Caltech Submillimeter Observatory Decommissioning
Final IDPM Summary Report Rev 01

Mauna Kea Hawaii
October 2024

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California Institute of Technology
1200 E California Blvd
Pasadena, CA 91125

Subject: Post-Decommissioning Summary Report

1. Introduction

This summary report has been prepared at the request of Caltech to evaluate and summarize the project team's adherence to the Site Decommissioning Plan (SDP), identify best practices and lessons learned, as well as an evaluation of the Independent Decommissioning Project Manager (IDPM) role.

2. Adherence to the SDP

Starting with the removal of the telescope in the fall of 2023, the decommissioning of the observatory was done in accordance with the SDP. Under the leadership of Sunil Golwala of Caltech, who required all the work be done in strict adherence to the SDP, the project permits, and the guidance of the Center for Maunakea Stewardship, the removal of the telescope from the observatory and its transportation off the Mauna was completed without any violations or deficiencies observed.

As the decommissioning continued in the spring of 2024 with the demolition of the observatory structures and infrastructure, the adherence to the requirements for work on Maunakea continued as well. The General Contractor, Goodfellow Brothers Inc., was completely on board with the requirements of the University of Hawaii, the various permits, and the contractual requirements with Caltech. They supervised their subcontractors and service providers closely to ensure the work went smoothly and in accordance with the plan. Communication with the Cultural, Archeological, Construction, and Invasive Species monitoring organizations, as well and the Air Quality and Hazardous Material monitors, was constant and ongoing, and played a large role in the success of the project.

3. Best Practices

A few Best Practices were instituted during the demolition process, that also were valuable to the success of the project. The Contractor worked closely with the Maunakea Rangers to schedule the required trucking to interfere as little as possible with the traffic of personnel from other observatories, and to not interfere with the weekly maintenance of the Maunakea Access Road. Also, as many of the project personnel were staying at the Hale Pohaku lodge and eating in the cafeteria, a daily breakfast meeting was started in order to make sure all the personnel were aligned regarding the planned work for the day and allowed the Contractor's daily safety meeting to include everyone. This meeting also allowed Caltech personnel to call in and stay informed on a daily basis with all the aspects of the ongoing work.

4. Lessons Learned

Stewart Hunter from the Center for Maunakea Stewardship kept a log of lessons learned during the project, and two items are worth reiterating.

First, demolish and remove everything possible inside the dome prior to demolishing the dome itself. Due to the windiness of the summit site, the potential for windblown materials to land outside the site boundaries is substantial. Although the project was blessed with light to moderate wind most of the time,

there were instances when all the personnel on the ground were picking up small bits of material from the ground on the leeward side of the site. Removing as much as possible of the interior materials, such as drywall, insulation, and any lightweight materials and rubbish, leaving as nearly as practicable only the structure, would reduce the probability of such materials being blown from the sites.

Second, if it is feasible, it could be useful to spray a flexible film over the interior painted structural elements prior to demolition. We found that the cutting, bending, and twisting of the steel members during demolition caused a lot of the paint to come off, and much of the one to two hours of cleanup time at the end of the days, and additional time during breaks in the demolition, was spent sweeping, vacuuming, and picking up paint from the ground on the site. A flexible film could bind the paint coming off the steel into larger sheets, rather than smaller flakes, making it more likely to fall within the footprint of the building even during gusty conditions. Demolition was stopped by the Contractor on one occasion due to this issue.

5. Utility of the role of IDPM

Although often seen as an observer, the IDPM had an important role in the project, and, depending on organizational arrangement, could play a larger role. On several occasions, members of "sister organizations" on the client's org chart looked to the IDPM for guidance. Additionally, contracting all monitors (archaeological, cultural, invasive species) through the IDPM would streamline communication, and all observer's report could be required to be submitted directly to the client in order to prevent any perception of impropriety.

It should also be noted that this project went very well, due in large part to virtually all of the personnel from all the organizations working on the project being completely aligned with all the requirements for working on the Mauna. Should that not always be the case, future IDPMs with the same responsibilities will have a much busier time fulfilling those responsibilities.

6. Incidents

A summary of significant incidents that occurred on the project site are summarized below; additional details, including the reports from the day the incident occurred and photo documentation is provided in Appendix A and Appendix B. No incidents outside the project site were observed or recorded during the project.

9/19/23 Altitude sickness. After executing the last crane "pick" required for the removal of the telescope from the summit, the crane operator experienced altitude sickness symptoms, including dizziness, nausea, and vomiting. He was given oxygen, and directed by the telescope removal lead to go to the ER in Hilo. The assistant operator stowed the crane and the crew left the summit.

There were other instances of apparent altitude sickness mentioned to, but not witnessed by, the IDPM, including most of the traffic control crew provided by HELCO for the transformer removal, but none were characterized as being serious. The individuals were taken from the summit to Hale Pohaku, where they recovered.

9/27/23 Uninspected truck. A roll-off rubbish bin was delivered to the site and no onsite observer had a chance to ask the driver for the inspection certificate. The Contractor PM noted that they had stopped at the Ranger Check station, so assumed they had it, but, through some miscommunication, they had been allowed to proceed without it. The bin itself was observed by the IDPM to be clean. See also the Invasive Species Monitoring Annual Report 2024.

9/28/23 Oil spot. An oil spot approximately 8 inches in diameter was created at the site entrance when some oil from an overturned bucket in a contractor's truck trickled out of the bed and onto the ground. The spot was cleaned up as soon as it was noticed when the truck was moved. A Ranger stopped by

the site after an unknown person reported a large hydraulic oil spill, and was shown the cleaned-up oil spot.

9/28/23 COVID. The demolition team foreman was taken from the summit early in the morning, with the assumption of altitude sickness. Later in the morning he was taken to a doctor in Hilo and was diagnosed with COVID. As he was an Oahu resident and had no other place to stay on Hawaii Island, he was kept in isolation in his room at Hale Pohaku. When he was recovered enough to fly, he returned home to Oahu.

4/23/24 Dirty excavator tracks. During mobilization of the demolition excavators, the smaller excavator was found to have dried mud in the tracks when delivered to the site. The Contractor cleaned the tracks and properly disposed of the material removed from the tracks. The invasive species monitor later reported that he had inspected the excavator on 4/22 (see certificate) but that the mud was picked up as it was being loaded onto a lowboy trailer on 4/23, the day after his inspection.. The Contractor instituted the policy of laying plywood on the ground when loading equipment to prevent a recurrence of the event.

4/29/24 Excavator oil leak. After the assembly of the high reach boom and shears on the larger excavator the previous Friday, on Monday morning it was found that a hydraulic fitting had leaked oil onto the asphalt pavement over the weekend. The hydraulic line was repaired and the leaked oil was cleaned from the pavement.

4/30/24 Excavator oil spill. At 10:34am, the excavator expelled a cloud of white smoke, and then hydraulic oil dropped out of the bottom of the engine compartment onto the asphalt pavement. The machine was immediately shut off and personnel began containment. Within one minute of the spill, absorbent "snakes" contained the perimeter of the oil, and within two minutes, absorbent materials had been spread over the spill area. Additional absorbent materials were added over the next several minutes, and the area stayed under close monitoring. Both the IDPM and CMS personnel witnessed the event, and estimated that 10-15 gallons of hydraulic oil spilled. The demolition subcontractor identified the failed low-pressure hydraulic line in the engine compartment and went to Hilo to get replacement parts. They arrived back at the site with the replacement parts and hydraulic oil, and by 4:15, the repairs were complete, ten gallons of hydraulic oil were added to the reservoir, and the excavator hydraulics tested. The excavator was cleaned and the remaining used absorbent materials were cleaned up.

Because there was a crack in the pavement at one side of the spill, it was known that some amount of oil would have seeped into the fill material under the pavement. See discussion of remediation of this oil leakage under "6/19/25 Soil Remediation" below.

5/1/24 Oil drips and containment. On the following morning, it was found that some residual oil had leaked from the engine compartment onto the asphalt pavement. The oil was cleaned up with absorbent material. At the end of the work day, to mitigate the issue of residual oil leaking out of the HR excavator, ground sheets were laid on the pavement, and the excavator was parked on them. Absorbent "snakes" were installed to contain any oil that leaks overnight. The NW crew spent about an hour and a half continuing cleaning the excavator, and putting absorbent materials in the engine compartment. The excavator was parked on groundsheets for the rest of its time on site.

5/2/24 Grappler hydraulic oil leak. After lunch, demolition resumed in the dome, using the grappler attachment. Later in the afternoon, it was observed that a small leak had appeared in the grappler oil line connection. The leak was fixed, but recurred at around 1400. NW decided to end work for the day and replace the grappler with the shears attachment. The dripping oil from the leak all fell inside the dome, on demoed material to be removed from the Mauna. The grappler was not used again.

5/24/24 Improper behavior. One of the drivers of the trucks removing demoed material from the site was observed urinating on the ground next to his truck in the vicinity of the JCMT. The driver was suspended from the project for two weeks, and his Mauna Kea User Orientation certificate was revoked. Prior to returning to work on the project, this driver had to complete the Mauna Kea User Orientation again and obtain a new certificate.

5/29/24 Breaker hydraulic leak. At 10:55am, a hydraulic fitting on the hammer/breaker attachment failed, and the machine was immediately shut down. Estimated <1gal. of oil spilled, all of it on the concrete, and almost all of it inside the ring with some sprayed drops on the apron. The team immediately put oil absorbent material on all the spilled oil. The fitting was replaced, and after the lunch break and cleaning up the absorbent material, demo resumed on the rail ring. About 10-15 feet of the ring was demoed when the same fitting was noted to have a small leak. The breaker was detached from the excavator, and the bucket was attached to begin work elsewhere on the site. The oil line attachment fittings were replaced by the mechanic prior to the breaker being used again.

6/19/24 Contaminated Soil Remediation. Given the likelihood that hydraulic fluid from the 4/30/24 release had seeped through cracks into the soil below the asphalt, Lehua performed soil sampling on 6/11/2024. The analysis showed levels of petroleum components exceeding allowable levels (see Lehua reports for details). Therefore, on 6/19/24, the 900 sq ft area that had been sampled by Lehua was excavated to a depth of approximately 1 ft. The material was segregated on plastic sheeting. Both the exposed soil under the excavation and the contaminated soil stockpile were sampled and analyzed again. All samples showed no contamination above allowable levels, indicating the now-excavated site was safe. The segregated soil was later removed and properly disposed of offsite (see Lehua Removal Action Report).

Appendix A – Documentation of Significant Incidents

AECOM

INDEPENDENT DECOMMISSIONING PROJECT MANAGER PROJECT DIARY

DATE : **Tuesday, September 19, 2023**

WEATHER: Suitable For All Planned Work
At CSO, clear, light wind. Temp at 8:00am 45F, later up to mid 50s.

PROJECT TITLE: **Caltech Submillimeter Observatory Decommissioning**

Work Hours:
Arrv: **0800**
Dep: **1330**

Report By: **Shawn Gardner**

Monitors on Site:	Cultural - Gerald Mahi

Work Items	**Location & Description of Work/Activities**
Telescope removal	Lowboy trailer from Conen's Freight arrived at 9:22am. The base assembly and the second of the two counterweights were loaded on the lowboy, and it departed the site at 10:46am. Simon Radford and Stewart Hunter were present and observed the removal. Simon also continued the preparation of jackstands for the BUS in preparation for disassembly. Note: after the crane picks were done, the operator had apparent altitude sickness. He was given oxygen and was directed by Bill Johnson to go to the ER in Hilo, and he and his crew left the site.

WORK FORCE & EQUIPMENT

NAME	POS	HR	Company	EQUIPMENT	TYPE	HR
Bill Johnson		8		Pasha Container	20 ft	Onsite
Rick	Crew	8		Container	40 ft	Onsite
George	Crew	8		Telehandler, JLG Skytrak	10054	1
Sayer	Crew	8		Manlift, Genie	Z-62/40	1
				Crane, Grove 120 ton	GMK5120B	2
Alan Paiva	Operator	3	Isemoto			
Colin	Oiler	3	Isemoto			
Eric	Rigger	3	Isemoto			
Renae	Rigger	3	Isemoto			

Signed by: _____ Reviewed by: Shawn Gardner Date 9/19/2023

^ 8:12am - CSO from JCMT

^ 9:22am - lowboy arrives

^ 9:30am - picking base assy from ground

^ 9:33am - base assy positioned on lowboy

^ 9:45am - counterweight positioned on lowboy

^ 10:46am - lowboy departing site

AECOM

INDEPENDENT DECOMMISSIONING PROJECT MANAGER PROJECT DIARY

DATE : **Wednesday, September 27, 2023**

WEATHER: Suitable For All Planned Work
At CSO, clear, moderate variable wind. Temp at 8:00am 40F, later up to low 50s.

PROJECT TITLE: **Caltech Submillimeter Observatory Decommissioning**

Work Hours:
Arrv: **0800**
Dep: **1530**

Report By: **Shawn Gardner**

Monitors on Site:	Cultural - Julian Shiroma Construction - Karl Halemano

Work Items	Location & Description of Work/Activities
Telescope removal	Bill Johnson and crew, assisted by Simon Radford and Sunil Golwala, with colleagues from the Shanghai Normal University, started dissasembly of the BUS.
Demolition	Leleiwi Elec. continued work on de-energizing the dome structure, and troubleshooting the shutter which remains inoperable. Northwest Demolition crew began demolition on the 3rd level of the dome structure. A Roll-Off rubbish bin was delivered to the site. Jon Steen was onsite all day.

WORK FORCE & EQUIPMENT

NAME	POS	HR	Company	EQUIPMENT	MODEL/TYPE	HR
Bill Johnson		8		Pasha Container	20 ft	Onsite
Rick	Crew	8		Container	40 ft	Onsite
George	Crew	8		Telehandler, JLG Skytrak	10054	Onsite
Sayer	Crew	8		Generator, Multiquip Whisperwatt	DCA-25SSIU4F	8
				Rubbish Bin	Roll-Off	Onsite
Sam Peck	Sup.	0	GBI			
Keoni Kaluna	Foreman	0	GBI			
Frank Collo	Operator	0	GBI			
Gary Fujii	Foreman	8	Leleiwi Elec.			
Ronald Lee	Crew	8	Leleiwi Elec.			
Ryerson Andrade	Crew	8	Leleiwi Elec.			
Bruce Burley	Foreman	8	Northwest Demo.			
Darren Miguel	Crew	8	Northwest Demo.			
Anthony Ortiz	Crew	8	Northwest Demo.			
Gary Lagapa	Crew	8	Northwest Demo.			

Signed by: 

Reviewed by: Shawn Gardner Date 9/27/2023

^ 8:47am - site view

^ 8:55am - generator connection

^ 8:55am - working on BUS disassembly

^ 12:44pm - progress in electric room

^ 12:47pm - demo progress on 3rd level

^ 3:21pm - finished for the day on the BUS

Hawaiian Cultural Monitor Report

DATE: 09/27/23

A Cultural Monitor documents and observes actions on significant historic properties and mitigates those effects. Pursuant to 2012 S.C.R NO. 115:

"Whereas, the State of Hawaii places a high priority on protecting and preserving its historic and cultural resources which include iwi kupuna or Hawaiian burial remains..."

PROJECT NAME	CSO DECOMMISSIONING	**PROJECT WORK CREW**	Shawn, AECOM, Jon STEEN, Good Fellow
HAWAIIAN CULTURAL MONITOR	JULIAN SHIROMA	**PROJECT WORK CREW**	Leleiwi Electric: Gary, Ronald, Bruddah
CSO WORK CREW	BILL JOHNSON (RICK, GEORGE, SAYER)	**PROJECT WORK CREW**	NW Demo: Bruce, Anthony, Darren, Gary

TIME	OBSERVATIONS	FINDINGS (YES OR NO)
700	Leave HP with Bill Johnson and his work crew. No briefing. Arrive at CSO project site 0720 hours. I prayed for all present. Good Fellow, Leleiwi Electric, NW Demo all present. Bill and his crew begin working on the large reflector dish outside. NW Demo begin demolition in the dome. Leleiwi Electric working on fixing the large retractable dome door that is not working. Jon STEEN is working with both NW Demo and Leleiwi Electric	NO
813	Edwin DeLuz Trucking arrives and delivers a rolloff. Driver plus one passenger in the cab. Jon STEEN climbs up to cab and speaks with driver. Jon jumps off and before I can get to the truck to ask for the invasive species inspection report, they drive off. I'm later told that the truck would not have passed the Rangers without producing the inspection docs. Carl HALEMANU, construction monitor, and Shawn GARDNER. AECOM, construction monitor arrive shortly after the truck delivered the rolloff.	NO
833	Sunil GOLWALA arrives with three Chinese men. They begin working on the large reflector dish outside with Bill's crew.	NO
1057	Simon RADFORD arrives with two Chinese men. They deliver three 5 gallon buckets of hydraulic fluid. They then join the aforementioned people working on the large reflector dish outside.	NO
1337	The dome door is still not working. This is preventing NW Demo from loading the roll off trash container. Jon STEEN and Sunil discuss having to call D & M Hydraulic to address the hydraulic pump problem, and to call American electric to address the electrical problems. Nothing is dumped into the roll off trash container. Carl HALEMANU leaves about this time.	NO
1424	Work crews manage to lower the done door about two feet to close and secure the dome till tomorrow.	NO
1445	Leleiwi Electric and Jon STEEN depart. Simon Radford, Bill Johnson and his crew, Sunil and the five Chinese men are wrapping up their work on the large reflector dish outside.	NO
1519	End work, depart project site. 1543 returned to HP	NO

PICTURES

0720: View upon arrival.

0813: Edwin DeLuz deliver "roll off" .

0849: View Inside the Dome.

1259: "Roll Off" empty and clean.

1345: People working on large reflector dish outside.

1519: View upon departure.

AECOM

INDEPENDENT DECOMMISSIONING PROJECT MANAGER PROJECT DIARY

DATE : **Thursday, September 28, 2023**

WEATHER: Suitable For All Planned Work
At CSO, clear, moderate variable wind. Temp at 8:00am 35F, later up to low 50s.

PROJECT TITLE: **Caltech Submillimeter Observatory Decommissioning**

Work Hours:
Arrv: **0800**
Dep: **1610**

Report By: **Shawn Gardner**

Monitors on Site:	Cultural - Julian Shiroma

Work Items	Location & Description of Work/Activities
Telescope removal	Bill Johnson's crew, assisted by Simon Radford with colleagues from the Shanghai Normal University, continued disassembly of the BUS.
Demolition	Northwest Demolition crew continued demolition on the 3rd level of the dome structure. The foreman came down sick and was taken off the Mauna by one of his crew early AM. A second Roll-Off rubbish bin was delivered to the site. Jon Steen was onsite on-and-off all day. He brought a tech from D&M Hydraulics to troubleshoot the shutter system, but no solution was found. The shutter remains inoperable. Note: Jon parked his truck, backed in to the site entrance, at about 9am. When he left with his crew for lunch, we noticed a fresh oil spot on the pavement where the back end of his truck was. The spot, about 8-inch in diameter, and a nearby oil spot, was then cleaned up with granular oil absorbent material. Jon was told about the spots, and he found that gear in the back of his truck had overturned. He re-stowed it more securely and cleaned the back of the truck.

WORK FORCE & EQUIPMENT

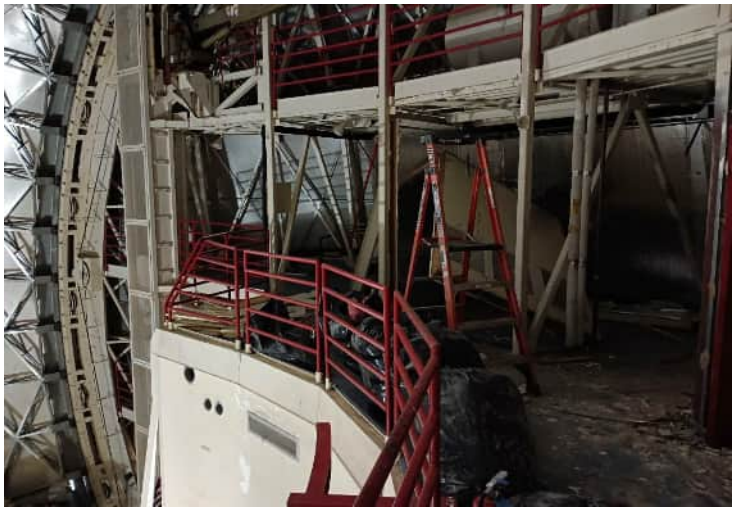
NAME	POS	HR	Company	EQUIPMENT	MODEL/TYPE	HR
Bill Johnson		8		Pasha Container	20 ft	Onsite
Rick	Crew	8		Container	40 ft	Onsite
George	Crew	8		Telehandler, JLG Skytrak	10054	Onsite
Sayer	Crew	8		Generator, Multiquip Whisperwatt	DCA-25SSIU4F	8
				Rubbish Bin x2	Roll-Off	Onsite
Sam Peck	Sup.	0	GBI			
Keoni Kaluna	Foreman	0	GBI			
Frank Collo	Operator	0	GBI			
Gary Fujii	Foreman	0	Leleiwi Elec.			
Ronald Lee	Crew	0	Leleiwi Elec.			
Ryerson Andrade	Crew	0	Leleiwi Elec.			
Bruce Burley	Foreman	0	Northwest Demo.			
Darren Miguel	Crew	8	Northwest Demo.			
Anthony Ortiz	Crew	0	Northwest Demo.			
Gary Lagapa	Crew	8	Northwest Demo.			

Signed by: 

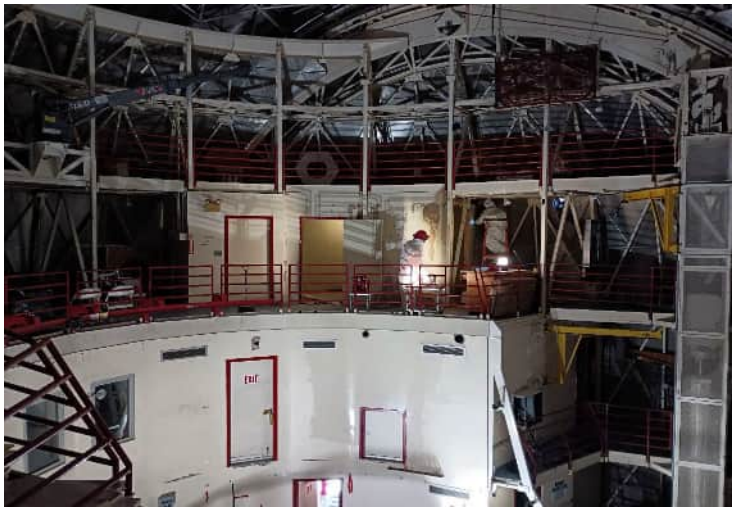
Reviewed by: Shawn Gardner Date 9/28/2023

^ 8:02am - Roll-off truck arriving

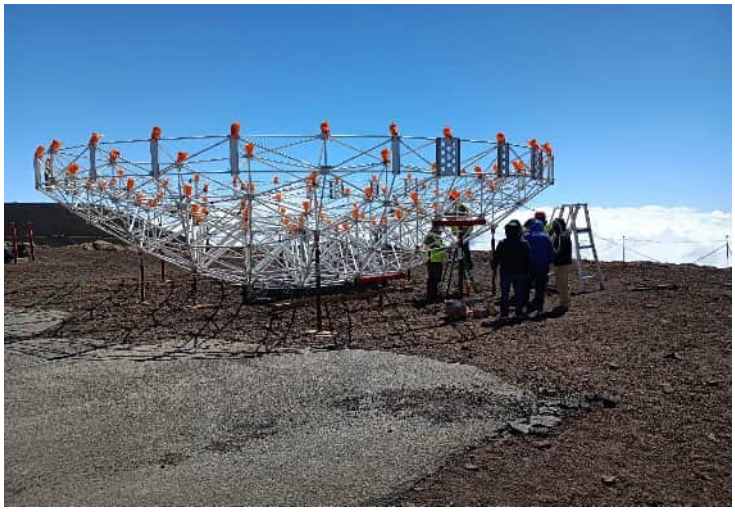
^ 8:10am - Roll-off truck departing



^ 8:45am - demo work from yesterday



^ 10:37am - demo in progress



^ 1:26pm - work on BUS disassembly

^ 2:55pm - cleaned up oil spot

Hawaiian Cultural Monitor Report

DATE: 09/28/23

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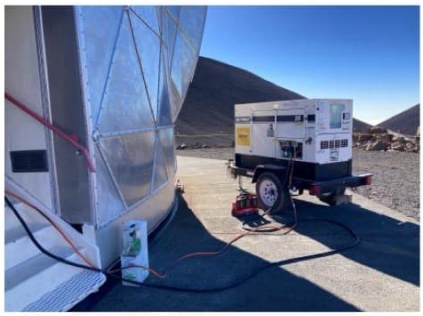
PROJECT NAME	CSO DECOMMISSIONING	**PROJECT WORK CREW**	SHAWN GARDNER, AECOM
HAWAIIAN CULTURAL MONITOR	JULIAN SHIROMA	**PROJECT WORK CREW**	NW Demo Gary & Darren
CSO WORK CREW	BILL JOHNSON (RICK, GEORGE, SAYER)	**PROJECT WORK CREW**	Jon STEEN, G.F., Bubba of D&M Hydraulic

TIME	OBSERVATIONS	FINDINGS (YES OR NO)
0710 - 0733	Depart HP with Bill's work crew George, Sayer, and Rick. Bill not present. No briefing. Arrive CSO project site at 0733 hours. Conducted prayer for all present.	NO
803	Edwin DeLuz Trucking arrives. Driver Kalei produces invasive species certificate of inspection, start 9/27/23, 1630 hours , ends 10/1/23, 1630 hours. Truck drops off roll off trash container. "Manti" is passenger in truck. 0805 hours NM Demo crew members, Darren and Gary arrive. Per Shawn, Bruce Burley of NW Demo got altitude sickness so one of NW Demo crew Anthony drove him back down. NW Demo continue their work on the third floor. They also continue to put the debris in large trash bags and leave them in the dome. None of the debris and trash is being put into the rolloff dumpster outside. 0836 hours Simon Radford, and five Chinese men arriv e and continue their work on the large reflector dish outside.	NO
903	Jon STEEN arrives with Bubba from D & M Hydraulics. They begin work on the hydraulic pump.	NO
1129 - 1250	Jon STEEN, Bubba, Darren and Gary leave for lunch. **As Jon drives off I notice what appears to be a hydraulic oil spill on the driveway asphalt where the rear end of his pick up truck was parked. Rick applies cat litter to absorb the oil then vacuums the cat litter.** 1130: Sunil and Bill JOHNSON arrive after Jon departed. 1230: when Jon returns I inform him of the oil spill. He checks the bed of his pick up truck and finds that a couple 5 gallon buckets containing hydraulic oil had toppled in the bed and was leaking hydraulic oil. Jon righted the cans and cleaned the bed of his truck. 1240: Jon informs, all that need to know at the project site that Bruce Burley, who was transported to Waimea for medical treatment, tested positive for Covid-19, when he was examined. He and his worker Anthony who drove him to Waimea will not be returning. Darren and Gary continued working at the project site. 1250: Jon leaves for H P CMS to find out what protocols to follow since Bruce and his work crew are from Oahu. Bubba leaves with him. The hydraulic pump remains in operable.	*Note: Hydraulic Oil spill on driveway, cat litter used to soak up spill.
1250 - 1415	The Chinese men who had left for lunch earlier about 1130, return to the project site and resume working on the large reflector dish outside with Sunil, Simon RADFORD, Bill and his crew. NE Demo crew Gary and Darren in dome working. Per Shawn, while I was in the dome about 1415 hours, a Ranger came to the project site to view the hydraulic oil spill and how it was cleaned up. Shawn did not get the name of the Ranger, but based on the physical description, I believe the Ranger to be "Mick".	NO
1505 - 1529	Sunil conducts a walk through of the dome with Jon and Gary. They discuss things that need to be done and followed up on, to wit, hazmat concerns re: fluorescent lights and ballasts, lead paint removal during decommissioning of the enclosure. Mold (Unitek) and glycol (Bill Johnson) had previously been removed, and the prior hazardous material survey (Lehua, 2019) reported no asbestos. Advised to contact Unitek and Lehua for further information. James Whippel of American Electric for the dome retractable door problem. **Jon informs Sunil about Edwin Deluz Trucking not having an invasive species inspection report the day before, and how the truck was allowed to proceed after a person whom the Rangers consult with evaluated the truck and gave the OK for the Rangers to allow the truck to proceed. It should be noted that I brought this lack of inspection to Ranger Duane WAIPA, Paul NAGATA, and Mick's attention at 0645 during breakfast.** received the same explanation as to why the truck was allowed to proceed. 1529, Jon, Gary and Darren leave for the day.	*NOTE: E. Deluz Trucking did not have the invasive species inspection report 09/27/2023.
1542	I leave for the day with Bill and his work crew.	NO
1603	Returned to HP	NO

PICTURES

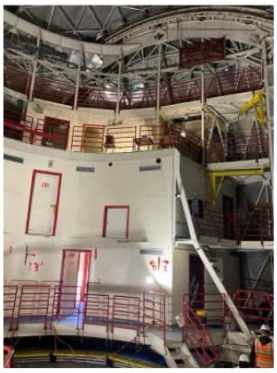
0803: E. Deluz Trucking certificate of inspection

0809: E. Deluz truck drops "roll off"

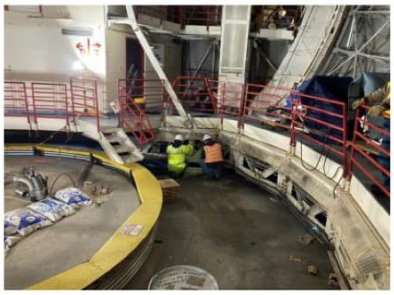


0822: Generator supplying electricity to work crews.

0849: Crews working on large reflector dish outside.



0944: NW Demo working on 3rd floor.

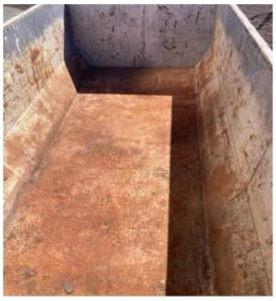


0944: Jon STEEN w/ Bubba D&M Hydraulics working on lines.

1159: Hydraulic oil spill cleanup.

1233: Hydraulic oil in bed of truck. *SOURCE OF SPILL

1450 - 1503: Inside two roll off containers.



1541: View upon departure

Hawaiian Cultural Monitor Report

DATE: 09/29/23

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PROJECT NAME	CSO DECOMMISSIONING	**PROJECT WORK CREW**	Shawn, AECOM, Jon, Keoni, Frank- GFBs
HAWAIIAN CULTURAL MONITOR	JULIAN SHIROMA	**PROJECT WORK CREW**	Scott -Island Undergroud
CSO WORK CREW	BILL JOHNSON (RICK, GEORGE, SAYER)	**PROJECT WORK CREW**	NW Demo: Anthony, Darren, Gary

TIME	OBSERVATIONS	FINDINGS (YES OR NO)
0700 - 0815	Leave HP with Bill Johnson and his work crew. Arrive at CSO project site 0721. Prayer conducted for all present. Work and safety briefing conducted by Bill. Discussed taking apart the large reflector dish utilizing the tele handler. Three crew members of NW Demo also just arrived minutes before us and are preparing to go into the dome to continue demolition. It should be noted that Bruce Burley, who was stricken with COVID-19 the day before is not with them. Jon STEEN arrives shortly after us. When asked about Bruce BURLEY, John Steen informs us that Bruce is in isolation back at Hale Pohaku. 0815: I observe and photo work of NW Demo on the 3rd floor. Trash and debris are in large black trash bags. Shawn Gardner is with me.	NO
0836 - 0900	Scott of Island Underground arrives to do toning and deep, underground radar. 0840: Simon Radford and three Chinese men arrive to continue their work on the large reflective dish outside. 0842: Keoni Kaluna and Frankie of Goodfellow brothers arrive to do GPS. 0900: Carl HALEMANU arrives.	NO
950	The first large piece of the reflector dish outside is removed by the tele handler and successfully lowered to the ground. 1005: two Chinese men arrive in a Sun-Belt rental truck with 2 x 3 and 2 x 4 wood in the bed to build crates in the welding shed. After they unload the wood, they join Simon, and the other three Chinese men.	NO
1006	Travis from Terminix arrives to set 4 sealed rodent traps in the dome. Travis is escorted by Jon Steen into the dome. 1007: Neil with JCMT observatory arrives to pick up parts from within the dome to recycle and reuse at the JCMT observatory. He is assisted by Jon Steen. I checked with Neil and his Ford 350 flat bed truck with hydraulic lift gate does not require an invasive species inspection.	NO
1143	The second large piece of the reflector dish is removed utilizing the tele handler and successfully lowered to the ground	NO
1230	I walk through, observe, and photo work of NW Demo on the 3rd floor. A roll of thick black plastic is being used to cover all the trash and debris. Shawn Gardner and Jon Steen are with me. Simon Radford and Bill Johnson also enter the dome and conduct a walk through shortly after Shawn and I. All trash and debris will remain in the dome. No trash and debris have been placed in the two large roll off trash containers outside.	NO
1243	I depart the project site with Simon Radford. Per Simon, 5 more sections of the large reflector dish needs to be removed for a total of 8 pieces to be later loaded into shipping containers for transport and shipping later to Chile.	NO
1309	Return back to HP	NO

PICTURES

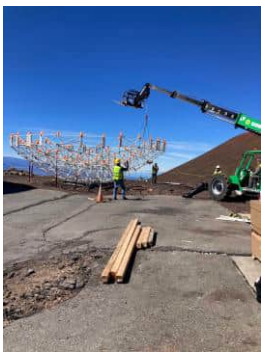
0721: View Upon Arrival

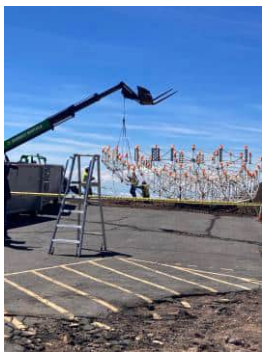
0758: Stack of Traction mats for truck tires

0816: Two photos of 3rd floor in dome.

0840: Scott Island Underground toning

0855: Frank of GFBs conducting GPS





0950 - 1152: Dismantling Reflector

1236: Black plastic covering trash & debris on 3rd floor.

