3/2020	<10 UJ	<3.1	<b>42 J</b>	<0.51	<0.51	<b>7.9</b>	<b>2.9</b>	<b>8.8</b>	<b>5.9</b>	<0.020	<2.0	<b>5.1</b>	<3.1	<1.5	<10	<b>18</b>	<b>36</b>	<0.040	–
	SRE-SED-2-210526		5/26/2021	<b>17</b>	<b>2.3</b>	<b>47</b>	<b>0.82</b>	<0.2	<b>8.8</b>	<b>3.5</b>	<b>8.8</b>	<b>7.4</b>	<0.043	<2.0	<b>5.6</b>	<2.0	<0.49					

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

Sample Location Name	Sample Name	Matrix	Date Collected	Title 22 Metals <sup>1</sup>																	Per-chlorate <sup>3</sup>	NDMA <sup>4</sup>
				Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Copper	Lead	Mercury <sup>2</sup>	Molybdenum	Nickel	Selenium	Silver	Thallium	Vanadium	Zinc		
OS8-SED-1	OS8-SED-1-190613	Sediment	6/13/2019	<9.9 UJ	<b>3.8</b>	<b>34</b>	<0.49	<0.49	<b>12</b>	<b>1.4</b>	<b>4.8</b>	<b>5.4</b>	<0.020	<2.0	<b>6.1</b>	<3.0	<1.5	<9.9	<b>21</b>	<b>32</b>	<0.040	–
	OS8-SED-1-200603		6/2/2020	<9.9 UJ	<3.0	<b>32 J</b>	<0.50	<0.50	<b>7.5</b>	<b>1.9</b>	<b>5.5</b>	<b>5.3</b>	<0.020	<2.0	<b>5.1</b>	<3.0	<1.5	<9.9	<b>14</b>	<b>25</b>	<0.040	–
	OS8-SED-1-210526		5/26/2021	<b>11</b>	<b>2.1</b>	<b>30</b>	<b>0.48</b>	<0.19	<b>6.8</b>	<b>2.0</b>	<b>4.3</b>	<b>5.3</b>	<0.038	<1.9	<b>4.4</b>	<1.9	<0.48	<1.9	<b>13</b>	<b>24</b>	<0.039	–
	OS8-SED-1-220511 <sup>5</sup>		5/11/2022	<0.90	<b>1.4 J</b>	<b>27</b>	<0.029	<b>0.075 J</b>	<b>6.5</b>	<b>2.2</b>	<b>3.8</b>	<b>4.1</b>	<0.0074	<0.72	<b>4.5</b>	<1.3	<0.087	<0.81	<b>12</b>	<b>26</b>	<0.020	–
OW-SED-1	OW-SED-1-190613	Sediment	6/13/2019	<10 UJ	<3.0	<b>39</b>	<0.50	<0.50	<b>7.3</b>	<b>1.2</b>	<b>2.0</b>	<b>4.0</b>	<0.020	<2.0	<b>3.8</b>	<3.0	<1.5	<10	<b>15</b>	<b>29</b>	<0.040	–
	OW-SED-1-200603		6/3/2020	<10 UJ	<3.0	<b>37 J</b>	<0.51	<0.51	<b>9.1</b>	<b>2.4</b>	<b>4.0</b>	<b>4.1</b>	<0.020	<2.0	<b>4.9</b>	<3.0	<1.5	<10	<b>19</b>	<b>29</b>	<0.040	–
	OW-SED-1-210526		5/26/2021	<b>18</b>	<b>4.9</b>	<b>56</b>	<b>0.76</b>	<0.19	<b>9.9</b>	<b>3.4</b>	<b>5.6</b>	<b>7.1</b>	<0.038	<1.9	<b>6.3</b>	<1.9	<0.49	<1.9	<b>21</b>	<b>36</b>	<0.040	–
	OW-SED-1-220511 <sup>5</sup>		5/11/2022	<0.93	<b>1.9 J</b>	<b>31</b>	<0.030	<b>0.074 J</b>	<b>6.7</b>	<b>2.5</b>	<b>3.5</b>	<b>4.3</b>	<0.0079	<0.74	<b>4.1</b>	<1.4	<0.089	<0.83	<b>15</b>	<b>27</b>	<0.020	–
<b>Screening Criteria</b>																						
Residential Risk-Based Screening Levels <sup>5</sup>				31	0.11	15,000	16	71	120,000	23	3,100	80	1	390	820	390	390	0.78	390	23,000	55	0.002
Regional Background Levels <sup>6</sup>				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	–

**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 N-Nitrosodimethylamine (NDMA) by TestAmerica method GCMSMS\_NDMA.
5. Regional screening levels (RSLs) for residential soil endorsed or modified by the California Department of Toxic Substances Control (DTSC, 2020), or USEPA RSLs for analytes not included in DTSC's document (USEPA, 2021).
6. Background threshold values as calculated by the DTSC for the Santa Susana Field Laboratory (2013).
7. 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 or detection limit shown  
mg/kg = milligrams per kilogram      NDMA = N-Nitrosodimethylamine  
UJ = The analyte 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, 2020, Human and Ecological Risk Office (HERO) Human Health Risk Assessment Note Number 3, June.  
U. S. Environmental Protection Agency (USEPA), 2021, Regional Screening Levels, May.



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

Sample Location	Sample Name	Matrix	Date Collected	Tritium <sup>1</sup>	Strontium-90 <sup>2</sup>	Cesium-137 <sup>3</sup>
				pCi/g		
<b>Main Campus Sampling Locations</b>						
HV-1	HV-1-190422	Soil	4/22/2019	<0.359	<0.273	<0.187
	HV-1-200603		6/3/2020	<2.14	<0.0987	<0.0557
	HV-1-210526		5/26/2021	<2.23	<0.082	<0.0465
	HV-1-220511		5/11/2022	<0.0361	<0.0955	<0.0510
HV-2	HV-2-190422	Soil	4/22/2019	<0.362	<0.242	<0.125
	HV-2-200603		6/3/2020	<2.22	<0.0978	<0.0409
	HV-2-210526		5/26/2021	<2.22	<0.0912	<0.0560
	HV-2-220511		5/11/2022	<0.501	<0.0935	<0.107
HV-SED-1	HV-SED-1-190422	Sediment	4/22/2019	<0.363	<0.284	<0.161
	HV-SED-1-200603		6/3/2020	<2.09	<0.0929	<0.0618
	HV-SED-1-210526		5/26/2021	<2.08	<0.0825	<0.0604
	HV-SED-1-220511		5/11/2022	<0.0571	<0.0736	<0.0747
TF-1	TF-1-190422	Soil	4/22/2019	<0.355	<0.495	<0.158
	TF-1-200603		6/3/2020	<2.23	<0.0954	<0.0551
	TF-1-210526		5/26/2021	<2.17	<0.0991	<0.0479
	TF-1-220510		5/10/2022	<0.974	<0.0978	<0.0613
KC-1	KC-1-190422	Soil	4/22/2019	<0.332	<0.266	<0.192
	KC-1-200603		6/3/2020	<2.15	<0.0981	<0.0458
	KC-1-210527		5/27/2021	<2.12	<0.0849	<0.0564
	KC-1-220511		5/11/2022	<0.628	<0.0909	<0.0660
GF-1	GF-1-190422	Soil	4/22/2019	<0.393	<0.281	<0.165
	GF-1-200603		6/3/2020	<2.08	<0.0981	<b>0.0662</b>
	GF-1-210527		5/27/2021	<2.26	<0.0976	<0.0521
	GF-1-220512		5/12/2022	<0.105	<0.0679	<b>0.0788</b>
CIT-1	CIT-1-190422	Soil	4/22/2019	<0.348	<0.246	<0.162
	CIT-1-200602		6/2/2020	<2.21	<0.0951	<b>0.0789</b>
	CIT-1-210525		5/25/2021	<2.03	<0.0821	<b>0.0900</b>
	CIT-1-220510		5/10/2022	<0.0332	<0.0956	<b>0.115</b>
AT-1	AT-1-190422	Soil	4/22/2019	<0.356	<0.267	<0.207
	AT-1-200603		6/3/2020	<2.30	<0.0920	<0.0627
	AT-1-210527		5/27/2021	<1.93	<0.0837	<0.0609
	AT-1-220512		5/12/2022	<0.124	<0.0985	<0.0687

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

Sample Location	Sample Name	Matrix	Date Collected	Tritium <sup>1</sup>	Strontium-90 <sup>2</sup>	Cesium-137 <sup>3</sup>
				pCi/g		
<b>Drainage Sampling Locations</b>						
BP-SED-1	BP-SED-1-190613	Sediment	6/13/2019	<0.061	<b>0.32</b>	<b>0.0550</b>
	BP-SED-1-190829		8/29/2019	–	<0.0506	–
	BP-SED-1-200602		6/2/2020	<3.14	<0.0994	<b>0.110</b>
	BP-SED-1-210525		5/25/2021	<2.98	<0.0947	<b>0.0985</b>
	BP-SED-1-220510		5/10/2022	<0.0628	<0.0621	<b>0.107</b>
BP-SED-1A	BP-SED-1A-190829	Sediment	8/29/2019	–	<0.0968	–
BP-SED-1B	BP-SED-1B-190829		8/29/2019	–	<0.0474	–
BP-SED-1C	BP-SED-1C-190829		8/29/2019	–	<0.0976	–
RRMDF-SED-1	RRMDF-SED-1-190613	Sediment	6/13/2019	<0.068	<b>0.48</b>	<b>0.111</b>
	RRMDF-SED-1-190829		8/29/2019	–	<0.0667	–
	RRMDF-SED-1-200602		6/2/2020	<3.45	<0.0948	<b>0.198</b>
	RRMDF-SED-1-21025		5/25/2021	<2.23	<0.0802	<b>0.0795</b>
	RRMDF-SED-1-220510		5/10/2022	<1.7	<0.0955	<b>0.206</b>
RRMDF-SED-1A	RRMDF-SED-1A-190829	Sediment	8/29/2019	–	<0.0984	–
RRMDF-SED-1B	RRMDF-SED-1B-190829		8/29/2019	–	<0.0661	–
RRMDF-SED-1C	RRMDF-SED-1C-190829		8/29/2019	–	<0.0582	–
SRE-SED-1	SRE-SED-1-190613	Sediment	6/13/2019	<0.066	<b>0.232</b>	<0.037
	SRE-SED-1-190829		8/29/2019	–	<0.0982	–
SRE-SED-1A	SRE-SED-1A-190829	Sediment	8/29/2019	–	<0.053	–
SRE-SED-1B	SRE-SED-1B-190829		8/29/2019	–	<0.0977	–
SRE-SED-1C	SRE-SED-1C-190829		8/29/2019	–	<0.0435	–
SRE-SED-2	SRE-SED-2-190829	Sediment	8/29/2019	–	<0.0443	–
	SRE-SED-2-200603		6/3/2020	<3.11	<0.0931	0.0567
	SRE-SED-2-210526		5/26/2021	<2.15	<0.0822	<b>0.0729</b>
	SRE-SED-2-220511		5/11/2022	<0.128	<0.0959	<0.0809
OS1-SED-1-200603	051-SED-1-200603	Sediment	6/3/2020	<3.13	<0.0637	<0.0528
	OS1-SED-1-210526		5/26/2021	<2.04	<0.0812	<b>0.0669</b>
	OS1-SED-1-220511		5/11/2022	<0.814	<0.0965	<0.0875
OS8-SED-1	OS8-SED-1-190613	Sediment	6/13/2019	<0.161	<b>0.36</b>	<b>0.0360</b>
	OS8-SED-1-190830		8/30/2019	–	<0.0644	–
	058-SED-1-200603		6/3/2020	<3.21	<0.0962	<0.0989
	OS8-SED-1-210526		5/26/2021	<2.11	<0.0792	<b>0.109</b>
	OS8-SED-1-220511		5/11/2022	<0.0891	<0.0972	<0.0647
OS8-SED-1A	OS8-SED-1A-190830	Sediment	8/30/2019	–	<0.0821	–
OS8-SED-1B	OS8-SED-1B-190830		8/30/2019	–	<0.0991	–
OS8-SED-1C	OS8-SED-1C-190830		8/30/2019	–	<0.0462	–
OW-SED-1	OW-SED-1-190613	Sediment	6/13/2019	<0.101	<0.128	<b>0.0310</b>
	OW-SED-1-200603		6/3/2020	<3.28	<0.0989	<b>0.0720</b>
	OW-SED-1-210526		5/26/2021	<2.22	<0.0925	<b>0.147</b>
	OW-SED-1-220511		5/11/2022	<0.0700	<0.0940	<0.0557

**TABLE 3**  
**SOIL AND SEDIMENT ANALYTICAL RESULTS - RADIONUCLIDES**

**AJU Brandeis-Bardin Campus**  
Brandeis, California

Sample Location	Sample Name	Matrix	Date Collected	Tritium <sup>1</sup>	Strontium-90 <sup>2</sup>	Cesium-137 <sup>3</sup>
				pCi/g		
<b>Background Levels</b>						
			McLaren/Hart (1993; 1995) <sup>4</sup>	None	0.130	0.275
			Ogden Environmental and Energy Services Co., Inc. (1998) <sup>4</sup>	0.226	None	0.167
			HydroGeoLogic, Inc. (2012) <sup>5</sup>	7.38	0.075	0.193
<b>Health-Based Screening Criteria</b>						
			Preliminary Remediation Goals <sup>6</sup>	0.237	13.4	25.3

Notes:

1. Samples analyzed for tritium using U.S. Environmental Protection Agency (USEPA) Method 906.0 or equivalent (analytical method for May 2022 samples was method GL-RAD-A-002).
2. Samples analyzed for strontium-90 using USEPA Method 905.0.
3. Samples analyzed for cesium-137 using USEPA Method 901.1 or equivalent (analytical method for June 2020 and May 2022 samples cited as DOE HASL 300, 4.5.2.3/Ga-01-R).
4. 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.
5. Background values are drawn from the look-up tables published by HydroGeoLogic, Inc. (2012) and approved by the USEPA.
6. 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.
7. 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 minimum 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, California

Sample Location Name	Sample Name	Date Collected	Title 22 Metals <sup>1</sup>																	Per-chlorate <sup>3</sup>	VOCs <sup>4</sup>	
			Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Copper	Lead	Mercury <sup>2</sup>	Molybdenum	Nickel	Selenium	Silver	Thallium	Vanadium	Zinc		Naphthalene	Other VOCs
			mg/L																	µg/L		
<b>Spring/Seep Samples</b>																						
OS1-W	OS1-W-190613	6/13/2019	<0.010	<0.010	<b>0.040</b>	<0.0020	<0.0050	<0.0050	<0.010	<b>0.047</b>	<b>0.0063</b>	<0.00020	<0.020	<b>0.0078 J</b>	<0.010	<0.010	<0.010	<0.010	<b>0.63</b>	<0.0040	-	-
	OS1-W-220511 <sup>5</sup>	5/11/2022	<0.0098	<0.012	<b>0.037</b>	<0.00030	<0.00050	<0.0012	<0.0030	<b>0.016</b>	<b>0.0031 J</b>	<0.000100	<0.0027	<0.0024	<0.013	<0.00084	<0.0090	<0.0019	<b>0.19</b>	<b>0.0020 J</b>	-	-
OS3-W	OS3-W-190613	6/13/2019	<0.010	<0.010	<b>0.039</b>	<0.0020	<0.0050	<0.0050	<0.010	<b>0.0083 J</b>	<0.0050	<0.00020	<0.020	<b>0.0055 J</b>	<0.010	<0.010	<0.010	<0.010	<0.020	<0.0040	-	-
	OS3-W-200602	6/2/2020	<0.010	<0.010	<b>0.038</b>	<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	<0.0040	<1.0	None
OS357-W	OS357-W-200602	6/2/2020	<0.010	<0.010	<b>0.034</b>	<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	<b>0.048</b>	<0.0040	<1.0	None
	OS357-W-210525 <sup>5</sup>	5/25/2021	<0.0098	<0.012	<b>0.039</b>	<b>0.00055 J</b>	<0.00050	<0.0012	<0.0030	<0.0021	<0.0025	<0.00010	<0.0027	<0.0024	<0.013	<0.00084	<0.0090	<0.0019	<0.0030	<0.0020	<0.48	None
	OS357-W-220510 <sup>5</sup>	5/10/2022	<0.0098	<0.012	<b>0.036</b>	<0.00030	<0.00050	<0.0012	<0.0030	<0.0021	<0.0025	<0.000100	<0.0027	<0.0024	<0.013	<0.00084	<0.0090	<0.0019	<0.0030	<0.0020 UJ	-	-
OS8-W	OS8-W-200603	6/3/2020	<0.010	<0.010	<b>0.046</b>	<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	<0.0040	<b>3.0 J</b>	None
	OS8-W-210526 <sup>5</sup>	5/26/2021	<0.0098	<0.012	<b>0.11</b>	<0.00030	<0.00050	<b>0.0027 J</b>	<0.0030	<b>0.0042 J</b>	<b>0.0028 J</b>	<0.00010	<0.0027	<0.0024	<0.013	<b>0.0016 J</b>	<0.0090	<b>0.010</b>	<b>0.027</b>	<0.0020	<0.48	None
	OS8-W-220511 <sup>5</sup>	5/11/2022	<0.0098	<0.012	<b>0.056</b>	<0.00030	<0.00050	<0.0012	<0.0030	<0.0021	<0.0025	<0.000100	<0.0027	<0.0024	<0.013	<0.00084	<0.0090	<0.0019	<0.0030	<0.0020 UJ	-	-
<b>Surface Water/Runoff Samples</b>																						
SRE-W	SRE-W-200603	6/3/2020	<0.010	<0.010	<b>0.13</b>	<0.0020	<0.0050	<b>0.015</b>	<0.010	<b>0.019</b>	<b>0.012</b>	<0.00020	<0.020	<0.010	<0.010	<0.010	<0.010	<b>0.031</b>	<b>0.086</b>	<0.004	<1.0	None
	SRE-W-220511 <sup>5</sup>	5/11/2022	<0.0098	<0.012	<b>0.056</b>	<0.00030	<0.00050	<b>0.0027 J</b>	<0.0030	<b>0.0025 J</b>	<0.0025	<0.000100	<0.0027	<0.0024	<0.013	<0.00084	<0.0090	<b>0.0061</b>	<b>0.0099 J</b>	<0.0020 UJ	-	-
<b>Screening Criteria</b>																						
Drinking Water Screening Level <sup>6</sup>			0.006	0.010	1.0	0.004	0.005	0.05	0.006	1.3	0.015	0.002	0.1	0.1	0.05	0.094	0.002	0.086	6.0	0.006	0.12	Various
SSFL Groundwater Comparison Concentrations <sup>7</sup>			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 total metals using U.S. Environmental Protection Agency (USEPA) Method 6010B unless otherwise indicated.
2. Samples analyzed for total mercury using USEPA Method 7471A.
3. Samples analyzed for total perchlorate using USEPA Method 314.0.
4. Samples analyzed for VOCs using USEPA Method 8260.
5. Results reported to the method detection limit.
6. Drinking water screening levels were drawn from the following sources in descending order of preference:
  - California maximum contaminant levels (MCLs), as established in Title 22 of the California Code of Regulations (CCR) § 64431.
  - Residential tap water screening levels as endorsed or modified by the DTSC (2020).
  - Regional screening levels (RSLs) for residential tap water, as published by the USEPA (2021).
7. Background concentrations in groundwater determined for the Santa Susana Field Lab (SSFL; MWH Americas, Inc., 2014).

**Abbreviations:**

**Bold** = analyte detected above the laboratory reporting limit  
 mg/L = milligrams per liter  
 µg/L = nanograms per liter  
 J = Reported value is estimated.  
 UJ = The analyte was analyzed for, but not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.  
 - = not analyzed

< = analyte was not detected above the reporting limit or method detection limit shown  
 VOCs = volatile organic compounds  
 MCL = maximum contaminant level  
 RSL = regional screening level

**References:**

DTSC, 2020, Human and Ecological Risk Office (HERO) Human Health Risk Assessment Note Number 3, June.  
 MWH Americas, Inc., 2014, Final Standardized Risk Assessment Methodology Revision 2 Addendum, Santa Susana Field Laboratory, Ventura County, California, August.  
 U. S. Environmental Protection Agency (USEPA), 2021, Regional Screening Levels, May.

**TABLE 5**  
**SPRING AND SURFACE WATER ANALYTICAL RESULTS - RADIONUCLIDES**  
**AJU Brandeis-Bardin Campus**  
Brandeis, California

Sample Location Name	Sample Name	Date Collected	Tritium <sup>1</sup>	Strontium-90 <sup>2</sup>	Cesium-137 <sup>3</sup>
			pCi/L		
<b>Spring/Seep Samples</b>					
OS1-W	OS1-W-190613	6/13/2019	<310	<0.66	<7.1
	OS1-W-220511	5/11/2022	<625	<1.90	<7.48
OS3-W	OS3-W-190613	6/13/2019	<310	<0.65	<5.1
	OS3-W-200602	6/2/2020	<368	<1.28	<8.15
OS357-W	OS357-W-200602	6/2/2020	<362	<1.32	<6.86
	OS357-W-210525	5/25/2021	<401	<0.976	<8.58
	OS357-W-220510	5/10/2022	<633	<1.87	<8.55
OS8-W	OS8-W-200603	6/3/2020	<360	<1.37	<8.20
	OS8-W-210526	5/26/2021	<410	<1.17	<5.69
	OS8-W-220511	5/11/2022	<632	<1.82	<10.1
<b>Surface Water/Runoff Samples</b>					
SRE-W	SRE-W-200603	6/3/2020	<360	<1.54	<6.76
	SRE-W-220511	5/11/2022	<622	<1.88	<6.17
<b>Screening Criteria</b>					
Maximum Contaminant Level <sup>4</sup>			20,000	8.0	None
SSFL Groundwater Comparison Concentrations <sup>5</sup>			20,000	8.0	200

**Notes:**

1. Samples analyzed for total tritium using U.S. Environmental Protection Agency (USEPA) Method 906.0 or equivalent.
2. Samples analyzed for total strontium-90 using USEPA Method 905.0 or equivalent.
3. Samples analyzed for total 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 minimum 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, California

Sample Location Name	Sample Name	Matrix	Date Collected	Antimony		Arsenic		Barium		Beryllium		Cadmium		Chromium		Cobalt		Copper		Lead		Mercury <sup>2</sup>	
				PRG <sup>4</sup>	Conc.	PRG	Conc.	PRG	Conc.	PRG	Conc.	PRG	Conc.	PRG	Conc.	PRG	Conc.	PRG	Conc.	PRG	Conc.	PRG	Conc.
<b>µg/kg</b>																							
<b>On-Site Samples</b>																							
AV-1	AV-1-200604	Avocado	6/4/2020	11,000	<b>1,450</b>	0.77	<475	540,000	<b>214</b>	540	<95.1	2,700	<95.1	4,100,000	<143	810	<143	110,000	<b>4,500</b>	Note 5	<314	430	<6.81
A-1	A-1-200604	Apple	6/4/2020	15,000	<330	1.10	<500	740,000	<b>225</b>	740	<100	3,700	<100	5,600,000	<150	1,100	<150	150,000	<b>563</b>	Note 5	<b>397</b>	590	<7.73
G-1	G-1-200604	Grapefruit	6/4/2020	890	<b>343</b>	0.06	<453	45,000	<b>602</b>	44.5	<90.6	220	<90.6	330,000	<136	66.8	<136	8,900	<b>435</b>	Note 5	<299	35.6	<7.20
O-1	O-1-200604	Orange	6/4/2020	890	<303	0.06	<459	45,000	<b>883</b>	44.5	<91.7	220	<91.7	330,000	<138	66.8	<138	8,900	<b>454</b>	Note 5	<303	35.6	<7.08
	O-1-220512		5/12/2022		<b>646 B</b>		<476		<b>457 J</b>		<95.2		<95.2		<143		<143		<b>735 J</b>		<314		<7.31 UJ
L-1	L-1-200604	Lemon	6/4/2020	890	<304	0.06	<461	45,000	<b>437</b>	44.5	<92.3	220	<92.3	330,000	<138	66.8	<138	8,900	<b>367</b>	Note 5	<304	35.6	<7.67
	L-1-210527		5/27/2021		<b>496 J</b>		<455		<b>423 J</b>		<91.1		<91.1		<137		<137		<273		<301		<7.64
	L-1-220512		5/12/2022		<b>814 B</b>		<451		<b>513</b>		<90.3		<90.3		<135		<135		<b>521 J</b>		<298		<7.42 UJ
<b>Off-Site Reference Samples</b>																							
AV-2	AV-2-200604	Avocado	6/4/2020	11,000	<315	0.77	<477	540,000	<95.4	540	<95.4	2,700	<95.4	4,100,000	<143	810	<143	110,000	<b>3,240</b>	Note 5	<b>446</b>	430	<7.50
A-2	A-2-200604	Apple	6/4/2020	15,000	<b>460</b>	1.10	<480	740,000	<b>343</b>	740	<96.0	3,700	<96.0	5,600,000	<144	1,100	<144	150,000	<b>426</b>	Note 5	<317	590	<7.31
G-2	G-2-200604	Grapefruit	6/4/2020	890	<b>516</b>	0.06	<481	45,000	<b>149</b>	44.5	<96.2	220	<96.2	330,000	<144	66.8	<144	8,900	<b>3,360</b>	Note 5	<b>431</b>	35.6	<7.50
O-2	O-2-200604	Orange	6/4/2020	890	<307	0.06	<466	45,000	<b>313</b>	44.5	<93.1	220	<93.1	330,000	<140	66.8	<140	8,900	<b>636</b>	Note 5	<307	35.6	<8.01
	O-2-220512		5/12/2022		<b>737 B</b>		<473		<b>346 J</b>		<94.7		<94.7		<142		<142		<b>1,060 J</b>		<313		<7.85 UJ
L-2	L-2-200604	Lemon	6/4/2020	890	<326	0.06	<494	45,000	<98.8	44.5	<98.8	220	<98.8	330,000	<148	66.8	<148	8,900	<b>340</b>	Note 5	<326	35.6	<7.53
	L-2-210527		5/27/2021		<321		<486		<b>134 J</b>		<97.3		<97.3		<146		<146		<b>321 J</b>		<321		<7.05
	L-2-220512		5/12/2022		<b>833 B</b>		<436		<b>736</b>		<87.1		<87.1		<131		<131		<b>526 J</b>		<287		<7.91 UJ

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

Sample Location Name	Sample Name	Matrix	Date Collected	Molybdenum		Nickel		Selenium		Silver		Thallium		Vanadium		Zinc		Perchlorate	
				PRG	Conc.	PRG	Conc.	PRG	Conc.	PRG	Conc.	PRG	Conc.	PRG	Conc.	PRG	Conc.	PRG	Conc.
<i>μg/kg</i>																			
<b>On-Site Samples</b>																			
AV-1	AV-1-200604	Avocado	6/4/2020	14,000	<190	30,000	<143	14,000	<475	14,000	<95.1	27.0	<475	14,000	<95.1	810,000	<b>5,610</b>	1,900	<0.437
A-1	A-1-200604	Apple	6/4/2020	19,000	<200	41,000	<150	19,000	<500	19,000	<100	37.0	<500	19,000	<100	1,100,000	<b>1,480 J</b>	2,600	<0.455
G-1	G-1-200604	Grapefruit	6/4/2020	1,100	<181	2,400	<136	1,100	<453	1,100	<90.6	2.23	<453	1,100	<90.6	67,000	<b>2,400</b>	160	<4.05
O-1	O-1-200604	Orange	6/4/2020	1,100	<183	2,400	<b>315 J</b>	1,100	<459	1,100	<91.7	2.23	<459	1,100	<91.7	67,000	<b>3,230</b>	160	<10.2
	O-1-220512		5/12/2022		<190		<143		<b>738 B</b>		<95.2		<476		<95.2		<b>1,750 J</b>		<b>0.440 J</b>
L-1	L-1-200604	Lemon	6/4/2020	1,100	<185	2,400	<138	1,100	<461	1,100	<92.3	2.23	<461	1,100	<92.3	67,000	<b>3,450</b>	160	<10.6
	L-1-210527		5/27/2021		<182		<137		<455		<91.1		<455		<91.1		<b>5,770 J</b>		<0.403
	L-1-220512		5/12/2022		<181		<135		<b>1,340 B</b>		<90.3		<451		<90.3		<b>4,390</b>		<0.431 UJ
<b>Off-Site Reference Samples</b>																			
AV-2	AV-2-200604	Avocado	6/4/2020	14,000	<191	30,000	<b>245 J</b>	14,000	<477	14,000	<95.4	27.0	<477	14,000	<95.4	810,000	<b>4,970</b>	1,900	<0.840
A-2	A-2-200604	Apple	6/4/2020	19,000	<192	11,000	<b>151 J</b>	19,000	<480	19,000	<96.0	37.0	<480	19,000	<96.0	1,100,000	<b>2,270</b>	2,600	<0.459
G-2	G-2-200604	Grapefruit	6/4/2020	1,100	<192	2,450	<144	1,100	<481	1,100	<96.2	2.23	<481	1,100	<96.2	67,000	<b>4,370</b>	160	<4.29
O-2	O-2-200604	Orange	6/4/2020	1,100	<186	2,450	<b>143 J</b>	1,100	<466	1,100	<93.1	2.23	<466	1,100	<93.1	67,000	<b>4,050</b>	160	<10.7
	O-2-220512		5/12/2022		<189		<142		<b>1,280 B</b>		<94.7		<473		<94.7		<b>2,140</b>		<b>1.23 J</b>
L-2	L-2-200604	Lemon	6/4/2020	1,100	<198	2,450	<148	1,100	<494	1,100	<98.8	2.23	<494	1,100	<98.8	67,000	<b>1,700 J</b>	160	<10.0
	L-2-210527		5/27/2021		<195		<146		<486		<97.3		<486		<97.3		<b>5,240 J</b>		<0.426
	L-2-220512		5/12/2022		<174		<131		<b>695 B</b>		<87.1		<436		<87.1		<b>3,020</b>		<2.25 UJ

**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 and assume the exposure frequencies below based on the average length of the fruit-producing season in Ventura County for each type of fruit:  
 Avocado = 129 days per year  
 Apples = 92 days per year  
 Grapefruits, Oranges, and Lemons = 350 days per year
5. Adverse health effects from exposure to lead at residential sites is evaluated by calculating the blood lead level of a child. The evaluation in 2020 was conducted using the DTSC's LeadSpread8. For more information, see Appendix A of the 2020 monitoring report (GSI, 2020). The results indicated that the presence of lead at the Site, when detected, does not result in adverse health effects for a residential exposure. No additional lead was detected in the lemon sample collected in 2021, so the conclusion has not changed from 2020.

**Abbreviations:**

- Bold** = analyte detected above the laboratory reporting limit
- < = analyte was not detected above the detection limit shown
- μg/kg = micrograms per kilogram
- = not applicable
- J = Value is estimated.
- UJ = The analyte was analyzed for, but not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.
- 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.



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

Sample Location Name	Sample Name	Sample Type	Date Collected	Tritium <sup>1</sup>		Strontium-90 <sup>2</sup>		Cesium-137 <sup>3</sup>	
				PRG <sup>4</sup>	Concentration	PRG <sup>4</sup>	Concentration	PRG <sup>4</sup>	Concentration
				pCi/g <sup>5</sup>					
<b>On-Site Samples</b>									
AV-1	AV-1-190830	Avocado	8/30/2019	7.76	–	3.21	<0.227	16.8	–
	AV-1-200604		6/4/2020		<3.28		<0.237		<0.0288
A-1	A-1-190830	Apple	8/30/2019	9.5	–	3.9	<0.187	20.5	–
	A-1-200604		6/4/2020		<4.90		<0.0447		<0.0115
G-1	G-1-190830	Grapefruit	8/30/2019	2.04	–	0.843	<0.212	4.41	–
	G-1-200604		6/4/2020		<4.78		<0.0714		<0.0134
O-1	O-1-200604	Orange	6/4/2020	2.04	<4.98	0.843	<0.0488	4.41	<0.0113
	O-1-220512		5/12/2022		<1.33		<0.0346		<0.0101
L-1	L-1-190830	Lemon	8/30/2019	2.04	–	0.843	<0.117	4.41	–
	L-1-200604		6/4/2020		<4.57		<0.0419		<0.00739
	L-1-210527		5/27/2021		<1.13 UJ		<0.119		<0.0120
	L-1-220512		5/12/2022		<1.27		<0.0356		<0.00605
<b>Off-Site Reference Samples</b>									
AV-2	AV-2-190830	Avocado	8/30/2019	7.76	–	3.21	<0.225	16.8	–
	AV-2-200604		6/4/2020		<4.64		<0.140		<0.0145
A-2	A-2-190830	Apple	8/30/2019	9.5	–	3.9	<0.151	20.5	–
	A-2-200604		6/4/2020		<3.28		<0.0634		<0.0123
G-2	G-2-190830	Grapefruit	8/30/2019	2.04	–	0.843	<0.150	4.41	–
	G-2-200604		6/4/2020		<3.38		<0.0425		<0.00968
O-2	O-2-200604	Orange	6/4/2020	2.04	<4.63	0.843	<0.0467	4.41	<0.0308
	O-2-220512		5/12/2022		<1.30		<0.0342		<0.0111



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

Sample Location Name	Sample Name	Sample Type	Date Collected	Tritium <sup>1</sup>		Strontium-90 <sup>2</sup>		Cesium-137 <sup>3</sup>	
				PRG <sup>4</sup>	Concentration	PRG <sup>4</sup>	Concentration	PRG <sup>4</sup>	Concentration
				pCi/g <sup>5</sup>					
L-2	L-2-190830	Lemon	8/30/2019	2.04	–	0.843	<0.126	4.41	–
	L-2-1200604		6/4/2020		<3.25		<0.0440		<0.0114
	L-2-210527		5/27/2021		<0.960 UJ		<0.0332		<0.0119
	L-2-220512		5/12/2022		<1.34		<0.0301		<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 minimum 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 minimum detectable concentration (MDC) shown

– = not analyzed

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

References:

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

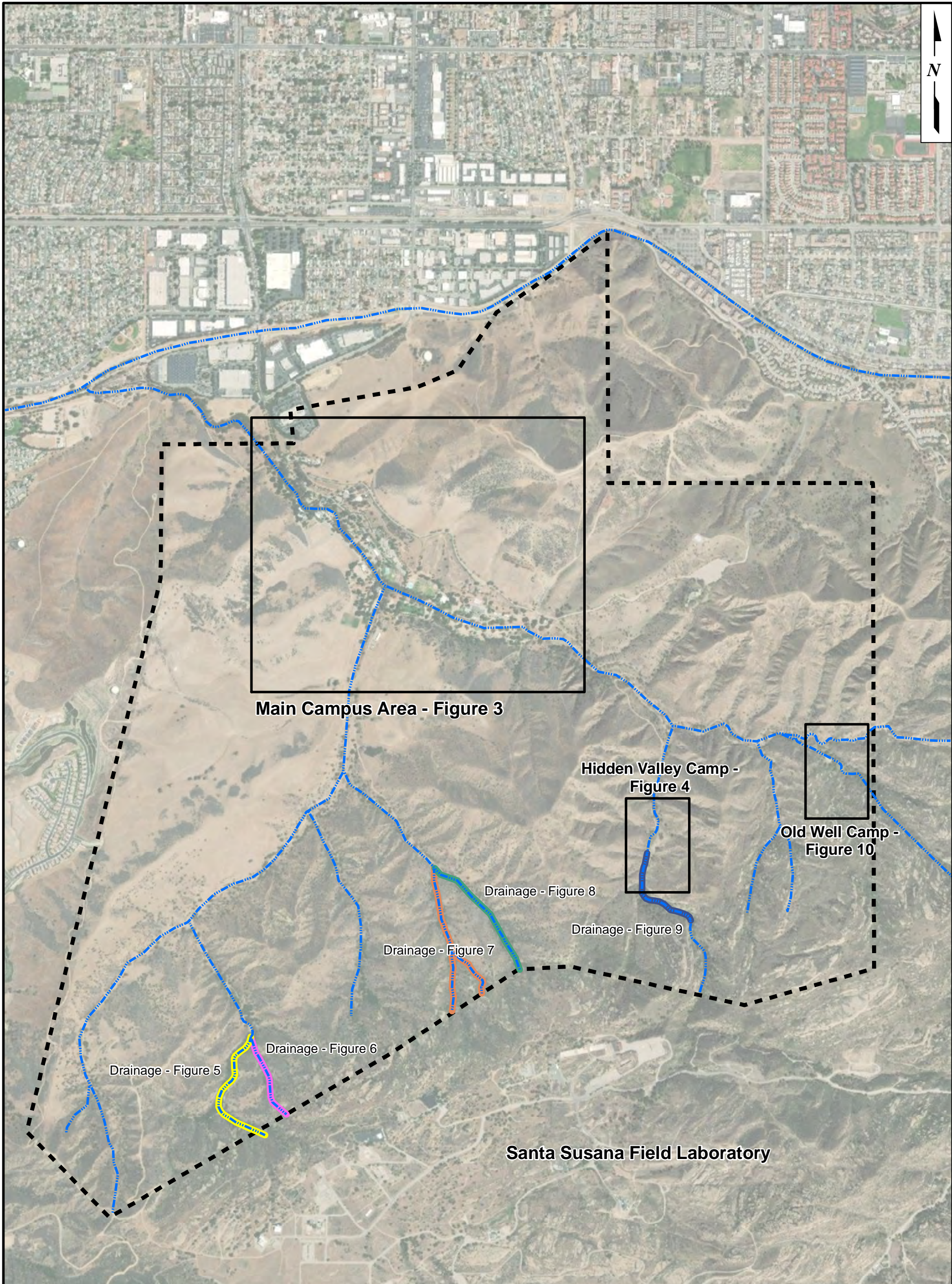


GSI Job No.	5182	Drawn by:	AV
Issued:	17-Jul-2022	Chk'd by:	SMG
Revised:		Apr'd by:	SMG
Map ID:	AJU_SiteLocMap	<b>FIGURE 1</b>	

**SITE LOCATION MAP**



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

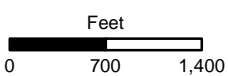




**Note:**  
 Imagery downloaded from Esri ArcGIS Online, June 2021.

**LEGEND**

-  Approximate Site Boundary
-  Intermittent Stream



GSI Job No.	5182	Map ID:	AJU_SiteMapDrainages
Issued:	17-Jul-2022	Drawn By:	AV
		Chk'd By:	SMG
		Aprv'd By:	SMG

**SITE MAP AND FEATURES**

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

**FIGURE 2**





**LEGEND**

- Soil Sampling Location
- Approximate Site Boundary
- Site Feature
- Intermittent Stream

**Note**  
 Imagery downloaded from Esri ArcGIS Online, June 2021.

Scale (Feet)  
 0 200 400

Projected Coordinate System  
 Datum: NAD 1983  
 State Plane California Zone V  
 Units: Feet



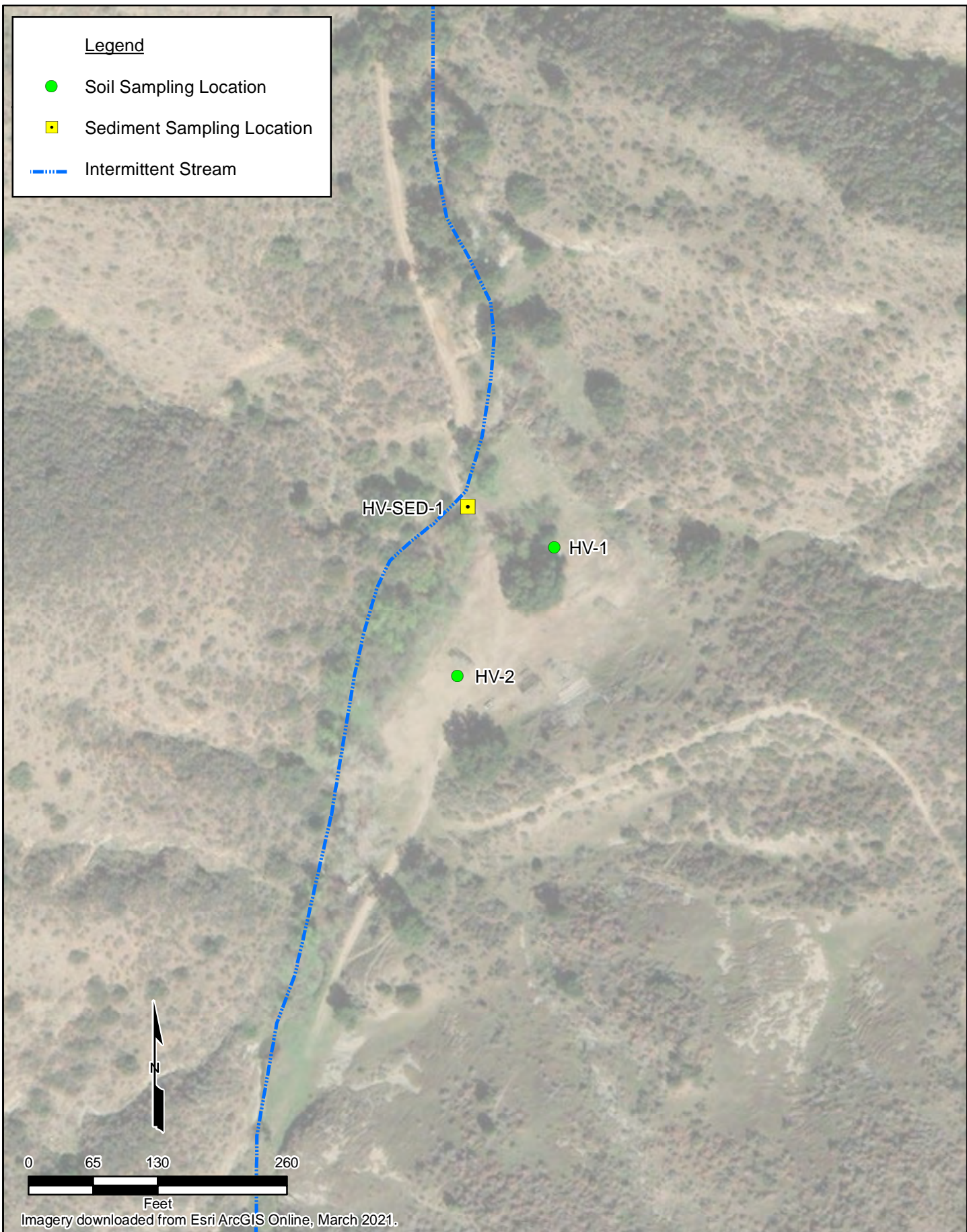
**MAIN CAMPUS AREA MAP  
 AND SAMPLING LOCATIONS**

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

GSI Job No.	5182	Drawn By:	AV
Issued:	19-Jul-2022	Chk'd By:	SMG
Map ID:	AJU_MainCampusLand	Appv'd By:	SMG

**FIGURE 3**



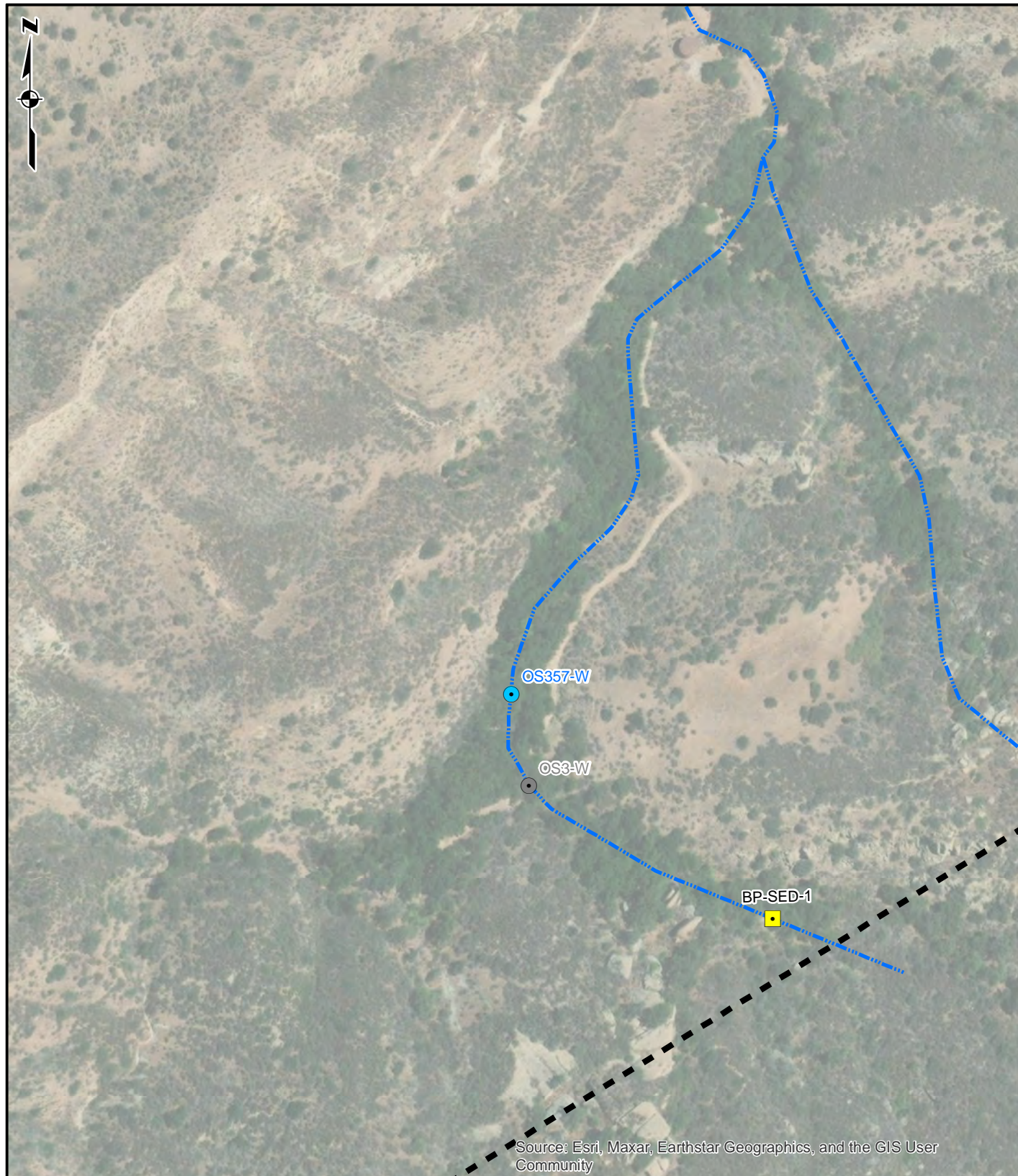


GSI Job No.	5182	Drawn by:	AV
Issued:	17-Jul-2022	Chk'd by:	SMG
Revised:		Aprv'd by:	SMG
Map ID:	AJU_HVC_8x11	<b>FIGURE 4</b>	

