

Weekly Construction Summary

Week Ending 06/21/2024

Construction Summary

The weather was suitable for all planned work all week.

Monday (06/17) Remainder of demo debris stockpile removed from site. Silt fence 90% removed. Site contouring continued.

Tuesday (06/18): Rolloff bin and excess material and equipment removed from site. Removal of fill dirt to Batch Plant area continued.

Wednesday (06/19) Soil test results showed petroleum level slightly above the limit on one sample in the CSO parking area. Additional soil was excavated and placed onto plastic sheeting, and the excavated soil and the pit created were resampled. The pavement at the site entrance was sawcut and demolished to the road edge. Relocation of stockpiles in Batch Plant area requested by CMS started.

Thursday (06/20): No work on site pending results of soil retesting. Relocation of stockpiles in the Batch Plant area continued.

Friday (06/21) No work on site pending results of soil retesting. Relocation of stockpiles in the Batch Plant area was completed.

Daily reports and photos attached.

NOTES:

- GBI awaiting soil test results from Lehua Environmental in order to complete excavation and site recontouring work.



INDEPENDENT DECOMMISSIONING PROJECT MANAGER PROJECT DIARY

DATE : Monday, June 17, 2024

WEATHER: Suitable for all Planned Work
Overcast, moderate wind increasing at lunchtime, cold.

PROJECT TITLE: **Caltech Submillimeter Observatory Decommissioning**

Work Hours:

Arrv: **0730**

Dep: **1440**

Report By: **Shawn Gardner**

Monitors on Site:	Cultural - Peter Alu Archeological - Robynn Namnama Construction - CMS Karl Halemano
Work Items	
Earthwork	<p>Following the 0645 meeting, CMS, AECOM, GBI, ASM, and Taymade personnel arrived at the CSO site approx. 0730. Two Deluz trucks with end-dump trailers also arrived at the site by 0730.</p> <p>Dust control water was sprayed on the site, and loading the Deluz trucks with the remaining stockpiled demo debris started by 0800. The remaining stockpile was loaded into the trucks, and they departed at 0845.</p> <p>The fence was removed starting from the gatepost to the left of the entrance, all the way around to the storage area on the northwest side of the site, in order to begin the contouring of the perimeter of the site. That work continued for the rest of the day.</p> <p>The 10CY dump truck began hauling fill dirt to the batch plant area by 0900, but on the third load, it broke down at the batch plant area. It was expected to be repaired the following morning.</p> <p>Work ceased for the day and all personnel left the site by 1440.</p> <p>Notes: * Nahua Guilloz visited the site at about 1115. She viewed the ongoing contouring work and found it to be looking good. * GBI awaiting Lehua soil test results to excavate\haul CSO dome area.</p>

WORK FORCE & EQUIPMENT						
NAME	POS	HR	Company	EQUIPMENT	MODEL/TYPE	HR
Jon Steen	Supt		GBI	20' Container	Generic	
Bronson Sylva	Foreman		GBI	Water Truck	Kenworth lic. 469TXU	
Brandon Kepano	Equip Op		GBI	Loader	CAT 950 GC	
Keala Drummondo	Equip Op		GBI	Excavator w/ hydraulic hammer chisel point	Deere 350 P	
Kai'imi Beck	Intern		GBI	Excavator w two buckets and chain lift	Deere 245 P	
Frank Collo	Equip Op		GBI	Crew Truck w/ fuel tank	Ford F350	
				Pickup Truck	Ford F150	
				10CY Dump Truck	Peterbilt lic.768HEG	
				4X4 Van	Ford E350	

Signed by: 

Reviewed by: Shawn Gardner

Date 6/17/2024



^ 7:55am - first Deluz truck being loaded



^ 8:46am - Deluz trucks leaving the site



^ 9:57am - first truckload of fill leaving site



^ 12:11pm - broke down dumptruck at batch plant area



^ 12:43pm - contouring work in progress



^ 2:40pm - site closed for the day



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CENTER FOR MAUNAKEA
STEWARDSHIP

No. 1592

INVASIVE SPECIES INSPECTION CERTIFICATE

Delivery is: ☒ APPROVED ☐ REJECTED

Date and Time: 6/13/24 5pm
Expiration date and time: 6/17/24 5pm
Destination: CSD site summit
Vehicle Lic & Owner: 881 HEC semi
Cargo Description: dump trailer

Inspector: James Parker
Inspection location: De Luz Waima
Facility/Representative: Kevin Balog
Concerns identified: N/A
Remediation taken: N/A

Bait used? ☐ Yes ☒ No Rush inspection? ☐ Yes ☒ No Escort Required? ☐ Yes ☒ No
☐ EMERGENCY (no inspection) ☐ NON-COMPLIANT (no inspection requested)

This certificate is proof that the inspection is valid for the stated vehicle, cargo, destination, and time frame.

Drivers should keep this certificate in vehicle when making delivery.

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ST00110



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No. 1593

INVASIVE SPECIES INSPECTION CERTIFICATE

Delivery is: ☒ APPROVED ☐ REJECTED

Date and Time: 6/13/24 5pm
Expiration date and time: 6/17/24 5pm
Destination: CSD site summit
Vehicle Lic & Owner: 921 HZL trailer
Cargo Description: empty

Inspector: James Parker
Inspection location: De Luz Waima
Facility/Representative: Kevin Balog
Concerns identified: N/A
Remediation taken: N/A

Bait used? ☐ Yes ☒ No Rush inspection? ☐ Yes ☒ No Escort Required? ☐ Yes ☒ No
☐ EMERGENCY (no inspection) ☐ NON-COMPLIANT (no inspection requested)

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EDT0018



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No. 1594

INVASIVE SPECIES INSPECTION CERTIFICATE

Delivery is: ☒ APPROVED ☐ REJECTED

Date and Time: 6/13/24 5pm
Expiration date and time: 6/17/24 5pm
Destination: CSD site summit
Vehicle Lic & Owner: 19D HEB Semi
Cargo Description: dump trailer

Inspector: James Parker
Inspection location: De Luz Waima
Facility/Representative: Kevin Balog
Concerns identified: N/A
Remediation taken: N/A

Bait used? ☐ Yes ☒ No Rush inspection? ☐ Yes ☒ No Escort Required? ☐ Yes ☒ No
☐ EMERGENCY (no inspection) ☐ NON-COMPLIANT (no inspection requested)

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ST00141



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No. 1595

INVASIVE SPECIES INSPECTION CERTIFICATE

Delivery is: ☒ APPROVED ☐ REJECTED

Date and Time: 6/13/24 5pm
Expiration date and time: 6/17/24 5pm
Destination: CSD site summit
Vehicle Lic & Owner: 159 HXX trailer
Cargo Description: empty

Inspector: James Parker
Inspection location: De Luz Waima
Facility/Representative: Kevin Balog
Concerns identified: N/A
Remediation taken: N/A

Bait used? ☐ Yes ☒ No Rush inspection? ☐ Yes ☒ No Escort Required? ☐ Yes ☒ No
☐ EMERGENCY (no inspection) ☐ NON-COMPLIANT (no inspection requested)

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EDT0077



INDEPENDENT DECOMMISSIONING PROJECT MANAGER PROJECT DIARY

DATE : Tuesday, June 18, 2024

WEATHER: Suitable for all Planned Work
Clear, light wind, 40F at 0730. Warmed
to 50F in the afternoon.

PROJECT TITLE: **Caltech Submillimeter Observatory Decommissioning**

Work Hours:

Report By: **Shawn Gardner**

Arrv: **0730**

Dep: **1400**

Monitors on Site:	Cultural - Peter Alu Archeological - Robynn Namnama
Work Items	
Earthwork	<p>Following the 0645 meeting, AECOM, GBI, ASM, and Taymade personnel arrived at the CSO site approx. 0730. One Deluz truck with a lowboy trailer also arrived at the site by 0730.</p> <p>Dust control water was sprayed on the site, and loading the Deluz truck started by 0750. The rolloff bin and various excess materials and equipment were loaded onto the lowboy, and the truck departed at 0850.</p> <p>The 10CY dump truck was repaired by 1100, and began hauling fill dirt to the batch plant area by 1130. Four loads of stockpiled fill were moved to the batch plant area. Little more earthwork could be done pending the Lehua soil test results.</p> <p>The small amount of remaining material and equipment was consolidated near the entrance, and all visible concrete and other trash was collected and stockpiled near the entrance.</p> <p>Work ceased for the day and all personnel left the site by 1400.</p> <p>Notes: * GBI awaiting Lehua soil test results to excavate\haul CSO dome area.</p>

WORK FORCE & EQUIPMENT						
NAME	POS	HR	Company	EQUIPMENT	MODEL/TYPE	HR
Jon Steen	Supt		GBI	20' Container	Generic	
Bronson Sylva	Foreman		GBI	Water Truck	Kenworth lic. 469TXU	
Brandon Kepano	Equip Op		GBI	Loader	CAT 950 GC	
Keala Drummondo	Equip Op		GBI	Excavator w/ hydraulic hammer chisel point	Deere 350 P	
Kai'imi Beck	Intern		GBI	Excavator w two buckets and chain lift	Deere 245 P	
Frank Collo	Equip Op		GBI	Crew Truck w/ fuel tank	Ford F350	
				Pickup Truck	Ford F150	
				10CY Dump Truck	Peterbilt lic. 768HEG	
				4X4 Van	Ford E350	

Signed by: 

Reviewed by: Shawn Gardner

Date 6/18/2024



^ 7:29am - dust control spraying



^ 7:50am - loading rolloff bin onto lowboy



^ 8:18am - loading materials and equipment



^ 11:24am - repaired dumptruck arriving for first load



^ 1:52pm - site closed for the day



^ 2:04pm - site closed for the day



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No. 1598

INVASIVE SPECIES INSPECTION CERTIFICATE

Delivery is: ☒ APPROVED ☐ REJECTED

Date and Time: 6/17/24 5pm

Inspector: James Parker

Expiration date and time: 6/21/24 5pm

Inspection location: De Luz Waimoa

Destination: CSD site summit

Facility/Representative: Kevin Balog

Vehicle Lic & Owner: silver lowboy no plates

Concerns identified: N/A

Cargo Description: empty

Remediation taken: N/A

Bait used? ☐ Yes ☒ No

Rush inspection? ☐ Yes ☒ No

Escort Required? ☐ Yes ☒ No

☐ EMERGENCY (no inspection)

☐ NON-COMPLIANT (no inspection requested)

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No. 1599

INVASIVE SPECIES INSPECTION CERTIFICATE

Delivery is:



APPROVED



REJECTED

Date and Time: 6/17/24 5pm

Inspector: James Parker

Expiration date and time: 6/21/24 5pm

Inspection location: De Luz Wainae

Destination: CSD site summit

Facility/Representative: Kevin Balog

Vehicle Lic & Owner: temp license Semi

Concerns identified: N/A

Cargo Description: lowboy trailer

Remediation taken: N/A

Bait used? ☐ Yes ☒ No

Rush inspection? ☐ Yes ☒ No

Escort Required? ☐ Yes ☒ No

☐ EMERGENCY (no inspection)

☐ NON-COMPLIANT (no inspection requested)

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INDEPENDENT DECOMMISSIONING PROJECT MANAGER PROJECT DIARY

DATE : Wednesday, June 19, 2024

WEATHER: Suitable for all Planned Work
Clear, light wind, 40F at 0730. Warmed
to 50F in the afternoon.