1244: View upon departure

HAWAIIAN CULTURAL MONITOR REPORT

DATE: 2024-04-23

AMENDED AS OF 2024-04-30

A Cultural Monitor documents and observes actions on significant historic properties and mitigates those effects. Pursuant to 2012 S.C.R NO. 115: "Whereas, the State of Hawaii places a high priority on protecting and preserving its historic and cultural resources which include Iwi Kupuna or Hawaiian Burial remains…"

PROJECT NAME: Caltech Submillimeter Observatory Decommissioning Project **WORK CREW**: Goodfellow Construction-John STEEN and Cody BROWN (Engineer)

HAWAIIAN CULTURAL MONITOR: Peter ALU **WORK CREW:** GBI: Sam PECK; Brandon KEPANO; Bronson SILVA

WORK CREW: Stuart HUNTER (CMS); Shawn GARDNER (AECOM); Simon RADFORD (CSO) **WORK CREW:** Deluz Trucking: Maurer PACHECO; Keanu KANE

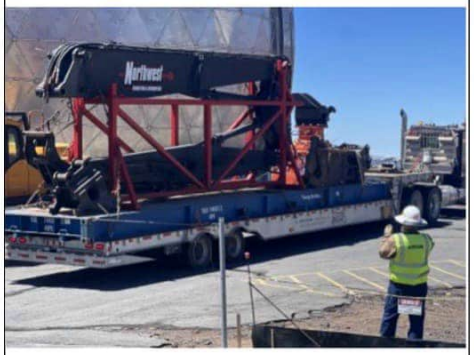
TIME	OBSERVATIONS	FINDINGS (YES OR NO)
0700-0730 Hrs	Breakfast and a short conversation with Jon Steen regarding the transporting of heavy equipment to Cal-Tech Observatory site and an update on what would take place today. Also brought in the conversation of a possibility of working 10 hour shifts. Sitting in this conversation was Shawn Gardner and Simon Radford. Leaving Hale Pohaku after short breakfast/meeting	No
0800 Hrs	Arriving at Cal-Tech Observatory Site. Blessing and Protocol conducted by Peter Alu (HCM). Standing by for Good Fellow Construction getting ready to transport heavy equipment with DE LUZ Trucking.	No
1030 Hrs	Arrival of heavy equipment of an Excavator and attachments belonging to Northwest Construction transported by De Luz Trucking. Track loader part of Goodfellow arriving also assisting with the hauling. Checked with Deluz Trucking crew if they had stopped to get an inspection to be cleared to proceed to their destination. They said that there were 2-3 Rangers that waved them on and proceeded up to the site. It was brought to the attention of Stuart Hunter head of CMS.	No
1100 Hrs	Notice some debri left behind after Excavator driven off of lowboy which also brought it to the attention of Shawn Gardner who had a Goodfellow crew sweep up the debri. Further checks conducted that there was more debri on the tracks of the excavator. See Photos Attached. Shawn asked Jon Steen and his crew to clean off the tracks. Shawn's report will reflect on the cleanup that was done. It was also relayed to Stuart Hunter of CMS.	Yes
1430 Hrs	Track cleaned on excavator with photos following	Yes
1600 HRS	Back at Hale Pohaku	No

HAWAIIAN CULTURAL MONITOR REPORT

A Cultural Monitor documents and observes actions on significant historic properties and mitigates those effects. Pursuant to 2012 S.C.R NO. 115: "Whereas, the State of Hawaii places a high priority on protecting and preserving its historic and cultural resources which include Iwi Kupuna or Hawaiian Burial remains…"

PICTURE (1)	DESCRIPTION (1)
	Delivery by De Luz Trucking for Northwest Construction to CSO Site

PICTURE (3)	DESCRIPTION (3)
	Debri on tracks of excavator

PICTURE (2)	DESCRIPTION (2)
	2nd delivery

PICTURE (4)	DESCRIPTION (4)
	Excavator being clean by Goodfellow Contruction crews

HAWAIIAN CULTURAL MONITOR REPORT

A Cultural Monitor documents and observes actions on significant historic properties and mitigates those effects. Pursuant to 2012 S.C.R NO. 115: "Whereas, the State of Hawaii places a high priority on protecting and preserving its historic and cultural resources which include Iwi Kupuna or Hawaiian Burial remains…"

PICTURE (5)	DESCRIPTION (5)
	Debri located just behind the left rear tire of the tractor loader from excavator tracks after being moved to a different location

PICTURE (7)	DESCRIPTION (7)

PICTURE (6)	DESCRIPTION (6)

PICTURE (8)	DESCRIPTION (8)

AECOM

INDEPENDENT DECOMMISSIONING PROJECT MANAGER PROJECT DIARY

DATE : **Tuesday, April 23, 2024**

WEATHER: Suitable For All Planned Work
At CSO, clear, light wind. Temp at 9am 45F. Up to high 50s in the afternoon.

PROJECT TITLE: **Caltech Submillimeter Observatory Decommissioning**

Work Hours:
Arrv: **0900**
Dep: **1430**

Report By: **Shawn Gardner**

Monitors on Site:	Cultural - Peter Alu

Work Items	**Location & Description of Work/Activities**
Demolition	Two personnel from MKSS removed the lubrication oil from the CSO compressor first thing in the morning, assisted by Simon. The two trucks mobilizing equipment to the site arrived at HP at 0845. The first, transporting an excavator, arrived at the site at 1030. After the excavator was unloaded, that truck departed. The second truck, transporting the boom and other equipment for the long reach excavator, arrived at the site at 1100. It was parked and remained on site. The inspection certificates are attached to this report. GBI personnel installed the remainder of the "No Trespassing" signs on the construction fence. During the unloading of the excavator, it was noted that dried mud was coming off of the tracks onto the pavement. The excavator was parked on the pavement next to the dome, the material that had fallen onto the pavement was swept up, and the tracks were cleaned by the GBI crew. Using the boom, one track at a time was lifted off the pavement, and dropcloth was put under the track. Then all of the dried earth material was scraped out of the tracks and collected with a shop vac. All of the material collected in the vac and the amounts that fell on the dropcloth were secured for removal from the Mauna. Simon Radford and Stewart Hunter were onsite in the morning.

WORK FORCE & EQUIPMENT

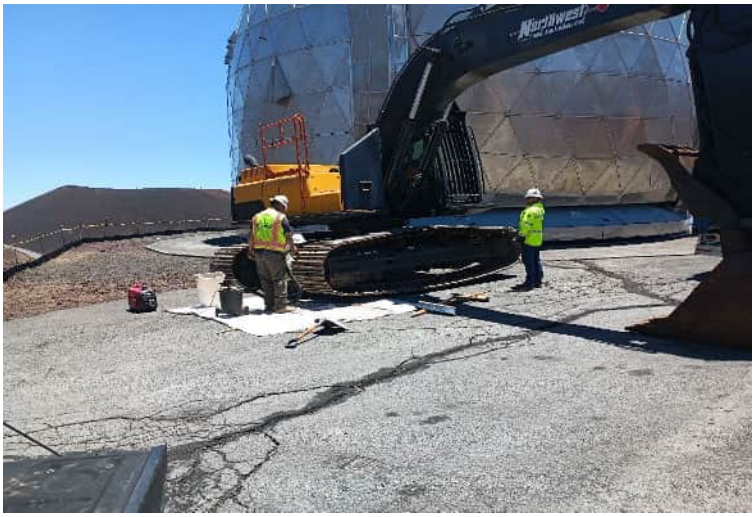
NAME	POS	HR	Company	EQUIPMENT	MODEL/TYPE	HR
Jon Steen		6	GBI	Loader	CAT 950 GC	
Cody Brown		6	GBI	Excavator	Volvo EC300DL	
Bronson Sylva		6	GBI	Semi tractor lic. 208HED w/lowboy trailer	Kenworth	
Sam Peck		6	GBI			
Brandon Kepano		6	GBI			

Signed by: _____ Reviewed by: Shawn Gardner Date 4/23/2024

^ 8:41am - trucks approaching HP

^ 10:29am - excavator arrives at site

^ 11:00am - long reach boom arrives at site



^ 12:56pm - cleaning excavator tracks

^ 2:05pm - track cleaning completed

^ 2:35pm - site closed for the day

No. 01041

OMKM
Office of Maunakea Management

INVASIVE SPECIES INSPECTION CERTIFICATE

Delivery is:

APPROVED **REJECTED**

Date and Time: 4/22/24 4:10pm

Expiration date and time: 4/26/24 4:10pm

Destination: CSO site summit

Vehicle Lic/Descrip: temp license Semi PUC 5093-C

Cargo Description: lowboy trailer

Bait used? Yes No

Inspector: James Parker

Inspection location: De Luz Waimea

Facility/Representative: Bruce Burley

Concerns identified: N/A

Remediation taken: N/A

Rush inspection? Yes No

DELIBERATE NON-COMPLIANCE **NON-COMPLIANCE (UNAWARE)**

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/

No. 01042

OMKM
Office of Maunakea Management

INVASIVE SPECIES INSPECTION CERTIFICATE

Delivery is:

APPROVED **REJECTED**

Date and Time: 4/22/24 4pm

Expiration date and time: 4/26/24 4pm

Destination: CSO site summit

Vehicle Lic/Descrip: excavator

Cargo Description:

Bait used? (Yes) No

Inspector: James Parker

Inspection location: De Luz Waimea

Facility/Representative: Bruce Burley

Concerns identified: N/A

Remediation taken: N/A

Rush inspection? Yes (No)

DELIBERATE NON-COMPLIANCE **NON-COMPLIANCE (UNAWARE)**

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/

No. 01039

OMKM
Office of Maunakea Management

INVASIVE SPECIES INSPECTION CERTIFICATE

Delivery is:

APPROVED

REJECTED

Date and Time: 4/22/24 4pm

Expiration date and time: 4/26/24 4pm

Destination: CSO site Summit

Vehicle Lic/Descrip: 208 HED Semi

Cargo Description: Silver lowboy

Bait used? (Yes) No

Inspector: James Parker

Inspection location: De Luz Waimea

Facility/Representative: Bruce Burley

Concerns identified: N/A

Remediation taken: N/A

Rush inspection? Yes (No)

DELIBERATE NON-COMPLIANCE

NON-COMPLIANCE (UNAWARE)

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/

No. 01038

OMKM
Office of Maunakea Management

INVASIVE SPECIES INSPECTION CERTIFICATE

Delivery is:

APPROVED **REJECTED**

Date and Time: 4/22/24 4pm

Expiration date and time: 4/26/24 4pm

Destination: CSO site summit

Vehicle Lic/Descrip: silver lowboy trailer

Cargo Description: Boom/shear/grapple

Bait used? (Yes) No

Inspector: James Parker

Inspection location: De Luz Waimea

Facility/Representative: Bruce Burley

Concerns identified: N/A

Remediation taken: N/A

Rush inspection? Yes (No)

DELIBERATE NON-COMPLIANCE **NON-COMPLIANCE (UNAWARE)**

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

HAWAIIAN CULTURAL MONITOR REPORT

DATE: 2024-04-29

A Cultural Monitor documents and observes actions on significant historic properties and mitigates those effects. Pursuant to 2012 S.C.R NO. 115: "Whereas, the State of Hawaii places a high priority on protecting and preserving its historic and cultural resources which include Iwi Kupuna or Hawaiian Burial remains…"

PROJECT NAME: Caltech Submillimeter Observatory Decommissioning Project

WORK CREW: GBI - J. Steen (PM); C. Brown; B. Silva; B. Kepano; K. Drummundo

HAWAIIAN CULTURAL MONITOR: Gerard Mahi

WORK CREW: NW DEMO: B. Burley; A. Ortiz; D. Miguel - Lehua Environmental: K. Kobaiyashi

WORK CREW: AECOM: S. Gardner - CMS: S. Hunter; K. Halemano

WORK CREW: UNITEK: J. Abella; J. Ebuen; J. Abella

TIME	OBSERVATIONS	FINDINGS (YES OR NO)
0735-0815	Travel from Hale Pohaku to Caltech Submillimeter site. Arrived first on site. Opening photos taken of CSO. Photos two and three show signs of oil leak from hoses of the Sky Reach. UNITEK did cleanup.	Yes
0905-0916	First two Deluz trucks arrive at CSO. Keanu Kane & Jeremy Gallup. NW Demo crew, Stuart Hunter(CMS), & Bronson Silva(GBI) on site.	No
1000-1014	Third truck arrived - Driver: Lana Simmons. Fourth Deluz truck (Driver- Earlson Kanaiaupo) & Karl Halemano arrived on site. Three workers arrived from UNITEK and one worker from Lehua Environmental.	No
1022	Fifth Deluz truck arrived. Driver- Kekoa Bagorio. NW Demo Supervisor Lucas on site.	No
1240-1250	Loading debris onto first truck to be loaded out.	No
1250-1300	Truck 2 loading, and is done.	No

HAWAIIAN CULTURAL MONITOR REPORT

A Cultural Monitor documents and observes actions on significant historic properties and mitigates those effects. Pursuant to 2012 S.C.R NO. 115: "Whereas, the State of Hawaii places a high priority on protecting and preserving its historic and cultural resources which include Iwi Kupuna or Hawaiian Burial remains…"

TIME	OBSERVATIONS	FINDINGS (YES OR NO)
1300-1314	Truck 3 is here getting loaded, and is done.	No
1314-1335	Truck 4 in and out with a load of debris.	No
1350-1442	Truck 5 is loaded and ready to go.	No
1345-1530	Unitek doing cleanup. NW Demo removing units from CSO interior.	No
1530	NW Demo left CSO.	No
1605	Departed from CSO, heading for Hale Pohaku.	No
1635	Arrived at Hale Pohaku. End of Day!	No

HAWAIIAN CULTURAL MONITOR REPORT

A Cultural Monitor documents and observes actions on significant historic properties and mitigates those effects. Pursuant to 2012 S.C.R NO. 115: "Whereas, the State of Hawaii places a high priority on protecting and preserving its historic and cultural resources which include Iwi Kupuna or Hawaiian Burial remains…"

PICTURE (1)	DESCRIPTION (1)
	Opening shot of the day.

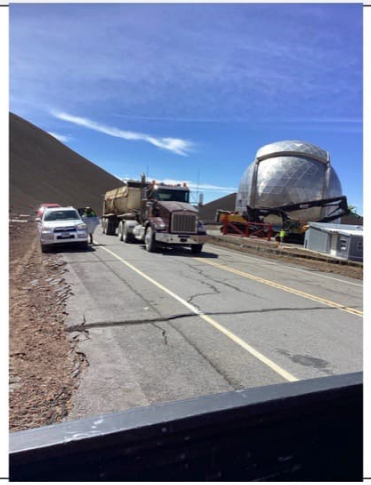
PICTURE (3)	DESCRIPTION (3)
	Second oil leak detected from Sky Reach.

PICTURE (2)	DESCRIPTION (2)
	Oil leak detected from Sky Reach.

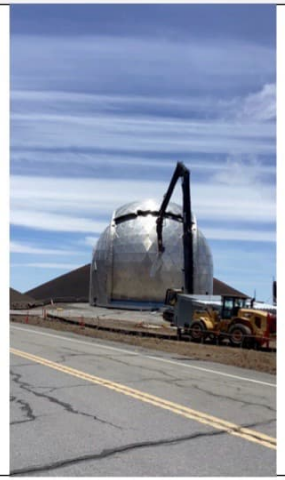
PICTURE (4)	DESCRIPTION (4)
	First De Luz truck arrives.

HAWAIIAN CULTURAL MONITOR REPORT

A Cultural Monitor documents and observes actions on significant historic properties and mitigates those effects. Pursuant to 2012 S.C.R NO. 115: "Whereas, the State of Hawaii places a high priority on protecting and preserving its historic and cultural resources which include Iwi Kupuna or Hawaiian Burial remains…"

PICTURE (5)	DESCRIPTION (5)
	Second truck arrives.

PICTURE (7)	DESCRIPTION (7)
	Dome work continues.

PICTURE (6)	DESCRIPTION (6)
	Work starts on CSO dome.

PICTURE (8)	DESCRIPTION (8)
	First truck gets loaded.

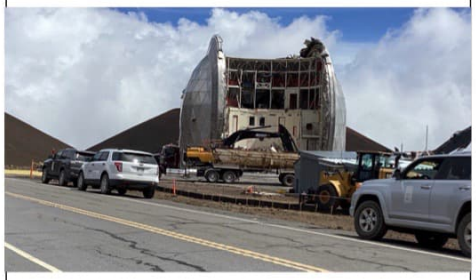
HAWAIIAN CULTURAL MONITOR REPORT

A Cultural Monitor documents and observes actions on significant historic properties and mitigates those effects. Pursuant to 2012 S.C.R NO. 115: "Whereas, the State of Hawaii places a high priority on protecting and preserving its historic and cultural resources which include Iwi Kupuna or Hawaiian Burial remains…"

PICTURE (9)	DESCRIPTION (9)
	Second truck gets loaded.

PICTURE (11)	DESCRIPTION (11)
	Fourth truck gets loaded.

PICTURE (10)	DESCRIPTION (10)
	Third truck gets loaded.

PICTURE (12)	DESCRIPTION (12)
	Fifth truck gets loaded.

HAWAIIAN CULTURAL MONITOR REPORT

A Cultural Monitor documents and observes actions on significant historic properties and mitigates those effects. Pursuant to 2012 S.C.R NO. 115: "Whereas, the State of Hawaii places a high priority on protecting and preserving its historic and cultural resources which include Iwi Kupuna or Hawaiian Burial remains…"

PICTURE (13)	DESCRIPTION (13)
	UNITEK crew cleaning up.

PICTURE (15)	DESCRIPTION (15)

PICTURE (14)	DESCRIPTION (14)
	Closing shot of the day.

PICTURE (16)	DESCRIPTION (16)

AECOM

INDEPENDENT DECOMMISSIONING PROJECT MANAGER PROJECT DIARY

DATE : **Monday, April 29, 2024**

WEATHER: Suitable For All Planned Work
At CSO, high clouds, light wind. Temp at 10am 50F. Up to low 50s in the afternoon.

PROJECT TITLE: **Caltech Submillimeter Observatory Decommissioning**

Work Hours:
Arrv: **0900**
Dep: **1600**

Report By: **Shawn Gardner**

Monitors on Site:	Cultural - Gerard Mahi

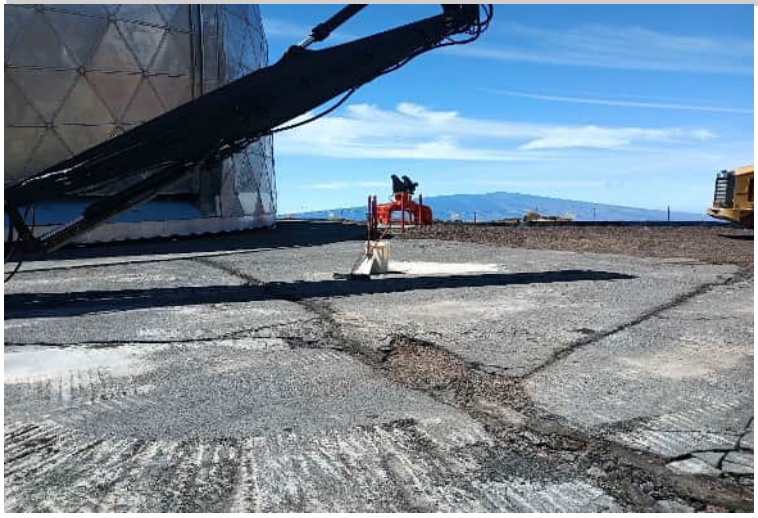
Work Items	Location & Description of Work/Activities
Demolition	Cultural Orientation was conducted at HP, started at 0900 due to personnel arriving from interisland. Included personnel both in person and on Zoom meetings. Upon arriving at the CSO site in the morning, it was found that the HR excavator had developed another leak over the weekend. The oil was cleaned up, and the NW team made repairs that resolved the leaks. At 1150, work was started on demolition of the dome shutters. By 1230, all of the front shutter and most of the top shutter were removed, and work began on loading the demoed material on the trucks. Almost all the material fit on the first four trucks, so the the remainder of the top shutter was demoed, and the material loaded on the fifth truck. That last truck departed at ~1400. The site was thoroughly cleaned up, with the cleanup work finishing at 1600.

WORK FORCE & EQUIPMENT

NAME	POS	HR	Company	EQUIPMENT	MODEL/TYPE	HR
Jon Steen		8	GBI	20' Container		
Bronson Sylva		8	GBI	Loader	CAT 950 GC	
Brandon Kepano		8	GBI	Excavator	Volvo EC300DL	
Keala Drummondo		8	GBI	High Reach Excavator	Volvo EC480E HR	
				Sunbelt rental manlift	JLG 660SJ	
Bruce Burley		8	NW Demo			
Anthony Ortiz		8	NW Demo			
Darren Whittaker		8	NW Demo			
Jeff Abella		6	Unitek			
Jone Abella		6	Unitek			
Jomhel Ebuen		6	Unitek			
Kama Kobayashi		6	Lehua Environmental			

Signed by: 

Reviewed by: Shawn Gardner Date 4/29/2024



^ 10:45am - cleaned up oil leak

^ 11:50am - started demo

^ 12:30pm - most of shutters demoed

^ 12:36pm - loading demoed material

^ 3:13pm - cleanup in progress

^ 4:03pm - site closed for the day

No. 1609

UNIVERSITY of HAWAI'I at HILO
CENTER FOR MAUNAKEA STEWARDSHIP

INVASIVE SPECIES INSPECTION CERTIFICATE

Delivery is: ☒ APPROVED ☐ REJECTED

Date and Time: 4/25/24 4pm
Expiration date and time: 4/29/24 4pm
Destination: CSO site summit
Vehicle Lic & Owner: 188 HEB Semi
Cargo Description: Dump trailer

Inspector: James Parker
Inspection location: De Luz Waimea
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.

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

(Earlson)

No. 1608

UNIVERSITY of HAWAI'I at HILO
CENTER FOR MAUNAKEA STEWARDSHIP

INVASIVE SPECIES INSPECTION CERTIFICATE

Delivery is: ☒ APPROVED ☐ REJECTED

Date and Time: 4/25/24 4pm
Expiration date and time: 4/29/24
Destination: CSO site summit
Vehicle Lic & Owner: 059 WDA Trailer
Cargo Description: Empty

Inspector: James Parker
Inspection location: De Luz Waimea
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.

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

(Earlson)

No. 1641

UNIVERSITY of HAWAI'I at HILO
CENTER FOR MAUNAKEA STEWARDSHIP

INVASIVE SPECIES INSPECTION CERTIFICATE

Delivery is: ☒ APPROVED ☐ REJECTED

Date and Time: 4/25/24 4pm
Inspector: James Parker
Expiration date and time: 4/29/24 4pm
Inspection location: De Luz Waimea
Destination: CSO site summit
Facility/Representative: Kevin Balog
Vehicle Lic & Owner: 303 HDV Semi
Concerns identified: N/A
Cargo Description: dump 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/

Jonony

No. 1610

UNIVERSITY of HAWAI'I at HILO
CENTER FOR MAUNAKEA STEWARDSHIP

INVASIVE SPECIES INSPECTION CERTIFICATE

Delivery is: ☒ APPROVED ☐ REJECTED

Date and Time: 4/25/24 4:15pm
Inspector: James Parker
Expiration date and time: 4/29/24 4:15pm
Inspection location: De Luz Waimea
Destination: CSO site summit
Facility/Representative: Kevin Balog
Vehicle Lic & Owner: 710 HYP 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.

Drivers should keep this certificate in vehicle when making delivery.

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

Jonony

No. 1726

UNIVERSITY of HAWAI'I at HILO
CENTER FOR MAUNAKEA STEWARDSHIP

INVASIVE SPECIES INSPECTION CERTIFICATE

Delivery is: ☒ APPROVED ☐ REJECTED

Date and Time: 4/25/24 4pm
Expiration date and time: 4/29/24 4pm
Destination: CSO site Summit
Vehicle Lic & Owner: 190 HEB Semi
Cargo Description: Dump trailer

Inspector: James Parker
Inspection location: De Luz Waimea
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.

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

Mucap

No. 1727

UNIVERSITY of HAWAI'I at HILO
CENTER FOR MAUNAKEA STEWARDSHIP

INVASIVE SPECIES INSPECTION CERTIFICATE

Delivery is: ☒ APPROVED ☐ REJECTED

Date and Time: 4/25/24 4pm
Expiration date and time: 4/29/24 4pm
Destination: CSO site summit
Vehicle Lic & Owner: 159 HYX Trailer
Cargo Description: empty

Inspector: James Parker
Inspection location: De Luz Waimea
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.

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

Mucap

No. 1611

UNIVERSITY of HAWAI'I at HILO
CENTER FOR MAUNAKEA STEWARDSHIP

INVASIVE SPECIES INSPECTION CERTIFICATE

Delivery is: ☒ APPROVED ☐ REJECTED

Date and Time: 4/25/24 4:15pm
Inspector: James Parker
Expiration date and time: 4/29/24
Inspection location: De Luz Waimea
Destination: CSO site summit
Facility/Representative: Kevin Baloy
Vehicle Lic & Owner: 881 HEC Semi
Concerns identified: N/A
Cargo Description: empty 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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For more information please visit: www.malamamaunakea.org/inspections/

LMA

No. 1612

UNIVERSITY of HAWAI'I at HILO
CENTER FOR MAUNAKEA STEWARDSHIP

INVASIVE SPECIES INSPECTION CERTIFICATE

Delivery is: ☒ APPROVED ☐ REJECTED

Date and Time: 4/25/24 4:15pm
Inspector: James Parker
Expiration date and time: 4/29/24 4:15pm
Inspection location: De Luz Waimea
Destination: CSO site summit
Facility/Representative: Kevin Baloy
Vehicle Lic & Owner: 921 HZL 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)

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LMA

HAWAIIAN CULTURAL MONITOR REPORT

DATE: 2024-04-30

A Cultural Monitor documents and observes actions on significant historic properties and mitigates those effects. Pursuant to 2012 S.C.R NO. 115: "Whereas, the State of Hawaii places a high priority on protecting and preserving its historic and cultural resources which include Iwi Kupuna or Hawaiian Burial remains…"

PROJECT NAME: Caltech Submillimeter Observatory Decommissioning Project

WORK CREW: GBI - J. Steen (PM); C. Brown; B. Silva; B. Kepano; K. Drummundo

HAWAIIAN CULTURAL MONITOR: Gerard Mahi

WORK CREW: UNITEK: J. Abella; J. Ebuen; J. Abella - Lehua Environmental: K. Kobaiyashi

WORK CREW: AECOM: S. Gardner - CMS: S. Hunter; K. Halemano

WORK CREW: NW DEMO: B. Burley; A. Ortiz; D. Miguel - D&M Hydraulics: J. Pasa; F. Feliciano

TIME	OBSERVATIONS	FINDINGS (YES OR NO)
0700	Morning meeting with the above named people in attendance, and Chief Ranger D. Waipa. Morning prayer offered by G. Mahi.	No
0720	Departed Hale Pohaku(HP), headed for CalTech Submillimeter Observatory(CSO).	No
0740	Arrived at CSO, opening shots taken. All in order small amount of oil leak from the large wrecker.	No
0810-0846	0810: First Deluz dump truck arrived. 0823: Second Deluz truck arrived. 0828: Sky Reach working. 0846: GBI Water Truck on site.	No
0852-0931	0852: Truck 3 arrived at CSO. 0911: Truck 4 is here at CSO. 0931: Truck 5 arrived at CSO.	No
1017	Oil leak on the excavator causes a burst of smoke, stopping all work and requiring containment and cleanup measures by Unitek and others.	Yes

HAWAIIAN CULTURAL MONITOR REPORT

A Cultural Monitor documents and observes actions on significant historic properties and mitigates those effects. Pursuant to 2012 S.C.R NO. 115: "Whereas, the State of Hawaii places a high priority on protecting and preserving its historic and cultural resources which include Iwi Kupuna or Hawaiian Burial remains…"

TIME	OBSERVATIONS	FINDINGS (YES OR NO)
1104	All five dump trucks were dismissed from the area due to equipment failure.	No
1109	An inspection by NW Demo workers determined a hose sprung a leak which caused the oil fluid to leak from engine compartment.	No
1200-1245	Lunch break.	No
1400	D&M Hydraulics (Franko Feliciano, Joseph Pasa), working on cylinders .	No
1710	Departed CSO.	No
1735	Arrived at Hale Pohaku. End of Day.	No

HAWAIIAN CULTURAL MONITOR REPORT

A Cultural Monitor documents and observes actions on significant historic properties and mitigates those effects. Pursuant to 2012 S.C.R NO. 115: "Whereas, the State of Hawaii places a high priority on protecting and preserving its historic and cultural resources which include Iwi Kupuna or Hawaiian Burial remains…"

PICTURE (1)	DESCRIPTION (1)
	Opening shot of the day.

PICTURE (3)	DESCRIPTION (3)
	GBI water truck used to keep dust down with streams of water.

PICTURE (2)	DESCRIPTION (2)
	Sky Reach working on interior of dome.

PICTURE (4)	DESCRIPTION (4)
	Oil leak from the engine of the Sky Reach.

HAWAIIAN CULTURAL MONITOR REPORT

A Cultural Monitor documents and observes actions on significant historic properties and mitigates those effects. Pursuant to 2012 S.C.R NO. 115: "Whereas, the State of Hawaii places a high priority on protecting and preserving its historic and cultural resources which include Iwi Kupuna or Hawaiian Burial remains…"

PICTURE (5)	DESCRIPTION (5)
	Due to the oil leak, work slowed down. All five dump trucks were released from the area.

PICTURE (7)	DESCRIPTION (7)
	Cylinders were wrapped ahead of their removal.

PICTURE (6)	DESCRIPTION (6)
	Oil spill is cleaned up.

PICTURE (8)	DESCRIPTION (8)
	Closing shot of the day.

AECOM

INDEPENDENT DECOMMISSIONING PROJECT MANAGER PROJECT DIARY

DATE : **Tuesday, April 30, 2024**

WEATHER: Suitable For All Planned Work
At CSO, high clouds/overcast, light wind. Temp at 8am 35F. Up to high 40s and partly cloudy in the afternoon.

PROJECT TITLE: **Caltech Submillimeter Observatory Decommissioning**

Work Hours:
Arrv: **0730**
Dep: **1700**

Report By: **Shawn Gardner**

Monitors on Site:	Cultural - Gerard Mahi

Work Items	**Location & Description of Work/Activities**
Demolition	Personnel began arriving on site at about 0730, and the excavators were started to warm up. The first haul truck arrived at 0800, the last one arrived at 0930. NW started demo at 0830, working mainly on the gyp-board wall rooms. The water truck applied minimal water needed for dust control. At 1034, the excavator expelled a cloud of white smoke, and then hydraulic oil dropped out of the bottom of the engine compartment. The machine was immediately shut off and personnel began containment. Within one minute of the spill, absorbent "snakes" contained the perimeter of the oil, and within two minutes, absorbent materials had been spread over the spill area. Additional absorbent materials were added over the next several minutes, and the area stayed under close monitoring. The unloaded haul trucks departed at 1105. Simon Radford arrived with a rental truck right after the spill occurred. After the spill was contained and the situation was stabilized, the remaining telescope items were loaded on the truck and he departed. The person from JCMT also picked up the UPS units at that time. The oil-absorbent mats and pillows were collected up and additional granular absorbent was spread over the spill area. After lunch, the demoed material in the dome was covered with plastic, and Unitek cleaned up the small amount of material that had fallen outside the dome. NW had identified the failed hydraulic line in the engine compartment and went to Hilo to get replacement parts. They arrived back at the site with the replacement parts, hydraulic oil, and more than enough absorbent materials to replenish the spill kits that had been used. By 1615, the repairs were complete, ten gallons of hydraulic oil were added to the reservoir, and the excavator hydraulics tested. The the excavator was cleaned and the remaining used absorbent materials were cleaned up, and final site cleanup performed. All personnel had left the site by 1710. Note: The amount of oil spilled was 10-15 gallons, less than the amount triggering the reporting requirement by DOH.

WORK FORCE & EQUIPMENT

NAME	POS	HR	Company	EQUIPMENT	MODEL/TYPE	HR
Jon Steen		10	GBI	20' Container		
Bronson Sylva		10	GBI	Loader	CAT 950 GC	
Brandon Kepano		10	GBI	Excavator	Volvo EC300DL	
Keala Drummondo		10	GBI	High Reach Excavator	Volvo EC480E HR	
				Sunbelt rental manlift	JLG 660SJ	
Bruce Burley		10	NW Demo			
Anthony Ortiz		10	NW Demo			
Darren Whittaker		10	NW Demo			
Jeff Abella		8	Unitek			
Jone Abella		8	Unitek			
Jomhel Ebuen		8	Unitek			
Kama Kobayashi		8	Lehua Environmental			

Signed by: 

Reviewed by: Shawn Gardner Date 4/30/2024

^ 10:04am - demo in progress

^ 10:34:05am - oil spilled from excavator

^ 10:34:44am - containment started

^ 10:35:46am - perimeter contained and materials being placed

^ 4:52pm - cleaning up last absorbent material

^ 5:10pm - site closed for the day

No. 1617

UNIVERSITY of HAWAI'I at HILO
CENTER FOR MAUNAKEA STEWARDSHIP

INVASIVE SPECIES INSPECTION CERTIFICATE

Delivery is: ☒ APPROVED ☐ REJECTED

Date and Time: 4/29/24 4pm
Inspector: James Parker
Expiration date and time: 5/3/24 4pm
Inspection location: De Luz Waimea
Destination: CSO site summit
Facility/Representative: Kevin Balog
Vehicle Lic & Owner: 188 HEB Semi
Concerns identified: N/A
Cargo Description: empty dump 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/

EDMUNDSON

No. 1616

UNIVERSITY of HAWAI'I at HILO
CENTER FOR MAUNAKEA STEWARDSHIP

INVASIVE SPECIES INSPECTION CERTIFICATE

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Date and Time: 4/29/24 4pm
Inspector: James Parker
Expiration date and time: 5/3/24 4pm
Inspection location: De Luz Waimea
Destination: CSO site summit
Facility/Representative: Kevin Balog
Vehicle Lic & Owner: 059 WDA 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)

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EDMUNDSON

No. 1622

UNIVERSITY of HAWAI'I at HILO
CENTER FOR MAUNAKEA STEWARDSHIP

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Date and Time: 4/29/24 4pm
Inspector: James Parker
Expiration date and time: 5/3/24 4pm
Inspection location: De Luz Waimea
Destination: CSO site summit
Facility/Representative: Kevin Balog
Vehicle Lic & Owner: 303 HDV Semi
Concerns identified: N/A
Cargo Description: empty dump 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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Jeremy

No. 1621

UNIVERSITY of HAWAI'I at HILO
CENTER FOR MAUNAKEA STEWARDSHIP

INVASIVE SPECIES INSPECTION CERTIFICATE

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Date and Time: 4/29/24 4pm
Inspector: James Parker
Expiration date and time: 5/3/24 4pm
Inspection location: De Luz Waimea
Destination: CSO site summit
Facility/Representative: Kevin Balog
Vehicle Lic & Owner: 710 HYP 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)

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Jeremy

No. 1624

UNIVERSITY of HAWAI'I at HILO
CENTER FOR MAUNAKEA STEWARDSHIP

INVASIVE SPECIES INSPECTION CERTIFICATE

Delivery is: ☒ APPROVED ☐ REJECTED

Date and Time: 4/29/24 4pm
Inspector: James Parker
Expiration date and time: 5/3/24 4pm
Inspection location: De Luz Waimea
Destination: CSO site summit
Facility/Representative: Kevin Balog
Vehicle Lic & Owner: temp license PUC 5093-C Semi
Concerns identified: N/A
Cargo Description: empty dump 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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Kawai

No. 1623

UNIVERSITY of HAWAI'I at HILO
CENTER FOR MAUNAKEA STEWARDSHIP

INVASIVE SPECIES INSPECTION CERTIFICATE

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Date and Time: 4/29/24 4pm
Inspector: James Parker
Expiration date and time: 5/3/24 4pm
Inspection location: De Luz Waimea
Destination: CSO site summit
Facility/Representative: Kevin Balog
Vehicle Lic & Owner: 795 HYR 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)

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Kawai

No. 1626

UNIVERSITY of HAWAI'I at HILO
CENTER FOR MAUNAKEA STEWARDSHIP

INVASIVE SPECIES INSPECTION CERTIFICATE

Delivery is: ☒ APPROVED ☐ REJECTED

Date and Time: 4/29/24 4pm
Inspector: James Parker
Expiration date and time: 5/3/24 4pm
Inspection location: De Luz Waimea
Destination: CSO site summit
Facility/Representative: Kevin Balog
Vehicle Lic & Owner: 190 HEB Semi
Concerns identified: N/A
Cargo Description: dump 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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Kevin

No. 1625

UNIVERSITY of HAWAI'I at HILO
CENTER FOR MAUNAKEA STEWARDSHIP

INVASIVE SPECIES INSPECTION CERTIFICATE

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Date and Time: 4/29/24 4pm
Inspector: James Parker
Expiration date and time: 5/3/24 4pm
Inspection location: De Luz Waimea
Destination: CSO site summit
Facility/Representative: Kevin Balog
Vehicle Lic & Owner: 159 HYX 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)

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Kevin

No. 1620

UNIVERSITY of HAWAI'I at HILO
CENTER FOR MAUNAKEA STEWARDSHIP

INVASIVE SPECIES INSPECTION CERTIFICATE

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Date and Time: 4/29/24 4pm
Inspector: James Parker
Expiration date and time: 5/3/24 4pm
Inspection location: De Luz Waimea
Destination: CSO site summit
Facility/Representative: Kevin Balog
Vehicle Lic & Owner: 881 HEC semi
Concerns identified: N/A
Cargo Description: empty dump 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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LMA

No. 1619

UNIVERSITY of HAWAI'I at HILO
CENTER FOR MAUNAKEA STEWARDSHIP

INVASIVE SPECIES INSPECTION CERTIFICATE

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Date and Time: 4/29/24 4pm
Inspector: James Parker
Expiration date and time: 5/3/24 4pm
Inspection location: De Luz Waimea
Destination: CSO site summit
Facility/Representative: Kevin Balog
Vehicle Lic & Owner: 921 HZL 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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LMA

HAWAIIAN CULTURAL MONITOR REPORT

DATE: 2024-05-01

A Cultural Monitor documents and observes actions on significant historic properties and mitigates those effects. Pursuant to 2012 S.C.R NO. 115: "Whereas, the State of Hawaii places a high priority on protecting and preserving its historic and cultural resources which include Iwi Kupuna or Hawaiian Burial remains…"

PROJECT NAME: Caltech Submillimeter Observatory Decommissioning Project

HAWAIIAN CULTURAL MONITOR: Gerard Mahi

WORK CREW: AECOM: S. Gardner - CMS: S. Hunter; K. Halemano

WORK CREW: GBI - J. Steen (PM); C. Brown; B. Silva; B. Kepano; K. Drummundo

WORK CREW: UNITEK: J. Abella; J. Ebuen; J. Abella - Lehua Environmental: N. Garaganza-Tengan

WORK CREW: NW DEMO: B. Burley; A. Ortiz; D. Miguel - D&M Hydraulics: J. Pasa; F. Feliciano

TIME	OBSERVATIONS	FINDINGS (YES OR NO)
0700	Morning meeting and protocol. Prayer given by G. Mahi. The above mentioned crews were present, including Chief Ranger D. Waipa.	No
0720-0745	Travel to CSO. NWD, Unitek, First De Luz dump truck, and GBI water truck on site.	No
0805-0855	0805: Truck 2 arrived. 0830: S. Gardner arrive on site. 0855: Sky Reach has a problem with a bolt on the arm of the machine. S. Hunter assisted in obtaining a replacement.	No
0910-0925	Driver K. Kane was the first to load up.	No
0929-0950	Driver L. Simmons was second up to be loaded.	No
1040-1051	1040: Truck 3 arrive on site. 1051: K. Kane and L. Simmons escorted down the summit by GBI: B. Silva.	No

HAWAIIAN CULTURAL MONITOR REPORT

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TIME	OBSERVATIONS	FINDINGS (YES OR NO)
1104	Truck 4 is on site.	No
1110	Truck 3 is done loading.	No
1130	Truck 4 is done loading, staging for an escort down from the summit.	No
1200-1245	Lunch break.	No
1245-1500	NWD performing maintenance on the engine of the Sky Reacher.	No
1555	Closing shots taken.	No
1610-1645	Travel from CSO to HP, then the Sunbelt Rental truck was gassed up.	No

HAWAIIAN CULTURAL MONITOR REPORT

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PICTURE (1)	DESCRIPTION (1)
	Opening shot of the day.