**HIDDEN VALLEY CAMP  
SAMPLING LOCATIONS**

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



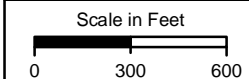


**LEGEND**

- Sediment Sampling Location
- Intermittent Stream
- Water Sampling Location
- Approximate Site Boundary
- Former Water Sampling Location, Not Sampled Since 2020

**SAMPLING LOCATIONS  
OS357-W AND BP-SED-1**

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

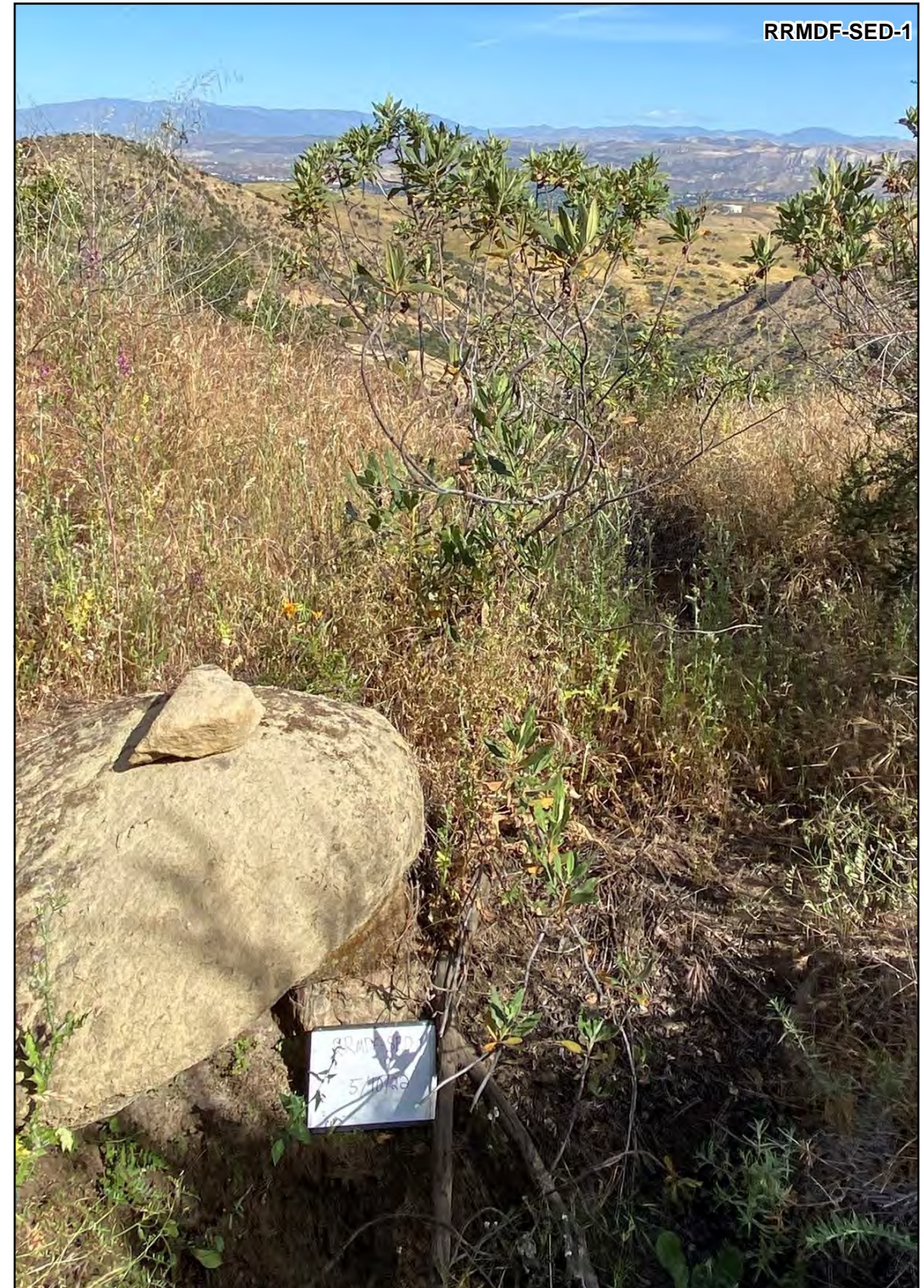
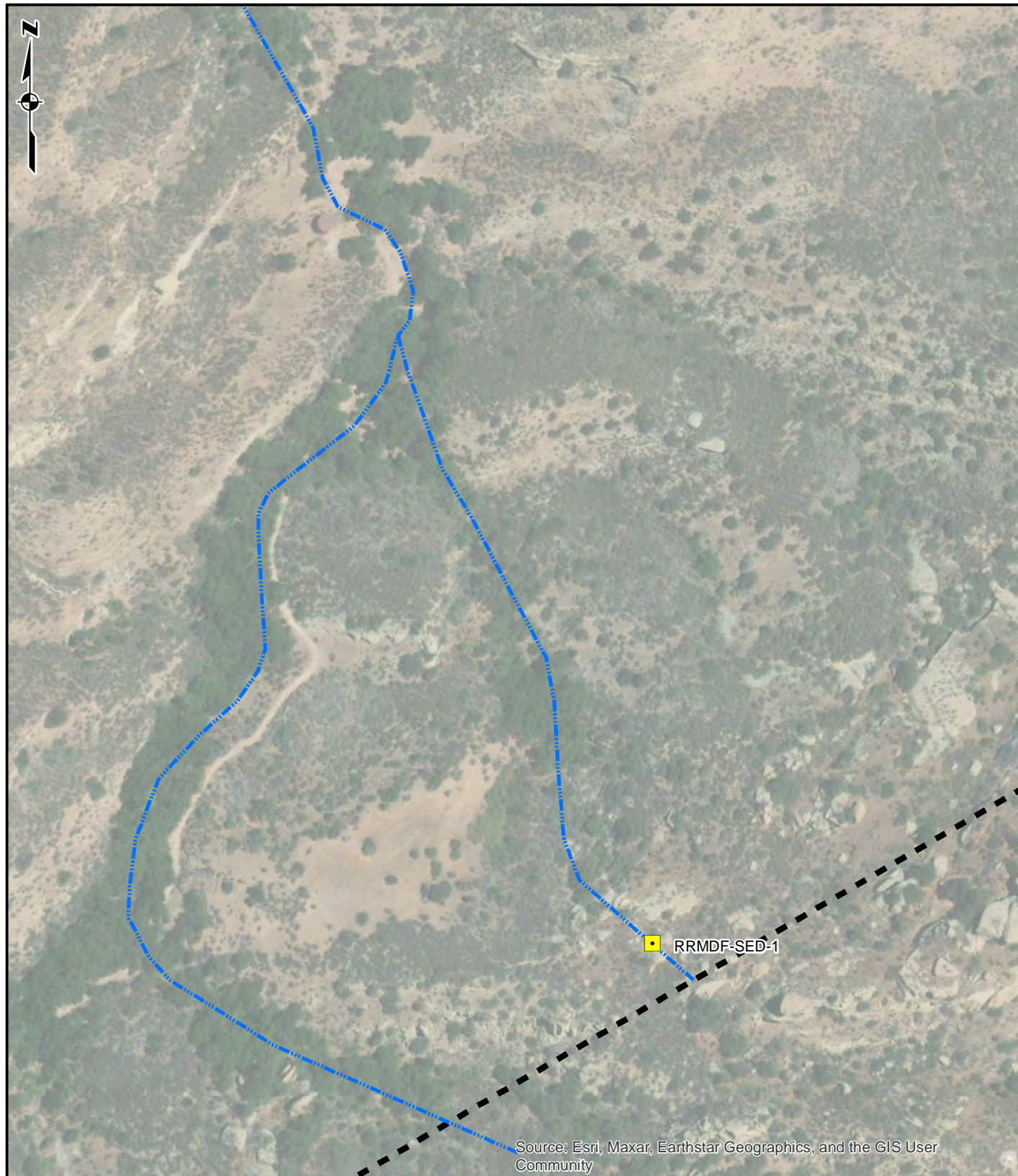


State Plane  
California Zone V  
Datum: NAD 83

GSI Job No.	5182	Drawn By:	AV
Issued:	17-Jul-2022	Chk'd By:	SMG
Map ID:	AJU_BurnPit_0722	Appv'd By:	SMG

**FIGURE 5**



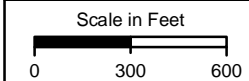


**LEGEND**

- Sediment Sampling Location
- Approximate Site Boundary
- Intermittent Stream

**SAMPLING LOCATION RRMDF-SED-1**

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

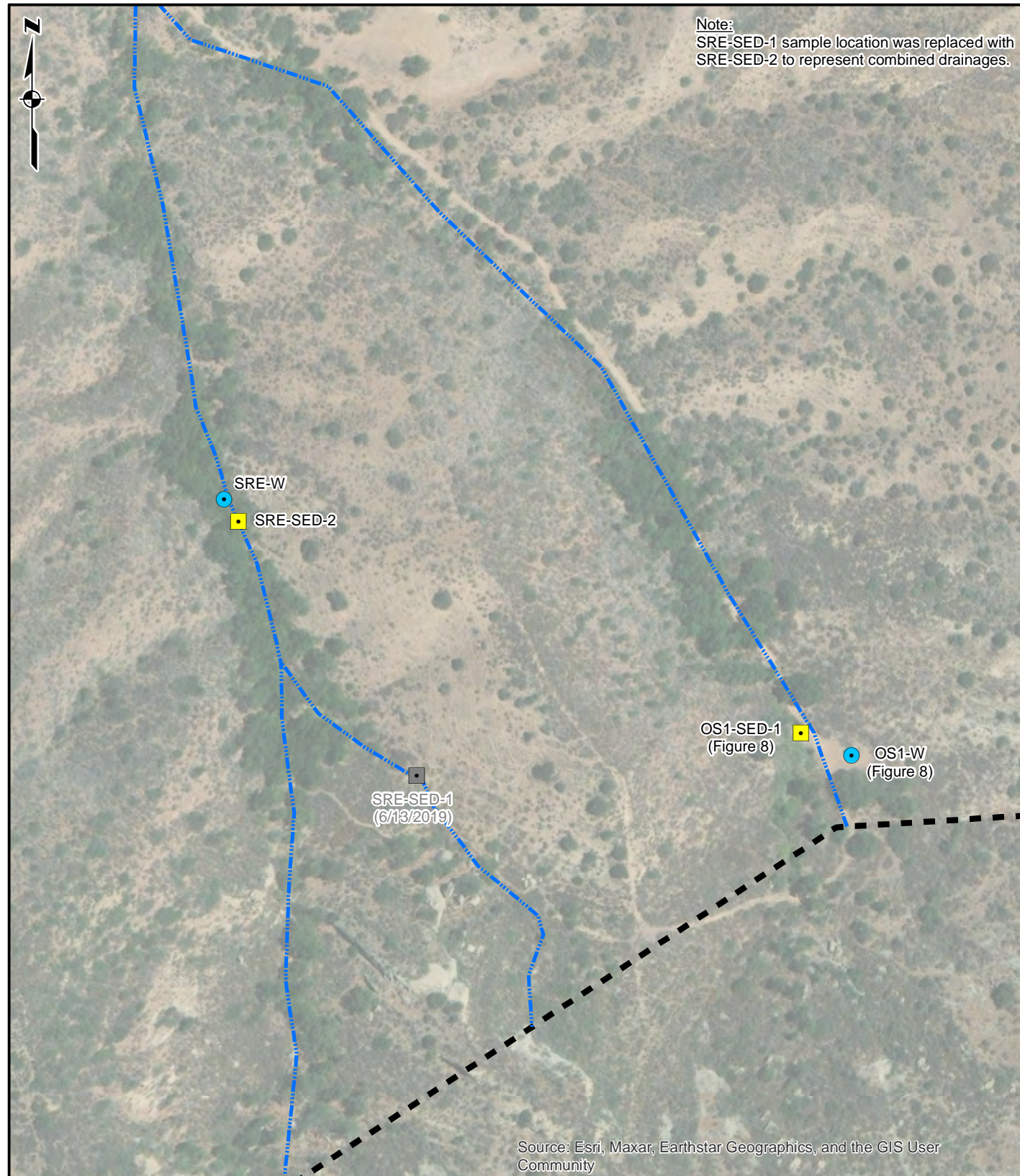


State Plane  
California Zone V  
Datum: NAD 83

GSI Job No.	5182	Drawn By:	AV
Issued:	17-Jul-2022	Chk'd By:	SMG
Map ID:	AJU_ReactorRMDF_0722	Appv'd By:	SMG

**FIGURE 6**



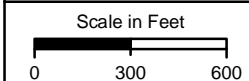


**LEGEND**

- Water Sampling Location
- Sediment Sampling Location
- Former Sediment Sampling Location
- - - - - Intermittent Stream
- Approximate Site Boundary

**SAMPLING LOCATIONS  
SRE-SED-2 AND SRE-W**

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

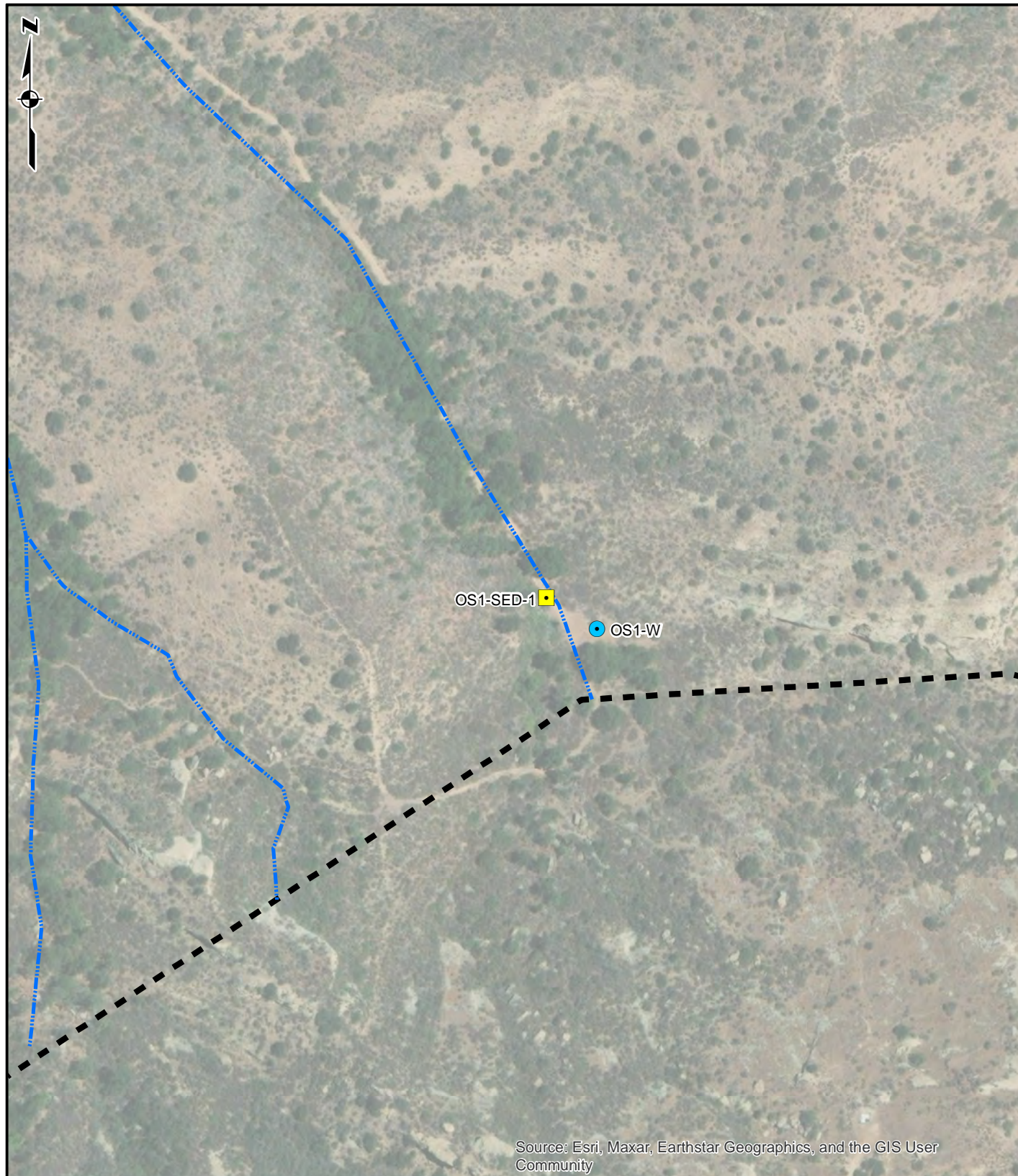


State Plane  
California Zone V  
Datum: NAD 83

GSI Job No.	5182	Drawn By:	AV
Issued:	17-Jul-2022	Chk'd By:	SMG
Map ID:	AJU_SRER_0722	Appv'd By:	SMG

**FIGURE 7**





Spring OS1, which was sampled during the 2022 monitoring event, is identified as monitoring wells RD68A and 68B. Because this location is monitored by NASA, it is not routinely included in the AJU sampling program.

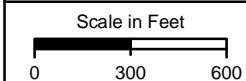


**LEGEND**

- Water Sampling Location
- - - - - Intermittent Stream
- Sediment Sampling Location
- Approximate Site Boundary

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

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

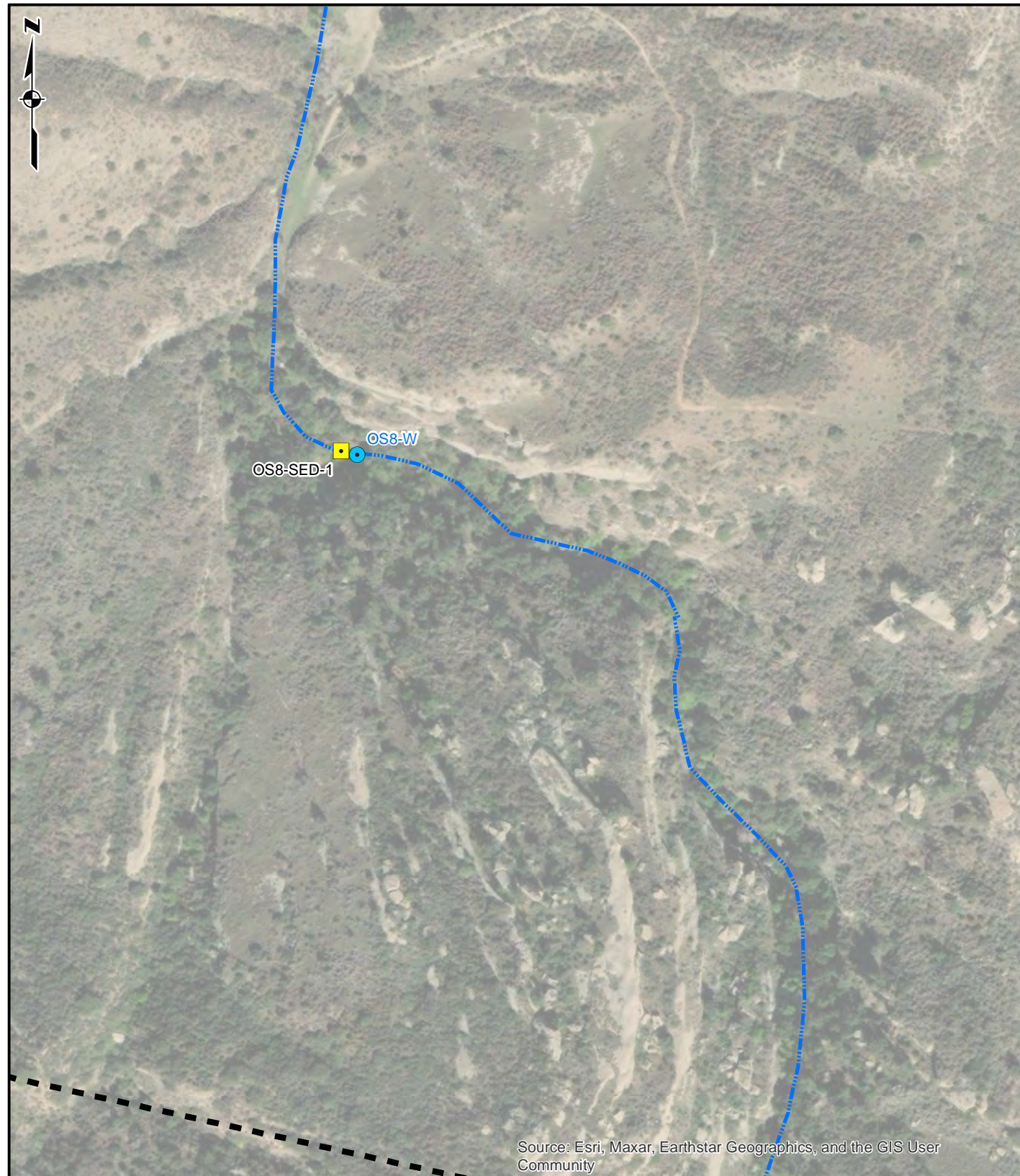


State Plane  
California Zone V  
Datum: NAD 83

GSI Job No.	5182	Drawn By:	AV
Issued:	17-Jul-2022	Chk'd By:	SMG
Map ID:	AJU_OS1_0722	Appv'd By:	SMG

**FIGURE 8**



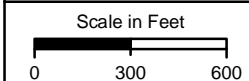


**LEGEND**

- Water Sampling Location
- Sediment Sampling Location
- - - - - Intermittent Stream
- Approximate Site Boundary

**SAMPLING LOCATIONS  
OS8-SED-1 AND OS8-W**

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



State Plane  
California Zone V  
Datum: NAD 83

GSI Job No.	5182	Drawn By:	AV
Issued:	17-Jul-2022	Chk'd By:	SMG
Map ID:	AJU_OS8_0722	Appv'd By:	SMG

**FIGURE 9**



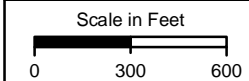


**LEGEND**

- Sediment Sampling Location
- Approximate Site Boundary
- Intermittent Stream

**SAMPLING LOCATION OW-SED-1**

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






State Plane  
California Zone V  
Datum: NAD 83

GSI Job No.	5182	Drawn By:	AV
Issued:	17-Jul-2022	Chk'd By:	SMG
Map ID:	AJU_OWC_0722	Appv'd By:	SMG

**FIGURE 10**



**Legend**

-  Fruit Sampling Location
-  Fruit Sampling Location - Not Sampled in 2022
-  Intermittent Stream



**Notes:**  
 1. For general location on the campus, see Figure 3.  
 2. Aerial Image downloaded from Google Earth Pro, January 2019.



GSI Job No.	5182	Drawn by:	AV
Issued:	17-Jul-2022	Chk'd by:	SMG
Revised:		Aprv'd by:	SMG
Map ID:	AJU_FruitOrchard_0722	<b>FIGURE 11</b>	

**FRUIT ORCHARD SAMPLING LOCATIONS**

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

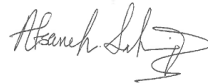
## ANALYTICAL REPORT

Eurofins Sacramento  
880 Riverside Parkway  
West Sacramento, CA 95605  
Tel: (916)373-5600

Laboratory Job ID: 320-87849-1  
Client Project/Site: AJU-BB  
Revision: 1

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

Attn: Matt Goerz



---

Authorized for release by:  
7/21/2022 4:33:56 PM

Afsaneh Salimpour, Senior Project Manager  
(925)484-1919  
[Afsaneh.Salimpour@et.eurofinsus.com](mailto:Afsaneh.Salimpour@et.eurofinsus.com)

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results through



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

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



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# Definitions/Glossary

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

Job ID: 320-87849-1

## Qualifiers

### HPLC/IC

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

### Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

## Glossary

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

# Case Narrative

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

Job ID: 320-87849-1

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## Job ID: 320-87849-1

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### Laboratory: Eurofins Sacramento

#### Narrative

---

#### Job Narrative 320-87849-1

Revised Antomony data on 7/21/2022.

#### Comments

No additional comments.

#### Receipt

The samples were received on 5/13/2022 9:35 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 0.4° C.

#### Metals

Method 6010B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 320-588470 and analytical batch 320-588669 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.

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

#### General Chemistry

Method 314.0: The following samples in analytical batch 320-590459 were diluted due to the nature of the sample matrix: CIT-1-220510 (320-87849-1), TF-1-220510 (320-87849-2), HV-2-220511 (320-87849-5), KC-1-220511 (320-87849-6), GF-1-220512 (320-87849-7) and AT-1-220512 (320-87849-8). Elevated reporting limits (RLs) are provided.

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



# Detection Summary

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

Job ID: 320-87849-1

## Client Sample ID: CIT-1-220510

## Lab Sample ID: 320-87849-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	2.5		1.9	1.3	mg/Kg	1		6010B	Total/NA
Barium	42		0.96	0.12	mg/Kg	1		6010B	Total/NA
Beryllium	0.14	J	0.19	0.029	mg/Kg	1		6010B	Total/NA
Cadmium	0.18	J	0.19	0.029	mg/Kg	1		6010B	Total/NA
Cobalt	3.7		0.48	0.24	mg/Kg	1		6010B	Total/NA
Chromium	10		0.48	0.13	mg/Kg	1		6010B	Total/NA
Copper	7.4		1.4	0.21	mg/Kg	1		6010B	Total/NA
Nickel	6.5		0.96	0.23	mg/Kg	1		6010B	Total/NA
Lead	8.5		0.96	0.25	mg/Kg	1		6010B	Total/NA
Vanadium	19		0.48	0.18	mg/Kg	1		6010B	Total/NA
Zinc	47		1.9	0.18	mg/Kg	1		6010B	Total/NA

## Client Sample ID: TF-1-220510

## Lab Sample ID: 320-87849-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	4.5		1.9	1.3	mg/Kg	1		6010B	Total/NA
Barium	89		0.96	0.12	mg/Kg	1		6010B	Total/NA
Beryllium	0.19		0.19	0.029	mg/Kg	1		6010B	Total/NA
Cadmium	0.16	J	0.19	0.029	mg/Kg	1		6010B	Total/NA
Cobalt	5.6		0.48	0.24	mg/Kg	1		6010B	Total/NA
Chromium	13		0.48	0.13	mg/Kg	1		6010B	Total/NA
Copper	15		1.4	0.21	mg/Kg	1		6010B	Total/NA
Nickel	9.9		0.96	0.23	mg/Kg	1		6010B	Total/NA
Lead	7.8		0.96	0.25	mg/Kg	1		6010B	Total/NA
Vanadium	29		0.48	0.18	mg/Kg	1		6010B	Total/NA
Zinc	44		1.9	0.18	mg/Kg	1		6010B	Total/NA

## Client Sample ID: HV-1-220511

## Lab Sample ID: 320-87849-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	4.8		2.0	1.3	mg/Kg	1		6010B	Total/NA
Barium	68		0.99	0.12	mg/Kg	1		6010B	Total/NA
Beryllium	0.11	J	0.20	0.030	mg/Kg	1		6010B	Total/NA
Cadmium	0.12	J	0.20	0.030	mg/Kg	1		6010B	Total/NA
Cobalt	3.6		0.50	0.25	mg/Kg	1		6010B	Total/NA
Chromium	11		0.50	0.14	mg/Kg	1		6010B	Total/NA
Copper	6.6		1.5	0.22	mg/Kg	1		6010B	Total/NA
Nickel	6.5		0.99	0.24	mg/Kg	1		6010B	Total/NA
Lead	4.5		0.99	0.26	mg/Kg	1		6010B	Total/NA
Vanadium	19		0.50	0.19	mg/Kg	1		6010B	Total/NA
Zinc	45		2.0	0.19	mg/Kg	1		6010B	Total/NA

## Client Sample ID: HV-SED-1-220511

## Lab Sample ID: 320-87849-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Silver	0.19	J	0.49	0.087	mg/Kg	1		6010B	Total/NA
Arsenic	3.1		1.9	1.3	mg/Kg	1		6010B	Total/NA
Barium	42		0.97	0.12	mg/Kg	1		6010B	Total/NA
Beryllium	0.055	J	0.19	0.029	mg/Kg	1		6010B	Total/NA
Cadmium	0.15	J	0.19	0.029	mg/Kg	1		6010B	Total/NA
Cobalt	3.2		0.49	0.24	mg/Kg	1		6010B	Total/NA
Chromium	9.0		0.49	0.14	mg/Kg	1		6010B	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Sacramento

# Detection Summary

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

Job ID: 320-87849-1

## Client Sample ID: HV-SED-1-220511 (Continued)

Lab Sample ID: 320-87849-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Copper	6.4		1.5	0.21	mg/Kg	1		6010B	Total/NA
Nickel	6.1		0.97	0.23	mg/Kg	1		6010B	Total/NA
Lead	6.9		0.97	0.25	mg/Kg	1		6010B	Total/NA
Vanadium	17		0.49	0.18	mg/Kg	1		6010B	Total/NA
Zinc	39		1.9	0.18	mg/Kg	1		6010B	Total/NA

## Client Sample ID: HV-2-220511

Lab Sample ID: 320-87849-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Silver	1.1		0.51	0.091	mg/Kg	1		6010B	Total/NA
Arsenic	4.5		2.0	1.3	mg/Kg	1		6010B	Total/NA
Barium	54		1.0	0.12	mg/Kg	1		6010B	Total/NA
Beryllium	0.84		0.20	0.030	mg/Kg	1		6010B	Total/NA
Cadmium	0.094	J	0.20	0.030	mg/Kg	1		6010B	Total/NA
Cobalt	4.0		0.51	0.25	mg/Kg	1		6010B	Total/NA
Chromium	14		0.51	0.14	mg/Kg	1		6010B	Total/NA
Copper	7.1		1.5	0.22	mg/Kg	1		6010B	Total/NA
Nickel	8.8		1.0	0.24	mg/Kg	1		6010B	Total/NA
Lead	9.5		1.0	0.26	mg/Kg	1		6010B	Total/NA
Thallium	0.92	J	2.0	0.85	mg/Kg	1		6010B	Total/NA
Vanadium	21		0.51	0.19	mg/Kg	1		6010B	Total/NA
Zinc	48		2.0	0.19	mg/Kg	1		6010B	Total/NA
Mercury	0.0089	J	0.038	0.0075	mg/Kg	1		7471A	Total/NA

## Client Sample ID: KC-1-220511

Lab Sample ID: 320-87849-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Silver	0.44	J	0.51	0.092	mg/Kg	1		6010B	Total/NA
Arsenic	5.5		2.0	1.3	mg/Kg	1		6010B	Total/NA
Barium	61		1.0	0.12	mg/Kg	1		6010B	Total/NA
Beryllium	0.85		0.20	0.031	mg/Kg	1		6010B	Total/NA
Cadmium	0.064	J	0.20	0.031	mg/Kg	1		6010B	Total/NA
Cobalt	6.0		0.51	0.26	mg/Kg	1		6010B	Total/NA
Chromium	17		0.51	0.14	mg/Kg	1		6010B	Total/NA
Copper	10		1.5	0.22	mg/Kg	1		6010B	Total/NA
Molybdenum	1.0	J	2.0	0.77	mg/Kg	1		6010B	Total/NA
Nickel	11		1.0	0.24	mg/Kg	1		6010B	Total/NA
Lead	10		1.0	0.27	mg/Kg	1		6010B	Total/NA
Selenium	2.7		2.0	1.4	mg/Kg	1		6010B	Total/NA
Vanadium	34		0.51	0.19	mg/Kg	1		6010B	Total/NA
Zinc	55		2.0	0.19	mg/Kg	1		6010B	Total/NA

## Client Sample ID: GF-1-220512

Lab Sample ID: 320-87849-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	1.8	J	1.9	1.2	mg/Kg	1		6010B	Total/NA
Barium	28		0.94	0.11	mg/Kg	1		6010B	Total/NA
Beryllium	0.38		0.19	0.028	mg/Kg	1		6010B	Total/NA
Cadmium	0.090	J	0.19	0.028	mg/Kg	1		6010B	Total/NA
Cobalt	2.3		0.47	0.24	mg/Kg	1		6010B	Total/NA
Chromium	6.7		0.47	0.13	mg/Kg	1		6010B	Total/NA
Copper	4.6		1.4	0.21	mg/Kg	1		6010B	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Sacramento

# Detection Summary

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

Job ID: 320-87849-1

## Client Sample ID: GF-1-220512 (Continued)

## Lab Sample ID: 320-87849-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Nickel	4.3		0.94	0.23	mg/Kg	1		6010B	Total/NA
Lead	3.4		0.94	0.25	mg/Kg	1		6010B	Total/NA
Vanadium	14		0.47	0.18	mg/Kg	1		6010B	Total/NA
Zinc	39		1.9	0.18	mg/Kg	1		6010B	Total/NA
Mercury	0.0095	J	0.039	0.0077	mg/Kg	1		7471A	Total/NA

## Client Sample ID: AT-1-220512

## Lab Sample ID: 320-87849-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	5.7		2.0	1.3	mg/Kg	1		6010B	Total/NA
Barium	50		1.0	0.12	mg/Kg	1		6010B	Total/NA
Beryllium	0.63		0.20	0.030	mg/Kg	1		6010B	Total/NA
Cadmium	0.16	J	0.20	0.030	mg/Kg	1		6010B	Total/NA
Cobalt	4.3		0.50	0.25	mg/Kg	1		6010B	Total/NA
Chromium	15		0.50	0.14	mg/Kg	1		6010B	Total/NA
Copper	11		1.5	0.22	mg/Kg	1		6010B	Total/NA
Nickel	7.8		1.0	0.24	mg/Kg	1		6010B	Total/NA
Lead	6.5		1.0	0.26	mg/Kg	1		6010B	Total/NA
Selenium	1.4	J	2.0	1.4	mg/Kg	1		6010B	Total/NA
Vanadium	24		0.50	0.19	mg/Kg	1		6010B	Total/NA
Zinc	44		2.0	0.19	mg/Kg	1		6010B	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Sacramento

# Client Sample Results

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

Job ID: 320-87849-1

**Client Sample ID: CIT-1-220510**

**Lab Sample ID: 320-87849-1**

Date Collected: 05/10/22 14:00

Matrix: Solid

Date Received: 05/13/22 09:35

**Method: 314.0 - Perchlorate (IC) - Soluble**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	ND		990	500	ug/Kg			05/25/22 15:48	25

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	ND		0.48	0.087	mg/Kg		05/16/22 06:30	05/16/22 15:54	1
<b>Arsenic</b>	<b>2.5</b>		1.9	1.3	mg/Kg		05/16/22 06:30	05/16/22 15:54	1
<b>Barium</b>	<b>42</b>		0.96	0.12	mg/Kg		05/16/22 06:30	05/16/22 15:54	1
<b>Beryllium</b>	<b>0.14</b>	J	0.19	0.029	mg/Kg		05/16/22 06:30	05/16/22 15:54	1
<b>Cadmium</b>	<b>0.18</b>	J	0.19	0.029	mg/Kg		05/16/22 06:30	05/16/22 15:54	1
<b>Cobalt</b>	<b>3.7</b>		0.48	0.24	mg/Kg		05/16/22 06:30	05/16/22 15:54	1
<b>Chromium</b>	<b>10</b>		0.48	0.13	mg/Kg		05/16/22 06:30	05/16/22 15:54	1
<b>Copper</b>	<b>7.4</b>		1.4	0.21	mg/Kg		05/16/22 06:30	05/16/22 15:54	1
Molybdenum	ND		1.9	0.72	mg/Kg		05/16/22 06:30	05/16/22 15:54	1
<b>Nickel</b>	<b>6.5</b>		0.96	0.23	mg/Kg		05/16/22 06:30	05/16/22 15:54	1
<b>Lead</b>	<b>8.5</b>		0.96	0.25	mg/Kg		05/16/22 06:30	05/16/22 15:54	1
Selenium	ND		1.9	1.3	mg/Kg		05/16/22 06:30	05/16/22 15:54	1
Antimony	ND		1.9	0.90	mg/Kg		05/16/22 06:30	05/16/22 15:54	1
Thallium	ND		1.9	0.81	mg/Kg		05/16/22 06:30	05/16/22 15:54	1
<b>Vanadium</b>	<b>19</b>		0.48	0.18	mg/Kg		05/16/22 06:30	05/16/22 15:54	1
<b>Zinc</b>	<b>47</b>		1.9	0.18	mg/Kg		05/16/22 06:30	05/16/22 15:54	1

**Method: 7471A - Mercury (CVAA)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.040	0.0080	mg/Kg		05/16/22 14:28	05/16/22 18:44	1

# Client Sample Results

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

Job ID: 320-87849-1

**Client Sample ID: TF-1-220510**

**Lab Sample ID: 320-87849-2**

Date Collected: 05/10/22 14:35

Matrix: Solid

Date Received: 05/13/22 09:35

**Method: 314.0 - Perchlorate (IC) - Soluble**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	ND		400	200	ug/Kg			05/25/22 16:11	10

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	ND		0.48	0.087	mg/Kg		05/16/22 06:30	05/16/22 15:58	1
<b>Arsenic</b>	<b>4.5</b>		1.9	1.3	mg/Kg		05/16/22 06:30	05/16/22 15:58	1
<b>Barium</b>	<b>89</b>		0.96	0.12	mg/Kg		05/16/22 06:30	05/16/22 15:58	1
<b>Beryllium</b>	<b>0.19</b>		0.19	0.029	mg/Kg		05/16/22 06:30	05/16/22 15:58	1
<b>Cadmium</b>	<b>0.16</b>	J	0.19	0.029	mg/Kg		05/16/22 06:30	05/16/22 15:58	1
<b>Cobalt</b>	<b>5.6</b>		0.48	0.24	mg/Kg		05/16/22 06:30	05/16/22 15:58	1
<b>Chromium</b>	<b>13</b>		0.48	0.13	mg/Kg		05/16/22 06:30	05/16/22 15:58	1
<b>Copper</b>	<b>15</b>		1.4	0.21	mg/Kg		05/16/22 06:30	05/16/22 15:58	1
Molybdenum	ND		1.9	0.72	mg/Kg		05/16/22 06:30	05/16/22 15:58	1
<b>Nickel</b>	<b>9.9</b>		0.96	0.23	mg/Kg		05/16/22 06:30	05/16/22 15:58	1
<b>Lead</b>	<b>7.8</b>		0.96	0.25	mg/Kg		05/16/22 06:30	05/16/22 15:58	1
Selenium	ND		1.9	1.3	mg/Kg		05/16/22 06:30	05/16/22 15:58	1
Antimony	ND		1.9	0.90	mg/Kg		05/16/22 06:30	05/16/22 15:58	1
Thallium	ND		1.9	0.81	mg/Kg		05/16/22 06:30	05/16/22 15:58	1
<b>Vanadium</b>	<b>29</b>		0.48	0.18	mg/Kg		05/16/22 06:30	05/16/22 15:58	1
<b>Zinc</b>	<b>44</b>		1.9	0.18	mg/Kg		05/16/22 06:30	05/16/22 15:58	1

**Method: 7471A - Mercury (CVAA)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.041	0.0083	mg/Kg		05/16/22 14:28	05/16/22 18:46	1

# Client Sample Results

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

Job ID: 320-87849-1

**Client Sample ID: HV-1-220511**

**Lab Sample ID: 320-87849-3**

Date Collected: 05/11/22 11:50

Matrix: Solid

Date Received: 05/13/22 09:35

**Method: 314.0 - Perchlorate (IC) - Soluble**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	ND		40	20	ug/Kg			05/25/22 18:02	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	ND		0.50	0.089	mg/Kg		05/16/22 06:30	05/16/22 16:01	1
<b>Arsenic</b>	<b>4.8</b>		2.0	1.3	mg/Kg		05/16/22 06:30	05/16/22 16:01	1
<b>Barium</b>	<b>68</b>		0.99	0.12	mg/Kg		05/16/22 06:30	05/16/22 16:01	1
<b>Beryllium</b>	<b>0.11</b>	<b>J</b>	0.20	0.030	mg/Kg		05/16/22 06:30	05/16/22 16:01	1
<b>Cadmium</b>	<b>0.12</b>	<b>J</b>	0.20	0.030	mg/Kg		05/16/22 06:30	05/16/22 16:01	1
<b>Cobalt</b>	<b>3.6</b>		0.50	0.25	mg/Kg		05/16/22 06:30	05/16/22 16:01	1
<b>Chromium</b>	<b>11</b>		0.50	0.14	mg/Kg		05/16/22 06:30	05/16/22 16:01	1
<b>Copper</b>	<b>6.6</b>		1.5	0.22	mg/Kg		05/16/22 06:30	05/16/22 16:01	1
Molybdenum	ND		2.0	0.74	mg/Kg		05/16/22 06:30	05/16/22 16:01	1
<b>Nickel</b>	<b>6.5</b>		0.99	0.24	mg/Kg		05/16/22 06:30	05/16/22 16:01	1
<b>Lead</b>	<b>4.5</b>		0.99	0.26	mg/Kg		05/16/22 06:30	05/16/22 16:01	1
Selenium	ND		2.0	1.4	mg/Kg		05/16/22 06:30	05/16/22 16:01	1
Antimony	ND		2.0	0.93	mg/Kg		05/16/22 06:30	05/16/22 16:01	1
Thallium	ND		2.0	0.83	mg/Kg		05/16/22 06:30	05/16/22 16:01	1
<b>Vanadium</b>	<b>19</b>		0.50	0.19	mg/Kg		05/16/22 06:30	05/16/22 16:01	1
<b>Zinc</b>	<b>45</b>		2.0	0.19	mg/Kg		05/16/22 06:30	05/16/22 16:01	1

**Method: 7471A - Mercury (CVAA)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.039	0.0077	mg/Kg		05/16/22 14:28	05/16/22 18:48	1

# Client Sample Results

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

Job ID: 320-87849-1

**Client Sample ID: HV-SED-1-220511**

**Lab Sample ID: 320-87849-4**

Date Collected: 05/11/22 12:00

Matrix: Solid

Date Received: 05/13/22 09:35

**Method: 314.0 - Perchlorate (IC) - Soluble**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	ND		40	20	ug/Kg			05/20/22 20:42	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	0.19	J	0.49	0.087	mg/Kg		05/16/22 06:30	05/16/22 16:05	1
Arsenic	3.1		1.9	1.3	mg/Kg		05/16/22 06:30	05/16/22 16:05	1
Barium	42		0.97	0.12	mg/Kg		05/16/22 06:30	05/16/22 16:05	1
Beryllium	0.055	J	0.19	0.029	mg/Kg		05/16/22 06:30	05/16/22 16:05	1
Cadmium	0.15	J	0.19	0.029	mg/Kg		05/16/22 06:30	05/16/22 16:05	1
Cobalt	3.2		0.49	0.24	mg/Kg		05/16/22 06:30	05/16/22 16:05	1
Chromium	9.0		0.49	0.14	mg/Kg		05/16/22 06:30	05/16/22 16:05	1
Copper	6.4		1.5	0.21	mg/Kg		05/16/22 06:30	05/16/22 16:05	1
Molybdenum	ND		1.9	0.73	mg/Kg		05/16/22 06:30	05/16/22 16:05	1
Nickel	6.1		0.97	0.23	mg/Kg		05/16/22 06:30	05/16/22 16:05	1
Lead	6.9		0.97	0.25	mg/Kg		05/16/22 06:30	05/16/22 16:05	1
Selenium	ND		1.9	1.4	mg/Kg		05/16/22 06:30	05/16/22 16:05	1
Antimony	ND		1.9	0.91	mg/Kg		05/16/22 06:30	05/16/22 16:05	1
Thallium	ND		1.9	0.82	mg/Kg		05/16/22 06:30	05/16/22 16:05	1
Vanadium	17		0.49	0.18	mg/Kg		05/16/22 06:30	05/16/22 16:05	1
Zinc	39		1.9	0.18	mg/Kg		05/16/22 06:30	05/16/22 16:05	1