PROJECT TITLE: **Caltech Submillimeter Observatory Decommissioning**

Work Hours:

Arrv: **0730**

Dep: **1430**

Report By: **Shawn Gardner**

Monitors on Site:	Cultural - Peter Alu Archeological - Robynn Namnama Construction - Karl Halemano
Work Items	
Earthwork	<p>Following the 0645 meeting, CMS, AECOM, GBI, ASM, and Taymade personnel arrived at the CSO site approx. 0730.</p> <ul style="list-style-type: none">- By 0800, sawcutting the asphalt at the site entrance began, and a groove approx. 2" deep was completed at about 0845. After that, the yellow matting at the entrance was removed from the pavement.- GBI also began excavation the fill material on the northeast edge of the site at 0800, and removing various, apparent construction rubbish, found within it.- Nahua Guilloz arrived at the site at about 0850 and had a brief discussion with Jon Steen, Karl Halemano, and myself re the process for remediation and retesting the soil in the parking area where the previous testing showed an out-of-tolerance level of petroleum. Also talked about the work progress and possibilities for the remainder of the fill removal and site contouring. After she took some photos of the site, we went to the Batch Plant area. Nahua requested relocation of some of the stockpiled materials. There are two piles of fill dirt, the large pile of stone, and a small pile of the sand bedding material that was under/around the water tank. She requested the larger dirt pile be moved to the same location as the smaller dirt pile, and the stone pile be relocated to where the larger dirt pile was, adjacent to the lava ridge at the boundary of the area. She also requested the sand pile and an existing, adjacent, pile of material be relocated to a nearby area where various piles of different colored material are stored. Jon agreed to do the requested stockpile relocations.- At 0930, after the yellow mats had been removed, the pile of demo rubbish and found construction rubbish was loaded onto the 10CY dumptruck. Demo of the asphalt at the entrance began, and the dumptruck was filled the rest the way with that material, and then left the site. As the asphalt was too thick (varied 6-10 inches) to break neatly at the sawcut groove, GBI finished the demo with the hydraulic breaker.- Calvin Arca from Lehua Env. arrived at 1015, and excavation began at the parking area per the remediation plan. The soil was placed onto plastic sheeting, and Calvin took many sample increments from the soil as it was being placed on the stockpile. After the excavation was complete, the stockpile was covered with plastic, and Calvin took many sample increments from many places inside the pit. When the first pit sampling was completed, he took a second set of sample increments similarly from inside the pit. After properly packing the samples, Calvin left the site at about 1115.- The loader and water truck were brought to the Batch Plant area at about 1100 and the stockpile relocation work began.- Jon Steen reported that the dumptruck had broken down again on the way back to the site on the Maunakea Access Road, and would not be repaired earlier than Friday, due to the parts having to be ordered. As a result of the truck becoming unavailable and the soil tests pending, he said no more work would be done on the site until probably Monday, and for the rest of the week, only the stockpile relocation work would be performed. <p>Work ceased for the day and all personnel left the site by 1415.</p> <p>Note: M3 personnel David Adriaanse, Mikaela Ritter, and Lauren Hunter visited the site at around 0900. Discussed the soil remediation, work progress, and they inspected the site. They departed after about one hour.</p>

WORK FORCE & EQUIPMENT

NAME	POS	HR	Company	EQUIPMENT	MODEL/TYPE	HR
Jon Steen	Supt		GBI			
Bronson Sylva	Foreman		GBI	Water Truck	Kenworth lic. 469TXU	
Brandon Kepano	Equip Op		GBI	Loader	CAT 950 GC	
Keala Drummondo	Equip Op		GBI	Excavator w/ hydraulic hammer chisel point	Deere 350 P	
Kai'imi Beck	Intern		GBI	Excavator w two buckets and chain lift	Deere 245 P	
Frank Collo	Equip Op		GBI	Crew Truck w/ fuel tank	Ford F350	
				Pickup Truck	Ford F150	
				10CY Dump Truck	Peterbilt lic. 768HEG	
				4X4 Van	Ford E350	
Calvin Arca			Lehua Env.			

Signed by: 

Reviewed by: Shawn Gardner

Date 6/19/2024



^ 8:18am - sawcutting pavement



^ 9:46am - starting asphalt demo



^ 9:54am - loading the dumptruck



^ 10:29am - sampling excavated material



^ 10:49am - sampling in excavation



^ 11:26am - demoing asphalt with breaker

Table 2. Soil Sampling Summary
CSO Decommissioning - CSO Slab and Asphalt Driveway/Parking Area

Descriptive Sample ID				CSO DU-1A-1			CSO DU-1A-2		
Sample Description				Under CSO Slab (0"-6" bss)			Under CSO Slab (0"-6" bss)		
Analyte	Laboratory Analytical Method	DOH EAL Unrestricted Land Use (mg/kg)	DOH EAL Commercial/ Industrial Land Use (mg/kg)	Result (mg/kg)	Practical Quantitation Limit (PQL) (mg/kg)	Pass/Fail	Result (mg/kg)	Practical Quantitation Limit (PQL) (mg/kg)	Pass/Fail
RCRA 8 Metals - Total									
Arsenic	EPA 6010D/7471B	24	95	NA	NA	NA	NA	NA	NA
Barium	EPA 6010D/7471B	1000	2500	NA	NA	NA	NA	NA	NA
Cadmium	EPA 6010D/7471B	14	72	NA	NA	NA	NA	NA	NA
Chromium	EPA 6010D/7471B	1100	1100	NA	NA	NA	NA	NA	NA
Lead	EPA 6010D/7471B	200	800	ND	5.2	Pass	ND	5.2	Pass
Silver	EPA 6010D/7471B	78	1000	NA	NA	NA	NA	NA	NA
Selenium	EPA 6010D/7471B	78	1000	NA	NA	NA	NA	NA	NA
Mercury	EPA 6010D/7471B	4.7	61	NA	NA	NA	NA	NA	NA
RCRA Metals - TCLP									
Lead (Pb)	EPA 1311/6010D	EPA Limit - 5.0 mg/L		ND	0.2	Pass	ND	0.2	Pass
Volatile Organic Compounds (VOCs)									
VOCs (See laboratory results for details)	EPA 8260D/SIM	Various	Various	NA	NA	NA	NA	NA	NA
Polychlorinated Biphenyls (PCBs)									
A1016	EPA 8082A	1.2	8.6	ND	0.052	Pass	ND	0.052	Pass
A1221	EPA 8082A	1.2	8.6	ND	0.052	Pass	ND	0.052	Pass
A1232	EPA 8082A	1.2	8.6	ND	0.052	Pass	ND	0.052	Pass
A1242	EPA 8082A	1.2	8.6	ND	0.052	Pass	ND	0.052	Pass
A1248	EPA 8082A	1.2	8.6	ND	0.052	Pass	ND	0.052	Pass
A1254	EPA 8082A	1.2	8.6	ND	0.052	Pass	ND	0.052	Pass
A1260	EPA 8082A	1.2	8.6	ND	0.052	Pass	ND	0.052	Pass
Total Petroleum Hydrocarbons (TPHs)									
TPH-Diesel	EPA 8015M	220	680	ND	26	Pass	ND	26	Pass
TPH-Oil	EPA 8015M	500	1000	ND	52	Pass	ND	52	Pass
TPH-Gas	EPA 8015M	100	500	NA	NA	NA	NA	NA	NA
Polycyclic Aromatic Hydrocarbons (PAHs)									
Naphthalene	EPA 8270E/3550C	4.4	4.4	NA	NA	NA	NA	NA	NA
2-Methylnaphthalene	EPA 8270E/3550C	4.1	4.1	NA	NA	NA	NA	NA	NA
1-Methylnaphthalene	EPA 8270E/3550C	4.2	4.2	NA	NA	NA	NA	NA	NA
Acenaphthylene	EPA 8270E/3550C	100	100	NA	NA	NA	NA	NA	NA
Acenaphthene	EPA 8270E/3550C	120	120	NA	NA	NA	NA	NA	NA
Fluorene	EPA 8270E/3550C	93	93	NA	NA	NA	NA	NA	NA
Phenanthrene	EPA 8270E/3550C	460	500	NA	NA	NA	NA	NA	NA
Anthracene	EPA 8270E/3550C	4.2	4.2	NA	NA	NA	NA	NA	NA
Fluoranthene	EPA 8270E/3550C	120	120	NA	NA	NA	NA	NA	NA
Pyrene	EPA 8270E/3550C	44	44	NA	NA	NA	NA	NA	NA
Benzo(a)anthracene	EPA 8270E/3550C	10	10	NA	NA	NA	NA	NA	NA
Chrysene	EPA 8270E/3550C	30	30	NA	NA	NA	NA	NA	NA
Benzo(b)fluoranthene	EPA 8270E/3550C	11	21	NA	NA	NA	NA	NA	NA
Benzo(k)fluoranthene	EPA 8270E/3550C	39	39	NA	NA	NA	NA	NA	NA
Benzo(a)pyrene	EPA 8270E/3550C	3.6	1.5	NA	NA	NA	NA	NA	NA
Indeno(1,2,3-cd)pyrene	EPA 8270E/3550C	11	31	NA	NA	NA	NA	NA	NA
Dibenzo(a,h)anthracene	EPA 8270E/3550C	1.1	18	NA	NA	NA	NA	NA	NA
Benzo(ghi)perylene	EPA 8270E/3550C	35	35	NA	NA	NA	NA	NA	NA
Other									
Cyanide	SM4500-CN	4.8	30	NA	NA	NA	NA	NA	NA

Notes:

ND = Not detected above the laboratory detection limit

DOH = State of Hawai'i Department of Health

EPA = Environmental Protection Agency

bss = below soil surface

EAL = Environmental Action Level

mg/kg = Milligrams per kilogram

NA = Not available

Table 2. Soil Sampling Summary
CSO Decommissioning - CSO Slab and Asphalt Driveway/Parking Area

Descriptive Sample ID				CSO DU-1A-3			CSO DU-1B		
Sample Description				Under CSO Slab (0"-6" bss)			Under CSO Slab (6"-12" bss)		
Analyte	Laboratory Analytical Method	DOH EAL Unrestricted Land Use (mg/kg)	DOH EAL Commercial/ Industrial Land Use (mg/kg)	Result (mg/kg)	Practical Quantitation Limit (PQL) (mg/kg)	Pass/Fail	Result (mg/kg)	Practical Quantitation Limit (PQL) (mg/kg)	Pass/Fail
RCRA 8 Metals - Total									
Arsenic	EPA 6010D/7471B	24	95	NA	NA	NA	NA	NA	NA
Barium	EPA 6010D/7471B	1000	2500	NA	NA	NA	NA	NA	NA
Cadmium	EPA 6010D/7471B	14	72	NA	NA	NA	NA	NA	NA
Chromium	EPA 6010D/7471B	1100	1100	NA	NA	NA	NA	NA	NA
Lead	EPA 6010D/7471B	200	800	ND	5.2	Pass	ND	5.2	Pass
Silver	EPA 6010D/7471B	78	1000	NA	NA	NA	NA	NA	NA
Selenium	EPA 6010D/7471B	78	1000	NA	NA	NA	NA	NA	NA
Mercury	EPA 6010D/7471B	4.7	61	NA	NA	NA	NA	NA	NA
RCRA Metals - TCLP									
Lead (Pb)	EPA 1311/6010D	EPA Limit - 5.0 mg/L		ND	0.2	Pass	ND	0.2	Pass
Volatile Organic Compounds (VOCs)									
VOCs (See laboratory results for details)	EPA 8260D/SIM	Various	Various	NA	NA	NA	NA	NA	NA
Polychlorinated Biphenyls (PCBs)									
A1016	EPA 8082A	1.2	8.6	ND	0.052	Pass	ND	0.052	Pass
A1221	EPA 8082A	1.2	8.6	ND	0.052	Pass	ND	0.052	Pass
A1232	EPA 8082A	1.2	8.6	ND	0.052	Pass	ND	0.052	Pass
A1242	EPA 8082A	1.2	8.6	ND	0.052	Pass	ND	0.052	Pass
A1248	EPA 8082A	1.2	8.6	ND	0.052	Pass	ND	0.052	Pass
A1254	EPA 8082A	1.2	8.6	ND	0.052	Pass	ND	0.052	Pass
A1260	EPA 8082A	1.2	8.6	ND	0.052	Pass	ND	0.052	Pass
Total Petroleum Hydrocarbons (TPHs)									
TPH-Diesel	EPA 8015M	220	680	ND	26	Pass	ND	26	Pass
TPH-Oil	EPA 8015M	500	1000	ND	52	Pass	ND	53	Pass
TPH-Gas	EPA 8015M	100	500	NA	NA	NA	NA	NA	NA
Polycyclic Aromatic Hydrocarbons (PAHs)									
Naphthalene	EPA 8270E/3550C	4.4	4.4	NA	NA	NA	NA	NA	NA
2-Methylnaphthalene	EPA 8270E/3550C	4.1	4.1	NA	NA	NA	NA	NA	NA
1-Methylnaphthalene	EPA 8270E/3550C	4.2	4.2	NA	NA	NA	NA	NA	NA
Acenaphthylene	EPA 8270E/3550C	100	100	NA	NA	NA	NA	NA	NA
Acenaphthene	EPA 8270E/3550C	120	120	NA	NA	NA	NA	NA	NA
Fluorene	EPA 8270E/3550C	93	93	NA	NA	NA	NA	NA	NA
Phenanthrene	EPA 8270E/3550C	460	500	NA	NA	NA	NA	NA	NA
Anthracene	EPA 8270E/3550C	4.2	4.2	NA	NA	NA	NA	NA	NA
Fluoranthene	EPA 8270E/3550C	120	120	NA	NA	NA	NA	NA	NA
Pyrene	EPA 8270E/3550C	44	44	NA	NA	NA	NA	NA	NA
Benzo(a)anthracene	EPA 8270E/3550C	10	10	NA	NA	NA	NA	NA	NA
Chrysene	EPA 8270E/3550C	30	30	NA	NA	NA	NA	NA	NA
Benzo(b)fluoranthene	EPA 8270E/3550C	11	21	NA	NA	NA	NA	NA	NA
Benzo(k)fluoranthene	EPA 8270E/3550C	39	39	NA	NA	NA	NA	NA	NA
Benzo(a)pyrene	EPA 8270E/3550C	3.6	1.5	NA	NA	NA	NA	NA	NA
Indeno(1,2,3-cd)pyrene	EPA 8270E/3550C	11	31	NA	NA	NA	NA	NA	NA
Dibenzo(a,h)anthracene	EPA 8270E/3550C	1.1	18	NA	NA	NA	NA	NA	NA
Benzo(ghi)perylene	EPA 8270E/3550C	35	35	NA	NA	NA	NA	NA	NA
Other									
Cyanide	SM4500-CN	4.8	30	NA	NA	NA	NA	NA	NA