PICTURE (2)	DESCRIPTION (2)
	Shot of CSO dome.

PICTURE (3)	DESCRIPTION (3)
	Driver K. Kane's truck is being loaded.

PICTURE (4)	DESCRIPTION (4)
	Driver L. Simmons truck being loaded.

HAWAIIAN CULTURAL MONITOR REPORT

A Cultural Monitor documents and observes actions on significant historic properties and mitigates those effects. Pursuant to 2012 S.C.R NO. 115: "Whereas, the State of Hawaii places a high priority on protecting and preserving its historic and cultural resources which include Iwi Kupuna or Hawaiian Burial remains…"

PICTURE (5)	DESCRIPTION (5)
	Right rear angle view of the Volvo 480 getting some maintenance done.

PICTURE (7)	DESCRIPTION (7)
	Asphalt surface free of hazardous substance fluid.

PICTURE (6)	DESCRIPTION (6)
	Left rear view of the Volvo 480 maintenance.

PICTURE (8)	DESCRIPTION (8)
	Closing shot of the day.

AECOM

INDEPENDENT DECOMMISSIONING PROJECT MANAGER PROJECT DIARY

DATE : **Wednesday, May 1, 2024**

WEATHER: Suitable For All Planned Work
At CSO, high clouds, light wind. Temp at 8am 35F. Up to high 40s and variably cloudy in the afternoon.

PROJECT TITLE: **Caltech Submillimeter Observatory Decommissioning**

Work Hours:
Arrv: **0830**
Dep: **1600**

Report By: **Shawn Gardner**

Monitors on Site:	Cultural - Gerard Mahi

Work Items	**Location & Description of Work/Activities**
Demolition	Upon arrival at the CSO site, it was found that some residual hydraulic oil from the engine compartment of the HR excavator had leaked onto the pavement. The oil was cleaned up and work started. NW continued demolition inside the dome until 0830, then started loading trucks with the demoed material. Four trucks arrived at the site this date (certs attached) and were loaded and departed the site by 1130. After lunch, NW demoed a portion of the hydraulic cylinder shaft on the south side so that the sheave block could be removed with the cylinder. Then, using the manlift, the cables were cut away from the sheave block. The bolts at the bottom end of the cylinder were removed, and half of them were reinstalled handtight to secure the cylinder until it is removed. NW made the decision to remove the cylinders on Thursday (5/2). Unitek did their site cleanup in the afternoon and were done by the time the cylinder was finished be prepped for removal at 1400. To mitigate the issue of residual oil leaking out of the HR excavator, ground sheets were laid on the pavement, and the excavator was parked on them. Absorbent "snakes" were installed to contain any oil that leaks overnight. The NW crew spent about an hour and a half continuing cleaning the excavator, and putting absorbent materials in the engine compartment. Following that, they did the final site cleanup. All personnel has left the site by 1610.

WORK FORCE & EQUIPMENT

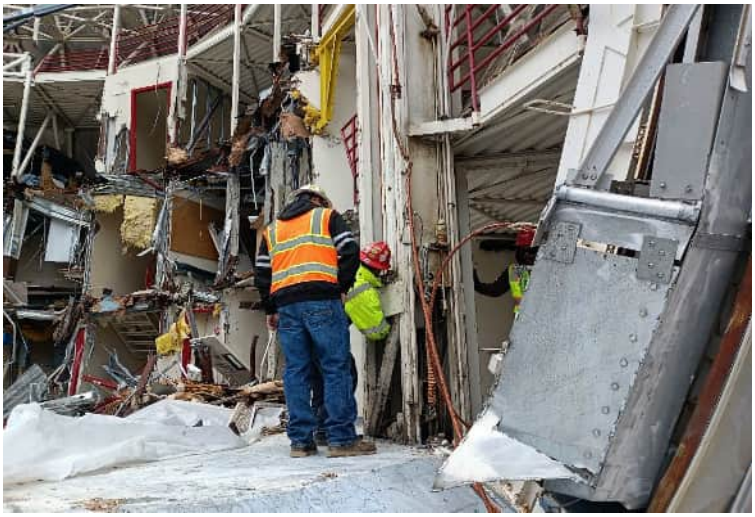
NAME	POS	HR	Company	EQUIPMENT	MODEL/TYPE	HR
Jon Steen		8	GBI	20' Container		
Bronson Sylva		8	GBI	Loader	CAT 950 GC	
Brandon Kepano		8	GBI	Excavator	Volvo EC300DL	
Keala Drummondo		8	GBI	High Reach Excavator	Volvo EC480E HR	
Sam Peck		8	GBI	Sunbelt rental manlift	JLG 660SJ	
Bruce Burley		8	NW Demo			
Anthony Ortiz		8	NW Demo			
Darren Whittaker		8	NW Demo			
Jeff Abella		8	Unitek			
Jone Abella		8	Unitek			
Jomhel Ebuen		8	Unitek			
Nicole Garaganza		8	Lehua Environmental			

Signed by: 

Reviewed by: Shawn Gardner Date 5/1/2024

^ 8:29am - demo in progress

^ 11:17am - loading last truck



^ 1:15pm - removing bolts from bottom of cylinder

^ 2:10pm - shutter cylinder prepped for removal

^ 3:12pm - cleaning the excavator

^ 4:11pm - site closed for the day

No. 1622

UNIVERSITY of HAWAI'I at HILO
CENTER FOR MAUNAKEA STEWARDSHIP

INVASIVE SPECIES INSPECTION CERTIFICATE

Delivery is: ☒ APPROVED ☐ REJECTED

Date and Time: 4/29/24 4pm
Inspector: James Parker
Expiration date and time: 5/3/24 4pm
Inspection location: De Luz Waimea
Destination: CSO site summit
Facility/Representative: Kevin Balog
Vehicle Lic & Owner: 303 HDV Semi
Concerns identified: N/A
Cargo Description: empty dump 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/

Jeremy

No. 1621

UNIVERSITY of HAWAI'I at HILO
CENTER FOR MAUNAKEA STEWARDSHIP

INVASIVE SPECIES INSPECTION CERTIFICATE

Delivery is: ☒ APPROVED ☐ REJECTED

Date and Time: 4/29/24 4pm
Inspector: James Parker
Expiration date and time: 5/3/24 4pm
Inspection location: De Luz Waimea
Destination: CSO site summit
Facility/Representative: Kevin Balog
Vehicle Lic & Owner: 710 HYP 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)

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Jeremy

No. 1624

UNIVERSITY of HAWAI'I at HILO
CENTER FOR MAUNAKEA STEWARDSHIP

INVASIVE SPECIES INSPECTION CERTIFICATE

Delivery is: ☒ APPROVED ☐ REJECTED

Date and Time: 4/29/24 4pm
Inspector: James Parker
Expiration date and time: 5/3/24 4pm
Inspection location: De Luz Waimea
Destination: CSO site summit
Facility/Representative: Kevin Balog
Vehicle Lic & Owner: temp license PUC 5093-C Semi
Concerns identified: N/A
Cargo Description: empty dump 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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Kawai

No. 1623

UNIVERSITY of HAWAI'I at HILO
CENTER FOR MAUNAKEA STEWARDSHIP

INVASIVE SPECIES INSPECTION CERTIFICATE

Delivery is: ☒ APPROVED ☐ REJECTED

Date and Time: 4/29/24 4pm
Inspector: James Parker
Expiration date and time: 5/3/24 4pm
Inspection location: De Luz Waimea
Destination: CSO site summit
Facility/Representative: Kevin Balog
Vehicle Lic & Owner: 795 HYR 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.

Drivers should keep this certificate in vehicle when making delivery.

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

Kawai

No. 1626

UNIVERSITY of HAWAI'I at HILO
CENTER FOR MAUNAKEA STEWARDSHIP

INVASIVE SPECIES INSPECTION CERTIFICATE

Delivery is: ☒ APPROVED ☐ REJECTED

Date and Time: 4/29/24 4pm
Inspector: James Parker
Expiration date and time: 5/3/24 4pm
Inspection location: De Luz Waimea
Destination: CSO site summit
Facility/Representative: Kevin Balog
Vehicle Lic & Owner: 190 HEB Semi
Concerns identified: N/A
Cargo Description: dump 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/

Kevin

No. 1625

UNIVERSITY of HAWAI'I at HILO
CENTER FOR MAUNAKEA STEWARDSHIP

INVASIVE SPECIES INSPECTION CERTIFICATE

Delivery is: ☒ APPROVED ☐ REJECTED

Date and Time: 4/29/24 4pm
Inspector: James Parker
Expiration date and time: 5/3/24 4pm
Inspection location: De Luz Waimea
Destination: CSO site summit
Facility/Representative: Kevin Balog
Vehicle Lic & Owner: 159 HYX 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.

Drivers should keep this certificate in vehicle when making delivery.

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

Kevin

No. 1620

UNIVERSITY of HAWAI'I at HILO
CENTER FOR MAUNAKEA STEWARDSHIP

INVASIVE SPECIES INSPECTION CERTIFICATE

Delivery is: ☒ APPROVED ☐ REJECTED

Date and Time: 4/29/24 4pm
Inspector: James Parker
Expiration date and time: 5/3/24 4pm
Inspection location: De Luz Waimea
Destination: CSO site summit
Facility/Representative: Kevin Balog
Vehicle Lic & Owner: 881 HEC semi
Concerns identified: N/A
Cargo Description: empty dump 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/

LMA

No. 1619

UNIVERSITY of HAWAI'I at HILO
CENTER FOR MAUNAKEA STEWARDSHIP

INVASIVE SPECIES INSPECTION CERTIFICATE

Delivery is: ☒ APPROVED ☐ REJECTED

Date and Time: 4/29/24 4pm
Inspector: James Parker
Expiration date and time: 5/3/24 4pm
Inspection location: De Luz Waimea
Destination: CSO site summit
Facility/Representative: Kevin Balog
Vehicle Lic & Owner: 921 HZL 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.

Drivers should keep this certificate in vehicle when making delivery.

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

LMA

HAWAIIAN CULTURAL MONITOR REPORT

DATE: 2024-05-02

A Cultural Monitor documents and observes actions on significant historic properties and mitigates those effects. Pursuant to 2012 S.C.R NO. 115: "Whereas, the State of Hawaii places a high priority on protecting and preserving its historic and cultural resources which include Iwi Kupuna or Hawaiian Burial remains…"

PROJECT NAME: Caltech Submillimeter Observatory Decommissioning Project

HAWAIIAN CULTURAL MONITOR: Ronald Mitchell

WORK CREW: AECOM: S. Gardner - CMS: S. Hunter; K. Halemano

WORK CREW: GBI Leads: J. Steen (PM); C. Brown; B. Silva; B. Kepano; K. Drummundo

WORK CREW: UNITEK: J. Abella; J. Abella; J. Ebuen; J. Deseo; D. Scott

WORK CREW: NWD: B. Burley; A. Ortiz; D. Miguel

TIME	OBSERVATIONS	FINDINGS (YES OR NO)
0645-0709	0645: Mandatory daily construction meeting prior to daily construction on CSO site conducted at HP with all assigned personnel presence required. After meeting morning prayer and blessing conducted by R. Mitchell (HCM). 0709: Left HP for CSO site at summit of Maunakea.	No
0740-0758	0740: Arrived at CSO site. 0758: All work personnel arrive at CSO site.	No
0821-0940	0821-0940: NWD begins strip down of hydraulic cylinders.	No
0940-1012	0940-1012: NWD in the final stripping process of the hydraulic cylinders. After UNITEK will wrap the stripped and drained cylinders.	No
1201	1201: GBI water truck sprays water over the CSO site to insure there are no debris particles.	No
1326-1409	1326-1409: Noticed drops while NWD was operating machinery. NWD began to inspect machine and found that drops originated from top of machine and not due to faulty hydraulic hoses. UNITEK personnel did cleanup after.	Yes

HAWAIIAN CULTURAL MONITOR REPORT

A Cultural Monitor documents and observes actions on significant historic properties and mitigates those effects. Pursuant to 2012 S.C.R NO. 115: "Whereas, the State of Hawaii places a high priority on protecting and preserving its historic and cultural resources which include Iwi Kupuna or Hawaiian Burial remains…"

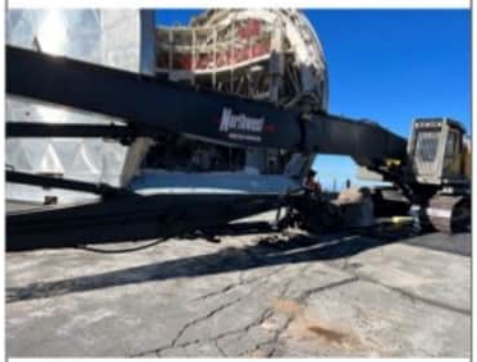
TIME	OBSERVATIONS	FINDINGS (YES OR NO)
1435	1435: NWD parked Crain, Excavator, and Boom Lift on black fiber cloth cover placed by UNITEK. Black fiber cloth cover was there to catch any possible overnight leaks.	No
1445	1445: Yellow barrier with "No Trespassing" sign erected At CSO site. Closing blessing protocol by R. Mitchell (HCM). Headed down to Hale Pohaku.	No
1537	Arrived at Hale Pohaku. End of Day.	No

HAWAIIAN CULTURAL MONITOR REPORT

A Cultural Monitor documents and observes actions on significant historic properties and mitigates those effects. Pursuant to 2012 S.C.R NO. 115: "Whereas, the State of Hawaii places a high priority on protecting and preserving its historic and cultural resources which include Iwi Kupuna or Hawaiian Burial remains…"

PICTURE (1)	DESCRIPTION (1)
	Shot of CSO upon arrival.

PICTURE (3)	DESCRIPTION (3)
	Shot of CSO dome.

PICTURE (2)	DESCRIPTION (2)
	NWD machinery.

PICTURE (4)	DESCRIPTION (4)
	Noticed drips under truck.

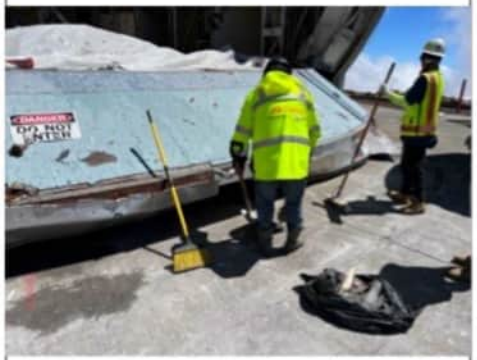
HAWAIIAN CULTURAL MONITOR REPORT

A Cultural Monitor documents and observes actions on significant historic properties and mitigates those effects. Pursuant to 2012 S.C.R NO. 115: "Whereas, the State of Hawaii places a high priority on protecting and preserving its historic and cultural resources which include Iwi Kupuna or Hawaiian Burial remains…"

PICTURE (5)	DESCRIPTION (5)
	NWD working on dome.

PICTURE (7)	DESCRIPTION (7)
	UNITEK vacumming particles.

PICTURE (6)	DESCRIPTION (6)
	GBI water truck spraying water while NWD dismantles cylinders.

PICTURE (8)	DESCRIPTION (8)
	UNITEK personnel continues cleanup

HAWAIIAN CULTURAL MONITOR REPORT

A Cultural Monitor documents and observes actions on significant historic properties and mitigates those effects. Pursuant to 2012 S.C.R NO. 115: "Whereas, the State of Hawaii places a high priority on protecting and preserving its historic and cultural resources which include Iwi Kupuna or Hawaiian Burial remains…"

PICTURE (9)	DESCRIPTION (9)
	NWD positions machinery after work on black fiber cloth.

PICTURE (11)	DESCRIPTION (11)

PICTURE (10)	DESCRIPTION (10)
	Last shot of machines, end of day.

PICTURE (12)	DESCRIPTION (12)

AECOM

INDEPENDENT DECOMMISSIONING PROJECT MANAGER PROJECT DIARY

DATE : **Thursday, May 2, 2024**

WEATHER: Suitable For All Planned Work
At CSO, clear, light wind. Temp at 8am 40F. Up to mid 50s and some high clouds in the afternoon.

PROJECT TITLE: **Caltech Submillimeter Observatory Decommissioning**

Work Hours:
Arrv: **0745**
Dep: **1500**

Report By: **Shawn Gardner**

Monitors on Site:	Cultural - Ron Mitchell

Work Items	**Location & Description of Work/Activities**
Demolition	Personnel began arriving at the CSO site at 0745. Prep for shutter cylinder removal began with partial demo of the cylinder housing, removing enough material to allow the sheave out of the housing. Then the cables were cut and removed from the sheave, and the bolts were removed from the bottom of the cylinder. The cylinders were both removed from the structure without incident, wrapped in absorbent material and plastic, and staged for transport. No evidence of oil leakage was observed. After lunch, demolition resumed in the dome, using the grappler attachment. Later in the afternoon, Lehua Enviro personnel observed that a small leak had appeared in the grappler. The leak was fixed, but recurred at around 1400. NW decided to end work for the day and replace the grappler with the shears attachment. The dripping oil from the leak all occured inside the dome. Site cleanup began and the equipment was parked, with the HR excavator again parked on groundsheets. All personnel had left the site by 1500.

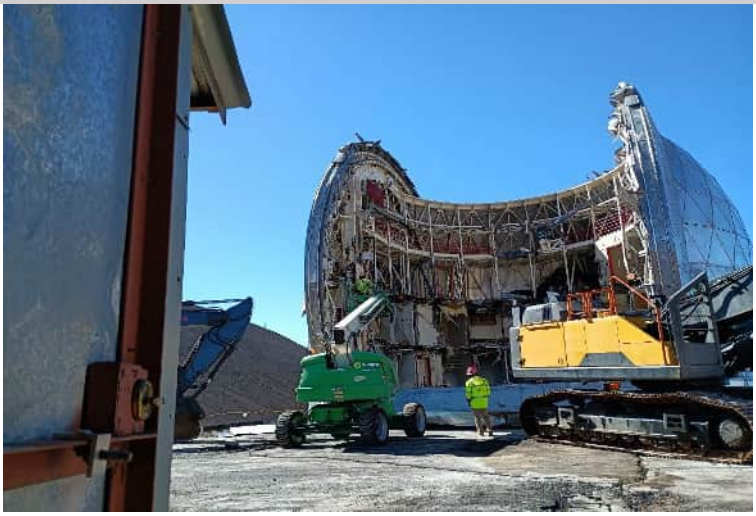
WORK FORCE & EQUIPMENT

NAME	POS	HR	Company	EQUIPMENT	MODEL/TYPE	HR
Jon Steen		8	GBI	20' Container		
Bronson Sylva		8	GBI	Loader	CAT 950 GC	
Brandon Kepano		8	GBI	Excavator	Volvo EC300DL	
Keala Drummondo		8	GBI	High Reach Excavator	Volvo EC480E HR	
				Sunbelt rental manlift	JLG 660SJ	
Bruce Burley		8	NW Demo			
Anthony Ortiz		8	NW Demo			
Darren Whittaker		8	NW Demo			
Jeff Abella		8	Unitek			
Jone Abella		8	Unitek			
Jomhel Ebuen		8	Unitek			
Nicole Garaganza		8	Lehua Environmental			

Signed by: 

Reviewed by: Shawn Gardner Date 5/2/2024

^ 8:25am - housing demo for cylinder removal



^ 8:56am - cutting cables from sheave

^ 9:39am - removing first cylinder

^ 10:06am - removing second cylinder, first is wrapped

^ 11:17pm - cylinders double wrapped, awaiting transport from site

^ 2:08pm - starting site cleanup

From: Stewart Hunter <eshunter@hawaii.edu>
Sent: Friday, May 24, 2024 2:21 PM
To: Sunil Golwala; Simmons, Colin A.
Cc: Jon Steen; bburley@nwdemolition.com; Gardner, Shawn; Gregory Chun PhD.; Nahua Guilloz; Rodrigo Romo; Karl Halemano
Subject: Improper Behavior
Attachments: IMG_6255.jpg

Aloha,

Earlier today, the driver of the 4th dump truck filled today was seen urinating on the summit. See attached. This photo was taken along the JCMT driveway. Five minutes before the photo was taken, the driver had been parked at CSO while the truck was getting loaded - No further than about 30-feet from a freshly cleaned portable toilet!

This driver is suspended from working on the CSO Decommissioning Project for a period of two work weeks. He may return to work on this project on Monday, June 10, 2024. Additionally, his Mauna Kea User Orientation certificate is revoked. Prior to returning to work on this project, this driver must complete the Mauna Kea User Orientation again and obtain a new sticker.

In the future, should any DeLuz Trucking drivers be found in violation of the project work rules, DeLuz Trucking may be suspended from working on Maunakea.

Mahalo,
Stewart

HAWAIIAN CULTURAL MONITOR REPORT

DATE: 2024-05-29

A Cultural Monitor documents and observes actions on significant historic properties and mitigates those effects. Pursuant to 2012 S.C.R NO. 115: "Whereas, the State of Hawaii places a high priority on protecting and preserving its historic and cultural resources which include Iwi Kupuna or Hawaiian Burial remains…"

PROJECT NAME: Caltech Submillimeter Observatory Decommissioning Project

WORK CREW: GBI - J. Steen (PM); B. Silva; B. Kepano; K. Drummundo; K. Beck

HAWAIIAN CULTURAL MONITOR: Ronald Mitchell

WORK CREW: NW DEMO: B. Burley; A. Ortiz; J. Cabjuan - UNITEK: J. Abella; J. Abella

WORK CREW: AECOM: S. Gardner - CMS: S. Hunter - Lehua Environmental: C. Arca

WORK CREW: Archeologist: R. Namnama

TIME	OBSERVATIONS	FINDINGS (YES OR NO)
0645	CSO daily pre-construction Zoom meeting at HP Meeting room. Present: GBI: J. Steen (PM); B. Silva (Foreman); B. Kepano (Operator); K. Drummondo (Water Truck Operator); K. Beck (GBI) - D. Waipa (Lead Ranger) - AECOM: S. Gardner - CMS: S. Hunter - Lehua Environmental: C. Arca. NW DEMO*:Bruce Burley (Foreman); A. Ortiz; D. Whittaker; J. Cabjuan - UNITEK*:J. Abella; J. Abella Jeff Abella *All the above not at onsite meeting but will be at CSO Site.	No
0645-0700	Work Schedule: 3 Deluz dump trucks will be on site ordered by GBI: J. Steen. Invasive species certification for all truck on record with J. Steen. Continuation of Hauling off CSO debris & NW Demo to take apart CSO railing in 4 sections. GBI Excavator coming up to CSO site hauled up by lowboy. Archeologist R. Namnama arriving at CSO site around 1200PM.	No
0700	Pule and Blessing protocol by R. Mitchell (HCM). After heading up to CSO site.	No
0730	Arrived at CSO site.	No
0753-900	0753: GBI, Lehua, AECOM, 1 Deluz dump truck arrived. 0819: Lehua setting up air monitoring equipment on CSO Site. 0820: Standing by for NW Demo crew & UNITEK Crew to arrive.	No
0928	0928: NW Demo arrive and begin warming up machinery.	No

HAWAIIAN CULTURAL MONITOR REPORT

A Cultural Monitor documents and observes actions on significant historic properties and mitigates those effects. Pursuant to 2012 S.C.R NO. 115: "Whereas, the State of Hawaii places a high priority on protecting and preserving its historic and cultural resources which include Iwi Kupuna or Hawaiian Burial remains…"

TIME	OBSERVATIONS	FINDINGS (YES OR NO)
0956-1247	Loading of Deluz trucks to haul debris down the summit.	No
1300	NW DEMO works on undoing of bolts on CSO dome.	No
1401	1401 hrs GBI Excavator delivered n CSO site	No
1500	1500 hrs all Pau at CSO Site secured	No
1530	Arrived at Hale Pohaku	No

HAWAIIAN CULTURAL MONITOR REPORT

A Cultural Monitor documents and observes actions on significant historic properties and mitigates those effects. Pursuant to 2012 S.C.R NO. 115: "Whereas, the State of Hawaii places a high priority on protecting and preserving its historic and cultural resources which include Iwi Kupuna or Hawaiian Burial remains…"

PICTURE (1)	DESCRIPTION (1)
	NW Demo warming up machinery and continues dismantling of CSO.

PICTURE (3)	DESCRIPTION (3)
	Continuation of loading Deluz trucks.

PICTURE (2)	DESCRIPTION (2)
	Deluz trucks are loaded

PICTURE (4)	DESCRIPTION (4)
	Continuation of loading Deluz trucks.

HAWAIIAN CULTURAL MONITOR REPORT

A Cultural Monitor documents and observes actions on significant historic properties and mitigates those effects. Pursuant to 2012 S.C.R NO. 115: "Whereas, the State of Hawaii places a high priority on protecting and preserving its historic and cultural resources which include Iwi Kupuna or Hawaiian Burial remains…"

PICTURE (5)	DESCRIPTION (5)
	Loading of Deluz trucks.

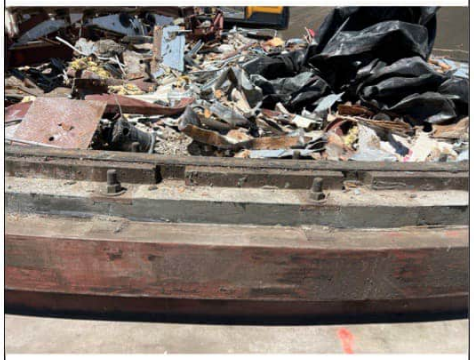
PICTURE (7)	DESCRIPTION (7)
	Loading of Deluz trucks.

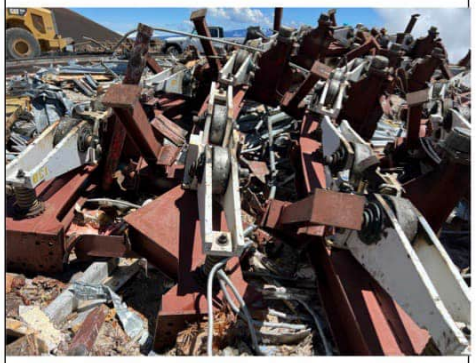
PICTURE (6)	DESCRIPTION (6)
	Loading of Deluz trucks.

PICTURE (8)	DESCRIPTION (8)
	CSO dome foundation.

HAWAIIAN CULTURAL MONITOR REPORT

A Cultural Monitor documents and observes actions on significant historic properties and mitigates those effects. Pursuant to 2012 S.C.R NO. 115: "Whereas, the State of Hawaii places a high priority on protecting and preserving its historic and cultural resources which include Iwi Kupuna or Hawaiian Burial remains…"

PICTURE (9)	DESCRIPTION (9)
	NW Demo dismantle bolts.

PICTURE (11)	DESCRIPTION (11)
	Debris of CSO site.

PICTURE (10)	DESCRIPTION (10)
	Closing shot of CSO site.

PICTURE (12)	DESCRIPTION (12)

AECOM

INDEPENDENT DECOMMISSIONING PROJECT MANAGER PROJECT DIARY

DATE : **Wednesday, May 29, 2024**

WEATHER: Suitable for all Planned Work
At CSO, partly cloudy, light wind. Temp at 7:30am 40F.

PROJECT TITLE: **Caltech Submillimeter Observatory Decommissioning**

Work Hours:
Arrv: **0730**
Dep: **1500**

Report By: **Shawn Gardner**

Monitors on Site:	Cultural - Ron Mitchell Archeological - Robynn Namnama

Work Items	Location & Description of Work/Activities
Demolition	Following the 0645 meeting, personnel arrived at the CSO between 0730 and 0800. The three trucks that came today, two flatbeds and one dump, arrived between 0725 and 0735. NW loaded the previously separated ring sections onto the flatbeds, and then demo debris onto the dump trailer. The flatbeds departed at 1000, and the dump departed at 1030 when it was finished loading. GBI broke up the outbuilding foundation with the hydraulic breaker attachment on their excavator concurrently with the loading. After the remaining debris was put into a small pile, the breaker was used to start demolishing the rail ring. At 1055, a hydraulic fitting on the breaker failed, and the machine was immediately shut down. Estimated <1gal. of oil spilled, all of it on the concrete, and almost all of it inside the ring with some sprayed drops on the apron. The team immediately put oil absorbent material on all the spilled oil. The fitting was replaced, and after the lunch break and cleaning up the absorbent material, demo resumed on the rail ring. About 10-15 of the ring was demoed when the same fitting was noted to have a small leak. The breaker was detached from the excavator, and the bucket was attached to begin excavation at the cesspool. Cleanup was started at the ring area. Excavation at the cesspool started at 1330. It was uncovered to about two feet below the top of the sidewalls, and soil samples were taken by Lehua. The HR excavator was prepped for demobilization. The boom was removed and put in its cradle. The site cleanup was completed and all personnel left the site by 1500.

WORK FORCE & EQUIPMENT

NAME	POS	HR	Company	EQUIPMENT	MODEL/TYPE	HR
Jon Steen			GBI	20' Container		
Bronson Sylva			GBI	Water Truck	Kenworth lic. 469TXU	
Brandon Kepano			GBI	Excavator	Volvo EC300DL	
Keala Drummondo			GBI	High Reach Excavator	Volvo EC480E HR	
Kai'imi Beck			GBI	Sunbelt rental manlift	JLG 660SJ	
				Loader	CAT 950 GC	
Bruce Burley			NW Demo	Excavator	Deere 350 P	
Anthony Ortiz			NW Demo			
Jeff Abella			Unitek			
Jone Abella			Unitek			
Calvin Arca			Lehua Environmental			
Nicole Garaganza			Lehua Environmental			

Signed by: _____ Reviewed by: Shawn Gardner Date 5/29/2024

^ 8:05am - loading first ring section onto the flatbed

^ 9:07am - breaking outbuilding foundation

^ 10:56am - spilled oil on concrete

^ 12:52pm - demoed section of rail ring (dust control water visible)

^ 2:38pm - cesspool excavation cordoned off

^ 2:55pm - site closed for the day

No. 1556

UNIVERSITY of HAWAI'I at HILO
CENTER FOR MAUNAKEA STEWARDSHIP

INVASIVE SPECIES INSPECTION CERTIFICATE

Delivery is: ☒ APPROVED ☐ REJECTED

Date and Time: 5/28/24 5pm
Expiration date and time: 6/1/24 5pm
Destination: CSO site summit
Vehicle Lic & Owner: 188 HEB Semi
Cargo Description: Flat trailer

Inspector: James Parker
Inspection location: De Luz Waimea
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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For more information please visit: www.malamamaunakea.org/inspections/

ST00140

No. 1557

UNIVERSITY of HAWAI'I at HILO
CENTER FOR MAUNAKEA STEWARDSHIP

INVASIVE SPECIES INSPECTION CERTIFICATE

Delivery is: ☒ APPROVED ☐ REJECTED

Date and Time: 5/28/24 5pm
Expiration date and time: 6/1/24 5pm
Destination: CSO site summit
Vehicle Lic & Owner: 652 HYZ trailer
Cargo Description: empty

Inspector: James Parker
Inspection location: De Luz Waimea
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.

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

No. 1558

UNIVERSITY of HAWAI'I at HILO
CENTER FOR MAUNAKEA STEWARDSHIP

INVASIVE SPECIES INSPECTION CERTIFICATE

Delivery is: ☒ APPROVED ☐ REJECTED

Date and Time: 5/28/24 5pm
Inspector: James Parker
Expiration date and time: 6/1/24 5pm
Inspection location: De Luz Waimea
Destination: CSD site summit
Facility/Representative: Kevin Balog
Vehicle Lic & Owner: 222 HEM 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.