**Method: 7471A - Mercury (CVAA)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.038	0.0075	mg/Kg		05/16/22 14:28	05/16/22 18:49	1

# Client Sample Results

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

Job ID: 320-87849-1

**Client Sample ID: HV-2-220511**

**Lab Sample ID: 320-87849-5**

Date Collected: 05/11/22 12:15

Matrix: Solid

Date Received: 05/13/22 09:35

**Method: 314.0 - Perchlorate (IC) - Soluble**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	ND		200	100	ug/Kg			05/25/22 16:33	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	1.1		0.51	0.091	mg/Kg		05/18/22 06:30	05/18/22 14:36	1
Arsenic	4.5		2.0	1.3	mg/Kg		05/18/22 06:30	05/18/22 14:36	1
Barium	54		1.0	0.12	mg/Kg		05/18/22 06:30	05/18/22 14:36	1
Beryllium	0.84		0.20	0.030	mg/Kg		05/18/22 06:30	05/18/22 14:36	1
Cadmium	0.094	J	0.20	0.030	mg/Kg		05/18/22 06:30	05/18/22 14:36	1
Cobalt	4.0		0.51	0.25	mg/Kg		05/18/22 06:30	05/18/22 14:36	1
Chromium	14		0.51	0.14	mg/Kg		05/18/22 06:30	05/18/22 14:36	1
Copper	7.1		1.5	0.22	mg/Kg		05/18/22 06:30	05/18/22 14:36	1
Molybdenum	ND		2.0	0.76	mg/Kg		05/18/22 06:30	05/18/22 14:36	1
Nickel	8.8		1.0	0.24	mg/Kg		05/18/22 06:30	05/18/22 14:36	1
Lead	9.5		1.0	0.26	mg/Kg		05/18/22 06:30	05/18/22 14:36	1
Selenium	ND		2.0	1.4	mg/Kg		05/18/22 06:30	05/18/22 14:36	1
Antimony	ND		2.0	0.93	mg/Kg		07/08/22 15:59	07/11/22 14:54	1
Thallium	0.92	J	2.0	0.85	mg/Kg		05/18/22 06:30	05/18/22 14:36	1
Vanadium	21		0.51	0.19	mg/Kg		05/18/22 06:30	05/18/22 14:36	1
Zinc	48		2.0	0.19	mg/Kg		05/18/22 06:30	05/18/22 14:36	1

**Method: 7471A - Mercury (CVAA)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.0089	J	0.038	0.0075	mg/Kg		05/16/22 14:28	05/16/22 18:51	1



# Client Sample Results

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

Job ID: 320-87849-1

**Client Sample ID: KC-1-220511**

**Lab Sample ID: 320-87849-6**

Date Collected: 05/11/22 14:25

Matrix: Solid

Date Received: 05/13/22 09:35

**Method: 314.0 - Perchlorate (IC) - Soluble**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	ND		200	99	ug/Kg			05/25/22 16:55	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	0.44	J	0.51	0.092	mg/Kg		05/18/22 06:30	05/18/22 15:06	1
Arsenic	5.5		2.0	1.3	mg/Kg		05/18/22 06:30	05/18/22 15:06	1
Barium	61		1.0	0.12	mg/Kg		05/18/22 06:30	05/18/22 15:06	1
Beryllium	0.85		0.20	0.031	mg/Kg		05/18/22 06:30	05/18/22 15:06	1
Cadmium	0.064	J	0.20	0.031	mg/Kg		05/18/22 06:30	05/18/22 15:06	1
Cobalt	6.0		0.51	0.26	mg/Kg		05/18/22 06:30	05/18/22 15:06	1
Chromium	17		0.51	0.14	mg/Kg		05/18/22 06:30	05/18/22 15:06	1
Copper	10		1.5	0.22	mg/Kg		05/18/22 06:30	05/18/22 15:06	1
Molybdenum	1.0	J	2.0	0.77	mg/Kg		05/18/22 06:30	05/18/22 15:06	1
Nickel	11		1.0	0.24	mg/Kg		05/18/22 06:30	05/18/22 15:06	1
Lead	10		1.0	0.27	mg/Kg		05/18/22 06:30	05/18/22 15:06	1
Selenium	2.7		2.0	1.4	mg/Kg		05/18/22 06:30	05/18/22 15:06	1
Antimony	ND		2.0	0.94	mg/Kg		07/08/22 15:59	07/11/22 14:58	1
Thallium	ND		2.0	0.86	mg/Kg		05/18/22 06:30	05/18/22 15:06	1
Vanadium	34		0.51	0.19	mg/Kg		05/18/22 06:30	05/18/22 15:06	1
Zinc	55		2.0	0.19	mg/Kg		05/18/22 06:30	05/18/22 15:06	1

**Method: 7471A - Mercury (CVAA)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.038	0.0075	mg/Kg		05/16/22 14:28	05/16/22 18:53	1

# Client Sample Results

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

Job ID: 320-87849-1

**Client Sample ID: GF-1-220512**

**Lab Sample ID: 320-87849-7**

Date Collected: 05/12/22 07:45

Matrix: Solid

Date Received: 05/13/22 09:35

**Method: 314.0 - Perchlorate (IC) - Soluble**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	ND		400	200	ug/Kg			05/25/22 17:17	10

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	ND		0.47	0.085	mg/Kg		05/18/22 06:30	05/18/22 15:09	1
<b>Arsenic</b>	<b>1.8</b>	<b>J</b>	1.9	1.2	mg/Kg		05/18/22 06:30	05/18/22 15:09	1
<b>Barium</b>	<b>28</b>		0.94	0.11	mg/Kg		05/18/22 06:30	05/18/22 15:09	1
<b>Beryllium</b>	<b>0.38</b>		0.19	0.028	mg/Kg		05/18/22 06:30	05/18/22 15:09	1
<b>Cadmium</b>	<b>0.090</b>	<b>J</b>	0.19	0.028	mg/Kg		05/18/22 06:30	05/18/22 15:09	1
<b>Cobalt</b>	<b>2.3</b>		0.47	0.24	mg/Kg		05/18/22 06:30	05/18/22 15:09	1
<b>Chromium</b>	<b>6.7</b>		0.47	0.13	mg/Kg		05/18/22 06:30	05/18/22 15:09	1
<b>Copper</b>	<b>4.6</b>		1.4	0.21	mg/Kg		05/18/22 06:30	05/18/22 15:09	1
Molybdenum	ND		1.9	0.71	mg/Kg		05/18/22 06:30	05/18/22 15:09	1
<b>Nickel</b>	<b>4.3</b>		0.94	0.23	mg/Kg		05/18/22 06:30	05/18/22 15:09	1
<b>Lead</b>	<b>3.4</b>		0.94	0.25	mg/Kg		05/18/22 06:30	05/18/22 15:09	1
Selenium	ND		1.9	1.3	mg/Kg		05/18/22 06:30	05/18/22 15:09	1
Antimony	ND		1.9	0.91	mg/Kg		07/08/22 15:59	07/11/22 15:02	1
Thallium	ND		1.9	0.79	mg/Kg		05/18/22 06:30	05/18/22 15:09	1
<b>Vanadium</b>	<b>14</b>		0.47	0.18	mg/Kg		05/18/22 06:30	05/18/22 15:09	1
<b>Zinc</b>	<b>39</b>		1.9	0.18	mg/Kg		05/18/22 06:30	05/18/22 15:09	1

**Method: 7471A - Mercury (CVAA)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Mercury</b>	<b>0.0095</b>	<b>J</b>	0.039	0.0077	mg/Kg		05/16/22 14:28	05/16/22 18:54	1

# Client Sample Results

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

Job ID: 320-87849-1

**Client Sample ID: AT-1-220512**

**Lab Sample ID: 320-87849-8**

Date Collected: 05/12/22 08:20

Matrix: Solid

Date Received: 05/13/22 09:35

**Method: 314.0 - Perchlorate (IC) - Soluble**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	ND		990	500	ug/Kg			05/25/22 17:40	25

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	ND		0.50	0.090	mg/Kg		05/18/22 06:30	05/18/22 15:13	1
<b>Arsenic</b>	<b>5.7</b>		2.0	1.3	mg/Kg		05/18/22 06:30	05/18/22 15:13	1
<b>Barium</b>	<b>50</b>		1.0	0.12	mg/Kg		05/18/22 06:30	05/18/22 15:13	1
<b>Beryllium</b>	<b>0.63</b>		0.20	0.030	mg/Kg		05/18/22 06:30	05/18/22 15:13	1
<b>Cadmium</b>	<b>0.16</b>	J	0.20	0.030	mg/Kg		05/18/22 06:30	05/18/22 15:13	1
<b>Cobalt</b>	<b>4.3</b>		0.50	0.25	mg/Kg		05/18/22 06:30	05/18/22 15:13	1
<b>Chromium</b>	<b>15</b>		0.50	0.14	mg/Kg		05/18/22 06:30	05/18/22 15:13	1
<b>Copper</b>	<b>11</b>		1.5	0.22	mg/Kg		05/18/22 06:30	05/18/22 15:13	1
Molybdenum	ND		2.0	0.75	mg/Kg		05/18/22 06:30	05/18/22 15:13	1
<b>Nickel</b>	<b>7.8</b>		1.0	0.24	mg/Kg		05/18/22 06:30	05/18/22 15:13	1
<b>Lead</b>	<b>6.5</b>		1.0	0.26	mg/Kg		05/18/22 06:30	05/18/22 15:13	1
<b>Selenium</b>	<b>1.4</b>	J	2.0	1.4	mg/Kg		05/18/22 06:30	05/18/22 15:13	1
Antimony	ND		1.9	0.90	mg/Kg		07/08/22 15:59	07/11/22 15:05	1
Thallium	ND		2.0	0.84	mg/Kg		05/18/22 06:30	05/18/22 15:13	1
<b>Vanadium</b>	<b>24</b>		0.50	0.19	mg/Kg		05/18/22 06:30	05/18/22 15:13	1
<b>Zinc</b>	<b>44</b>		2.0	0.19	mg/Kg		05/18/22 06:30	05/18/22 15:13	1

**Method: 7471A - Mercury (CVAA)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.040	0.0080	mg/Kg		05/16/22 14:28	05/16/22 18:56	1

# QC Sample Results

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

Job ID: 320-87849-1

## Method: 314.0 - Perchlorate (IC)

**Lab Sample ID: MRL 320-589278/12**  
**Matrix: Solid**  
**Analysis Batch: 589278**

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

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Perchlorate	3.99	4.11		ug/L		103	75 - 125

**Lab Sample ID: MRL 320-590459/12**  
**Matrix: Solid**  
**Analysis Batch: 590459**

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

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Perchlorate	3.99	3.71	J	ug/L		93	75 - 125

**Lab Sample ID: MB 320-588326/1-A**  
**Matrix: Solid**  
**Analysis Batch: 589278**

**Client Sample ID: Method Blank**  
**Prep Type: Soluble**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	ND		40	20	ug/Kg			05/20/22 15:30	1

**Lab Sample ID: LCS 320-588326/2-A**  
**Matrix: Solid**  
**Analysis Batch: 589278**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Soluble**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Perchlorate	502	466		ug/Kg		93	75 - 125

## Method: 6010B - Metals (ICP)

**Lab Sample ID: MB 320-587911/1-A**  
**Matrix: Solid**  
**Analysis Batch: 588135**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 587911**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	ND		0.50	0.090	mg/Kg		05/16/22 06:30	05/16/22 14:05	1
Arsenic	ND		2.0	1.3	mg/Kg		05/16/22 06:30	05/16/22 14:05	1
Barium	ND		1.0	0.12	mg/Kg		05/16/22 06:30	05/16/22 14:05	1
Beryllium	ND		0.20	0.030	mg/Kg		05/16/22 06:30	05/16/22 14:05	1
Cadmium	ND		0.20	0.030	mg/Kg		05/16/22 06:30	05/16/22 14:05	1
Cobalt	ND		0.50	0.25	mg/Kg		05/16/22 06:30	05/16/22 14:05	1
Chromium	ND		0.50	0.14	mg/Kg		05/16/22 06:30	05/16/22 14:05	1
Copper	ND		1.5	0.22	mg/Kg		05/16/22 06:30	05/16/22 14:05	1
Molybdenum	ND		2.0	0.75	mg/Kg		05/16/22 06:30	05/16/22 14:05	1
Nickel	ND		1.0	0.24	mg/Kg		05/16/22 06:30	05/16/22 14:05	1
Lead	ND		1.0	0.26	mg/Kg		05/16/22 06:30	05/16/22 14:05	1
Selenium	ND		2.0	1.4	mg/Kg		05/16/22 06:30	05/16/22 14:05	1
Antimony	ND		2.0	0.94	mg/Kg		05/16/22 06:30	05/16/22 14:05	1
Thallium	ND		2.0	0.84	mg/Kg		05/16/22 06:30	05/16/22 14:05	1
Vanadium	ND		0.50	0.19	mg/Kg		05/16/22 06:30	05/16/22 14:05	1
Zinc	ND		2.0	0.19	mg/Kg		05/16/22 06:30	05/16/22 14:05	1

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# QC Sample Results

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

Job ID: 320-87849-1

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

**Lab Sample ID: LCS 320-587911/2-A**  
**Matrix: Solid**  
**Analysis Batch: 588135**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 587911**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Silver	5.05	4.40		mg/Kg		87	80 - 120
Arsenic	50.0	47.8		mg/Kg		96	80 - 120
Barium	50.0	47.3		mg/Kg		95	80 - 120
Beryllium	25.0	24.4		mg/Kg		98	80 - 120
Cadmium	25.0	24.8		mg/Kg		99	80 - 120
Cobalt	25.0	24.0		mg/Kg		96	80 - 120
Chromium	25.0	24.3		mg/Kg		97	80 - 120
Copper	25.0	22.8		mg/Kg		91	80 - 120
Molybdenum	24.9	24.1		mg/Kg		97	80 - 120
Nickel	25.0	24.3		mg/Kg		97	80 - 120
Lead	25.0	25.3		mg/Kg		101	80 - 120
Selenium	50.0	45.6		mg/Kg		91	80 - 120
Antimony	50.0	49.1		mg/Kg		98	80 - 120
Thallium	50.0	49.3		mg/Kg		99	80 - 120
Vanadium	25.0	24.0		mg/Kg		96	80 - 120
Zinc	49.9	50.0		mg/Kg		100	80 - 120

**Lab Sample ID: MB 320-588470/1-A**  
**Matrix: Solid**  
**Analysis Batch: 588669**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 588470**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	ND		0.50	0.090	mg/Kg		05/18/22 06:30	05/18/22 14:28	1
Arsenic	ND		2.0	1.3	mg/Kg		05/18/22 06:30	05/18/22 14:28	1
Barium	ND		1.0	0.12	mg/Kg		05/18/22 06:30	05/18/22 14:28	1
Beryllium	ND		0.20	0.030	mg/Kg		05/18/22 06:30	05/18/22 14:28	1
Cadmium	ND		0.20	0.030	mg/Kg		05/18/22 06:30	05/18/22 14:28	1
Cobalt	ND		0.50	0.25	mg/Kg		05/18/22 06:30	05/18/22 14:28	1
Chromium	ND		0.50	0.14	mg/Kg		05/18/22 06:30	05/18/22 14:28	1
Copper	ND		1.5	0.22	mg/Kg		05/18/22 06:30	05/18/22 14:28	1
Molybdenum	ND		2.0	0.75	mg/Kg		05/18/22 06:30	05/18/22 14:28	1
Nickel	ND		1.0	0.24	mg/Kg		05/18/22 06:30	05/18/22 14:28	1
Lead	ND		1.0	0.26	mg/Kg		05/18/22 06:30	05/18/22 14:28	1
Selenium	ND		2.0	1.4	mg/Kg		05/18/22 06:30	05/18/22 14:28	1
Antimony	ND		2.0	0.94	mg/Kg		05/18/22 06:30	05/18/22 14:28	1
Thallium	ND		2.0	0.84	mg/Kg		05/18/22 06:30	05/18/22 14:28	1
Vanadium	ND		0.50	0.19	mg/Kg		05/18/22 06:30	05/18/22 14:28	1
Zinc	ND		2.0	0.19	mg/Kg		05/18/22 06:30	05/18/22 14:28	1

**Lab Sample ID: LCS 320-588470/2-A**  
**Matrix: Solid**  
**Analysis Batch: 588669**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 588470**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Silver	5.05	4.83		mg/Kg		96	80 - 120
Arsenic	50.0	49.8		mg/Kg		100	80 - 120
Barium	50.0	49.5		mg/Kg		99	80 - 120
Beryllium	25.0	25.3		mg/Kg		101	80 - 120
Cadmium	25.0	26.0		mg/Kg		104	80 - 120

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# QC Sample Results

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

Job ID: 320-87849-1

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

**Lab Sample ID: LCS 320-588470/2-A**  
**Matrix: Solid**  
**Analysis Batch: 588669**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 588470**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Cobalt	25.0	25.1		mg/Kg		100	80 - 120
Chromium	25.0	25.4		mg/Kg		102	80 - 120
Copper	25.0	24.2		mg/Kg		97	80 - 120
Molybdenum	24.9	25.0		mg/Kg		100	80 - 120
Nickel	25.0	25.4		mg/Kg		102	80 - 120
Lead	25.0	25.0		mg/Kg		100	80 - 120
Selenium	50.0	48.4		mg/Kg		97	80 - 120
Antimony	50.0	50.1		mg/Kg		100	80 - 120
Thallium	50.0	49.7		mg/Kg		99	80 - 120
Vanadium	25.0	25.2		mg/Kg		101	80 - 120
Zinc	49.9	51.7		mg/Kg		104	80 - 120

**Lab Sample ID: 320-87849-5 MS**  
**Matrix: Solid**  
**Analysis Batch: 588669**

**Client Sample ID: HV-2-220511**  
**Prep Type: Total/NA**  
**Prep Batch: 588470**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Silver	1.1		5.10	5.39		mg/Kg		84	80 - 120
Arsenic	4.5		50.5	48.2		mg/Kg		87	80 - 120
Barium	54		50.5	97.4		mg/Kg		87	80 - 120
Beryllium	0.84		25.3	23.7		mg/Kg		91	80 - 120
Cadmium	0.094	J	25.3	23.2		mg/Kg		92	80 - 120
Cobalt	4.0		25.3	26.7		mg/Kg		90	80 - 120
Chromium	14		25.3	36.1		mg/Kg		86	80 - 120
Copper	7.1		25.3	29.8		mg/Kg		90	80 - 120
Molybdenum	ND		25.1	22.1		mg/Kg		88	80 - 120
Nickel	8.8		25.3	31.0		mg/Kg		88	80 - 120
Lead	9.5		25.3	32.2		mg/Kg		90	80 - 120
Selenium	ND		50.5	42.7		mg/Kg		84	80 - 120
Thallium	0.92	J	50.5	45.4		mg/Kg		88	80 - 120
Vanadium	21		25.3	45.3		mg/Kg		95	80 - 120
Zinc	48		50.4	91.1		mg/Kg		86	80 - 120

**Lab Sample ID: 320-87849-5 MSD**  
**Matrix: Solid**  
**Analysis Batch: 588669**

**Client Sample ID: HV-2-220511**  
**Prep Type: Total/NA**  
**Prep Batch: 588470**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Silver	1.1		5.10	5.60		mg/Kg		88	80 - 120	4	35
Arsenic	4.5		50.5	48.9		mg/Kg		88	80 - 120	1	35
Barium	54		50.5	106		mg/Kg		104	80 - 120	8	35
Beryllium	0.84		25.3	24.1		mg/Kg		92	80 - 120	2	35
Cadmium	0.094	J	25.3	23.6		mg/Kg		93	80 - 120	2	35
Cobalt	4.0		25.3	27.4		mg/Kg		93	80 - 120	3	35
Chromium	14		25.3	36.8		mg/Kg		89	80 - 120	2	35
Copper	7.1		25.3	30.5		mg/Kg		93	80 - 120	2	35
Molybdenum	ND		25.1	22.7		mg/Kg		90	80 - 120	3	35
Nickel	8.8		25.3	31.6		mg/Kg		90	80 - 120	2	35
Lead	9.5		25.3	33.0		mg/Kg		93	80 - 120	3	35

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# QC Sample Results

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

Job ID: 320-87849-1

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

**Lab Sample ID: 320-87849-5 MSD**  
**Matrix: Solid**  
**Analysis Batch: 588669**

**Client Sample ID: HV-2-220511**  
**Prep Type: Total/NA**  
**Prep Batch: 588470**

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec	RPD	RPD
	Result	Qualifier	Added	Result	Qualifier				Limits	Limit	
Selenium	ND		50.5	43.4		mg/Kg		86	80 - 120	2	35
Thallium	0.92	J	50.5	46.2		mg/Kg		90	80 - 120	2	35
Vanadium	21		25.3	46.7		mg/Kg		101	80 - 120	3	35
Zinc	48		50.4	96.3		mg/Kg		96	80 - 120	5	35

**Lab Sample ID: MB 320-601786/1-A**  
**Matrix: Solid**  
**Analysis Batch: 602248**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 601786**

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Silver	ND		0.50	0.090	mg/Kg		07/08/22 15:59	07/11/22 13:06	1
Arsenic	ND		2.0	1.3	mg/Kg		07/08/22 15:59	07/11/22 13:06	1
Barium	ND		1.0	0.12	mg/Kg		07/08/22 15:59	07/11/22 13:06	1
Beryllium	ND		0.20	0.030	mg/Kg		07/08/22 15:59	07/11/22 13:06	1
Cadmium	ND		0.20	0.030	mg/Kg		07/08/22 15:59	07/11/22 13:06	1
Cobalt	ND		0.50	0.25	mg/Kg		07/08/22 15:59	07/11/22 13:06	1
Chromium	0.164	J	0.50	0.14	mg/Kg		07/08/22 15:59	07/11/22 13:06	1
Copper	0.240	J	1.5	0.22	mg/Kg		07/08/22 15:59	07/11/22 13:06	1
Molybdenum	ND		2.0	0.75	mg/Kg		07/08/22 15:59	07/11/22 13:06	1
Nickel	ND		1.0	0.24	mg/Kg		07/08/22 15:59	07/11/22 13:06	1
Lead	ND		1.0	0.26	mg/Kg		07/08/22 15:59	07/11/22 13:06	1
Selenium	ND		2.0	1.4	mg/Kg		07/08/22 15:59	07/11/22 13:06	1
Antimony	ND		2.0	0.94	mg/Kg		07/08/22 15:59	07/11/22 13:06	1
Thallium	ND		2.0	0.84	mg/Kg		07/08/22 15:59	07/11/22 13:06	1
Vanadium	ND		0.50	0.19	mg/Kg		07/08/22 15:59	07/11/22 13:06	1
Zinc	ND		2.0	0.19	mg/Kg		07/08/22 15:59	07/11/22 13:06	1

**Lab Sample ID: LCS 320-601786/2-A**  
**Matrix: Solid**  
**Analysis Batch: 602248**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 601786**

Analyte	Spike Added	LCS	LCS	Unit	D	%Rec	%Rec
		Result	Qualifier				Limits
Silver	5.05	4.22		mg/Kg		84	80 - 120
Arsenic	50.0	43.3		mg/Kg		87	80 - 120
Barium	50.0	44.0		mg/Kg		88	80 - 120
Beryllium	25.0	23.0		mg/Kg		92	80 - 120
Cadmium	25.0	22.4		mg/Kg		90	80 - 120
Cobalt	25.0	22.8		mg/Kg		91	80 - 120
Chromium	25.0	23.4		mg/Kg		93	80 - 120
Copper	25.0	21.3		mg/Kg		85	80 - 120
Molybdenum	25.0	22.8		mg/Kg		91	80 - 120
Nickel	25.0	22.8		mg/Kg		91	80 - 120
Lead	25.0	23.2		mg/Kg		93	80 - 120
Selenium	50.0	41.5		mg/Kg		83	80 - 120
Antimony	50.0	44.1		mg/Kg		88	80 - 120
Thallium	50.0	45.7		mg/Kg		91	80 - 120
Vanadium	25.0	22.7		mg/Kg		91	80 - 120
Zinc	49.9	45.6		mg/Kg		91	80 - 120

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# QC Sample Results

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

Job ID: 320-87849-1

## Method: 7471A - Mercury (CVAA)

**Lab Sample ID: MB 320-588008/11-A**  
**Matrix: Solid**  
**Analysis Batch: 588201**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 588008**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.040	0.0080	mg/Kg		05/16/22 14:28	05/16/22 17:48	1

**Lab Sample ID: LCS 320-588008/12-A**  
**Matrix: Solid**  
**Analysis Batch: 588201**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 588008**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	0.167	0.158		mg/Kg		95	86 - 114

**Lab Sample ID: LCSD 320-588008/13-A**  
**Matrix: Solid**  
**Analysis Batch: 588201**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**  
**Prep Batch: 588008**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Mercury	0.167	0.167		mg/Kg		100	86 - 114	6	17



# QC Association Summary

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

Job ID: 320-87849-1

## HPLC/IC

### Leach Batch: 588326

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-87849-1	CIT-1-220510	Soluble	Solid	DI Leach	
320-87849-2	TF-1-220510	Soluble	Solid	DI Leach	
320-87849-3	HV-1-220511	Soluble	Solid	DI Leach	
320-87849-4	HV-SED-1-220511	Soluble	Solid	DI Leach	
320-87849-5	HV-2-220511	Soluble	Solid	DI Leach	
320-87849-6	KC-1-220511	Soluble	Solid	DI Leach	
320-87849-7	GF-1-220512	Soluble	Solid	DI Leach	
320-87849-8	AT-1-220512	Soluble	Solid	DI Leach	
MB 320-588326/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 320-588326/2-A	Lab Control Sample	Soluble	Solid	DI Leach	

### Analysis Batch: 589278

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-87849-4	HV-SED-1-220511	Soluble	Solid	314.0	588326
MB 320-588326/1-A	Method Blank	Soluble	Solid	314.0	588326
LCS 320-588326/2-A	Lab Control Sample	Soluble	Solid	314.0	588326
MRL 320-589278/12	Lab Control Sample	Total/NA	Solid	314.0	

### Analysis Batch: 590459

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-87849-1	CIT-1-220510	Soluble	Solid	314.0	588326
320-87849-2	TF-1-220510	Soluble	Solid	314.0	588326
320-87849-3	HV-1-220511	Soluble	Solid	314.0	588326
320-87849-5	HV-2-220511	Soluble	Solid	314.0	588326
320-87849-6	KC-1-220511	Soluble	Solid	314.0	588326
320-87849-7	GF-1-220512	Soluble	Solid	314.0	588326
320-87849-8	AT-1-220512	Soluble	Solid	314.0	588326
MRL 320-590459/12	Lab Control Sample	Total/NA	Solid	314.0	

## Metals

### Prep Batch: 587911

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-87849-1	CIT-1-220510	Total/NA	Solid	3050B	
320-87849-2	TF-1-220510	Total/NA	Solid	3050B	
320-87849-3	HV-1-220511	Total/NA	Solid	3050B	
320-87849-4	HV-SED-1-220511	Total/NA	Solid	3050B	
MB 320-587911/1-A	Method Blank	Total/NA	Solid	3050B	
LCS 320-587911/2-A	Lab Control Sample	Total/NA	Solid	3050B	

### Prep Batch: 588008

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-87849-1	CIT-1-220510	Total/NA	Solid	7471A	
320-87849-2	TF-1-220510	Total/NA	Solid	7471A	
320-87849-3	HV-1-220511	Total/NA	Solid	7471A	
320-87849-4	HV-SED-1-220511	Total/NA	Solid	7471A	
320-87849-5	HV-2-220511	Total/NA	Solid	7471A	
320-87849-6	KC-1-220511	Total/NA	Solid	7471A	
320-87849-7	GF-1-220512	Total/NA	Solid	7471A	
320-87849-8	AT-1-220512	Total/NA	Solid	7471A	
MB 320-588008/11-A	Method Blank	Total/NA	Solid	7471A	

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# QC Association Summary

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

Job ID: 320-87849-1

## Metals (Continued)

### Prep Batch: 588008 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 320-588008/12-A	Lab Control Sample	Total/NA	Solid	7471A	
LCSD 320-588008/13-A	Lab Control Sample Dup	Total/NA	Solid	7471A	

### Analysis Batch: 588135

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 320-587911/1-A	Method Blank	Total/NA	Solid	6010B	587911
LCS 320-587911/2-A	Lab Control Sample	Total/NA	Solid	6010B	587911

### Analysis Batch: 588201

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-87849-1	CIT-1-220510	Total/NA	Solid	7471A	588008
320-87849-2	TF-1-220510	Total/NA	Solid	7471A	588008
320-87849-3	HV-1-220511	Total/NA	Solid	7471A	588008
320-87849-4	HV-SED-1-220511	Total/NA	Solid	7471A	588008
320-87849-5	HV-2-220511	Total/NA	Solid	7471A	588008
320-87849-6	KC-1-220511	Total/NA	Solid	7471A	588008
320-87849-7	GF-1-220512	Total/NA	Solid	7471A	588008
320-87849-8	AT-1-220512	Total/NA	Solid	7471A	588008
MB 320-588008/11-A	Method Blank	Total/NA	Solid	7471A	588008
LCS 320-588008/12-A	Lab Control Sample	Total/NA	Solid	7471A	588008
LCSD 320-588008/13-A	Lab Control Sample Dup	Total/NA	Solid	7471A	588008

### Analysis Batch: 588239

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-87849-1	CIT-1-220510	Total/NA	Solid	6010B	587911
320-87849-2	TF-1-220510	Total/NA	Solid	6010B	587911
320-87849-3	HV-1-220511	Total/NA	Solid	6010B	587911
320-87849-4	HV-SED-1-220511	Total/NA	Solid	6010B	587911

### Prep Batch: 588470

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-87849-5	HV-2-220511	Total/NA	Solid	3050B	
320-87849-6	KC-1-220511	Total/NA	Solid	3050B	
320-87849-7	GF-1-220512	Total/NA	Solid	3050B	
320-87849-8	AT-1-220512	Total/NA	Solid	3050B	
MB 320-588470/1-A	Method Blank	Total/NA	Solid	3050B	
LCS 320-588470/2-A	Lab Control Sample	Total/NA	Solid	3050B	
320-87849-5 MS	HV-2-220511	Total/NA	Solid	3050B	
320-87849-5 MSD	HV-2-220511	Total/NA	Solid	3050B	

### Analysis Batch: 588669

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-87849-5	HV-2-220511	Total/NA	Solid	6010B	588470
320-87849-6	KC-1-220511	Total/NA	Solid	6010B	588470
320-87849-7	GF-1-220512	Total/NA	Solid	6010B	588470
320-87849-8	AT-1-220512	Total/NA	Solid	6010B	588470
MB 320-588470/1-A	Method Blank	Total/NA	Solid	6010B	588470
LCS 320-588470/2-A	Lab Control Sample	Total/NA	Solid	6010B	588470
320-87849-5 MS	HV-2-220511	Total/NA	Solid	6010B	588470
320-87849-5 MSD	HV-2-220511	Total/NA	Solid	6010B	588470

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# QC Association Summary

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

Job ID: 320-87849-1

## Metals

### Prep Batch: 601786

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-87849-5	HV-2-220511	Total/NA	Solid	3050B	
320-87849-6	KC-1-220511	Total/NA	Solid	3050B	
320-87849-7	GF-1-220512	Total/NA	Solid	3050B	
320-87849-8	AT-1-220512	Total/NA	Solid	3050B	
MB 320-601786/1-A	Method Blank	Total/NA	Solid	3050B	
LCS 320-601786/2-A	Lab Control Sample	Total/NA	Solid	3050B	

### Analysis Batch: 602248

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-87849-5	HV-2-220511	Total/NA	Solid	6010B	601786
320-87849-6	KC-1-220511	Total/NA	Solid	6010B	601786
320-87849-7	GF-1-220512	Total/NA	Solid	6010B	601786
320-87849-8	AT-1-220512	Total/NA	Solid	6010B	601786
MB 320-601786/1-A	Method Blank	Total/NA	Solid	6010B	601786
LCS 320-601786/2-A	Lab Control Sample	Total/NA	Solid	6010B	601786

# Lab Chronicle

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

Job ID: 320-87849-1

**Client Sample ID: CIT-1-220510**

**Lab Sample ID: 320-87849-1**

**Date Collected: 05/10/22 14:00**

**Matrix: Solid**

**Date Received: 05/13/22 09:35**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			5.04 g	50 mL	588326	05/17/22 12:23	KMW	TAL SAC
Soluble	Analysis	314.0		25			590459	05/25/22 15:48	TCS	TAL SAC
Total/NA	Prep	3050B			1.04 g	100 mL	587911	05/16/22 06:30	NIM	TAL SAC
Total/NA	Analysis	6010B		1			588239	05/16/22 15:54	SP	TAL SAC
Total/NA	Prep	7471A			0.60 g	50 mL	588008	05/16/22 14:28	JAP	TAL SAC
Total/NA	Analysis	7471A		1			588201	05/16/22 18:44	JP	TAL SAC

**Client Sample ID: TF-1-220510**

**Lab Sample ID: 320-87849-2**

**Date Collected: 05/10/22 14:35**

**Matrix: Solid**

**Date Received: 05/13/22 09:35**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			5.04 g	50 mL	588326	05/17/22 12:23	KMW	TAL SAC
Soluble	Analysis	314.0		10			590459	05/25/22 16:11	TCS	TAL SAC
Total/NA	Prep	3050B			1.04 g	100 mL	587911	05/16/22 06:30	NIM	TAL SAC
Total/NA	Analysis	6010B		1			588239	05/16/22 15:58	SP	TAL SAC
Total/NA	Prep	7471A			0.58 g	50 mL	588008	05/16/22 14:28	JAP	TAL SAC
Total/NA	Analysis	7471A		1			588201	05/16/22 18:46	JP	TAL SAC

**Client Sample ID: HV-1-220511**

**Lab Sample ID: 320-87849-3**

**Date Collected: 05/11/22 11:50**

**Matrix: Solid**

**Date Received: 05/13/22 09:35**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			4.99 g	50 mL	588326	05/17/22 12:23	KMW	TAL SAC
Soluble	Analysis	314.0		1			590459	05/25/22 18:02	TCS	TAL SAC
Total/NA	Prep	3050B			1.01 g	100 mL	587911	05/16/22 06:30	NIM	TAL SAC
Total/NA	Analysis	6010B		1			588239	05/16/22 16:01	SP	TAL SAC
Total/NA	Prep	7471A			0.62 g	50 mL	588008	05/16/22 14:28	JAP	TAL SAC
Total/NA	Analysis	7471A		1			588201	05/16/22 18:48	JP	TAL SAC

**Client Sample ID: HV-SED-1-220511**

**Lab Sample ID: 320-87849-4**

**Date Collected: 05/11/22 12:00**

**Matrix: Solid**

**Date Received: 05/13/22 09:35**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			4.96 g	50 mL	588326	05/17/22 12:23	KMW	TAL SAC
Soluble	Analysis	314.0		1			589278	05/20/22 20:42	AP1	TAL SAC
Total/NA	Prep	3050B			1.03 g	100 mL	587911	05/16/22 06:30	NIM	TAL SAC
Total/NA	Analysis	6010B		1			588239	05/16/22 16:05	SP	TAL SAC
Total/NA	Prep	7471A			0.64 g	50 mL	588008	05/16/22 14:28	JAP	TAL SAC
Total/NA	Analysis	7471A		1			588201	05/16/22 18:49	JP	TAL SAC

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# Lab Chronicle

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

Job ID: 320-87849-1

**Client Sample ID: HV-2-220511**

**Lab Sample ID: 320-87849-5**

**Date Collected: 05/11/22 12:15**

**Matrix: Solid**

**Date Received: 05/13/22 09:35**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			4.98 g	50 mL	588326	05/17/22 12:23	KMW	TAL SAC
Soluble	Analysis	314.0		5			590459	05/25/22 16:33	TCS	TAL SAC
Total/NA	Prep	3050B			1.01 g	100 mL	601786	07/08/22 15:59	JP	TAL SAC
Total/NA	Analysis	6010B		1			602248	07/11/22 14:54	SP	TAL SAC
Total/NA	Prep	3050B			0.99 g	100 mL	588470	05/18/22 06:30	NIM	TAL SAC
Total/NA	Analysis	6010B		1			588669	05/18/22 14:36	SP	TAL SAC
Total/NA	Prep	7471A			0.64 g	50 mL	588008	05/16/22 14:28	JAP	TAL SAC
Total/NA	Analysis	7471A		1			588201	05/16/22 18:51	JP	TAL SAC

**Client Sample ID: KC-1-220511**

**Lab Sample ID: 320-87849-6**

**Date Collected: 05/11/22 14:25**

**Matrix: Solid**

**Date Received: 05/13/22 09:35**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			5.03 g	50 mL	588326	05/17/22 12:23	KMW	TAL SAC
Soluble	Analysis	314.0		5			590459	05/25/22 16:55	TCS	TAL SAC
Total/NA	Prep	3050B			1.00 g	100 mL	601786	07/08/22 15:59	JP	TAL SAC
Total/NA	Analysis	6010B		1			602248	07/11/22 14:58	SP	TAL SAC
Total/NA	Prep	3050B			0.98 g	100 mL	588470	05/18/22 06:30	NIM	TAL SAC
Total/NA	Analysis	6010B		1			588669	05/18/22 15:06	SP	TAL SAC
Total/NA	Prep	7471A			0.64 g	50 mL	588008	05/16/22 14:28	JAP	TAL SAC
Total/NA	Analysis	7471A		1			588201	05/16/22 18:53	JP	TAL SAC

**Client Sample ID: GF-1-220512**

**Lab Sample ID: 320-87849-7**

**Date Collected: 05/12/22 07:45**

**Matrix: Solid**

**Date Received: 05/13/22 09:35**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			5.02 g	50 mL	588326	05/17/22 12:23	KMW	TAL SAC
Soluble	Analysis	314.0		10			590459	05/25/22 17:17	TCS	TAL SAC
Total/NA	Prep	3050B			1.03 g	100 mL	601786	07/08/22 15:59	JP	TAL SAC
Total/NA	Analysis	6010B		1			602248	07/11/22 15:02	SP	TAL SAC
Total/NA	Prep	3050B			1.06 g	100 mL	588470	05/18/22 06:30	NIM	TAL SAC
Total/NA	Analysis	6010B		1			588669	05/18/22 15:09	SP	TAL SAC
Total/NA	Prep	7471A			0.62 g	50 mL	588008	05/16/22 14:28	JAP	TAL SAC
Total/NA	Analysis	7471A		1			588201	05/16/22 18:54	JP	TAL SAC

**Client Sample ID: AT-1-220512**

**Lab Sample ID: 320-87849-8**

**Date Collected: 05/12/22 08:20**

**Matrix: Solid**

**Date Received: 05/13/22 09:35**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			5.04 g	50 mL	588326	05/17/22 12:23	KMW	TAL SAC
Soluble	Analysis	314.0		25			590459	05/25/22 17:40	TCS	TAL SAC

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# Lab Chronicle

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

Job ID: 320-87849-1

**Client Sample ID: AT-1-220512**

**Lab Sample ID: 320-87849-8**

**Date Collected: 05/12/22 08:20**

**Matrix: Solid**

**Date Received: 05/13/22 09:35**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.05 g	100 mL	601786	07/08/22 15:59	JP	TAL SAC
Total/NA	Analysis	6010B		1			602248	07/11/22 15:05	SP	TAL SAC
Total/NA	Prep	3050B			1.00 g	100 mL	588470	05/18/22 06:30	NIM	TAL SAC
Total/NA	Analysis	6010B		1			588669	05/18/22 15:13	SP	TAL SAC
Total/NA	Prep	7471A			0.60 g	50 mL	588008	05/16/22 14:28	JAP	TAL SAC
Total/NA	Analysis	7471A		1			588201	05/16/22 18:56	JP	TAL SAC

**Laboratory References:**

TAL SAC = Eurofins Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600



# Accreditation/Certification Summary

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

Job ID: 320-87849-1

## Laboratory: Eurofins Sacramento

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
California	State	2897	01-31-23

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
314.0		Solid	Perchlorate

- 1
- 2
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- 13
- 14

# Method Summary

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

Job ID: 320-87849-1

Method	Method Description	Protocol	Laboratory
314.0	Perchlorate (IC)	EPA	TAL SAC
6010B	Metals (ICP)	SW846	TAL SAC
7471A	Mercury (CVAA)	SW846	TAL SAC
3050B	Preparation, Metals	SW846	TAL SAC
7471A	Preparation, Mercury	SW846	TAL SAC
DI Leach	Deionized Water Leaching Procedure	ASTM	TAL SAC

**Protocol References:**

ASTM = ASTM International

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 SAC = Eurofins Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600





# Sample Summary


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

Job ID: 320-87849-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
320-87849-1	CIT-1-220510	Solid	05/10/22 14:00	05/13/22 09:35
320-87849-2	TF-1-220510	Solid	05/10/22 14:35	05/13/22 09:35
320-87849-3	HV-1-220511	Solid	05/11/22 11:50	05/13/22 09:35
320-87849-4	HV-SED-1-220511	Solid	05/11/22 12:00	05/13/22 09:35
320-87849-5	HV-2-220511	Solid	05/11/22 12:15	05/13/22 09:35
320-87849-6	KC-1-220511	Solid	05/11/22 14:25	05/13/22 09:35
320-87849-7	GF-1-220512	Solid	05/12/22 07:45	05/13/22 09:35
320-87849-8	AT-1-220512	Solid	05/12/22 08:20	05/13/22 09:35

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- 14



FROM: GSI Environmental Inc. 155 Grand Ave. Suite 704 Oakland, CA 94612 (510) 463-8484		PROJECT NAME: <b>AJU-BB</b>		PROJECT NO.: <b>5182</b>																																																																																																						
TEL: (510) 463-8484		PROJECT CONTACT: <b>Matt Goertz</b>		LAB CONTACT: <b>Afsaneh Salimpour (West Sac)</b>																																																																																																						
E-MAIL: <a href="mailto:mpgoertz@gsi-net.com">mpgoertz@gsi-net.com</a>		GLOBAL ID: <b>JIV/CDB</b>		SAMPLER(S): (PRINT)																																																																																																						
LABORATORY: <b>Eurofins</b>		<b>REQUESTED ANALYSES</b> Please check box or fill in blank as needed.																																																																																																								
TURNAROUND TIME: <input type="checkbox"/> 24 HR <input type="checkbox"/> 48 HR <input type="checkbox"/> 72 HR <input type="checkbox"/> 5 DAYS <input checked="" type="checkbox"/> STANDARD		<table border="1"> <thead> <tr> <th rowspan="2">LAB USE ONLY</th> <th rowspan="2">SAMPLE ID</th> <th colspan="2">SAMPLING</th> <th rowspan="2">NO. OF CONT.</th> <th rowspan="2">MATRIX</th> <th rowspan="2">Unpreserved</th> <th rowspan="2">Preserved</th> <th rowspan="2">Field Filtered</th> <th rowspan="2">Title 22 Metals (6010/7470)</th> <th rowspan="2">Perchlorate (314.0)</th> </tr> <tr> <th>DATE</th> <th>TIME</th> </tr> </thead> <tbody> <tr> <td></td> <td>CIT-1-220510</td> <td>5/10/22</td> <td>1400</td> <td>1</td> <td>S</td> <td></td> <td></td> <td></td> <td>X</td> <td>X</td> </tr> <tr> <td></td> <td>TF-1-220510</td> <td>5/10/22</td> <td>1435</td> <td>1</td> <td></td> <td></td> <td></td> <td></td> <td>X</td> <td>X</td> </tr> <tr> <td></td> <td>HV-1-220511</td> <td>5/11/22</td> <td>1150</td> <td>1</td> <td></td> <td></td> <td></td> <td></td> <td>X</td> <td>X</td> </tr> <tr> <td></td> <td>HV-5ED-1-220511</td> <td>5/11/22</td> <td>1200</td> <td>1</td> <td></td> <td></td> <td></td> <td></td> <td>X</td> <td>X</td> </tr> <tr> <td></td> <td>HV-2-220511</td> <td>5/11/22</td> <td>1215</td> <td>1</td> <td></td> <td></td> <td></td> <td></td> <td>X</td> <td>X</td> </tr> <tr> <td></td> <td>KC-1-220511</td> <td>5/11/22</td> <td>1425</td> <td>1</td> <td></td> <td></td> <td></td> <td></td> <td>X</td> <td>X</td> </tr> <tr> <td></td> <td>GF-1-220512</td> <td>5/12/22</td> <td>0745</td> <td>1</td> <td></td> <td></td> <td></td> <td></td> <td>X</td> <td>X</td> </tr> <tr> <td></td> <td>AT-1-220512</td> <td>5/12/22</td> <td>0820</td> <td>1</td> <td></td> <td></td> <td></td> <td></td> <td>X</td> <td>X</td> </tr> </tbody> </table>				LAB USE ONLY	SAMPLE ID	SAMPLING		NO. OF CONT.	MATRIX	Unpreserved	Preserved	Field Filtered	Title 22 Metals (6010/7470)	Perchlorate (314.0)	DATE	TIME		CIT-1-220510	5/10/22	1400	1	S				X	X		TF-1-220510	5/10/22	1435	1					X	X		HV-1-220511	5/11/22	1150	1					X	X		HV-5ED-1-220511	5/11/22	1200	1					X	X		HV-2-220511	5/11/22	1215	1					X	X		KC-1-220511	5/11/22	1425	1					X	X		GF-1-220512	5/12/22	0745	1					X	X		AT-1-220512	5/12/22	0820	1					X	X
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SPECIAL INSTRUCTIONS:		 320-87849 Chain of Custody																																																																																																								
Relinquished by: (Signature) <i>[Signature]</i>		Received by: (Signature) <i>[Signature]</i>		Date: <u>5/12/22</u> Time: <u>12:18</u>																																																																																																						
Relinquished by: (Signature) <i>[Signature]</i>		Received by: (Signature) <i>[Signature]</i>		Date: <u>5/12/22</u> Time: <u>17:00</u>																																																																																																						
Relinquished by: (Signature) <i>[Signature]</i>		Received by: (Signature) <i>[Signature]</i>		Date: <u>5/13/22</u> Time: <u>09:35</u>																																																																																																						

NOT Relinquished 505-13-11

2-113.8 IR 96

0.4% Vol

- 1
- 2
- 3
- 4
- 5
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- 9
- 10
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- 12
- 13
- 14

## Login Sample Receipt Checklist

Client: GSI Environmental, Inc

Job Number: 320-87849-1

**Login Number: 87849**

**List Source: Eurofins Sacramento**

**List Number: 1**

**Creator: Oropeza, Salvador**

Question	Answer	Comment
Radioactivity wasn't checked or is <=/ background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	seal
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	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.	False	COC not relinquished.
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	



June 06, 2022

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

Re: Near SSFL  
Work Order: 579886

Dear Travis Wicks:

GEL Laboratories, LLC (GEL) appreciates the opportunity to provide the enclosed analytical results for the sample(s) we received on May 13, 2022. This revised data report has been prepared and reviewed in accordance with GEL's standard operating procedures. This package has been revised to include the tritium distillation method for sample TF-1-220510. Please see email for further detail.