Notes:

ND = Not detected above the laboratory detection limit

DOH = State of Hawai'i Department of Health

EPA = Environmental Protection Agency

Table 2. Soil Sampling Summary
CSO Decommissioning - CSO Slab and Asphalt Driveway/Parking Area

				Descriptive Sample ID	CSO DU-4	
				Sample Description	Under Asphalt Driveway/ Parking Area (0"-6" bss)	
Analyte	Laboratory Analytical Method	DOH EAL Unrestricted Land Use (mg/kg)	DOH EAL Commercial/ Industrial Land Use (mg/kg)	Result (mg/kg)	Practical Quantitation Limit (PQL) (mg/kg)	Pass/Fail
RCRA 8 Metals - Total						
Arsenic	EPA 6010D/7471B	24	95	ND	10	Pass
Barium	EPA 6010D/7471B	1000	2500	120	2.6	Pass
Cadmium	EPA 6010D/7471B	14	72	ND	0.52	Pass
Chromium	EPA 6010D/7471B	1100	1100	6.6	0.52	Pass
Lead	EPA 6010D/7471B	200	800	ND	5.2	Pass
Silver	EPA 6010D/7471B	78	1000	ND	0.26	Pass
Selenium	EPA 6010D/7471B	78	1000	ND	10	Pass
Mercury	EPA 6010D/7471B	4.7	61	ND	1	Pass
RCRA Metals - TCLP						
Lead (Pb)	EPA 1311/6010D	EPA Limit - 5.0 mg/L		ND	0.2	Pass
Volatile Organic Compounds (VOCs)						
VOCs (See laboratory results for details)	EPA 8260D/SIM	Various	Various	ND	Various	Pass
Polychlorinated Biphenyls (PCBs)						
A1016	EPA 8082A	1.2	8.6	ND	0.052	Pass
A1221	EPA 8082A	1.2	8.6	ND	0.052	Pass
A1232	EPA 8082A	1.2	8.6	ND	0.052	Pass
A1242	EPA 8082A	1.2	8.6	ND	0.052	Pass
A1248	EPA 8082A	1.2	8.6	ND	0.052	Pass
A1254	EPA 8082A	1.2	8.6	ND	0.052	Pass
A1260	EPA 8082A	1.2	8.6	ND	0.052	Pass
Total Petroleum Hydrocarbons (TPHs)						
TPH-Diesel	EPA 8015M	220	680	ND	83	Pass
TPH-Oil	EPA 8015M	500	1000	540	53	Fail
TPH-Gas	EPA 8015M	100	500	ND	9.5	Pass
Polycyclic Aromatic Hydrocarbons (PAHs)						
Naphthalene	EPA 8270E/3550C	4.4	4.4	ND	0.007	Pass
2-Methylnaphthalene	EPA 8270E/3550C	4.1	4.1	ND	0.007	Pass
1-Methylnaphthalene	EPA 8270E/3550C	4.2	4.2	ND	0.007	Pass
Acenaphthylene	EPA 8270E/3550C	100	100	ND	0.007	Pass
Acenaphthene	EPA 8270E/3550C	120	120	ND	0.007	Pass
Fluorene	EPA 8270E/3550C	93	93	ND	0.007	Pass
Phenanthrene	EPA 8270E/3550C	460	500	0.0085	0.007	Pass
Anthracene	EPA 8270E/3550C	4.2	4.2	ND	0.007	Pass
Fluoranthene	EPA 8270E/3550C	120	120	ND	0.007	Pass
Pyrene	EPA 8270E/3550C	44	44	0.0076	0.007	Pass
Benzo(a)anthracene	EPA 8270E/3550C	10	10	ND	0.007	Pass
Chrysene	EPA 8270E/3550C	30	30	0.0073	0.007	Pass
Benzo(b)fluoranthene	EPA 8270E/3550C	11	21	ND	0.007	Pass
Benzo(k)fluoranthene	EPA 8270E/3550C	39	39	ND	0.007	Pass
Benzo(a)pyrene	EPA 8270E/3550C	3.6	1.5	ND	0.007	Pass
Indeno(1,2,3-cd)pyrene	EPA 8270E/3550C	11	31	ND	0.007	Pass
Dibenzo(a,h)anthracene	EPA 8270E/3550C	1.1	18	ND	0.007	Pass
Benzo(ghi)perylene	EPA 8270E/3550C	35	35	ND	0.007	Pass
Other						
Cyanide	SM4500-CN	4.8	30	NA	NA	NA

Notes:

ND = Not detected above the laboratory detection limit

DOH = State of Hawai'i Department of Health

EPA = Environmental Protection Agency



**OnSite
Environmental Inc.**

14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

June 18, 2024

Kama Kobayashi
Lehua Environmental Inc.
P.O. Box 1018
Kamuela, HI 96743

Re: Analytical Data for Project 2024-243-3
Laboratory Reference No. 2406-163

Dear Kama:

Enclosed are the analytical results and associated quality control data for samples submitted on June 13, 2024.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

David Baumeister
Project Manager

Enclosures



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: June 18, 2024
Samples Submitted: June 13, 2024
Laboratory Reference: 2406-163
Project: 2024-243-3

Case Narrative

Samples were collected on June 11, 2024 and received by the laboratory on June 13, 2024. Samples were shipped in a cooler packed with blue ice and arrived at a temperature of $<6^{\circ}\text{C}$. They were maintained at the laboratory at a temperature of 2°C to 6°C . A copy of the cooler receipt form has been included with this report.

Please note that any and all soil sample results are reported on a dry-weight basis, unless otherwise noted below. However the soil results for the QA/QC samples are reported on a wet-weight basis.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.

All samples were processed in the laboratory following the multi-increment sampling procedures as outlined in the HEER-TGM. Additional notes will be addressed in appropriate sections as warranted.

Volatiles EPA 8260D Analysis

The percent recovery for Bromomethane and 1,1,2-Trichloroethane is outside the control limits in the Spike Blank. The method allows for a percentage of the compounds to fall outside of the control limits due to the large number of analytes being spiked.

The RPD for Chloroethane, 1,1,2-Trichloroethane, 1,4-Dichlorobenzene and 1,2-Dichlorobenzene is outside the control limits for the Spike Blank/Spike Blank Duplicate. The method allows for a percentage of the compounds to fall outside of the control limits due to the large number of analytes being spiked.

Any other QA/QC issues associated with this extraction and analysis will be indicated with a footnote reference and discussed in detail on the Data Qualifier page.



Date of Report: June 18, 2024
 Samples Submitted: June 13, 2024
 Laboratory Reference: 2406-163
 Project: 2024-243-3

GASOLINE RANGE ORGANICS
EPA 8015M

Matrix: Soil
 Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	CSO DU-4					
Laboratory ID:	06-163-01					
Gasoline	ND	9.5	EPA 8015M	6-17-24	6-17-24	
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	87	62-134				



Date of Report: June 18, 2024
 Samples Submitted: June 13, 2024
 Laboratory Reference: 2406-163
 Project: 2024-243-3

**GASOLINE RANGE ORGANICS
 EPA 8015M
 QUALITY CONTROL**

Matrix: Soil
 Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0617S2					
Gasoline	ND	5.0	EPA 8015M	6-17-24	6-17-24	
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	109	62-134				

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE								
Laboratory ID:	06-163-01							
	ORIG	DUP						
Gasoline	ND	ND	NA	NA	NA	NA	NA	30
Surrogate:								
Fluorobenzene				87	92	62-134		



Date of Report: June 18, 2024
 Samples Submitted: June 13, 2024
 Laboratory Reference: 2406-163
 Project: 2024-243-3

**DIESEL AND HEAVY OIL RANGE ORGANICS
 EPA 8015M**

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	CSO DU-4					
Laboratory ID:	06-163-01					
Diesel Range Organics	ND	83	EPA 8015M	6-17-24	6-18-24	U1
Residual Range Organics	540	53	EPA 8015M	6-17-24	6-18-24	
Surrogate:	Percent Recovery	Control Limits				
o-Terphenyl	71	50-150				



Date of Report: June 18, 2024
 Samples Submitted: June 13, 2024
 Laboratory Reference: 2406-163
 Project: 2024-243-3

**DIESEL AND HEAVY OIL RANGE ORGANICS
 EPA 8015M
 QUALITY CONTROL**

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0617S1					
Diesel Range Organics	ND	25	EPA 8015M	6-17-24	6-17-24	
Residual Range Organics	ND	50	EPA 8015M	6-17-24	6-17-24	
Surrogate:	Percent Recovery	Control Limits				
<i>o</i> -Terphenyl	88	50-150				

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE								
Laboratory ID:	06-183-02							
	ORIG	DUP						
Diesel Range	ND	ND	NA	NA	NA	NA	40	
Residual Range	ND	ND	NA	NA	NA	NA	40	
Surrogate:								
<i>o</i> -Terphenyl				75	75	50-150		



Date of Report: June 18, 2024
 Samples Submitted: June 13, 2024
 Laboratory Reference: 2406-163
 Project: 2024-243-3

VOLATILE ORGANICS EPA 8260D/SIM
 page 1 of 2

Matrix: Soil
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	CSO DU-4					
Laboratory ID:	06-163-01					
Dichlorodifluoromethane	ND	0.13	EPA 8260D	6-17-24	6-17-24	
Chloromethane	ND	0.48	EPA 8260D	6-17-24	6-17-24	
Vinyl Chloride (SIM)	ND	0.0048	EPA 8260D/SIM	6-17-24	6-17-24	
Bromomethane	ND	0.48	EPA 8260D	6-17-24	6-17-24	
Chloroethane	ND	0.48	EPA 8260D	6-17-24	6-17-24	
Trichlorofluoromethane	ND	0.095	EPA 8260D	6-17-24	6-17-24	
1,1-Dichloroethene	ND	0.095	EPA 8260D	6-17-24	6-17-24	
Acetone	ND	0.95	EPA 8260D	6-17-24	6-17-24	
Iodomethane	ND	0.95	EPA 8260D	6-17-24	6-17-24	
Carbon Disulfide	ND	0.095	EPA 8260D	6-17-24	6-17-24	
Methylene Chloride	ND	0.48	EPA 8260D	6-17-24	6-17-24	
(trans) 1,2-Dichloroethene	ND	0.095	EPA 8260D	6-17-24	6-17-24	
Methyl t-Butyl Ether	ND	0.095	EPA 8260D	6-17-24	6-17-24	
1,1-Dichloroethane	ND	0.095	EPA 8260D	6-17-24	6-17-24	
Vinyl Acetate	ND	0.48	EPA 8260D	6-17-24	6-17-24	
2,2-Dichloropropane	ND	0.095	EPA 8260D	6-17-24	6-17-24	
(cis) 1,2-Dichloroethene	ND	0.095	EPA 8260D	6-17-24	6-17-24	
2-Butanone	ND	0.48	EPA 8260D	6-17-24	6-17-24	
Bromochloromethane	ND	0.095	EPA 8260D	6-17-24	6-17-24	
Chloroform (SIM)	ND	0.0048	EPA 8260D/SIM	6-17-24	6-17-24	
1,1,1-Trichloroethane	ND	0.095	EPA 8260D	6-17-24	6-17-24	
Carbon Tetrachloride	ND	0.095	EPA 8260D	6-17-24	6-17-24	
1,1-Dichloropropene	ND	0.095	EPA 8260D	6-17-24	6-17-24	
Benzene	ND	0.095	EPA 8260D	6-17-24	6-17-24	
1,2-Dichloroethane (SIM)	ND	0.0048	EPA 8260D/SIM	6-17-24	6-17-24	
Trichloroethene	ND	0.095	EPA 8260D	6-17-24	6-17-24	
1,2-Dichloropropane	ND	0.095	EPA 8260D	6-17-24	6-17-24	
Dibromomethane	ND	0.095	EPA 8260D	6-17-24	6-17-24	
Bromodichloromethane (SIM)	ND	0.0048	EPA 8260D/SIM	6-17-24	6-17-24	



Date of Report: June 18, 2024
 Samples Submitted: June 13, 2024
 Laboratory Reference: 2406-163
 Project: 2024-243-3