Drivers should keep this certificate in vehicle when making delivery.

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

FRT0063

No. 1559

UNIVERSITY of HAWAI'I at HILO
CENTER FOR MAUNAKEA STEWARDSHIP

INVASIVE SPECIES INSPECTION CERTIFICATE

Delivery is: ☒ APPROVED ☐ REJECTED

Date and Time: 5/28/24 5pm
Inspector: James Parker
Expiration date and time: 6/1/24 5pm
Inspection location: De Luz Waimea
Destination: CSD site summit
Facility/Representative: Kevin Balog
Vehicle Lic & Owner: temp license Semi
Concerns identified: N/A
Cargo Description: Flat 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/

6100171

No. 1749

UNIVERSITY of HAWAI'I at HILO
CENTER FOR MAUNAKEA STEWARDSHIP

INVASIVE SPECIES INSPECTION CERTIFICATE

Delivery is: ☒ APPROVED ☐ REJECTED

Date and Time: 5/28/24 5pm
Expiration date and time: 6/1/24 5pm
Destination: CSO site summit
Vehicle Lic & Owner: 190 HEB Semi
Cargo Description: dump trailer

Inspector: James Parker
Inspection location: De Luz Waimea
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.

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

ST00141

No. 1750

UNIVERSITY of HAWAI'I at HILO
CENTER FOR MAUNAKEA STEWARDSHIP

INVASIVE SPECIES INSPECTION CERTIFICATE

Delivery is: ☒ APPROVED ☐ REJECTED

Date and Time: 5/28/24 5pm
Expiration date and time: 6/1/24 5pm
Destination: CSO site summit
Vehicle Lic & Owner: 159 HYX trailer
Cargo Description: empty

Inspector: James Parker
Inspection location: De Luz Waimea
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.

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

EDT0077

HAWAIIAN CULTURAL MONITOR REPORT

DATE: 2024-06-19

AMENDED

A Cultural Monitor documents and observes actions on significant historic properties and mitigates those effects. Pursuant to 2012 S.C.R NO. 115: "Whereas, the State of Hawaii places a high priority on protecting and preserving its historic and cultural resources which include Iwi Kupuna or Hawaiian Burial remains…"

PROJECT NAME: Caltech Submillimeter Observatory Decommissioning

WORK CREW: GBI - J. Steen (PM); S. Peck; K. Beck; B. Sylva; K. Drummundo; F. Collo

HAWAIIAN CULTURAL MONITOR: Peter Alu

WORK CREW: CMS: K. Halemano - Lehua: C. Arca

WORK CREW: M3: D. Adriaanse; L. Hunter; M.

WORK CREW: Archeologist: R.

TIME	OBSERVATIONS	FINDINGS (YES OR NO)
0645	Zoom meeting consisting of all crews above. Hauled 6 loads of cinder/ fill material. Sample testing done near the dome area came back contaminated above action level. This location corresponds to the hydraulic fluid leak over the asphalt from the Northwest Demo excavator during demolition. This did not have to do with prior conditions on site, it arose from a known event during deconstruction. Today removing the yellow mats and remaining asphalt. Excavating approximately 1' of area which was found to be contaminated. That particular area will be sent for testing. Always be safe up there. Prayer/Pule conducted by HCM Peter Alu.	Yes
0710	Leaving Hale Pohaku and heading to CSO Site with all crews to commence	No
0740	Arriving at CSO Site along with a crews to commence	No
1420	Work done heading down to Hale	No
1445	Arrive down at Hale	No

HAWAIIAN CULTURAL MONITOR REPORT

A Cultural Monitor documents and observes actions on significant historic properties and mitigates those effects. Pursuant to 2012 S.C.R NO. 115: "Whereas, the State of Hawaii places a high priority on protecting and preserving its historic and cultural resources which include Iwi Kupuna or Hawaiian Burial remains…"

PICTURE (1)	DESCRIPTION (1)
	0746 hrs. Crews starting up work. Prayer/ Pule commenced on site.

PICTURE (3)	DESCRIPTION (3)
	0800 hrs. Depicts approximately 2 feet of contaminated material that will be tested, removed and disposed of in a secured area.

PICTURE (2)	DESCRIPTION (2)
	0747 hrs. Photo of contaminated debri consisting of cement, gravel chips, gathered and to be removed and disposed of.

PICTURE (4)	DESCRIPTION (4)
	0840 hrs. Excavator dressing up landscape of CSO Site.

HAWAIIAN CULTURAL MONITOR REPORT

A Cultural Monitor documents and observes actions on significant historic properties and mitigates those effects. Pursuant to 2012 S.C.R NO. 115: "Whereas, the State of Hawaii places a high priority on protecting and preserving its historic and cultural resources which include Iwi Kupuna or Hawaiian Burial remains…"

PICTURE (5)	DESCRIPTION (5)
	0942 hrs. Uncontaminated soil to be hauled off to Batch plant.

PICTURE (7)	DESCRIPTION (7)
	1020 hrs. Contaminated soil being gathered and placed on plastic matting to be tested. Area where fill was gathered was considered to be contaminated through test results.

PICTURE (6)	DESCRIPTION (6)
	GBI Crews assessing the elevation of site to be landscaped.

PICTURE (8)	DESCRIPTION (8)
	Area where soil was tested and found to be contaminated.

HAWAIIAN CULTURAL MONITOR REPORT

A Cultural Monitor documents and observes actions on significant historic properties and mitigates those effects. Pursuant to 2012 S.C.R NO. 115: "Whereas, the State of Hawaii places a high priority on protecting and preserving its historic and cultural resources which include Iwi Kupuna or Hawaiian Burial remains…"

PICTURE (9)	DESCRIPTION (9)
	1058 hrs. C. Arca of Lehua Environmental taking samples of soil to be tested for contamination.

PICTURE (11)	DESCRIPTION (11)
	1114 hrs. Continuing hammering asphalt roadway while AECOM Shawn Gardner looks on.

PICTURE (10)	DESCRIPTION (10)
	GBI Operator F. Collo hammering asphalt approximately 7-10" thick to be removed and restored back close to its original state.

PICTURE (12)	DESCRIPTION (12)
	1126 hrs. GBI relocating fill in quarry to a different location within the quarry perimeter.

HAWAIIAN CULTURAL MONITOR REPORT

A Cultural Monitor documents and observes actions on significant historic properties and mitigates those effects. Pursuant to 2012 S.C.R NO. 115: "Whereas, the State of Hawaii places a high priority on protecting and preserving its historic and cultural resources which include Iwi Kupuna or Hawaiian Burial remains…"

PICTURE (13)	DESCRIPTION (13)
	1413 hrs. CSO Site closed with the ending of Prayer/Pule.

PICTURE (15)	DESCRIPTION (15)

PICTURE (14)	DESCRIPTION (14)

PICTURE (16)	DESCRIPTION (16)

AECOM

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	Following the 0645 meeting, CMS, AECOM, GBI, ASM, and Taymade personnel arrived at the CSO site approx. 0730. - 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. Work ceased for the day and all personnel left the site by 1415. 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.

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

Analyte	Laboratory Analytical Method	DOH EAL Unrestricted Land Use (mg/kg)	DOH EAL Commercial/ Industrial Land Use (mg/kg)	Descriptive Sample ID: CSO DU-4 Sample Description: Under Asphalt Driveway/ Parking Area (0"-6" bss) 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

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°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*				
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	NA	40	
Residual Range	**ND**	**ND**	NA	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: 2406-163
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
page 2 of 2

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	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*91*	*69-124*				
Toluene-d8	*109*	*80-118*				
4-Bromofluorobenzene	*95*	*75-123*				

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*				

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		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
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
page 2 of 2

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
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	
Surrogate:	*Percent Recovery*	*Control Limits*				
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	
Surrogate:	*Percent Recovery*	*Control Limits*				
DCB	*89*	*40-134*				

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

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

OnSite Environmental Inc.

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

Chain of Custody

OnSite Environmental Inc.
Analytical Laboratory Testing Services
14648 NE 95th Street • Redmond, WA 98052
Phone: (425) 883-3881 • www.onsite-env.com

Company: LEHUA ENVIRONMENTAL INC.
Project Number: 2024-243-3
Project Name: CSO DECOMMISSIONING - PARKING LOT/ DRIVEWAY ASPHALT PAVED AREA
Project Manager: KAMA KOBAYASHI
Sampled by: CALVIN ARCA

Turnaround Request (in working days)
(Check One)
☐ Same Day ☒ 1 Day
☐ 2 Days ☐ 3 Days
☐ Standard (7 Days)
☐ _____ (other)

Laboratory Number: 06-163

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx EPA 8015	NWTPH-Dx XXXXXXXXXXXXXXXXXXXX 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 RCRA Metals	Total MTCA Metals	TCLP Metals	HEM (oil and grease) 1664A	Multi-incremental sample preparation Volatile and Non-Volatile				% Moisture
1	CSO DU-4	6-11-24		S	14			X	X	X				X	X				X				X				6

	Signature	Company	Date	Time
Relinquished		LEHUA ENVIRONMENTAL INC.	6-12-24	12:00 pm
Received		ONE	6/13/24	1000
Relinquished				
Received				
Relinquished				
Received				
Reviewed/Date		Reviewed/Date		

Comments/Special Instructions
13 in methanol vials
1 ziploc bag

Data Package: Standard ☐ Level III ☐ Level IV ☐
Chromatograms with final report ☐ Electronic Data Deliverables (EDDs) ☐

Sample/Cooler Receipt and Acceptance Checklist

Client: UET

Client Project Name/Number: 2024-243-3

OnSite Project Number: 06-163

Initiated by: MV

Date Initiated: 6/13/24

1.0 Cooler Verification

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

2.0 Chain of Custody Verification

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

3.0 Sample Verification

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

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 2024-243-2
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,

David Baumeister
Project Manager

Enclosures

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°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	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*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	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*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	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*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	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*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	NA	40	
Residual Range	**ND**	**ND**	NA	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	
Surrogate:	*Percent Recovery*	*Control Limits*				
DCB	*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

OnSite Environmental Inc.

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

Chain of Custody

OnSite Environmental Inc.
Analytical Laboratory Testing Services
14648 NE 95th Street • Redmond, WA 98052
Phone: (425) 883-3881 • www.onsite-env.com

Company: LEHUA ENVIRONMENTAL INC.
Project Number: 2024-243-2
Project Name: CSO DECOMMISSIONING - CSO Slab
Project Manager: KAMA KOBAYASHI
Sampled by: CALVIN ARCA

Turnaround Request (in working days)
(Check One)
☐ Same Day ☒ 1 Day
☐ 2 Days ☐ 3 Days
☐ Standard (7 Days)
☐ _____ (other)

Laboratory Number: 06-162

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx (☐ 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 RCRA Metals Lead	Total MTCA Metals	TCLP Metals Lead	HEM (oil and grease) 1664A	Multi-incremental sample preparation Non-Volatile				% Moisture
1	CSO DU-1A-1	6-11-24		S	1				X						X				X		X		X				10
2	CSO DU-1A-2	6-11-24		↓	1				X						X				X		X		X				|
3	CSO DU-1A-3	6-11-24			1				X						X				X		X		X				|
4	CSO DU-1B	6-11-24			1				X						X				X		X		X				|

	Signature	Company	Date	Time
Relinquished		LEHUA ENVIRONMENTAL INC.	6-12-24	12:00pm
Received		ONE	6/13/24	1000
Relinquished				
Received				
Relinquished				
Received				
Reviewed/Date		Reviewed/Date		

Comments/Special Instructions

Data Package: Standard ☐ Level III ☐ Level IV ☐

Chromatograms with final report ☐ Electronic Data Deliverables (EDDs) ☐

Sample/Cooler Receipt and Acceptance Checklist

Client: UEI

Client Project Name/Number: 2024-243-2

OnSite Project Number: 06-162

Initiated by: JMV

Date Initiated: 6/13/24

1.0 Cooler Verification

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

2.0 Chain of Custody Verification

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

3.0 Sample Verification

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

Lehua Environmental Inc.

P.O. Box 1018 • Kamuela, Hawaii 96743 • Tel: (808) 494-0365 • E-mail: LehuaEnvironmental@gmail.com

June 14, 2024

California Institute of Technology
391 S. Holliston Avenue
Pasadena, CA 91106

Attn: Denise Lu

Subject: **3RD PARTY LEAD ENVIRONMENTAL AIR MONITORING**
CALTECH SUBMILLIMETER OBSERVATORY (CSO) DECOMMISSIONING
MAUNA KEA, BIG ISLAND, HAWAii

The purpose of this letter report is to document the activities and findings from Lehua Environmental Inc.'s (LEI's) 3rd party lead environmental air monitoring activities completed during lead paint disturbance activities associated with the CSO Decommissioning project located on Mauna Kea, Big Island, Hawaii (Subject Site). The air monitoring activities occurred from April 29, 2024 through May 30, 2024 at the Subject Site.

Background
Lead-Containing Paint (LCP) and Lead-Based Paint (LBP) were identified at the Subject Site. The Unitek Contracting Group (Contractor) was contracted to furnish labor, equipment and materials to properly clean and dispose of lead paint chips from the work area throughout the lead paint disturbance activities associated with the CSO Decommissioning project at the Subject Site.

Abatement Activities
The Contractor properly cleaned the lead work area throughout the duration of the lead paint disturbance activities associated with the CSO Decommissioning project at the Subject Site. Following and during the disturbance and removal of lead painted building components from the work area, the Contractor cleaned the work area via HEPA vacuums and hand-picking methods.

Daily field activities are documented in the daily field reports included in Attachment II.

Methodology

Lead Air Monitoring Activities

LEI conducted lead environmental air monitoring which included work area samples during the lead paint disturbance work at the Subject Site. Four (4) air samples were collected in and around the active work area during lead paint disturbance work. Air samples were collected using low volume pumps set at 2.0 liters per minute (L/min).

All samples were properly logged and recorded following strict chain of custody procedure and submitted to Hawaii Analytical located in Honolulu, Hawaii for total lead analysis in accordance with NIOSH Method 7082.

Lead Visual Clearance Activities

LEI personnel conducted visual clearances throughout the duration of the lead paint disturbance activities to ensure the lead paint and associated lead debris did not exit the work area during the CSO decommissioning work. LEI personnel also conducted a lead visual clearance at the end of each work day to confirm no visible lead paint chips and/or debris remained on the ground or other areas surrounding the CSO platform.

Findings

Lead Environmental Air Monitoring

Laboratory results indicated that all analyzed environmental air samples collected during lead disturbance activities were below **t**he Occupational Safety and Health Administration (OSHA) action level of 30 micrograms of lead per cubic meter of air, calculated as an 8-hour time-weighted average. A copy of the laboratory results is provided in Attachment I.

Lead Visual Clearance Activities

The lead visual clearances were successfully completed by LEI personnel at the end of each day's lead paint disturbance activities. LEI personnel confirmed no visible lead paint chips and/or debris were present at the completion of the CSO structure decommissioning.

Limitations

LEI's findings and conclusions contained herein are professional opinions based solely upon visual observations, laboratory data, and information provided to LEI at the time this study. Opinions stated in this report do not apply to changes that may have occurred after the services were performed.

LEI has performed specified services for this project with the degree of care, skill and diligence ordinarily exercised by professional consultants performing the same or similar services. No other warranty, guarantee, or representation, expressed or implied, is included or intended; unless otherwise specifically agreed to in writing by both LEI and LEI's Client.

This report is intended for the sole use of LEI's Client, exclusively for the project site indicated. LEI's Client may use and release this report, including making and retaining copies, provided such use is limited to the particular site and project for which this report is provided. However, the services performed may not be appropriate for satisfying the needs of other users. Release of this report to third-parties will be at the sole risk of Client and/or said user, and LEI shall not be liable for any claims or damages resulting from or connected with such release or any third party's use or reuse of this report.

Thank you for allowing us to serve you. Please contact us at (808)494-0365 with any questions.

Respectfully,

LEHUA ENVIRONMENTAL INC.

Kamalana Kobayashi
State of Hawaii Certified Lead Risk Assessor
Certification #: PB-0132 Expires: 5/16/25

Attachment I: Laboratory Reports
Attachment II: Daily Field Reports

Attachment I:
Laboratory Results

Hawaii Analytical Laboratory
ANALYTICAL REPORT

Tuesday, May 7, 2024

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

Phone Number: (808)494-0365
Facsimile:
Email: lehuaenvironmental@gmail.com

Lab Job No: 202404826
Date Submitted: 5/6/2024
Your Project: 2024-224, CSO Decommissioning, 4/29/24-4/30/24

Air - Lead

NIOSH Method: 7082m LEAD by FAAS

Sample No.	Your Sample ID / Description	Results	Units	Date Analyzed
202433370	**042924-C-L1**	< 6.9	ug/m3	5/6/2024
Comments				
202433371	**042924-C-L2**	< 6.9	ug/m3	5/6/2024
Comments				
202433372	**042924-C-L3**	< 6.9	ug/m3	5/6/2024
Comments				
202433373	**042924-C-L4**	< 6.9	ug/m3	5/6/2024
Comments				
202433375	**043024-C-L1**	< 6.9	ug/m3	5/6/2024
Comments				
202433376	**043024-C-L2**	< 6.9	ug/m3	5/6/2024
Comments				
202433377	**043024-C-L3**	< 6.9	ug/m3	5/6/2024
Comments				
202433378	**043024-C-L4**	< 6.9	ug/m3	5/6/2024
Comments				

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

Phone Number: (808)494-0365
Facsimile:
Email: lehuaenvironmental@gmail.com

Lab Job No: 202404826
Date Submitted: 5/6/2024
Your Project: 2024-224, CSO Decommissioning, 4/29/24-4/30/24

All Quality Control data are acceptable unless otherwise noted.
MRL for lead air is 5ug.
MRL for lead wipe is 10ug.
MRL for lead paint or soil is 40 mg/kg for a 0.25g sample.

General Comments
The sample[s] analysis subject of this analytical report were conducted in general accordance with the procedures associated with the "analytical method" referenced above. Modifications to this methodology may have been made based upon the analyst's professional judgment and / or sample matrix effects encountered. The analysis of sample relates only to the sample analyzed, and may or may not be representative of the original source of the material submitted for our analysis. All analysts participate in interlaboratory quality control testing to continuously document profiency. This report is not to be duplicated except in full without the expressed written permission of Hawaii Analytical Laboratory. This report should not be construed as an endorsement for a product or a service by the AIHA LAP, LLC or any affiliated organizations. Sample and associated sampling / collection data is reported as provided by client. TWA values have been calculated based on information supplied by the client that the laboratory has not independently verified. Results have not been corrected for blank determinations unless noted in remarks. Unless otherwise indicated the sample condition at the time of receipt was acceptable.

Results and Symbols Definitions
> This testing result is greater than the numerical value listed.
< This testing result is less than the numerical value listed.
# = Analytical methods marked with an "#" are not within our AIHA LAP, LLC Scope of Accreditation.
MRL = Method Reporting Limit.

Jennifer Hsu Liao
Laboratory Manager

HAWAII ANALYTICAL LABORATORY, LLC
3615 Harding Avenue, Suite 308
Honolulu, HI 96816
Ph: 808-735-0422 - Fax: 808-735-0047
https://analyzehawaii.com

☐ New Client?

Report To*	:	Kamalana Kobayashi
Company	:	Lehua Environmental Inc.
Address*	:	PO BOX 1018
		Kamuela, Hawaii 96743
Phone / Cell No.*	:	808-494-0365
Report results to	:	K. Kobayashi
Email / Fax	:	Lehuaenvironmental@gmail.com

Invoice To*	:	Kamalana Kobayashi
Company	:	Lehua Environmental Inc.
Address*	:	PO BOX 1018
		Kamuela, Hawaii 96743
Phone / Cell No.*	:	808-494-0365
Purchase Order No.	:	K. Kobayashi
Email Invoice To	:	Lehuaenvironmental@gmail.com

Need Results By*:

- ☐ 5 Working Days (WD)
- ☐ 4 WD
- ☐ 3 WD
- ☐ 2 WD
- ☑ 24 hours
- ☐ 6 hours or less
- ☐ 4 hours or less
- ☐ 1-2 hours

Site/Project Name: CSO Decommisioning

Client Project No.: 2024-224

Verbal results? ☐

Sampled By & Certif. #: Kama Kobayashi

Special Instructions: Do not analyze blank until further notice

PLM POSITIVE STOP Instructions:
- ☐ + stop / SAMPLE
- ☐ + stop / LAYER

Lab Report No.: 202404826

Sample ID	Sample Description*	Date Sampled* (mm/dd/yy)	Collection Medium	Sample Area / Air Volume	Analysis Requested*	Method Reference	Lab Sample(s) No.:
042924-C-L1	Lead Air Sample	4/29/2024	cassette	720 L	Lead Air		202433370
042924-C-L2	Lead Air Sample	4/29/2024	cassette	720 L	Lead Air		202433371
042924-C-L3	Lead Air Sample	4/29/2024	cassette	720 L	Lead Air		202433372
042924-C-L4	Lead Air Sample	4/29/2024	cassette	720 L	Lead Air		202433373
042924-C-L5 (Blank)	Lead Air Sample	4/29/2024	cassette	720 L	Lead Air		202433374
043024-C-L1	Lead Air Sample	4/30/2024	cassette	720 L	Lead Air		202433375
043024-C-L2	Lead Air Sample	4/30/2024	cassette	720 L	Lead Air		202433376
043024-C-L3	Lead Air Sample	4/30/2024	cassette	720 L	Lead Air		202433377
043024-C-L4	Lead Air Sample	4/30/2024	cassette	720 L	Lead Air		202433378
043024-C-L5 (blank)	Lead Air Sample	4/30/2024	cassette	720 L	Lead Air		202433379

Relinquished By (Print and Sign)	Date/Time	Received By (Print and Sign)	Date/Time
Kama Kobayashi [signature]	5/1/2024	Savannah Newman Savannah Newman	05-06-24A10:16 RCVD

*Sample description can be paint chips, concrete, specific sample collection location, etc...
If matrix is 'soil', please specify if it is a FOREIGN SOIL SAMPLE (outside Hawaii) in the comment section.
All samples submitted are subject to Hawaii Analytical Laboratory terms and conditions.
*Required fields, failure to complete these fields may result in a delay in your samples being processed.

☒ via HAC ☐ via USPS ☐ via drop box ☐ via FedEx ☐ via pick up
awb#: 173-...91617234

Page: ______ of ______

Hawaii Analytical Laboratory
ANALYTICAL REPORT

Monday, May 13, 2024

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

Phone Number: (808)494-0365
Facsimile:
Email: lehuaenvironmental@gmail.com

Lab Job No: 202404955
Date Submitted: 5/8/2024
Your Project: CSO Decommissioning, 5/1/24-5/3/24

Air - Lead

NIOSH Method: 7082m LEAD by FAAS

Sample No.	Your Sample ID / Description	Results	Units	Date Analyzed
202434533	**CSO 050124 L1**	< 6.1	ug/m3	5/13/2024
Comments				
202434534	**CSO 050124 L2**	< 6.1	ug/m3	5/13/2024
Comments				
202434535	**CSO 050124 L3**	< 6.1	ug/m3	5/13/2024
Comments				
202434536	**CSO 050124 L4**	< 6.1	ug/m3	5/13/2024
Comments				
202434538	**CSO 050224 L1**	< 6.3	ug/m3	5/13/2024
Comments				
202434539	**CSO 050224 L2**	< 6.3	ug/m3	5/13/2024
Comments				
202434540	**CSO 050224 L3**	< 6.3	ug/m3	5/13/2024
Comments				
202434541	**CSO 050224 L4**	< 6.3	ug/m3	5/13/2024
Comments				

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

Phone Number: (808)494-0365
Facsimile:
Email: lehuaenvironmental@gmail.com

Lab Job No: 202404955
Date Submitted: 5/8/2024
Your Project: CSO Decommissioning, 5/1/24-5/3/24

Air - Lead

NIOSH Method: 7082m LEAD by FAAS

Sample No.	Your Sample ID / Description	Results	Units	Date Analyzed
202434543	**CSO 050324 L1**	< 9.1	ug/m3	5/13/2024
Comments				
202434544	**CSO 050324 L2**	< 9.1	ug/m3	5/13/2024
Comments				
202434545	**CSO 050324 L3**	< 9.1	ug/m3	5/13/2024
Comments				
202434546	**CSO 050324 L4**	< 9.1	ug/m3	5/13/2024
Comments				

All Quality Control data are acceptable unless otherwise noted.
MRL for lead air is 5ug.
MRL for lead wipe is 10ug.
MRL for lead paint or soil is 40 mg/kg for a 0.25g sample.

General Comments
The sample[s] analysis subject of this analytical report were conducted in general accordance with the procedures associated with the "analytical method" referenced above. Modifications to this methodology may have been made based upon the analyst's professional judgment and / or sample matrix effects encountered. The analysis of sample relates only to the sample analyzed, and may or may not be representative of the original source of the material submitted for our analysis. All analysts participate in interlaboratory quality control testing to continuously document profiency. This report is not to be duplicated except in full without the expressed written permission of Hawaii Analytical Laboratory. This report should not be construed as an endorsement for a product or a service by the AIHA LAP, LLC or any affiliated organizations. Sample and associated sampling / collection data is reported as provided by client. TWA values have been calculated based on information supplied by the client that the laboratory has not independently verified. Results have not been corrected for blank determinations unless noted in remarks. Unless otherwise indicated the sample condition at the time of receipt was acceptable.

Results and Symbols Definitions
> This testing result is greater than the numerical value listed.
< This testing result is less than the numerical value listed.
# = Analytical methods marked with an "#" are not within our AIHA LAP, LLC Scope of Accreditation.
MRL = Method Reporting Limit.

Jennifer Hsu Liao
Laboratory Manager

HAWAII ANALYTICAL LABORATORY, LLC
3615 Harding Avenue, Suite 308
Honolulu, HI 96816
Ph: 808-735-0422 - Fax: 808-735-0047
https://analyzehawaii.com

☐ New Client?

Report To*	Kama Kobayashi
Company	Lehua Environmental Inc.
Address*	PO BOX 1018
	Kamuela, Hawaii 96743
Phone / Cell No.*	808-494-0365
Report results to	K. Kobayashi
via email or fax	nicoleg@lehuaenv.com
	lehuaenvironmental@gmail.com

Invoice To*	Kamalana Kobayashi
Company	Lehua Environmental Inc.
Address*	PO BOX 1018
	Kamuela, Hawaii 96743
Phone / Cell No.*	
Purchase Order No.	
Email Invoice To	lehuaenvironmental@gmail.com

Need Results By*:
- ☐ 5 Working Days (WD)
- ☐ 4 WD
- ☑ 3 WD
- ☐ 2 WD
- ☐ 24 hours
- ☐ 6 hours or less
- ☐ 4 hours or less
- ☐ 1-2 hours

Client Project No.:

Site/Project Name: CSO Decommissioning ☐

Sampled By & Certif. # : Nicole Garaganza-Tengan

Special Instructions: Do Not Analyze Blank Until Further Notice

PLM POSITIVE STOP? ☐ + stop / SAMPLE ☐ + stop / LAYER

Verbal results? ☐

Lab Report No.: 202404955

	Sample ID	Sample Description*	Date Sampled* (mm/dd/yy)	Collection Medium	Sample Area / Air Volume	Analysis Requested*	Method Reference	***Lab Sample(s) No.:***
1		CSO 050124 L1	5/1/2024	Cassette	820 L	Lead Air		202434533
2		CSO 050124 L2	5/1/2024	Cassette	820 L	Lead Air		202434534
3		CSO 050124 L3	5/1/2024	Cassette	820 L	Lead Air		202434535
4		CSO 050124 L4	5/1/2024	Cassette	820 L	Lead Air		202434536
5		CSO 050124 BLANK	5/1/2024	Cassette	BLANK	BLANK		202434537
6		CSO 050224 L1	5/2/2024	Cassette	800 L	Lead Air		202434538
7		CSO 050224 L2	5/2/2024	Cassette	800 L	Lead Air		202434539
8		CSO 050224 L3	5/2/2024	Cassette	800 L	Lead Air		202434540
9		CSO 050224 L4	5/2/2024	Cassette	800 L	Lead Air		202434541
10		CSO 050224 BLANK	5/2/2024	Cassette	BLANK	BLANK		202434542
11		CSO 050324 L1	5/3/2024	Cassette	550 L	Lead Air		202434543
12		CSO 050324 L2	5/3/2024	Cassette	550 L	Lead Air		202434544
13		CSO 050324 L3	5/3/2024	Cassette	550 L	Lead Air		202434545
14		CSO 050324 L4	5/3/2024	Cassette	550 L	Lead Air		202434546
15		CSO 050324 BLANK	5/3/2024	Cassette	BLANK	BLANK		202434547

Relinquished By (Print and Sign)	Date/Time	Received By (Print and Sign)	Date/Time
Nicole Garaganza-Tengan	5/7/2024 17:15	Trinidad Shutt	05-08-24A10:43 RCVD

HAWAII ANALYTICAL LABORATORY, LLC

3615 Harding Avenue, Suite 308
Honolulu, HI 96816
Ph: 808-735-0422 - Fax: 808-735-0047
https://analyzehawaii.com

☐ New Client?

Report To*	Kama Kobayashi
Company	Lehua Environmental Inc.
Address*	PO BOX 1018
	Kamuela, Hawaii 96743
Phone / Cell No.*	808-494-0365
Report results to	K. Kobayashi
via email or fax	nicoleg@lehuaenv.com
	lehuaenvironmental@gmail.com

Invoice To*	Kamalana Kobayashi
Company	Lehua Environmental Inc.
Address*	PO BOX 1018
	Kamuela, Hawaii 96743
Phone / Cell No.*	
Purchase Order No.	
Email Invoice To	lehuaenvironmental@gmail.com

Need Results By*:

- ☐ 5 Working Days (WD)
- ☐ 4 WD
- ☑ 3 WD
- ☐ 2 WD
- ☐ 24 hours
- ☐ 6 hours or less
- ☐ 4 hours or less
- ☐ 1-2 hours

Client Project No.:

Site/Project Name: CSO Decommissioning ☐

Sampled By & Certif. # : Nicole Garaganza-Tengan

Special Instructions: Do Not Analyze Blank Until Further Notice

PLM POSITIVE STOP?
- ☐ + stop / SAMPLE
- ☐ + stop / LAYER

Verbal results? ☐

Lab Report No.: 202404955

Sample ID	Sample Description*	Date Sampled* (mm/dd/yy)	Collection Medium	Sample Area / Air Volume	Analysis Requested*	Method Reference	***Lab Sample(s) No.:***

***Sample description can be paint chips, concrete, specific sample collection location, etc...**
If matrix is 'soil', please specify if it is a FOREIGN SOIL SAMPLE (outside Hawaii) in the comment section.
All samples submitted are subject to Hawaii Analytical Laboratory terms and conditions.
***Required fields, failure to complete these fields may result in a delay in your samples being processed.**

☑ via HAC ☐ via USPS ☐ via drop box ☐ via FedEx ☐ via pick up

awb#: 173-.....9161.7256

Page: _____ of _____

Trinidad Shutt

Trinidad Shutt

05-08-24A10:42 RCVD

Hawaii Analytical Laboratory
ANALYTICAL REPORT

Thursday, May 23, 2024

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

Phone Number: (808)494-0365
Facsimile:
Email: lehuaenvironmental@gmail.com

Lab Job No: 202405274
Date Submitted: 5/20/2024
Your Project: CSO Decomissioning, 5/13/24-5/16/24

Air - Lead

NIOSH Method: 7082m LEAD by FAAS

Sample No.	Your Sample Description	Results	Units	Date Analyzed
202436179	**CSO 5/13/24 L1**	< 7.6	ug/m3	5/23/2024
Comments				
202436180	**CSO 5/13/24 L2**	< 7.6	ug/m3	5/23/2024
Comments				
202436181	**CSO 5/13/24 L3**	< 7.6	ug/m3	5/23/2024
Comments				
202436182	**CSO 5/13/24 L4**	< 7.6	ug/m3	5/23/2024
Comments				
202436184	**CSO 5/14/24 L1**	< 8.3	ug/m3	5/23/2024
Comments				
202436185	**CSO 5/14/24 L2**	< 8.3	ug/m3	5/23/2024
Comments				
202436186	**CSO 5/14/24 L3**	< 8.3	ug/m3	5/23/2024
Comments				
202436187	**CSO 5/14/24 L4**	< 8.3	ug/m3	5/23/2024
Comments				

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

Phone Number: (808)494-0365
Facsimile:
Email: lehuaenvironmental@gmail.com

Lab Job No: 202405274
Date Submitted: 5/20/2024
Your Project: CSO Decomissioning, 5/13/24-5/16/24

Air - Lead

NIOSH Method: 7082m LEAD by FAAS

Sample No.	Your Sample Description	Results	Units	Date Analyzed
202436189	**CSO 5/15/24 L1**	< 6.9	ug/m3	5/23/2024
Comments				
202436190	**CSO 5/15/24 L2**	< 6.9	ug/m3	5/23/2024
Comments				
202436191	**CSO 5/15/24 L3**	< 6.9	ug/m3	5/23/2024
Comments				
202436192	**CSO 5/15/24 L4**	< 6.9	ug/m3	5/23/2024
Comments				
202436194	**CSO 5/16/24 L1**	< 8.3	ug/m3	5/23/2024
Comments				
202436195	**CSO 5/16/24 L2**	< 8.3	ug/m3	5/23/2024
Comments				
202436196	**CSO 5/16/24 L3**	< 8.3	ug/m3	5/23/2024
Comments				
202436197	**CSO 5/16/24 L4**	< 8.3	ug/m3	5/23/2024
Comments				

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

Phone Number: (808)494-0365
Facsimile:
Email: lehuaenvironmental@gmail.com

Lab Job No: 202405274
Date Submitted: 5/20/2024
Your Project: CSO Decomissioning, 5/13/24-5/16/24

All Quality Control data are acceptable unless otherwise noted.
MRL for lead air is 5ug.
MRL for lead wipe is 10ug.
MRL for lead paint or soil is 40 mg/kg for a 0.25g sample.

General Comments
The sample[s] analysis subject of this analytical report were conducted in general accordance with the procedures associated with the "analytical method" referenced above. Modifications to this methodology may have been made based upon the analyst's professional judgment and / or sample matrix effects encountered. The analysis of sample relates only to the sample analyzed, and may or may not be representative of the original source of the material submitted for our analysis. All analysts participate in interlaboratory quality control testing to continuously document profiency. This report is not to be duplicated except in full without the expressed written permission of Hawaii Analytical Laboratory. This report should not be construed as an endorsement for a product or a service by the AIHA LAP, LLC or any affiliated organizations. Sample and associated sampling / collection data is reported as provided by client. TWA values have been calculated based on information supplied by the client that the laboratory has not independently verified. Results have not been corrected for blank determinations unless noted in remarks. Unless otherwise indicated the sample condition at the time of receipt was acceptable.

Results and Symbols Definitions
> This testing result is greater than the numerical value listed.
< This testing result is less than the numerical value listed.
# = Analytical methods marked with an "#" are not within our AIHA LAP, LLC Scope of Accreditation.
MRL = Method Reporting Limit.