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](http://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. 1614.

Sincerely,

Delaney Stone  
Project Manager

Purchase Order: 5182  
Enclosures



**GEL LABORATORIES LLC**

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

**Certificate of Analysis Report  
for**

GSIE002 GSI Environmental Inc.

Client SDG: 579886 GEL Work Order: 579886

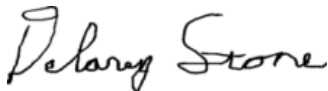
**The Qualifiers in this report are defined as follows:**

- \* 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, Delaney Stone.



Reviewed by \_\_\_\_\_

# GEL LABORATORIES LLC

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

## Certificate of Analysis

Company : GSI Environmental Inc.  
Address : 155 Grand Ave  
Suite 704  
Oakland, California 94612  
Contact: Travis Wicks  
Project: Near SSFL

Report Date: June 6, 2022

Client Sample ID: CIT-1-220510  
Sample ID: 579886001  
Matrix: Soil  
Collect Date: 10-MAY-22  
Receive Date: 13-MAY-22  
Collector: Client  
Moisture: 3.13%

Project: GSIE00119  
Client ID: GSIE002

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date	Time	Batch	Mtd.
<b>Rad Gamma Spec Analysis</b>														
<i>Gammascpec, Gamma, Solid (Standard List) "Dry Weight Corrected"</i>														
Cesium-137		0.115	+/-0.0575	0.0666	+/-0.0582	0.100	pCi/g			MXR1	05/18/22	0858	2266313	1
<b>Rad Gas Flow Proportional Counting</b>														
<i>GFPC, Sr90, Solid "Dry Weight Corrected"</i>														
Strontium-90	U	0.0476	+/-0.0567	0.0956	+/-0.0574	0.100	pCi/g			KP1	05/21/22	1121	2266327	2
<b>Rad Liquid Scintillation Analysis</b>														
<i>LSC, Tritium Vacuum, Soil "As Received"</i>														
Tritium	U	-0.0100	+/-0.0180	0.0332	+/-0.0180	0.200	pCi/g			CM3	05/26/22	0900	2266282	3

### The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CM2	05/13/22	1934	2265904

### The following Analytical Methods were performed

Method	Description
1	DOE HASL 300, 4.5.2.3/Ga-01-R
2	EPA 905.0 Modified/DOE RP501 Rev. 1 Modified
3	GL-RAD-A-002

Surrogate/Tracer Recovery	Test	Batch ID	Recovery%	Acceptable Limits
Strontium Carrier	GFPC, Sr90, Solid "Dry Weight Corrected"	2266327	75.5	(25%-125%)

# GEL LABORATORIES LLC

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

## Certificate of Analysis

Company : GSI Environmental Inc.  
Address : 155 Grand Ave  
Suite 704  
Oakland, California 94612

Report Date: June 6, 2022

Contact: Travis Wicks  
Project: Near SSFL

Client Sample ID: CIT-1-220510  
Sample ID: 579886001

Project: GSIE00119  
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

Mtd.: Method

PF: Prep Factor

RL: Reporting Limit

TPU: Total Propagated Uncertainty

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## Certificate of Analysis

Company : GSI Environmental Inc.  
 Address : 155 Grand Ave  
 Suite 704  
 Oakland, California 94612

Report Date: June 6, 2022

Contact: Travis Wicks

Project: Near SSFL

Client Sample ID: TF-1-220510

Project: GSIE00119

Sample ID: 579886002

Client ID: GSIE002

Matrix: Soil

Collect Date: 10-MAY-22

Receive Date: 13-MAY-22

Collector: Client

Moisture: 1.35%

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date	Time	Batch	Mtd.
<b>Rad Gamma Spec Analysis</b>														
<i>Gammasec, Gamma, Solid (Standard List) "Dry Weight Corrected"</i>														
Cesium-137	U	0.0203	+/-0.0280	0.0613	+/-0.0295	0.100	pCi/g			MXR1	05/18/22	1000	2266313	1
<b>Rad Gas Flow Proportional Counting</b>														
<i>GFPC, Sr90, Solid "Dry Weight Corrected"</i>														
Strontium-90	U	0.0143	+/-0.0548	0.0978	+/-0.0548	0.100	pCi/g			KP1	05/21/22	1121	2266327	2
<b>Rad Liquid Scintillation Analysis</b>														
<i>LSC, Tritium Distillation, Soil "As Received"</i>														
Tritium	U	-0.143	+/-0.507	0.974	+/-0.507	0.200	pCi/g			KXA1	06/02/22	1436	2272299	3

**The following Prep Methods were performed**

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CM2	05/13/22	1934	2265904

**The following Analytical Methods were performed**

Method	Description
1	DOE HASL 300, 4.5.2.3/Ga-01-R
2	EPA 905.0 Modified/DOE RP501 Rev. 1 Modified
3	EPA 906.0 Modified

Surrogate/Tracer Recovery	Test	Batch ID	Recovery%	Acceptable Limits
Strontium Carrier	GFPC, Sr90, Solid "Dry Weight Corrected"	2266327	73.1	(25%-125%)



# GEL LABORATORIES LLC

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## Certificate of Analysis

Company : GSI Environmental Inc.  
Address : 155 Grand Ave  
Suite 704  
Oakland, California 94612

Report Date: June 6, 2022

Contact: Travis Wicks

Project: Near SSFL

Client Sample ID: TF-1-220510

Sample ID: 579886002

Project: GSIE00119

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

Mtd.: Method

PF: Prep Factor

RL: Reporting Limit

TPU: Total Propagated Uncertainty

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## Certificate of Analysis

Company : GSI Environmental Inc.  
 Address : 155 Grand Ave  
 Suite 704  
 Oakland, California 94612

Report Date: June 6, 2022

Contact: Travis Wicks

Project: Near SSFL

Client Sample ID: HV-1-220511

Project: GSIE00119

Sample ID: 579886003

Client ID: GSIE002

Matrix: Soil

Collect Date: 11-MAY-22

Receive Date: 13-MAY-22

Collector: Client

Moisture: 2.65%

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date	Time	Batch	Mtd.
<b>Rad Gamma Spec Analysis</b>														
<i>Gammasec, Gamma, Solid (Standard List) "Dry Weight Corrected"</i>														
Cesium-137	U	-0.0101	+/-0.0280	0.0510	+/-0.0284	0.100	pCi/g			MXR1	05/18/22	1001	2266313	1
<b>Rad Gas Flow Proportional Counting</b>														
<i>GFPC, Sr90, Solid "Dry Weight Corrected"</i>														
Strontium-90	U	0.0750	+/-0.0594	0.0955	+/-0.0609	0.100	pCi/g			KP1	05/21/22	1121	2266327	2
<b>Rad Liquid Scintillation Analysis</b>														
<i>LSC, Tritium Vacuum, Soil "As Received"</i>														
Tritium	U	-0.00663	+/-0.0198	0.0361	+/-0.0198	0.200	pCi/g			CM3	05/26/22	0932	2266282	3

**The following Prep Methods were performed**

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CM2	05/13/22	1934	2265904

**The following Analytical Methods were performed**

Method	Description
1	DOE HASL 300, 4.5.2.3/Ga-01-R
2	EPA 905.0 Modified/DOE RP501 Rev. 1 Modified
3	GL-RAD-A-002

Surrogate/Tracer Recovery	Test	Batch ID	Recovery%	Acceptable Limits
Strontium Carrier	GFPC, Sr90, Solid "Dry Weight Corrected"	2266327	70.8	(25%-125%)

# GEL LABORATORIES LLC

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## Certificate of Analysis

Company : GSI Environmental Inc.  
Address : 155 Grand Ave  
Suite 704  
Oakland, California 94612

Report Date: June 6, 2022

Contact: Travis Wicks

Project: Near SSFL

Client Sample ID: HV-1-220511

Sample ID: 579886003

Project: GSIE00119

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

Mtd.: Method

PF: Prep Factor

RL: Reporting Limit

TPU: Total Propagated Uncertainty



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## Certificate of Analysis

Company : GSI Environmental Inc.  
 Address : 155 Grand Ave  
 Suite 704  
 Oakland, California 94612

Report Date: June 6, 2022

Contact: Travis Wicks

Project: Near SSFL

Client Sample ID: HV-SED-1-220511

Project: GSIE00119

Sample ID: 579886004

Client ID: GSIE002

Matrix: Soil

Collect Date: 11-MAY-22

Receive Date: 13-MAY-22

Collector: Client

Moisture: 11.9%

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date	Time	Batch	Mtd.
<b>Rad Gamma Spec Analysis</b>														
<i>Gammasec, Gamma, Solid (Standard List) "Dry Weight Corrected"</i>														
Cesium-137	U	0.0290	+/-0.0358	0.0747	+/-0.0382	0.100	pCi/g			MXR1	05/18/22	1001	2266313	1
<b>Rad Gas Flow Proportional Counting</b>														
<i>GFPC, Sr90, Solid "Dry Weight Corrected"</i>														
Strontium-90	U	0.0691	+/-0.0475	0.0736	+/-0.0493	0.100	pCi/g			KP1	05/24/22	1652	2266327	2
<b>Rad Liquid Scintillation Analysis</b>														
<i>LSC, Tritium Vacuum, Soil "As Received"</i>														
Tritium	U	-0.00728	+/-0.0317	0.0571	+/-0.0317	0.200	pCi/g			CM3	05/26/22	1003	2266282	3

**The following Prep Methods were performed**

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CM2	05/13/22	1934	2265904

**The following Analytical Methods were performed**

Method	Description
1	DOE HASL 300, 4.5.2.3/Ga-01-R
2	EPA 905.0 Modified/DOE RP501 Rev. 1 Modified
3	GL-RAD-A-002

Surrogate/Tracer Recovery	Test	Batch ID	Recovery%	Acceptable Limits
Strontium Carrier	GFPC, Sr90, Solid "Dry Weight Corrected"	2266327	66	(25%-125%)

# GEL LABORATORIES LLC

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## Certificate of Analysis

Company : GSI Environmental Inc.  
Address : 155 Grand Ave  
Suite 704  
Oakland, California 94612  
Contact: Travis Wicks  
Project: Near SSFL  
Client Sample ID: HV-SED-1-220511  
Sample ID: 579886004

Report Date: June 6, 2022

Project: GSIE00119  
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	Mtd.: Method
DL: Detection Limit	PF: Prep Factor
Lc/LC: Critical Level	RL: Reporting Limit
MDA: Minimum Detectable Activity	TPU: Total Propagated Uncertainty
MDC: Minimum Detectable Concentration	

# GEL LABORATORIES LLC

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## Certificate of Analysis

Company : GSI Environmental Inc.  
 Address : 155 Grand Ave  
 Suite 704  
 Oakland, California 94612

Report Date: June 6, 2022

Contact: Travis Wicks

Project: Near SSFL

Client Sample ID: HV-2-220511

Project: GSIE00119

Sample ID: 579886005

Client ID: GSIE002

Matrix: Soil

Collect Date: 11-MAY-22

Receive Date: 13-MAY-22

Collector: Client

Moisture: .965%

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date	Time	Batch	Mtd.
<b>Rad Gamma Spec Analysis</b>														
<i>Gammasec, Gamma, Solid (Standard List) "Dry Weight Corrected"</i>														
Cesium-137	U	0.0227	+/-0.0525	0.107	+/-0.0536	0.100	pCi/g			MXR1	05/18/22	1007	2266313	1
<b>Rad Gas Flow Proportional Counting</b>														
<i>GFPC, Sr90, Solid "Dry Weight Corrected"</i>														
Strontium-90	U	0.00395	+/-0.0509	0.0935	+/-0.0509	0.100	pCi/g			KP1	05/21/22	1121	2266327	2
<b>Rad Liquid Scintillation Analysis</b>														
<i>LSC, Tritium Vacuum, Soil "As Received"</i>														
Tritium	U	-0.119	+/-0.274	0.501	+/-0.274	0.200	pCi/g			CM3	05/26/22	1034	2266282	3

**The following Prep Methods were performed**

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CM2	05/13/22	1934	2265904

**The following Analytical Methods were performed**

Method	Description
1	DOE HASL 300, 4.5.2.3/Ga-01-R
2	EPA 905.0 Modified/DOE RP501 Rev. 1 Modified
3	GL-RAD-A-002

Surrogate/Tracer Recovery	Test	Batch ID	Recovery%	Acceptable Limits
Strontium Carrier	GFPC, Sr90, Solid "Dry Weight Corrected"	2266327	66	(25%-125%)



# GEL LABORATORIES LLC

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

## Certificate of Analysis

Company : GSI Environmental Inc.  
Address : 155 Grand Ave  
Suite 704  
Oakland, California 94612

Report Date: June 6, 2022

Contact: Travis Wicks  
Project: Near SSFL

Client Sample ID: HV-2-220511  
Sample ID: 579886005

Project: GSIE00119  
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

Mtd.: Method

PF: Prep Factor

RL: Reporting Limit

TPU: Total Propagated Uncertainty

# GEL LABORATORIES LLC

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

## Certificate of Analysis

Company : GSI Environmental Inc.  
 Address : 155 Grand Ave  
 Suite 704  
 Oakland, California 94612

Contact: Travis Wicks  
 Project: Near SSFL

Report Date: June 6, 2022

Client Sample ID: KC-1-220511  
 Sample ID: 579886006  
 Matrix: Soil  
 Collect Date: 11-MAY-22  
 Receive Date: 13-MAY-22  
 Collector: Client  
 Moisture: 2.32%

Project: GSIE00119  
 Client ID: GSIE002

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date	Time	Batch	Mtd.
<b>Rad Gamma Spec Analysis</b>														
<i>Gammasec, Gamma, Solid (Standard List) "Dry Weight Corrected"</i>														
Cesium-137	U	0.0330	+/-0.0453	0.0660	+/-0.0453	0.100	pCi/g			MXR1	05/18/22	1007	2266313	1
<b>Rad Gas Flow Proportional Counting</b>														
<i>GFPC, Sr90, Solid "Dry Weight Corrected"</i>														
Strontium-90	U	0.0789	+/-0.0589	0.0909	+/-0.0606	0.100	pCi/g			KP1	05/21/22	1121	2266327	2
<b>Rad Liquid Scintillation Analysis</b>														
<i>LSC, Tritium Vacuum, Soil "As Received"</i>														
Tritium	U	-0.280	+/-0.335	0.628	+/-0.335	0.200	pCi/g			CM3	05/26/22	1106	2266282	3

**The following Prep Methods were performed**

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CM2	05/13/22	1933	2265932

**The following Analytical Methods were performed**

Method	Description
1	DOE HASL 300, 4.5.2.3/Ga-01-R
2	EPA 905.0 Modified/DOE RP501 Rev. 1 Modified
3	GL-RAD-A-002

Surrogate/Tracer Recovery	Test	Batch ID	Recovery%	Acceptable Limits
Strontium Carrier	GFPC, Sr90, Solid "Dry Weight Corrected"	2266327	61.3	(25%-125%)

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## Certificate of Analysis

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Address : 155 Grand Ave  
Suite 704  
Oakland, California 94612

Report Date: June 6, 2022

Contact: Travis Wicks

Project: Near SSFL

Client Sample ID: KC-1-220511

Sample ID: 579886006

Project: GSIE00119

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

Mtd.: Method

PF: Prep Factor

RL: Reporting Limit

TPU: Total Propagated Uncertainty



# GEL LABORATORIES LLC

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## Certificate of Analysis

Company : GSI Environmental Inc.  
 Address : 155 Grand Ave  
 Suite 704  
 Oakland, California 94612

Report Date: June 6, 2022

Contact: Travis Wicks

Project: Near SSFL

Client Sample ID: GF-1-220512

Project: GSIE00119

Sample ID: 579886007

Client ID: GSIE002

Matrix: Soil

Collect Date: 12-MAY-22

Receive Date: 13-MAY-22

Collector: Client

Moisture: 19.1%

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date	Time	Batch	Mtd.
<b>Rad Gamma Spec Analysis</b>														
<i>Gammasec, Gamma, Solid (Standard List) "Dry Weight Corrected"</i>														
Cesium-137		0.0788	+/-0.0506	0.0470	+/-0.0511	0.100	pCi/g			MXR1	05/18/22	1137	2266313	1
<b>Rad Gas Flow Proportional Counting</b>														
<i>GFPC, Sr90, Solid "Dry Weight Corrected"</i>														
Strontium-90	U	0.00947	+/-0.0371	0.0679	+/-0.0372	0.100	pCi/g			KP1	05/24/22	1652	2266327	2
<b>Rad Liquid Scintillation Analysis</b>														
<i>LSC, Tritium Vacuum, Soil "As Received"</i>														
Tritium	U	-0.0491	+/-0.0557	0.105	+/-0.0557	0.200	pCi/g			CM3	05/26/22	1137	2266282	3

**The following Prep Methods were performed**

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CM2	05/13/22	1933	2265932

**The following Analytical Methods were performed**

Method	Description
1	DOE HASL 300, 4.5.2.3/Ga-01-R
2	EPA 905.0 Modified/DOE RP501 Rev. 1 Modified
3	GL-RAD-A-002

Surrogate/Tracer Recovery	Test	Batch ID	Recovery%	Acceptable Limits
Strontium Carrier	GFPC, Sr90, Solid "Dry Weight Corrected"	2266327	68.4	(25%-125%)

# GEL LABORATORIES LLC

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## Certificate of Analysis

Company : GSI Environmental Inc.  
Address : 155 Grand Ave  
Suite 704  
Oakland, California 94612

Report Date: June 6, 2022

Contact: Travis Wicks  
Project: Near SSFL

Client Sample ID: GF-1-220512  
Sample ID: 579886007

Project: GSIE00119  
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

Mtd.: Method

PF: Prep Factor

RL: Reporting Limit

TPU: Total Propagated Uncertainty

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## Certificate of Analysis

Company : GSI Environmental Inc.  
 Address : 155 Grand Ave  
 Suite 704  
 Oakland, California 94612

Report Date: June 6, 2022

Contact: Travis Wicks  
 Project: Near SSFL

Client Sample ID: AT-1-220512  
 Sample ID: 579886008  
 Matrix: Soil  
 Collect Date: 12-MAY-22  
 Receive Date: 13-MAY-22  
 Collector: Client  
 Moisture: 17%

Project: GSIE00119  
 Client ID: GSIE002

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date	Time	Batch	Mtd.
<b>Rad Gamma Spec Analysis</b>														
<i>Gammasec, Gamma, Solid (Standard List) "Dry Weight Corrected"</i>														
Cesium-137	U	0.0342	+/-0.0522	0.0687	+/-0.0523	0.100	pCi/g			MXR1	05/18/22	1137	2266313	1
<b>Rad Gas Flow Proportional Counting</b>														
<i>GFPC, Sr90, Solid "Dry Weight Corrected"</i>														
Strontium-90	U	0.0409	+/-0.0577	0.0985	+/-0.0582	0.100	pCi/g			KP1	05/21/22	1122	2266327	2
<b>Rad Liquid Scintillation Analysis</b>														
<i>LSC, Tritium Vacuum, Soil "As Received"</i>														
Tritium	U	-0.0527	+/-0.0661	0.124	+/-0.0661	0.200	pCi/g			CM3	05/26/22	1208	2266282	3

**The following Prep Methods were performed**

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CM2	05/13/22	1933	2265932

**The following Analytical Methods were performed**

Method	Description
1	DOE HASL 300, 4.5.2.3/Ga-01-R
2	EPA 905.0 Modified/DOE RP501 Rev. 1 Modified
3	GL-RAD-A-002

Surrogate/Tracer Recovery	Test	Batch ID	Recovery%	Acceptable Limits
Strontium Carrier	GFPC, Sr90, Solid "Dry Weight Corrected"	2266327	73.1	(25%-125%)



# GEL LABORATORIES LLC

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## Certificate of Analysis

Company : GSI Environmental Inc.  
Address : 155 Grand Ave  
Suite 704  
Oakland, California 94612

Report Date: June 6, 2022

Contact: Travis Wicks  
Project: Near SSFL

Client Sample ID: AT-1-220512  
Sample ID: 579886008

Project: GSIE00119  
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

Mtd.: Method

PF: Prep Factor

RL: Reporting Limit

TPU: Total Propagated Uncertainty

# GEL LABORATORIES LLC

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

## QC Summary

Report Date: June 6, 2022  
Page 1 of 3

Client : GSI Environmental Inc.  
155 Grand Ave  
Suite 704  
Oakland, California  
Contact: Travis Wicks  
Workorder: 579886

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time	
<b>Rad Gamma Spec</b>												
Batch	2266313											
QC1205092510	579886001 DUP											
Cesium-137		0.115		0.0875	pCi/g	27.4		(0% - 100%)	MXR1	05/18/22	17:05	
	Uncert:	+/-0.0575		+/-0.0849								
	TPU:	+/-0.0582		+/-0.0853								
QC1205092511	LCS											
Americium-241	485			527	pCi/g		109	(75%-125%)	MXR1	05/18/22	17:07	
	Uncert:			+/-11.9								
	TPU:			+/-54.1								
Cobalt-60	76.6			72.7	pCi/g		94.9	(75%-125%)				
	Uncert:			+/-3.22								
	TPU:			+/-6.93								
Cesium-137	157			148	pCi/g		93.8	(75%-125%)				
	Uncert:			+/-3.74								
	TPU:			+/-12.6								
QC1205092509	MB											
Cesium-137			U	0.00348	pCi/g				MXR1	05/18/22	14:42	
	Uncert:			+/-0.0176								
	TPU:			+/-0.0177								
<b>Rad Gas Flow</b>												
Batch	2266327											
QC1205092551	579886001 DUP											
Strontium-90	U	0.0476	U	0.0685	pCi/g	0			N/A	KP1	05/21/22	11:21
	Uncert:	+/-0.0567		+/-0.0567								
	TPU:	+/-0.0574		+/-0.0580								
QC1205092552	LCS											
Strontium-90	3.85			3.80	pCi/g		98.6	(75%-125%)	KP1	05/21/22	11:21	
	Uncert:			+/-0.206								
	TPU:			+/-0.708								
QC1205092550	MB											
Strontium-90			U	0.0642	pCi/g				KP1	05/21/22	11:21	
	Uncert:			+/-0.0576								
	TPU:			+/-0.0588								
<b>Rad Liquid Scintillation</b>												
Batch	2266282											
QC1205092418	579888004 DUP											
Tritium	U	-0.00222	U	-0.0789	pCi/g	0			N/A	CM3	05/26/22	16:19
	Uncert:	+/-0.0719		+/-0.0659								
	TPU:	+/-0.0719		+/-0.0659								
QC1205092420	LCS											
Tritium	13.3			12.9	pCi/g		96.6	(75%-125%)	CM3	05/26/22	17:21	
	Uncert:			+/-0.760								

# GEL LABORATORIES LLC

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

## QC Summary

Workorder: 579886

Page 2 of 3

Parmname	NOM	Sample Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
<b>Rad Liquid Scintillation</b>									
Batch	2266282								
		TPU:							
QC1205092417	MB								
Tritium			U	-0.137	pCi/g			CM3	05/26/22 15:47
		Uncert:		+/-0.289					
		TPU:		+/-0.289					
QC1205092419	579888004	MS							
Tritium	6.45	U	-0.00222	5.98	pCi/g	92.9	(75%-125%)	CM3	05/26/22 16:50
		Uncert:	+/-0.0719	+/-0.245					
		TPU:	+/-0.0719	+/-0.262					
Batch	2272299								
QC1205104628	579886002	DUP							
Tritium		U	-0.143	U	0.0995	pCi/g	0	N/A	KXA1 06/02/22 16:42
		Uncert:	+/-0.507	+/-0.468					
		TPU:	+/-0.507	+/-0.468					
QC1205104630	LCS								
Tritium	26.5			26.6	pCi/g	101	(75%-125%)	KXA1	06/02/22 18:02
		Uncert:		+/-3.54					
		TPU:		+/-7.00					
QC1205104627	MB								
Tritium			U	0.150	pCi/g			KXA1	06/02/22 15:39
		Uncert:		+/-0.473					
		TPU:		+/-0.474					
QC1205104629	579886002	MS							
Tritium	52.9	U	-0.143	50.1	pCi/g	94.7	(75%-125%)	KXA1	06/02/22 17:44
		Uncert:	+/-0.507	+/-6.75					
		TPU:	+/-0.507	+/-13.2					

**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.



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## QC Summary

Workorder: 579886

Page 3 of 3

Parmname	NOM	Sample Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
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								

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 acceptance 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.



5798860579886-16

FROM: GSI Environmental Inc. 155 Grand Ave. Suite 704 Oakland, CA 94612 (510) 463-8484		PROJECT NAME: AJU-BB		PROJECT NO.: 5182																																																																																																																		
TEL: (510) 463-8484		E-MAIL: mpgoerz@gsi-net.com, tzwick@gsi-net.com		LAB CONTACT: Delaney Stone																																																																																																																		
LABORATORY: GEL Laboratories		GLOBAL ID: -		SAMPLER(S): (PRINT) JCV / CTB																																																																																																																		
TURNAROUND TIME: <input type="checkbox"/> SAME DAY <input type="checkbox"/> 24 HR <input type="checkbox"/> 48 HR <input type="checkbox"/> 72 HR <input checked="" type="checkbox"/> 5 DAYS <input checked="" type="checkbox"/> STANDARD		<b>REQUESTED ANALYSES</b> Please check box or fill in blank as needed.																																																																																																																				
SPECIAL INSTRUCTIONS: - Sr-90 MDC of 0.1 pCi/g - H-3 MDC of 0.2 pCi/g - Cs-137 MDC of 0.1 pCi/g		<table border="1"> <thead> <tr> <th rowspan="2">LAB USE ONLY</th> <th rowspan="2">SAMPLE ID</th> <th colspan="2">SAMPLING</th> <th rowspan="2">MATRIX</th> <th rowspan="2">NO. OF CONT.</th> <th colspan="3">PRESERVATION</th> <th rowspan="2">Sr-90 (905.0)</th> <th rowspan="2">Cs-137 (901.1)</th> <th rowspan="2">H-3 (906)</th> </tr> <tr> <th>DATE</th> <th>TIME</th> <th>Unpreserved</th> <th>Preserved</th> <th>Field Filtered</th> </tr> </thead> <tbody> <tr> <td></td> <td>CTT-1-220510</td> <td>5/10/22</td> <td>1400</td> <td>S</td> <td>1</td> <td></td> <td></td> <td></td> <td>X</td> <td>X</td> <td>X</td> </tr> <tr> <td></td> <td>TF-1-220510</td> <td>5/10/22</td> <td>1435</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>X</td> <td>X</td> <td>X</td> </tr> <tr> <td></td> <td>HV-1-220511</td> <td>5/11/22</td> <td>1150</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>X</td> <td>X</td> <td>X</td> </tr> <tr> <td></td> <td>HV-5ED-1-220511</td> <td>5/11/22</td> <td>1200</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>X</td> <td>X</td> <td>X</td> </tr> <tr> <td></td> <td>HV-2-220511</td> <td>5/11/22</td> <td>1215</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>X</td> <td>X</td> <td>X</td> </tr> <tr> <td></td> <td>KC-1-220511</td> <td>5/11/22</td> <td>1425</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>X</td> <td>X</td> <td>X</td> </tr> <tr> <td></td> <td>GF-1-220512</td> <td>5/12/22</td> <td>0745</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>X</td> <td>X</td> <td>X</td> </tr> <tr> <td></td> <td>AT-1-220512</td> <td>5/12/22</td> <td>0820</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>X</td> <td>X</td> <td>X</td> </tr> </tbody> </table>				LAB USE ONLY	SAMPLE ID	SAMPLING		MATRIX	NO. OF CONT.	PRESERVATION			Sr-90 (905.0)	Cs-137 (901.1)	H-3 (906)	DATE	TIME	Unpreserved	Preserved	Field Filtered		CTT-1-220510	5/10/22	1400	S	1				X	X	X		TF-1-220510	5/10/22	1435						X	X	X		HV-1-220511	5/11/22	1150						X	X	X		HV-5ED-1-220511	5/11/22	1200						X	X	X		HV-2-220511	5/11/22	1215						X	X	X		KC-1-220511	5/11/22	1425						X	X	X		GF-1-220512	5/12/22	0745						X	X	X		AT-1-220512	5/12/22	0820						X	X	X
LAB USE ONLY	SAMPLE ID	SAMPLING		MATRIX	NO. OF CONT.			PRESERVATION				Sr-90 (905.0)	Cs-137 (901.1)	H-3 (906)																																																																																																								
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Relinquished by: (Signature) <i>[Signature]</i>		Received by: (Signature) <i>[Signature]</i>		Date: 5/12/22 Time: 1200																																																																																																																		
Relinquished by: (Signature)		Received by: (Signature) <i>[Signature]</i>		Date: 5/12/22 Time: 930																																																																																																																		
Relinquished by: (Signature)		Received by: (Signature)		Date:																																																																																																																		



Laboratories LLC

SAMPLE RECEIPT & REVIEW FORM

Client: **GSIE** SDG/AR/COC/Work Order: **579886/579886/579886/579886**

Received By: **Stacy Baens** Date Received: **May 13, 2022**

Carrier and Tracking Number  
FedEx Express FedEx Ground UPS Field Services Courier Other  
**2730 6924 2337 21c** **2730 6924 2348 13c**

Suspected Hazard Information	Yes	No	*If Net Counts > 100cpm on samples not marked "radioactive", contact the Radiation Safety Group for further investigation.
A) Shipped as a DOT Hazardous?		<input checked="" type="checkbox"/>	Hazard Class Shipped: _____ UN#: _____ If UN2910, Is the Radioactive Shipment Survey Compliant? Yes ___ No ___
B) Did the client designate the samples are to be received as radioactive?		<input checked="" type="checkbox"/>	COC notation or radioactive stickers on containers equal client designation.
C) Did the RSO classify the samples as radioactive?		<input checked="" type="checkbox"/>	Maximum Net Counts Observed* (Observed Counts - Area Background Counts): <u>0</u> CPM / mR/Hr Classified as: Rad 1 Rad 2 Rad 3
D) Did the client designate samples are hazardous?		<input checked="" type="checkbox"/>	COC notation or hazard labels on containers equal client designation.
E) Did the RSO identify possible hazards?		<input checked="" type="checkbox"/>	If D or E is yes, select Hazards below. PCB's Flammable Foreign Soil RCRA Asbestos Beryllium Other: _____

Sample Receipt Criteria	Yes	NA	No	Comments/Qualifiers (Required for Non-Conforming Items)
1. Shipping containers received intact and sealed?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
2. Chain of custody documents included with shipment?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		Circle Applicable: Client contacted and provided COC COC created upon receipt
3. Samples requiring cold preservation within (0 ≤ 5 deg. C)?*	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		Preservation Method: Wet Ice Ice Packs Dry Ice None Other: _____ *all temperatures are recorded in: Celsius <b>SEE BELOW</b> TEMP: _____
4. Daily check performed and passed on IR temperature gun?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		Temperature Device Serial #: <b>FRI-22</b> Secondary Temperature Device Serial # (If Applicable): _____
5. Sample containers intact and sealed?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
6. Samples requiring chemical preservation at proper pH?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		Sample ID's and Containers Affected: _____ If Preservation added, Lot#: _____ If Yes, are Encores or Soil Kits present for solids? Yes ___ No ___ NA ___ (If yes, take to VOA Freezer)
7. Do any samples require Volatile Analysis?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		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?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		ID's and tests affected: _____
9. Sample ID's on COC match ID's on bottles?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		ID's and containers affected: _____
10. Date & time on COC match date & time on bottles?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		Circle Applicable: No dates on containers No times on containers COC missing info Other (describe)
11. Number of containers received match number indicated on COC?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		Circle Applicable: No container count on COC Other (describe)
12. Are sample containers identifiable as GEL provided by use of GEL labels?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<b>X SB</b>	
13. COC form is properly signed in relinquished/received sections?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		Circle Applicable: Not relinquished Other (describe)

Comments (Use Continuation Form if needed):  
**2730 6924 2348 @ 13c : FRUIT, KC-1-220511**  
**GF-1-220512**  
**AT-1-200512**  
**08**  
**058-SED-1-220511**

PM (or PMA) review: Initials MB Date 5/19/22 Page 1 of 7



## Delaney Stone

---

**From:** Travis Wicks <TZWicks@gsi-net.com>  
**Sent:** Tuesday, May 31, 2022 5:36 PM  
**To:** Delaney Stone; Matthew Goerz  
**Cc:** Susan Gallardo; Team Stone  
**Subject:** RE: GEL Analytical Report- SDG 579886

[EXTERNAL EMAIL] DO NOT CLICK links or attachments unless you recognize the sender and know the content is safe.

Hi Delaney,

We'd like to have the package revised. It should make things cleaner for our reporting purposes.

Thanks,

Travis Wicks, PG  
Staff Geologist  
GSI Environmental Inc.  
O 510.463.8484 | C 510.468.6940

-----Original Message-----

From: Delaney Stone <Delaney.Stone@gel.com>  
Sent: Tuesday, May 31, 2022 2:21 PM  
To: Travis Wicks <TZWicks@gsi-net.com>; Matthew Goerz <mpgoerz@gsi-net.com>  
Cc: Susan Gallardo <SMGallardo@gsi-net.com>; Team Stone <Team.Stone@gel.com>  
Subject: RE: GEL Analytical Report- SDG 579886

Travis,

Can the results be reported on a separate workorder? Or do you want the package revised?

Thank you,  
Delaney

-----Original Message-----

From: Travis Wicks <TZWicks@gsi-net.com>  
Sent: Tuesday, May 31, 2022 5:05 PM  
To: Delaney Stone <Delaney.Stone@gel.com>; Matthew Goerz <mpgoerz@gsi-net.com>  
Cc: Susan Gallardo <SMGallardo@gsi-net.com>; Team Stone <Team.Stone@gel.com>  
Subject: RE: GEL Analytical Report- SDG 579886

[EXTERNAL EMAIL] DO NOT CLICK links or attachments unless you recognize the sender and know the content is safe.

Hi Delaney,

We can live with the 2 pCi/g. Please have them run that sample by distillation.

Thanks,

Travis Wicks, PG  
Staff Geologist  
GSI Environmental Inc.  
O 510.463.8484 | C 510.468.6940

-----Original Message-----

From: Delaney Stone <Delaney.Stone@gel.com>  
Sent: Tuesday, May 31, 2022 1:50 PM  
To: Travis Wicks <TZWicks@gsi-net.com>; Matthew Goerz <mpgoerz@gsi-net.com>  
Cc: Susan Gallardo <SMGallardo@gsi-net.com>; Team Stone <Team.Stone@gel.com>  
Subject: RE: GEL Analytical Report- SDG 579886

Travis,

Yes, we can run by distillation. We just can't meet 0.2 pCi/g using that method. We can meet around 2 pCi/g. Please let me know if you would like the lab to analyze using the other method.

Thank you,  
Delaney

-----Original Message-----

From: Travis Wicks <TZWicks@gsi-net.com>  
Sent: Tuesday, May 31, 2022 4:48 PM  
To: Delaney Stone <Delaney.Stone@gel.com>; Matthew Goerz <mpgoerz@gsi-net.com>  
Cc: Susan Gallardo <SMGallardo@gsi-net.com>; Team Stone <Team.Stone@gel.com>  
Subject: RE: GEL Analytical Report- SDG 579886

[EXTERNAL EMAIL] DO NOT CLICK links or attachments unless you recognize the sender and know the content is safe.

Hi Delaney,

Is it possible to still have this analysis run, but with a higher detection limit? In the case of this project, I think a high detection limit would be better for our purposes than no result.

Thanks,

Travis Wicks, PG  
Staff Geologist  
GSI Environmental Inc.  
O 510.463.8484 | C 510.468.6940

-----Original Message-----

From: Delaney Stone <Delaney.Stone@gel.com>  
Sent: Tuesday, May 31, 2022 12:49 PM  
To: Matthew Goerz <mpgoerz@gsi-net.com>; Travis Wicks <TZWicks@gsi-net.com>  
Cc: Susan Gallardo <SMGallardo@gsi-net.com>; Team Stone <Team.Stone@gel.com>  
Subject: RE: GEL Analytical Report- SDG 579886

Hello all,

The lab needs a certain moisture threshold (roughly 2%) to run the analysis. Since we were using the vacuum method to meet a low detection limit, there wasn't enough moisture collected from the sample to perform the requested analysis.

Please don't hesitate to reach out if you have any more questions.

Thank you,  
Delaney

-----Original Message-----

From: Matthew Goerz <mpgoerz@gsi-net.com>  
Sent: Friday, May 27, 2022 6:06 PM  
To: Delaney Stone <Delaney.Stone@gel.com>; Travis Wicks <TZWicks@gsi-net.com>  
Cc: Susan Gallardo <SMGallardo@gsi-net.com>; Team Stone <Team.Stone@gel.com>  
Subject: RE: GEL Analytical Report- SDG 579886

[EXTERNAL EMAIL] DO NOT CLICK links or attachments unless you recognize the sender and know the content is safe.

Hi Delaney,  
I'm assisting Travis with this project. Can you provide more information about why the tritium result will not be reported? I've never heard that low moisture content is an issue with a soil sample. Is there a way to report the result with adjusted reporting limits?

Thanks,  
Matt

Matthew Goerz  
Senior Scientist  
GSI Environmental Inc.  
O 510.463.8484 | C 510.301.9297

-----Original Message-----

From: Delaney Stone <Delaney.Stone@gel.com>  
Sent: Friday, May 27, 2022 2:40 PM  
To: Travis Wicks <TZWicks@gsi-net.com>  
Cc: Matthew Goerz <mpgoerz@gsi-net.com>; Susan Gallardo <SMGallardo@gsi-net.com>; Team Stone <Team.Stone@gel.com>  
Subject: RE: GEL Analytical Report- SDG 579886

[Some people who received this message don't often get email from delaney.stone@gel.com. Learn why this is important at <https://aka.ms/LearnAboutSenderIdentification>.]

Hi Travis,

The lab notified me that:

H3 for 579886002 will not be reported due to low moisture collected.

Thank you,  
Delaney

-----Original Message-----

From: Travis Wicks <TZWicks@gsi-net.com>  
Sent: Friday, May 27, 2022 5:38 PM  
To: Delaney Stone <Delaney.Stone@gel.com>  
Cc: Matthew Goerz <mpgoerz@gsi-net.com>; Susan Gallardo <SMGallardo@gsi-net.com>; Team Stone <Team.Stone@gel.com>  
Subject: RE: GEL Analytical Report- SDG 579886

[EXTERNAL EMAIL] DO NOT CLICK links or attachments unless you recognize the sender and know the content is safe.

Hi Delaney,

I didn't see the tritium results for Sample ID 579886002 (TF-1-220510). Did I just miss it?

Thanks,

Travis Wicks, PG  
Staff Geologist  
GSI Environmental Inc.  
O 510.463.8484 | C 510.468.6940

-----Original Message-----

From: GEL Data <data@gellaboratories.com>  
Sent: Friday, May 27, 2022 12:25 PM  
To: Travis Wicks <TZWicks@gsi-net.com>  
Cc: delaney.stone@gel.com; Delaney.Stone@gel.com; Susan Gallardo <SMGallardo@gsi-net.com>; Kalin Howell <kjhowell@gsi-net.com>  
Subject: GEL Analytical Report- SDG 579886

Attached are the results for the samples received on May 13, 2022. Please contact us if there are any questions.

Sincerely,  
Delaney Stone

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

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**List of current GEL Certifications as of 06 June 2022**

<b>State</b>	<b>Certification</b>
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	SC000122022-4
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	T104704235-22-20
Utah NELAP	SC000122021-36
Vermont	VT87156
Virginia NELAP	460202
Washington	C780

**Radiochemistry  
Technical Case Narrative  
GSI Environmental Inc.  
SDG #: 579886**

**Product:** Dry Weight

**Preparation Method:** Dry Soil Prep

**Preparation Procedure:** GL-RAD-A-021 REV# 24

**Preparation Batch:** 2265904

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

<b><u>GEL Sample ID#</u></b>	<b><u>Client Sample Identification</u></b>
579886001	CIT-1-220510
579886002	TF-1-220510
579886003	HV-1-220511
579886004	HV-SED-1-220511
579886005	HV-2-220511

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:** Dry Weight

**Preparation Method:** Dry Soil Prep

**Preparation Procedure:** GL-RAD-A-021 REV# 24

**Preparation Batch:** 2265932

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

<b><u>GEL Sample ID#</u></b>	<b><u>Client Sample Identification</u></b>
579886006	KC-1-220511
579886007	GF-1-220512
579886008	AT-1-220512

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:** 2266313

**Preparation Method:** Dry Soil Prep

**Preparation Procedure:** GL-RAD-A-021 REV# 24

**Preparation Batches:** 2265904 and 2265932

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

<b><u>GEL Sample ID#</u></b>	<b><u>Client Sample Identification</u></b>
579886001	CIT-1-220510
579886002	TF-1-220510
579886003	HV-1-220511
579886004	HV-SED-1-220511
579886005	HV-2-220511
579886006	KC-1-220511
579886007	GF-1-220512
579886008	AT-1-220512
1205092509	Method Blank (MB)
1205092510	579886001(CIT-1-220510) Sample Duplicate (DUP)
1205092511	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:** GFPC, Sr90, Solid

**Analytical Method:** EPA 905.0 Modified/DOE RP501 Rev. 1 Modified

**Analytical Procedure:** GL-RAD-A-004 REV# 22

**Analytical Batch:** 2266327

**Preparation Method:** Dry Soil Prep

**Preparation Procedure:** GL-RAD-A-021 REV# 24

**Preparation Batches:** 2265904 and 2265932

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

<b><u>GEL Sample ID#</u></b>	<b><u>Client Sample Identification</u></b>
579886001	CIT-1-220510
579886002	TF-1-220510
579886003	HV-1-220511
579886004	HV-SED-1-220511
579886005	HV-2-220511

579886006	KC-1-220511
579886007	GF-1-220512
579886008	AT-1-220512
1205092550	Method Blank (MB)
1205092551	579886001(CIT-1-220510) Sample Duplicate (DUP)
1205092552	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 579886004 (HV-SED-1-220511) and 579886007 (GF-1-220512) were recounted due to a suspected false positive. The recounts are reported.