VOLATILE ORGANICS EPA 8260D/SIM

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	CSO DU-4					
Laboratory ID:	06-163-01					
2-Chloroethyl Vinyl Ether	ND	0.48	EPA 8260D	6-17-24	6-17-24	
(cis) 1,3-Dichloropropene (SIM)	ND	0.0048	EPA 8260D/SIM	6-17-24	6-17-24	
Methyl Isobutyl Ketone	ND	0.48	EPA 8260D	6-17-24	6-17-24	
Toluene	ND	0.48	EPA 8260D	6-17-24	6-17-24	
(trans) 1,3-Dichloropropene (SIM)	ND	0.0048	EPA 8260D/SIM	6-17-24	6-17-24	
1,1,2-Trichloroethane (SIM)	ND	0.0095	EPA 8260D/SIM	6-17-24	6-17-24	
Tetrachloroethene	ND	0.095	EPA 8260D	6-17-24	6-17-24	
1,3-Dichloropropane	ND	0.095	EPA 8260D	6-17-24	6-17-24	
2-Hexanone	ND	0.48	EPA 8260D	6-17-24	6-17-24	
Dibromochloromethane (SIM)	ND	0.0048	EPA 8260D/SIM	6-17-24	6-17-24	
1,2-Dibromoethane (SIM)	ND	0.0048	EPA 8260D/SIM	6-17-24	6-17-24	
Chlorobenzene	ND	0.095	EPA 8260D	6-17-24	6-17-24	
1,1,1,2-Tetrachloroethane	ND	0.095	EPA 8260D	6-17-24	6-17-24	
Ethylbenzene	ND	0.095	EPA 8260D	6-17-24	6-17-24	
m,p-Xylene	ND	0.19	EPA 8260D	6-17-24	6-17-24	
o-Xylene	ND	0.095	EPA 8260D	6-17-24	6-17-24	
Styrene	ND	0.095	EPA 8260D	6-17-24	6-17-24	
Bromoform	ND	0.48	EPA 8260D	6-17-24	6-17-24	
Isopropylbenzene	ND	0.095	EPA 8260D	6-17-24	6-17-24	
Bromobenzene	ND	0.095	EPA 8260D	6-17-24	6-17-24	
1,1,2,2-Tetrachloroethane	ND	0.095	EPA 8260D	6-17-24	6-17-24	
1,2,3-Trichloropropane (SIM)	ND	0.0095	EPA 8260D/SIM	6-17-24	6-17-24	
n-Propylbenzene	ND	0.095	EPA 8260D	6-17-24	6-17-24	
2-Chlorotoluene	ND	0.095	EPA 8260D	6-17-24	6-17-24	
4-Chlorotoluene	ND	0.095	EPA 8260D	6-17-24	6-17-24	
1,3,5-Trimethylbenzene	ND	0.095	EPA 8260D	6-17-24	6-17-24	
tert-Butylbenzene	ND	0.095	EPA 8260D	6-17-24	6-17-24	
1,2,4-Trimethylbenzene	ND	0.095	EPA 8260D	6-17-24	6-17-24	
sec-Butylbenzene	ND	0.095	EPA 8260D	6-17-24	6-17-24	
1,3-Dichlorobenzene	ND	0.095	EPA 8260D	6-17-24	6-17-24	
p-Isopropyltoluene	ND	0.095	EPA 8260D	6-17-24	6-17-24	
1,4-Dichlorobenzene (SIM)	ND	0.0095	EPA 8260D/SIM	6-17-24	6-17-24	
1,2-Dichlorobenzene	ND	0.095	EPA 8260D	6-17-24	6-17-24	
n-Butylbenzene	ND	0.095	EPA 8260D	6-17-24	6-17-24	
1,2-Dibromo-3-chloropropane (SIM)	ND	0.0095	EPA 8260D/SIM	6-17-24	6-17-24	
1,2,4-Trichlorobenzene	ND	0.095	EPA 8260D	6-17-24	6-17-24	
Hexachlorobutadiene (SIM)	ND	0.0095	EPA 8260D/SIM	6-17-24	6-17-24	
Naphthalene	ND	0.48	EPA 8260D	6-17-24	6-17-24	
1,2,3-Trichlorobenzene	ND	0.095	EPA 8260D	6-17-24	6-17-24	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>91</i>	<i>69-124</i>				
<i>Toluene-d8</i>	<i>109</i>	<i>80-118</i>				
<i>4-Bromofluorobenzene</i>	<i>95</i>	<i>75-123</i>				



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

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Date of Report: June 18, 2024
 Samples Submitted: June 13, 2024
 Laboratory Reference: 2406-163
 Project: 2024-243-3

VOLATILE ORGANICS EPA 8260D/SIM
QUALITY CONTROL
 page 1 of 2

Matrix: Soil
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0617S2					
Dichlorodifluoromethane	ND	0.070	EPA 8260D	6-17-24	6-17-24	
Chloromethane	ND	0.25	EPA 8260D	6-17-24	6-17-24	
Vinyl Chloride (SIM)	ND	0.0025	EPA 8260D/SIM	6-17-24	6-17-24	
Bromomethane	ND	0.25	EPA 8260D	6-17-24	6-17-24	
Chloroethane	ND	0.25	EPA 8260D	6-17-24	6-17-24	
Trichlorofluoromethane	ND	0.050	EPA 8260D	6-17-24	6-17-24	
1,1-Dichloroethene	ND	0.050	EPA 8260D	6-17-24	6-17-24	
Acetone	ND	0.50	EPA 8260D	6-17-24	6-17-24	
Iodomethane	ND	0.50	EPA 8260D	6-17-24	6-17-24	
Carbon Disulfide	ND	0.050	EPA 8260D	6-17-24	6-17-24	
Methylene Chloride	ND	0.25	EPA 8260D	6-17-24	6-17-24	
(trans) 1,2-Dichloroethene	ND	0.050	EPA 8260D	6-17-24	6-17-24	
Methyl t-Butyl Ether	ND	0.050	EPA 8260D	6-17-24	6-17-24	
1,1-Dichloroethane	ND	0.050	EPA 8260D	6-17-24	6-17-24	
Vinyl Acetate	ND	0.25	EPA 8260D	6-17-24	6-17-24	
2,2-Dichloropropane	ND	0.050	EPA 8260D	6-17-24	6-17-24	
(cis) 1,2-Dichloroethene	ND	0.050	EPA 8260D	6-17-24	6-17-24	
2-Butanone	ND	0.25	EPA 8260D	6-17-24	6-17-24	
Bromochloromethane	ND	0.050	EPA 8260D	6-17-24	6-17-24	
Chloroform (SIM)	ND	0.0025	EPA 8260D/SIM	6-17-24	6-17-24	
1,1,1-Trichloroethane	ND	0.050	EPA 8260D	6-17-24	6-17-24	
Carbon Tetrachloride	ND	0.050	EPA 8260D	6-17-24	6-17-24	
1,1-Dichloropropene	ND	0.050	EPA 8260D	6-17-24	6-17-24	
Benzene	ND	0.050	EPA 8260D	6-17-24	6-17-24	
1,2-Dichloroethane (SIM)	ND	0.0025	EPA 8260D/SIM	6-17-24	6-17-24	
Trichloroethene	ND	0.050	EPA 8260D	6-17-24	6-17-24	
1,2-Dichloropropane	ND	0.050	EPA 8260D	6-17-24	6-17-24	
Dibromomethane	ND	0.050	EPA 8260D	6-17-24	6-17-24	
Bromodichloromethane (SIM)	ND	0.0025	EPA 8260D/SIM	6-17-24	6-17-24	



Date of Report: June 18, 2024
 Samples Submitted: June 13, 2024
 Laboratory Reference: 2406-163
 Project: 2024-243-3

VOLATILE ORGANICS EPA 8260D/SIM
QUALITY CONTROL
 page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0617S2					
2-Chloroethyl Vinyl Ether	ND	0.25	EPA 8260D	6-17-24	6-17-24	
(cis) 1,3-Dichloropropene (SIM)	ND	0.0025	EPA 8260D/SIM	6-17-24	6-17-24	
Methyl Isobutyl Ketone	ND	0.25	EPA 8260D	6-17-24	6-17-24	
Toluene	ND	0.25	EPA 8260D	6-17-24	6-17-24	
(trans) 1,3-Dichloropropene (SIM)	ND	0.0025	EPA 8260D/SIM	6-17-24	6-17-24	
1,1,2-Trichloroethane (SIM)	ND	0.0050	EPA 8260D/SIM	6-17-24	6-17-24	
Tetrachloroethene	ND	0.050	EPA 8260D	6-17-24	6-17-24	
1,3-Dichloropropane	ND	0.050	EPA 8260D	6-17-24	6-17-24	
2-Hexanone	ND	0.25	EPA 8260D	6-17-24	6-17-24	
Dibromochloromethane (SIM)	ND	0.0025	EPA 8260D/SIM	6-17-24	6-17-24	
1,2-Dibromoethane (SIM)	ND	0.0025	EPA 8260D/SIM	6-17-24	6-17-24	
Chlorobenzene	ND	0.050	EPA 8260D	6-17-24	6-17-24	
1,1,1,2-Tetrachloroethane	ND	0.050	EPA 8260D	6-17-24	6-17-24	
Ethylbenzene	ND	0.050	EPA 8260D	6-17-24	6-17-24	
m,p-Xylene	ND	0.10	EPA 8260D	6-17-24	6-17-24	
o-Xylene	ND	0.050	EPA 8260D	6-17-24	6-17-24	
Styrene	ND	0.050	EPA 8260D	6-17-24	6-17-24	
Bromoform	ND	0.25	EPA 8260D	6-17-24	6-17-24	
Isopropylbenzene	ND	0.050	EPA 8260D	6-17-24	6-17-24	
Bromobenzene	ND	0.050	EPA 8260D	6-17-24	6-17-24	
1,1,2,2-Tetrachloroethane	ND	0.050	EPA 8260D	6-17-24	6-17-24	
1,2,3-Trichloropropane (SIM)	ND	0.0050	EPA 8260D/SIM	6-17-24	6-17-24	
n-Propylbenzene	ND	0.050	EPA 8260D	6-17-24	6-17-24	
2-Chlorotoluene	ND	0.050	EPA 8260D	6-17-24	6-17-24	
4-Chlorotoluene	ND	0.050	EPA 8260D	6-17-24	6-17-24	
1,3,5-Trimethylbenzene	ND	0.050	EPA 8260D	6-17-24	6-17-24	
tert-Butylbenzene	ND	0.050	EPA 8260D	6-17-24	6-17-24	
1,2,4-Trimethylbenzene	ND	0.050	EPA 8260D	6-17-24	6-17-24	
sec-Butylbenzene	ND	0.050	EPA 8260D	6-17-24	6-17-24	
1,3-Dichlorobenzene	ND	0.050	EPA 8260D	6-17-24	6-17-24	
p-Isopropyltoluene	ND	0.050	EPA 8260D	6-17-24	6-17-24	
1,4-Dichlorobenzene (SIM)	ND	0.0050	EPA 8260D/SIM	6-17-24	6-17-24	
1,2-Dichlorobenzene	ND	0.050	EPA 8260D	6-17-24	6-17-24	
n-Butylbenzene	ND	0.050	EPA 8260D	6-17-24	6-17-24	
1,2-Dibromo-3-chloropropane (SIM)	ND	0.0050	EPA 8260D/SIM	6-17-24	6-17-24	
1,2,4-Trichlorobenzene	ND	0.050	EPA 8260D	6-17-24	6-17-24	
Hexachlorobutadiene (SIM)	ND	0.0050	EPA 8260D/SIM	6-17-24	6-17-24	
Naphthalene	ND	0.25	EPA 8260D	6-17-24	6-17-24	
1,2,3-Trichlorobenzene	ND	0.050	EPA 8260D	6-17-24	6-17-24	
Surrogate:	Percent Recovery	Control Limits				
Dibromofluoromethane	96	69-124				
Toluene-d8	110	80-118				
4-Bromofluorobenzene	115	75-123				



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: June 18, 2024
 Samples Submitted: June 13, 2024
 Laboratory Reference: 2406-163
 Project: 2024-243-3

VOLATILE ORGANICS EPA 8260D/SIM
QUALITY CONTROL
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Matrix: Soil
 Units: mg/kg