Eva Skogsberg
Laboratory Supervisor

HAWAII ANALYTICAL LABORATORY, LLC
3615 Harding Avenue, Suite 308
Honolulu, HI 96816
Ph: 808-735-0422 - Fax: 808-735-0047
https://analyzehawaii.com

☐ New Client?

Report To*	Kama Kobayashi
Company	Lehua Environmental Inc.
Address*	PO BOX 1018
	Kamuela, Hawaii 96743
Phone / Cell No.*	808-494-0365
Report results to	K. Kobayashi
via email or fax	calvin@lehuaenv.com
	lehuaenvironmental@gmail.com

Invoice To*	Kamalana Kobayashi
Company	Lehua Environmental Inc.
Address*	PO BOX 1018
	Kamuela, Hawaii 96743
Phone / Cell No.*	
Purchase Order No.	
Email Invoice To	lehuaenvironmental@gmail.com

Need Results By*:
- ☐ 5 Working Days (WD)
- ☐ 4 WD
- ☑ 3 WD
- ☐ 2 WD
- ☐ 24 hours
- ☐ 6 hours or less
- ☐ 4 hours or less
- ☐ 1-2 hours

Client Project No.:

Site/Project Name: CSO Decomissioning 5/13/24 - 5/16/24 ☐

Sampled By & Certif. # : Calvin Arca

Special Instructions: Do Not Analyze Blank Until Further Notice

PLM POSITIVE STOP? ☐ + stop / SAMPLE ☐ + stop / LAYER

Verbal results? ☐

Lab Report No.: 202405274

	Sample ID	Sample Description*	Date Sampled* (mm/dd/yy)	Collection Medium	Sample Area / Air Volume	Analysis Requested*	Method Reference	***Lab Sample(s) No.:***
1		CSO 5/13/24 L1	5/13/2024	cassette	660 L	Lead Air		202436179
2		CSO 5/13/24 L2	5/13/2024	cassette	660 L	Lead Air		202436180
3		CSO 5/13/24 L3	5/13/2024	cassette	660 L	Lead Air		202436181
4		CSO 5/13/24 L4	5/13/2024	cassette	660 L	Lead Air		202436182
5		CSO 5/13/24 Blank	5/13/2024	cassette	Blank	Blank		202436183
6		CSO 5/14/24 L1	5/14/2024	cassette	600 L	Lead Air		202436184
7		CSO 5/14/24 L2	5/14/2024	cassette	600 L	Lead Air		202436185
8		CSO 5/14/24 L3	5/14/2024	cassette	600 L	Lead Air		202436186
9		CSO 5/14/24 L4	5/14/2024	cassette	600 L	Lead Air		202436187
10		CSO 5/14/24 Blank	5/14/2024	cassette	Blank	Blank		202436188
11		CSO 5/15/24 L1	5/15/2024	cassette	720 L	Lead Air		202436189
12		CSO 5/15/24 L2	5/15/2024	cassette	720 L	Lead Air		202436190
13		CSO 5/15/24 L3	5/15/2024	cassette	720 L	Lead Air		202436191
14		CSO 5/15/24 L4	5/15/2024	cassette	720 L	Lead Air		202436192
15		CSO 5/15/24 Blank	5/15/2024	cassette	Blank	Blank		202436193

HAWAII ANALYTICAL LABORATORY, LLC

3615 Harding Avenue, Suite 308
Honolulu, HI 96816
Ph: 808-735-0422 - Fax: 808-735-0047
https://analyzehawaii.com

☐ New Client?

Report To*	Kama Kobayashi	Invoice To*	Kamalana Kobayashi
Company	Lehua Environmental Inc.	Company	Lehua Environmental Inc.
Address*	PO BOX 1018 Kamuela, Hawaii 96743	Address*	PO BOX 1018 Kamuela, Hawaii 96743
Phone / Cell No.*	808-494-0365	Phone / Cell No.*	
Report results to	K. Kobayashi	Purchase Order No.	
via email or fax	calvin@lehuaenv.com lehuaenvironmental@gmail.com	Email Invoice To	lehuaenvironmental@gmail.com

Need Results By*:

- ☐ 5 Working Days (WD)
- ☐ 4 WD
- ☑ 3 WD
- ☐ 2 WD
- ☐ 24 hours
- ☐ 6 hours or less
- ☐ 4 hours or less
- ☐ 1-2 hours

Client Project No.:

Site/Project Name: CSO Decomissioning 5/13/24 - 5/16/24 ☐

Sampled By & Certif. #: Calvin Arca

Special Instructions: Do Not Analyze Blank Until Further Notice

PLM POSITIVE STOP? ☐ + stop / SAMPLE ☐ + stop / LAYER

Verbal results? ☐

Lab Report No.: 202405274

	Sample ID	Sample Description*	Date Sampled* (mm/dd/yy)	Collection Medium	Sample Area / Air Volume	Analysis Requested*	Method Reference	*Lab Sample(s) No.:*
16		CSO 5/16/24 L1	5/16/2024	cassette	600 L	Lead Air		202436194
17		CSO 5/16/24 L2	5/16/2024	cassette	600 L	Lead Air		202436195
18		CSO 5/16/24 L3	5/16/2024	cassette	600 L	Lead Air		202436196
19		CSO 5/16/24 L4	5/16/2024	cassette	600 L	Lead Air		202436197
20		CSO 5/16/24 Blank	5/16/2024	cassette	Blank	Blank		202436198

Relinquished By (Print and Sign)	Date/Time	Received By (Print and Sign)	Date/Time
Calvin Arca	1/28/2024 12:00	Trinidad Shutt [signature]	05-20-24 A09:24 RCVD

*Sample description can be paint chips, concrete, specific sample collection location, etc...
If matrix is 'soil', please specify if it is a FOREIGN SOIL SAMPLE (outside Hawaii) in the comment section.
All samples submitted are subject to Hawaii Analytical Laboratory terms and conditions.
*Required fields, failure to complete these fields may result in a delay in your samples being processed.

☒ via HAC ☐ via USPS ☐ via drop box ☐ via FedEx ☐ via pick up

awb#: 173-39175625

Page: ______ of ______

Hawaii Analytical Laboratory
ANALYTICAL REPORT

Friday, May 31, 2024

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

Phone Number: (808)494-0365
Facsimile:
Email: lehuaenvironmental@gmail.com

Lab Job No: 202405578
Date Submitted: 5/28/2024
Project Name: CSO Decomissioning, 5/20/24-5/24/24

Air - Lead

NIOSH Method: 7082m LEAD by FAAS

Sample No.	Your Sample ID / Description	Results	Units	Date Analyzed
202437662	**CSO 5/20/24 L1**	< 6.4	ug/m3	5/29/2024
Comments				
202437663	**CSO 5/20/24 L2**	< 6.4	ug/m3	5/29/2024
Comments				
202437664	**CSO 5/20/24 L3**	< 6.4	ug/m3	5/29/2024
Comments				
202437665	**CSO 5/20/24 L4**	< 6.4	ug/m3	5/29/2024
Comments				
202437667	**CSO 5/21/24 L1**	< 5.2	ug/m3	5/29/2024
Comments				
202437668	**CSO 5/21/24 L2**	< 5.2	ug/m3	5/29/2024
Comments				
202437669	**CSO 5/21/24 L3**	< 5.2	ug/m3	5/29/2024
Comments				
202437670	**CSO 5/21/24 L4**	< 5.2	ug/m3	5/29/2024
Comments				
202437672	**CSO 5/22/24 L1**	< 6.4	ug/m3	5/29/2024
Comments				

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

Phone Number: (808)494-0365
Facsimile:
Email: lehuaenvironmental@gmail.com

Lab Job No: 202405578
Date Submitted: 5/28/2024
Project Name: CSO Decomissioning, 5/20/24-5/24/24

Air - Lead

NIOSH Method: 7082m LEAD by FAAS

Sample No.	Your Sample ID / Description	Results	Units	Date Analyzed
202437673	**CSO 5/22/24 L2**	< 6.4	ug/m3	5/29/2024
Comments				
202437674	**CSO 5/22/24 L3**	< 6.4	ug/m3	5/29/2024
Comments				
202437675	**CSO 5/22/24 L4**	< 6.4	ug/m3	5/29/2024
Comments				
202437677	**CSO 5/23/24 L1**	< 6	ug/m3	5/29/2024
Comments				
202437678	**CSO 5/23/24 L2**	< 6	ug/m3	5/29/2024
Comments				
202437679	**CSO 5/23/24 L3**	< 6	ug/m3	5/29/2024
Comments				
202437680	**CSO 5/23/24 L4**	< 6	ug/m3	5/29/2024
Comments				
202437682	**CSO 5/24/24 L1**	< 8.3	ug/m3	5/29/2024
Comments				
202437683	**CSO 5/24/24 L2**	< 8.3	ug/m3	5/29/2024
Comments				
202437684	**CSO 5/24/24 L3**	< 8.3	ug/m3	5/29/2024
Comments				
202437685	**CSO 5/24/24 L4**	< 8.3	ug/m3	5/29/2024
Comments				

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

Phone Number: (808)494-0365
Facsimile:
Email: lehuaenvironmental@gmail.com

Lab Job No: 202405578
Date Submitted: 5/28/2024
Project Name: CSO Decomissioning, 5/20/24-5/24/24

All Quality Control data are acceptable unless otherwise noted.
MRL for lead air is 5ug.
MRL for lead wipe is 10ug.
MRL for lead paint or soil is 40 mg/kg for a 0.25g sample.

General Comments
The sample[s] analysis subject of this analytical report were conducted in general accordance with the procedures associated with the "analytical method" referenced above. Modifications to this methodology may have been made based upon the analyst's professional judgment and / or sample matrix effects encountered. The analysis of sample relates only to the sample analyzed, and may or may not be representative of the original source of the material submitted for our analysis. All analysts participate in interlaboratory quality control testing to continuously document profiency. This report is not to be duplicated except in full without the expressed written permission of Hawaii Analytical Laboratory. This report should not be construed as an endorsement for a product or a service by the AIHA LAP, LLC or any affiliated organizations. Sample and associated sampling / collection data is reported as provided by client. TWA values have been calculated based on information supplied by the client that the laboratory has not independently verified. Results have not been corrected for blank determinations unless noted in remarks. Unless otherwise indicated the sample condition at the time of receipt was acceptable.

Results and Symbols Definitions
> This testing result is greater than the numerical value listed.
< This testing result is less than the numerical value listed.
# = Analytical methods marked with an "#" are not within our AIHA LAP, LLC Scope of Accreditation.
MRL = Method Reporting Limit.

Anne Antin

Anne Antin
Quality Control Manager

HAWAII ANALYTICAL LABORATORY, LLC
3615 Harding Avenue, Suite 308
Honolulu, HI 96816
Ph: 808-735-0422 - Fax: 808-735-0047
https://analyzehawaii.com

☐ New Client?

Report To*	Kama Kobayashi
Company	Lehua Environmental Inc.
Address*	PO BOX 1018
	Kamuela, Hawaii 96743
Phone / Cell No.*	808-494-0365
Report results to	K. Kobayashi
via email or fax	calvin@lehuaenv.com
	lehuaenvironmental@gmail.com

Invoice To*	Kamalana Kobayashi
Company	Lehua Environmental Inc.
Address*	PO BOX 1018
	Kamuela, Hawaii 96743
Phone / Cell No.*	
Purchase Order No.	
Email Invoice To	lehuaenvironmental@gmail.com

Need Results By*:
- ☐ 5 Working Days (WD)
- ☐ 4 WD
- ☑ 3 WD
- ☐ 2 WD
- ☐ 24 hours
- ☐ 6 hours or less
- ☐ 4 hours or less
- ☐ 1-2 hours

Client Project No.:

Site/Project Name: CSO Decomissioning 5/20/24 - 5/24/24 ☐

Sampled By & Certif. # : Calvin Arca

Special Instructions: Do Not Analyze Blank Until Further Notice

PLM POSITIVE STOP? ☐ + stop / SAMPLE ☐ + stop / LAYER

Verbal results? ☐

Lab Report No.: 202405578

	Sample ID	Sample Description*	Date Sampled* (mm/dd/yy)	Collection Medium	Sample Area / Air Volume	Analysis Requested*	Method Reference	***Lab Sample(s) No.:***
1		CSO 5/20/24 L1	5/20/2024	cassette	780 L	Lead Air		202437662
2		CSO 5/20/24 L2	5/20/2024	cassette	780 L	Lead Air		202437663
3		CSO 5/20/24 L3	5/20/2024	cassette	780 L	Lead Air		202437664
4		CSO 5/20/24 L4	5/20/2024	cassette	780 L	Lead Air		202437665
5		CSO 5/20/24 Blank	5/20/2024	cassette	Blank	Blank		202437666
6		CSO 5/21/24 L1	5/21/2024	cassette	960 L	Lead Air		202437667
7		CSO 5/21/24 L2	5/21/2024	cassette	960 L	Lead Air		202437668
8		CSO 5/21/24 L3	5/21/2024	cassette	960 L	Lead Air		202437669
9		CSO 5/21/24 L4	5/21/2024	cassette	960 L	Lead Air		202437670
10		CSO 5/21/24 Blank	5/21/2024	cassette	Blank	Blank		202437671
11		CSO 5/22/24 L1	5/22/2024	cassette	780 L	Lead Air		202437672
12		CSO 5/22/24 L2	5/22/2024	cassette	780 L	Lead Air		202437673
13		CSO 5/22/24 L3	5/22/2024	cassette	780 L	Lead Air		202437674
14		CSO 5/22/24 L4	5/22/2024	cassette	780 L	Lead Air		202437675
15		CSO 5/22/24 Blank	5/22/2024	cassette	Blank	Blank		202437676

HAWAII ANALYTICAL LABORATORY, LLC

3615 Harding Avenue, Suite 308
Honolulu, HI 96816
Ph: 808-735-0422 - Fax: 808-735-0047
https://analyzehawaii.com

☐ New Client?

Report To*	Kama Kobayashi
Company	Lehua Environmental Inc.
Address*	PO BOX 1018
	Kamuela, Hawaii 96743
Phone / Cell No.*	808-494-0365
Report results to	K. Kobayashi
via email or fax	calvin@lehuaenv.com lehuaenvironmental@gmail.com

Invoice To*	Kamalana Kobayashi
Company	Lehua Environmental Inc.
Address*	PO BOX 1018
	Kamuela, Hawaii 96743
Phone / Cell No.*	
Purchase Order No.	
Email Invoice To	lehuaenvironmental@gmail.com

Need Results By*:
- ☐ 5 Working Days (WD)
- ☐ 4 WD
- ☑ 3 WD
- ☐ 2 WD
- ☐ 24 hours
- ☐ 6 hours or less
- ☐ 4 hours or less
- ☐ 1-2 hours

Client Project No.:

Site/Project Name: CSO Decomissioning 5/20/24 - 5/24/24 ☐

Sampled By & Certif. # : Calvin Arca

Special Instructions: Do Not Analyze Blank Until Further Notice

PLM POSITIVE STOP?
- ☐ + stop / SAMPLE
- ☐ + stop / LAYER

Verbal results? ☐

Lab Report No.: 202405578

	Sample ID	Sample Description*	Date Sampled* (mm/dd/yy)	Collection Medium	Sample Area / Air Volume	Analysis Requested*	Method Reference	Lab Sample(s) No.:
16		CSO 5/23/24 L1	5/23/2024	cassette	840 L	Lead Air		202437677
17		CSO 5/23/24 L2	5/23/2024	cassette	840 L	Lead Air		202437678
18		CSO 5/23/24 L3	5/23/2024	cassette	840 L	Lead Air		202437679
19		CSO 5/23/24 L4	5/23/2024	cassette	840 L	Lead Air		202437680
20		CSO 5/23/24 Blank	5/23/2024	cassette	Blank	Blank		202437681
21		CSO 5/24/24 L1	5/24/2024	cassette	600 L	Lead Air		202437682
22		CSO 5/24/24 L2	5/24/2024	cassette	600 L	Lead Air		202437683
23		CSO 5/24/24 L3	5/24/2024	cassette	600 L	Lead Air		202437684
24		CSO 5/24/24 L4	5/24/2024	cassette	600 L	Lead Air		202437685
25		CSO 5/24/24 Blank	5/24/2024	cassette	Blank	Blank		202437686

Relinquished By (Print and Sign)	Date/Time	Received By (Print and Sign)	Date/Time
Calvin Arca	1/28/2024 12:00	Savannah Newman Savannah Newman	5/28/24 1:00pm

*Sample description can be paint chips, concrete, specific sample collection location, etc...
If matrix is 'soil', please specify if it is a FOREIGN SOIL SAMPLE (outside Hawaii) in the comment section.
All samples submitted are subject to Hawaii Analytical Laboratory terms and conditions.
*Required fields, failure to complete these fields may result in a delay in your samples being processed.

☒ via HAC ☐ via USPS ☐ via drop box ☐ via FedEx ☐ via pick up
awb#: 173-39175614

Page: _____ of _____

Hawaii Analytical Laboratory
ANALYTICAL REPORT

Tuesday, June 11, 2024

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

Phone Number: (808)494-0365
Facsimile:
Email: lehuaenvironmental@gmail.com

Lab Job No: 202405887
Date Submitted: 6/6/2024
Your Project: CSO Decomissioning, 5/28/24-5/30/24

Air - Lead

NIOSH Method: 7082m LEAD by FAAS

Sample No.	Your Sample Description	Results	Units	Date Analyzed
202439776	**CSO 5/28/24 L1**	< 8.3	ug/m3	6/10/2024
Comments				
202439777	**CSO 5/28/24 L2**	< 8.3	ug/m3	6/10/2024
Comments				
202439778	**CSO 5/28/24 L3**	< 8.3	ug/m3	6/10/2024
Comments				
202439779	**CSO 5/28/24 L4**	< 8.3	ug/m3	6/10/2024
Comments				
202439781	**CSO 2/29/24 L1**	< 6.9	ug/m3	6/10/2024
Comments				
202439782	**CSO 2/29/24 L2**	< 6.9	ug/m3	6/10/2024
Comments				
202439783	**CSO 2/29/24 L3**	< 6.9	ug/m3	6/10/2024
Comments				
202439784	**CSO 2/29/24 L4**	< 6.9	ug/m3	6/10/2024
Comments				

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

Phone Number: (808)494-0365
Facsimile:
Email: lehuaenvironmental@gmail.com

Lab Job No: 202405887
Date Submitted: 6/6/2024
Your Project: CSO Decomissioning, 5/28/24-5/30/24

Air - Lead

NIOSH Method: 7082m LEAD by FAAS

Sample No.	Your Sample Description	Results	Units	Date Analyzed
202439786	**CSO 5/30/24 L1**	< 6	ug/m3	6/10/2024
Comments				
202439787	**CSO 5/30/24 L2**	< 6	ug/m3	6/10/2024
Comments				
202439788	**CSO 5/30/24 L3**	< 6	ug/m3	6/10/2024
Comments				
202439789	**CSO 5/30/24 L4**	< 6	ug/m3	6/10/2024
Comments				

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

Phone Number: (808)494-0365
Facsimile:
Email: lehuaenvironmental@gmail.com

Lab Job No: 202405887
Date Submitted: 6/6/2024
Your Project: CSO Decomissioning, 5/28/24-5/30/24

All Quality Control data are acceptable unless otherwise noted.
MRL for lead air is 5ug.
MRL for lead wipe is 10ug.
MRL for lead paint or soil is 40 mg/kg for a 0.25g sample.

General Comments
The sample[s] analysis subject of this analytical report were conducted in general accordance with the procedures associated with the "analytical method" referenced above. Modifications to this methodology may have been made based upon the analyst's professional judgment and / or sample matrix effects encountered. The analysis of sample relates only to the sample analyzed, and may or may not be representative of the original source of the material submitted for our analysis. All analysts participate in interlaboratory quality control testing to continuously document profiency. This report is not to be duplicated except in full without the expressed written permission of Hawaii Analytical Laboratory. This report should not be construed as an endorsement for a product or a service by the AIHA LAP, LLC or any affiliated organizations. Sample and associated sampling / collection data is reported as provided by client. TWA values have been calculated based on information supplied by the client that the laboratory has not independently verified. Results have not been corrected for blank determinations unless noted in remarks. Unless otherwise indicated the sample condition at the time of receipt was acceptable.

Results and Symbols Definitions
> This testing result is greater than the numerical value listed.
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# = Analytical methods marked with an "#" are not within our AIHA LAP, LLC Scope of Accreditation.
MRL = Method Reporting Limit.

Eva Skogsberg
Laboratory Supervisor

HAWAII ANALYTICAL LABORATORY, LLC
3615 Harding Avenue, Suite 308
Honolulu, HI 96816
Ph: 808-735-0422 - Fax: 808-735-0047
https://analyzehawaii.com

☐ New Client?

Report To*	Kama Kobayashi
Company	Lehua Environmental Inc.
Address*	PO BOX 1018
	Kamuela, Hawaii 96743
Phone / Cell No.*	808-494-0365
Report results to	K. Kobayashi
via email or fax	calvin@lehuaenv.com
	lehuaenvironmental@gmail.com

Invoice To*	Kamalana Kobayashi
Company	Lehua Environmental Inc.
Address*	PO BOX 1018
	Kamuela, Hawaii 96743
Phone / Cell No.*	
Purchase Order No.	
Email Invoice To	lehuaenvironmental@gmail.com

Need Results By*:
- ☐ 5 Working Days (WD)
- ☐ 4 WD
- ☑ 3 WD
- ☐ 2 WD
- ☐ 24 hours
- ☐ 6 hours or less
- ☐ 4 hours or less
- ☐ 1-2 hours

Client Project No.:

Site/Project Name: CSO Decomissioning 5/28/24 - 5/30/24 ☐

Sampled By & Certif. # : Calvin Arca

Special Instructions: Do Not Analyze Blank Until Further Notice

PLM POSITIVE STOP?
- ☐ + stop / SAMPLE
- ☐ + stop / LAYER

Verbal results? ☐

Lab Report No.: 202405887

	Sample ID	Sample Description*	Date Sampled* (mm/dd/yy)	Collection Medium	Sample Area / Air Volume	Analysis Requested*	Method Reference	***Lab Sample(s) No.:***
1		CSO 5/28/24 L1	5/28/2024	cassette	600 L	Lead Air		202439776
2		CSO 5/28/24 L2	5/28/2024	cassette	600 L	Lead Air		202439777
3		CSO 5/28/24 L3	5/28/2024	cassette	600 L	Lead Air		202439778
4		CSO 5/28/24 L4	5/28/2024	cassette	600 L	Lead Air		202439779
5		CSO 5/28/24 Blank	5/28/2024	cassette	Blank	Blank		202439780
6		CSO 5/29/24 L1	5/29/2024	cassette	720 L	Lead Air		202439781
7		CSO 5/29/24 L2	5/29/2024	cassette	720 L	Lead Air		202439782
8		CSO 5/29/24 L3	5/29/2024	cassette	720 L	Lead Air		202439783
9		CSO 5/29/24 L4	5/29/2024	cassette	720 L	Lead Air		202439784
10		CSO 5/29/24 Blank	5/29/2024	cassette	Blank	Blank		202439785
11		CSO 5/30/24 L1	5/30/2024	cassette	840 L	Lead Air		202439786
12		CSO 5/30/24 L2	5/30/2024	cassette	840 L	Lead Air		202439787

HAWAII ANALYTICAL LABORATORY, LLC

3615 Harding Avenue, Suite 308
Honolulu, HI 96816
Ph: 808-735-0422 - Fax: 808-735-0047
https://analyzehawaii.com

☐ New Client?

Report To*	Kama Kobayashi
Company	Lehua Environmental Inc.
Address*	PO BOX 1018
	Kamuela, Hawaii 96743
Phone / Cell No.*	808-494-0365
Report results to	K. Kobayashi
via email or fax	calvin@lehuaenv.com
	lehuaenvironmental@gmail.com

Invoice To*	Kamalana Kobayashi
Company	Lehua Environmental Inc.
Address*	PO BOX 1018
	Kamuela, Hawaii 96743
Phone / Cell No.*	
Purchase Order No.	
Email Invoice To	lehuaenvironmental@gmail.com

Need Results By*:
- ☐ 5 Working Days (WD)
- ☐ 4 WD
- ☑ 3 WD
- ☐ 2 WD
- ☐ 24 hours
- ☐ 6 hours or less
- ☐ 4 hours or less
- ☐ 1-2 hours

Client Project No.:

Site/Project Name: CSO Decomissioning 5/28/24 - 5/30/24 ☐

Sampled By & Certif. # : Calvin Arca

Special Instructions: Do Not Analyze Blank Until Further Notice

PLM POSITIVE STOP? ☐ + stop / SAMPLE ☐ + stop / LAYER

Verbal results? ☐

Lab Report No.: 202405887

	Sample ID	Sample Description*	Date Sampled* (mm/dd/yy)	Collection Medium	Sample Area / Air Volume	Analysis Requested*	Method Reference	Lab Sample(s) No.:
13		CSO 5/30/24 L3	5/30/2024	cassette	840 L	Lead Air		202439788
14		CSO 5/30/24 L4	5/30/2024	cassette	840 L	Lead Air		202439789
15		CSO 5/30/24 Blank	5/30/2024	cassette	Blank	Blank		202439790

Relinquished By (Print and Sign)	Date/Time	Received By (Print and Sign)	Date/Time
Calvin Arca	1/28/2024 12:00	Haley Leavitt	06-06-24P02:21 RCVD

***Sample description can be paint chips, concrete, specific sample collection location, etc...**
If matrix is 'soil', please specify if it is a FOREIGN SOIL SAMPLE (outside Hawaii) in the comment section.
All samples submitted are subject to Hawaii Analytical Laboratory terms and conditions.
***Required fields, failure to complete these fields may result in a delay in your samples being processed.**

☑ via HAC ☐ via USPS ☐ via drop box ☐ via FedEx ☐ via pick up
awb#: 173-39175651

Page: _____ of _____

Attachment II:
Daily Field Reports

Lehua Environmental Inc. **DAILY ACTIVITY LOG**

Page: 1 of 1

Project: Caltech Submillimeter Observatory Decommissioning Date:

Scheduled Activity			
Building(s):	Caltech Submillimeter Observatory	Floor(s):	N/A
Room(s):	N/A		
Material to be disturbed:	LBP/LCP debris		

Time	Description
10:00 am	Arrive onsite, calibrate and setup pumps around perimeter of work area. Northwest Demo (NWD) to start the demolition of the observatory utilizing an excavator with sheer attachment.
11:30 am	NWD starts demolition of the exterior metal surfaces of the observatory. Unitek on standby to conduct paint chip cleanup during and after the lead paint disturbance activities.
2:00 pm	NWD continues the demolition of the observatory metal surfaces. Visible debris is controlled to work area. Demoed metal building materials are placed inside the middle of the observatory floor.
3:00 pm	NWD stops the demolition for the day. Unitek crew conducts lead paint chip cleanup with a HEPA vacuum and hand picking methods.
4:00 pm	Unitek completes the lead paint chip clean up of the work area. Lehua Env. (LEI) conducts a visual inspection of the site. LEI approves the cleanup and no visible paint chips remain on the ground surfaces of the work area. Pumps are turned off and calibrated.

LEI Staff: K. Kobayashi Date: 04/29/24

Lehua Environmental Consultants, LLC — Air Monitoring Log

Project No.:		**Date:**	4/29/2024
Client:	Caltech	**Sampled By:**	K. Kobayashi
Project Site:	Caltech Submillimeter Observatory Decommissioning		

Sample ID	Type*	Start Time	Stop Time	Initial Flow (LPM)	Final Flow (LPM)	Avg. Flor (LPM)	Total Time (min.)	Total Vol. (liters)
042924-C-L1	OWA	10:00	16:00	2	2	2	360	720 L
Sample Location: Near storage bldg.								
Analyte: (Select one)	Asbestos X Lead Other:_____							

Sample ID	Type*	Start Time	Stop Time	Initial Flow (LPM)	Final Flow (LPM)	Avg. Flor (LPM)	Total Time (min.)	Total Vol. (liters)
042924-C-L2	OWA	10:00	16:00	2	2	2	360	720 L
Sample Location: Entrance to job site. South side of driveway								
Analyte: (Select one)	Asbestos X Lead Other:_____							

Sample ID	Type*	Start Time	Stop Time	Initial Flow (LPM)	Final Flow (LPM)	Avg. Flor (LPM)	Total Time (min.)	Total Vol. (liters)
042924-C-L3	OWA	10:00	16:00	2	2	2	360	720 L
Sample Location: Southwest corner of job site.								
Analyte: (Select one)	Asbestos X Lead Other:_____							

Sample ID	Type*	Start Time	Stop Time	Initial Flow (LPM)	Final Flow (LPM)	Avg. Flor (LPM)	Total Time (min.)	Total Vol. (liters)
042924-C-L4	OWA	10:00	16:00	2	2	2	360	720 L
Sample Location: Northwest corner of job site.								
Analyte: (Select one)	Asbestos X Lead Other:_____							

Sample ID	Type*	Start Time	Stop Time	Initial Flow (LPM)	Final Flow (LPM)	Avg. Flor (LPM)	Total Time (min.)	Total Vol. (liters)
042924-C-L5	FB	NA	NA	NA	NA	NA	NA	NA
Sample Location: NA								
Analyte: (Select one)	Asbestos X Lead Other:_____							

*Sample Type: IWA- Inside Work Area, OWA- Outside Work Area, E- Environmental, B- Background, C- Clearance, P- Personal, FB- Field Blank, LB- Lot Blank, NA - Not applicable

P.O. Box 1018, Kamuela, Hawaii 96743
Tel: 808.494.0365 Email: lehuaenvironmental@gmail.com

Lehua Environmental Inc. **DAILY ACTIVITY LOG**

Page: 1 of 1

Project: Caltech Submillimeter Observatory Decommissioning Date: 04/30/24

Scheduled Activity			
Building(s):	Caltech Submillimeter Observatory	Floor(s):	N/A
Room(s):	N/A		
Material to be disturbed:	LBP/LCP debris		

Time	Description
7:00 am	Arrive onsite, calibrate and setup pumps around perimeter of work area. Northwest Demo (NWD) will continue demolition of the observatory utilizing the excavator with sheer attachment.
9:30 am	NWD continues demo work. Unitek on standby to conduct paint chip cleanup during and after the lead paint disturbance activities.
11:00 am	NWD excavator leaks hydraulic fluid after a hose bursts on the machine. All haul out trucks called off for the day. Unitek, NWD and GBI clean up the leak and place absorbent litter and pads on ground in area of the leak.
1:00 pm	Continued cleanup of hydraulic leak area continues. Pumps turned off and calibrated.
2:00 pm	Unitek and NWD continue cleanup of hydraulic leak on asphalt surface.
4:00 pm	Site work completed for the day. LEI conducts visual clearance of work area and no visible paint chips observed.

LEI Staff: K. Kobayashi Date: 04/30/24

Lehua Environmental Consultants, LLC — Air Monitoring Log

Project No.:		**Date:**	4/30/2024
Client:	Caltech	**Sampled By:**	K. Kobayashi
Project Site:	Caltech Submillimeter Observatory Decommissioning		

Sample ID	Type*	Start Time	Stop Time	Initial Flow (LPM)	Final Flow (LPM)	Avg. Flor (LPM)	Total Time (min.)	Total Vol. (liters)
043024-C-L1	OWA	7:00	13:00	2	2	2	360	720 L
Sample Location: Near storage bldg.								
Analyte: (Select one)	Asbestos X Lead Other:_____							

Sample ID	Type*	Start Time	Stop Time	Initial Flow (LPM)	Final Flow (LPM)	Avg. Flor (LPM)	Total Time (min.)	Total Vol. (liters)
043024-C-L2	OWA	7:00	13:00	2	2	2	360	720 L
Sample Location: Entrance to job site. South side of driveway								
Analyte: (Select one)	Asbestos X Lead Other:_____							

Sample ID	Type*	Start Time	Stop Time	Initial Flow (LPM)	Final Flow (LPM)	Avg. Flor (LPM)	Total Time (min.)	Total Vol. (liters)
043024-C-L3	OWA	7:00	13:00	2	2	2	360	720 L
Sample Location: Southwest corner of job site.								
Analyte: (Select one)	Asbestos X Lead Other:_____							

Sample ID	Type*	Start Time	Stop Time	Initial Flow (LPM)	Final Flow (LPM)	Avg. Flor (LPM)	Total Time (min.)	Total Vol. (liters)
043024-C-L4	OWA	7:00	13:00	2	2	2	360	720 L
Sample Location: Northwest corner of job site.								
Analyte: (Select one)	Asbestos X Lead Other:_____							

Sample ID	Type*	Start Time	Stop Time	Initial Flow (LPM)	Final Flow (LPM)	Avg. Flor (LPM)	Total Time (min.)	Total Vol. (liters)
043024-C-L5	FB	NA	NA	NA	NA	NA	NA	NA
Sample Location: NA								
Analyte: (Select one)	Asbestos X Lead Other:_____							

*Sample Type: IWA- Inside Work Area, OWA- Outside Work Area, E- Environmental, B- Background, C- Clearance, P- Personal, FB- Field Blank, LB- Lot Blank, NA - Not applicable

Lehua Environmental Inc. **DAILY ACTIVITY LOG**

Project: Caltech Submillimeter Observatory Decommissioning Date: 05/01/24

Scheduled Activity			
Building(s):	Caltech Submillimeter Observatory	Floor(s):	N/A
Room(s):	N/A		
Material to be disturbed:	LBP/ LCP debris		

Time	Description
7:30 am	Arrived on site. North West Demo (NWD) getting machines into position to begin demo of observatory. At 7:55am I calibrated 4 pumps for lead air monitoring and set up around the perimeter of the work area. Unitek on site to assist in clean up of debris throughout the demo process.
8:15 am	NWD began demo on observatory interior using the high reach excavator and snipper attachment. The first 2 trucks to haul out debris arrived and on standby. All debris will be contained within the exterior shell of the observatory.
8:45 am	Demo work put on pause and NWD started sorting through debris pile and separating out the metal. Dust/ paint chips under control and staying within the exterior shell. Water truck is on standby for dust control.
9:15 am	Sorting has finished and trucks are ready to be loaded. Unitek placed 6-mil poly plastic on the ground of the loading area to contain any fallen debris during the loading process. The first truck was loaded with metal debris. At 9:55am NWD started loading the second truck. Unitek cleaned off the plastic between trucks. Barely any dust generate during loading process.
10:45 am	The last 2 trucks arrived. NWD began loading up regular debris. Loose debris creating dust, loading stopped for water truck to shoot water for dust control. Water not sprayed in excess to create any run off. By 11:30 pm both trucks left job site. Unitek began clean up around the loading area.
12:30 pm	NWD began exposing the hydraulic pumps with the high reach snipper to expose the bolts and cables. The LBP metal frame being disturbed but paint chips are being contained within the shell area. Unitek cleaning up larger pieces of metal that fell onto the ground in between the cutting process.
2:10 pm	NDW cut the cables that support the shutter door of the observatory. Work for the day finished once cables were cut. Unitek began clean up of all areas around the observatory.

LEI Staff: Nicole Garaganza-Tengan Date: 05/01/24

Lehua Environmental Inc.