**Product: LSC, Tritium Vacuum, Soil**

**Analytical Method:** GL-RAD-A-002

**Analytical Procedure:** GL-RAD-A-002 REV# 24

**Analytical Batch:** 2266282

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

<b><u>GEL Sample ID#</u></b>	<b><u>Client Sample Identification</u></b>
579886001	CIT-1-220510
579886003	HV-1-220511
579886004	HV-SED-1-220511
579886005	HV-2-220511
579886006	KC-1-220511
579886007	GF-1-220512
579886008	AT-1-220512
1205092417	Method Blank (MB)
1205092418	579888004(SRE-SED-2-220511) Sample Duplicate (DUP)
1205092419	579888004(SRE-SED-2-220511) Matrix Spike (MS)
1205092420	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**



The blank (See Below) did not meet the detection limit due to keeping the blank volume consistent with the other sample aliquots.

Sample	Analyte	Value
1205092417 (MB)	Tritium	Result -0.137 < MDA 0.53 > RDL 0.2 pCi/g

Samples (See Below) did not meet the detection limits due to the small sample aliquots used. The aliquots were reduced due to the matrix of the samples. The samples were counted the maximum count time in order to achieve the lowest possible MDAs.

Sample	Analyte	Value
579886005 (HV-2-220511)	Tritium	Result -0.119 < MDA 0.501 > RDL 0.2 pCi/g
579886006 (KC-1-220511)	Tritium	Result -0.28 < MDA 0.628 > RDL 0.2 pCi/g

**Product: LSC, Tritium Distillation, Soil**

**Analytical Method:** EPA 906.0 Modified

**Analytical Procedure:** GL-RAD-A-002 REV# 24

**Analytical Batch:** 2272299

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

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
579886002	TF-1-220510
1205104627	Method Blank (MB)
1205104628	579886002(TF-1-220510) Sample Duplicate (DUP)
1205104629	579886002(TF-1-220510) Matrix Spike (MS)
1205104630	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**

The blank (See Below) did not meet the detection limit due to keeping the blank volume consistent with the other sample aliquots.

Sample	Analyte	Value
1205104627 (MB)	Tritium	Result 0.15 < MDA 0.849 > RDL 0.2 pCi/g

Samples (See Below) did not meet the detection limits due to limited sample volume.

<b>Sample</b>	<b>Analyte</b>	<b>Value</b>
1205104628 (TF-1-220510DUP)	Tritium	Result 0.0995 < MDA 0.851 > RDL 0.2 pCi/g
579886002 (TF-1-220510)	Tritium	Result -0.143 < MDA 0.974 > RDL 0.2 pCi/g

**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.

## ANALYTICAL REPORT

Eurofins Sacramento  
880 Riverside Parkway  
West Sacramento, CA 95605  
Tel: (916)373-5600

Laboratory Job ID: 320-87847-1  
Client Project/Site: AJU-BB

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

Attn: Matt Goerz



Authorized for release by:  
5/24/2022 3:15:11 PM

Afsaneh Salimpour, Senior Project Manager  
(925)484-1919  
[Afsaneh.Salimpour@et.eurofinsus.com](mailto:Afsaneh.Salimpour@et.eurofinsus.com)

### LINKS

Review your project  
results through



Have a Question?



Visit us at:

[www.eurofinsus.com/Env](http://www.eurofinsus.com/Env)

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

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

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



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# Definitions/Glossary

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

Job ID: 320-87847-1

## Qualifiers

### Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

## Glossary

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

# Case Narrative

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

Job ID: 320-87847-1

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**Job ID: 320-87847-1**

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**Laboratory: Eurofins Sacramento**

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**Narrative**

**Job Narrative**  
**320-87847-1**

**Comments**

No additional comments.

**Receipt**

The samples were received on 5/13/2022 9:35 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 0.4° C.

**Metals**

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.

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# Detection Summary

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

Job ID: 320-87847-1

## Client Sample ID: RRMDf-SED-1-220510

## Lab Sample ID: 320-87847-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	2.3		2.1	1.4	mg/Kg	1		6010B	Total/NA
Barium	50		1.0	0.13	mg/Kg	1		6010B	Total/NA
Beryllium	0.050	J	0.21	0.031	mg/Kg	1		6010B	Total/NA
Cadmium	0.15	J	0.21	0.031	mg/Kg	1		6010B	Total/NA
Cobalt	3.1		0.52	0.26	mg/Kg	1		6010B	Total/NA
Chromium	9.6		0.52	0.15	mg/Kg	1		6010B	Total/NA
Copper	6.5		1.6	0.23	mg/Kg	1		6010B	Total/NA
Nickel	6.0		1.0	0.25	mg/Kg	1		6010B	Total/NA
Lead	6.6		1.0	0.27	mg/Kg	1		6010B	Total/NA
Vanadium	18		0.52	0.20	mg/Kg	1		6010B	Total/NA
Zinc	47		2.1	0.20	mg/Kg	1		6010B	Total/NA
Mercury	0.016	J	0.041	0.0081	mg/Kg	1		7471A	Total/NA

## Client Sample ID: BP-SED-1-220510

## Lab Sample ID: 320-87847-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	9.9		1.9	1.3	mg/Kg	1		6010B	Total/NA
Barium	50		0.97	0.12	mg/Kg	1		6010B	Total/NA
Beryllium	0.061	J	0.19	0.029	mg/Kg	1		6010B	Total/NA
Cadmium	0.13	J	0.19	0.029	mg/Kg	1		6010B	Total/NA
Cobalt	3.8		0.49	0.24	mg/Kg	1		6010B	Total/NA
Chromium	10		0.49	0.14	mg/Kg	1		6010B	Total/NA
Copper	6.5		1.5	0.21	mg/Kg	1		6010B	Total/NA
Nickel	7.1		0.97	0.23	mg/Kg	1		6010B	Total/NA
Lead	8.0		0.97	0.25	mg/Kg	1		6010B	Total/NA
Vanadium	20		0.49	0.18	mg/Kg	1		6010B	Total/NA
Zinc	40		1.9	0.18	mg/Kg	1		6010B	Total/NA
Mercury	0.052		0.039	0.0077	mg/Kg	1		7471A	Total/NA

## Client Sample ID: OS1-SED-1-220511

## Lab Sample ID: 320-87847-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	1.6	J	2.1	1.3	mg/Kg	1		6010B	Total/NA
Barium	28		1.0	0.12	mg/Kg	1		6010B	Total/NA
Cadmium	0.066	J	0.21	0.031	mg/Kg	1		6010B	Total/NA
Cobalt	2.9		0.52	0.26	mg/Kg	1		6010B	Total/NA
Chromium	7.1		0.52	0.14	mg/Kg	1		6010B	Total/NA
Copper	3.9		1.5	0.23	mg/Kg	1		6010B	Total/NA
Nickel	4.6		1.0	0.25	mg/Kg	1		6010B	Total/NA
Lead	2.7		1.0	0.27	mg/Kg	1		6010B	Total/NA
Vanadium	17		0.52	0.20	mg/Kg	1		6010B	Total/NA
Zinc	24		2.1	0.20	mg/Kg	1		6010B	Total/NA

## Client Sample ID: SRE-SED-2-220511

## Lab Sample ID: 320-87847-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	1.7	J	1.9	1.3	mg/Kg	1		6010B	Total/NA
Barium	36		0.97	0.12	mg/Kg	1		6010B	Total/NA
Beryllium	0.042	J	0.19	0.029	mg/Kg	1		6010B	Total/NA
Cadmium	0.082	J	0.19	0.029	mg/Kg	1		6010B	Total/NA
Cobalt	2.9		0.49	0.24	mg/Kg	1		6010B	Total/NA
Chromium	7.4		0.49	0.14	mg/Kg	1		6010B	Total/NA

This Detection Summary does not include radiochemical test results.

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# Detection Summary

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

Job ID: 320-87847-1

## Client Sample ID: SRE-SED-2-220511 (Continued)

Lab Sample ID: 320-87847-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Copper	5.3		1.5	0.21	mg/Kg	1		6010B	Total/NA
Nickel	4.6		0.97	0.23	mg/Kg	1		6010B	Total/NA
Lead	4.8		0.97	0.25	mg/Kg	1		6010B	Total/NA
Vanadium	16		0.49	0.18	mg/Kg	1		6010B	Total/NA
Zinc	32		1.9	0.18	mg/Kg	1		6010B	Total/NA

## Client Sample ID: OW-SED-1-220511

Lab Sample ID: 320-87847-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	1.9	J	2.0	1.3	mg/Kg	1		6010B	Total/NA
Barium	31		0.99	0.12	mg/Kg	1		6010B	Total/NA
Cadmium	0.074	J	0.20	0.030	mg/Kg	1		6010B	Total/NA
Cobalt	2.5		0.50	0.25	mg/Kg	1		6010B	Total/NA
Chromium	6.7		0.50	0.14	mg/Kg	1		6010B	Total/NA
Copper	3.5		1.5	0.22	mg/Kg	1		6010B	Total/NA
Nickel	4.1		0.99	0.24	mg/Kg	1		6010B	Total/NA
Lead	4.3		0.99	0.26	mg/Kg	1		6010B	Total/NA
Vanadium	15		0.50	0.19	mg/Kg	1		6010B	Total/NA
Zinc	27		2.0	0.19	mg/Kg	1		6010B	Total/NA

## Client Sample ID: OS8-SED-1-220511

Lab Sample ID: 320-87847-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	1.4	J	1.9	1.3	mg/Kg	1		6010B	Total/NA
Barium	27		0.96	0.12	mg/Kg	1		6010B	Total/NA
Cadmium	0.075	J	0.19	0.029	mg/Kg	1		6010B	Total/NA
Cobalt	2.2		0.48	0.24	mg/Kg	1		6010B	Total/NA
Chromium	6.5		0.48	0.13	mg/Kg	1		6010B	Total/NA
Copper	3.8		1.4	0.21	mg/Kg	1		6010B	Total/NA
Nickel	4.5		0.96	0.23	mg/Kg	1		6010B	Total/NA
Lead	4.1		0.96	0.25	mg/Kg	1		6010B	Total/NA
Vanadium	12		0.48	0.18	mg/Kg	1		6010B	Total/NA
Zinc	26		1.9	0.18	mg/Kg	1		6010B	Total/NA

This Detection Summary does not include radiochemical test results.

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# Client Sample Results

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

Job ID: 320-87847-1

**Client Sample ID: RRMDF-SED-1-220510**

**Lab Sample ID: 320-87847-1**

Date Collected: 05/10/22 10:25

Matrix: Solid

Date Received: 05/13/22 09:35

**Method: 314.0 - Perchlorate (IC) - Soluble**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	ND		40	20	ug/Kg			05/20/22 16:15	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	ND		0.52	0.094	mg/Kg		05/16/22 06:30	05/16/22 15:23	1
<b>Arsenic</b>	<b>2.3</b>		2.1	1.4	mg/Kg		05/16/22 06:30	05/16/22 15:23	1
<b>Barium</b>	<b>50</b>		1.0	0.13	mg/Kg		05/16/22 06:30	05/16/22 15:23	1
<b>Beryllium</b>	<b>0.050</b>	<b>J</b>	0.21	0.031	mg/Kg		05/16/22 06:30	05/16/22 15:23	1
<b>Cadmium</b>	<b>0.15</b>	<b>J</b>	0.21	0.031	mg/Kg		05/16/22 06:30	05/16/22 15:23	1
<b>Cobalt</b>	<b>3.1</b>		0.52	0.26	mg/Kg		05/16/22 06:30	05/16/22 15:23	1
<b>Chromium</b>	<b>9.6</b>		0.52	0.15	mg/Kg		05/16/22 06:30	05/16/22 15:23	1
<b>Copper</b>	<b>6.5</b>		1.6	0.23	mg/Kg		05/16/22 06:30	05/16/22 15:23	1
Molybdenum	ND		2.1	0.78	mg/Kg		05/16/22 06:30	05/16/22 15:23	1
<b>Nickel</b>	<b>6.0</b>		1.0	0.25	mg/Kg		05/16/22 06:30	05/16/22 15:23	1
<b>Lead</b>	<b>6.6</b>		1.0	0.27	mg/Kg		05/16/22 06:30	05/16/22 15:23	1
Selenium	ND		2.1	1.5	mg/Kg		05/16/22 06:30	05/16/22 15:23	1
Antimony	ND		2.1	0.98	mg/Kg		05/16/22 06:30	05/16/22 15:23	1
Thallium	ND		2.1	0.88	mg/Kg		05/16/22 06:30	05/16/22 15:23	1
<b>Vanadium</b>	<b>18</b>		0.52	0.20	mg/Kg		05/16/22 06:30	05/16/22 15:23	1
<b>Zinc</b>	<b>47</b>		2.1	0.20	mg/Kg		05/16/22 06:30	05/16/22 15:23	1

**Method: 7471A - Mercury (CVAA)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Mercury</b>	<b>0.016</b>	<b>J</b>	0.041	0.0081	mg/Kg		05/16/22 14:28	05/16/22 18:25	1

# Client Sample Results

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

Job ID: 320-87847-1

**Client Sample ID: BP-SED-1-220510**

**Lab Sample ID: 320-87847-2**

Date Collected: 05/10/22 11:15

Matrix: Solid

Date Received: 05/13/22 09:35

**Method: 314.0 - Perchlorate (IC) - Soluble**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	ND		40	20	ug/Kg			05/20/22 16:37	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	ND		0.49	0.087	mg/Kg		05/16/22 06:30	05/16/22 15:26	1
<b>Arsenic</b>	<b>9.9</b>		1.9	1.3	mg/Kg		05/16/22 06:30	05/16/22 15:26	1
<b>Barium</b>	<b>50</b>		0.97	0.12	mg/Kg		05/16/22 06:30	05/16/22 15:26	1
<b>Beryllium</b>	<b>0.061</b>	<b>J</b>	0.19	0.029	mg/Kg		05/16/22 06:30	05/16/22 15:26	1
<b>Cadmium</b>	<b>0.13</b>	<b>J</b>	0.19	0.029	mg/Kg		05/16/22 06:30	05/16/22 15:26	1
<b>Cobalt</b>	<b>3.8</b>		0.49	0.24	mg/Kg		05/16/22 06:30	05/16/22 15:26	1
<b>Chromium</b>	<b>10</b>		0.49	0.14	mg/Kg		05/16/22 06:30	05/16/22 15:26	1
<b>Copper</b>	<b>6.5</b>		1.5	0.21	mg/Kg		05/16/22 06:30	05/16/22 15:26	1
Molybdenum	ND		1.9	0.73	mg/Kg		05/16/22 06:30	05/16/22 15:26	1
<b>Nickel</b>	<b>7.1</b>		0.97	0.23	mg/Kg		05/16/22 06:30	05/16/22 15:26	1
<b>Lead</b>	<b>8.0</b>		0.97	0.25	mg/Kg		05/16/22 06:30	05/16/22 15:26	1
Selenium	ND		1.9	1.4	mg/Kg		05/16/22 06:30	05/16/22 15:26	1
Antimony	ND		1.9	0.91	mg/Kg		05/16/22 06:30	05/16/22 15:26	1
Thallium	ND		1.9	0.82	mg/Kg		05/16/22 06:30	05/16/22 15:26	1
<b>Vanadium</b>	<b>20</b>		0.49	0.18	mg/Kg		05/16/22 06:30	05/16/22 15:26	1
<b>Zinc</b>	<b>40</b>		1.9	0.18	mg/Kg		05/16/22 06:30	05/16/22 15:26	1

**Method: 7471A - Mercury (CVAA)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Mercury</b>	<b>0.052</b>		0.039	0.0077	mg/Kg		05/16/22 14:28	05/16/22 18:32	1

# Client Sample Results

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

Job ID: 320-87847-1

**Client Sample ID: OS1-SED-1-220511**

**Lab Sample ID: 320-87847-3**

Date Collected: 05/11/22 08:35

Matrix: Solid

Date Received: 05/13/22 09:35

**Method: 314.0 - Perchlorate (IC) - Soluble**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	ND		40	20	ug/Kg			05/20/22 17:44	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	ND		0.52	0.093	mg/Kg		05/16/22 06:30	05/16/22 15:30	1
<b>Arsenic</b>	<b>1.6</b>	<b>J</b>	2.1	1.3	mg/Kg		05/16/22 06:30	05/16/22 15:30	1
<b>Barium</b>	<b>28</b>		1.0	0.12	mg/Kg		05/16/22 06:30	05/16/22 15:30	1
Beryllium	ND		0.21	0.031	mg/Kg		05/16/22 06:30	05/16/22 15:30	1
<b>Cadmium</b>	<b>0.066</b>	<b>J</b>	0.21	0.031	mg/Kg		05/16/22 06:30	05/16/22 15:30	1
<b>Cobalt</b>	<b>2.9</b>		0.52	0.26	mg/Kg		05/16/22 06:30	05/16/22 15:30	1
<b>Chromium</b>	<b>7.1</b>		0.52	0.14	mg/Kg		05/16/22 06:30	05/16/22 15:30	1
<b>Copper</b>	<b>3.9</b>		1.5	0.23	mg/Kg		05/16/22 06:30	05/16/22 15:30	1
Molybdenum	ND		2.1	0.77	mg/Kg		05/16/22 06:30	05/16/22 15:30	1
<b>Nickel</b>	<b>4.6</b>		1.0	0.25	mg/Kg		05/16/22 06:30	05/16/22 15:30	1
<b>Lead</b>	<b>2.7</b>		1.0	0.27	mg/Kg		05/16/22 06:30	05/16/22 15:30	1
Selenium	ND		2.1	1.4	mg/Kg		05/16/22 06:30	05/16/22 15:30	1
Antimony	ND		2.1	0.97	mg/Kg		05/16/22 06:30	05/16/22 15:30	1
Thallium	ND		2.1	0.87	mg/Kg		05/16/22 06:30	05/16/22 15:30	1
<b>Vanadium</b>	<b>17</b>		0.52	0.20	mg/Kg		05/16/22 06:30	05/16/22 15:30	1
<b>Zinc</b>	<b>24</b>		2.1	0.20	mg/Kg		05/16/22 06:30	05/16/22 15:30	1

**Method: 7471A - Mercury (CVAA)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.039	0.0079	mg/Kg		05/16/22 14:28	05/16/22 18:34	1

# Client Sample Results

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

Job ID: 320-87847-1

**Client Sample ID: SRE-SED-2-220511**

**Lab Sample ID: 320-87847-4**

Date Collected: 05/11/22 09:50

Matrix: Solid

Date Received: 05/13/22 09:35

**Method: 314.0 - Perchlorate (IC) - Soluble**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	ND		40	20	ug/Kg			05/20/22 18:06	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	ND		0.49	0.087	mg/Kg		05/16/22 06:30	05/16/22 15:34	1
<b>Arsenic</b>	<b>1.7</b>	<b>J</b>	1.9	1.3	mg/Kg		05/16/22 06:30	05/16/22 15:34	1
<b>Barium</b>	<b>36</b>		0.97	0.12	mg/Kg		05/16/22 06:30	05/16/22 15:34	1
<b>Beryllium</b>	<b>0.042</b>	<b>J</b>	0.19	0.029	mg/Kg		05/16/22 06:30	05/16/22 15:34	1
<b>Cadmium</b>	<b>0.082</b>	<b>J</b>	0.19	0.029	mg/Kg		05/16/22 06:30	05/16/22 15:34	1
<b>Cobalt</b>	<b>2.9</b>		0.49	0.24	mg/Kg		05/16/22 06:30	05/16/22 15:34	1
<b>Chromium</b>	<b>7.4</b>		0.49	0.14	mg/Kg		05/16/22 06:30	05/16/22 15:34	1
<b>Copper</b>	<b>5.3</b>		1.5	0.21	mg/Kg		05/16/22 06:30	05/16/22 15:34	1
Molybdenum	ND		1.9	0.73	mg/Kg		05/16/22 06:30	05/16/22 15:34	1
<b>Nickel</b>	<b>4.6</b>		0.97	0.23	mg/Kg		05/16/22 06:30	05/16/22 15:34	1
<b>Lead</b>	<b>4.8</b>		0.97	0.25	mg/Kg		05/16/22 06:30	05/16/22 15:34	1
Selenium	ND		1.9	1.4	mg/Kg		05/16/22 06:30	05/16/22 15:34	1
Antimony	ND		1.9	0.91	mg/Kg		05/16/22 06:30	05/16/22 15:34	1
Thallium	ND		1.9	0.82	mg/Kg		05/16/22 06:30	05/16/22 15:34	1
<b>Vanadium</b>	<b>16</b>		0.49	0.18	mg/Kg		05/16/22 06:30	05/16/22 15:34	1
<b>Zinc</b>	<b>32</b>		1.9	0.18	mg/Kg		05/16/22 06:30	05/16/22 15:34	1

**Method: 7471A - Mercury (CVAA)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.038	0.0076	mg/Kg		05/16/22 14:28	05/16/22 18:36	1



# Client Sample Results

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

Job ID: 320-87847-1

**Client Sample ID: OW-SED-1-220511**

**Lab Sample ID: 320-87847-5**

Date Collected: 05/11/22 11:15

Matrix: Solid

Date Received: 05/13/22 09:35

**Method: 314.0 - Perchlorate (IC) - Soluble**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	ND		40	20	ug/Kg			05/20/22 18:28	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	ND		0.50	0.089	mg/Kg		05/16/22 06:30	05/16/22 15:38	1
<b>Arsenic</b>	<b>1.9</b>	<b>J</b>	2.0	1.3	mg/Kg		05/16/22 06:30	05/16/22 15:38	1
<b>Barium</b>	<b>31</b>		0.99	0.12	mg/Kg		05/16/22 06:30	05/16/22 15:38	1
Beryllium	ND		0.20	0.030	mg/Kg		05/16/22 06:30	05/16/22 15:38	1
<b>Cadmium</b>	<b>0.074</b>	<b>J</b>	0.20	0.030	mg/Kg		05/16/22 06:30	05/16/22 15:38	1
<b>Cobalt</b>	<b>2.5</b>		0.50	0.25	mg/Kg		05/16/22 06:30	05/16/22 15:38	1
<b>Chromium</b>	<b>6.7</b>		0.50	0.14	mg/Kg		05/16/22 06:30	05/16/22 15:38	1
<b>Copper</b>	<b>3.5</b>		1.5	0.22	mg/Kg		05/16/22 06:30	05/16/22 15:38	1
Molybdenum	ND		2.0	0.74	mg/Kg		05/16/22 06:30	05/16/22 15:38	1
<b>Nickel</b>	<b>4.1</b>		0.99	0.24	mg/Kg		05/16/22 06:30	05/16/22 15:38	1
<b>Lead</b>	<b>4.3</b>		0.99	0.26	mg/Kg		05/16/22 06:30	05/16/22 15:38	1
Selenium	ND		2.0	1.4	mg/Kg		05/16/22 06:30	05/16/22 15:38	1
Antimony	ND		2.0	0.93	mg/Kg		05/16/22 06:30	05/16/22 15:38	1
Thallium	ND		2.0	0.83	mg/Kg		05/16/22 06:30	05/16/22 15:38	1
<b>Vanadium</b>	<b>15</b>		0.50	0.19	mg/Kg		05/16/22 06:30	05/16/22 15:38	1
<b>Zinc</b>	<b>27</b>		2.0	0.19	mg/Kg		05/16/22 06:30	05/16/22 15:38	1

**Method: 7471A - Mercury (CVAA)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.039	0.0079	mg/Kg		05/16/22 14:28	05/16/22 18:41	1

# Client Sample Results

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

Job ID: 320-87847-1

**Client Sample ID: OS8-SED-1-220511**

**Lab Sample ID: 320-87847-6**

Date Collected: 05/11/22 13:40

Matrix: Solid

Date Received: 05/13/22 09:35

**Method: 314.0 - Perchlorate (IC) - Soluble**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	ND		40	20	ug/Kg			05/20/22 18:50	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	ND		0.48	0.087	mg/Kg		05/16/22 06:30	05/16/22 15:42	1
<b>Arsenic</b>	<b>1.4</b>	<b>J</b>	1.9	1.3	mg/Kg		05/16/22 06:30	05/16/22 15:42	1
<b>Barium</b>	<b>27</b>		0.96	0.12	mg/Kg		05/16/22 06:30	05/16/22 15:42	1
Beryllium	ND		0.19	0.029	mg/Kg		05/16/22 06:30	05/16/22 15:42	1
<b>Cadmium</b>	<b>0.075</b>	<b>J</b>	0.19	0.029	mg/Kg		05/16/22 06:30	05/16/22 15:42	1
<b>Cobalt</b>	<b>2.2</b>		0.48	0.24	mg/Kg		05/16/22 06:30	05/16/22 15:42	1
<b>Chromium</b>	<b>6.5</b>		0.48	0.13	mg/Kg		05/16/22 06:30	05/16/22 15:42	1
<b>Copper</b>	<b>3.8</b>		1.4	0.21	mg/Kg		05/16/22 06:30	05/16/22 15:42	1
Molybdenum	ND		1.9	0.72	mg/Kg		05/16/22 06:30	05/16/22 15:42	1
<b>Nickel</b>	<b>4.5</b>		0.96	0.23	mg/Kg		05/16/22 06:30	05/16/22 15:42	1
<b>Lead</b>	<b>4.1</b>		0.96	0.25	mg/Kg		05/16/22 06:30	05/16/22 15:42	1
Selenium	ND		1.9	1.3	mg/Kg		05/16/22 06:30	05/16/22 15:42	1
Antimony	ND		1.9	0.90	mg/Kg		05/16/22 06:30	05/16/22 15:42	1
Thallium	ND		1.9	0.81	mg/Kg		05/16/22 06:30	05/16/22 15:42	1
<b>Vanadium</b>	<b>12</b>		0.48	0.18	mg/Kg		05/16/22 06:30	05/16/22 15:42	1
<b>Zinc</b>	<b>26</b>		1.9	0.18	mg/Kg		05/16/22 06:30	05/16/22 15:42	1

**Method: 7471A - Mercury (CVAA)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.037	0.0074	mg/Kg		05/16/22 14:28	05/16/22 18:43	1

# QC Sample Results

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

Job ID: 320-87847-1

## Method: 314.0 - Perchlorate (IC)

**Lab Sample ID: MRL 320-589278/12**  
**Matrix: Solid**  
**Analysis Batch: 589278**

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

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Perchlorate	3.99	4.11		ug/L		103	75 - 125

**Lab Sample ID: MB 320-588326/1-A**  
**Matrix: Solid**  
**Analysis Batch: 589278**

**Client Sample ID: Method Blank**  
**Prep Type: Soluble**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	ND		40	20	ug/Kg			05/20/22 15:30	1

**Lab Sample ID: LCS 320-588326/2-A**  
**Matrix: Solid**  
**Analysis Batch: 589278**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Soluble**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Perchlorate	502	466		ug/Kg		93	75 - 125

**Lab Sample ID: 320-87847-2 MS**  
**Matrix: Solid**  
**Analysis Batch: 589278**

**Client Sample ID: BP-SED-1-220510**  
**Prep Type: Soluble**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Perchlorate	ND		499	476		ug/Kg		95	75 - 125

**Lab Sample ID: 320-87847-2 MSD**  
**Matrix: Solid**  
**Analysis Batch: 589278**

**Client Sample ID: BP-SED-1-220510**  
**Prep Type: Soluble**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Perchlorate	ND		497	475		ug/Kg		96	75 - 125	0	20

## Method: 6010B - Metals (ICP)

**Lab Sample ID: MB 320-587911/1-A**  
**Matrix: Solid**  
**Analysis Batch: 588135**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 587911**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	ND		0.50	0.090	mg/Kg		05/16/22 06:30	05/16/22 14:05	1
Arsenic	ND		2.0	1.3	mg/Kg		05/16/22 06:30	05/16/22 14:05	1
Barium	ND		1.0	0.12	mg/Kg		05/16/22 06:30	05/16/22 14:05	1
Beryllium	ND		0.20	0.030	mg/Kg		05/16/22 06:30	05/16/22 14:05	1
Cadmium	ND		0.20	0.030	mg/Kg		05/16/22 06:30	05/16/22 14:05	1
Cobalt	ND		0.50	0.25	mg/Kg		05/16/22 06:30	05/16/22 14:05	1
Chromium	ND		0.50	0.14	mg/Kg		05/16/22 06:30	05/16/22 14:05	1
Copper	ND		1.5	0.22	mg/Kg		05/16/22 06:30	05/16/22 14:05	1
Molybdenum	ND		2.0	0.75	mg/Kg		05/16/22 06:30	05/16/22 14:05	1
Nickel	ND		1.0	0.24	mg/Kg		05/16/22 06:30	05/16/22 14:05	1
Lead	ND		1.0	0.26	mg/Kg		05/16/22 06:30	05/16/22 14:05	1
Selenium	ND		2.0	1.4	mg/Kg		05/16/22 06:30	05/16/22 14:05	1
Antimony	ND		2.0	0.94	mg/Kg		05/16/22 06:30	05/16/22 14:05	1

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# QC Sample Results

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

Job ID: 320-87847-1

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

**Lab Sample ID: MB 320-587911/1-A**  
**Matrix: Solid**  
**Analysis Batch: 588135**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 587911**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Thallium	ND		2.0	0.84	mg/Kg		05/16/22 06:30	05/16/22 14:05	1
Vanadium	ND		0.50	0.19	mg/Kg		05/16/22 06:30	05/16/22 14:05	1
Zinc	ND		2.0	0.19	mg/Kg		05/16/22 06:30	05/16/22 14:05	1

**Lab Sample ID: LCS 320-587911/2-A**  
**Matrix: Solid**  
**Analysis Batch: 588135**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 587911**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Silver	5.05	4.40		mg/Kg		87	80 - 120
Arsenic	50.0	47.8		mg/Kg		96	80 - 120
Barium	50.0	47.3		mg/Kg		95	80 - 120
Beryllium	25.0	24.4		mg/Kg		98	80 - 120
Cadmium	25.0	24.8		mg/Kg		99	80 - 120
Cobalt	25.0	24.0		mg/Kg		96	80 - 120
Chromium	25.0	24.3		mg/Kg		97	80 - 120
Copper	25.0	22.8		mg/Kg		91	80 - 120
Molybdenum	24.9	24.1		mg/Kg		97	80 - 120
Nickel	25.0	24.3		mg/Kg		97	80 - 120
Lead	25.0	25.3		mg/Kg		101	80 - 120
Selenium	50.0	45.6		mg/Kg		91	80 - 120
Antimony	50.0	49.1		mg/Kg		98	80 - 120
Thallium	50.0	49.3		mg/Kg		99	80 - 120
Vanadium	25.0	24.0		mg/Kg		96	80 - 120
Zinc	49.9	50.0		mg/Kg		100	80 - 120

## Method: 7471A - Mercury (CVAA)

**Lab Sample ID: MB 320-588008/11-A**  
**Matrix: Solid**  
**Analysis Batch: 588201**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 588008**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.040	0.0080	mg/Kg		05/16/22 14:28	05/16/22 17:48	1

**Lab Sample ID: LCS 320-588008/12-A**  
**Matrix: Solid**  
**Analysis Batch: 588201**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 588008**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Mercury	0.167	0.158		mg/Kg		95	86 - 114

**Lab Sample ID: LCSD 320-588008/13-A**  
**Matrix: Solid**  
**Analysis Batch: 588201**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**  
**Prep Batch: 588008**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Mercury	0.167	0.167		mg/Kg		100	86 - 114	6	17

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# QC Sample Results

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

Job ID: 320-87847-1

## Method: 7471A - Mercury (CVAA) (Continued)

**Lab Sample ID: 320-87847-1 MS**  
**Matrix: Solid**  
**Analysis Batch: 588201**

**Client Sample ID: RRMDf-SED-1-220510**  
**Prep Type: Total/NA**  
**Prep Batch: 588008**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	0.016	J	0.167	0.191		mg/Kg		105	86 - 114

**Lab Sample ID: 320-87847-1 MSD**  
**Matrix: Solid**  
**Analysis Batch: 588201**

**Client Sample ID: RRMDf-SED-1-220510**  
**Prep Type: Total/NA**  
**Prep Batch: 588008**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Mercury	0.016	J	0.167	0.191		mg/Kg		105	86 - 114	0	17



# QC Association Summary

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

Job ID: 320-87847-1

## HPLC/IC

### Leach Batch: 588326

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-87847-1	RRMDF-SED-1-220510	Soluble	Solid	DI Leach	
320-87847-2	BP-SED-1-220510	Soluble	Solid	DI Leach	
320-87847-3	OS1-SED-1-220511	Soluble	Solid	DI Leach	
320-87847-4	SRE-SED-2-220511	Soluble	Solid	DI Leach	
320-87847-5	OW-SED-1-220511	Soluble	Solid	DI Leach	
320-87847-6	OS8-SED-1-220511	Soluble	Solid	DI Leach	
MB 320-588326/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 320-588326/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
320-87847-2 MS	BP-SED-1-220510	Soluble	Solid	DI Leach	
320-87847-2 MSD	BP-SED-1-220510	Soluble	Solid	DI Leach	

### Analysis Batch: 589278

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-87847-1	RRMDF-SED-1-220510	Soluble	Solid	314.0	588326
320-87847-2	BP-SED-1-220510	Soluble	Solid	314.0	588326
320-87847-3	OS1-SED-1-220511	Soluble	Solid	314.0	588326
320-87847-4	SRE-SED-2-220511	Soluble	Solid	314.0	588326
320-87847-5	OW-SED-1-220511	Soluble	Solid	314.0	588326
320-87847-6	OS8-SED-1-220511	Soluble	Solid	314.0	588326
MB 320-588326/1-A	Method Blank	Soluble	Solid	314.0	588326
LCS 320-588326/2-A	Lab Control Sample	Soluble	Solid	314.0	588326
MRL 320-589278/12	Lab Control Sample	Total/NA	Solid	314.0	
320-87847-2 MS	BP-SED-1-220510	Soluble	Solid	314.0	588326
320-87847-2 MSD	BP-SED-1-220510	Soluble	Solid	314.0	588326

## Metals

### Prep Batch: 587911

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-87847-1	RRMDF-SED-1-220510	Total/NA	Solid	3050B	
320-87847-2	BP-SED-1-220510	Total/NA	Solid	3050B	
320-87847-3	OS1-SED-1-220511	Total/NA	Solid	3050B	
320-87847-4	SRE-SED-2-220511	Total/NA	Solid	3050B	
320-87847-5	OW-SED-1-220511	Total/NA	Solid	3050B	
320-87847-6	OS8-SED-1-220511	Total/NA	Solid	3050B	
MB 320-587911/1-A	Method Blank	Total/NA	Solid	3050B	
LCS 320-587911/2-A	Lab Control Sample	Total/NA	Solid	3050B	

### Prep Batch: 588008

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-87847-1	RRMDF-SED-1-220510	Total/NA	Solid	7471A	
320-87847-2	BP-SED-1-220510	Total/NA	Solid	7471A	
320-87847-3	OS1-SED-1-220511	Total/NA	Solid	7471A	
320-87847-4	SRE-SED-2-220511	Total/NA	Solid	7471A	
320-87847-5	OW-SED-1-220511	Total/NA	Solid	7471A	
320-87847-6	OS8-SED-1-220511	Total/NA	Solid	7471A	
MB 320-588008/11-A	Method Blank	Total/NA	Solid	7471A	
LCS 320-588008/12-A	Lab Control Sample	Total/NA	Solid	7471A	
LCSD 320-588008/13-A	Lab Control Sample Dup	Total/NA	Solid	7471A	
320-87847-1 MS	RRMDF-SED-1-220510	Total/NA	Solid	7471A	
320-87847-1 MSD	RRMDF-SED-1-220510	Total/NA	Solid	7471A	

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# QC Association Summary

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

Job ID: 320-87847-1

## Metals

### Analysis Batch: 588135

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 320-587911/1-A	Method Blank	Total/NA	Solid	6010B	587911
LCS 320-587911/2-A	Lab Control Sample	Total/NA	Solid	6010B	587911

### Analysis Batch: 588201

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-87847-1	RRMDF-SED-1-220510	Total/NA	Solid	7471A	588008
320-87847-2	BP-SED-1-220510	Total/NA	Solid	7471A	588008
320-87847-3	OS1-SED-1-220511	Total/NA	Solid	7471A	588008
320-87847-4	SRE-SED-2-220511	Total/NA	Solid	7471A	588008
320-87847-5	OW-SED-1-220511	Total/NA	Solid	7471A	588008
320-87847-6	OS8-SED-1-220511	Total/NA	Solid	7471A	588008
MB 320-588008/11-A	Method Blank	Total/NA	Solid	7471A	588008
LCS 320-588008/12-A	Lab Control Sample	Total/NA	Solid	7471A	588008
LCSD 320-588008/13-A	Lab Control Sample Dup	Total/NA	Solid	7471A	588008
320-87847-1 MS	RRMDF-SED-1-220510	Total/NA	Solid	7471A	588008
320-87847-1 MSD	RRMDF-SED-1-220510	Total/NA	Solid	7471A	588008

### Analysis Batch: 588239

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-87847-1	RRMDF-SED-1-220510	Total/NA	Solid	6010B	587911
320-87847-2	BP-SED-1-220510	Total/NA	Solid	6010B	587911
320-87847-3	OS1-SED-1-220511	Total/NA	Solid	6010B	587911
320-87847-4	SRE-SED-2-220511	Total/NA	Solid	6010B	587911
320-87847-5	OW-SED-1-220511	Total/NA	Solid	6010B	587911
320-87847-6	OS8-SED-1-220511	Total/NA	Solid	6010B	587911

# Lab Chronicle

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

Job ID: 320-87847-1

**Client Sample ID: RRMDf-SED-1-220510**

**Lab Sample ID: 320-87847-1**

**Date Collected: 05/10/22 10:25**

**Matrix: Solid**

**Date Received: 05/13/22 09:35**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			5.00 g	50 mL	588326	05/17/22 12:23	KMW	TAL SAC
Soluble	Analysis	314.0		1			589278	05/20/22 16:15	AP1	TAL SAC
Total/NA	Prep	3050B			0.96 g	100 mL	587911	05/16/22 06:30	NIM	TAL SAC
Total/NA	Analysis	6010B		1			588239	05/16/22 15:23	SP	TAL SAC
Total/NA	Prep	7471A			0.59 g	50 mL	588008	05/16/22 14:28	JAP	TAL SAC
Total/NA	Analysis	7471A		1			588201	05/16/22 18:25	JP	TAL SAC

**Client Sample ID: BP-SED-1-220510**

**Lab Sample ID: 320-87847-2**

**Date Collected: 05/10/22 11:15**

**Matrix: Solid**

**Date Received: 05/13/22 09:35**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			4.98 g	50 mL	588326	05/17/22 12:23	KMW	TAL SAC
Soluble	Analysis	314.0		1			589278	05/20/22 16:37	AP1	TAL SAC
Total/NA	Prep	3050B			1.03 g	100 mL	587911	05/16/22 06:30	NIM	TAL SAC
Total/NA	Analysis	6010B		1			588239	05/16/22 15:26	SP	TAL SAC
Total/NA	Prep	7471A			0.62 g	50 mL	588008	05/16/22 14:28	JAP	TAL SAC
Total/NA	Analysis	7471A		1			588201	05/16/22 18:32	JP	TAL SAC

**Client Sample ID: OS1-SED-1-220511**

**Lab Sample ID: 320-87847-3**

**Date Collected: 05/11/22 08:35**

**Matrix: Solid**

**Date Received: 05/13/22 09:35**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			5.03 g	50 mL	588326	05/17/22 12:23	KMW	TAL SAC
Soluble	Analysis	314.0		1			589278	05/20/22 17:44	AP1	TAL SAC
Total/NA	Prep	3050B			0.97 g	100 mL	587911	05/16/22 06:30	NIM	TAL SAC
Total/NA	Analysis	6010B		1			588239	05/16/22 15:30	SP	TAL SAC
Total/NA	Prep	7471A			0.61 g	50 mL	588008	05/16/22 14:28	JAP	TAL SAC
Total/NA	Analysis	7471A		1			588201	05/16/22 18:34	JP	TAL SAC

**Client Sample ID: SRE-SED-2-220511**

**Lab Sample ID: 320-87847-4**

**Date Collected: 05/11/22 09:50**

**Matrix: Solid**

**Date Received: 05/13/22 09:35**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			4.97 g	50 mL	588326	05/17/22 12:23	KMW	TAL SAC
Soluble	Analysis	314.0		1			589278	05/20/22 18:06	AP1	TAL SAC
Total/NA	Prep	3050B			1.03 g	100 mL	587911	05/16/22 06:30	NIM	TAL SAC
Total/NA	Analysis	6010B		1			588239	05/16/22 15:34	SP	TAL SAC
Total/NA	Prep	7471A			0.63 g	50 mL	588008	05/16/22 14:28	JAP	TAL SAC
Total/NA	Analysis	7471A		1			588201	05/16/22 18:36	JP	TAL SAC



# Lab Chronicle

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

Job ID: 320-87847-1

**Client Sample ID: OW-SED-1-220511**

**Lab Sample ID: 320-87847-5**

**Date Collected: 05/11/22 11:15**

**Matrix: Solid**

**Date Received: 05/13/22 09:35**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			4.97 g	50 mL	588326	05/17/22 12:23	KMW	TAL SAC
Soluble	Analysis	314.0		1			589278	05/20/22 18:28	AP1	TAL SAC
Total/NA	Prep	3050B			1.01 g	100 mL	587911	05/16/22 06:30	NIM	TAL SAC
Total/NA	Analysis	6010B		1			588239	05/16/22 15:38	SP	TAL SAC
Total/NA	Prep	7471A			0.61 g	50 mL	588008	05/16/22 14:28	JAP	TAL SAC
Total/NA	Analysis	7471A		1			588201	05/16/22 18:41	JP	TAL SAC

**Client Sample ID: OS8-SED-1-220511**

**Lab Sample ID: 320-87847-6**

**Date Collected: 05/11/22 13:40**

**Matrix: Solid**

**Date Received: 05/13/22 09:35**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			5.04 g	50 mL	588326	05/17/22 12:23	KMW	TAL SAC
Soluble	Analysis	314.0		1			589278	05/20/22 18:50	AP1	TAL SAC
Total/NA	Prep	3050B			1.04 g	100 mL	587911	05/16/22 06:30	NIM	TAL SAC
Total/NA	Analysis	6010B		1			588239	05/16/22 15:42	SP	TAL SAC
Total/NA	Prep	7471A			0.65 g	50 mL	588008	05/16/22 14:28	JAP	TAL SAC
Total/NA	Analysis	7471A		1			588201	05/16/22 18:43	JP	TAL SAC

**Laboratory References:**

TAL SAC = Eurofins Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

# Accreditation/Certification Summary

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

Job ID: 320-87847-1

## Laboratory: Eurofins Sacramento

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

<u>Authority</u>	<u>Program</u>	<u>Identification Number</u>	<u>Expiration Date</u>
California	State	2897	01-31-23

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

<u>Analysis Method</u>	<u>Prep Method</u>	<u>Matrix</u>	<u>Analyte</u>
314.0		Solid	Perchlorate

- 1
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- 10
- 11
- 12
- 13
- 14

# Method Summary

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

Job ID: 320-87847-1

Method	Method Description	Protocol	Laboratory
314.0	Perchlorate (IC)	EPA	TAL SAC
6010B	Metals (ICP)	SW846	TAL SAC
7471A	Mercury (CVAA)	SW846	TAL SAC
3050B	Preparation, Metals	SW846	TAL SAC
7471A	Preparation, Mercury	SW846	TAL SAC
DI Leach	Deionized Water Leaching Procedure	ASTM	TAL SAC

**Protocol References:**

ASTM = ASTM International

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 SAC = Eurofins Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600



# Sample Summary

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


Job ID: 320-87847-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
320-87847-1	RRMDF-SED-1-220510	Solid	05/10/22 10:25	05/13/22 09:35
320-87847-2	BP-SED-1-220510	Solid	05/10/22 11:15	05/13/22 09:35
320-87847-3	OS1-SED-1-220511	Solid	05/11/22 08:35	05/13/22 09:35
320-87847-4	SRE-SED-2-220511	Solid	05/11/22 09:50	05/13/22 09:35
320-87847-5	OW-SED-1-220511	Solid	05/11/22 11:15	05/13/22 09:35
320-87847-6	OS8-SED-1-220511	Solid	05/11/22 13:40	05/13/22 09:35

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- 11
- 12
- 13
- 14





FROM: GSI Environmental Inc. 155 Grand Ave. Suite 704 Oakland, CA 94612 (510) 463-8484		PROJECT NAME: <b>AJU-BB</b>		PROJECT NO.: <b>5182</b>																																																																																
TEL: (510) 463-8484		PROJECT CONTACT: <b>Matt Goertz</b>		LAB CONTACT: <b>Afsaneh Salimpour (West Sac)</b>																																																																																
E-MAIL: <a href="mailto:mgoertz@gsi-net.com">mgoertz@gsi-net.com</a>		GLOBAL ID:		SAMPLER(S): (PRINT) <b>JW / GJB</b>																																																																																
LABORATORY: <b>Eurofins</b>		<b>REQUESTED ANALYSES</b> Please check box or fill in blank as needed.																																																																																		
TURNAROUND TIME: <input type="checkbox"/> SAME DAY <input type="checkbox"/> 24 HR <input type="checkbox"/> 48 HR <input type="checkbox"/> 72 HR <input checked="" type="checkbox"/> STANDARD		<table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th rowspan="2">LAB USE ONLY</th> <th rowspan="2">SAMPLE ID</th> <th colspan="2">SAMPLING</th> <th rowspan="2">MATRIX</th> <th rowspan="2">NO. OF CONT.</th> <th rowspan="2">Unpreserved</th> <th rowspan="2">Preserved</th> <th rowspan="2">Field Filtered</th> <th rowspan="2">Title 22 Metals (6010/7470)</th> <th rowspan="2">Perchlorate (314.0)</th> </tr> <tr> <th>DATE</th> <th>TIME</th> </tr> </thead> <tbody> <tr> <td></td> <td>R2MDF-SED-1-220510</td> <td>5/10/22</td> <td>1025</td> <td>S</td> <td>1</td> <td></td> <td></td> <td></td> <td>X</td> <td></td> </tr> <tr> <td></td> <td>BP-SED-1-220510</td> <td>5/10/22</td> <td>1115</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>X</td> <td></td> </tr> <tr> <td></td> <td>OS1-SED-1-220511</td> <td>5/11/22</td> <td>0835</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>X</td> <td></td> </tr> <tr> <td></td> <td>SLE-SED-2-220511</td> <td>5/11/22</td> <td>0950</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>X</td> <td></td> </tr> <tr> <td></td> <td>OW-SED-1-220511</td> <td>5/11/22</td> <td>1115</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>X</td> <td></td> </tr> <tr> <td></td> <td>OS8-SED-1-220511</td> <td>5/11/22</td> <td>1340</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>X</td> <td></td> </tr> </tbody> </table>				LAB USE ONLY	SAMPLE ID	SAMPLING		MATRIX	NO. OF CONT.	Unpreserved	Preserved	Field Filtered	Title 22 Metals (6010/7470)	Perchlorate (314.0)	DATE	TIME		R2MDF-SED-1-220510	5/10/22	1025	S	1				X			BP-SED-1-220510	5/10/22	1115						X			OS1-SED-1-220511	5/11/22	0835						X			SLE-SED-2-220511	5/11/22	0950						X			OW-SED-1-220511	5/11/22	1115						X			OS8-SED-1-220511	5/11/22	1340						X	
LAB USE ONLY	SAMPLE ID	SAMPLING		MATRIX	NO. OF CONT.			Unpreserved	Preserved								Field Filtered	Title 22 Metals (6010/7470)	Perchlorate (314.0)																																																																	
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	BP-SED-1-220510	5/10/22	1115						X																																																																											
	OS1-SED-1-220511	5/11/22	0835						X																																																																											
	SLE-SED-2-220511	5/11/22	0950						X																																																																											
	OW-SED-1-220511	5/11/22	1115						X																																																																											
	OS8-SED-1-220511	5/11/22	1340						X																																																																											
SPECIAL INSTRUCTIONS:		 320-87847 Chain of Custody																																																																																		
Relinquished by: (Signature) <i>[Signature]</i>		Received by: (Signature) <i>[Signature]</i>		Date: <u>5/12/22</u> Time: <u>12:18</u>																																																																																
Relinquished by: (Signature) <i>[Signature]</i>		Received by: (Signature) <i>[Signature]</i>		Date: <u>5/12/22</u> Time: <u>17:00</u>																																																																																
Relinquished by: (Signature) <i>[Signature]</i>		Received by: (Signature) <i>[Signature]</i>		Date: <u>5/13/22</u> Time: <u>09:55</u>																																																																																

2-113-8 IR-96

not required so 5-13-22

Oyoc Luke



## Login Sample Receipt Checklist

Client: GSI Environmental, Inc

Job Number: 320-87847-1

**Login Number: 87847**

**List Source: Eurofins Sacramento**

**List Number: 1**

**Creator: Oropeza, Salvador**

Question	Answer	Comment
Radioactivity wasn't checked or is <=/ background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	seal
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	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	





May 27, 2022

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

Re: Near SSFL  
Work Order: 579888

Dear Travis Wicks:

GEL Laboratories, LLC (GEL) appreciates the opportunity to provide the enclosed analytical results for the sample(s) we received on May 13, 2022. 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](http://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. 1614.