Analyte	Result		Spike Level		Percent		Recovery		RPD		Flags
					Recovery		Limits		RPD	Limit	
SPIKE BLANKS											
Laboratory ID:	SB0617S1										
	SB	SBD	SB	SBD	SB	SBD					
Dichlorodifluoromethane	0.0385	0.0329	0.0500	0.0500	77	66	24-162	16	24		
Chloromethane	0.0465	0.0441	0.0500	0.0500	93	88	41-143	5	22		
Vinyl Chloride	0.0499	0.0453	0.0500	0.0500	100	91	52-141	10	20		
Bromomethane	0.0808	0.0720	0.0500	0.0500	162	144	37-145	12	23	I	
Chloroethane	0.0617	0.0492	0.0500	0.0500	123	98	54-148	23	19	L	
Trichlorofluoromethane	0.0578	0.0518	0.0500	0.0500	116	104	65-142	11	18		
1,1-Dichloroethene	0.0604	0.0592	0.0500	0.0500	121	118	74-133	2	16		
Acetone	0.0413	0.0313	0.0500	0.0500	83	63	50-159	28	38		
Iodomethane	0.0491	0.0461	0.0500	0.0500	98	92	36-133	6	31		
Carbon Disulfide	0.0625	0.0568	0.0500	0.0500	125	114	37-138	10	27		
Methylene Chloride	0.0484	0.0492	0.0500	0.0500	97	98	60-135	2	23		
(trans) 1,2-Dichloroethene	0.0595	0.0591	0.0500	0.0500	119	118	74-131	1	15		
Methyl t-Butyl Ether	0.0504	0.0489	0.0500	0.0500	101	98	76-129	3	15		
1,1-Dichloroethane	0.0592	0.0602	0.0500	0.0500	118	120	74-130	2	15		
Vinyl Acetate	0.0510	0.0445	0.0500	0.0500	102	89	58-146	14	21		
2,2-Dichloropropane	0.0626	0.0675	0.0500	0.0500	125	135	74-137	8	16		
(cis) 1,2-Dichloroethene	0.0631	0.0626	0.0500	0.0500	126	125	71-136	1	15		
2-Butanone	0.0401	0.0374	0.0500	0.0500	80	75	58-144	7	32		
Bromochloromethane	0.0453	0.0445	0.0500	0.0500	91	89	78-128	2	15		
Chloroform	0.0575	0.0575	0.0500	0.0500	115	115	75-128	0	15		
1,1,1-Trichloroethane	0.0584	0.0587	0.0500	0.0500	117	117	73-129	1	15		
Carbon Tetrachloride	0.0511	0.0519	0.0500	0.0500	102	104	69-134	2	15		
1,1-Dichloropropene	0.0580	0.0577	0.0500	0.0500	116	115	73-127	1	15		
Benzene	0.0599	0.0598	0.0500	0.0500	120	120	75-126	0	15		
1,2-Dichloroethane	0.0499	0.0491	0.0500	0.0500	100	98	70-133	2	15		
Trichloroethene	0.0554	0.0539	0.0500	0.0500	111	108	80-130	3	15		
1,2-Dichloropropane	0.0600	0.0616	0.0500	0.0500	120	123	78-131	3	16		
Dibromomethane	0.0459	0.0443	0.0500	0.0500	92	89	72-136	4	28		
Bromodichloromethane	0.0583	0.0568	0.0500	0.0500	117	114	80-129	3	15		
(cis) 1,3-Dichloropropene	0.0628	0.0604	0.0500	0.0500	126	121	80-132	4	17		
Methyl Isobutyl Ketone	0.0417	0.0400	0.0500	0.0500	83	80	62-146	4	22		
Toluene	0.0580	0.0600	0.0500	0.0500	116	120	78-124	3	17		
(trans) 1,3-Dichloropropene	0.0526	0.0542	0.0500	0.0500	105	108	80-130	3	15		



Date of Report: June 18, 2024
 Samples Submitted: June 13, 2024
 Laboratory Reference: 2406-163
 Project: 2024-243-3

VOLATILE ORGANICS EPA 8260D/SIM
QUALITY CONTROL
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Analyte	Result	Spike Level	Percent		Recovery		RPD	Limit	Flags	
			Recovery	Limits						
SPIKE BLANKS										
Laboratory ID:	SB0617S1									
	SB	SBD	SB	SBD	SB	SBD				
1,1,2-Trichloroethane	0.0387	0.0451	0.0500	0.0500	77	90	80-123	15	15	I,L
Tetrachloroethene	0.0529	0.0590	0.0500	0.0500	106	118	80-130	11	15	
1,3-Dichloropropane	0.0453	0.0501	0.0500	0.0500	91	100	80-122	10	15	
2-Hexanone	0.0385	0.0414	0.0500	0.0500	77	83	61-143	7	30	
Dibromochloromethane	0.0413	0.0433	0.0500	0.0500	83	87	80-129	5	15	
1,2-Dibromoethane	0.0398	0.0429	0.0500	0.0500	80	86	80-125	7	15	
Chlorobenzene	0.0484	0.0483	0.0500	0.0500	97	97	80-119	0	15	
1,1,1,2-Tetrachloroethane	0.0496	0.0497	0.0500	0.0500	99	99	80-124	0	15	
Ethylbenzene	0.0574	0.0581	0.0500	0.0500	115	116	80-120	1	15	
m,p-Xylene	0.112	0.116	0.100	0.100	112	116	80-121	4	15	
o-Xylene	0.0563	0.0569	0.0500	0.0500	113	114	80-120	1	15	
Styrene	0.0528	0.0531	0.0500	0.0500	106	106	80-130	1	15	
Bromoform	0.0467	0.0419	0.0500	0.0500	93	84	79-132	11	15	
Isopropylbenzene	0.0556	0.0558	0.0500	0.0500	111	112	80-126	0	15	
Bromobenzene	0.0486	0.0507	0.0500	0.0500	97	101	80-124	4	15	
1,1,2,2-Tetrachloroethane	0.0440	0.0444	0.0500	0.0500	88	89	75-128	1	19	
1,2,3-Trichloropropane	0.0463	0.0462	0.0500	0.0500	93	92	74-128	0	19	
n-Propylbenzene	0.0584	0.0617	0.0500	0.0500	117	123	80-128	5	16	
2-Chlorotoluene	0.0510	0.0530	0.0500	0.0500	102	106	80-126	4	15	
4-Chlorotoluene	0.0502	0.0523	0.0500	0.0500	100	105	80-129	4	15	
1,3,5-Trimethylbenzene	0.0557	0.0590	0.0500	0.0500	111	118	80-129	6	15	
tert-Butylbenzene	0.0527	0.0543	0.0500	0.0500	105	109	80-129	3	15	
1,2,4-Trimethylbenzene	0.0570	0.0549	0.0500	0.0500	114	110	80-127	4	15	
sec-Butylbenzene	0.0582	0.0535	0.0500	0.0500	116	107	77-134	8	16	
1,3-Dichlorobenzene	0.0524	0.0474	0.0500	0.0500	105	95	80-125	10	15	
p-Isopropyltoluene	0.0558	0.0521	0.0500	0.0500	112	104	80-133	7	15	
1,4-Dichlorobenzene	0.0518	0.0492	0.0500	0.0500	104	98	78-127	5	15	
1,2-Dichlorobenzene	0.0505	0.0429	0.0500	0.0500	101	86	79-127	16	15	L
n-Butylbenzene	0.0629	0.0526	0.0500	0.0500	126	105	80-136	18	17	L
1,2-Dibromo-3-chloropropane	0.0396	0.0339	0.0500	0.0500	79	68	68-143	16	26	
1,2,4-Trichlorobenzene	0.0542	0.0524	0.0500	0.0500	108	105	77-142	3	19	
Hexachlorobutadiene	0.0604	0.0620	0.0500	0.0500	121	124	73-135	3	19	
Naphthalene	0.0398	0.0373	0.0500	0.0500	80	75	72-142	6	21	
1,2,3-Trichlorobenzene	0.0496	0.0481	0.0500	0.0500	99	96	77-139	3	19	
Surrogate:										
Dibromofluoromethane					99	95	69-124			
Toluene-d8					103	108	80-118			
4-Bromofluorobenzene					97	115	75-123			



Date of Report: June 18, 2024
 Samples Submitted: June 13, 2024
 Laboratory Reference: 2406-163
 Project: 2024-243-3

PAHs EPA 8270E/SIM

Matrix: Soil
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	CSO DU-4					
Laboratory ID:	06-163-01					
Naphthalene	ND	0.0070	EPA 8270E/SIM	6-17-24	6-18-24	
2-Methylnaphthalene	ND	0.0070	EPA 8270E/SIM	6-17-24	6-18-24	
1-Methylnaphthalene	ND	0.0070	EPA 8270E/SIM	6-17-24	6-18-24	
Acenaphthylene	ND	0.0070	EPA 8270E/SIM	6-17-24	6-18-24	
Acenaphthene	ND	0.0070	EPA 8270E/SIM	6-17-24	6-18-24	
Fluorene	ND	0.0070	EPA 8270E/SIM	6-17-24	6-18-24	
Phenanthrene	0.0085	0.0070	EPA 8270E/SIM	6-17-24	6-18-24	
Anthracene	ND	0.0070	EPA 8270E/SIM	6-17-24	6-18-24	
Fluoranthene	ND	0.0070	EPA 8270E/SIM	6-17-24	6-18-24	
Pyrene	0.0076	0.0070	EPA 8270E/SIM	6-17-24	6-18-24	
Benzo[a]anthracene	ND	0.0070	EPA 8270E/SIM	6-17-24	6-18-24	
Chrysene	0.0073	0.0070	EPA 8270E/SIM	6-17-24	6-18-24	
Benzo[b]fluoranthene	ND	0.0070	EPA 8270E/SIM	6-17-24	6-18-24	
Benzo(j,k)fluoranthene	ND	0.0070	EPA 8270E/SIM	6-17-24	6-18-24	
Benzo[a]pyrene	ND	0.0070	EPA 8270E/SIM	6-17-24	6-18-24	
Indeno(1,2,3-c,d)pyrene	ND	0.0070	EPA 8270E/SIM	6-17-24	6-18-24	
Dibenz[a,h]anthracene	ND	0.0070	EPA 8270E/SIM	6-17-24	6-18-24	
Benzo[g,h,i]perylene	ND	0.0070	EPA 8270E/SIM	6-17-24	6-18-24	
Surrogate:	Percent Recovery	Control Limits				
2-Fluorobiphenyl	81	47-112				
Pyrene-d10	91	48-129				
Terphenyl-d14	104	51-114				



Date of Report: June 18, 2024
 Samples Submitted: June 13, 2024
 Laboratory Reference: 2406-163
 Project: 2024-243-3

**PAHs EPA 8270E/SIM
 QUALITY CONTROL**

Matrix: Soil
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0617S1					
Naphthalene	ND	0.0067	EPA 8270E/SIM	6-17-24	6-17-24	
2-Methylnaphthalene	ND	0.0067	EPA 8270E/SIM	6-17-24	6-17-24	
1-Methylnaphthalene	ND	0.0067	EPA 8270E/SIM	6-17-24	6-17-24	
Acenaphthylene	ND	0.0067	EPA 8270E/SIM	6-17-24	6-17-24	
Acenaphthene	ND	0.0067	EPA 8270E/SIM	6-17-24	6-17-24	
Fluorene	ND	0.0067	EPA 8270E/SIM	6-17-24	6-17-24	
Phenanthrene	ND	0.0067	EPA 8270E/SIM	6-17-24	6-17-24	
Anthracene	ND	0.0067	EPA 8270E/SIM	6-17-24	6-17-24	
Fluoranthene	ND	0.0067	EPA 8270E/SIM	6-17-24	6-17-24	
Pyrene	ND	0.0067	EPA 8270E/SIM	6-17-24	6-17-24	
Benzo[a]anthracene	ND	0.0067	EPA 8270E/SIM	6-17-24	6-17-24	
Chrysene	ND	0.0067	EPA 8270E/SIM	6-17-24	6-17-24	
Benzo[b]fluoranthene	ND	0.0067	EPA 8270E/SIM	6-17-24	6-17-24	
Benzo[j,k]fluoranthene	ND	0.0067	EPA 8270E/SIM	6-17-24	6-17-24	
Benzo[a]pyrene	ND	0.0067	EPA 8270E/SIM	6-17-24	6-17-24	
Indeno(1,2,3-c,d)pyrene	ND	0.0067	EPA 8270E/SIM	6-17-24	6-17-24	
Dibenz[a,h]anthracene	ND	0.0067	EPA 8270E/SIM	6-17-24	6-17-24	
Benzo[g,h,i]perylene	ND	0.0067	EPA 8270E/SIM	6-17-24	6-17-24	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
2-Fluorobiphenyl	84	47-112				
Pyrene-d10	94	48-129				
Terphenyl-d14	95	51-114				



Date of Report: June 18, 2024
 Samples Submitted: June 13, 2024
 Laboratory Reference: 2406-163
 Project: 2024-243-3

**PAHs EPA 8270E/SIM
 QUALITY CONTROL**

Matrix: Soil
 Units: mg/Kg

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB0617S1									
	SB	SBD	SB	SBD	SB	SBD				
Naphthalene	0.0731	0.0746	0.0833	0.0833	88	90	64-115	2	15	
Acenaphthylene	0.0794	0.0807	0.0833	0.0833	95	97	68-118	2	15	
Acenaphthene	0.0758	0.0778	0.0833	0.0833	91	93	67-116	3	15	
Fluorene	0.0776	0.0793	0.0833	0.0833	93	95	69-120	2	15	
Phenanthrene	0.0778	0.0811	0.0833	0.0833	93	97	67-120	4	15	
Anthracene	0.0786	0.0823	0.0833	0.0833	94	99	71-118	5	15	
Fluoranthene	0.0816	0.0857	0.0833	0.0833	98	103	73-118	5	15	
Pyrene	0.0790	0.0820	0.0833	0.0833	95	98	71-118	4	15	
Benzo[a]anthracene	0.0825	0.0870	0.0833	0.0833	99	104	60-128	5	15	
Chrysene	0.0780	0.0828	0.0833	0.0833	94	99	70-121	6	15	
Benzo[b]fluoranthene	0.0758	0.0791	0.0833	0.0833	91	95	68-123	4	15	
Benzo(j,k)fluoranthene	0.0830	0.0877	0.0833	0.0833	100	105	73-123	6	17	
Benzo[a]pyrene	0.0790	0.0826	0.0833	0.0833	95	99	72-120	4	15	
Indeno(1,2,3-c,d)pyrene	0.0764	0.0798	0.0833	0.0833	92	96	64-122	4	15	
Dibenz[a,h]anthracene	0.0783	0.0821	0.0833	0.0833	94	99	72-120	5	15	
Benzo[g,h,i]perylene	0.0777	0.0812	0.0833	0.0833	93	97	71-117	4	15	
Surrogate:										
2-Fluorobiphenyl					85	86	47-112			
Pyrene-d10					92	97	48-129			
Terphenyl-d14					92	97	51-114			