Air Monitoring Log

Project No.:		**Date:**	05/01/24
Client:		**Sampled By:**	Nicole Garaganza-Tengan
Project Site:	Caltech Submillimeter Observatory		

Sample ID	Type*	Start Time	Stop Time	Initial Flow (LPM)	Final Flow (LPM)	Avg. Flor (LPM)	Total Time (min.)	Total Vol. (liters)
CSO 050124 L1	OWA	7:55 am	2:45 pm	2	2	2	410	820 L

Sample Location:
Near large storage shed

Analyte: (select one) ○ Asbestos ◉ Lead ○ Other:_____

Sample ID	Type*	Start Time	Stop Time	Initial Flow (LPM)	Final Flow (LPM)	Avg. Flor (LPM)	Total Time (min.)	Total Vol. (liters)
CSO 050124 L2	OWA	7:55 am	2:45 pm	2	2	2	410	820 L

Sample Location:
South side of driveway entrance to job site

Analyte: (select one) ○ Asbestos ◉ Lead ○ Other:_____

Sample ID	Type*	Start Time	Stop Time	Initial Flow (LPM)	Final Flow (LPM)	Avg. Flor (LPM)	Total Time (min.)	Total Vol. (liters)
CSO 050124 L3	OWA	7:55 am	2:45 pm	2	2	2	410	820 L

Sample Location:
South-west corner of job site

Analyte: (select one) ○ Asbestos ◉ Lead ○ Other:_____

Sample ID	Type*	Start Time	Stop Time	Initial Flow (LPM)	Final Flow (LPM)	Avg. Flor (LPM)	Total Time (min.)	Total Vol. (liters)
CSO 050124 L4	OWA	7:55 am	2:45 pm	2	2	2	410	820 L

Sample Location:
North-west corner of job site

Analyte: (select one) ○ Asbestos ◉ Lead ○ Other:_____

*Sample Type: IWA- Inside Work Area, OWA- Outside Work Area, E- Environmental, B- Background, C- Clearance, P- Personal, FB- Field Blank, LB- Lot Blank

Lehua Environmental Inc. **DAILY ACTIVITY LOG**

Project: Caltech Submillimeter Observatory Decommissioning Date: 05/02/24

Scheduled Activity			
Building(s):	Caltech Submillimeter Observatory	Floor(s):	N/A
Room(s):	N/A		
Material to be disturbed:	LBP/ LCP debris		

Time	Description
8:00 am	Arrived on site. I calibrated 4 pumps for lead air monitoring and set up around the work area. As discussed in the morning meeting, NWD will start with removing the 2 hydraulic pumps located on both sides of the shutter door opening. Unitek removed the plastic inside the shell covering the debris. No trucks will be coming up to the summit today.
8:30 am	NWD began cutting away at the metal frame to further expose the hydraulic pumps. All paint chips being contained inside the shell. Once the pumps were exposed, they'll cut the final shutter cables. On the ground, Unitek and Good Fellow (GBI) prepped area with plastic of where the pumps will be placed and wrapped.
9:45 am	Bolts of the first pump were removed and NWD began removing the pump from its upright position. Plastic laid on the platform to protect area from any hydraulic fluid leaks. NWD then tied up pump for lifting and carefully lifted pump over to the staged area. Once placed, Unitek began wrapping pump with 2 layers of plastic. Oil pads were placed underneath pump to soak up any fluid that may leak out.
10:15 am	The process was repeated again for second hydraulic pump. Both pumps were moved and staged on the west side of the observatory on the concrete pad. Plastic laid beneath for extra precaution of any leaks. No leaks or spill occurred during the entire process. Unitek did a quick clean up around the observatory.
12:00 pm	NWD switched attachments to the grabber on the high reach machine. For the rest of the day, they'll be pulling down all the wood floors and insulation within the framing. Water getting sprayed before start of demo for dust control.
12:30 pm	Hydraulic hose on high reach began to leak fluid, and work stopped. Leak was contained right away. NWD working on fixing hose line. Unitek did a quick clean up around work area.
1:00 pm	Hose was fixed, and NWD continued with demo. Water sprayed again for dust control.

LEI Staff: Nicole Garaganza-Tengan	Date: 05/02/24

Lehua Environmental Inc. **DAILY ACTIVITY LOG**

Project: Caltech Submillimeter Observatory Decommissioning Date: 05/02/24

Scheduled Activity			
Building(s):	Caltech Submillimeter Observatory	Floor(s):	N/A
Room(s):	N/A		
Material to be disturbed:	LBP/ LCP debris		

Time	Description
1:45 pm	The hydraulic hose leaked again, and work stopped. The leak was minimal and contained right away. Shortly after the hose was fixed, work ended for the day. Unitek began cleaning with HEPA vacuum and picking up paint chips around the observatory.
2:40 pm	Unitek finished cleaning and I did a visual walk through. Plastic was placed over the debris and secured for the night. I collected and calibrated pumps.
3:00 pm	Left job site.

LEI Staff: Nicole Garaganza-Tengan Date: 05/02/24

Lehua Environmental Inc.

Air Monitoring Log

Project No.:		**Date:**	05/02/24
Client:		**Sampled By:**	Nicole Garaganza-Tengan
Project Site:	Caltech Submillimeter Observatory		

Sample ID	Type*	Start Time	Stop Time	Initial Flow (LPM)	Final Flow (LPM)	Avg. Flor (LPM)	Total Time (min.)	Total Vol. (liters)
CSO 050224 L1	OWA	8:00 am	2:40 pm	2	2	2	400	800 L

Sample Location:
Near large storage shed

Analyte: (select one) ◯ Asbestos ◉ Lead ◯ Other:_____

Sample ID	Type*	Start Time	Stop Time	Initial Flow (LPM)	Final Flow (LPM)	Avg. Flor (LPM)	Total Time (min.)	Total Vol. (liters)
CSO 050224 L2	OWA	8:00 am	2:40 pm	2	2	2	400	800 L

Sample Location:
South side of driveway entrance to job site

Analyte: (select one) ◯ Asbestos ◉ Lead ◯ Other:_____

Sample ID	Type*	Start Time	Stop Time	Initial Flow (LPM)	Final Flow (LPM)	Avg. Flor (LPM)	Total Time (min.)	Total Vol. (liters)
CSO 050224 L3	OWA	8:00 am	2:40 pm	2	2	2	400	800 L

Sample Location:
South-west corner of job site

Analyte: (select one) ◯ Asbestos ◉ Lead ◯ Other:_____

Sample ID	Type*	Start Time	Stop Time	Initial Flow (LPM)	Final Flow (LPM)	Avg. Flor (LPM)	Total Time (min.)	Total Vol. (liters)
CSO 050224 L4	OWA	8:00 am	2:40 pm	2	2	2	400	800 L

Sample Location:
North-west corner of job site

Analyte: (select one) ◯ Asbestos ◉ Lead ◯ Other:_____

*Sample Type: IWA- Inside Work Area, OWA- Outside Work Area, E- Environmental, B- Background, C- Clearance, P- Personal, FB- Field Blank, LB- Lot Blank

Lehua Environmental Inc. **DAILY ACTIVITY LOG**

Page: 1 of 1

Project: Caltech Submillimeter Observatory Decommissioning Date: 05/03/24

Scheduled Activity			
Building(s):	Caltech Submillimeter Observatory	Floor(s):	N/A
Room(s):	N/A		
Material to be disturbed:	LBP/ LCP debris		

Time	Description
7:50 am	Arrived on site. I calibrated 4 pumps for lead air monitoring and set up around the work area. NWB waiting for trucks to arrive and will start loading demo debris. Plan is to remove all demo debris as high winds are in the forecast over the weekend/ upcoming week.
8:30 am	Trucks still have not arrived, NWD started pulling down loose pieces of the exterior metal shell that could be picked up during the high winds. Water strayed prior to work for dust control. Unitek did a walk through of areas outside of the roped area in case any metal debris make it out there.
9:30 am	The trucks have made it up to the observatory. Before loading begins, water got sprayed over debris to help keep dust down during the loading process. Unitek also laid plastic on the ground in the loading area.
10:00 am	The first 2 trucks have been loaded. Unitek cleaned loading area in between trucks. NWD will continue with demo to accumulate enough debris for the last 2 trucks.
11:45 am	The last 2 trucks were loaded and left job site. NWD brought down the hydraulic crane and placed it in front of the storage shed. Oil pads were placed under crane to contain a small fluid leak. UHM truck will come to remove the crane and take it down to HP. Unitek started cleaning around the observatory with HEPA vacuum and picking up paint chips.
12:25 pm	Unitek finished cleaning and we both did a visual walk through around the whole job site. Plastic was laid over inside the shell to cover whatever debris is left over. We secured the plastic well so that it would with stand the high winds. NWD position the observatory to also shelter the debris inside from the high winds. I collected and calibrated my pumps.
12:40 pm	Left job site.

LEI Staff: Nicole Garaganza-Tengan Date: 05/03/24

Lehua Environmental Inc.

Air Monitoring Log

Project No.:		**Date:**	05/03/24
Client:		**Sampled By:**	Nicole Garaganza-Tengan
Project Site:	Caltech Submillimeter Observatory		

Sample ID	Type*	Start Time	Stop Time	Initial Flow (LPM)	Final Flow (LPM)	Avg. Flor (LPM)	Total Time (min.)	Total Vol. (liters)
CSO 050324 L1	OWA	7:50 am	12:25 pm	2	2	2	275	550 L

Sample Location:
Near large storage shed

Analyte: (select one) ◯ Asbestos ◉ Lead ◯ Other:_____

Sample ID	Type*	Start Time	Stop Time	Initial Flow (LPM)	Final Flow (LPM)	Avg. Flor (LPM)	Total Time (min.)	Total Vol. (liters)
CSO 050324 L2	OWA	7:50 am	12:25 pm	2	2	2	275	550 L

Sample Location:
South side of driveway entrance to job site

Analyte: (select one) ◯ Asbestos ◉ Lead ◯ Other:_____

Sample ID	Type*	Start Time	Stop Time	Initial Flow (LPM)	Final Flow (LPM)	Avg. Flor (LPM)	Total Time (min.)	Total Vol. (liters)
CSO 050324 L3	OWA	7:50 am	12:25 pm	2	2	2	275	550 L

Sample Location:
South-west corner of job site

Analyte: (select one) ◯ Asbestos ◉ Lead ◯ Other:_____

Sample ID	Type*	Start Time	Stop Time	Initial Flow (LPM)	Final Flow (LPM)	Avg. Flor (LPM)	Total Time (min.)	Total Vol. (liters)
CSO 050324 L4	OWA	7:50 am	12:25 pm	2	2	2	275	550 L

Sample Location:
North-west corner of job site

Analyte: (select one) ◯ Asbestos ◉ Lead ◯ Other:_____

*Sample Type: IWA- Inside Work Area, OWA- Outside Work Area, E- Environmental, B- Background, C- Clearance, P- Personal, FB- Field Blank, LB- Lot Blank

Lehua Environmental Inc. **DAILY ACTIVITY LOG**

Page: 1 of 1

Project: Mauna Kea CSO decomissioning Date: 05/06/24

Scheduled Activity			
Building(s):	Caltech Submillimeter Observatory	Floor(s):	N/A
Room(s):	N/A		
Material to be disturbed:	Lead paint		

Time	Description
7:30 am	Calvin arrive at Hale Pohaku to meet other parties involved with Decommissioning. Main people are Unitek (Jeffy) and Northwest Demo. Discussed plans and forecast for work for the week.
10:30 am	Crews arrived at CSO. No paint chips seen around structure. Multiple crew members from different companies started sweeping and throwing debris into bottom dip of Telescope structure. No paint scraping occured during this day due to high winds. At site, plastic was laid on the bottom dip of the structure with debris on top of it. All debris swept was 'general debris' and not lead containing. No lead-monitorring cassettes were setup because no lead disturbance.
11:00 am	Burrito-wrapped debris was loaded onto flat-bed truck.
12:00 pm	New plastic sheeting was cut and placed over debris and secured with weighted debris. No loose debris was present on ground floor. Tape and escavator bucket were placed on top layer of plastic to ensure it wouldn't move.
12:30 pm	Leave work area. Work area left clean and free of visible concerns or debris

LEI Staff: Calvin Arca	Date: 05/06/24

Lehua Environmental Inc. **DAILY ACTIVITY LOG**

Page: 1 of 1

Project: Mauna Kea CSO decomissioning Date: 05/13/24

Scheduled Activity			
Building(s):	Caltech Submillimeter Observatory	Floor(s):	N/A
Room(s):	N/A		
Material to be disturbed:	Lead paint. Silver panels and white framing.		

Time	Description
8:30 am	Meeting at Hale Pohaku. Discussed plans for the day.
9:30 am	Arrived to CSO. Air monitorring pumps and lead cassettes were setup around the area. Pump 1 setup by front entrance, Pump 2 setup by storage shed, Pump 3 setup on opposite side of front entrance behind barrier, Pump 4 setup on opposite side of storage behind barrier. All pumps setup around observatory structure. Upon arrival, checked plastic covering debris within observatory. Seemed secure and held up over the weekend.
10:30 am	Northwest crew began using hydraulic cutters to cut exterior pieces of the observatory panels. Afterwards, focused on cutting the white metal framing of the observatory. Paint chips seen faling downward. Calvin and Unitek focused on picking up paint chips. Water truck sprayed water on debris and where debris was piled up to weigh down paint chips and dust.
1:30 pm	Hydraulic cutter finished cutting. All debris piled toward center-dip of observatory. Multiple people worked to sweep debris into the center of the structure and pick up and vaccum paint chips on the ground. Debris in center-dip was covered with plastic.
3:00 pm	Area was clean and free of visible debris. Pumps and cassettes collected.

LEI Staff: Calvin Arca Date: 05/13/24

Lehua Environmental Inc.

Air Monitoring Log

Project No.:		**Date:**	05/13/24
Client:		**Sampled By:**	Calvin Arca
Project Site:	CSO Decomissioning		

Sample ID	Type*	Start Time	Stop Time	Initial Flow (LPM)	Final Flow (LPM)	Avg. Flor (LPM)	Total Time (min.)	Total Vol. (liters)
CSO 5/13/24 L1	OWA	9:30 am	3:00 pm	2	2	2	330	660

Sample Location:

At gate / road entrance to observatory structure. Northeast of observatory.

Analyte: (select one) ○ Asbestos ◉ Lead ○ Other:_____

Sample ID	Type*	Start Time	Stop Time	Initial Flow (LPM)	Final Flow (LPM)	Avg. Flor (LPM)	Total Time (min.)	Total Vol. (liters)
CSO 5/13/24 L2	OWA	9:30 am	3:00 pm	2	2	2	330	660

Sample Location:

In between the storage sheds of the observatory structure. Northwest of observatory. .

Analyte: (select one) ○ Asbestos ◉ Lead ○ Other:_____

Sample ID	Type*	Start Time	Stop Time	Initial Flow (LPM)	Final Flow (LPM)	Avg. Flor (LPM)	Total Time (min.)	Total Vol. (liters)
CSO 5/13/24 L3	OWA	9:30 am	3:00 pm	2	2	2	330	660

Sample Location:

Southwest of observatory. Opposite side of the gate / road entrance. Along rope barrier.

Analyte: (select one) ○ Asbestos ◉ Lead ○ Other:_____

Sample ID	Type*	Start Time	Stop Time	Initial Flow (LPM)	Final Flow (LPM)	Avg. Flor (LPM)	Total Time (min.)	Total Vol. (liters)
CSO 5/13/24 L4	OWA	9:30 am	3:00 pm	2	2	2	330	660

Sample Location:

Southeast of observatory. Opposite side of the storage sheds. Along rope barrier.

Analyte: (select one) ○ Asbestos ◉ Lead ○ Other:_____

*Sample Type: IWA- Inside Work Area, OWA- Outside Work Area, E- Environmental, B- Background, C- Clearance, P- Personal, FB- Field Blank, LB- Lot Blank

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Lehua Environmental Inc. **DAILY ACTIVITY LOG**

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Project: Mauna Kea CSO decomissioning Date: 05/14/24

Scheduled Activity			
Building(s):	Caltech Submillimeter Observatory	Floor(s):	N/A
Room(s):	N/A		
Material to be disturbed:	Lead paint. White framing and silver panels.		

Time	Description
8:00 am	Meeting at Hale Pohaku. Discussed plans for the day.
9:00 am	Arrived at CSO. Pumps and cassettes setup and placed around observatory in same manner as described before. Debris covered with plastic in center-dip of observatory was clean and stable, didn't move overnight.
9:30 am	Crane and excavator moved debris in center-dip to make it easier to load dump trucks. Calvin and Unitek monitor area and pick up paint chips as needed.
10:00 am	5 dump trucks on site. 1 truck at a time moved close to observatory to be loaded with debris with the excavator. Plastic was laid out at the area where trucks were loaded to catch paint chips. Every truck had a cargo net to cover their beds after being loaded.
12:00 pm	All 5 trucks finished loading. Northwest continued demoing more of the observatory. Water truck sprayed to weigh paint chips down and control dust.
12:30 pm	Everyone focused on cleaning. Sweeping and moving debris into the center-dip of the observatory. Center-dip was covered with plastic. Calvin and Unitek focused on picking up and vaccuming paint chips around the area.
2:00 pm	Pumps and cassettes collected.

LEI Staff: Calvin Arca	Date: 05/14/24

Lehua Environmental Inc.

Air Monitoring Log

Project No.:		**Date:**	05/14/24
Client:		**Sampled By:**	Calvin Arca
Project Site:	CSO Decomissioning		

Sample ID	Type*	Start Time	Stop Time	Initial Flow (LPM)	Final Flow (LPM)	Avg. Flor (LPM)	Total Time (min.)	Total Vol. (liters)
CSO 5/14/24 L1	OWA	9:00 am	2:00 pm	2	2	2	300	600

Sample Location:

At gate / road entrance to observatory structure. Northeast of observatory.

Analyte: (select one) ○ Asbestos ◉ Lead ○ Other:_____

Sample ID	Type*	Start Time	Stop Time	Initial Flow (LPM)	Final Flow (LPM)	Avg. Flor (LPM)	Total Time (min.)	Total Vol. (liters)
CSO 5/14/24 L2	OWA	9:00 am	2:00 pm	2	2	2	300	600

Sample Location:

In between the storage sheds of the observatory structure. Northwest of observatory. .

Analyte: (select one) ○ Asbestos ◉ Lead ○ Other:_____

Sample ID	Type*	Start Time	Stop Time	Initial Flow (LPM)	Final Flow (LPM)	Avg. Flor (LPM)	Total Time (min.)	Total Vol. (liters)
CSO 5/14/24 L3	OWA	9:00 am	2:00 pm	2	2	2	300	600

Sample Location:

Southwest of observatory. Opposite side of the gate / road entrance. Along rope barrier.

Analyte: (select one) ○ Asbestos ◉ Lead ○ Other:_____

Sample ID	Type*	Start Time	Stop Time	Initial Flow (LPM)	Final Flow (LPM)	Avg. Flor (LPM)	Total Time (min.)	Total Vol. (liters)
CSO 5/14/24 L4	OWA	9:00 am	2:00 pm	2	2	2	300	600

Sample Location:

Southeast of observatory. Opposite side of the storage sheds. Along rope barrier.

Analyte: (select one) ○ Asbestos ◉ Lead ○ Other:_____

*Sample Type: IWA- Inside Work Area, OWA- Outside Work Area, E- Environmental, B- Background, C- Clearance, P- Personal, FB- Field Blank, LB- Lot Blank

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Lehua Environmental Inc. **DAILY ACTIVITY LOG**

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Project: Mauna Kea CSO decomissioning Date: 05/15/24

Scheduled Activity			
Building(s):	Caltech Submillimeter Observatory	Floor(s):	N/A
Room(s):	N/A		
Material to be disturbed:	Lead paint. White framing and silver panels		

Time	Description
8:00 am	Crews arrived at CSO. Pumps and cassettes were setup around the observatory in the same manner as before. Crane cutter focused on cutting demoing drywall within the structure that was still connected to intact panels to prevent debris splatter in the wind. Water truck also sprayed water where crane was demoing.
9:00 am	Brief stop in work. All crews focused on picking up paint chips around the area. Work continued at 9:30 am.
9:45 am	Brief stop in work. Hydraulic cutters' line disconnected.
10:00 am	Continue cutting inside frames and drywall of 2 remaining sides of the observatory structure. Afterwards, hydraulic crane focused collapsing 1 more side of the structure. Silver panels and white metal framing. Water truck sprayed water as needed. All available hands helped with picking up paint chips during the process.
12:30 pm	Side of the observatory was finished demoing. Final cleanup performed for the day. All available hands picked up paint chips and sweeped and moved debris into the center-dip of the observatory structure.
2:00 pm	Area left clean and secure. Pumps and cassettes collected.

LEI Staff: Calvin Arca	Date: 05/15/24

Lehua Environmental Inc.

Air Monitoring Log

Project No.:		**Date:**	05/15/24
Client:		**Sampled By:**	Calvin Arca
Project Site:	CSO Decomissioning		

Sample ID	Type*	Start Time	Stop Time	Initial Flow (LPM)	Final Flow (LPM)	Avg. Flor (LPM)	Total Time (min.)	Total Vol. (liters)
CSO 5/15/24 L1	OWA	8:00 am	2:00 pm	2	2	2	360	720

Sample Location:

At gate / road entrance to observatory structure. Northeast of observatory.

Analyte: (select one) ○ Asbestos ◉ Lead ○ Other:_____

Sample ID	Type*	Start Time	Stop Time	Initial Flow (LPM)	Final Flow (LPM)	Avg. Flor (LPM)	Total Time (min.)	Total Vol. (liters)
CSO 5/15/24 L2	OWA	8:00 am	2:00 pm	2	2	2	360	720

Sample Location:

In between the storage sheds of the observatory structure. Northwest of observatory. .

Analyte: (select one) ○ Asbestos ◉ Lead ○ Other:_____

Sample ID	Type*	Start Time	Stop Time	Initial Flow (LPM)	Final Flow (LPM)	Avg. Flor (LPM)	Total Time (min.)	Total Vol. (liters)
CSO 5/15/24 L3	OWA	8:00 am	2:00 pm	2	2	2	360	720

Sample Location:

Southwest of observatory. Opposite side of the gate / road entrance. Along rope barrier.

Analyte: (select one) ○ Asbestos ◉ Lead ○ Other:_____

Sample ID	Type*	Start Time	Stop Time	Initial Flow (LPM)	Final Flow (LPM)	Avg. Flor (LPM)	Total Time (min.)	Total Vol. (liters)
CSO 5/15/24 L4	OWA	8:00 am	2:00 pm	2	2	2	360	720

Sample Location:

Southeast of observatory. Opposite side of the storage sheds. Along rope barrier.

Analyte: (select one) ○ Asbestos ◉ Lead ○ Other:_____

*Sample Type: IWA- Inside Work Area, OWA- Outside Work Area, E- Environmental, B- Background, C- Clearance, P- Personal, FB- Field Blank, LB- Lot Blank

Lehua Environmental Inc. **DAILY ACTIVITY LOG**

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Project: Mauna Kea CSO decomissioning Date: 05/16/24

Scheduled Activity			
Building(s):	Caltech Submillimeter Observatory	Floor(s):	N/A
Room(s):	N/A		
Material to be disturbed:	Lead paint. White framing and silver panels.		

Time	Description
6:45 am	Meeting at Hale Pohaku. Discussed plans for the day.
8:00 am	Crews arrived at CSO. Pumps and cassettes setup in the same manner as described before. Area was very foggy and windy. Waited for all project leaders to arrive and discuss next course of action. It was decided that we would try loading 1 truck to see if debris would splatter upon moving stockpiled debris.
10:00 am	Started loading 1 dump truck at a time. All available hands spread out far to pick up paint chips if seen. Trucks were loaded slowly and only with big debris at the top, not the fine smaller debris at the bottom. A lower wall of the structure was left in tact to shield the piled debris in the center from wind flow.
12:30 pm	Trucks were loaded. Small debris in the center-dip wasn't touched ue to winds. All hands on site did as much as they could to pick up paint chips seen. Northwest continued demoing some metal framing. Constant vaccuming and picking up of material done by everyone.
1:00 pm	Work day done. Area left clean as possible. Center-dip of structure was covered with big pieces of material. Wind forecast for the night was low. Pumps and cassettes collected.

LEI Staff: Calvin Arca Date: 05/16/24

Lehua Environmental Inc.

Air Monitoring Log

Project No.:		**Date:**	05/16/24
Client:		**Sampled By:**	Calvin Arca
Project Site:	CSO Decomissioning		

Sample ID	Type*	Start Time	Stop Time	Initial Flow (LPM)	Final Flow (LPM)	Avg. Flor (LPM)	Total Time (min.)	Total Vol. (liters)
CSO 5/16/24 L1	OWA	8:00 am	1:00 pm	2	2	2	300	600

Sample Location:

At gate / road entrance to observatory structure. Northeast of observatory.

Analyte: (select one) ○ Asbestos ◉ Lead ○ Other:_____

Sample ID	Type*	Start Time	Stop Time	Initial Flow (LPM)	Final Flow (LPM)	Avg. Flor (LPM)	Total Time (min.)	Total Vol. (liters)
CSO 5/16/24 L2	OWA	8:00 am	1:00 pm	2	2	2	300	600

Sample Location:

In between the storage sheds of the observatory structure. Northwest of observatory. .

Analyte: (select one) ○ Asbestos ◉ Lead ○ Other:_____

Sample ID	Type*	Start Time	Stop Time	Initial Flow (LPM)	Final Flow (LPM)	Avg. Flor (LPM)	Total Time (min.)	Total Vol. (liters)
CSO 5/16/24 L3	OWA	8:00 am	1:00 pm	2	2	2	300	600

Sample Location:

Southwest of observatory. Opposite side of the gate / road entrance. Along rope barrier.

Analyte: (select one) ○ Asbestos ◉ Lead ○ Other:_____

Sample ID	Type*	Start Time	Stop Time	Initial Flow (LPM)	Final Flow (LPM)	Avg. Flor (LPM)	Total Time (min.)	Total Vol. (liters)
CSO 5/16/24 L4	OWA	8:00 am	1:00 pm	2	2	2	300	600

Sample Location:

Southeast of observatory. Opposite side of the storage sheds. Along rope barrier.

Analyte: (select one) ○ Asbestos ◉ Lead ○ Other:_____

*Sample Type: IWA- Inside Work Area, OWA- Outside Work Area, E- Environmental, B- Background, C- Clearance, P- Personal, FB- Field Blank, LB- Lot Blank

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Lehua Environmental Inc. **DAILY ACTIVITY LOG**

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Project: Mauna Kea CSO decomissioning Date: 05/17/24

Scheduled Activity			
Building(s):	Caltech Submillimeter Observatory	Floor(s):	N/A
Room(s):	N/A		
Material to be disturbed:	Lead paint. White framing and silver panels		

Time	Description
6:45 am	Meeting at Hale Pohaku. Discuss plans for the day.
8:00 am	Crews arrived on site. Area very windy, foggy, and cold. Plan for loading trucks for the day was canceled. No pumps or cassettes were setup around the area due to no demolition. Crews focused on securing stockpiled debris in the center-dip of of the structure. Black fabric was placed over dip and weighed down with heavy framing pieces to hold it down over the weekend.
9:00 am	Work area left secure. Center-dip of observatory was completely covered with black fabric.

LEI Staff: Calvin Arca	Date: 05/17/24

Lehua Environmental Inc. **DAILY ACTIVITY LOG**

Page: 1 of 1

Project: Mauna Kea CSO decomissioning Date: 05/20/24

Scheduled Activity			
Building(s):	Caltech Submillimeter Observatory	Floor(s):	N/A
Room(s):	N/A		
Material to be disturbed:	Lead paint. White framing and silver panels.		

Time	Description
8:30 am	Meeting at Hale Pohaku. Discussed plans for the day.
10:00 am	Crews arrived at CSO structure. Northwest demolition and Unitek prepared for loading dump trucks with debris from center-dip of the structure. Debris in the center was covered and seemed secure over the weekend. Unitek staff laid out plastic for dump trucks to set bed on for loading of debris. Winds were low.Pumps and cassettes setup.
10:30 am	Calvin hiked up Northeast to scout for paint chips supposedly seen last week thursday that caught wind and went far. None seen, only general trash such as footballs, slippers, and white plastic pieces not from CSO. Unitek remained at CSO to clean as dump trucks were loaded and pick up paint chips.
1:30 pm	Northwest started demoing silver storage building to make room for collapsing ring of CSO. Drywall and insulation seen in building. All hands helped to clean and remove insulation and sweep debris as soon as possible. Water truck sprayed water to weigh down debris and limit travel. Pump 2 location adjusted.
2:30 pm	5 trucks loaded with debris and driving down.
3:00 pm	Storage down. Pieces of storage were placed over center-dip of CSO. Multiple hands on site cleaned up entire area for debris and paint chips. Calvin went far to scout for debris that went outside of barrier area.
4:30 pm	End of day. Pumps and cassettes collected. Area left clean.

LEI Staff: Calvin Arca	Date: 05/20/24

Lehua Environmental Inc.

Air Monitoring Log

Project No.:		**Date:**	05/20/24
Client:		**Sampled By:**	Calvin Arca
Project Site:	CSO Decomissioning		

Sample ID	Type*	Start Time	Stop Time	Initial Flow (LPM)	Final Flow (LPM)	Avg. Flor (LPM)	Total Time (min.)	Total Vol. (liters)
CSO 5/20/24 L1	OWA	10:00 am	4:30 pm	2	2	2	390	780

Sample Location:

At gate / road entrance to observatory structure. Northeast of observatory.

Analyte: (select one) ○ Asbestos ◉ Lead ○ Other:_____

Sample ID	Type*	Start Time	Stop Time	Initial Flow (LPM)	Final Flow (LPM)	Avg. Flor (LPM)	Total Time (min.)	Total Vol. (liters)
CSO 5/20/24 L2	OWA	10:00 am	4:30 pm	2	2	2	390	780

Sample Location:

In between the storage sheds of the observatory structure. Northwest of observatory. .

Analyte: (select one) ○ Asbestos ◉ Lead ○ Other:_____

Sample ID	Type*	Start Time	Stop Time	Initial Flow (LPM)	Final Flow (LPM)	Avg. Flor (LPM)	Total Time (min.)	Total Vol. (liters)
CSO 5/20/24 L3	OWA	10:00 am	4:30 pm	2	2	2	390	780

Sample Location:

Southwest of observatory. Opposite side of the gate / road entrance. Along rope barrier.

Analyte: (select one) ○ Asbestos ◉ Lead ○ Other:_____

Sample ID	Type*	Start Time	Stop Time	Initial Flow (LPM)	Final Flow (LPM)	Avg. Flor (LPM)	Total Time (min.)	Total Vol. (liters)
CSO 5/20/24 L4	OWA	10:00 am	4:30 pm	2	2	2	390	780

Sample Location:

Southeast of observatory. Opposite side of the storage sheds. Along rope barrier.

Analyte: (select one) ○ Asbestos ◉ Lead ○ Other:_____

*Sample Type: IWA- Inside Work Area, OWA- Outside Work Area, E- Environmental, B- Background, C- Clearance, P- Personal, FB- Field Blank, LB- Lot Blank

Lehua Environmental Inc. **DAILY ACTIVITY LOG**

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Project: Mauna Kea CSO decomissioning Date: 05/21/24

Scheduled Activity			
Building(s):	Caltech Submillimeter Observatory	Floor(s):	N/A
Room(s):	N/A		
Material to be disturbed:	Lead paint. White framing and silver panels.		

Time	Description
6:45 am	Meeting at Hale Pohaku. Discussed plans for the day.
7:30 am	Crews arrived to CSO. Northwest demolition focused on manipulating debris in center-dip of structure to make it easier for loading. No debris on the ground, not affected by overnight winds. Unitek setup vaccums and plastic for truck loading. Pumps and casettes setup around area.
9:00 am	Dump trucks on site. Trucks were loaded with debris from CSO 1 by 1. Available hands assissted with debris cleanup during loading. Wind flow now coming from the northeast to the southwest of the structure. Had to pickup debris on 'downhill' side of the structure now. Occasional watering used to weigh debris down and reduce travel.
10:00 am	3 trucks done loading. Northwest demolition started taking off exterior aluminum panels off of the last ring and began demoing the last of the interior drywalls. Watertruck used to keep dust down. All available hands worked on cleaning and picking up debris during the process.
11:30 am	Northwest demolition began focusing on cutting more framing on the rings to prepare for ring-takedown.
1:30 pm	Observatory ring dropped. All available hands assissted with cleaning debris. Northwest ddemolition focused on cutting the ring into smaller pieces and placing them onto center-dip of structure. Plastic placed over section with small debris. Big pieces remained in the center.
3:35 pm	Work day done. Area left clean. Pumps and cassettes collected. Left job site.

LEI Staff: Calvin Arca	Date: 05/21/24

Lehua Environmental Inc.

Air Monitoring Log

Project No.:		**Date:**	05/21/24
Client:		**Sampled By:**	Calvin Arca
Project Site:	CSO Decomissioning		

Sample ID	Type*	Start Time	Stop Time	Initial Flow (LPM)	Final Flow (LPM)	Avg. Flor (LPM)	Total Time (min.)	Total Vol. (liters)
CSO 5/21/24 L1	OWA	7:30 am	3:30 pm	2	2	2	480	960

Sample Location:

At gate / road entrance to observatory structure. Northeast of observatory.

Analyte: (select one) ○ Asbestos ◉ Lead ○ Other:_____

Sample ID	Type*	Start Time	Stop Time	Initial Flow (LPM)	Final Flow (LPM)	Avg. Flor (LPM)	Total Time (min.)	Total Vol. (liters)
CSO 5/21/24 L2	OWA	7:30 am	3:30 pm	2	2	2	480	960

Sample Location:

Next to water-pump shed of the observatory structure. Northwest of observatory. .

Analyte: (select one) ○ Asbestos ◉ Lead ○ Other:_____

Sample ID	Type*	Start Time	Stop Time	Initial Flow (LPM)	Final Flow (LPM)	Avg. Flor (LPM)	Total Time (min.)	Total Vol. (liters)
CSO 5/21/24 L3	OWA	7:30 am	3:30 pm	2	2	2	480	960

Sample Location:

Southwest of observatory. Opposite side of the gate / road entrance. Along rope barrier.

Analyte: (select one) ○ Asbestos ◉ Lead ○ Other:_____

Sample ID	Type*	Start Time	Stop Time	Initial Flow (LPM)	Final Flow (LPM)	Avg. Flor (LPM)	Total Time (min.)	Total Vol. (liters)
CSO 5/21/24 L4	OWA	7:30 am	3:30 pm	2	2	2	480	960

Sample Location:

Southeast of observatory. Opposite side of the storage sheds. Along rope barrier.

Analyte: (select one) ○ Asbestos ◉ Lead ○ Other:_____

*Sample Type: IWA- Inside Work Area, OWA- Outside Work Area, E- Environmental, B- Background, C- Clearance, P- Personal, FB- Field Blank, LB- Lot Blank

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Lehua Environmental Inc. **DAILY ACTIVITY LOG**

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Project: Mauna Kea CSO decomissioning Date: 05/22/24

Scheduled Activity			
Building(s):	Caltech Submillimeter Observatory	Floor(s):	N/A
Room(s):	N/A		
Material to be disturbed:	Lead paint. White and red framing and silver panels.		