Sincerely,

Patrick Cordell for  
Delaney Stone  
Project Manager

Purchase Order: 5182  
Enclosures

## GEL LABORATORIES LLC

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

### Certificate of Analysis Report for

GSIE002 GSI Environmental Inc.

Client SDG: 579888 GEL Work Order: 579888

**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, Delaney Stone.



Reviewed by \_\_\_\_\_

# GEL LABORATORIES LLC

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

## Certificate of Analysis

Company : GSI Environmental Inc.  
 Address : 155 Grand Ave  
 Suite 704  
 Oakland, California 94612  
 Contact: Travis Wicks  
 Project: Near SSFL

Report Date: May 27, 2022

Client Sample ID: RRMDf-SED-1-220510  
 Sample ID: 579888001  
 Matrix: Soil  
 Collect Date: 10-MAY-22  
 Receive Date: 13-MAY-22  
 Collector: Client  
 Moisture: 4.88%

Project: GSIE00119  
 Client ID: GSIE002

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date	Time	Batch	Mtd.
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**Rad Gamma Spec Analysis**

*Gammascpec, Gamma, Solid (Standard List) "Dry Weight Corrected"*

Cesium-137		0.206	+/-0.0752	0.0781	+/-0.0770	0.100	pCi/g			MXR1	05/18/22	1139	2266313	1
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**Rad Gas Flow Proportional Counting**

*GFPC, Sr90, Solid "Dry Weight Corrected"*

Strontium-90	U	0.0289	+/-0.0551	0.0955	+/-0.0553	0.100	pCi/g			KP1	05/21/22	1122	2266327	2
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**Rad Liquid Scintillation Analysis**

*LSC, Tritium Vacuum, Soil "As Received"*

Tritium	U	-0.606	+/-0.917	1.70	+/-0.917	0.200	pCi/g			CM3	05/26/22	1239	2266282	3
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**The following Prep Methods were performed**

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CM2	05/13/22	1934	2265904

**The following Analytical Methods were performed**

Method	Description
1	DOE HASL 300, 4.5.2.3/Ga-01-R
2	EPA 905.0 Modified/DOE RP501 Rev. 1 Modified
3	GL-RAD-A-002

Surrogate/Tracer Recovery	Test	Batch ID	Recovery%	Acceptable Limits
Strontium Carrier	GFPC, Sr90, Solid "Dry Weight Corrected"	2266327	77.8	(25%-125%)



# GEL LABORATORIES LLC

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## Certificate of Analysis

Company : GSI Environmental Inc.  
Address : 155 Grand Ave  
Suite 704  
Oakland, California 94612

Report Date: May 27, 2022

Contact: Travis Wicks  
Project: Near SSFL

Client Sample ID: RRMDF-SED-1-220510  
Sample ID: 579888001

Project: GSIE00119  
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

Mtd.: Method

PF: Prep Factor

RL: Reporting Limit

TPU: Total Propagated Uncertainty

# GEL LABORATORIES LLC

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## Certificate of Analysis

Company : GSI Environmental Inc.  
Address : 155 Grand Ave  
Suite 704  
Oakland, California 94612  
Contact: Travis Wicks  
Project: Near SSFL

Report Date: May 27, 2022

Client Sample ID: BP-SED-1-220510  
Sample ID: 579888002  
Matrix: Soil  
Collect Date: 10-MAY-22  
Receive Date: 13-MAY-22  
Collector: Client  
Moisture: 9.58%

Project: GSIE00119  
Client ID: GSIE002

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date	Time	Batch	Mtd.
<b>Rad Gamma Spec Analysis</b>														
<i>Gammasec, Gamma, Solid (Standard List) "Dry Weight Corrected"</i>														
Cesium-137		0.107	+/-0.0826	0.0696	+/-0.0831	0.100	pCi/g			MXR1	05/18/22	1325	2266313	1
<b>Rad Gas Flow Proportional Counting</b>														
<i>GFPC, Sr90, Solid "Dry Weight Corrected"</i>														
Strontium-90	U	0.0599	+/-0.0405	0.0621	+/-0.0419	0.100	pCi/g			KP1	05/24/22	1652	2266327	2
<b>Rad Liquid Scintillation Analysis</b>														
<i>LSC, Tritium Vacuum, Soil "As Received"</i>														
Tritium	U	-0.00441	+/-0.0350	0.0628	+/-0.0350	0.200	pCi/g			CM3	05/26/22	1311	2266282	3

### The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CM2	05/13/22	1934	2265904

### The following Analytical Methods were performed

Method	Description
1	DOE HASL 300, 4.5.2.3/Ga-01-R
2	EPA 905.0 Modified/DOE RP501 Rev. 1 Modified
3	GL-RAD-A-002

Surrogate/Tracer Recovery	Test	Batch ID	Recovery%	Acceptable Limits
Strontium Carrier	GFPC, Sr90, Solid "Dry Weight Corrected"	2266327	70.8	(25%-125%)

# GEL LABORATORIES LLC

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

## Certificate of Analysis

Company : GSI Environmental Inc.  
Address : 155 Grand Ave  
Suite 704  
Oakland, California 94612  
Contact: Travis Wicks  
Project: Near SSFL  
Client Sample ID: BP-SED-1-220510  
Sample ID: 579888002

Report Date: May 27, 2022

Project: GSIE00119  
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	Mtd.: Method
DL: Detection Limit	PF: Prep Factor
Lc/LC: Critical Level	RL: Reporting Limit
MDA: Minimum Detectable Activity	TPU: Total Propagated Uncertainty
MDC: Minimum Detectable Concentration	

# GEL LABORATORIES LLC

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## Certificate of Analysis

Company : GSI Environmental Inc.  
Address : 155 Grand Ave  
Suite 704  
Oakland, California 94612  
Contact: Travis Wicks  
Project: Near SSFL

Report Date: May 27, 2022

Client Sample ID: OS1-SED-1-220511  
Sample ID: 579888003  
Matrix: Soil  
Collect Date: 11-MAY-22  
Receive Date: 13-MAY-22  
Collector: Client  
Moisture: 1.83%

Project: GSIE00119  
Client ID: GSIE002

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date	Time	Batch	Mtd.
<b>Rad Gamma Spec Analysis</b>														
<i>Gammaspec, Gamma, Solid (Standard List) "Dry Weight Corrected"</i>														
Cesium-137	U	0.0637	+/-0.0388	0.0875	+/-0.0485	0.100	pCi/g			MXR1	05/18/22	1325	2266313	1
<b>Rad Gas Flow Proportional Counting</b>														
<i>GFPC, Sr90, Solid "Dry Weight Corrected"</i>														
Strontium-90	U	0.0820	+/-0.0610	0.0965	+/-0.0628	0.100	pCi/g			KP1	05/21/22	1122	2266327	2
<b>Rad Liquid Scintillation Analysis</b>														
<i>LSC, Tritium Vacuum, Soil "As Received"</i>														
Tritium	U	-0.0115	+/-0.457	0.814	+/-0.457	0.200	pCi/g			CM3	05/26/22	1342	2266282	3

### The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CM2	05/13/22	1934	2265904

### The following Analytical Methods were performed

Method	Description
1	DOE HASL 300, 4.5.2.3/Ga-01-R
2	EPA 905.0 Modified/DOE RP501 Rev. 1 Modified
3	GL-RAD-A-002

Surrogate/Tracer Recovery	Test	Batch ID	Recovery%	Acceptable Limits
Strontium Carrier	GFPC, Sr90, Solid "Dry Weight Corrected"	2266327	63.7	(25%-125%)

# GEL LABORATORIES LLC

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

## Certificate of Analysis

Company : GSI Environmental Inc.  
Address : 155 Grand Ave  
Suite 704  
Oakland, California 94612  
Contact: Travis Wicks  
Project: Near SSFL  
Client Sample ID: OS1-SED-1-220511  
Sample ID: 579888003

Report Date: May 27, 2022

Project: GSIE00119  
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	Mtd.: Method
DL: Detection Limit	PF: Prep Factor
Lc/LC: Critical Level	RL: Reporting Limit
MDA: Minimum Detectable Activity	TPU: Total Propagated Uncertainty
MDC: Minimum Detectable Concentration	



# GEL LABORATORIES LLC

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

## Certificate of Analysis

Company : GSI Environmental Inc.  
Address : 155 Grand Ave  
Suite 704  
Oakland, California 94612  
Contact: Travis Wicks  
Project: Near SSFL

Report Date: May 27, 2022

Client Sample ID: SRE-SED-2-220511  
Sample ID: 579888004  
Matrix: Soil  
Collect Date: 11-MAY-22  
Receive Date: 13-MAY-22  
Collector: Client  
Moisture: 28.6%

Project: GSIE00119  
Client ID: GSIE002

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date	Time	Batch	Mtd.
<b>Rad Gamma Spec Analysis</b>														
<i>Gammaspec, Gamma, Solid (Standard List) "Dry Weight Corrected"</i>														
Cesium-137	U	-0.0220	+/-0.0435	0.0809	+/-0.0447	0.100	pCi/g			MXR1	05/18/22	1325	2266313	1
<b>Rad Gas Flow Proportional Counting</b>														
<i>GFPC, Sr90, Solid "Dry Weight Corrected"</i>														
Strontium-90	U	0.0654	+/-0.0589	0.0959	+/-0.0601	0.100	pCi/g			KP1	05/21/22	1122	2266327	2
<b>Rad Liquid Scintillation Analysis</b>														
<i>LSC, Tritium Vacuum, Soil "As Received"</i>														
Tritium	U	-0.00222	+/-0.0719	0.128	+/-0.0719	0.200	pCi/g			CM3	05/26/22	1413	2266282	3

### The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CM2	05/13/22	1934	2265904

### The following Analytical Methods were performed

Method	Description
1	DOE HASL 300, 4.5.2.3/Ga-01-R
2	EPA 905.0 Modified/DOE RP501 Rev. 1 Modified
3	GL-RAD-A-002

Surrogate/Tracer Recovery	Test	Batch ID	Recovery%	Acceptable Limits
Strontium Carrier	GFPC, Sr90, Solid "Dry Weight Corrected"	2266327	66	(25%-125%)

# GEL LABORATORIES LLC

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

## Certificate of Analysis

Company : GSI Environmental Inc.  
Address : 155 Grand Ave  
Suite 704  
Oakland, California 94612

Report Date: May 27, 2022

Contact: Travis Wicks  
Project: Near SSFL

Client Sample ID: SRE-SED-2-220511  
Sample ID: 579888004

Project: GSIE00119  
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

Mtd.: Method

PF: Prep Factor

RL: Reporting Limit

TPU: Total Propagated Uncertainty

# GEL LABORATORIES LLC

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

## Certificate of Analysis

Company : GSI Environmental Inc.  
 Address : 155 Grand Ave  
 Suite 704  
 Oakland, California 94612  
 Contact: Travis Wicks  
 Project: Near SSFL

Report Date: May 27, 2022

Client Sample ID: OW-SED-1-220511  
 Sample ID: 579888005  
 Matrix: Soil  
 Collect Date: 11-MAY-22  
 Receive Date: 13-MAY-22  
 Collector: Client  
 Moisture: 7.47%

Project: GSIE00119  
 Client ID: GSIE002

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date	Time	Batch	Mtd.
<b>Rad Gamma Spec Analysis</b>														
<i>Gammaspec, Gamma, Solid (Standard List) "Dry Weight Corrected"</i>														
Cesium-137	U	0.0375	+/-0.0355	0.0557	+/-0.0357	0.100	pCi/g			MXR1	05/18/22	1326	2266313	1
<b>Rad Gas Flow Proportional Counting</b>														
<i>GFPC, Sr90, Solid "Dry Weight Corrected"</i>														
Strontium-90	U	-0.0670	+/-0.0456	0.0940	+/-0.0456	0.100	pCi/g			KP1	05/21/22	1122	2266327	2
<b>Rad Liquid Scintillation Analysis</b>														
<i>LSC, Tritium Vacuum, Soil "As Received"</i>														
Tritium	U	-0.0218	+/-0.0379	0.0700	+/-0.0379	0.200	pCi/g			CM3	05/26/22	1445	2266282	3

**The following Prep Methods were performed**

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CM2	05/13/22	1934	2265904

**The following Analytical Methods were performed**

Method	Description
1	DOE HASL 300, 4.5.2.3/Ga-01-R
2	EPA 905.0 Modified/DOE RP501 Rev. 1 Modified
3	GL-RAD-A-002

Surrogate/Tracer Recovery	Test	Batch ID	Recovery%	Acceptable Limits
Strontium Carrier	GFPC, Sr90, Solid "Dry Weight Corrected"	2266327	82.5	(25%-125%)

# GEL LABORATORIES LLC

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

## Certificate of Analysis

Company : GSI Environmental Inc.  
Address : 155 Grand Ave  
Suite 704  
Oakland, California 94612  
Contact: Travis Wicks  
Project: Near SSFL  
Client Sample ID: OW-SED-1-220511  
Sample ID: 579888005

Report Date: May 27, 2022

Project: GSIE00119  
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

Mtd.: Method

PF: Prep Factor

RL: Reporting Limit

TPU: Total Propagated Uncertainty

# GEL LABORATORIES LLC

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

## Certificate of Analysis

Company : GSI Environmental Inc.  
 Address : 155 Grand Ave  
 Suite 704  
 Oakland, California 94612

Contact: Travis Wicks  
 Project: Near SSFL

Report Date: May 27, 2022

Client Sample ID: OS8-SED-1-220511  
 Sample ID: 579888006  
 Matrix: Soil  
 Collect Date: 11-MAY-22  
 Receive Date: 13-MAY-22  
 Collector: Client  
 Moisture: 17%

Project: GSIE00119  
 Client ID: GSIE002

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date	Time	Batch	Mtd.
<b>Rad Gamma Spec Analysis</b>														
<i>Gammasec, Gamma, Solid (Standard List) "Dry Weight Corrected"</i>														
Cesium-137	U	0.00408	+/-0.0372	0.0647	+/-0.0373	0.100	pCi/g			MXR1	05/18/22	1326	2266313	1
<b>Rad Gas Flow Proportional Counting</b>														
<i>GFPC, Sr90, Solid "Dry Weight Corrected"</i>														
Strontium-90	U	0.0415	+/-0.0569	0.0972	+/-0.0573	0.100	pCi/g			KP1	05/21/22	1122	2266327	2
<b>Rad Liquid Scintillation Analysis</b>														
<i>LSC, Tritium Vacuum, Soil "As Received"</i>														
Tritium	U	-0.0200	+/-0.0488	0.0891	+/-0.0488	0.200	pCi/g			CM3	05/26/22	1516	2266282	3

**The following Prep Methods were performed**

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CM2	05/13/22	1933	2265932

**The following Analytical Methods were performed**

Method	Description
1	DOE HASL 300, 4.5.2.3/Ga-01-R
2	EPA 905.0 Modified/DOE RP501 Rev. 1 Modified
3	GL-RAD-A-002

Surrogate/Tracer Recovery	Test	Batch ID	Recovery%	Acceptable Limits
Strontium Carrier	GFPC, Sr90, Solid "Dry Weight Corrected"	2266327	68.4	(25%-125%)



# GEL LABORATORIES LLC

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

## Certificate of Analysis

Company : GSI Environmental Inc.  
Address : 155 Grand Ave  
Suite 704  
Oakland, California 94612

Report Date: May 27, 2022

Contact: Travis Wicks  
Project: Near SSFL

Client Sample ID: OS8-SED-1-220511  
Sample ID: 579888006

Project: GSIE00119  
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

Mtd.: Method

PF: Prep Factor

RL: Reporting Limit

TPU: Total Propagated Uncertainty

# GEL LABORATORIES LLC

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

## QC Summary

Report Date: May 27, 2022  
Page 1 of 3

**Client :** GSI Environmental Inc.  
155 Grand Ave  
Suite 704  
Oakland, California

**Contact:** Travis Wicks

**Workorder:** 579888

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time	
<b>Rad Gamma Spec</b>												
Batch	2266313											
QC1205092510	579886001 DUP											
Cesium-137		0.115		0.0875	pCi/g	27.4		(0% - 100%)	MXR1	05/18/22	17:05	
	Uncert:	+/-0.0575		+/-0.0849								
	TPU:	+/-0.0582		+/-0.0853								
QC1205092511	LCS											
Americium-241	485			527	pCi/g		109	(75%-125%)	MXR1	05/18/22	17:07	
	Uncert:			+/-11.9								
	TPU:			+/-54.1								
Cobalt-60	76.6			72.7	pCi/g		94.9	(75%-125%)				
	Uncert:			+/-3.22								
	TPU:			+/-6.93								
Cesium-137	157			148	pCi/g		93.8	(75%-125%)				
	Uncert:			+/-3.74								
	TPU:			+/-12.6								
QC1205092509	MB											
Cesium-137			U	0.00348	pCi/g				MXR1	05/18/22	14:42	
	Uncert:			+/-0.0176								
	TPU:			+/-0.0177								
<b>Rad Gas Flow</b>												
Batch	2266327											
QC1205092551	579886001 DUP											
Strontium-90	U	0.0476	U	0.0685	pCi/g	0			N/A	KP1	05/21/22	11:21
	Uncert:	+/-0.0567		+/-0.0567								
	TPU:	+/-0.0574		+/-0.0580								
QC1205092552	LCS											
Strontium-90	3.85			3.80	pCi/g		98.6	(75%-125%)	KP1	05/21/22	11:21	
	Uncert:			+/-0.206								
	TPU:			+/-0.708								
QC1205092550	MB											
Strontium-90			U	0.0642	pCi/g				KP1	05/21/22	11:21	
	Uncert:			+/-0.0576								
	TPU:			+/-0.0588								
<b>Rad Liquid Scintillation</b>												
Batch	2266282											
QC1205092418	579888004 DUP											
Tritium	U	-0.00222	U	-0.0789	pCi/g	0			N/A	CM3	05/26/22	16:19
	Uncert:	+/-0.0719		+/-0.0659								
	TPU:	+/-0.0719		+/-0.0659								
QC1205092420	LCS											
Tritium	13.3			12.9	pCi/g		96.6	(75%-125%)	CM3	05/26/22	17:21	
	Uncert:			+/-0.760								

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## QC Summary

Workorder: 579888

Page 2 of 3

Parmname	NOM	Sample Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Liquid Scintillation</b>										
Batch	2266282									
QC1205092417	MB	TPU:	+/-0.787							
Tritium		U	-0.137	pCi/g				CM3	05/26/22	15:47
		Uncert:	+/-0.289							
		TPU:	+/-0.289							
QC1205092419	579888004	MS								
Tritium	6.45	U	-0.00222	5.98	pCi/g	92.9	(75%-125%)	CM3	05/26/22	16:50
		Uncert:	+/-0.0719		+/-0.245					
		TPU:	+/-0.0719		+/-0.262					

**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

# GEL LABORATORIES LLC

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

## QC Summary

Workorder: 579888

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 acceptance 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.



579888

<b>FROM:</b> GSI Environmental Inc. 155 Grand Ave. Suite 704 Oakland, CA 94612 (510) 463-8484 (510) 463-8484 E-MAIL: mpgoerz@gsi-net.com; tzwicks@gsi-net.com <b>LABORATORY:</b> GEL Laboratories		<b>PROJECT NAME:</b> AJU-BB <b>PROJECT CONTACT:</b> Matt Goerz <b>GLOBAL ID:</b> -		<b>PROJECT NO.:</b> 5182 <b>LAB CONTACT:</b> Delaney Stone <b>SAMPLER(S): (PRINT)</b> JCV/CJB																																																																																							
<b>TURNAROUND TIME:</b> <input type="checkbox"/> SAME DAY <input type="checkbox"/> 24 HR <input type="checkbox"/> 48 HR <input type="checkbox"/> 72 HR <input type="checkbox"/> 5 DAYS <input checked="" type="checkbox"/> STANDARD		<b>REQUESTED ANALYSES</b> Please check box or fill in blank as needed.																																																																																									
<b>SPECIAL INSTRUCTIONS:</b> - Sr-90 MDC of 0.1 pCi/g - H-3 MDC of 0.2 pCi/g - Cs-137 MDC of 0.1 pCi/g		<table border="1"> <thead> <tr> <th rowspan="2">LAB USE ONLY</th> <th rowspan="2">SAMPLE ID</th> <th colspan="2">SAMPLING</th> <th rowspan="2">MATRIX</th> <th rowspan="2">NO. OF CONT.</th> <th rowspan="2">Unpreserved</th> <th rowspan="2">Preserved</th> <th rowspan="2">Field Filtered</th> <th rowspan="2">Sr-90 (905.0)</th> <th rowspan="2">Cs-137 (901.1)</th> <th rowspan="2">H-3 (906)</th> </tr> <tr> <th>DATE</th> <th>TIME</th> </tr> </thead> <tbody> <tr> <td></td> <td>RQWDF-SED-1-220510</td> <td>5/10/22</td> <td>1025</td> <td>S</td> <td>1</td> <td></td> <td></td> <td></td> <td>X</td> <td>X</td> <td>X</td> </tr> <tr> <td></td> <td>BP-SED-1-220510</td> <td>5/10/22</td> <td>1115</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>X</td> <td>X</td> <td>X</td> </tr> <tr> <td></td> <td>OS1-SED-1-220511</td> <td>5/11/22</td> <td>0835</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>X</td> <td>X</td> <td>X</td> </tr> <tr> <td></td> <td>SRE-SED-2-220511</td> <td>5/11/22</td> <td>0950</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>X</td> <td>X</td> <td>X</td> </tr> <tr> <td></td> <td>OW-SED-1-220511</td> <td>5/11/22</td> <td>1115</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>X</td> <td>X</td> <td>X</td> </tr> <tr> <td></td> <td>OSB-SED-1-220511</td> <td>5/11/22</td> <td>1340</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>X</td> <td>X</td> <td>X</td> </tr> </tbody> </table>				LAB USE ONLY	SAMPLE ID	SAMPLING		MATRIX	NO. OF CONT.	Unpreserved	Preserved	Field Filtered	Sr-90 (905.0)	Cs-137 (901.1)	H-3 (906)	DATE	TIME		RQWDF-SED-1-220510	5/10/22	1025	S	1				X	X	X		BP-SED-1-220510	5/10/22	1115						X	X	X		OS1-SED-1-220511	5/11/22	0835						X	X	X		SRE-SED-2-220511	5/11/22	0950						X	X	X		OW-SED-1-220511	5/11/22	1115						X	X	X		OSB-SED-1-220511	5/11/22	1340						X	X	X
LAB USE ONLY	SAMPLE ID	SAMPLING		MATRIX	NO. OF CONT.			Unpreserved	Preserved									Field Filtered	Sr-90 (905.0)	Cs-137 (901.1)	H-3 (906)																																																																						
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<b>Relinquished by: (Signature)</b> <i>[Signature]</i>		<b>Received by: (Signature)</b> <i>[Signature]</i>		<b>Date:</b> 5/12/22 <b>Time:</b> 1120																																																																																							
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<b>Relinquished by: (Signature)</b>		<b>Received by: (Signature)</b>		<b>Date:</b> <b>Time:</b>																																																																																							



**SAMPLE RECEIPT & REVIEW FORM**

Client: <b>GSIE</b>	SDG/AR/COC/Work Order: <b>579888/579886/579885/579882</b>
Received By: <b>Stacy Boone</b>	Date Received: <b>May 13, 2022</b>
Circle Applicable: FedEx Express   FedEx Ground   UPS   Field Services   Courier   Other	
Carrier and Tracking Number <b>2730 6924 2337 21c      2730 6924 2348 13c</b>	

Suspected Hazard Information	Yes	No	*If Net Counts > 100cpm on samples not marked "radioactive", contact the Radiation Safety Group for further investigation.
A) Shipped as a DOT Hazardous?		<input checked="" type="checkbox"/>	Hazard Class Shipped: _____ UN#: _____ If UN2910, Is the Radioactive Shipment Survey Compliant? Yes ___ No ___
B) Did the client designate the samples are to be received as radioactive?		<input checked="" type="checkbox"/>	COC notation or radioactive stickers on containers equal client designation.
C) Did the RSO classify the samples as radioactive?		<input checked="" type="checkbox"/>	Maximum Net Counts Observed* (Observed Counts - Area Background Counts): <u>0</u> CPM / mR/Hr Classified as: Rad 1   Rad 2   Rad 3
D) Did the client designate samples are hazardous?		<input checked="" type="checkbox"/>	COC notation or hazard labels on containers equal client designation.
E) Did the RSO identify possible hazards?		<input checked="" type="checkbox"/>	If D or E is yes, select Hazards below. PCB's   Flammable   Foreign Soil   RCRA   Asbestos   Beryllium   Other: _____

Sample Receipt Criteria	Yes	NA	No	Comments/Qualifiers (Required for Non-Conforming Items)
1 Shipping containers received intact and sealed?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Circle Applicable: Seals broken   Damaged container   Leaking container   Other (describe)
2 Chain of custody documents included with shipment?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Circle Applicable: Client contacted and provided COC   COC created upon receipt:
3 Samples requiring cold preservation within (0 ≤ 6 deg. C)?*	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Preservation Method: Wet Ice   Ice Packs   Dry Ice   None   Other: _____ *all temperatures are recorded in Celsius <b>SEE BELOW</b> TEMP: _____
4 Daily check performed and passed on IR temperature gun?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Temperature Device Serial #: <b>XRI-22</b> Secondary Temperature Device Serial # (If Applicable): _____
5 Sample containers intact and sealed?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Circle Applicable: Seals broken   Damaged container   Leaking container   Other (describe)
6 Samples requiring chemical preservation at proper pH?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Sample ID's and Containers Affected: If Preservation added, Lot#: _____
7 Do any samples require Volatile Analysis?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	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 ___
8 Samples received within holding time?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	ID's and tests affected:
9 Sample ID's on COC match ID's on bottles?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	ID's and containers affected:
10 Date & time on COC match date & time on bottles?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Circle Applicable: No dates on containers   No times on containers   COC missing info   Other (describe)
11 Number of containers received match number indicated on COC?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Circle Applicable: No container count on COC   Other (describe)
12 Are sample containers identifiable as GEL provided by use of GEL labels?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<b>SB</b>
13 COC form is properly signed in relinquished/received sections?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Circle Applicable: Not relinquished   Other (describe)

Comments (Use Continuation Form if needed):  
**2730 6924 2348 D 13c : FRUIT, KC-1-220511**  
**GF-1-220512**  
**AT-1-200512**  
**08**  
**058-SED-1-220511**

PM (or PMA) review: Initials MM Date 5/19/22 Page 1 of 7

**List of current GEL Certifications as of 27 May 2022**

<b>State</b>	<b>Certification</b>
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	SC000122022-4
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	T104704235-22-20
Utah NELAP	SC000122021-36
Vermont	VT87156
Virginia NELAP	460202
Washington	C780

**Radiochemistry  
Technical Case Narrative  
GSI Environmental Inc.  
SDG #: 579888**

**Product:** Dry Weight

**Preparation Method:** Dry Soil Prep

**Preparation Procedure:** GL-RAD-A-021 REV# 24

**Preparation Batch:** 2265904

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

<b><u>GEL Sample ID#</u></b>	<b><u>Client Sample Identification</u></b>
579888001	RRMDF-SED-1-220510
579888002	BP-SED-1-220510
579888003	OS1-SED-1-220511
579888004	SRE-SED-2-220511
579888005	OW-SED-1-220511

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:** Dry Weight

**Preparation Method:** Dry Soil Prep

**Preparation Procedure:** GL-RAD-A-021 REV# 24

**Preparation Batch:** 2265932

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

<b><u>GEL Sample ID#</u></b>	<b><u>Client Sample Identification</u></b>
579888006	OS8-SED-1-220511

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:** 2266313

**Preparation Method:** Dry Soil Prep

**Preparation Procedure:** GL-RAD-A-021 REV# 24

**Preparation Batches:** 2265904 and 2265932

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

<b><u>GEL Sample ID#</u></b>	<b><u>Client Sample Identification</u></b>
579888001	RRMDF-SED-1-220510
579888002	BP-SED-1-220510
579888003	OS1-SED-1-220511
579888004	SRE-SED-2-220511
579888005	OW-SED-1-220511
579888006	OS8-SED-1-220511
1205092509	Method Blank (MB)
1205092510	579886001(CIT-1-220510) Sample Duplicate (DUP)
1205092511	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:** GFPC, Sr90, Solid

**Analytical Method:** EPA 905.0 Modified/DOE RP501 Rev. 1 Modified

**Analytical Procedure:** GL-RAD-A-004 REV# 22

**Analytical Batch:** 2266327

**Preparation Method:** Dry Soil Prep

**Preparation Procedure:** GL-RAD-A-021 REV# 24

**Preparation Batches:** 2265904 and 2265932

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

<b><u>GEL Sample ID#</u></b>	<b><u>Client Sample Identification</u></b>
579888001	RRMDF-SED-1-220510
579888002	BP-SED-1-220510
579888003	OS1-SED-1-220511
579888004	SRE-SED-2-220511
579888005	OW-SED-1-220511
579888006	OS8-SED-1-220511
1205092550	Method Blank (MB)
1205092551	579886001(CIT-1-220510) Sample Duplicate (DUP)
1205092552	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**

Sample 579888002 (BP-SED-1-220510) was recounted due to a suspected false positive. The recount is reported.

**Product:** LSC, Tritium Vacuum, Soil

**Analytical Method:** GL-RAD-A-002

**Analytical Procedure:** GL-RAD-A-002 REV# 24

**Analytical Batch:** 2266282

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

<b><u>GEL Sample ID#</u></b>	<b><u>Client Sample Identification</u></b>
579888001	RRMDF-SED-1-220510
579888002	BP-SED-1-220510
579888003	OS1-SED-1-220511
579888004	SRE-SED-2-220511
579888005	OW-SED-1-220511
579888006	OS8-SED-1-220511
1205092417	Method Blank (MB)
1205092418	579888004(SRE-SED-2-220511) Sample Duplicate (DUP)
1205092419	579888004(SRE-SED-2-220511) Matrix Spike (MS)
1205092420	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**

The blank (See Below) did not meet the detection limit due to keeping the blank volume consistent with the other sample aliquots.

<b>Sample</b>	<b>Analyte</b>	<b>Value</b>
1205092417 (MB)	Tritium	Result -0.137 < MDA 0.53 > RDL 0.2 pCi/g



Samples (See Below) did not meet the detection limits due to the small sample aliquots used. The aliquots were reduced due to the matrix of the samples. The samples were counted the maximum count time in order to achieve the lowest possible MDAs.

<b>Sample</b>	<b>Analyte</b>	<b>Value</b>
579888001 (RRMDF-SED-1-220510)	Tritium	Result -0.606 < MDA 1.7 > RDL 0.2 pCi/g
579888003 (OS1-SED-1-220511)	Tritium	Result -0.0115 < MDA 0.814 > RDL 0.2 pCi/g

### **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.



May 27, 2022

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

Re: Near SSFL  
Work Order: 579882

Dear Travis Wicks:

GEL Laboratories, LLC (GEL) appreciates the opportunity to provide the enclosed analytical results for the sample(s) we received on May 13, 2022. 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](http://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. 1614.

Sincerely,

Delaney Stone  
Project Manager

Purchase Order: 5182  
Enclosures

**GEL LABORATORIES LLC**

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

**Certificate of Analysis Report  
for**

GSIE002 GSI Environmental Inc.

Client SDG: 579882 GEL Work Order: 579882

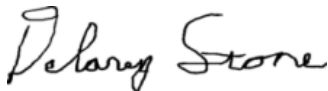
**The Qualifiers in this report are defined as follows:**

- \* 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, Delaney Stone.



Reviewed by \_\_\_\_\_

# GEL LABORATORIES LLC

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

## Certificate of Analysis

Company : GSI Environmental Inc.  
Address : 155 Grand Ave  
Suite 704  
Oakland, California 94612  
Contact: Travis Wicks  
Project: Near SSFL

Report Date: May 27, 2022

Client Sample ID: OS357-W-220510 Project: GSIE00119  
Sample ID: 579882001 Client ID: GSIE002  
Matrix: Water  
Collect Date: 10-MAY-22  
Receive Date: 13-MAY-22  
Collector: Client

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date	Time	Batch	Mtd.
<b>Rad Gamma Spec Analysis</b>														
<i>Gammascpec, Gamma, Liquid (Standard List) "As Received"</i>														
Cesium-137	U	2.88	+/-4.15	8.55	+/-4.35	10.0	pCi/L			MXR1	05/18/22	1323	2266015	1
<b>Rad Gas Flow Proportional Counting</b>														
<i>GFPC, Sr90, Liquid "As Received"</i>														
Strontium-90	U	-1.01	+/-0.917	1.87	+/-0.917	2.00	pCi/L			KP1	05/20/22	1342	2266317	2
<b>Rad Liquid Scintillation Analysis</b>														
<i>LSC, Tritium Distillation, Liquid "As Received"</i>														
Tritium	U	21.1	+/-362	633	+/-362	700	pCi/L			KXA1	05/26/22	2045	2266948	3

### The following Analytical Methods were performed

Method	Description
1	EPA 901.1
2	EPA 905.0 Modified/DOE RP501 Rev. 1 Modified
3	EPA 906.0 Modified

Surrogate/Tracer Recovery	Test	Batch ID	Recovery%	Acceptable Limits
Strontium Carrier	GFPC, Sr90, Liquid "As Received"	2266317	87.3	(25%-125%)

**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

# GEL LABORATORIES LLC

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## Certificate of Analysis

Company : GSI Environmental Inc.  
 Address : 155 Grand Ave  
 Suite 704  
 Oakland, California 94612

Report Date: May 27, 2022

Contact: Travis Wicks

Project: Near SSFL

Client Sample ID: OS1-W-220511

Project: GSIE00119

Sample ID: 579882002

Client ID: GSIE002

Matrix: Water

Collect Date: 11-MAY-22

Receive Date: 13-MAY-22

Collector: Client

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date	Time	Batch	Mtd.
<b>Rad Gamma Spec Analysis</b>														
<i>Gammascpec, Gamma, Liquid (Standard List) "As Received"</i>														
Cesium-137	UI	0.000	+/-9.44	7.48	+/-9.46	10.0	pCi/L			MXR1	05/18/22	1323	2266015	1
<b>Rad Gas Flow Proportional Counting</b>														
<i>GFPC, Sr90, Liquid "As Received"</i>														
Strontium-90	U	-3.30	+/-0.759	1.90	+/-0.759	2.00	pCi/L			KP1	05/20/22	1342	2266317	2
<b>Rad Liquid Scintillation Analysis</b>														
<i>LSC, Tritium Distillation, Liquid "As Received"</i>														
Tritium	U	-88.0	+/-352	625	+/-352	700	pCi/L			KXA1	05/26/22	2106	2266948	3

**The following Analytical Methods were performed**

Method	Description
1	EPA 901.1
2	EPA 905.0 Modified/DOE RP501 Rev. 1 Modified
3	EPA 906.0 Modified

Surrogate/Tracer Recovery	Test	Batch ID	Recovery%	Acceptable Limits
Strontium Carrier	GFPC, Sr90, Liquid "As Received"	2266317	89.6	(25%-125%)

**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	Mtd.: Method
DL: Detection Limit	PF: Prep Factor
Lc/LC: Critical Level	RL: Reporting Limit
MDA: Minimum Detectable Activity	TPU: Total Propagated Uncertainty
MDC: Minimum Detectable Concentration	



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## Certificate of Analysis

Company : GSI Environmental Inc.  
 Address : 155 Grand Ave  
 Suite 704  
 Oakland, California 94612

Report Date: May 27, 2022

Contact: Travis Wicks

Project: Near SSFL

Client Sample ID: SRE-W-220511

Project: GSIE00119

Sample ID: 579882003

Client ID: GSIE002

Matrix: Water

Collect Date: 11-MAY-22

Receive Date: 13-MAY-22

Collector: Client

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date	Time	Batch	Mtd.
<b>Rad Gamma Spec Analysis</b>														
<i>Gammascpec, Gamma, Liquid (Standard List) "As Received"</i>														
Cesium-137	U	1.51	+/-4.63	6.17	+/-4.63	10.0	pCi/L			MXR1	05/18/22	1324	2266015	1
<b>Rad Gas Flow Proportional Counting</b>														
<i>GFPC, Sr90, Liquid "As Received"</i>														
Strontium-90	U	1.04	+/-1.12	1.88	+/-1.14	2.00	pCi/L			KP1	05/20/22	1342	2266317	2
<b>Rad Liquid Scintillation Analysis</b>														
<i>LSC, Tritium Distillation, Liquid "As Received"</i>														
Tritium	U	304	+/-369	622	+/-374	700	pCi/L			KXA1	05/26/22	2126	2266948	3

**The following Analytical Methods were performed**

Method	Description
1	EPA 901.1
2	EPA 905.0 Modified/DOE RP501 Rev. 1 Modified
3	EPA 906.0 Modified

Surrogate/Tracer Recovery	Test	Batch ID	Recovery%	Acceptable Limits
Strontium Carrier	GFPC, Sr90, Liquid "As Received"	2266317	84.9	(25%-125%)

**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	Mtd.: Method
DL: Detection Limit	PF: Prep Factor
Lc/LC: Critical Level	RL: Reporting Limit
MDA: Minimum Detectable Activity	TPU: Total Propagated Uncertainty
MDC: Minimum Detectable Concentration	

# GEL LABORATORIES LLC

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## Certificate of Analysis

Company : GSI Environmental Inc.  
 Address : 155 Grand Ave  
 Suite 704  
 Oakland, California 94612

Report Date: May 27, 2022

Contact: Travis Wicks  
 Project: Near SSFL

Client Sample ID: OS8-W-220511  
 Sample ID: 579882004  
 Matrix: Water  
 Collect Date: 11-MAY-22  
 Receive Date: 13-MAY-22  
 Collector: Client

Project: GSIE00119  
 Client ID: GSIE002

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date	Time	Batch	Mtd.
<b>Rad Gamma Spec Analysis</b>														
<i>Gammascpec, Gamma, Liquid (Standard List) "As Received"</i>														
Cesium-137	U	8.46	+/-14.8	10.1	+/-14.8	10.0	pCi/L			MXR1	05/18/22	1324	2266015	1
<b>Rad Gas Flow Proportional Counting</b>														
<i>GFPC, Sr90, Liquid "As Received"</i>														
Strontium-90	U	0.945	+/-1.08	1.82	+/-1.09	2.00	pCi/L			KP1	05/20/22	1342	2266317	2
<b>Rad Liquid Scintillation Analysis</b>														
<i>LSC, Tritium Distillation, Liquid "As Received"</i>														
Tritium	U	73.1	+/-364	632	+/-365	700	pCi/L			KXA1	05/26/22	2147	2266948	3

**The following Analytical Methods were performed**

Method	Description
1	EPA 901.1
2	EPA 905.0 Modified/DOE RP501 Rev. 1 Modified
3	EPA 906.0 Modified

Surrogate/Tracer Recovery	Test	Batch ID	Recovery%	Acceptable Limits
Strontium Carrier	GFPC, Sr90, Liquid "As Received"	2266317	80.2	(25%-125%)

**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	Mtd.: Method
DL: Detection Limit	PF: Prep Factor
Lc/LC: Critical Level	RL: Reporting Limit
MDA: Minimum Detectable Activity	TPU: Total Propagated Uncertainty
MDC: Minimum Detectable Concentration	

# GEL LABORATORIES LLC

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## QC Summary

Report Date: May 27, 2022  
Page 1 of 3

**Client :** GSI Environmental Inc.  
155 Grand Ave  
Suite 704  
Oakland, California

**Contact:** Travis Wicks

**Workorder:** 579882

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Gamma Spec</b>											
Batch	2266015										
QC1205091881	579882001 DUP										
Cesium-137	U	2.88	U	-0.310	pCi/L	0		N/A	MXR1	05/19/22	05:20
	Uncert:	+/-4.15		+/-4.34							
	TPU:	+/-4.35		+/-4.34							
QC1205091882	LCS										
Americium-241		1.09E+05		1.31E+05	pCi/L		120	(75%-125%)	MXR1	05/19/22	05:21
	Uncert:			+/-4550							
	TPU:			+/-19600							
Cobalt-60		19900		21300	pCi/L		107	(75%-125%)			
	Uncert:			+/-749							
	TPU:			+/-2450							
Cesium-137		37500		40700	pCi/L		109	(75%-125%)			
	Uncert:			+/-852							
	TPU:			+/-3640							
QC1205091880	MB										
Cesium-137			U	-5.61	pCi/L				MXR1	05/18/22	13:24
	Uncert:			+/-4.71							
	TPU:			+/-5.37							
<b>Rad Gas Flow</b>											
Batch	2266317										
QC1205092516	579882001 DUP										
Strontium-90	U	-1.01	U	-0.465	pCi/L	0		N/A	KP1	05/20/22	13:42
	Uncert:	+/-0.917		+/-0.990							
	TPU:	+/-0.917		+/-0.990							
QC1205092517	LCS										
Strontium-90		77.6		82.6	pCi/L		106	(75%-125%)	KP1	05/25/22	10:45
	Uncert:			+/-3.79							
	TPU:			+/-13.5							
QC1205092515	MB										
Strontium-90			U	0.201	pCi/L				KP1	05/20/22	13:42
	Uncert:			+/-0.905							
	TPU:			+/-0.905							
<b>Rad Liquid Scintillation</b>											
Batch	2266948										
QC1205093951	579882001 DUP										
Tritium	U	21.1	U	-275	pCi/L	0		N/A	KXA1	05/26/22	22:28
	Uncert:	+/-362		+/-347							
	TPU:	+/-362		+/-347							
QC1205093953	LCS										
Tritium		5330		4930	pCi/L		92.5	(75%-125%)	KXA1	05/26/22	23:10
	Uncert:			+/-545							

# GEL LABORATORIES LLC

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## QC Summary

Workorder: 579882

Page 2 of 3

Parmname	NOM	Sample Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Liquid Scintillation</b>										
Batch	2266948									
TPU: +/-1100										
QC1205093950	MB									
Tritium		U	-18.0	pCi/L				KXA1	05/26/22	22:08
Uncert: +/-364										
TPU: +/-364										
QC1205093952	579882001	MS								
Tritium	5340	U	21.1	4390	pCi/L	82.1	(75%-125%)	KXA1	05/26/22	22:49
Uncert: +/-362 +/-527										
TPU: +/-362 +/-998										

**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

# GEL LABORATORIES LLC

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

## QC Summary

Workorder: 579882

Page 3 of 3

<u>Parmname</u>	<u>NOM</u>	<u>Sample Qual</u>	<u>QC</u>	<u>Units</u>	<u>RPD%</u>	<u>REC%</u>	<u>Range</u>	<u>Anlst</u>	<u>Date</u>	<u>Time</u>
-----------------	------------	--------------------	-----------	--------------	-------------	-------------	--------------	--------------	-------------	-------------

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 acceptance 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.