Date of Report: June 18, 2024
 Samples Submitted: June 13, 2024
 Laboratory Reference: 2406-163
 Project: 2024-243-3

PCBs EPA 8082A

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	CSO DU-4					
Laboratory ID:	06-163-01					
Aroclor 1016	ND	0.052	EPA 8082A	6-17-24	6-18-24	
Aroclor 1221	ND	0.052	EPA 8082A	6-17-24	6-18-24	
Aroclor 1232	ND	0.052	EPA 8082A	6-17-24	6-18-24	
Aroclor 1242	ND	0.052	EPA 8082A	6-17-24	6-18-24	
Aroclor 1248	ND	0.052	EPA 8082A	6-17-24	6-18-24	
Aroclor 1254	ND	0.052	EPA 8082A	6-17-24	6-18-24	
Aroclor 1260	ND	0.052	EPA 8082A	6-17-24	6-18-24	
Aroclor 1262	ND	0.052	EPA 8082A	6-17-24	6-18-24	
Aroclor 1268	ND	0.052	EPA 8082A	6-17-24	6-18-24	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>DCB</i>	<i>89</i>	<i>40-134</i>				



Date of Report: June 18, 2024
 Samples Submitted: June 13, 2024
 Laboratory Reference: 2406-163
 Project: 2024-243-3

**PCBs EPA 8082A
 QUALITY CONTROL**

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0617S1					
Aroclor 1016	ND	0.050	EPA 8082A	6-17-24	6-17-24	
Aroclor 1221	ND	0.050	EPA 8082A	6-17-24	6-17-24	
Aroclor 1232	ND	0.050	EPA 8082A	6-17-24	6-17-24	
Aroclor 1242	ND	0.050	EPA 8082A	6-17-24	6-17-24	
Aroclor 1248	ND	0.050	EPA 8082A	6-17-24	6-17-24	
Aroclor 1254	ND	0.050	EPA 8082A	6-17-24	6-17-24	
Aroclor 1260	ND	0.050	EPA 8082A	6-17-24	6-17-24	
Aroclor 1262	ND	0.050	EPA 8082A	6-17-24	6-17-24	
Aroclor 1268	ND	0.050	EPA 8082A	6-17-24	6-17-24	
Surrogate:	Percent Recovery	Control Limits				
DCB	102	40-134				

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS											
Laboratory ID:	SB0617S1										
	SB	SBD	SB	SBD		SB	SBD				
Aroclor 1260	0.394	0.452	0.500	0.500	N/A	79	90	60-115	14	23	
Surrogate:											
DCB						102	107	40-134			



Date of Report: June 18, 2024
 Samples Submitted: June 13, 2024
 Laboratory Reference: 2406-163
 Project: 2024-243-3

TOTAL METALS
EPA 6010D/7471B

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	CSO DU-4					
Laboratory ID:	06-163-01					
Arsenic	ND	10	EPA 6010D	6-18-24	6-18-24	
Barium	120	2.6	EPA 6010D	6-18-24	6-18-24	
Cadmium	ND	0.52	EPA 6010D	6-18-24	6-18-24	
Chromium	6.6	0.52	EPA 6010D	6-18-24	6-18-24	
Lead	ND	5.2	EPA 6010D	6-18-24	6-18-24	
Mercury	ND	0.26	EPA 7471B	6-17-24	6-17-24	
Selenium	ND	10	EPA 6010D	6-18-24	6-18-24	
Silver	ND	1.0	EPA 6010D	6-18-24	6-18-24	



Date of Report: June 18, 2024
 Samples Submitted: June 13, 2024
 Laboratory Reference: 2406-163
 Project: 2024-243-3

**TOTAL METALS
 EPA 6010D/7471B
 QUALITY CONTROL**

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0618SM2					
Arsenic	ND	10	EPA 6010D	6-17-24	6-18-24	
Barium	ND	2.5	EPA 6010D	6-17-24	6-17-24	
Cadmium	ND	0.50	EPA 6010D	6-17-24	6-18-24	
Chromium	ND	0.50	EPA 6010D	6-17-24	6-18-24	
Lead	ND	5.0	EPA 6010D	6-17-24	6-18-24	
Selenium	ND	10	EPA 6010D	6-17-24	6-18-24	
Silver	ND	1.0	EPA 6010D	6-17-24	6-18-24	

Laboratory ID:	MB0617S1					
Mercury	ND	0.25	EPA 7471B	6-17-24	6-17-24	

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE								
Laboratory ID:	06-213-01							
	ORIG	DUP						
Arsenic	ND	ND	NA	NA	NA	NA	NA	20
Barium	87.6	87.9	NA	NA	NA	NA	0	20
Cadmium	ND	ND	NA	NA	NA	NA	NA	20
Chromium	19.1	19.2	NA	NA	NA	NA	1	20
Lead	8.40	7.96	NA	NA	NA	NA	5	20
Selenium	ND	ND	NA	NA	NA	NA	NA	20
Silver	ND	ND	NA	NA	NA	NA	NA	20

Laboratory ID:	06-183-02							
Mercury	ND	ND	NA	NA	NA	NA	NA	20

MATRIX SPIKES

Laboratory ID:	06-213-01									
	MS	MSD	MS	MSD		MS	MSD			
Arsenic	113	113	100	100	ND	113	113	75-125	0	20
Barium	189	183	100	100	87.6	101	96	75-125	3	20
Cadmium	51.8	49.9	50.0	50.0	ND	104	100	75-125	4	20
Chromium	126	123	100	100	19.1	106	104	75-125	2	20
Lead	273	261	250	250	8.40	106	101	75-125	5	20
Selenium	103	97.7	100	100	ND	103	98	75-125	5	20
Silver	24.0	22.9	25.0	25.0	ND	96	92	75-125	5	20

Laboratory ID:	06-183-02									
Mercury	0.508	0.511	0.500	0.500	0.00660	100	101	80-120	1	20



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: June 18, 2024
Samples Submitted: June 13, 2024
Laboratory Reference: 2406-163
Project: 2024-243-3

% MOISTURE

Client ID	Lab ID	% Moisture	Date Analyzed
CSO DU-4	06-163-01	7	6-14-24



Date of Report: June 18, 2024
Samples Submitted: June 13, 2024
Laboratory Reference: 2406-163
Project: 2024-243-3

**% MOISTURE
MULTI-INCREMENT SAMPLING**

Client ID	Lab ID	% Moisture	Date Analyzed
CSO DU-4	06-163-01	5	6-17-24





Data Qualifiers and Abbreviations

- A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.
- B - The analyte indicated was also found in the blank sample.
- C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.
- E - The value reported exceeds the quantitation range and is an estimate.
- F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.
- H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.
- I - Compound recovery is outside of the control limits.
- J - The value reported was below the practical quantitation limit. The value is an estimate.
- K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.
- L - The RPD is outside of the control limits.
- M - Hydrocarbons in the gasoline range are impacting the diesel range result.
- M1 - Hydrocarbons in the gasoline range (toluene-naphthalene) are present in the sample.
- N - Hydrocarbons in the lube oil range are impacting the diesel range result.
- N1 - Hydrocarbons in diesel range are impacting lube oil range results.
- O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.
- P - The RPD of the detected concentrations between the two columns is greater than 40.
- Q - Surrogate recovery is outside of the control limits.
- S - Surrogate recovery data is not available due to the necessary dilution of the sample.
- T - The sample chromatogram is not similar to a typical _____.
- U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
- U1 - The practical quantitation limit is elevated due to interferences present in the sample.
- V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.
- W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.
- X - Sample extract treated with a mercury cleanup procedure.
- X1 - Sample extract treated with a sulfuric acid/silica gel cleanup procedure.
- X2 - Sample extract treated with a silica gel cleanup procedure.
- Y - The calibration verification for this analyte exceeded the 20% drift specified in methods 8260 & 8270, and therefore the reported result should be considered an estimate. The overall performance of the calibration verification standard met the acceptance criteria of the method.
- Y1 - Negative effects of the matrix from this sample on the instrument caused values for this analyte in the bracketing continuing calibration verification standard (CCVs) to be outside of 20% acceptance criteria. Because of this, quantitation limits and sample concentrations should be considered estimates.
- Z -
- ND - Not Detected at PQL
- PQL - Practical Quantitation Limit
- RPD - Relative Percent Difference



Sample/Cooler Receipt and Acceptance Checklist

Client: UET
 Client Project Name/Number: 2024-243-3
 OnSite Project Number: 06-163

Initiated by: [Signature]
 Date Initiated: 6/13/24

1.0 Cooler Verification

1.1 Were there custody seals on the outside of the cooler?	Yes	<u>No</u>	N/A	1	2	3	4
1.2 Were the custody seals intact?	Yes	No	<u>N/A</u>	1	2	3	4
1.3 Were the custody seals signed and dated by last custodian?	Yes	No	<u>N/A</u>	1	2	3	4
1.4 Were the samples delivered on ice or blue ice?	<u>Yes</u>	No	N/A	1	2	3	4
1.5 Were samples received between 0-6 degrees Celsius?	<u>Yes</u>	No	N/A	Temperature: <u>6</u>			
1.6 Have shipping bills (if any) been attached to the back of this form?	<u>Yes</u>	N/A					
1.7 How were the samples delivered?	Client	Courier	<u>UPS/FedEx</u>	OSE Pickup	Other		

2.0 Chain of Custody Verification

2.1 Was a Chain of Custody submitted with the samples?	<u>Yes</u>	No	1	2	3	4
2.2 Was the COC legible and written in permanent ink?	<u>Yes</u>	No	1	2	3	4
2.3 Have samples been relinquished and accepted by each custodian?	<u>Yes</u>	No	1	2	3	4
2.4 Did the sample labels (ID, date, time, preservative) agree with COC?	<u>Yes</u>	No	1	2	3	4
2.5 Were all of the samples listed on the COC submitted?	<u>Yes</u>	No	1	2	3	4
2.6 Were any of the samples submitted omitted from the COC?	Yes	<u>No</u>	1	2	3	4

3.0 Sample Verification

3.1 Were any sample containers broken or compromised?	Yes	<u>No</u>	1	2	3	4	
3.2 Were any sample labels missing or illegible?	Yes	<u>No</u>	1	2	3	4	
3.3 Have the correct containers been used for each analysis requested?	<u>Yes</u>	No	1	2	3	4	
3.4 Have the samples been correctly preserved?	<u>Yes</u>	No	N/A	1	2	3	4
3.5 Are volatile samples free from headspace and bubbles greater than 6mm?	Yes	No	<u>N/A</u>	1	2	3	4
3.6 Is there sufficient sample submitted to perform requested analyses?	<u>Yes</u>	No		1	2	3	4
3.7 Have any holding times already expired or will expire in 24 hours?	Yes	<u>No</u>		1	2	3	4
3.8 Was method 5035A used?	<u>Yes</u>	No	N/A	1	2	3	4
3.9 If 5035A was used, which sampling option was used (#1, 2, or 3).	#	<u>2</u>	N/A	1	2	3	4

Explain any discrepancies:

1 - Discuss issue in Case Narrative

3 - Client contacted to discuss problem

2 - Process Sample As-is

4 - Sample cannot be analyzed or client does not wish to proceed



14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

June 18, 2024

Kama Kobayashi
Lehua Environmental Inc.
P.O. Box 1018
Kamuela, HI 96743

Re: Analytical Data for Project 2024-243-2
Laboratory Reference No. 2406-162

Dear Kama:

Enclosed are the analytical results and associated quality control data for samples submitted on June 13, 2024.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

A handwritten signature in black ink, appearing to read "DB", with a long horizontal line extending to the right.

David Baumeister
Project Manager

Enclosures



OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: June 18, 2024
Samples Submitted: June 13, 2024
Laboratory Reference: 2406-162
Project: 2024-243-2

Case Narrative

Samples were collected on June 11, 2024 and received by the laboratory on June 13, 2024. Samples were shipped in a cooler packed with blue ice and arrived at a temperature of $<6^{\circ}\text{C}$. They were maintained at the laboratory at a temperature of 2°C to 6°C . A copy of the cooler receipt form has been included with this report.

Please note that any and all soil sample results are reported on a dry-weight basis, unless otherwise noted below. However the soil results for the QA/QC samples are reported on a wet-weight basis.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.

All samples were processed in the laboratory following the multi-increment sampling procedures as outlined in the HEER-TGM. Additional notes will be addressed in appropriate sections as warranted.