Time	Description
6:45 am	Meeting at Hale Pohaku. Discussed plans for the day.
7:30 am	Crews arrived to CSO. Northwest demolition focused on manipulating debris in center-dip of structure to make it easier for loading. No debris on the ground, not affected by overnight winds. Unitek setup vaccums and plastic for truck loading. Pumps and casettes setup around area.
8:00 am	Crane cutter started cutting material. Water truck started watering structure to keep dust down.
8:50 am	1st truck started loading. Water truck used water occasionally to keep dust down. Unitek setup plastic on ground to keep ground clean. Staff standby to clean as needed. 4 Trucks finished loading at 10:30 am.
11:00 am	Standby. Watertruck stuck in different location.
12:30 pm	Watertruck returned. Northwest crew focused on knocking down 2nd ring structure of the observatory. Ring was brought down at 1:00 pm. Crew then focused on taking apart ring and placing pieces on center dip of structure.
2:00 pm	Final cleaning of area. All debris swept up and placed in center dip of structure. Wind forecast low for the night. Work area left clean.

LEI Staff: Calvin Arca	Date: 05/22/24

Lehua Environmental Inc.

Air Monitoring Log

Project No.:		**Date:**	05/22/24
Client:		**Sampled By:**	Calvin Arca
Project Site:	CSO Decomissioning		

Sample ID	Type*	Start Time	Stop Time	Initial Flow (LPM)	Final Flow (LPM)	Avg. Flor (LPM)	Total Time (min.)	Total Vol. (liters)
CSO 5/22/24 L1	OWA	7:30 am	2:00 pm	2	2	2	390	780

Sample Location:

At gate / road entrance to observatory structure. Northeast of observatory.

Analyte: (select one) ○ Asbestos ◉ Lead ○ Other:_____

Sample ID	Type*	Start Time	Stop Time	Initial Flow (LPM)	Final Flow (LPM)	Avg. Flor (LPM)	Total Time (min.)	Total Vol. (liters)
CSO 5/22/24 L2	OWA	7:30 am	2:00 pm	2	2	2	390	780

Sample Location:

Next to water-pump shed of the observatory structure. Northwest of observatory. .

Analyte: (select one) ○ Asbestos ◉ Lead ○ Other:_____

Sample ID	Type*	Start Time	Stop Time	Initial Flow (LPM)	Final Flow (LPM)	Avg. Flor (LPM)	Total Time (min.)	Total Vol. (liters)
CSO 5/22/24 L3	OWA	7:30 am	2:00 pm	2	2	2	390	780

Sample Location:

Southwest of observatory. Opposite side of the gate / road entrance. Along rope barrier.

Analyte: (select one) ○ Asbestos ◉ Lead ○ Other:_____

Sample ID	Type*	Start Time	Stop Time	Initial Flow (LPM)	Final Flow (LPM)	Avg. Flor (LPM)	Total Time (min.)	Total Vol. (liters)
CSO 5/22/24 L4	OWA	7:30 am	2:00 pm	2	2	2	390	780

Sample Location:

Southeast of observatory. Opposite side of the storage sheds. Along rope barrier.

Analyte: (select one) ○ Asbestos ◉ Lead ○ Other:_____

*Sample Type: IWA- Inside Work Area, OWA- Outside Work Area, E- Environmental, B- Background, C- Clearance, P- Personal, FB- Field Blank, LB- Lot Blank

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Lehua Environmental Inc. **DAILY ACTIVITY LOG**

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Project: Mauna Kea CSO decomissioning Date: 05/23/24

Scheduled Activity			
Building(s):	Caltech Submillimeter Observatory	Floor(s):	N/A
Room(s):	N/A		
Material to be disturbed:	Lead paint. White and red framing and silver panels.		

Time	Description
6:45 am	Meeting at Hale Pohaku. Discussed plans for the day as well as second meeting to discuss soil sampling.
8:00 am	Arrived to CSO. Northwest and Unitek crew on site preparing for loading debris onto trucks. Pumps and Cassettes were setup around work area. First truck was loaded at 8:50 am. Staff on standby cleaned and picked up debris as needed. Watertruck sprayed water occasionally to keep dust down.
10:00 am	Northwest crew started removing exterior silver panels on lower deck of structure. Calvin monitor as needed. Available hands picked up debris as needed. Water used to keep dust down.
10:30 am	4 trucks finished loading.
11:30 am	Exterior silver panels on lower deck removed. All hands picked up and swept up now-exposed debris and bagged them. Bigger pieces were thrown into center-dip of structure.
12:30 pm	All exposed debris now taken care of. Northwest crew continued cutting big pieces within center-dip of the structure. Northwest manipulated debris in center of the structure so big debris covered smaller debris.
3:00 pm	Cutting of debris in center-dip done. All available hands cleaned up visible debris outside of center dip. Scouted outside work area for paint chips. Debris in center-dip was secure. Wind low overnight. Pumps and casettes collected. Work site clean.

LEI Staff: Calvin Arca	Date: 05/23/24

Lehua Environmental Inc.

Air Monitoring Log

Project No.:		**Date:**	05/23/24
Client:		**Sampled By:**	Calvin Arca
Project Site:	CSO Decomissioning		

Sample ID	Type*	Start Time	Stop Time	Initial Flow (LPM)	Final Flow (LPM)	Avg. Flor (LPM)	Total Time (min.)	Total Vol. (liters)
CSO 5/23/24 L1	OWA	8:00 am	3:00 pm	2	2	2	420	840

Sample Location:

At gate / road entrance to observatory structure. Northeast of observatory.

Analyte: (select one) ○ Asbestos ◉ Lead ○ Other:_____

Sample ID	Type*	Start Time	Stop Time	Initial Flow (LPM)	Final Flow (LPM)	Avg. Flor (LPM)	Total Time (min.)	Total Vol. (liters)
CSO 5/23/24 L2	OWA	8:00 am	3:00 pm	2	2	2	420	840

Sample Location:

Next to water-pump shed of the observatory structure. Northwest of observatory. .

Analyte: (select one) ○ Asbestos ◉ Lead ○ Other:_____

Sample ID	Type*	Start Time	Stop Time	Initial Flow (LPM)	Final Flow (LPM)	Avg. Flor (LPM)	Total Time (min.)	Total Vol. (liters)
CSO 5/23/24 L3	OWA	8:00 am	3:00 pm	2	2	2	420	840

Sample Location:

Southwest of observatory. Opposite side of the gate / road entrance. Along rope barrier.

Analyte: (select one) ○ Asbestos ◉ Lead ○ Other:_____

Sample ID	Type*	Start Time	Stop Time	Initial Flow (LPM)	Final Flow (LPM)	Avg. Flor (LPM)	Total Time (min.)	Total Vol. (liters)
CSO 5/23/24 L4	OWA	8:00 am	3:00 pm	2	2	2	420	840

Sample Location:

Southeast of observatory. Opposite side of the storage sheds. Along rope barrier.

Analyte: (select one) ○ Asbestos ◉ Lead ○ Other:_____

*Sample Type: IWA- Inside Work Area, OWA- Outside Work Area, E- Environmental, B- Background, C- Clearance, P- Personal, FB- Field Blank, LB- Lot Blank

Lehua Environmental Inc. **DAILY ACTIVITY LOG**

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Project: Mauna Kea CSO decomissioning Date: 05/24/24

Scheduled Activity			
Building(s):	Caltech Submillimeter Observatory	Floor(s):	N/A
Room(s):	N/A		
Material to be disturbed:	Lead paint. White and red framing and silver panels.		

Time	Description
6:45 am	Meeting at Hale Pohaku. Discussed plans for the day.
7:30 am	Arrived at CSO. Checked exterior of work area for debris. None seen. Unitek and Northwest prepared area to load up debris onto trucks. Pumps and Cassettes set up around work area.
12:00 pm	5 trucks loaded. In between loading trucks, excavator operator manipulated debris again to have big pieces and panels over center-dip of the structure. All available hands cleaned area after trucks finished loading.
12:30 pm	Pumps and cassettes collected. Debris was secured in the center-dip of the structure. Left work area clean.

LEI Staff: Calvin Arca	Date: 05/24/24

Lehua Environmental Inc.

Air Monitoring Log

Project No.:		**Date:**	05/24/24
Client:		**Sampled By:**	Calvin Arca
Project Site:	CSO Decomissioning		

Sample ID	Type*	Start Time	Stop Time	Initial Flow (LPM)	Final Flow (LPM)	Avg. Flor (LPM)	Total Time (min.)	Total Vol. (liters)
CSO 5/24/24 L1	OWA	7:30 am	12:30 pm	2	2	2	300	600

Sample Location:

At gate / road entrance to observatory structure. Northeast of observatory.

Analyte: (select one) ○ Asbestos ◉ Lead ○ Other:_____

Sample ID	Type*	Start Time	Stop Time	Initial Flow (LPM)	Final Flow (LPM)	Avg. Flor (LPM)	Total Time (min.)	Total Vol. (liters)
CSO 5/24/24 L2	OWA	7:30 am	12:30 pm	2	2	2	300	600

Sample Location:

Next to water-pump shed of the observatory structure. Northwest of observatory. .

Analyte: (select one) ○ Asbestos ◉ Lead ○ Other:_____

Sample ID	Type*	Start Time	Stop Time	Initial Flow (LPM)	Final Flow (LPM)	Avg. Flor (LPM)	Total Time (min.)	Total Vol. (liters)
CSO 5/24/24 L3	OWA	7:30 am	12:30 pm	2	2	2	300	600

Sample Location:

Southwest of observatory. Opposite side of the gate / road entrance. Along rope barrier.

Analyte: (select one) ○ Asbestos ◉ Lead ○ Other:_____

Sample ID	Type*	Start Time	Stop Time	Initial Flow (LPM)	Final Flow (LPM)	Avg. Flor (LPM)	Total Time (min.)	Total Vol. (liters)
CSO 5/24/24 L4	OWA	7:30 am	12:30 pm	2	2	2	300	600

Sample Location:

Southeast of observatory. Opposite side of the storage sheds. Along rope barrier.

Analyte: (select one) ○ Asbestos ◉ Lead ○ Other:_____

*Sample Type: IWA- Inside Work Area, OWA- Outside Work Area, E- Environmental, B- Background, C- Clearance, P- Personal, FB- Field Blank, LB- Lot Blank

Lehua Environmental Inc. **DAILY ACTIVITY LOG**

Page: 1 of 1

Project: Mauna Kea CSO decomissioning Date: 05/28/24

Scheduled Activity			
Building(s):	Caltech Submillimeter Observatory	Floor(s):	N/A
Room(s):	N/A		
Material to be disturbed:	Lead paint containing materials. Loose debris.		

Time	Description
6:45 am	Meeting at Hale Pohaku. Discussed plans for the day.
8:30 am	Arrived to CSO. Area was clean.
9:30 am	Northwest started loading debris from concrete platform of the telescope. Water utilized as needed to keep dust down. Unitek prepared loading area by laying down plastic and constantly sweeping debris as needed. Pumps and cassettes setup around work area.
12:30 pm	3 trucks done loading. All hands clean area as needed. Delay due to excavator self-cleaning mode.
1:00 pm	Northwest began removing rotating red metal piece that circulated around structure. All removed by 1:30 pm.
2:30 pm	All available hands cleaned debris around work area. No paint chips seen. Covered debris on the concrete platform of CSO with plastic, especially soft insulation. Debris very saturated, water seen collecting on concrete plateform. Wind forecast for the night was low. Pumps and cassettes collected. Left work area.

LEI Staff: Calvin Arca	Date: 05/28/24

Lehua Environmental Inc.

Air Monitoring Log

Project No.:		**Date:**	05/28/24
Client:		**Sampled By:**	Calvin Arca
Project Site:	CSO Decomissioning		

Sample ID	Type*	Start Time	Stop Time	Initial Flow (LPM)	Final Flow (LPM)	Avg. Flor (LPM)	Total Time (min.)	Total Vol. (liters)
CSO 5/28/24 L1	OWA	9:30 am	2:30 pm	2	2	2	300	600

Sample Location:

At gate / road entrance to observatory structure. Northeast of observatory.

Analyte: (select one) ○ Asbestos ◉ Lead ○ Other:_____

Sample ID	Type*	Start Time	Stop Time	Initial Flow (LPM)	Final Flow (LPM)	Avg. Flor (LPM)	Total Time (min.)	Total Vol. (liters)
CSO 5/28/24 L2	OWA	9:30 am	2:30 pm	2	2	2	300	600

Sample Location:

Next to water-pump shed of the observatory structure. Northwest of observatory. .

Analyte: (select one) ○ Asbestos ◉ Lead ○ Other:_____

Sample ID	Type*	Start Time	Stop Time	Initial Flow (LPM)	Final Flow (LPM)	Avg. Flor (LPM)	Total Time (min.)	Total Vol. (liters)
CSO 5/28/24 L3	OWA	9:30 am	2:30 pm	2	2	2	300	600

Sample Location:

Southwest of observatory. Opposite side of the gate / road entrance. Along rope barrier.

Analyte: (select one) ○ Asbestos ◉ Lead ○ Other:_____

Sample ID	Type*	Start Time	Stop Time	Initial Flow (LPM)	Final Flow (LPM)	Avg. Flor (LPM)	Total Time (min.)	Total Vol. (liters)
CSO 5/28/24 L4	OWA	9:30 am	2:30 pm	2	2	2	300	600

Sample Location:

Southeast of observatory. Opposite side of the storage sheds. Along rope barrier.

Analyte: (select one) ○ Asbestos ◉ Lead ○ Other:_____

*Sample Type: IWA- Inside Work Area, OWA- Outside Work Area, E- Environmental, B- Background, C- Clearance, P- Personal, FB- Field Blank, LB- Lot Blank

Lehua Environmental Inc. **DAILY ACTIVITY LOG**

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Project: Mauna Kea CSO decomissioning Date: 05/29/24

Scheduled Activity			
Building(s):	Caltech Submillimeter Observatory	Floor(s):	N/A
Room(s):	N/A		
Material to be disturbed:	Lead paint building materials. loose debris.		

Time	Description
6:45 am	Meeting at Hale Pohaku. Discussed plans for the day.
8:30 am	Arrived to CSO. Pumps and cassettes setup. Unitek and Northwest onsite to prepare loading trucks. Area prepared for loading and all hands cleaned as needed. Plastic was laid down at loading area.
10:30 am	All trucks finished loading. Red metal ring tracks were loaded onto flatbed hauling trucks in stable pieces. All hands cleaned work area.
11:00 am	Goodfellow started hammering raised concrete lip. Water as needed to keep dust down.
1:00 pm	Goodfellow stopped hammering ring. Constant repairs on hydraulic lines. Switched to bucket and started focusing on cesspool digging. Calvin and Nicole did mock-sampling. Meanwhile, all available hands cleaned up the CSO side of the building for loose debris.
2:30 pm	Done cleaning. Pumps and cassettes collected. Cesspool area roped off. Left work area.

LEI Staff: Calvin Arca	Date: 05/29/24

Lehua Environmental Inc.

Air Monitoring Log

Project No.:		**Date:**	05/29/24
Client:		**Sampled By:**	Calvin Arca
Project Site:	CSO Decomissioning		

Sample ID	Type*	Start Time	Stop Time	Initial Flow (LPM)	Final Flow (LPM)	Avg. Flor (LPM)	Total Time (min.)	Total Vol. (liters)
CSO 5/29/24 L1	OWA	8:30 am	2:30 pm	2	2	2	360	720

Sample Location:

At gate / road entrance to observatory structure. Northeast of observatory.

Analyte: (select one) ○ Asbestos ◉ Lead ○ Other:_____

Sample ID	Type*	Start Time	Stop Time	Initial Flow (LPM)	Final Flow (LPM)	Avg. Flor (LPM)	Total Time (min.)	Total Vol. (liters)
CSO 5/29/24 L2	OWA	8:30 am	2:30 pm	2	2	2	360	720

Sample Location:

Next to container stored on work area. Next to rope barrier. Northwest of observatory. .

Analyte: (select one) ○ Asbestos ◉ Lead ○ Other:_____

Sample ID	Type*	Start Time	Stop Time	Initial Flow (LPM)	Final Flow (LPM)	Avg. Flor (LPM)	Total Time (min.)	Total Vol. (liters)
CSO 5/29/24 L3	OWA	8:30 am	2:30 pm	2	2	2	360	720

Sample Location:

Southwest of observatory. Opposite side of the gate / road entrance. Along rope barrier.

Analyte: (select one) ○ Asbestos ◉ Lead ○ Other:_____

Sample ID	Type*	Start Time	Stop Time	Initial Flow (LPM)	Final Flow (LPM)	Avg. Flor (LPM)	Total Time (min.)	Total Vol. (liters)
CSO 5/29/24 L4	OWA	8:30 am	2:30 pm	2	2	2	360	720

Sample Location:

Southeast of observatory. Opposite side of the storage sheds. Along rope barrier.

Analyte: (select one) ○ Asbestos ◉ Lead ○ Other:_____

*Sample Type: IWA- Inside Work Area, OWA- Outside Work Area, E- Environmental, B- Background, C- Clearance, P- Personal, FB- Field Blank, LB- Lot Blank

Lehua Environmental Inc. **DAILY ACTIVITY LOG**

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Project: Mauna Kea CSO decomissioning Date: 05/30/24

Scheduled Activity			
Building(s):	Caltech Submillimeter Observatory	Floor(s):	N/A
Room(s):	N/A		
Material to be disturbed:	Remaining loose debris from CSO. On concrete platform. Cesspool soil.		

Time	Description
6:45 am	Meeting at Hale Pohaku. Discussed plans for the day.
7:30 am	Arrived at CSO. Setup pumps and cassettes around area. Prepare for cesspool soil sampling. Unitek and Northwest on site preparing for loading debris.
8:30 am	White pump house shed was taken down and disposed of. Last lead structure in work area besides possible paint chips.
9:30 am	Goodfellow excavator did not work on cesspool. Switched sides to remove metal trim on raised lip of CSO structure. Used hammer attachment to do so. Water used as needed to keep dust down. Available hands were on CSO concrete platform shovelling and sweeping debris into loader bucket to be loaded on dump truck.
11:00 am	2nd excavator from goodfellows arrived for cesspool digging. Meanwhile, Northwest focused on loading machinery. All hands cleaned work area as much as possible before heavy machines started moving.
1:00 pm	Prepare area for soil sampling. Plastic laid out with burms. Excavator loaded soil onto plastic while Calvin sampled. PID reader nearby to track VOC concentrations. No concerns seen.
2:30 pm	Pumps and cassettes collected. Work area was clean. Cesspool roped off. Equipment collected. Left work area.

LEI Staff: Calvin Arca	Date: 05/30/24

Lehua Environmental Inc.

Air Monitoring Log

Project No.:		**Date:**	05/30/24
Client:		**Sampled By:**	Calvin Arca
Project Site:	CSO Decomissioning		

Sample ID	Type*	Start Time	Stop Time	Initial Flow (LPM)	Final Flow (LPM)	Avg. Flor (LPM)	Total Time (min.)	Total Vol. (liters)
CSO 5/30/24 L1	OWA	7:30 am	2:30 pm	2	2	2	420	840

Sample Location:

At gate / road entrance to observatory structure. Northeast of observatory.

Analyte: (select one) ○ Asbestos ◉ Lead ○ Other:_____

Sample ID	Type*	Start Time	Stop Time	Initial Flow (LPM)	Final Flow (LPM)	Avg. Flor (LPM)	Total Time (min.)	Total Vol. (liters)
CSO 5/30/24 L2	OWA	7:30 am	2:30 pm	2	2	2	420	840

Sample Location:

Next to container stored on site within work area. Next to rope barrier. Northwest of observatory. .

Analyte: (select one) ○ Asbestos ◉ Lead ○ Other:_____

Sample ID	Type*	Start Time	Stop Time	Initial Flow (LPM)	Final Flow (LPM)	Avg. Flor (LPM)	Total Time (min.)	Total Vol. (liters)
CSO 5/30/24 L3	OWA	7:30 am	2:30 pm	2	2	2	420	840

Sample Location:

Southwest of observatory. Opposite side of the gate / road entrance. Along rope barrier.

Analyte: (select one) ○ Asbestos ◉ Lead ○ Other:_____

Sample ID	Type*	Start Time	Stop Time	Initial Flow (LPM)	Final Flow (LPM)	Avg. Flor (LPM)	Total Time (min.)	Total Vol. (liters)
CSO 5/30/24 L4	OWA	7:30 am	2:30 pm	2	2	2	420	840

Sample Location:

Southeast of observatory. Opposite side of the storage sheds. Along rope barrier.

Analyte: (select one) ○ Asbestos ◉ Lead ○ Other:_____

*Sample Type: IWA- Inside Work Area, OWA- Outside Work Area, E- Environmental, B- Background, C- Clearance, P- Personal, FB- Field Blank, LB- Lot Blank

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Lehua Environmental Inc. **DAILY ACTIVITY LOG**

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Project: Mauna Kea CSO decomissioning Date: 05/31/24

Scheduled Activity			
Building(s):	Caltech Submillimeter Observatory	Floor(s):	N/A
Room(s):	N/A		
Material to be disturbed:	Remaining loose debris from CSO. On concrete platform. Cesspool soil.		

Time	Description
6:45 am	Meeting at Hale Pohaku. Discussed plans for the day.
7:30 am	Arrived at CSO. Unitek staff walked around outside of work area to look for any remaining paint chips. Calvin prepare for soil sampling.
8:30 am	Goodfellow started hammering concrete base of CSO (Not lower concrete skirt). Excavator for cesspool down, awaited repairs for the day.
10:30 am	Unitek gathered all signatures of monitors for clearance. Left job site. Area free of paint chips.
11:00 am	Brief digging and sampling of cesspool. Material laid on top of plastic. Calvin gathered samples. Excavator later went on for more repairs.
1:00 pm	Continue digging cesspool. Calvin monitor VOCs with PID. Calvin gather samples and advise for material management.
3:00 pm	Work done. Cesspool not finished. Soil stockpiles covered with plastic. Samples kept cool. Left work area.

LEI Staff: Calvin Arca	Date: 05/31/24

Lehua Environmental Inc. **DAILY ACTIVITY LOG**

Page: 1 of 1

Project: Mauna Kea CSO decomissioning Date: 06/03/24

Scheduled Activity			
Building(s):	Caltech Submillimeter Observatory	Floor(s):	N/A
Room(s):	N/A		
Material to be disturbed:	Cesspool soil.		

Time	Description
7:00 am	Meeting at Hale Pohaku. Discussed plans for the day.
7:30 am	Arrived at CSO. Goodfellow started digging cesspool and chipping concrete slab for CSO. Concrete demo area was watered occasionally to control dust. VOC readings done while working near cesspool. Soil sampling done while excavator stockpiled soils. stockpiled soils rested on plastic.
11:30 am	Reached base of cesspool. Last of DU 2 samples taken.
1:30 pm	Reached section of cesspool under concrete base. Concrete base removed. All discoloration (dark spots) removed. Soil placed on top of DU 3. Calvin sampled scoops of soil from DU 3.
3:00 pm	All soil samples from DU 2 and DU 3 taken. All stockpiled soils covered and secured with plastic. Left work area.

LEI Staff: Calvin Arca	Date: 06/03/24

CalTech Submillimeter Observatory Decommissioning Biological Monitoring and Inspections Report

AUGUST 2024

PREPARED FOR

AECOM Technical Services, Inc.

PREPARED BY

SWCA Environmental Consultants

CALTECH SUBMILLIMETER OBSERVATORY DECOMMISSIONING BIOLOGICAL MONITORING AND INSPECTIONS REPORT

Prepared for

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SWCA Project No. 72860-000-HON

August 2024

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1 INTRODUCTION

This report provides a summary of the invasive species monitoring activities for the California Institute of Technology Submillimeter Observatory (CSO) decommissioning project located at the summit of Maunakea on Hawai‘i Island. All work activities, including the invasive species monitoring described hereafter, followed the best management practices outlined by the Center for Maunakea Stewardship's 2015 Invasive Species Management Plan (Vanderwoude et al., 2015). SWCA Environmental Consultants (SWCA) was contracted by AECOM Technical Services, Inc., to provide invasive species monitoring services, which took place between September 2022 and June 2024.

1.1 Project Description

The CSO ceased operations in 2015. In 2022, the physical decommissioning of the CSO began. SWCA was contracted by AECOM Technical Services, Inc., to provide an invasive species biological monitor, James Parker, during the deconstruction activities to ensure that invasive species were not transported to the site as part of the decommissioning project. The primary responsibilities of the monitor included 1) monthly, quarterly, and annual monitoring for invasive arthropods and plants in the vicinity of the CSO site on Maunakea and 2) vehicle inspections on equipment and vehicles prior to accessing the CSO site.

2 METHODOLOGY

The field work methodology applied during monitoring activities is outlined in the Center for Maunakea Stewardship Office's (CMS) Standard Operating Procedures (SOPs). Specifically, SOP 02: Inspection of Vehicles, Construction Materials, Scientific Equipment, & Supplies (Kirkpatrick et al., 2022); SOP C: Maunakea Invertebrate Threats, Identification, Collection, and Processing Guide (Kirkpatrick et al.,2015); SOP D: Maunakea Plant Threats, Identification, Collection and Processing Guide. (Kirkpatrick et al., 2016).

2.1 Monitoring

The movement of people, personal supplies, construction materials, earthmoving equipment, and vehicles could introduce nonindigenous weedy flora or invasive fauna pests to the Maunakea summit region. The purpose of the invasive species monitoring is to prevent the introduction of such alien species.

Monitoring occurred on a monthly basis throughout the snow-free months during decommissioning activities. Monitoring was conducted quarterly, regardless of summit activity, to ensure comprehensive coverage throughout the year. During each monitoring visit, the invasive species monitor conducted a pedestrian survey around the CSO site to search for any invasive species. Sticky traps were deployed for 4 to 7 days to ensnare arthropods attracted to the baits (i.e., spam, peanut butter, and jelly). Baited vials containing spam, peanut butter, or jelly were deployed for less than 1 hour to detect invasive ant species. In addition, a search was conducted at each trap site and arthropods were captured by hand, if present. The locations for the deployment of traps and vials were selected by the Center for Maunakea Stewardship (Figure 1). Lastly, any invasive weeds that were present were hand-pulled during monitoring activities.

The initial annual monitoring is scheduled for July 2025 and will be performed annually for 3 consecutive years following the decommissioning process. This monitoring will adhere to the same methodology mentioned previously to ensure consistent and accurate data collection.

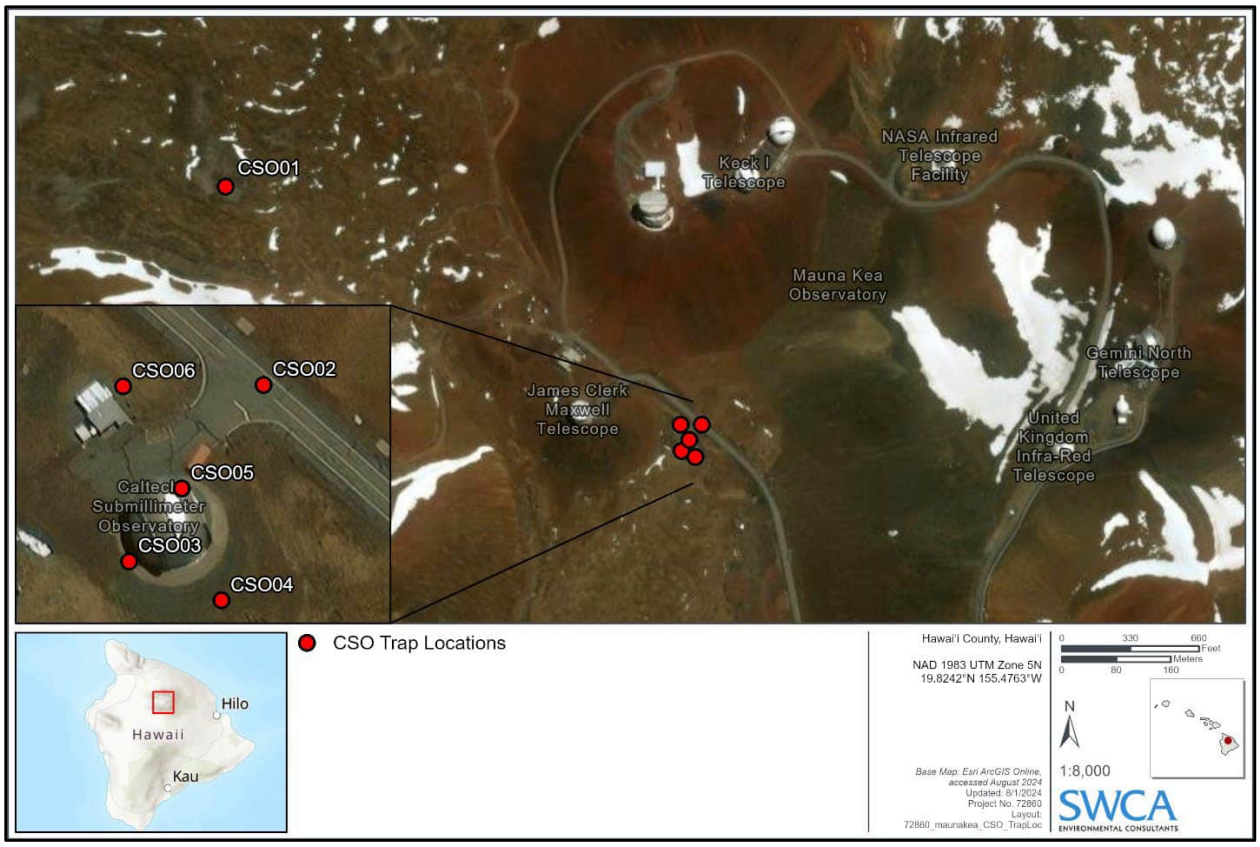

Figure 1. Locations of CSO monitoring sites for monthly and quarterly monitoring.

2.2 Vehicle and Equipment Inspections

Inspections of vehicles, heavy equipment, and cargo to be transported to the summit of Maunakea followed the guidelines described in SOP 02: Inspection of Vehicles, Construction Materials, Scientific Equipment, and Supplies. The inspections took place in private yards prior to transport to the site to allow remediation to take place if invasive species or biological contaminants were located. If approved, a certificate was handed to the responsible party to be shown to Maunakea ranger staff at Hale Pohaku and to construction monitors at the CSO site. Data for vehicle inspections was logged in a Google spreadsheet maintained by CMS staff.

Future inspections of goods and deliveries to the site will be conducted on an as-needed basis by a Department of Land and Natural Resources–approved biologist following the guidance outlined in SOP 02: Inspection of Vehicles, Construction Materials, Scientific Equipment and Supplies (Kirkpatrick et al., 2022).

2.3 Taxonomic Detail

Detailed guidance is provided in the Maunakea Invasive Species Management Plan (Vanderwoude et al. 2015) regarding the level of detail required for specimen identification. Identification was completed to species when possible, however, some orders or suborders of arthropods are low risk (e.g., common herbivores), and more detail is required to determine the level of biosecurity threat they pose. Positive

identification of unusual species may be delayed until subject matter experts can be found to review specimens. CMS's Maunakea Invasive Species Management Plan (Vanderwoude et al., 2015); SOP C: Maunakea Invertebrate Threats, Identification, Collection & Processing Guide (Kirkpatrick et al., 2015); and SOP D: Maunakea Plant Threats, Identification, Collection & Processing Guide (Kirkpatrick et al., 2016) provides the most recent guidance. The following is a summary of CMS guidance as of July 2024.

Arthropod threats of concern on Mauna Kea are to ecological stability, cultural resources, and human health and safety. Specific arthropod taxa of concern include:

- Ants (order Hymenoptera; suborder Apocrita; family Formicidae) and other taxa that are morphologically similar, i.e., look like ants.
- Wasps (order Hymenoptera; suborder Apocrita; families Vespidae, Pompilidae, and Mutilidae) and other taxa that are morphologically similar, i.e., look like large wasps. Does not include: suborder Apocrita; families Bradynobeanidae, Falsiformicidae, Rhopalosomatidae, Sapygidae, Scoliidae, Sierolomorphidae, and Tiphiidae.
- Spiders (order Aranae).
- Beetles (order Coleoptera). Does not include: suborder Polyphaga; family Coccinellidae (i.e., ladybugs).
- Horn and stable flies (order Diptera; suborder Brachycera; family Muscidae; subfamily Muscinae; tribe Stomoxyini).
- Centipedes (order Scolopendromorpha; family Scolopendridae; genus *Scolopendra*).

Specimen identification of the above taxa will be to the lowest practical level when encountered, typically to species level. While native species, such as wolf spiders (*Lycosa* spp.), may also occur within these taxonomic divisions, specimen identification will still be to the lowest taxonomic level feasible, typically species level. Although in the example of *Lycosa* spp., as with many other specimens, identification may frequently be only to genus given the difficulty in identifying to species level.

Specimens not included in the aforementioned list will be identified to the lowest practical taxonomic level without relying on third-party identification assistance. Based on previous experience from 2009–2012 with the Bishop Museum, this usually involves identification at the genus or species level. However, in cases where a specimen is incomplete, identification is particularly time-consuming, or the threat is minimal, identification to the family or similar taxonomic level is considered acceptable.

The Maunakea Wēkiu Bug Working Group may periodically review and revise these priorities. When questions arise regarding efficacy, individual member entomologists can be consulted to determine the appropriate level of detailed taxonomic identification required.

3 RESULTS

Throughout the decommissioning process, the invasive species monitor actively participated in weekly planning meetings to stay informed about project progress and scheduling.

On September 25, 2023, an orientation was held at Hale Pohaku for contractors involved in summit decommissioning activities. The invasive species monitor conducted a training session during this orientation, emphasizing the importance of invasive species prevention. Contractors received a concise, two-page handout (Appendix A) outlining the inspection process they were required to follow during decommissioning work.

The outcomes of monthly and quarterly monitoring, as well as all inspections, are presented below.

3.1 Monitoring

Monthly and quarterly monitoring visits were conducted at CSO during the decommissioning activities. These visits involved perimeter searches and setting arthropod traps. A summary of all monitoring visits is provided in Table 1, and a comprehensive sticky trap data summary can be found in Appendix B.

Throughout the monitoring period, there were a total of eight visits to the summit (see Table 1). Three quarterly visits coincided with months when monthly monitoring occurred, and one quarterly visit took place during a period with no decommissioning activity due to winter weather. Six traps were placed at pre-determined monitoring points during each visit and were left in place for an average of 4-7 days before being collected and examined.

Table 1. Summary of CSO Monthly and Quarterly Monitoring Visits

Monitoring Visit Type	Date Traps Set	Date Traps Picked Up
Monthly/Quarterly	9/10/2023	9/16/2023
Monthly	10/14/2023	10/21/2023
Monthly	11/18/2023	11/24/2023
Monthly/Quarterly	12/9/2023	12/14/2023
Quarterly	3/23/2024	3/30/2024
Monthly	4/21/2024	4/27/2024
Monthly	5/19/2024	5/24/2024
Monthly/Quarterly	6/23/2024	6/29/2024

Perimeter searches did not yield any concerning findings. Likewise, no significant invasive species were detected in the traps during monitoring visits. A full list of species recorded within traps, vials, and via hand searchers can be found in the monitoring datasheet in Appendix B. During the monitoring period, one of the six traps was crushed by decommissioning activities on two separate occasions. In December 2023, a deceased mouse was found in a trap, and data could not be retrieved due to the trap being damaged by the mouse.

3.2 Inspections

In total, 228 inspections were carried out at contractor transporting yards for the CSO decommissioning project. The majority of these inspections (approximately 150) were conducted at the De Luz Trucking yard, where five trucks and five end-dump trailers were inspected twice a week. This inspection frequency ensured that the equipment was ready for daily access to the summit for debris removal from the CSO site. A complete summary of inspection data can be found in Appendix C.