579882



FROM: GSI Environmental Inc.  
155 Grand Ave. Suite 704  
Oakland, CA 94612  
(510) 463-8484

PROJECT NAME: AJU-BB  
PROJECT CONTACT: Matt Goerz  
GLOBAL ID: -

TEL: (510) 463-8484  
E-MAIL: mgoerz@gsi-net.com; tzwick@gsi-net.com

LABORATORY: GEL Laboratories

PROJECT NO.: 5182  
LAB CONTACT: Delaney Stone  
SAMPLER(S): (PRINT) JCV / CJB

**REQUESTED ANALYSES**  
Please check box or fill in blank as needed.

LAB USE ONLY	SAMPLE ID	SAMPLING		MATRIX	NO. OF CONT.	Preservation		Field Filtered	Sr-90 (905.0)	Cs-137 (901.1)	H-3 (906)
		DATE	TIME			Unpreserved	Preserved				
	05357-W-220510	5/10/22	1245	W	3	1	2		X	X	X
	051-W-220511	5/11/22	0815	↓	↓	↓	↓		X	X	X
	SRE-W-220511	5/11/22	0940	↓	↓	↓	↓		X	X	X
	058-W-220511	5/11/22	1335	↓	↓	↓	↓		X	X	X

TURNAROUND TIME:  SAME DAY  24 HR  48 HR  72 HR  5 DAYS  STANDARD

SPECIAL INSTRUCTIONS:  
- Sr-90 MDC of 8 pCi/L  
- H-3 MDC of 20,000 pCi/L  
- Cs-137 MDC of 200 pCi/L

Relinquished by: (Signature) *M V* Date: 5/12/22 Time: 1126  
 Relinquished by: (Signature) *MSR* Date: 5/13/22 Time: 930  
 Relinquished by: (Signature) Date: Time:





Laboratories LLC

SAMPLE RECEIPT & REVIEW FORM

Client: **GSIE** SDG/AR/COC/Work Order: **579882/579886/579885/579887**

Received By: **Stacy Boone** Date Received: **May 13, 2022**

Carrier and Tracking Number  
Carrier: FedEx Express FedEx Ground UPS Field Services Courier Other  
Tracking: **2730 6924 2337 21c** **2730 6924 2348 13c**

Suspected Hazard Information Yes No \*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 received as radioactive? COC notation or radioactive stickers on containers equal client designation.

C) Did the RSO classify the samples as radioactive? Maximum Net Counts Observed\* (Observed Counts - Area Background Counts): 0 CPM / mR/Hr Classified as: Rad 1 Rad 2 Rad 3

D) Did the client designate samples are hazardous? COC notation or hazard labels on containers equal client designation.

E) 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 Yes NA No Comments/Qualifiers (Required for Non-Conforming Items)

1 Shipping containers received intact and sealed? 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 ≤ 6 deg. C)?\* Preservation Method: Wet Ice Ice Packs Dry Ice None Other: \*all temperatures are recorded in Celsius **SEE BELOW** TEMP: \_\_\_\_\_

4 Daily check performed and passed on IR temperature gun? Temperature Device Serial #: **KRI-22** 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? Sample ID's and Containers Affected: If Preservation added, Lot#:

7 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:

8 Samples received within holding time? ID's and tests affected:

9 Sample ID's on COC match ID's on bottles? ID's and containers affected:

10 Date & time on COC match date & time on bottles? Circle Applicable: No dates on containers No times on containers COC missing info Other (describe)

11 Number of containers received match number indicated on COC? Circle Applicable: No container count on COC Other (describe)

12 Are sample containers identifiable as GEL provided by use of GEL labels? **SB**

13 COC form is properly signed in relinquished/received sections? Circle Applicable: Not relinquished Other (describe)

Comments (Use Continuation Form if needed):  
**2730 6924 2348 @ 13c : FRUIT, KC-1-220511**  
**GF-1-220512**  
**AT-1-200512**  
**08**  
**058-SED-1-220511**

PM (or PMA) review: Initials JM Date 5/19/22 Page 1 of 1

**List of current GEL Certifications as of 27 May 2022**

<b>State</b>	<b>Certification</b>
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	SC000122022-4
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	T104704235-22-20
Utah NELAP	SC000122021-36
Vermont	VT87156
Virginia NELAP	460202
Washington	C780

**Radiochemistry  
Technical Case Narrative  
GSI Environmental Inc.  
SDG #: 579882**

**Product:** Gammaspec, Gamma, Liquid (Standard List)

**Analytical Method:** EPA 901.1

**Analytical Procedure:** GL-RAD-A-013 REV# 27

**Analytical Batch:** 2266015

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

<b><u>GEL Sample ID#</u></b>	<b><u>Client Sample Identification</u></b>
579882001	OS357-W-220510
579882002	OS1-W-220511
579882003	SRE-W-220511
579882004	OS8-W-220511
1205091880	Method Blank (MB)
1205091881	579882001(OS357-W-220510) Sample Duplicate (DUP)
1205091882	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.

**Qualifier Information**

<b>Qualifier</b>	<b>Reason</b>	<b>Analyte</b>	<b>Sample</b>	<b>Client Sample</b>
UI	Results are considered a false positive due to high counting uncertainty.	Cesium-137	579882002	OS1-W-220511

**Product:** GFPC, Sr90, Liquid

**Analytical Method:** EPA 905.0 Modified/DOE RP501 Rev. 1 Modified

**Analytical Procedure:** GL-RAD-A-004 REV# 22

**Analytical Batch:** 2266317

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

<b><u>GEL Sample ID#</u></b>	<b><u>Client Sample Identification</u></b>
579882001	OS357-W-220510
579882002	OS1-W-220511
579882003	SRE-W-220511
579882004	OS8-W-220511

1205092515 Method Blank (MB)  
 1205092516 579882001(OS357-W-220510) Sample Duplicate (DUP)  
 1205092517 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.

**Preparation Information**

**Homogenous Matrix**

Sample 579882003 (SRE-W-220511) was non-homogenous matrix. sediment at the bottom of sample bottle 579882003 (SRE-W-220511).

**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
579882002 (OS1-W-220511)	Strontium-90	Negative Result > 3 sigma value

**Recounts**

Sample 1205092517 (LCS) was recounted due to high recovery. The recount is reported.

**Product: LSC, Tritium Distillation, Liquid**

**Analytical Method:** EPA 906.0 Modified

**Analytical Procedure:** GL-RAD-A-002 REV# 24

**Analytical Batch:** 2266948

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

<b><u>GEL Sample ID#</u></b>	<b><u>Client Sample Identification</u></b>
579882001	OS357-W-220510
579882002	OS1-W-220511
579882003	SRE-W-220511
579882004	OS8-W-220511
1205093950	Method Blank (MB)
1205093951	579882001(OS357-W-220510) Sample Duplicate (DUP)
1205093952	579882001(OS357-W-220510) Matrix Spike (MS)
1205093953	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.

**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.


## ANALYTICAL REPORT

Eurofins Sacramento  
880 Riverside Parkway  
West Sacramento, CA 95605  
Tel: (916)373-5600

Laboratory Job ID: 320-87845-1  
Client Project/Site: AJU-BB

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

Attn: Matt Goerz



Authorized for release by:  
5/26/2022 2:59:23 PM

Afsaneh Salimpour, Senior Project Manager  
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results through



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

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

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





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# Definitions/Glossary

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

Job ID: 320-87845-1

## Qualifiers

### HPLC/IC

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

### Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

## Glossary

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

# Case Narrative

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

Job ID: 320-87845-1

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## Job ID: 320-87845-1

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### Laboratory: Eurofins Sacramento

#### Narrative

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#### Job Narrative 320-87845-1

#### Comments

No additional comments.

#### Receipt

The samples were received on 5/13/2022 9:35 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 0.4° C.

#### Receipt Exceptions

COC was not relinquished by shipper. OS357-W-220510 (320-87845-1), OS1-W-220511 (320-87845-2), SRE-W-220511 (320-87845-3) and OS8-W-220511 (320-87845-4)

Perchlorate analysis requires that samples have significant headspace (1/3 of container volume) to reduce potential anaerobic biodegradation. The following sample(s) were received with insufficient headspace: 1-4. OS357-W-220510 (320-87845-1), OS1-W-220511 (320-87845-2), SRE-W-220511 (320-87845-3) and OS8-W-220511 (320-87845-4).

#### Metals

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

#### General Chemistry

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

# Detection Summary

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

Job ID: 320-87845-1

## Client Sample ID: OS357-W-220510

## Lab Sample ID: 320-87845-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.036		0.0050	0.0025	mg/L	1		6010B	Total/NA

## Client Sample ID: OS1-W-220511

## Lab Sample ID: 320-87845-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perchlorate	2.0	J	4.0	2.0	ug/L	1		314.0	Total/NA
Barium	0.037		0.0050	0.0025	mg/L	1		6010B	Total/NA
Copper	0.016		0.010	0.0021	mg/L	1		6010B	Total/NA
Lead	0.0031	J	0.0050	0.0025	mg/L	1		6010B	Total/NA
Zinc	0.19		0.010	0.0030	mg/L	1		6010B	Total/NA

## Client Sample ID: SRE-W-220511

## Lab Sample ID: 320-87845-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.056		0.0050	0.0025	mg/L	1		6010B	Total/NA
Chromium	0.0027	J	0.0080	0.0012	mg/L	1		6010B	Total/NA
Copper	0.0025	J	0.010	0.0021	mg/L	1		6010B	Total/NA
Vanadium	0.0061		0.0050	0.0019	mg/L	1		6010B	Total/NA
Zinc	0.0099	J	0.010	0.0030	mg/L	1		6010B	Total/NA

## Client Sample ID: OS8-W-220511

## Lab Sample ID: 320-87845-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.056		0.0050	0.0025	mg/L	1		6010B	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Sacramento

# Client Sample Results

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

Job ID: 320-87845-1

**Client Sample ID: 0S357-W-220510**

**Lab Sample ID: 320-87845-1**

Date Collected: 05/10/22 12:45

Matrix: Water

Date Received: 05/13/22 09:35

**Method: 314.0 - Perchlorate (IC)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	ND		4.0	2.0	ug/L			05/17/22 20:36	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	ND		0.0050	0.00084	mg/L		05/17/22 06:00	05/17/22 20:17	1
Arsenic	ND		0.020	0.012	mg/L		05/17/22 06:00	05/17/22 20:17	1
<b>Barium</b>	<b>0.036</b>		0.0050	0.0025	mg/L		05/17/22 06:00	05/17/22 20:17	1
Beryllium	ND		0.0020	0.00030	mg/L		05/17/22 06:00	05/17/22 20:17	1
Cadmium	ND		0.0020	0.00050	mg/L		05/17/22 06:00	05/17/22 20:17	1
Cobalt	ND		0.0050	0.0030	mg/L		05/17/22 06:00	05/17/22 20:17	1
Chromium	ND		0.0080	0.0012	mg/L		05/17/22 06:00	05/17/22 20:17	1
Copper	ND		0.010	0.0021	mg/L		05/17/22 06:00	05/17/22 20:17	1
Molybdenum	ND		0.020	0.0027	mg/L		05/17/22 06:00	05/17/22 20:17	1
Nickel	ND		0.0050	0.0024	mg/L		05/17/22 06:00	05/17/22 20:17	1
Lead	ND		0.0050	0.0025	mg/L		05/17/22 06:00	05/17/22 20:17	1
Selenium	ND		0.020	0.013	mg/L		05/17/22 06:00	05/17/22 20:17	1
Antimony	ND		0.020	0.0098	mg/L		05/17/22 06:00	05/17/22 20:17	1
Thallium	ND		0.020	0.0090	mg/L		05/17/22 06:00	05/17/22 20:17	1
Vanadium	ND		0.0050	0.0019	mg/L		05/17/22 06:00	05/17/22 20:17	1
Zinc	ND		0.010	0.0030	mg/L		05/17/22 06:00	05/17/22 20:17	1

**Method: 7470A - Mercury (CVAA)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00010	mg/L		05/17/22 16:07	05/17/22 21:20	1

# Client Sample Results

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

Job ID: 320-87845-1

**Client Sample ID: OS1-W-220511**

**Lab Sample ID: 320-87845-2**

Date Collected: 05/11/22 08:15

Matrix: Water

Date Received: 05/13/22 09:35

**Method: 314.0 - Perchlorate (IC)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	2.0	J	4.0	2.0	ug/L			05/17/22 20:58	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	ND		0.0050	0.00084	mg/L		05/17/22 06:00	05/17/22 20:36	1
Arsenic	ND		0.020	0.012	mg/L		05/17/22 06:00	05/17/22 20:36	1
Barium	0.037		0.0050	0.0025	mg/L		05/17/22 06:00	05/17/22 20:36	1
Beryllium	ND		0.0020	0.00030	mg/L		05/17/22 06:00	05/17/22 20:36	1
Cadmium	ND		0.0020	0.00050	mg/L		05/17/22 06:00	05/17/22 20:36	1
Cobalt	ND		0.0050	0.0030	mg/L		05/17/22 06:00	05/17/22 20:36	1
Chromium	ND		0.0080	0.0012	mg/L		05/17/22 06:00	05/17/22 20:36	1
Copper	0.016		0.010	0.0021	mg/L		05/17/22 06:00	05/17/22 20:36	1
Molybdenum	ND		0.020	0.0027	mg/L		05/17/22 06:00	05/17/22 20:36	1
Nickel	ND		0.0050	0.0024	mg/L		05/17/22 06:00	05/17/22 20:36	1
Lead	0.0031	J	0.0050	0.0025	mg/L		05/17/22 06:00	05/17/22 20:36	1
Selenium	ND		0.020	0.013	mg/L		05/17/22 06:00	05/17/22 20:36	1
Antimony	ND		0.020	0.0098	mg/L		05/17/22 06:00	05/17/22 20:36	1
Thallium	ND		0.020	0.0090	mg/L		05/17/22 06:00	05/17/22 20:36	1
Vanadium	ND		0.0050	0.0019	mg/L		05/17/22 06:00	05/17/22 20:36	1
Zinc	0.19		0.010	0.0030	mg/L		05/17/22 06:00	05/17/22 20:36	1

**Method: 7470A - Mercury (CVAA)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00010	mg/L		05/17/22 16:07	05/17/22 21:22	1



# Client Sample Results

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

Job ID: 320-87845-1

**Client Sample ID: SRE-W-220511**

**Lab Sample ID: 320-87845-3**

Date Collected: 05/11/22 09:40

Matrix: Water

Date Received: 05/13/22 09:35

**Method: 314.0 - Perchlorate (IC)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	ND		4.0	2.0	ug/L			05/17/22 21:21	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	ND		0.0050	0.00084	mg/L		05/17/22 06:00	05/17/22 20:48	1
Arsenic	ND		0.020	0.012	mg/L		05/17/22 06:00	05/17/22 20:48	1
<b>Barium</b>	<b>0.056</b>		0.0050	0.0025	mg/L		05/17/22 06:00	05/17/22 20:48	1
Beryllium	ND		0.0020	0.00030	mg/L		05/17/22 06:00	05/17/22 20:48	1
Cadmium	ND		0.0020	0.00050	mg/L		05/17/22 06:00	05/17/22 20:48	1
Cobalt	ND		0.0050	0.0030	mg/L		05/17/22 06:00	05/17/22 20:48	1
<b>Chromium</b>	<b>0.0027</b>	<b>J</b>	0.0080	0.0012	mg/L		05/17/22 06:00	05/17/22 20:48	1
<b>Copper</b>	<b>0.0025</b>	<b>J</b>	0.010	0.0021	mg/L		05/17/22 06:00	05/17/22 20:48	1
Molybdenum	ND		0.020	0.0027	mg/L		05/17/22 06:00	05/17/22 20:48	1
Nickel	ND		0.0050	0.0024	mg/L		05/17/22 06:00	05/17/22 20:48	1
Lead	ND		0.0050	0.0025	mg/L		05/17/22 06:00	05/17/22 20:48	1
Selenium	ND		0.020	0.013	mg/L		05/17/22 06:00	05/17/22 20:48	1
Antimony	ND		0.020	0.0098	mg/L		05/17/22 06:00	05/17/22 20:48	1
Thallium	ND		0.020	0.0090	mg/L		05/17/22 06:00	05/17/22 20:48	1
<b>Vanadium</b>	<b>0.0061</b>		0.0050	0.0019	mg/L		05/17/22 06:00	05/17/22 20:48	1
<b>Zinc</b>	<b>0.0099</b>	<b>J</b>	0.010	0.0030	mg/L		05/17/22 06:00	05/17/22 20:48	1

**Method: 7470A - Mercury (CVAA)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00010	mg/L		05/17/22 16:07	05/17/22 21:27	1

# Client Sample Results

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

Job ID: 320-87845-1

**Client Sample ID: OS8-W-220511**

**Lab Sample ID: 320-87845-4**

Date Collected: 05/11/22 13:35

Matrix: Water

Date Received: 05/13/22 09:35

**Method: 314.0 - Perchlorate (IC)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	ND		4.0	2.0	ug/L			05/17/22 21:43	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	ND		0.0050	0.00084	mg/L		05/17/22 06:00	05/17/22 21:03	1
Arsenic	ND		0.020	0.012	mg/L		05/17/22 06:00	05/17/22 21:03	1
<b>Barium</b>	<b>0.056</b>		0.0050	0.0025	mg/L		05/17/22 06:00	05/17/22 21:03	1
Beryllium	ND		0.0020	0.00030	mg/L		05/17/22 06:00	05/17/22 21:03	1
Cadmium	ND		0.0020	0.00050	mg/L		05/17/22 06:00	05/17/22 21:03	1
Cobalt	ND		0.0050	0.0030	mg/L		05/17/22 06:00	05/17/22 21:03	1
Chromium	ND		0.0080	0.0012	mg/L		05/17/22 06:00	05/17/22 21:03	1
Copper	ND		0.010	0.0021	mg/L		05/17/22 06:00	05/17/22 21:03	1
Molybdenum	ND		0.020	0.0027	mg/L		05/17/22 06:00	05/17/22 21:03	1
Nickel	ND		0.0050	0.0024	mg/L		05/17/22 06:00	05/17/22 21:03	1
Lead	ND		0.0050	0.0025	mg/L		05/17/22 06:00	05/17/22 21:03	1
Selenium	ND		0.020	0.013	mg/L		05/17/22 06:00	05/17/22 21:03	1
Antimony	ND		0.020	0.0098	mg/L		05/17/22 06:00	05/17/22 21:03	1
Thallium	ND		0.020	0.0090	mg/L		05/17/22 06:00	05/17/22 21:03	1
Vanadium	ND		0.0050	0.0019	mg/L		05/17/22 06:00	05/17/22 21:03	1
Zinc	ND		0.010	0.0030	mg/L		05/17/22 06:00	05/17/22 21:03	1

**Method: 7470A - Mercury (CVAA)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00010	mg/L		05/17/22 16:07	05/17/22 21:29	1

# QC Sample Results

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

Job ID: 320-87845-1

## Method: 314.0 - Perchlorate (IC)

**Lab Sample ID: MB 320-588331/13**  
**Matrix: Water**  
**Analysis Batch: 588331**

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	ND		4.0	2.0	ug/L			05/17/22 15:03	1

**Lab Sample ID: LCS 320-588331/14**  
**Matrix: Water**  
**Analysis Batch: 588331**

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Perchlorate	49.9	51.1		ug/L		102	85 - 115

**Lab Sample ID: MRL 320-588331/12**  
**Matrix: Water**  
**Analysis Batch: 588331**

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

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Perchlorate	3.99	3.80	J	ug/L		95	75 - 125

## Method: 6010B - Metals (ICP)

**Lab Sample ID: MB 320-587976/1-A**  
**Matrix: Water**  
**Analysis Batch: 588490**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 587976**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	ND		0.0050	0.00084	mg/L		05/17/22 06:00	05/17/22 20:10	1
Arsenic	ND		0.020	0.012	mg/L		05/17/22 06:00	05/17/22 20:10	1
Barium	ND		0.0050	0.0025	mg/L		05/17/22 06:00	05/17/22 20:10	1
Beryllium	ND		0.0020	0.00030	mg/L		05/17/22 06:00	05/17/22 20:10	1
Cadmium	ND		0.0020	0.00050	mg/L		05/17/22 06:00	05/17/22 20:10	1
Cobalt	ND		0.0050	0.0030	mg/L		05/17/22 06:00	05/17/22 20:10	1
Chromium	ND		0.0080	0.0012	mg/L		05/17/22 06:00	05/17/22 20:10	1
Copper	ND		0.010	0.0021	mg/L		05/17/22 06:00	05/17/22 20:10	1
Molybdenum	ND		0.020	0.0027	mg/L		05/17/22 06:00	05/17/22 20:10	1
Nickel	ND		0.0050	0.0024	mg/L		05/17/22 06:00	05/17/22 20:10	1
Lead	ND		0.0050	0.0025	mg/L		05/17/22 06:00	05/17/22 20:10	1
Selenium	ND		0.020	0.013	mg/L		05/17/22 06:00	05/17/22 20:10	1
Antimony	ND		0.020	0.0098	mg/L		05/17/22 06:00	05/17/22 20:10	1
Thallium	ND		0.020	0.0090	mg/L		05/17/22 06:00	05/17/22 20:10	1
Vanadium	ND		0.0050	0.0019	mg/L		05/17/22 06:00	05/17/22 20:10	1
Zinc	ND		0.010	0.0030	mg/L		05/17/22 06:00	05/17/22 20:10	1

**Lab Sample ID: LCS 320-587976/2-A**  
**Matrix: Water**  
**Analysis Batch: 588490**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 587976**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Silver	0.0505	0.0494		mg/L		98	80 - 120
Arsenic	0.500	0.497		mg/L		99	80 - 120
Barium	0.500	0.491		mg/L		98	80 - 120
Beryllium	0.250	0.254		mg/L		102	80 - 120
Cadmium	0.250	0.259		mg/L		104	80 - 120

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# QC Sample Results

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

Job ID: 320-87845-1

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

**Lab Sample ID: LCS 320-587976/2-A**  
**Matrix: Water**  
**Analysis Batch: 588490**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 587976**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Cobalt	0.250	0.248		mg/L		99	80 - 120
Chromium	0.250	0.248		mg/L		99	80 - 120
Copper	0.250	0.236		mg/L		94	80 - 120
Molybdenum	0.249	0.243		mg/L		98	80 - 120
Nickel	0.250	0.251		mg/L		100	80 - 120
Lead	0.250	0.250		mg/L		100	80 - 120
Selenium	0.500	0.510		mg/L		102	80 - 120
Antimony	0.500	0.488		mg/L		98	80 - 120
Thallium	0.500	0.501		mg/L		100	80 - 120
Vanadium	0.250	0.247		mg/L		99	80 - 120
Zinc	0.499	0.520		mg/L		104	80 - 120

**Lab Sample ID: 320-87845-1 MS**  
**Matrix: Water**  
**Analysis Batch: 588490**

**Client Sample ID: 0S357-W-220510**  
**Prep Type: Total/NA**  
**Prep Batch: 587976**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Silver	ND		0.0505	0.0494		mg/L		98	80 - 120
Arsenic	ND		0.500	0.513		mg/L		103	80 - 120
Barium	0.036		0.500	0.535		mg/L		100	80 - 120
Beryllium	ND		0.250	0.260		mg/L		104	80 - 120
Cadmium	ND		0.250	0.255		mg/L		102	80 - 120
Cobalt	ND		0.250	0.251		mg/L		100	80 - 120
Chromium	ND		0.250	0.246		mg/L		99	80 - 120
Copper	ND		0.250	0.240		mg/L		96	80 - 120
Molybdenum	ND		0.249	0.248		mg/L		100	80 - 120
Nickel	ND		0.250	0.251		mg/L		100	80 - 120
Lead	ND		0.250	0.252		mg/L		101	80 - 120
Selenium	ND		0.500	0.506		mg/L		101	80 - 120
Antimony	ND		0.500	0.501		mg/L		100	80 - 120
Thallium	ND		0.500	0.507		mg/L		101	80 - 120
Vanadium	ND		0.250	0.250		mg/L		100	80 - 120
Zinc	ND		0.499	0.510		mg/L		102	80 - 120

**Lab Sample ID: 320-87845-1 MSD**  
**Matrix: Water**  
**Analysis Batch: 588490**

**Client Sample ID: 0S357-W-220510**  
**Prep Type: Total/NA**  
**Prep Batch: 587976**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Silver	ND		0.0505	0.0506		mg/L		100	80 - 120	2	20
Arsenic	ND		0.500	0.512		mg/L		102	80 - 120	0	20
Barium	0.036		0.500	0.541		mg/L		101	80 - 120	1	20
Beryllium	ND		0.250	0.263		mg/L		105	80 - 120	1	20
Cadmium	ND		0.250	0.256		mg/L		102	80 - 120	0	20
Cobalt	ND		0.250	0.250		mg/L		100	80 - 120	0	20
Chromium	ND		0.250	0.252		mg/L		101	80 - 120	2	20
Copper	ND		0.250	0.245		mg/L		98	80 - 120	2	20
Molybdenum	ND		0.249	0.249		mg/L		100	80 - 120	1	20
Nickel	ND		0.250	0.251		mg/L		100	80 - 120	0	20

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# QC Sample Results

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

Job ID: 320-87845-1

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

**Lab Sample ID: 320-87845-1 MSD**  
**Matrix: Water**  
**Analysis Batch: 588490**

**Client Sample ID: 0S357-W-220510**  
**Prep Type: Total/NA**  
**Prep Batch: 587976**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Lead	ND		0.250	0.253		mg/L		101	80 - 120	0	20
Selenium	ND		0.500	0.507		mg/L		101	80 - 120	0	20
Antimony	ND		0.500	0.500		mg/L		100	80 - 120	0	20
Thallium	ND		0.500	0.507		mg/L		101	80 - 120	0	20
Vanadium	ND		0.250	0.254		mg/L		102	80 - 120	2	20
Zinc	ND		0.499	0.525		mg/L		105	80 - 120	3	20

## Method: 7470A - Mercury (CVAA)

**Lab Sample ID: MB 320-588402/11-A**  
**Matrix: Water**  
**Analysis Batch: 588640**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 588402**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	0.00010	mg/L		05/17/22 16:07	05/17/22 20:32	1

**Lab Sample ID: LCS 320-588402/12-A**  
**Matrix: Water**  
**Analysis Batch: 588640**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 588402**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	0.00100	0.000963		mg/L		96	82 - 113

**Lab Sample ID: LCSD 320-588402/13-A**  
**Matrix: Water**  
**Analysis Batch: 588640**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**  
**Prep Batch: 588402**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Mercury	0.00100	0.000949		mg/L		95	82 - 113	1	17

# QC Association Summary

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

Job ID: 320-87845-1

## HPLC/IC

### Analysis Batch: 588331

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-87845-1	0S357-W-220510	Total/NA	Water	314.0	
320-87845-2	OS1-W-220511	Total/NA	Water	314.0	
320-87845-3	SRE-W-220511	Total/NA	Water	314.0	
320-87845-4	OS8-W-220511	Total/NA	Water	314.0	
MB 320-588331/13	Method Blank	Total/NA	Water	314.0	
LCS 320-588331/14	Lab Control Sample	Total/NA	Water	314.0	
MRL 320-588331/12	Lab Control Sample	Total/NA	Water	314.0	

## Metals

### Prep Batch: 587976

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-87845-1	0S357-W-220510	Total/NA	Water	3010A	
320-87845-2	OS1-W-220511	Total/NA	Water	3010A	
320-87845-3	SRE-W-220511	Total/NA	Water	3010A	
320-87845-4	OS8-W-220511	Total/NA	Water	3010A	
MB 320-587976/1-A	Method Blank	Total/NA	Water	3010A	
LCS 320-587976/2-A	Lab Control Sample	Total/NA	Water	3010A	
320-87845-1 MS	0S357-W-220510	Total/NA	Water	3010A	
320-87845-1 MSD	0S357-W-220510	Total/NA	Water	3010A	

### Prep Batch: 588402

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-87845-1	0S357-W-220510	Total/NA	Water	7470A	
320-87845-2	OS1-W-220511	Total/NA	Water	7470A	
320-87845-3	SRE-W-220511	Total/NA	Water	7470A	
320-87845-4	OS8-W-220511	Total/NA	Water	7470A	
MB 320-588402/11-A	Method Blank	Total/NA	Water	7470A	
LCS 320-588402/12-A	Lab Control Sample	Total/NA	Water	7470A	
LCSD 320-588402/13-A	Lab Control Sample Dup	Total/NA	Water	7470A	

### Analysis Batch: 588490

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-87845-1	0S357-W-220510	Total/NA	Water	6010B	587976
320-87845-2	OS1-W-220511	Total/NA	Water	6010B	587976
320-87845-3	SRE-W-220511	Total/NA	Water	6010B	587976
320-87845-4	OS8-W-220511	Total/NA	Water	6010B	587976
MB 320-587976/1-A	Method Blank	Total/NA	Water	6010B	587976
LCS 320-587976/2-A	Lab Control Sample	Total/NA	Water	6010B	587976
320-87845-1 MS	0S357-W-220510	Total/NA	Water	6010B	587976
320-87845-1 MSD	0S357-W-220510	Total/NA	Water	6010B	587976

### Analysis Batch: 588640

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-87845-1	0S357-W-220510	Total/NA	Water	7470A	588402
320-87845-2	OS1-W-220511	Total/NA	Water	7470A	588402
320-87845-3	SRE-W-220511	Total/NA	Water	7470A	588402
320-87845-4	OS8-W-220511	Total/NA	Water	7470A	588402
MB 320-588402/11-A	Method Blank	Total/NA	Water	7470A	588402
LCS 320-588402/12-A	Lab Control Sample	Total/NA	Water	7470A	588402
LCSD 320-588402/13-A	Lab Control Sample Dup	Total/NA	Water	7470A	588402

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# Lab Chronicle

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

Job ID: 320-87845-1

**Client Sample ID: OS357-W-220510**

**Lab Sample ID: 320-87845-1**

**Date Collected: 05/10/22 12:45**

**Matrix: Water**

**Date Received: 05/13/22 09:35**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	314.0		1			588331	05/17/22 20:36	AP1	TAL SAC
Total/NA	Prep	3010A			50 mL	50 mL	587976	05/17/22 06:00	NIM	TAL SAC
Total/NA	Analysis	6010B		1			588490	05/17/22 20:17	SP	TAL SAC
Total/NA	Prep	7470A			30 mL	30 mL	588402	05/17/22 16:07	JP	TAL SAC
Total/NA	Analysis	7470A		1			588640	05/17/22 21:20	JP	TAL SAC

**Client Sample ID: OS1-W-220511**

**Lab Sample ID: 320-87845-2**

**Date Collected: 05/11/22 08:15**

**Matrix: Water**

**Date Received: 05/13/22 09:35**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	314.0		1			588331	05/17/22 20:58	AP1	TAL SAC
Total/NA	Prep	3010A			50 mL	50 mL	587976	05/17/22 06:00	NIM	TAL SAC
Total/NA	Analysis	6010B		1			588490	05/17/22 20:36	SP	TAL SAC
Total/NA	Prep	7470A			30 mL	30 mL	588402	05/17/22 16:07	JP	TAL SAC
Total/NA	Analysis	7470A		1			588640	05/17/22 21:22	JP	TAL SAC

**Client Sample ID: SRE-W-220511**

**Lab Sample ID: 320-87845-3**

**Date Collected: 05/11/22 09:40**

**Matrix: Water**

**Date Received: 05/13/22 09:35**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	314.0		1			588331	05/17/22 21:21	AP1	TAL SAC
Total/NA	Prep	3010A			50 mL	50 mL	587976	05/17/22 06:00	NIM	TAL SAC
Total/NA	Analysis	6010B		1			588490	05/17/22 20:48	SP	TAL SAC
Total/NA	Prep	7470A			30 mL	30 mL	588402	05/17/22 16:07	JP	TAL SAC
Total/NA	Analysis	7470A		1			588640	05/17/22 21:27	JP	TAL SAC

**Client Sample ID: OS8-W-220511**

**Lab Sample ID: 320-87845-4**

**Date Collected: 05/11/22 13:35**

**Matrix: Water**

**Date Received: 05/13/22 09:35**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	314.0		1			588331	05/17/22 21:43	AP1	TAL SAC
Total/NA	Prep	3010A			50 mL	50 mL	587976	05/17/22 06:00	NIM	TAL SAC
Total/NA	Analysis	6010B		1			588490	05/17/22 21:03	SP	TAL SAC
Total/NA	Prep	7470A			30 mL	30 mL	588402	05/17/22 16:07	JP	TAL SAC
Total/NA	Analysis	7470A		1			588640	05/17/22 21:29	JP	TAL SAC

**Laboratory References:**

TAL SAC = Eurofins Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

# Accreditation/Certification Summary

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

Job ID: 320-87845-1

## Laboratory: Eurofins Sacramento

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

<u>Authority</u>	<u>Program</u>	<u>Identification Number</u>	<u>Expiration Date</u>
California	State	2897	01-31-23

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

<u>Analysis Method</u>	<u>Prep Method</u>	<u>Matrix</u>	<u>Analyte</u>
314.0		Water	Perchlorate

- 1
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- 13
- 14

# Method Summary

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

Job ID: 320-87845-1

Method	Method Description	Protocol	Laboratory
314.0	Perchlorate (IC)	EPA	TAL SAC
6010B	Metals (ICP)	SW846	TAL SAC
7470A	Mercury (CVAA)	SW846	TAL SAC
3010A	Preparation, Total Metals	SW846	TAL SAC
7470A	Preparation, Mercury	SW846	TAL SAC

**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 SAC = Eurofins Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600



# Sample Summary


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

Job ID: 320-87845-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
320-87845-1	OS357-W-220510	Water	05/10/22 12:45	05/13/22 09:35
320-87845-2	OS1-W-220511	Water	05/11/22 08:15	05/13/22 09:35
320-87845-3	SRE-W-220511	Water	05/11/22 09:40	05/13/22 09:35
320-87845-4	OS8-W-220511	Water	05/11/22 13:35	05/13/22 09:35

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- 14



FROM: GSI Environmental Inc. 155 Grand Ave. Suite 704 Oakland, CA 94612 (510) 463-8484		PROJECT NAME: <b>AJU-BB</b>		PROJECT NO.: <b>5182</b>	
E-MAIL: <a href="mailto:mpgoertz@gsi-net.com">mpgoertz@gsi-net.com</a>		PROJECT CONTACT: <b>Matt Goertz</b>		LAB CONTACT: <b>Afsaneh Salimpour (West Sac)</b>	
LABORATORY: <b>Eurofins</b>		GLOBAL ID: <b>JCV / CJB</b>		SAMPLER(S): (PRINT)	
TURNAROUND TIME: <input type="checkbox"/> SAME DAY <input type="checkbox"/> 24 HR <input type="checkbox"/> 72 HR <input type="checkbox"/> 48 HR <input checked="" type="checkbox"/> STANDARD		<b>REQUESTED ANALYSES</b> Please check box or fill in blank as needed.			
SPECIAL INSTRUCTIONS:		Unpreserved		Title 22 Metals (6010/7470)	
		Preserved		Perchlorate (314.0)	
		Field Filtered			
LAB USE ONLY	SAMPLE ID	DATE	SAMPLING TIME	MATRIX	NO. OF CONT.
	05357-W-220510	5/10/22	1245	W	2
	051-W-220511	5/11/22	0815	↓	↓
	05E-W-220511	5/11/22	0940	↓	↓
	05B-W-220511	5/11/22	1335	↓	↓
 320-87845 Chain of Custody					
Relinquished by: (Signature)		Received by: (Signature)		Date: <u>5/12/22</u> Time: <u>17:00</u>	
Relinquished by: (Signature)		Received by: (Signature)		Date: <u>5/12/22</u> Time: <u>17:00</u>	
Relinquished by: (Signature)		Received by: (Signature)		Date: <u>5/13/22</u> Time: <u>09:35</u>	

2-1/3-8 7-9-96

0.4 & Lab



# Login Sample Receipt Checklist

Client: GSI Environmental, Inc

Job Number: 320-87845-1

**Login Number: 87845**

**List Source: Eurofins Sacramento**

**List Number: 1**

**Creator: Oropeza, Salvador**

Question	Answer	Comment
Radioactivity wasn't checked or is <=/ background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	seal
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	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.	False	COC not relinquished.
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	314 samples have no headspace.
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	







June 15, 2022

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

Re: Near SSFL  
Work Order: 579885

Dear Travis Wicks:

GEL Laboratories, LLC (GEL) appreciates the opportunity to provide the enclosed analytical results for the sample(s) we received on May 13, 2022. This revised data report has been prepared and reviewed in accordance with GEL's standard operating procedures. Revision 01 reports the correct sample ID for 579885002..

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](http://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. 1614.

Sincerely,

Delaney Stone  
Project Manager

Purchase Order: 5182  
Enclosures

**GEL LABORATORIES LLC**

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

**Certificate of Analysis Report  
for**

GSIE002 GSI Environmental Inc.

Client SDG: 579885 GEL Work Order: 579885

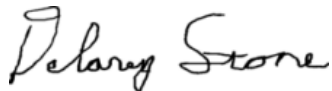
**The Qualifiers in this report are defined as follows:**

- \* 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, Delaney Stone.