Date of Report: June 18, 2024
 Samples Submitted: June 13, 2024
 Laboratory Reference: 2406-162
 Project: 2024-243-2

**DIESEL AND HEAVY OIL RANGE ORGANICS
 EPA 8015M**

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	CSO DU-1A-1					
Laboratory ID:	06-162-01					
Diesel Range Organics	ND	26	EPA 8015M	6-17-24	6-17-24	
Residual Range Organics	ND	52	EPA 8015M	6-17-24	6-17-24	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	78	50-150				

Client ID:	CSO DU-1A-2					
Laboratory ID:	06-162-02					
Diesel Range Organics	ND	26	EPA 8015M	6-17-24	6-17-24	
Residual Range Organics	ND	52	EPA 8015M	6-17-24	6-17-24	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	82	50-150				

Client ID:	CSO DU-1A-3					
Laboratory ID:	06-162-03					
Diesel Range Organics	ND	26	EPA 8015M	6-17-24	6-17-24	
Residual Range Organics	ND	52	EPA 8015M	6-17-24	6-17-24	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	82	50-150				

Client ID:	CSO DU-1B					
Laboratory ID:	06-162-04					
Diesel Range Organics	ND	26	EPA 8015M	6-17-24	6-18-24	
Residual Range Organics	ND	53	EPA 8015M	6-17-24	6-18-24	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	55	50-150				



Date of Report: June 18, 2024
 Samples Submitted: June 13, 2024
 Laboratory Reference: 2406-162
 Project: 2024-243-2

**DIESEL AND HEAVY OIL RANGE ORGANICS
 EPA 8015M
 QUALITY CONTROL**

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0617S1					
Diesel Range Organics	ND	25	EPA 8015M	6-17-24	6-17-24	
Residual Range Organics	ND	50	EPA 8015M	6-17-24	6-17-24	
Surrogate:	Percent Recovery	Control Limits				
o-Terphenyl	88	50-150				

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE								
Laboratory ID:	06-183-02							
	ORIG	DUP						
Diesel Range	ND	ND	NA	NA	NA	NA	40	
Residual Range	ND	ND	NA	NA	NA	NA	40	
Surrogate:								
o-Terphenyl				75	75	50-150		



Date of Report: June 18, 2024
 Samples Submitted: June 13, 2024
 Laboratory Reference: 2406-162
 Project: 2024-243-2

PCBs EPA 8082A

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: CSO DU-1A-1						
Laboratory ID:	06-162-01					
Aroclor 1016	ND	0.052	EPA 8082A	6-17-24	6-17-24	
Aroclor 1221	ND	0.052	EPA 8082A	6-17-24	6-17-24	
Aroclor 1232	ND	0.052	EPA 8082A	6-17-24	6-17-24	
Aroclor 1242	ND	0.052	EPA 8082A	6-17-24	6-17-24	
Aroclor 1248	ND	0.052	EPA 8082A	6-17-24	6-17-24	
Aroclor 1254	ND	0.052	EPA 8082A	6-17-24	6-17-24	
Aroclor 1260	ND	0.052	EPA 8082A	6-17-24	6-17-24	
Aroclor 1262	ND	0.052	EPA 8082A	6-17-24	6-17-24	
Aroclor 1268	ND	0.052	EPA 8082A	6-17-24	6-17-24	
Surrogate:	Percent Recovery	Control Limits				
DCB	91	40-134				
Client ID: CSO DU-1A-2						
Laboratory ID:	06-162-02					
Aroclor 1016	ND	0.052	EPA 8082A	6-17-24	6-17-24	
Aroclor 1221	ND	0.052	EPA 8082A	6-17-24	6-17-24	
Aroclor 1232	ND	0.052	EPA 8082A	6-17-24	6-17-24	
Aroclor 1242	ND	0.052	EPA 8082A	6-17-24	6-17-24	
Aroclor 1248	ND	0.052	EPA 8082A	6-17-24	6-17-24	
Aroclor 1254	ND	0.052	EPA 8082A	6-17-24	6-17-24	
Aroclor 1260	ND	0.052	EPA 8082A	6-17-24	6-17-24	
Aroclor 1262	ND	0.052	EPA 8082A	6-17-24	6-17-24	
Aroclor 1268	ND	0.052	EPA 8082A	6-17-24	6-17-24	
Surrogate:	Percent Recovery	Control Limits				
DCB	101	40-134				
Client ID: CSO DU-1A-3						
Laboratory ID:	06-162-03					
Aroclor 1016	ND	0.052	EPA 8082A	6-17-24	6-17-24	
Aroclor 1221	ND	0.052	EPA 8082A	6-17-24	6-17-24	
Aroclor 1232	ND	0.052	EPA 8082A	6-17-24	6-17-24	
Aroclor 1242	ND	0.052	EPA 8082A	6-17-24	6-17-24	
Aroclor 1248	ND	0.052	EPA 8082A	6-17-24	6-17-24	
Aroclor 1254	ND	0.052	EPA 8082A	6-17-24	6-17-24	
Aroclor 1260	ND	0.052	EPA 8082A	6-17-24	6-17-24	
Aroclor 1262	ND	0.052	EPA 8082A	6-17-24	6-17-24	
Aroclor 1268	ND	0.052	EPA 8082A	6-17-24	6-17-24	
Surrogate:	Percent Recovery	Control Limits				
DCB	104	40-134				



Date of Report: June 18, 2024
 Samples Submitted: June 13, 2024
 Laboratory Reference: 2406-162
 Project: 2024-243-2

PCBs EPA 8082A

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	CSO DU-1B					
Laboratory ID:	06-162-04					
Aroclor 1016	ND	0.052	EPA 8082A	6-17-24	6-18-24	
Aroclor 1221	ND	0.052	EPA 8082A	6-17-24	6-18-24	
Aroclor 1232	ND	0.052	EPA 8082A	6-17-24	6-18-24	
Aroclor 1242	ND	0.052	EPA 8082A	6-17-24	6-18-24	
Aroclor 1248	ND	0.052	EPA 8082A	6-17-24	6-18-24	
Aroclor 1254	ND	0.052	EPA 8082A	6-17-24	6-18-24	
Aroclor 1260	ND	0.052	EPA 8082A	6-17-24	6-18-24	
Aroclor 1262	ND	0.052	EPA 8082A	6-17-24	6-18-24	
Aroclor 1268	ND	0.052	EPA 8082A	6-17-24	6-18-24	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>DCB</i>	83	40-134				



Date of Report: June 18, 2024
 Samples Submitted: June 13, 2024
 Laboratory Reference: 2406-162
 Project: 2024-243-2

**PCBs EPA 8082A
 QUALITY CONTROL**

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0617S1					
Aroclor 1016	ND	0.050	EPA 8082A	6-17-24	6-17-24	
Aroclor 1221	ND	0.050	EPA 8082A	6-17-24	6-17-24	
Aroclor 1232	ND	0.050	EPA 8082A	6-17-24	6-17-24	
Aroclor 1242	ND	0.050	EPA 8082A	6-17-24	6-17-24	
Aroclor 1248	ND	0.050	EPA 8082A	6-17-24	6-17-24	
Aroclor 1254	ND	0.050	EPA 8082A	6-17-24	6-17-24	
Aroclor 1260	ND	0.050	EPA 8082A	6-17-24	6-17-24	
Aroclor 1262	ND	0.050	EPA 8082A	6-17-24	6-17-24	
Aroclor 1268	ND	0.050	EPA 8082A	6-17-24	6-17-24	
Surrogate:	Percent Recovery	Control Limits				
DCB	102	40-134				

Analyte	Result		Spike Level		Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB0617S1									
	SB	SBD	SB	SBD		SB	SBD			
Aroclor 1260	0.394	0.452	0.500	0.500	N/A	79	90	60-115	14	23
Surrogate:										
DCB						102	107	40-134		



Date of Report: June 18, 2024
 Samples Submitted: June 13, 2024
 Laboratory Reference: 2406-162
 Project: 2024-243-2

**TOTAL LEAD
EPA 6010D**

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	CSO DU-1A-1					
Laboratory ID:	06-162-01					
Lead	ND	5.2	EPA 6010D	6-17-24	6-17-24	

Client ID:	CSO DU-1A-2					
Laboratory ID:	06-162-02					
Lead	ND	5.2	EPA 6010D	6-17-24	6-17-24	

Client ID:	CSO DU-1A-3					
Laboratory ID:	06-162-03					
Lead	ND	5.2	EPA 6010D	6-17-24	6-17-24	

Client ID:	CSO DU-1B					
Laboratory ID:	06-162-04					
Lead	ND	5.2	EPA 6010D	6-17-24	6-17-24	



Date of Report: June 18, 2024
 Samples Submitted: June 13, 2024
 Laboratory Reference: 2406-162
 Project: 2024-243-2

**TOTAL LEAD
 EPA 6010D
 QUALITY CONTROL**

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0617SM1					
Lead	ND	5.0	EPA 6010D	6-17-24	6-17-24	

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE								
Laboratory ID:	06-169-13							
	ORIG	DUP						
Lead	ND	ND	NA	NA	NA	NA	NA	20

MATRIX SPIKES

Laboratory ID:	06-169-13									
	MS	MSD	MS	MSD		MS	MSD			
Lead	240	237	250	250	ND	96	95	75-125	1	20



Date of Report: June 18, 2024
 Samples Submitted: June 13, 2024
 Laboratory Reference: 2406-162
 Project: 2024-243-2

TCLP LEAD
EPA 1311/6010D

Matrix: TCLP Extract
 Units: mg/L (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	CSO DU-1A-1					
Laboratory ID:	06-162-01					
Lead	ND	0.20	EPA 6010D	6-18-24	6-18-24	

Client ID:	CSO DU-1A-2					
Laboratory ID:	06-162-02					
Lead	ND	0.20	EPA 6010D	6-18-24	6-18-24	

Client ID:	CSO DU-1A-3					
Laboratory ID:	06-162-03					
Lead	ND	0.20	EPA 6010D	6-18-24	6-18-24	

Client ID:	CSO DU-1B					
Laboratory ID:	06-162-04					
Lead	ND	0.20	EPA 6010D	6-18-24	6-18-24	



Date of Report: June 18, 2024
 Samples Submitted: June 13, 2024
 Laboratory Reference: 2406-162
 Project: 2024-243-2

**TCLP LEAD
 EPA 1311/6010D
 QUALITY CONTROL**

Matrix: TCLP Extract
 Units: mg/L (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0618TM1					
Lead	ND	0.20	EPA 6010D	6-18-24	6-18-24	

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE								
Laboratory ID:	06-162-01							
	ORIG	DUP						
Lead	ND	ND	NA	NA	NA	NA	NA	20

MATRIX SPIKES

Laboratory ID:	06-162-01									
	MS	MSD	MS	MSD		MS	MSD			
Lead	10.7	10.7	10.0	10.0	ND	107	107	75-125	0	20



Date of Report: June 18, 2024
Samples Submitted: June 13, 2024
Laboratory Reference: 2406-162
Project: 2024-243-2

**% MOISTURE
MULTI-INCREMENT SAMPLING**

Client ID	Lab ID	% Moisture	Date Analyzed
CSO DU-1A-1	06-162-01	4	6-17-24
CSO DU-1A-2	06-162-02	4	6-17-24
CSO DU-1A-3	06-162-03	4	6-17-24
CSO DU-1B	06-162-04	5	6-17-24





Data Qualifiers and Abbreviations

- A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.
- B - The analyte indicated was also found in the blank sample.
- C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.
- E - The value reported exceeds the quantitation range and is an estimate.
- F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.
- H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.
- I - Compound recovery is outside of the control limits.
- J - The value reported was below the practical quantitation limit. The value is an estimate.
- K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.
- L - The RPD is outside of the control limits.
- M - Hydrocarbons in the gasoline range are impacting the diesel range result.
- M1 - Hydrocarbons in the gasoline range (toluene-naphthalene) are present in the sample.
- N - Hydrocarbons in the lube oil range are impacting the diesel range result.
- N1 - Hydrocarbons in diesel range are impacting lube oil range results.
- O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.
- P - The RPD of the detected concentrations between the two columns is greater than 40.
- Q - Surrogate recovery is outside of the control limits.
- S - Surrogate recovery data is not available due to the necessary dilution of the sample.
- T - The sample chromatogram is not similar to a typical _____.
- U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
- U1 - The practical quantitation limit is elevated due to interferences present in the sample.
- V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.
- W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.
- X - Sample extract treated with a mercury cleanup procedure.
- X1 - Sample extract treated with a sulfuric acid/silica gel cleanup procedure.
- X2 - Sample extract treated with a silica gel cleanup procedure.
- Y - The calibration verification for this analyte exceeded the 20% drift specified in methods 8260 & 8270, and therefore the reported result should be considered an estimate. The overall performance of the calibration verification standard met the acceptance criteria of the method.
- Y1 - Negative effects of the matrix from this sample on the instrument caused values for this analyte in the bracketing continuing calibration verification standard (CCVs) to be outside of 20% acceptance criteria. Because of this, quantitation limits and sample concentrations should be considered estimates.
- Z -
- ND - Not Detected at PQL
- PQL - Practical Quantitation Limit
- RPD - Relative Percent Difference