Reviewed by \_\_\_\_\_

# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: June 15, 2022

Company : GSI Environmental Inc.  
 Address : 155 Grand Ave  
 Suite 704  
 Oakland, California 94612  
 Contact: Travis Wicks  
 Project: Near SSFL

Client Sample ID: L-1-220512	Project: GSIE00119
Sample ID: 579885001	Client ID: GSIE002
Matrix: Vegetation	
Collect Date: 12-MAY-22 09:00	
Receive Date: 13-MAY-22	
Collector: Client	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
LC-MS/MS Perchlorate												
Perchlorate by LC-MS/MS "As Received"												
Perchlorate	U	ND	0.431	1.72	ug/kg	8.62	1	SXC7	06/08/22	1555	2274589	1
Mercury Analysis-CVAA												
7471 Cold Vapor Mercury, Solid "As Received"												
Mercury	U	ND	7.42	22.1	ug/kg	111	1	JP2	05/20/22	1046	2267727	2
Metals Analysis-ICP												
SW846 3050B/6010D Metals, Solid "As Received"												
Antimony	J	814	298	1810	ug/kg	90.3	1	TXT1	05/20/22	2216	2266644	3
Arsenic	U	ND	451	2710	ug/kg	90.3	1					
Barium		513	90.3	451	ug/kg	90.3	1					
Beryllium	U	ND	90.3	451	ug/kg	90.3	1					
Cadmium	U	ND	90.3	451	ug/kg	90.3	1					
Chromium	U	ND	135	903	ug/kg	90.3	1					
Cobalt	U	ND	135	451	ug/kg	90.3	1					
Copper	J	521	271	1810	ug/kg	90.3	1					
Lead	U	ND	298	1810	ug/kg	90.3	1					
Molybdenum	U	ND	181	903	ug/kg	90.3	1					
Nickel	U	ND	135	451	ug/kg	90.3	1					
Selenium	J	1340	451	2710	ug/kg	90.3	1					
Silver	U	ND	90.3	451	ug/kg	90.3	1					
Thallium	U	ND	451	1810	ug/kg	90.3	1					
Vanadium	U	ND	90.3	451	ug/kg	90.3	1					
Zinc		4390	361	1810	ug/kg	90.3	1					

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
GEL Prep Method	Laboratory Composite				2266193
SW846 3050B	SW846 3050B Prep	CD3	05/17/22	1620	2266643
SW846 6850 Modified	EPA 6850 Perchlorate Extraction Solids	SXC7	06/08/22	1014	2274587
SW846 7471B Prep	SW846 7471B Mercury Prep Soil	CD3	05/19/22	1515	2267723

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 6850 Modified	
2	SW846 7471B	
3	SW846 3050B/6010D	

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: June 15, 2022

Company : GSI Environmental Inc.  
Address : 155 Grand Ave  
Suite 704  
Oakland, California 94612  
Contact: Travis Wicks  
Project: Near SSFL

Client Sample ID: L-1-220512  
Sample ID: 579885001

Project: GSIE00119  
Client ID: GSIE002

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
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### Notes:

Column headers are defined as follows:

DF: Dilution Factor

DL: Detection Limit

MDA: Minimum Detectable Activity

MDC: Minimum Detectable Concentration

Lc/LC: Critical Level

PF: Prep Factor

RL: Reporting Limit

SQL: Sample Quantitation Limit

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: June 15, 2022

Company : GSI Environmental Inc.  
 Address : 155 Grand Ave  
 Suite 704  
 Oakland, California 94612  
 Contact: Travis Wicks  
 Project: Near SSFL

Client Sample ID: O-1-220512	Project: GSIE00119
Sample ID: 579885002	Client ID: GSIE002
Matrix: Vegetation	
Collect Date: 12-MAY-22 09:20	
Receive Date: 13-MAY-22	
Collector: Client	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
LC-MS/MS Perchlorate												
Perchlorate by LC-MS/MS "As Received"												
Perchlorate	J	0.440	0.400	1.60	ug/kg	8.00	1	SXC7	06/08/22	1625	2274589	1
Mercury Analysis-CVAA												
7471 Cold Vapor Mercury, Solid "As Received"												
Mercury	U	ND	7.31	21.8	ug/kg	109	1	JP2	05/20/22	1048	2267727	2
Metals Analysis-ICP												
SW846 3050B/6010D Metals, Solid "As Received"												
Antimony	J	646	314	1900	ug/kg	95.2	1	TXT1	05/20/22	2233	2266644	3
Arsenic	U	ND	476	2860	ug/kg	95.2	1					
Barium	J	457	95.2	476	ug/kg	95.2	1					
Beryllium	U	ND	95.2	476	ug/kg	95.2	1					
Cadmium	U	ND	95.2	476	ug/kg	95.2	1					
Chromium	U	ND	143	952	ug/kg	95.2	1					
Cobalt	U	ND	143	476	ug/kg	95.2	1					
Copper	J	735	286	1900	ug/kg	95.2	1					
Lead	U	ND	314	1900	ug/kg	95.2	1					
Molybdenum	U	ND	190	952	ug/kg	95.2	1					
Nickel	U	ND	143	476	ug/kg	95.2	1					
Selenium	J	738	476	2860	ug/kg	95.2	1					
Silver	U	ND	95.2	476	ug/kg	95.2	1					
Thallium	U	ND	476	1900	ug/kg	95.2	1					
Vanadium	U	ND	95.2	476	ug/kg	95.2	1					
Zinc	J	1750	381	1900	ug/kg	95.2	1					

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
GEL Prep Method	Laboratory Composite				2266193
SW846 3050B	SW846 3050B Prep	CD3	05/17/22	1620	2266643
SW846 6850 Modified	EPA 6850 Perchlorate Extraction Solids	SXC7	06/08/22	1014	2274587
SW846 7471B Prep	SW846 7471B Mercury Prep Soil	CD3	05/19/22	1515	2267723

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 6850 Modified	
2	SW846 7471B	
3	SW846 3050B/6010D	

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: June 15, 2022

Company : GSI Environmental Inc.  
Address : 155 Grand Ave  
Suite 704  
Oakland, California 94612  
Contact: Travis Wicks  
Project: Near SSFL

Client Sample ID: O-1-220512  
Sample ID: 579885002

Project: GSIE00119  
Client ID: GSIE002

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
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### Notes:

Column headers are defined as follows:

DF: Dilution Factor

DL: Detection Limit

MDA: Minimum Detectable Activity

MDC: Minimum Detectable Concentration

Lc/LC: Critical Level

PF: Prep Factor

RL: Reporting Limit

SQL: Sample Quantitation Limit



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## Certificate of Analysis

Report Date: June 15, 2022

Company : GSI Environmental Inc.  
 Address : 155 Grand Ave  
 Suite 704  
 Oakland, California 94612  
 Contact: Travis Wicks  
 Project: Near SSFL

Client Sample ID: L-2-220512	Project: GSIE00119
Sample ID: 579885003	Client ID: GSIE002
Matrix: Vegetation	
Collect Date: 12-MAY-22 10:10	
Receive Date: 13-MAY-22	
Collector: Client	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
LC-MS/MS Perchlorate												
Perchlorate by LC-MS/MS "As Received"												
Perchlorate	U	ND	2.25	9.01	ug/kg	9.01	5	SXC7	06/09/22	1528	2274589	1
Mercury Analysis-CVAA												
7471 Cold Vapor Mercury, Solid "As Received"												
Mercury	U	ND	7.91	23.6	ug/kg	118	1	JP2	05/20/22	1050	2267727	2
Metals Analysis-ICP												
SW846 3050B/6010D Metals, Solid "As Received"												
Antimony	J	833	287	1740	ug/kg	87.1	1	TXT1	05/20/22	2236	2266644	3
Arsenic	U	ND	436	2610	ug/kg	87.1	1					
Barium		736	87.1	436	ug/kg	87.1	1					
Beryllium	U	ND	87.1	436	ug/kg	87.1	1					
Cadmium	U	ND	87.1	436	ug/kg	87.1	1					
Chromium	U	ND	131	871	ug/kg	87.1	1					
Cobalt	U	ND	131	436	ug/kg	87.1	1					
Copper	J	526	261	1740	ug/kg	87.1	1					
Lead	U	ND	287	1740	ug/kg	87.1	1					
Molybdenum	U	ND	174	871	ug/kg	87.1	1					
Nickel	U	ND	131	436	ug/kg	87.1	1					
Selenium	J	695	436	2610	ug/kg	87.1	1					
Silver	U	ND	87.1	436	ug/kg	87.1	1					
Thallium	U	ND	436	1740	ug/kg	87.1	1					
Vanadium	U	ND	87.1	436	ug/kg	87.1	1					
Zinc		3020	348	1740	ug/kg	87.1	1					

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
GEL Prep Method	Laboratory Composite				2266193
SW846 3050B	SW846 3050B Prep	CD3	05/17/22	1620	2266643
SW846 6850 Modified	EPA 6850 Perchlorate Extraction Solids	SXC7	06/08/22	1014	2274587
SW846 7471B Prep	SW846 7471B Mercury Prep Soil	CD3	05/19/22	1515	2267723

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 6850 Modified	
2	SW846 7471B	
3	SW846 3050B/6010D	

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: June 15, 2022

Company : GSI Environmental Inc.  
Address : 155 Grand Ave  
Suite 704  
Oakland, California 94612  
Contact: Travis Wicks  
Project: Near SSFL

Client Sample ID: L-2-220512  
Sample ID: 579885003

Project: GSIE00119  
Client ID: GSIE002

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
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### Notes:

Column headers are defined as follows:

DF: Dilution Factor

DL: Detection Limit

MDA: Minimum Detectable Activity

MDC: Minimum Detectable Concentration

Lc/LC: Critical Level

PF: Prep Factor

RL: Reporting Limit

SQL: Sample Quantitation Limit

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: June 15, 2022

Company : GSI Environmental Inc.  
 Address : 155 Grand Ave  
 Suite 704  
 Oakland, California 94612  
 Contact: Travis Wicks  
 Project: Near SSFL

Client Sample ID: O-2-220512	Project: GSIE00119
Sample ID: 579885004	Client ID: GSIE002
Matrix: Vegetation	
Collect Date: 12-MAY-22 10:20	
Receive Date: 13-MAY-22	
Collector: Client	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
LC-MS/MS Perchlorate												
Perchlorate by LC-MS/MS "As Received"												
Perchlorate	J	1.23	0.500	2.00	ug/kg	10.0	1	SXC7	06/08/22	1644	2274589	1
Mercury Analysis-CVAA												
7471 Cold Vapor Mercury, Solid "As Received"												
Mercury	U	ND	7.85	23.4	ug/kg	117	1	JP2	05/20/22	1051	2267727	2
Metals Analysis-ICP												
SW846 3050B/6010D Metals, Solid "As Received"												
Antimony	J	737	313	1890	ug/kg	94.7	1	TXT1	05/20/22	2240	2266644	3
Arsenic	U	ND	473	2840	ug/kg	94.7	1					
Barium	J	346	94.7	473	ug/kg	94.7	1					
Beryllium	U	ND	94.7	473	ug/kg	94.7	1					
Cadmium	U	ND	94.7	473	ug/kg	94.7	1					
Chromium	U	ND	142	947	ug/kg	94.7	1					
Cobalt	U	ND	142	473	ug/kg	94.7	1					
Copper	J	1060	284	1890	ug/kg	94.7	1					
Lead	U	ND	313	1890	ug/kg	94.7	1					
Molybdenum	U	ND	189	947	ug/kg	94.7	1					
Nickel	U	ND	142	473	ug/kg	94.7	1					
Selenium	J	1280	473	2840	ug/kg	94.7	1					
Silver	U	ND	94.7	473	ug/kg	94.7	1					
Thallium	U	ND	473	1890	ug/kg	94.7	1					
Vanadium	U	ND	94.7	473	ug/kg	94.7	1					
Zinc		2140	379	1890	ug/kg	94.7	1					

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
GEL Prep Method	Laboratory Composite				2266193
SW846 3050B	SW846 3050B Prep	CD3	05/17/22	1620	2266643
SW846 6850 Modified	EPA 6850 Perchlorate Extraction Solids	SXC7	06/08/22	1014	2274587
SW846 7471B Prep	SW846 7471B Mercury Prep Soil	CD3	05/19/22	1515	2267723

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 6850 Modified	
2	SW846 7471B	
3	SW846 3050B/6010D	

# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: June 15, 2022

Company : GSI Environmental Inc.  
Address : 155 Grand Ave  
Suite 704  
Oakland, California 94612  
Contact: Travis Wicks  
Project: Near SSFL

Client Sample ID: O-2-220512  
Sample ID: 579885004

Project: GSIE00119  
Client ID: GSIE002

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time Batch	Method
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### Notes:

Column headers are defined as follows:

DF: Dilution Factor

DL: Detection Limit

MDA: Minimum Detectable Activity

MDC: Minimum Detectable Concentration

Lc/LC: Critical Level

PF: Prep Factor

RL: Reporting Limit

SQL: Sample Quantitation Limit

# GEL LABORATORIES LLC

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

## Certificate of Analysis

Company : GSI Environmental Inc.  
 Address : 155 Grand Ave  
 Suite 704  
 Oakland, California 94612  
 Contact: Travis Wicks  
 Project: Near SSFL

Report Date: June 15, 2022

Client Sample ID: L-1-220512  
 Sample ID: 579885001  
 Matrix: Vegetation  
 Collect Date: 12-MAY-22  
 Receive Date: 13-MAY-22  
 Collector: Client  
 Moisture: 90.1%

Project: GSIE00119  
 Client ID: GSIE002

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date	Time	Batch	Mtd.
<b>Rad Gamma Spec Analysis</b>														
<i>Gammapec, Gamma, Solid (Standard List) "As Received"</i>														
Cesium-137	U	-0.00201	+/-0.00357	0.00605	+/-0.00369	0.100	pCi/g			MXR1	05/21/22	2003	2266745	1
<b>Rad Gas Flow Proportional Counting</b>														
<i>GFPC, Sr90, Vegetation "As Received"</i>														
Strontium-90	U	-0.0303	+/-0.0155	0.0356	+/-0.0155	0.500	pCi/g			KP1	05/25/22	1228	2266623	2
<b>Rad Liquid Scintillation Analysis</b>														
<i>LSC, Tritium Distillation, Vegetation "As Received"</i>														
Tritium	U	-0.0387	+/-0.638	1.27	+/-0.638	2.00	pCi/g			KXA1	05/26/22	0616	2267177	3

**Solid Preparation**

*Laboratory Composite "As Received"*

**The following Prep Methods were performed**

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	SF1	05/16/22	1504	2266599
GEL Prep Method	Laboratory Composite				2266193

**The following Analytical Methods were performed**

Method	Description
1	DOE HASL 300, 4.5.2.3/Ga-01-R
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
Strontium Carrier	GFPC, Sr90, Vegetation "As Received"	2266623	94.3	(25%-125%)

# GEL LABORATORIES LLC

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

## Certificate of Analysis

Company : GSI Environmental Inc.  
Address : 155 Grand Ave  
Suite 704  
Oakland, California 94612

Report Date: June 15, 2022

Contact: Travis Wicks  
Project: Near SSFL

Client Sample ID: L-1-220512  
Sample ID: 579885001

Project: GSIE00119  
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

Mtd.: Method

PF: Prep Factor

RL: Reporting Limit

TPU: Total Propagated Uncertainty



# GEL LABORATORIES LLC

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

## Certificate of Analysis

Company : GSI Environmental Inc.  
 Address : 155 Grand Ave  
 Suite 704  
 Oakland, California 94612

Report Date: June 15, 2022

Contact: Travis Wicks

Project: Near SSFL

Client Sample ID: O-1-220512

Project: GSIE00119

Sample ID: 579885002

Client ID: GSIE002

Matrix: Vegetation

Collect Date: 12-MAY-22

Receive Date: 13-MAY-22

Collector: Client

Moisture: 87.4%

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date	Time	Batch	Mtd.
<b>Rad Gamma Spec Analysis</b>														
<i>Gammaspec, Gamma, Solid (Standard List) "As Received"</i>														
Cesium-137	U	0.00335	+/-0.00532	0.0101	+/-0.00554	0.100	pCi/g			MXR1	05/21/22	2251	2266745	1
<b>Rad Gas Flow Proportional Counting</b>														
<i>GFPC, Sr90, Vegetation "As Received"</i>														
Strontium-90	U	0.00555	+/-0.0192	0.0346	+/-0.0192	0.500	pCi/g			KP1	05/25/22	1228	2266623	2
<b>Rad Liquid Scintillation Analysis</b>														
<i>LSC, Tritium Distillation, Vegetation "As Received"</i>														
Tritium	U	0.197	+/-0.711	1.33	+/-0.713	2.00	pCi/g			KXA1	05/26/22	0644	2267177	3

**Solid Preparation**

*Laboratory Composite "As Received"*

**The following Prep Methods were performed**

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	SF1	05/16/22	1504	2266599
GEL Prep Method	Laboratory Composite				2266193

**The following Analytical Methods were performed**

Method	Description
1	DOE HASL 300, 4.5.2.3/Ga-01-R
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
Strontium Carrier	GFPC, Sr90, Vegetation "As Received"	2266623	104	(25%-125%)

# GEL LABORATORIES LLC

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

## Certificate of Analysis

Company : GSI Environmental Inc.  
Address : 155 Grand Ave  
Suite 704  
Oakland, California 94612

Report Date: June 15, 2022

Contact: Travis Wicks  
Project: Near SSFL

Client Sample ID: O-1-220512  
Sample ID: 579885002

Project: GSIE00119  
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

Mtd.: Method

PF: Prep Factor

RL: Reporting Limit

TPU: Total Propagated Uncertainty

# GEL LABORATORIES LLC

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

## Certificate of Analysis

Company : GSI Environmental Inc.  
 Address : 155 Grand Ave  
 Suite 704  
 Oakland, California 94612

Report Date: June 15, 2022

Contact: Travis Wicks

Project: Near SSFL

Client Sample ID: L-2-220512

Project: GSIE00119

Sample ID: 579885003

Client ID: GSIE002

Matrix: Vegetation

Collect Date: 12-MAY-22

Receive Date: 13-MAY-22

Collector: Client

Moisture: 91.1%

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date	Time	Batch	Mtd.
<b>Rad Gamma Spec Analysis</b>														
<i>Gammaspec, Gamma, Solid (Standard List) "As Received"</i>														
Cesium-137	U	0.000279	+/-0.00604	0.0114	+/-0.00604	0.100	pCi/g			MXR1	05/21/22	2252	2266745	1
<b>Rad Gas Flow Proportional Counting</b>														
<i>GFPC, Sr90, Vegetation "As Received"</i>														
Strontium-90	U	0.00296	+/-0.0162	0.0301	+/-0.0162	0.500	pCi/g			KP1	05/25/22	1229	2266623	2
<b>Rad Liquid Scintillation Analysis</b>														
<i>LSC, Tritium Distillation, Vegetation "As Received"</i>														
Tritium	U	0.135	+/-0.704	1.34	+/-0.705	2.00	pCi/g			KXA1	05/26/22	0711	2267177	3

**Solid Preparation**

*Laboratory Composite "As Received"*

**The following Prep Methods were performed**

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	SF1	05/16/22	1504	2266599
GEL Prep Method	Laboratory Composite				2266193

**The following Analytical Methods were performed**

Method	Description
1	DOE HASL 300, 4.5.2.3/Ga-01-R
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
Strontium Carrier	GFPC, Sr90, Vegetation "As Received"	2266623	73.1	(25%-125%)

# GEL LABORATORIES LLC

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## Certificate of Analysis

Company : GSI Environmental Inc.  
Address : 155 Grand Ave  
Suite 704  
Oakland, California 94612

Report Date: June 15, 2022

Contact: Travis Wicks  
Project: Near SSFL

Client Sample ID: L-2-220512  
Sample ID: 579885003

Project: GSIE00119  
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

Mtd.: Method

PF: Prep Factor

RL: Reporting Limit

TPU: Total Propagated Uncertainty

# GEL LABORATORIES LLC

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## Certificate of Analysis

Company : GSI Environmental Inc.  
 Address : 155 Grand Ave  
 Suite 704  
 Oakland, California 94612

Report Date: June 15, 2022

Contact: Travis Wicks

Project: Near SSFL

Client Sample ID: O-2-220512

Project: GSIE00119

Sample ID: 579885004

Client ID: GSIE002

Matrix: Vegetation

Collect Date: 12-MAY-22

Receive Date: 13-MAY-22

Collector: Client

Moisture: 88.9%

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	PF	DF	Analyst	Date	Time	Batch	Mtd.
<b>Rad Gamma Spec Analysis</b>														
<i>Gammaspec, Gamma, Solid (Standard List) "As Received"</i>														
Cesium-137	U	0.00377	+/-0.00570	0.0111	+/-0.00595	0.100	pCi/g			MXR1	05/21/22	2253	2266745	1
<b>Rad Gas Flow Proportional Counting</b>														
<i>GFPC, Sr90, Vegetation "As Received"</i>														
Strontium-90	U	0.00535	+/-0.0187	0.0342	+/-0.0188	0.500	pCi/g			KP1	05/25/22	1229	2266623	2
<b>Rad Liquid Scintillation Analysis</b>														
<i>LSC, Tritium Distillation, Vegetation "As Received"</i>														
Tritium	U	0.253	+/-0.706	1.30	+/-0.708	2.00	pCi/g			KXA1	05/26/22	0739	2267177	3

**Solid Preparation**

*Laboratory Composite "As Received"*

**The following Prep Methods were performed**

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	SF1	05/16/22	1504	2266599
GEL Prep Method	Laboratory Composite				2266193

**The following Analytical Methods were performed**

Method	Description
1	DOE HASL 300, 4.5.2.3/Ga-01-R
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
Strontium Carrier	GFPC, Sr90, Vegetation "As Received"	2266623	82.5	(25%-125%)

# GEL LABORATORIES LLC

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## Certificate of Analysis

Company : GSI Environmental Inc.  
Address : 155 Grand Ave  
Suite 704  
Oakland, California 94612

Report Date: June 15, 2022

Contact: Travis Wicks  
Project: Near SSFL

Client Sample ID: O-2-220512  
Sample ID: 579885004

Project: GSIE00119  
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

Mtd.: Method

PF: Prep Factor

RL: Reporting Limit

TPU: Total Propagated Uncertainty



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## QC Summary

Report Date: June 15, 2022

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

Contact: Travis Wicks

Workorder: 579885

Parmname	NOM	Sample	Qual	QC	Units	RPD/D%	REC%	Range	Anlst	Date	Time
<b>LC-MS/MS Perchlorate</b>											
Batch	2274589										
QC1205109424		ICS									
Perchlorate	1.99		J	1.97	ug/kg		99	(70%-130%)	SXC7	06/08/22	15:45
QC1205109421		LCS									
Perchlorate	1.74			1.77	ug/kg		102	(70%-130%)		06/08/22	15:35
QC1205109420		MB									
Perchlorate			U	ND	ug/kg					06/08/22	15:25
QC1205109422		579885001	MS								
Perchlorate	1.63	U	ND	U	ND	ug/kg	0*	(75%-125%)		06/09/22	15:09
QC1205109423		579885001	MSD								
Perchlorate	1.63	U	ND	U	ND	ug/kg	N/A	0*	(0%-30%)	06/09/22	15:18
<b>Metals Analysis-ICP</b>											
Batch	2266644										
QC1205093249		LCS									
Antimony	48900			56900	ug/kg		116	(80%-120%)	TXT1	05/20/22	22:14
Arsenic	48900			51700	ug/kg		106	(80%-120%)			
Barium	48900			51000	ug/kg		104	(80%-120%)			
Beryllium	48900			53300	ug/kg		109	(80%-120%)			
Cadmium	48900			51400	ug/kg		105	(80%-120%)			
Chromium	48900			52200	ug/kg		107	(80%-120%)			

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## QC Summary

Workorder: 579885

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Parmname	NOM	Sample	Qual	QC	Units	RPD/D%	REC%	Range	Anlst	Date	Time
<b>Metals Analysis-ICP</b>											
Batch	2266644										
Cobalt	48900			51300	ug/kg		105	(80%-120%)	TXT1	05/20/22	22:14
Copper	48900			52800	ug/kg		108	(80%-120%)			
Lead	48900			52100	ug/kg		107	(80%-120%)			
Molybdenum	48900			52100	ug/kg		106	(80%-120%)			
Nickel	48900			52000	ug/kg		106	(80%-120%)			
Selenium	48900			51900	ug/kg		106	(80%-120%)			
Silver	9780			10600	ug/kg		108	(80%-120%)			
Thallium	48900			52600	ug/kg		107	(80%-120%)			
Vanadium	48900			52200	ug/kg		107	(80%-120%)			
Zinc	48900			51100	ug/kg		104	(80%-120%)			
QC1205093248	MB										
Antimony			J	629	ug/kg					05/20/22	22:10
Arsenic			U	ND	ug/kg						
Barium			U	ND	ug/kg						
Beryllium			U	ND	ug/kg						
Cadmium			U	ND	ug/kg						

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## QC Summary

Workorder: 579885

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Parname	NOM	Sample	Qual	QC	Units	RPD/D%	REC%	Range	Anlst	Date	Time
<b>Metals Analysis-ICP</b>											
Batch	2266644										
Chromium			U	ND	ug/kg				TXT1	05/20/22	22:10
Cobalt			U	ND	ug/kg						
Copper			U	ND	ug/kg						
Lead			U	ND	ug/kg						
Molybdenum			U	ND	ug/kg						
Nickel			U	ND	ug/kg						
Selenium			J	677	ug/kg						
Silver			U	ND	ug/kg						
Thallium			U	ND	ug/kg						
Vanadium			U	ND	ug/kg						
Zinc			U	ND	ug/kg						
QC1205093250 579885001 MS											
Antimony	47100	J	814	54800	ug/kg		115	(75%-125%)		05/20/22	22:20
Arsenic	47100	U	ND	48500	ug/kg		103	(75%-125%)			
Barium	47100		513	49100	ug/kg		103	(75%-125%)			
Beryllium	47100	U	ND	51300	ug/kg		109	(75%-125%)			

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## QC Summary

Workorder: 579885

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Parmname	NOM	Sample	Qual	QC	Units	RPD/D%	REC%	Range	Anlst	Date	Time
<b>Metals Analysis-ICP</b>											
Batch	2266644										
Cadmium	47100	U	ND	49100	ug/kg		104	(75%-125%)	TXT1	05/20/22	22:20
Chromium	47100	U	ND	50100	ug/kg		106	(75%-125%)			
Cobalt	47100	U	ND	49600	ug/kg		105	(75%-125%)			
Copper	47100	J	521	51600	ug/kg		108	(75%-125%)			
Lead	47100	U	ND	49700	ug/kg		106	(75%-125%)			
Molybdenum	47100	U	ND	50100	ug/kg		106	(75%-125%)			
Nickel	47100	U	ND	50000	ug/kg		106	(75%-125%)			
Selenium	47100	J	1340	48300	ug/kg		99.7	(75%-125%)			
Silver	9420	U	ND	10200	ug/kg		108	(75%-125%)			
Thallium	47100	U	ND	50400	ug/kg		107	(75%-125%)			
Vanadium	47100	U	ND	49700	ug/kg		106	(75%-125%)			
Zinc	47100		4390	52400	ug/kg		102	(75%-125%)			
QC1205093251 579885001 MSD											
Antimony	45600	J	814	52900	ug/kg	3.47	114	(0%-20%)		05/20/22	22:23
Arsenic	45600	U	ND	46800	ug/kg	3.47	103	(0%-20%)			
Barium	45600		513	48000	ug/kg	2.45	104	(0%-20%)			

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## QC Summary

Workorder: 579885

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Parmname	NOM	Sample	Qual	QC	Units	RPD/D%	REC%	Range	Anlst	Date	Time
<b>Metals Analysis-ICP</b>											
Batch	2266644										
Beryllium	45600	U	ND	50000	ug/kg	2.58	110	(0%-20%)	TXT1	05/20/22	22:23
Cadmium	45600	U	ND	47600	ug/kg	3.28	104	(0%-20%)			
Chromium	45600	U	ND	48600	ug/kg	2.91	106	(0%-20%)			
Cobalt	45600	U	ND	48200	ug/kg	2.99	106	(0%-20%)			
Copper	45600	J	521	50600	ug/kg	1.97	110	(0%-20%)			
Lead	45600	U	ND	48200	ug/kg	3.2	106	(0%-20%)			
Molybdenum	45600	U	ND	48700	ug/kg	2.75	107	(0%-20%)			
Nickel	45600	U	ND	48600	ug/kg	2.84	106	(0%-20%)			
Selenium	45600	J	1340	46700	ug/kg	3.35	99.5	(0%-20%)			
Silver	9120	U	ND	9850	ug/kg	3.19	108	(0%-20%)			
Thallium	45600	U	ND	49100	ug/kg	2.6	108	(0%-20%)			
Vanadium	45600	U	ND	48900	ug/kg	1.58	107	(0%-20%)			
Zinc	45600		4390	51700	ug/kg	1.25	104	(0%-20%)			
QC1205093252 579885001 SDILT											
Antimony		J	9.02	J	3.44	ug/L	90.6	(0%-20%)		05/20/22	22:29
Arsenic		U	ND	U	ND	ug/L	N/A	(0%-20%)			

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## QC Summary

Workorder: 579885

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Parmname	NOM	Sample	Qual	QC	Units	RPD/D%	REC%	Range	Anlst	Date	Time
<b>Metals Analysis-ICP</b>											
Batch	2266644										
Barium		5.69	J	1.17	ug/L	2.55		(0%-20%)	TXT1	05/20/22	22:29
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	J	5.77	U	ND	ug/L	N/A		(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	J	14.9	J	9.99	ug/L	235		(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		48.6	J	10.6	ug/L	9.36		(0%-20%)			

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## QC Summary

Workorder: 579885

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Parmname	NOM	Sample	Qual	QC	Units	RPD/D%	REC%	Range	Anlst	Date	Time
<b>Metals Analysis-Mercury</b>											
Batch	2267727										
QC1205095455	578376001	DUP									
Mercury	J	12.6	J	13.8	ug/kg	9.13 ^		(+/-23.5)	JP2	05/20/22	10:15
QC1205095454	LCS										
Mercury	237			237	ug/kg		100	(80%-120%)		05/20/22	10:08
QC1205095453	MB										
Mercury			U	ND	ug/kg					05/20/22	10:06
QC1205095456	578376001	MS									
Mercury	230	J	12.6	121	ug/kg		47.1 *	(80%-120%)		05/20/22	10:16
QC1205095461	578376001	PS									
Mercury	2.00	J	0.116	1.42	ug/L		65.2 *	(80%-120%)		05/20/22	10:20
QC1205095457	578376001	SDILT									
Mercury	J	0.116	U	ND	ug/L	N/A		(0%-10%)		05/20/22	10:18

**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



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## QC Summary

Workorder: 579885

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Parname	NOM	Sample Qual	QC	Units	RPD/D%	REC%	Range	Anlst	Date	Time
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								
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								
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									
P	Organics--	The 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									
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.									
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									

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.

^ The Relative Percent Difference (RPD) obtained from the sample duplicate (DUP) is evaluated against the acceptance criteria when the sample is greater than five times (5X) the contract required detection limit (RL). In cases where the 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.

# GEL LABORATORIES LLC

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

## QC Summary

Report Date: June 15, 2022

Page 1 of 3

**Client :** GSI Environmental Inc.  
 155 Grand Ave  
 Suite 704  
 Oakland, California

**Contact:** Travis Wicks

**Workorder:** 579885

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Gamma Spec</b>											
Batch	2266745										
QC1205093477	579885001 DUP										
Cesium-137	U	-0.00201	U	-0.00155	pCi/g	0		N/A	MXR1	05/21/22	22:55
	Uncert:	+/-0.00357		+/-0.00313							
	TPU:	+/-0.00369		+/-0.00321							
QC1205093478	LCS										
Americium-241		485		496	pCi/g		102	(75%-125%)	MXR1	05/21/22	23:03
	Uncert:			+/-11.0							
	TPU:			+/-53.1							
Cobalt-60		76.6		72.4	pCi/g		94.5	(75%-125%)			
	Uncert:			+/-2.70							
	TPU:			+/-7.00							
Cesium-137		157		152	pCi/g		96.4	(75%-125%)			
	Uncert:			+/-3.18							
	TPU:			+/-12.9							
QC1205093476	MB										
Cesium-137			U	0.000970	pCi/g				MXR1	05/21/22	22:54
	Uncert:			+/-0.0237							
	TPU:			+/-0.0237							
<b>Rad Gas Flow</b>											
Batch	2266623										
QC1205093228	579885001 DUP										
Strontium-90	U	-0.0303	U	0.0364	pCi/g	0		N/A	KP1	05/25/22	12:28
	Uncert:	+/-0.0155		+/-0.0316							
	TPU:	+/-0.0155		+/-0.0327							
QC1205093229	LCS										
Strontium-90		1.04		1.14	pCi/g		110	(75%-125%)	KP1	05/25/22	12:28
	Uncert:			+/-0.0753							
	TPU:			+/-0.270							
QC1205093227	MB										
Strontium-90			U	0.0271	pCi/g				KP1	05/25/22	12:28
	Uncert:			+/-0.0262							
	TPU:			+/-0.0269							
<b>Rad Liquid Scintillation</b>											
Batch	2267177										
QC1205094430	579885001 DUP										
Tritium	U	-0.0387	U	-0.0709	pCi/g	0		N/A	KXA1	05/26/22	08:34
	Uncert:	+/-0.638		+/-0.578							
	TPU:	+/-0.638		+/-0.578							
QC1205094432	LCS										
Tritium		23.1		22.5	pCi/g		97.1	(75%-125%)	KXA1	05/26/22	09:19
	Uncert:			+/-3.02							

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## QC Summary

Workorder: 579885

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Parmname	NOM	Sample Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Liquid Scintillation</b>										
Batch	2267177									
QC1205094429	MB	TPU:	+/-5.92							
Tritium		U	0.0393	pCi/g				KXA1	05/26/2208:06	
		Uncert:	+/-0.586							
		TPU:	+/-0.586							
QC1205094431	579885001 MS									
Tritium		23.7 U	-0.0387	20.6	pCi/g	86.9	(75%-125%)	KXA1	05/26/2209:01	
		Uncert:	+/-0.638							
		TPU:	+/-0.638							

**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

# GEL LABORATORIES LLC

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

## QC Summary

Workorder: 579885

Page 3 of 3

<u>Parmname</u>	<u>NOM</u>	<u>Sample Qual</u>	<u>QC</u>	<u>Units</u>	<u>RPD%</u>	<u>REC%</u>	<u>Range</u>	<u>Anlst</u>	<u>Date</u>	<u>Time</u>
-----------------	------------	--------------------	-----------	--------------	-------------	-------------	--------------	--------------	-------------	-------------

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 acceptance 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.



579885

**FROM:** GSI Environmental Inc.  
155 Grand Ave. Suite 704  
Oakland, CA 94612  
(510) 463-8484

**PROJECT NAME:** AJU-BB

**PROJECT NO.:** 5182

**LAB CONTACT:** Matt Goerz

**LAB CONTACT:** Delaney Stone

**GLOBAL ID:**

**SAMPLER(S): (PRINT)** JCV / CJB

**TEL:** (510) 463-8484

**E-MAIL:** mgoerz@gsi-net.com; tzwick@gsi-net.com

**LABORATORY:** GEL Laboratories

**TURNAROUND TIME:**  SAME DAY  24 HR  48 HR  STANDARD

**SPECIAL INSTRUCTIONS:**  
- Sr-90 MDC of 0.5 pCi/g  
- H-3 MDC of 2 pCi/g  
- Cs-137 MDC of 1 pCi/g  
- Include flesh only; no peel

LAB USE ONLY	SAMPLE ID	SAMPLING		MATRIX	NO. OF CONT.	Unpreserved	Preserved	Field Filtered	Sr-90 (905.0)	Cs-137 (901.1)	H-3 (906)	CA Title 22 Metals (6020/7470)	Perchlorate (314.0)	Requested Analyzes	
		DATE	TIME											Requested Analyzes	Requested Analyzes
	L-1-220512	5/12/22	0900	Fruit	1				X	X	X	X	X		
	0-2-220512		0920		1				X	X	X	X	X		
	L-2-220512		1010		1				X	X	X	X	X		
	0-2-220512		1020		1				X	X	X	X	X		

**REQUESTED ANALYSES**  
Please check box or fill in blank as needed.

**Relinquished by: (Signature)** [Signature] **Date:** 5/12/22 **Time:** 1120

**Relinquished by: (Signature)** [Signature] **Date:** 5/12/22 **Time:** 930

**Relinquished by: (Signature)** [Signature] **Date:** 5/12/22 **Time:** [Blank]



Laboratories LLC

SAMPLE RECEIPT & REVIEW FORM

Client: **GSIE** SDG/AR/COC/Work Order: **579885/579886/579885/579886**

Received By: **Stacy Barne** Date Received: **May 13, 2022**

Carrier and Tracking Number  
Circle Applicable: FedEx Express    FedEx Ground    UPS    Field Services    Courier    Other     
**2730 6924 2337 21 c** **2730 6924 2348 13 c**

Suspected Hazard Information	Yes	No	*If Net Counts > 100cpm on samples not marked "radioactive", contact the Radiation Safety Group for further investigation.
A) Shipped as a DOT Hazardous?		<input checked="" type="checkbox"/>	Hazard Class Shipped: _____ UN#: _____ If UN2910, Is the Radioactive Shipment Survey Compliant? Yes ___ No ___
B) Did the client designate the samples are to be received as radioactive?		<input checked="" type="checkbox"/>	COC notation or radioactive stickers on containers equal client designation.
C) Did the RSO classify the samples as radioactive?		<input checked="" type="checkbox"/>	Maximum Net Counts Observed* (Observed Counts - Area Background Counts): <u>  </u> CPM / mR/Hr Classified as: Rad 1 Rad 2 Rad 3
D) Did the client designate samples are hazardous?		<input checked="" type="checkbox"/>	COC notation or hazard labels on containers equal client designation.
E) Did the RSO identify possible hazards?		<input checked="" type="checkbox"/>	If D or E is yes, select Hazards below. PCB's Flammable Foreign Soil RCRA Asbestos Beryllium Other: _____

Sample Receipt Criteria	Yes	NA	No	Comments/Qualifiers (Required for Non-Conforming Items)
1. Shipping containers received intact and sealed?	<input checked="" type="checkbox"/>			Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
2. Chain of custody documents included with shipment?	<input checked="" type="checkbox"/>			Circle Applicable: Client contacted and provided COC COC created upon receipt:
3. Samples requiring cold preservation within (0 ≤ 6 deg. C)?*	<input checked="" type="checkbox"/>			Preservation Method: Wet Ice Ice Packs Dry ice None Other: <u>  </u> *all temperatures are recorded in Celsius TEMP: _____ <b>SEE BELOW</b>
4. Daily check performed and passed on IR temperature gun?	<input checked="" type="checkbox"/>			Temperature Device Serial #: <b>XRI-22</b> Secondary Temperature Device Serial # (If Applicable):
5. Sample containers intact and sealed?	<input checked="" type="checkbox"/>			Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
6. Samples requiring chemical preservation at proper pH?	<input checked="" type="checkbox"/>			Sample ID's and Containers Affected: If Preservation added, Lot#: 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)
7. Do any samples require Volatile Analysis?	<input checked="" type="checkbox"/>			Are liquid VOA vials free of headspace? Yes ___ No ___ NA ___ Sample ID's and containers affected:
8. Samples received within holding time?	<input checked="" type="checkbox"/>			ID's and tests affected:
9. Sample ID's on COC match ID's on bottles?	<input checked="" type="checkbox"/>			ID's and containers affected:
10. Date & time on COC match date & time on bottles?	<input checked="" type="checkbox"/>			Circle Applicable: No dates on containers No times on containers COC missing info Other (describe)
11. Number of containers received match number indicated on COC?	<input checked="" type="checkbox"/>			Circle Applicable: No container count on COC Other (describe)
12. Are sample containers identifiable as GEL provided by use of GEL labels?	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<b>SB</b>
13. COC form is properly signed in relinquished/received sections?	<input checked="" type="checkbox"/>			Circle Applicable: Not relinquished Other (describe)

Comments (Use Continuation Form if needed):  
**2730 6924 2348 @ 13 c : FRUIT, KC-1-220511**  
**GF-1-220512**  
**AT-1-200512**  
**08**  
**058-SED-1-220511**

PM (or PMA) review: Initials    Date 5/19/22 Page 1 of

## Delaney Stone

---

**From:** Travis Wicks <TZWicks@gsi-net.com>  
**Sent:** Monday, May 16, 2022 11:23 AM  
**To:** Delaney Stone  
**Cc:** Team Stone; Matthew Goerz  
**Subject:** Re: SDG 579885, Fruit Samples

[EXTERNAL EMAIL] DO NOT CLICK links or attachments unless you recognize the sender and know the content is safe.

Hi Delaney,

Thanks for letting me know. Were the samples received today? Please proceed with analysis anyways.

Thanks,  
Travis Wicks

---

**From:** Delaney Stone <Delaney.Stone@gel.com>  
**Sent:** Monday, May 16, 2022 8:14 AM  
**To:** Travis Wicks <TZWicks@gsi-net.com>  
**Cc:** Team Stone <Team.Stone@gel.com>  
**Subject:** SDG 579885, Fruit Samples

You don't often get email from delaney.stone@gel.com. [Learn why this is important](#)

Good morning,

The receiving team notified me that these samples arrived out of temperature specification. This will not affect the Sr90, Gamma, Tritium, and metals analysis. However, it will affect the total Mercury and Perchlorate analysis. Please advise on how you would like to proceed.

Thank you!  
**Delaney Stone**  
**Project Manager**



[2040 Savage Road, Charleston, SC 29407](#) | [P.O. Box 30712, Charleston, SC 29417](#)  
Office Main: 843.556.8171 | Direct Line: 843.852.5814 | Office Fax: 843.769.7383  
E-Mail: [delaney.stone@gel.com](mailto:delaney.stone@gel.com) | Website: [www.gel.com](http://www.gel.com)  
Follow us on [LinkedIn](#)

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**List of current GEL Certifications as of 15 June 2022**

<b>State</b>	<b>Certification</b>
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	SC000122022-4
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	T104704235-22-20
Utah NELAP	SC000122021-36
Vermont	VT87156
Virginia NELAP	460202
Washington	C780

**Technical Case Narrative  
GSI Environmental Inc.  
SDG #: 579885**

## **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)**

**Analytical Method: SW846 6850 Modified**

**Analytical Procedure: GL-OA-E-067 REV# 16**

**Analytical Batches: 2274589 and 2274587**

**Composite Preparation Method: GEL Prep Method**

**Composite Preparation Procedure: GL-RAD-A-026 REV# 18**

**Composite Preparation Batch: 2266193**

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

<b><u>GEL Sample ID#</u></b>	<b><u>Client Sample Identification</u></b>
579885001	L-1-220512
579885002	O-1-220512
579885003	L-2-220512
579885004	O-2-220512
1205109420	Method Blank (MB)
1205109421	Laboratory Control Sample (LCS)
1205109422	579885001(L-1-220512) Matrix Spike (MS)
1205109423	579885001(L-1-220512) Matrix Spike Duplicate (MSD)
1205109424	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**

Samples 1205109422 (L-1-220512MS), 1205109423 (L-1-220512MSD) and 579885003 (L-2-220512) and/or QC 1205109422 (L-1-220512MS), 1205109423 (L-1-220512MSD) and 579885003 (L-2-220512) were diluted due to matrix interference.

## **Metals**

**Product: Determination of Metals by ICP**

**Analytical Method: SW846 3050B/6010D**

**Analytical Procedure: GL-MA-E-013 REV# 32**

**Analytical Batch:** 2266644

**Preparation Method:** SW846 3050B

**Preparation Procedure:** GL-MA-E-009 REV# 29

**Preparation Batch:** 2266643

**Composite Preparation Method:** GEL Prep Method

**Composite Preparation Procedure:** GL-RAD-A-026 REV# 18

**Composite Preparation Batch:** 2266193

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

<b><u>GEL Sample ID#</u></b>	<b><u>Client Sample Identification</u></b>
579885001	L-1-220512
579885002	O-1-220512
579885003	L-2-220512
579885004	O-2-220512
1205093248	Method Blank (MB)ICP
1205093249	Laboratory Control Sample (LCS)
1205093252	579885001(L-1-220512L) Serial Dilution (SD)
1205093250	579885001(L-1-220512S) Matrix Spike (MS)
1205093251	579885001(L-1-220512SD) 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.

**Product: Mercury Analysis Using the Perkin Elmer Automated Mercury Analyzer**

**Analytical Method:** SW846 7471B

**Analytical Procedure:** GL-MA-E-010 REV# 38

**Analytical Batch:** 2267727

**Preparation Method:** SW846 7471B Prep

**Preparation Procedure:** GL-MA-E-010 REV# 38

**Preparation Batch:** 2267723

**Composite Preparation Method:** GEL Prep Method

**Composite Preparation Procedure:** GL-RAD-A-026 REV# 18

**Composite Preparation Batch:** 2266193

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

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
579885001	L-1-220512
579885002	O-1-220512
579885003	L-2-220512
579885004	O-2-220512
1205095453	Method Blank (MB)CVAA
1205095454	Laboratory Control Sample (LCS)
1205095457	578376001(NonSDGL) Serial Dilution (SD)
1205095455	578376001(NonSDGD) Sample Duplicate (DUP)
1205095456	578376001(NonSDGS) Matrix Spike (MS)
1205095461	578376001(NonSDGPS) Post Spike (PS)

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**

**Matrix Spike (MS/MSD) Recovery Statement**

The percent recoveries (%R) obtained from the MS/MSD analyses are evaluated when the sample concentration is less than four times (4X) the spike concentration added. The MS/MSD (See Below) did not meet the recommended quality control acceptance criteria for percent recoveries for the following applicable analyte. The post spike also did not meet the required control limits; thus, confirming matrix interferences and/or sample non-homogeneity.

Sample	Analyte	Value
1205095456 (Non SDG 578376001MS)	Mercury	47.1* (80%-120%)

**Post Spike (PS) Recovery Statement**

The percent recoveries (%R) obtained from the PS analyses are evaluated when the sample concentration is less than four times (4X) the spike concentration added. The PS did not meet the recommended quality control acceptance criteria for percent recoveries for all applicable analytes and verifies the presence of matrix interferences.

Sample	Analyte	Value
1205095461 (Non SDG 578376001PS)	Mercury	65.2* (80%-120%)

**Radiochemistry**

**Product:** Dry Weight

**Preparation Method:** Dry Soil Prep

**Preparation Procedure:** GL-RAD-A-021 REV# 24

**Preparation Batch:** 2266599

**Composite Preparation Method:** GEL Prep Method

**Composite Preparation Procedure:** GL-RAD-A-026 REV# 18

**Composite Preparation Batch:** 2266193

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

<b><u>GEL Sample ID#</u></b>	<b><u>Client Sample Identification</u></b>
579885001	L-1-220512
579885002	O-1-220512
579885003	L-2-220512
579885004	O-2-220512

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:** 2266745

**Preparation Method:** Dry Soil Prep

**Preparation Procedure:** GL-RAD-A-021 REV# 24

**Preparation Batch:** 2266599

**Composite Preparation Method:** GEL Prep Method

**Composite Preparation Procedure:** GL-RAD-A-026 REV# 18

**Composite Preparation Batch:** 2266193

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

<b><u>GEL Sample ID#</u></b>	<b><u>Client Sample Identification</u></b>
579885001	L-1-220512
579885002	O-1-220512
579885003	L-2-220512
579885004	O-2-220512
1205093476	Method Blank (MB)
1205093477	579885001(L-1-220512) Sample Duplicate (DUP)
1205093478	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# 22

**Analytical Batch:** 2266623

**Preparation Method:** Dry Soil Prep

**Preparation Procedure:** GL-RAD-A-021 REV# 24

**Preparation Batch:** 2266599

**Composite Preparation Method:** GEL Prep Method

**Composite Preparation Procedure:** GL-RAD-A-026 REV# 18

**Composite Preparation Batch:** 2266193

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

<b><u>GEL Sample ID#</u></b>	<b><u>Client Sample Identification</u></b>
579885001	L-1-220512
579885002	O-1-220512
579885003	L-2-220512
579885004	O-2-220512
1205093227	Method Blank (MB)
1205093228	579885001(L-1-220512) Sample Duplicate (DUP)
1205093229	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.

<b>Sample</b>	<b>Analyte</b>	<b>Value</b>
579885001 (L-1-220512)	Strontium-90	Negative Result > 3 sigma value

**Product:** LSC, Tritium Distillation, Vegetation

**Analytical Method:** EPA 906.0 Modified

**Analytical Procedure:** GL-RAD-A-002 REV# 24

**Analytical Batch:** 2267177

**Composite Preparation Method:** GEL Prep Method

**Composite Preparation Procedure:** GL-RAD-A-026 REV# 18

**Composite Preparation Batch:** 2266193

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

<b><u>GEL Sample ID#</u></b>	<b><u>Client Sample Identification</u></b>
579885001	L-1-220512
579885002	O-1-220512
579885003	L-2-220512
579885004	O-2-220512
1205094429	Method Blank (MB)
1205094430	579885001(L-1-220512) Sample Duplicate (DUP)
1205094431	579885001(L-1-220512) Matrix Spike (MS)
1205094432	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.

**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.



## Appendix D

### Data Validation Summary AJU Brandeis-Bardin Campus Brandeis, California

Analytical results for soil, sediment, water and crop samples collected during the 2022 sampling event at the AJU Brandeis-Bardin Campus are tabulated and presented on Tables 2 through 7. The analytical results were reviewed in accordance with the following documents:

- 2020 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:

- Water samples for perchlorate analysis were received at the laboratory with insufficient headspace. Affected samples were flagged with "UJ" (non-detected sample results) and "J" (detected sample results).
- Perchlorate was recovered in the Matrix Spike (MS)/ Matrix Spike Duplicate (MSD) for fruit samples below 30%. In addition, the temperature of samples submitted for perchlorate analysis was received at the laboratory outside specifications. As a result, detected perchlorate in fruit samples are flagged with "J" and non-detected perchlorate in fruit samples are flagged with "UJ".
- Antimony and selenium were detected in the laboratory method blank for fruit samples. As such, all detections of antimony and selenium in fruit samples within 10x of the detection blank are flagged with a "B".
- Mercury was recovered in the MS sample for fruit samples below specifications and greater than 30%. In addition, the temperature of samples submitted for mercury analysis was outside of specifications when received at the laboratory. As a result, non-detected results for mercury in fruit samples are flagged with "UJ".

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