Analytical Laboratory Testing Services
14648 NE 95th Street • Redmond, WA 98052
Phone: (425) 883-3861 • www.onsite-env.com

Chain of Custody

Page 1 of 1

Analytical Laboratory Testing Services 14648 NE 95th Street • Redmond, WA 98052 Phone: (425) 883-3881 • www.onsite-env.com			Turnaround Request (in working days)			Laboratory Number: 06-162																		
Company: LEHUA ENVIRONMENTAL INC.			(Check One)																					
Project Number: 2024-243-2			<input type="checkbox"/> Same Day <input checked="" type="checkbox"/> 1 Day																					
Project Name: CSO DECOMMISSIONING - CSO Slab			<input type="checkbox"/> 2 Days <input type="checkbox"/> 3 Days																					
Project Manager: KAMA KOBAYASHI			<input type="checkbox"/> Standard (7 Days)																					
Sampled by: CALVIN ARCA			<input type="checkbox"/> (other)																					
Lab ID			Date Sampled			Time Sampled			Matrix			Number of Containers												
1 CSO DU-1A-1			6-11-24						S 1			NWTPH-HCID												
2 CSO DU-1A-2			6-11-24						1			NWTPH-Gx/BTEX												
3 CSO DU-1A-3			6-11-24						1			NWTPH-Gx												
4 CSO DU-1B			6-11-24						1			NWTPH-Dx (<input type="checkbox"/> Acid / SG Clean-up) EPA 8015												
												Volatiles 8260C												
												Halogenated Volatiles 8260C												
												EDB EPA 8011 (Waters Only)												
												Semivolatiles 8270D/SIM (with low-level PAHs)												
												PAHs 8270D/SIM (low-level)												
												PCBs 8082A												
												Organochlorine Pesticides 8081B												
												Organophosphorus Pesticides 8270D/SIM												
												Chlorinated Acid Herbicides 8151A												
												Total FXXX Metals Lead												
												Total MTCA Metals												
												TCLP Metals Lead												
												HEM (oil and grease) 1664A												
												Multi-incremental sample preparation Non-Volatile												
												% Moisture												
Relinquished			Signature			Company			Date			Time			Comments/Special Instructions									
Received						LEHUA ENVIRONMENTAL INC.			6-12-24 12:00pm															
Relinquished									6/13/24 1000															
Received																								
Relinquished																								
Received																								
Relinquished																								
Reviewed/Date															Data Package: Standard <input type="checkbox"/> Level III <input type="checkbox"/> Level IV <input type="checkbox"/>									
															Chromatograms with final report <input type="checkbox"/> Electronic Data Deliverables (EDDs) <input type="checkbox"/>									

Sample/Cooler Receipt and Acceptance Checklist

Client: UEI

Client Project Name/Number: 2024-243-2

OnSite Project Number: 06-162

Initiated by: [Signature]

Date Initiated: 6/13/24

1.0 Cooler Verification

1.1 Were there custody seals on the outside of the cooler?	Yes	<u>No</u>	N/A	1	2	3	4
1.2 Were the custody seals intact?	Yes	No	<u>N/A</u>	1	2	3	4
1.3 Were the custody seals signed and dated by last custodian?	Yes	No	<u>N/A</u>	1	2	3	4
1.4 Were the samples delivered on ice or blue ice?	<u>Yes</u>	No	N/A	1	2	3	4
1.5 Were samples received between 0-6 degrees Celsius?	<u>Yes</u>	No	N/A	Temperature: <u>6</u>			
1.6 Have shipping bills (if any) been attached to the back of this form?	<u>Yes</u>	N/A					
1.7 How were the samples delivered?	Client	Courier	<u>UPS/FedEx</u>	OSE Pickup	Other		

2.0 Chain of Custody Verification

2.1 Was a Chain of Custody submitted with the samples?	<u>Yes</u>	No	1	2	3	4
2.2 Was the COC legible and written in permanent ink?	<u>Yes</u>	No	1	2	3	4
2.3 Have samples been relinquished and accepted by each custodian?	<u>Yes</u>	No	1	2	3	4
2.4 Did the sample labels (ID, date, time, preservative) agree with COC?	<u>Yes</u>	No	1	2	3	4
2.5 Were all of the samples listed on the COC submitted?	<u>Yes</u>	No	1	2	3	4
2.6 Were any of the samples submitted omitted from the COC?	Yes	<u>No</u>	1	2	3	4

3.0 Sample Verification

3.1 Were any sample containers broken or compromised?	Yes	<u>No</u>	1	2	3	4	
3.2 Were any sample labels missing or illegible?	Yes	<u>No</u>	1	2	3	4	
3.3 Have the correct containers been used for each analysis requested?	<u>Yes</u>	No	1	2	3	4	
3.4 Have the samples been correctly preserved?	Yes	No	<u>N/A</u>	1	2	3	4
3.5 Are volatile samples free from headspace and bubbles greater than 6mm?	Yes	No	<u>N/A</u>	1	2	3	4
3.6 Is there sufficient sample submitted to perform requested analyses?	<u>Yes</u>	No	1	2	3	4	
3.7 Have any holding times already expired or will expire in 24 hours?	Yes	<u>No</u>	1	2	3	4	
3.8 Was method 5035A used?	Yes	No	<u>N/A</u>	1	2	3	4
3.9 If 5035A was used, which sampling option was used (#1, 2, or 3).	#	<u>N/A</u>	1	2	3	4	

Explain any discrepancies:

1 - Discuss issue in Case Narrative

2 - Process Sample As-is

3 - Client contacted to discuss problem

4 - Sample cannot be analyzed or client does not wish to proceed



INDEPENDENT DECOMMISSIONING PROJECT MANAGER PROJECT DIARY

DATE : Thursday, June 20, 2024

WEATHER: Suitable for all Planned Work
Clear, light wind, 40F at 0730. Warmed
to 50F in the afternoon.

PROJECT TITLE: **Caltech Submillimeter Observatory Decommissioning**

Work Hours:

Report By: **Shawn Gardner**

Arrv: **0730**

Dep: **1415**

Monitors on Site:	Cultural - Julian Shiroma Archeological - Robynn Namnama Construction - Karl Halemano
Work Items	
Earthwork	<p>Following the 0645 meeting, AECOM, GBI, ASM, and Taymade personnel arrived at the CSO site approx. 0730. CMS arrived after lunch.</p> <ul style="list-style-type: none">- No work on the CSO site this date due to the pending soil test report and the dump truck being down.- The stockpiles relocation work resumed at 0800 at the Batch Plant area. The relocation of the larger fill dirt pile was completed by 0900. The existing pile and the sand pile were relocated by 1100. Approximately half of the stone pile was relocated by the end of the work day. Water was applied for dust control as needed throughout the day. <p>Work ceased for the day and all personnel left the site by 1415.</p>

WORK FORCE & EQUIPMENT						
NAME	POS	HR	Company	EQUIPMENT	MODEL/TYPE	HR
Bronson Sylva	Foreman		GBI	Water Truck	Kenworth lic. 469TXU	
Kai'imi Beck	Intern		GBI	Loader	CAT 950 GC	
Frank Collo	Equip Op		GBI	Excavator w/ hydraulic hammer chisel point	Deere 350 P	
				Excavator w two buckets and chain lift	Deere 245 P	
				Crew Truck w/ fuel tank	Ford F350	
				Pickup Truck	Ford F150	

Signed by: 

Reviewed by: Shawn Gardner

Date 6/20/2024



^ 7:43am - dust control in progress



^ 8:58am - larger stockpile relocation completed



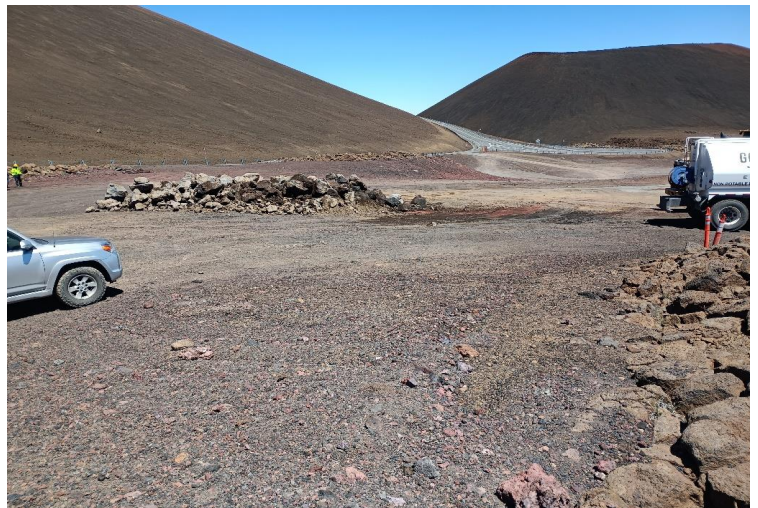
^ 10:02am - existing pile relocation complete



^ 11:05am - sand pile relocation complete



^ 2:09pm - approx. half of stone pile in new location



^ 2:09pm - stone material remaining to be relocated



INDEPENDENT DECOMMISSIONING PROJECT MANAGER PROJECT DIARY

DATE : Friday, June 21, 2024

WEATHER: Suitable for all Planned Work
Clear, light wind, 40F at 0730.

PROJECT TITLE: **Caltech Submillimeter Observatory Decommissioning**

Work Hours:

Report By: **Shawn Gardner**

Arrv: **0730**

Dep: **1100**

Monitors on Site:	Cultural - Julian Shiroma Archeological - Robynn Namnama Construction - Karl Halemano
Work Items	
Earthwork	<p>Following the 0645 meeting, CMS, AECOM, GBI, ASM, and Taymade personnel arrived at the CSO site approx. 0730.</p> <p>- No earthwork on the CSO site this date due to the pending soil test report and the dump truck being down. The truck from Island Topsoil with a lowboy trailer arrived at 0745. The larger excavator (Deere 350 P) was loaded on the lowboy, and it departed at 0840.</p> <p>- The stockpiles relocation work resumed at 0850 at the Batch Plant area. The relocation of the stone pile was completed, and the loader left the Batch Plant area at 1045.</p> <p>Water was applied for dust control as needed throughout the morning.</p> <p>The loader and water truck were parked at the CSO site, and all personnel left the site by 1100.</p>

WORK FORCE & EQUIPMENT						
NAME	POS	HR	Company	EQUIPMENT	MODEL/TYPE	HR
Jon Steen	Supt		GBI			
Bronson Sylva	Foreman		GBI	Water Truck	Kenworth lic. 469TXU	
				Loader	CAT 950 GC	
				Excavator	Deere 245 P	
Kai'imi Beck	Intern		GBI	Crew Truck w/ fuel tank	Ford F350	
Frank Collo	Equip Op		GBI	Pickup Truck	Ford F150	

Signed by: 

Reviewed by: Shawn Gardner

Date 6/21/2024



^ 7:40am - batch plant area



^ 8:08am - loading excavator, pavement protected with mats



^ 8:42am - lowboy with excavator departing site



^ 10:31am - stone pile relocated to edge of batch Plant area



^ 10:49am - all stockpile relocation complete



^ 10:57am - site closed for the day

INVASIVE SPECIES INSPECTION CERTIFICATE

Delivery is: ☒ APPROVED ☐ REJECTED

Date and Time: 6/20/24 7am

Inspector: James Parker

Expiration date and time: 6/24/24 7am

Inspection location: Island Topsoil

Destination: CSD site summit

Facility/Representative: Jesse Dereg

Vehicle Lic & Owner: 501 HES Semi

Concerns identified: N/A

Cargo Description: lowboy trailer

Remediation taken: N/A

Bait used? ☐ Yes ☒ No

Rush inspection? ☐ Yes ☒ No

Escort Required? ☐ Yes ☒ No

☐ EMERGENCY (no inspection)

☐ NON-COMPLIANT (no inspection requested)

This certificate is proof that the inspection is valid for the stated vehicle, cargo, destination, and time frame.

Drivers should keep this certificate in vehicle when making delivery.

For more information please visit: www.malamamaunakea.org/inspections/

INVASIVE SPECIES INSPECTION CERTIFICATE

Delivery is: ☒ APPROVED ☐ REJECTED

Date and Time: 6/20/24 7am

Inspector: James Parker

Expiration date and time: 6/24/24 7am

Inspection location: Island topsoil

Destination: CSD site summit

Facility/Representative: Jesse Dereg

Vehicle Lic & Owner: 402 MUI trailer

Concerns identified: N/A

Cargo Description: empty

Remediation taken: N/A

Bait used? ☐ Yes ☒ No

Rush inspection? ☐ Yes ☒ No

Escort Required? ☐ Yes ☒ No

☐ EMERGENCY (no inspection)

☐ NON-COMPLIANT (no inspection requested)

This certificate is proof that the inspection is valid for the stated vehicle, cargo, destination, and time frame.

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