3.2.1 Inspection Events of Significance

On September 27, 2023, a truck with an empty roll-off bin reached the CSO site without an inspection certificate. Jon Steen, Goodfellow Brothers Project Manager, reported that the vehicle was stopped at the Hale Pohaku Ranger Check Station, but it was allowed to proceed due to a miscommunication. By the time J. Steen realized the error, the truck was already heading to the summit, violating SOP 02

(Kirkpatrick et al, 2022). SWCA's invasive species monitor inspected a similar bin later that day at De Luz Trucking in Waimea, finding it clean. It was reiterated to De Luz Trucking and Goodfellow Brothers that all trucks and equipment must be inspected by a Department of Land and Natural Resources–approved biologist before heading to the summit.

On April 23, 2024, an excavator was transported to the CSO site by De Luz Trucking. When it arrived, one of the construction monitors noticed that the excavator had a gravel/cinder/mud mixture embedded in part of the tracks. The crew at Goodfellow Brothers cleaned the tracks and collected the debris at the site. It was assessed that the excavator, during the loading process, traversed some muddy ground while being loaded onto the trailer, which happened after the inspection was completed due to the trailer being used to haul multiple loads. There were no invasive species transported to the summit in this incident. Goodfellow Brothers implemented a new practice, which was to use plywood sheets under the tracks of the equipment during the loading process.

4 LITERATURE CITED

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APPENDIX A

Training Handout

INVASIVE SPECIES PREVENTION BEST MANAGEMENT PRACTICES

SWCA ENVIRONMENTAL CONSULTANTS

Caltech

Please follow these guidelines to help keep invasive species from spreading on Maunakea.

It will keep your organization in compliance as well as help establish best management practices for keeping your vehicles and equipment clean. There are other work sites, like the National Parks, across the state that now require similar inspections for deliveries and equipment.

Maunakea has a unique and isolated ecosystem, and the introduction of pests is detrimental. **Invasive plants**, as well as these categories of high-priority insects, are targets for early detection:

- **Ants**
- **Wasps**
- Spiders
- Beetles
- Horn and stable flies
- Centipedes
- Mollusks

All vehicles owned or contracted by companies working under a permit on Maunakea are required to be inspected. The two types of inspections are self-inspection and inspection by a Department of Land and Natural Resources–approved biologist.

Passenger Vehicles and Trucks (Reference SOP 01)

All vehicles are to be cleaned and inspected by the operator, **prior to arrival at the Saddle Road and Maunakea Access Road junction**. The objective is to remove any **plant, animal, or earthen material (i.e., weed seeds, ants, soil, mud and food scraps)**, that might harbor invasive animals or plant seeds.

When washing your vehicle, pay extra attention to the **undercarriage, fender wells, and mud flaps**. Undercarriage cleaning may be purchased as an add-on at most car washes. Keep your truck beds clean and free of litter or unnecessary items.

Remove food and food wrappers from your vehicle every day.

Place ant traps in your vehicle and replace them monthly.

Try not to park your vehicle among grass and weeds. Parking on a paved or gravel lot with regular (at least **monthly**) groundskeeping is preferred.

The vehicle operator should inspect the vehicle **prior to every trip** to the summit.

Other Vehicles and Equipment (3 axles and up, or cargo over 200 lbs)
(Reference SOP 02)

Schedule 1 hour to have vehicles or equipment inspected, because baiting may be necessary to conduct a thorough inspection. Send an email to Danielle Coulombe (Danielle.Coulombe@aecom.com) and Jimmy Parker (Jimmy.Parker@swca.com) to request an inspection. Preferably **1 week** in advance.

Treat your baseyard for ants, especially in staging areas. Granular bifenthrin products are widely available and are effective for at least a month. A bifenthrin spray can be used on wooden pallets or spacers to prevent infestation while staging.

Please pressure-wash trailers, flatbeds, and undercarriages. If mud, plants, or insects are present, your vehicle will be rejected and you will be asked to remediate the issue. It may require rescheduling the inspection on another day, delaying progress on your project. Hydraulic fluid and oil leaks may also lead to a rejection. Recommendations in the previous section also apply to larger vehicles.

Feel free to email us to discuss if a vehicle or shipment needs to be inspected.

CONTACT DANIELLE.COULOMBE@AECOM.COM | JIMMY.PARKER@SWCA.COM

APPENDIX B

Traps Data

Trap Type	Trap Location	Bait Used	Date Placed	Placed by	Date Retrieved	Retrieved by	Comments	PBJS Bait Remaining	Taxonomy Complete?	ID Taxonomist	Order	Family	Genus	Species	Common Name	Quantity Obs.	Nymph / Adult
Sticky trap	CSO 01	PBJSpam	9/10/2023	James Parker	9/16/2023	James Parker		Yes			Coleoptera	Coccinellidae			Ladybugs	1	Adult
Sticky trap	CSO 01	PBJSpam	9/10/2023	James Parker	9/16/2023	James Parker		Yes			Diptera	Muscidae			Housefly	1	Adult
Sticky trap	CSO 01	PBJSpam	9/10/2023	James Parker	9/16/2023	James Parker		Yes			Hemiptera	Lygaeidae	Nysius	palor	Seed bug	97	Adult
Sticky trap	CSO 01	PBJSpam	9/10/2023	James Parker	9/16/2023	James Parker		Yes			Thysanoptera	Thripidae			Thrips	88	Adult
Sticky trap	CSO 02	PBJSpam	9/10/2023	James Parker	9/16/2023	James Parker		Yes			Coleoptera	Coccinellidae			Ladybugs	2	Adult
Sticky trap	CSO 02	PBJSpam	9/10/2023	James Parker	9/16/2023	James Parker		Yes			Diptera	Muscidae			Housefly	2	Adult
Sticky trap	CSO 02	PBJSpam	9/10/2023	James Parker	9/16/2023	James Parker		Yes			Diptera	Culicidae			Mosquito	1	Adult
Sticky trap	CSO 02	PBJSpam	9/10/2023	James Parker	9/16/2023	James Parker		Yes			Hemiptera	Lygaeidae	Nysius	palor	Seed bug	90	Adult
Sticky trap	CSO 02	PBJSpam	9/10/2023	James Parker	9/16/2023	James Parker		Yes			Hemiptera	Pentatomidae	Bagrada	hilaris	Bagrada bug	4	Adult
Sticky trap	CSO 02	PBJSpam	9/10/2023	James Parker	9/16/2023	James Parker		Yes			Thysanoptera	Thripidae			Thrips	145	Adult
Sticky trap	CSO 02	PBJSpam	9/10/2023	James Parker	9/16/2023	James Parker		Yes			Hymenoptera	Braconidae			Braconid wasp	1	Adult
Sticky trap	CSO 03	PBJSpam	9/10/2023	James Parker	9/16/2023	James Parker		Yes			Coleoptera	Cleridae	Necrobia	rufipes	Red-legged ham beetle	1	Adult
Sticky trap	CSO 03	PBJSpam	9/10/2023	James Parker	9/16/2023	James Parker		Yes			Hemiptera	Lygaeidae	Nysius	palor	Seed bug	76	Adult
Sticky trap	CSO 03	PBJSpam	9/10/2023	James Parker	9/16/2023	James Parker		Yes			Hemiptera	Pentatomidae	Bagrada	hilaris	Bagrada bug	2	Adult
Sticky trap	CSO 03	PBJSpam	9/10/2023	James Parker	9/16/2023	James Parker		Yes			Thysanoptera	Thripidae			Thrips	18	Adult
Sticky trap	CSO 04	PBJSpam	9/10/2023	James Parker	9/16/2023	James Parker		Yes			Coleoptera	Coccinellidae			Ladybugs	1	Adult
Sticky trap	CSO 04	PBJSpam	9/10/2023	James Parker	9/16/2023	James Parker		Yes			Hemiptera	Lygaeidae	Nysius	palor	Seed bug	83	Adult
Sticky trap	CSO 04	PBJSpam	9/10/2023	James Parker	9/16/2023	James Parker		Yes			Thysanoptera	Thripidae			Thrips	77	Adult
Sticky trap	CSO 05	PBJSpam	9/10/2023	James Parker	9/16/2023	James Parker	Lid was crushed by crane, mostly Nysius palor, data not complete	Yes									
Sticky trap	CSO 06	PBJSpam	9/10/2023	James Parker	9/16/2023	James Parker		Yes			Coleoptera	Coccinellidae			Ladybugs	1	Adult
Sticky trap	CSO 06	PBJSpam	9/10/2023	James Parker	9/16/2023	James Parker		Yes			Diptera	Dolichopodidae			Long legged fly	1	Adult
Sticky trap	CSO 06	PBJSpam	9/10/2023	James Parker	9/16/2023	James Parker		Yes			Diptera	Muscidae			Housefly	3	Adult
Sticky trap	CSO 06	PBJSpam	9/10/2023	James Parker	9/16/2023	James Parker		Yes			Diptera	Syrphidae			Hoverfly	7	Adult
Sticky trap	CSO 06	PBJSpam	9/10/2023	James Parker	9/16/2023	James Parker		Yes			Diptera	Sarcrophagidae			Flesh fly	3	Adult
Sticky trap	CSO 06	PBJSpam	9/10/2023	James Parker	9/16/2023	James Parker		Yes			Hemiptera	Lygaeidae	Nysius	palor	Seed bug	287	Adult
Sticky trap	CSO 06	PBJSpam	9/10/2023	James Parker	9/16/2023	James Parker		Yes			Hemiptera	Pentatomidae	Bagrada	hilaris	Bagrada bug	4	Adult
Sticky trap	CSO 06	PBJSpam	9/10/2023	James Parker	9/16/2023	James Parker		Yes			Thysanoptera	Thripidae			Thrips	25	Adult
Sticky trap	CSO 01	PBJSpam	10/14/2023	James Parker	10/21/2023	James Parker		Yes			Thysanoptera	Thripidae			Thrips	6	Adult
Sticky trap	CSO 01	PBJSpam	10/14/2023	James Parker	10/21/2023	James Parker		Yes			Diptera	Phoridae			Hump-backed fly	2	Adult
Sticky trap	CSO 01	PBJSpam	10/14/2023	James Parker	10/21/2023	James Parker		Yes			Hemiptera	Lygaeidae	Nysius	terrestris	Seed bug	3	Adult
Sticky trap	CSO 02	PBJSpam	10/14/2023	James Parker	10/21/2023	James Parker		Yes			Thysanoptera	Thripidae			Thrips	7	Adult
Sticky trap	CSO 02	PBJSpam	10/14/2023	James Parker	10/21/2023	James Parker		Yes			Hemiptera	Lygaeidae	Nysius		Seed bug	4	Adult
Sticky trap	CSO 03	PBJSpam	10/14/2023	James Parker	10/21/2023	James Parker		Yes			Hemiptera	Lygaeidae	Nysius		Seed bug	2	Adult
Sticky trap	CSO 04	PBJSpam	10/14/2023	James Parker	10/21/2023	James Parker		Yes			Diptera	Phoridae			Hump-backed fly	1	Adult
Sticky trap	CSO 04	PBJSpam	10/14/2023	James Parker	10/21/2023	James Parker		Yes			Hemiptera	Lygaeidae	Nysius		Seed bug	3	Adult
Sticky trap	CSO 05	PBJSpam	10/14/2023	James Parker	10/21/2023	James Parker		Yes			Hemiptera	Lygaeidae	Nysius		Seed bug	21	Adult

Trap Type	Trap Location	Bait Used	Date Placed	Placed by	Date Retrieved	Retrieved by	Comments	PBJS Bait Remaining	Taxonomy Complete?	ID Taxonomist	Order	Family	Genus	Species	Common Name	Quantity Obs.	Nymph / Adult
Sticky trap	CSO 05	PBJSpam	10/14/2023	James Parker	10/21/2023	James Parker		Yes			Diptera	Agromyzidae			Leaf-miner flies	64	Adult
Sticky trap	CSO 05	PBJSpam	10/14/2023	James Parker	10/21/2023	James Parker		Yes			Diptera	Chloropidae			Frit flies	2	Adult
Sticky trap	CSO 05	PBJSpam	10/14/2023	James Parker	10/21/2023	James Parker		Yes			Hymenoptera	Ichneumonidae			Ichneumon wasps	2	Adult
Sticky trap	CSO 05	PBJSpam	10/14/2023	James Parker	10/21/2023	James Parker		Yes			Hymenoptera	Braconidae			Braconid wasps	2	Adult
Sticky trap	CSO 06	PBJSpam	10/14/2023	James Parker	10/21/2023	James Parker		Yes			Diptera	Muscidae			Housefly	3	Adult
Sticky trap	CSO 06	PBJSpam	10/14/2023	James Parker	10/21/2023	James Parker		Yes			Diptera	Agromyzidae			Leaf-miner flies	16	Adult
Sticky trap	CSO 06	PBJSpam	10/14/2023	James Parker	10/21/2023	James Parker		Yes			Hemiptera	Lygaeidae	Nysius		Seed bug	33	Adult
Sticky trap	CSO 06	PBJSpam	10/14/2023	James Parker	10/21/2023	James Parker		Yes			Hymenoptera	Braconidae			Braconid wasps	2	Adult
Sticky trap	CSO 01	PBJSpam	11/18/2023	James Parker	11/24/2023	James Parker		Yes									
Sticky trap	CSO 02	PBJSpam	11/18/2023	James Parker	11/24/2023	James Parker		Yes			Diptera	Agromyzidae			Leaf-miner flies	1	Adult
Sticky trap	CSO 03	PBJSpam	11/18/2023	James Parker	11/24/2023	James Parker		Yes			Hemiptera	Lygaeidae	Nysius	palor	Seed bug	1	Adult
Sticky trap	CSO 04	PBJSpam	11/18/2023	James Parker	11/24/2023	James Parker		Yes			Araneae					1	Juvenile
Sticky trap	CSO 04	PBJSpam	11/18/2023	James Parker	11/24/2023	James Parker		Yes			Hemiptera	Lygaeidae	Nysius	palor	Seed bug	3	Adult
Sticky trap	CSO 05	PBJSpam	11/18/2023	James Parker	11/24/2023	James Parker		Yes			Diptera	Agromyzidae			Leaf-miner flies	9	Adult
Sticky trap	CSO 05	PBJSpam	11/18/2023	James Parker	11/24/2023	James Parker		Yes			Hymenoptera	Ichneumonidae			Ichneumon wasps	1	Adult
Sticky trap	CSO 05	PBJSpam	11/18/2023	James Parker	11/24/2023	James Parker		Yes			Diptera	Sciaridae			Fungus gnat	2	Adult
Sticky trap	CSO 06	PBJSpam	11/18/2023	James Parker	11/24/2023	James Parker		Yes			Diptera	Sciaridae			Fungus gnat	1	Adult
Sticky trap	CSO 06	PBJSpam	11/18/2023	James Parker	11/24/2023	James Parker		Yes			Diptera	Agromyzidae			Leaf-miner flies	1	Adult
Sticky trap	CSO 01	PBJSpam	12/9/2023	James Parker	12/14/2023	James Parker		Yes									
Sticky trap	CSO 02	PBJSpam	12/9/2023	James Parker	12/14/2023	James Parker		Yes							Mouse in trap	1	Adult
Sticky trap	CSO 03	PBJSpam	12/9/2023	James Parker	12/14/2023	James Parker		Yes			Hemiptera	Lygaeidae	Nysius	palor	Seed bug	1	Adult
Sticky trap	CSO 03	PBJSpam	12/9/2023	James Parker	12/14/2023	James Parker		Yes			Aranaea	Salticidae			Jumping spider	1	Juvenile
Sticky trap	CSO 04	PBJSpam	12/9/2023	James Parker	12/14/2023	James Parker		Yes			Hemiptera	Lygaeidae	Nysius	palor	Seed bug	3	Adult
Sticky trap	CSO 04	PBJSpam	12/9/2023	James Parker	12/14/2023	James Parker		Yes			Lepidoptera	Noctuidae			Brown Caterpillar	1	Juvenile
Sticky trap	CSO 05	PBJSpam	12/9/2023	James Parker	12/14/2023	James Parker		Yes			Hemiptera	Lygaeidae	Nysius	palor	Seed bug	10	Adult
Sticky trap	CSO 05	PBJSpam	12/9/2023	James Parker	12/14/2023	James Parker		Yes			Diptera	Sciaridae			Fungus gnat	1	Adult
Sticky trap	CSO 06	PBJSpam	12/9/2023	James Parker	12/14/2023	James Parker		Yes			Diptera	Phoridae			Hump-backed fly	1	Adult
Sticky trap	CSO 06	PBJSpam	12/9/2023	James Parker	12/14/2023	James Parker		Yes			Diptera	Agromyzidae			Leaf-miner flies	3	Adult
Sticky trap	CSO 06	PBJSpam	12/9/2023	James Parker	12/14/2023	James Parker		Yes			Hemiptera	Lygaeidae	Nysius	palor	Seed bug	1	Adult
Sticky trap	CSO 06	PBJSpam	12/9/2023	James Parker	12/14/2023	James Parker		Yes			Diptera	Platypezoidea	Lonchoptera		Pointed wing fly	1	Adult
Sticky trap	CSO 01	PBJSpam	3/23/2024	James Parker	3/30/2024	James Parker		Yes									
Sticky trap	CSO 02	PBJSpam	3/23/2024	James Parker	3/30/2024	James Parker		Yes			Diptera	Sarcophagidae			Flesh flies	1	Adult
Sticky trap	CSO 02	PBJSpam	3/23/2024	James Parker	3/30/2024	James Parker		Yes			Hemiptera	Lygaeidae	Nysius	palor	Seed bug	2	Adult
Sticky trap	CSO 02	PBJSpam	3/23/2024	James Parker	3/30/2024	James Parker		Yes			Diptera	Sciaridae			Fungus gnat	1	Adult
Sticky trap	CSO 02	PBJSpam	3/23/2024	James Parker	3/30/2024	James Parker		Yes			Hemiptera				Orange seed bug	2	Adult
Sticky trap	CSO 03	PBJSpam	3/23/2024	James Parker	3/30/2024	James Parker		Yes			Hemiptera	Lygaeidae	Nysius	palor	Seed bug	1	Adult
Sticky trap	CSO 04	PBJSpam	3/23/2024	James Parker	3/30/2024	James Parker		Yes			Hemiptera	Lygaeidae	Nysius	palor	Seed bug	1	Adult
Sticky trap	CSO 04	PBJSpam	3/23/2024	James Parker	3/30/2024	James Parker		Yes			Aranaea				Tiny black spider	1	Adult
Sticky trap	CSO 05	PBJSpam	3/23/2024	James Parker	3/30/2024	James Parker		Yes			Hymenoptera	Ichneumonidae			Ichneumon wasps	45	Adult

Trap Type	Trap Location	Bait Used	Date Placed	Placed by	Date Retrieved	Retrieved by	Comments	PBJS Bait Remaining	Taxonomy Complete?	ID Taxonomist	Order	Family	Genus	Species	Common Name	Quantity Obs.	Nymph / Adult
Sticky trap	CSO 05	PBJSpam	3/23/2024	James Parker	3/30/2024	James Parker		Yes			Hemiptera	Lygaeidae	Nysius	palor	Seed bug	4	Adult
Sticky trap	CSO 05	PBJSpam	3/23/2024	James Parker	3/30/2024	James Parker		Yes			Diptera	Drosophilidae			Vinegar flies	1	Adult
Sticky trap	CSO 05	PBJSpam	3/23/2024	James Parker	3/30/2024	James Parker		Yes			Diptera	Muscidae			Housefly	2	Adult
Sticky trap	CSO 05	PBJSpam	3/23/2024	James Parker	3/30/2024	James Parker		Yes			Diptera	Chloropidae			Frit flies	6	Adult
Sticky trap	CSO 05	PBJSpam	3/23/2024	James Parker	3/30/2024	James Parker		Yes			Diptera	Sarcophagidae			Flesh flies	1	Adult
Sticky trap	CSO 06	PBJSpam	3/23/2024	James Parker	3/30/2024	James Parker		Yes			Diptera	Drosophilidae			Vinegar flies	1	Adult
Sticky trap	CSO 06	PBJSpam	3/23/2024	James Parker	3/30/2024	James Parker		Yes			Hymenoptera	Braconidae			Braconid wasp	2	Adult
Sticky trap	CSO 01	PBJSpam	4/21/2024	James Parker	4/27/2024	James Parker		Yes			Hemiptera	Lygaeidae	Nysuis	wekiuicola	Wekiu bug	1	Nymph
Sticky trap	CSO 01	PBJSpam	4/21/2024	James Parker	4/27/2024	James Parker		Yes			Diptera	Muscidae			Lesser housefly	1	Adult
Sticky trap	CSO 01	PBJSpam	4/21/2024	James Parker	4/27/2024	James Parker		Yes			Diptera	Drosophilidae			Vinegar fly	1	Adult
Sticky trap	CSO 02	PBJSpam	4/21/2024	James Parker	4/27/2024	James Parker		Yes			Hemiptera	Lygaeidae	Nysius	wekiuicola	Wekiu bug	18	Nymph
Sticky trap	CSO 02	PBJSpam	4/21/2024	James Parker	4/27/2024	James Parker		Yes			Hemiptera	Lygaeidae	Nysius	palor	Seed bug	10	Adult
Sticky trap	CSO 03	PBJSpam	4/21/2024	James Parker	4/27/2024	James Parker		Yes			Aranaea	Lycosidae	Lycosa	hawaiiensis	Wolf spider	1	Juvenile
Sticky trap	CSO 03	PBJSpam	4/21/2024	James Parker	4/27/2024	James Parker		Yes			Hemiptera	Lygaeidae	Nysius	palor	Seed bug	2	Adult
Sticky trap	CSO 04	PBJSpam	4/21/2024	James Parker	4/27/2024	James Parker		Yes			Hemiptera	Lygaeidae	Nysius	palor	Seed bug	1	Adult
Sticky trap	CSO 04	PBJSpam	4/21/2024	James Parker	4/27/2024	James Parker		Yes			Hymenoptera	Braconidae			Braconid wasp	1	Adult
Sticky trap	CSO 05	PBJSpam	4/21/2024	James Parker	4/27/2024	James Parker		Yes			Aranaea	Lycosidae			Wolf spider	1	Adult
Sticky trap	CSO 05	PBJSpam	4/21/2024	James Parker	4/27/2024	James Parker		Yes			Hemiptera	Lygaeidae	Nysius	palor	Seed bug	2	Adult
Sticky trap	CSO 05	PBJSpam	4/21/2024	James Parker	4/27/2024	James Parker		Yes			Diptera	Sarcophagidae			Flesh flies	1	Adult
Sticky trap	CSO 05	PBJSpam	4/21/2024	James Parker	4/27/2024	James Parker		Yes			Diptera	Agromyzidae			Leaf-miner fly	1	Adult
Sticky trap	CSO 06	PBJSpam	4/21/2024	James Parker	4/27/2024	James Parker		Yes			Hymenoptera	Ichneumonidae			Ichneumon wasps	4	Adult
Sticky trap	CSO 06	PBJSpam	4/21/2024	James Parker	4/27/2024	James Parker		Yes			Diptera	Muscidae			Lesser housefly	3	Adult
Sticky trap	CSO 01	PBJSpam	5/19/2024	James Parker	5/24/2024	James Parker		Yes			Coleoptera	Coccinellidae			Ladybugs	6	Adult
Sticky trap	CSO 01	PBJSpam	5/19/2024	James Parker	5/24/2024	James Parker		Yes			Hemiptera	Lygaeidae	Nysius	palor	Seed bug	9	Adult
Sticky trap	CSO 01	PBJSpam	5/19/2024	James Parker	5/24/2024	James Parker		Yes			Diptera	Syrphidae			Hover fly	1	Adult
Sticky trap	CSO 01	PBJSpam	5/19/2024	James Parker	5/24/2024	James Parker		Yes			Diptera	Phoridae			Hump-backed flies	74	Adult
Sticky trap	CSO 01	PBJSpam	5/19/2024	James Parker	5/24/2024	James Parker		Yes			Aranaea	Lycosidae	Lycosa	hawaiiensis	Wolf spider	2	Adult
Sticky trap	CSO 01	PBJSpam	5/19/2024	James Parker	5/24/2024	James Parker		Yes			Diptera	Agromyzidae			Leaf-miner fly	4	Adult
Sticky trap	CSO 02	PBJSpam	5/19/2024	James Parker	5/24/2024	James Parker		Yes			Diptera	Agromyzidae			Leaf-miner fly	2	Adult
Sticky trap	CSO 02	PBJSpam	5/19/2024	James Parker	5/24/2024	James Parker		Yes			Diptera	Phoridae			Hump-backed flies	9	Adult
Sticky trap	CSO 02	PBJSpam	5/19/2024	James Parker	5/24/2024	James Parker		Yes			Hymenoptera	Braconidae			Braconid wasp	2	Adult
Sticky trap	CSO 03	PBJSpam	5/19/2024	James Parker	5/24/2024	James Parker		Yes			Hymenoptera	Ichneumonidae			Ichneumon wasps	3	Adult
Sticky trap	CSO 03	PBJSpam	5/19/2024	James Parker	5/24/2024	James Parker		Yes			Hymenoptera	Braconidae			Braconid wasp	4	Adult
Sticky trap	CSO 03	PBJSpam	5/19/2024	James Parker	5/24/2024	James Parker		Yes			Diptera	Agromyzidae			Leaf-miner fly	2	Adult
Sticky trap	CSO 04	PBJSpam	5/19/2024	James Parker	5/24/2024	James Parker		Yes			Diptera	Agromyzidae			Leaf-miner fly	1	Adult
Sticky trap	CSO 04	PBJSpam	5/19/2024	James Parker	5/24/2024	James Parker		Yes			Diptera	Phoridae			Hump-backed flies	10	Adult
Sticky trap	CSO 04	PBJSpam	5/19/2024	James Parker	5/24/2024	James Parker		Yes			Hymenoptera	Braconidae			Braconid wasp	3	Adult

Trap Type	Trap Location	Bait Used	Date Placed	Placed by	Date Retrieved	Retrieved by	Comments	PBJS Bait Remaining	Taxonomy Complete?	ID Taxonomist	Order	Family	Genus	Species	Common Name	Quantity Obs.	Nymph / Adult
Sticky trap	CSO 04	PBJSpam	5/19/2024	James Parker	5/24/2024	James Parker		Yes			Hymenoptera	Ichneumonidae			Ichneumon wasps	2	Adult
Sticky trap	CSO 05	PBJSpam	5/19/2024	James Parker	5/24/2024	James Parker		Yes			Diptera	Phoridae			Hump-backed flies	8	Adult
Sticky trap	CSO 05	PBJSpam	5/19/2024	James Parker	5/24/2024	James Parker		Yes			Diptera	Agromyzidae			Leaf-miner fly	3	Adult
Sticky trap	CSO 05	PBJSpam	5/19/2024	James Parker	5/24/2024	James Parker		Yes			Hymenoptera	Ichneumonidae			Ichneumon wasps	1	Adult
Sticky trap	CSO 05	PBJSpam	5/19/2024	James Parker	5/24/2024	James Parker		Yes			Diptera	Syrphidae			Hover fly	1	Adult
Sticky trap	CSO 06	PBJSpam	5/19/2024	James Parker	5/24/2024	James Parker	Trap crushed by equipment, no specimens recovered	No									
Sticky trap	CSO 01	PBJSpam	6/23/2024	James Parker	6/29/2024	James Parker		Yes			Araneae	Lycosidae	Lycosa	hawaiiensis	Wolf spider	3	Adult
Sticky trap	CSO 01	PBJSpam	6/23/2024	James Parker	6/29/2024	James Parker		Yes			Hemiptera	Lygaeidae	Nysius	palor	Seed bug	1	Adult
Sticky trap	CSO 02	PBJSpam	6/23/2024	James Parker	6/29/2024	James Parker		Yes			Araneae	Lycosidae	Lycosa	hawaiiensis	Wolf spider	1	Adult
Sticky trap	CSO 02	PBJSpam	6/23/2024	James Parker	6/29/2024	James Parker		Yes			Diptera	Muscidae			Housefly	2	Adult
Sticky trap	CSO 02	PBJSpam	6/23/2024	James Parker	6/29/2024	James Parker		Yes			Hemiptera	Lygaeidae	Nysius	palor	Seed bug	1	Adult
Sticky trap	CSO 02	PBJSpam	6/23/2024	James Parker	6/29/2024	James Parker		Yes			Hemiptera	Lygaeidae	Nysius	wekiuicola	Wekiu bug	2	Nymph
Sticky trap	CSO 02	PBJSpam	6/23/2024	James Parker	6/29/2024	James Parker		Yes			Hemiptera	Lygaeidae	Nysius	wekiuicola	Wekiu bug	1	Adult
Sticky trap	CSO 02	PBJSpam	6/23/2024	James Parker	6/29/2024	James Parker		Yes			Hemiptera	Lygaeidae	Neacoryphus	bicrucis	Whitecrossed seedbug	1	Adult
Sticky trap	CSO 02	PBJSpam	6/23/2024	James Parker	6/29/2024	James Parker		Yes			Hymenoptera	Ichneumonidae			Ichneumon wasps	1	Adult
Sticky trap	CSO 03	PBJSpam	6/23/2024	James Parker	6/29/2024	James Parker		Yes									
Sticky trap	CSO 04	PBJSpam	6/23/2024	James Parker	6/29/2024	James Parker		Yes			Hemiptera	Lygaeidae	Nysius	palor	Seed bug	1	Adult
Sticky trap	CSO 05	PBJSpam	6/23/2024	James Parker	6/29/2024	James Parker		Yes									
Sticky trap	CSO 06	PBJSpam	6/23/2024	James Parker	6/29/2024	James Parker		Yes									

APPENDIX C

Inspections Data

-	Inspector	Inspection Location	Year	Date/Time of Inspection	Expiration Date/Time of Inspection	Destination	Observatories	Facility Representative	Vehicle Lic.	Vehicle Owner	Cargo Description	Inspection @ Origin	Bait (Attractant) used?	Concerns Identified	Remediation Taken	Reinspection	Approved for delivery	Rush Inspection?
1112	J. Parker	Kona Trans	2022	9/1/2022 15:30	9/5/2022 15:30	CSO	CSO	Aaron	281 HEH	Kona Trans	U-Pack x2, crates x3		Yes	None	NA	No	Approved	No
1113	J. Parker	Kona Trans	2022	9/7/2022 15:50	9/11/2022 15:50	CSO	CSO	Wesson Tuares	281 HEH	Kona Trans	None		No	None	N/A	No	Approved	No
1114	J. Parker	Kona Trans	2022	9/7/2022 15:55	9/11/2022 15:55	CSO	CSO	Wesson Tuares	391 HEH	Kona Trans	None		No	None	N/A	No	Approved	No
1115	J. Parker	Conen's	2022	10/12/2022 7:00	10/16/2022 7:00	CSO	CSO	Andrew	550 HEF	Conen's	Flatbed trailer(387 HZG) with pallets of empty drums		Yes	None	N/A	No	Approved	No
1116	J. Parker	CSO Office	2023	3/22/2023 15:00	3/26/2023 15:00	CSO	CSO	Bill Johnson	260 HEE		Steel frame on skid		NO	NONE	NONE	No	Approved	no
1117	J. Parker	Conen's Baseyard	2023	8/1/2023 7:45	8/5/2023 7:45	CSO	CSO	Austin Nakamura	575 HEN	Conen's	40ft container		Yes	None	None	No	Approved	No
1118	J. Parker	Conen's Baseyard	2023	8/1/2023 7:45	8/5/2023 7:45	CSO	CSO	Austin Nakamura	278 HZF	Conen's	Building materials, carpet pad		Yes	none	None	No	Approved	No
1119	J. Parker	CSO Office	2023	8/15/2023 7:15	8/19/2023 7:15	CSO	CSO	Bill Johnson	295 HEM		Metal Frame and lumber		NO	none	none	No	Approved	no
1120	J. Parker	Sunbelt Rentals	2023	8/16/2023 7:45	8/20/2023 7:45	CSO	CSO	Romeo Luis	MRGN10		Flatbed Trailer		no	none	none	No	Approved	no
1121	J. Parker	Sunbelt Rentals	2023	8/16/2023 7:50	8/20/2023 7:50	CSO	CSO	Romeo Luis	6706		telehandler		No	none	none	No	Approved	no
1122	J. Parker	Sunbelt Rentals	2023	8/22/2023 7:55	8/26/2023 7:55	CSO	CSO	Morgan Leopoldino	MRGN10		Flatbed trailer		no	none	none	No	Approved	no
1123	J. Parker	Sunbelt Rentals	2023	8/22/2023 8:00	8/26/2023 8:00	CSO	CSO	Morgan Leopoldino	6706		skylift		no	none	none	No	Approved	no
1124	J. Parker	Conen's Baseyard	2023	8/31/2023 8:40	9/3/2023 8:40	CSO	CSO	Edward Zander	149 HEL	Conen's	Hammar trailer		no	none	none	No	Approved	no
1125	J. Parker	Conen's Baseyard	2023	8/31/2023 8:50	9/3/2023 8:50	CSO	CSO	Edward Zander	278 HZF	Conen's	Empty hammar trailer		no	none	none	No	Approved	no
1126	J. Parker	Isemoto Baseyard	2023	9/7/2023 14:46	9/11/2023 14:46	CSO	CSO	Leslie Isemoto	Crane	Isemoto	Crane		Yes	LFA on outriggers	Bifenthrin spray	No	Rejected	no
1127	J. Parker	Isemoto Baseyard	2023	9/7/2023 14:50	9/11/2023 14:50	CSO	CSO	Leslie Isemoto	T17061	Isemoto	Lowboy trailer		Yes	none	none	No	Approved	no
1128	J. Parker	Isemoto Baseyard	2023	9/7/2023 15:00	9/11/2023 15:00	CSO	CSO	Leslie Isemoto	T26124	Isemoto	Diesel Tank		Yes	None	none	No	Approved	no
1129	J. Parker	Isemoto Baseyard	2023	9/7/2023 15:15	9/11/2023 15:15	CSO	CSO	Leslie Isemoto	6345TR	Isemoto	counterweights and wooden spacers		yes	Ants on spacers (wood)	Bifenthrin spray	No	Rejected	no
1130	J. Parker	Isemoto Baseyard	2023	9/7/2023 16:00	9/11/2023 16:00	CSO	CSO	leslie Isemoto	Crane	Isemoto	crane		Yes	none	none	Yes	Approved	no
1131	J. Parker	Isemoto Baseyard	2023	9/7/2023 15:50	9/11/2023 15:50	CSO	CSO	Leslie Isemoto	6345TR	Isemoto	counterweights and wooden spacers		yes	none	none	Yes	Approved	no
1132	J. Parker	Conen's Hilo	2023	9/15/2023 8:40	9/19/2023 8:40	CSO	CSO	John Malson	581 HEM	Conen's	flatbed trailer		No	none	none	No	Approved	no
1133	J. Parker	Conen's Hilo	2023	9/15/2023 8:50	9/19/2023 8:50	CSO	CSO	John Malson	633 HYY	Conen's	empty trailer		No	none	none	No	Approved	no
1134	J. Parker	Conen's Hilo	2023	9/18/2023 8:25	9/22/2023 8:25	CSO	CSO	John Malson	754 HYZ	Conen's	lowboy trailer		No	none	none	No	Approved	no
1135	J. Parker	Conen's Hilo	2023	9/18/2023 8:30	9/22/2023 8:30	CSO	CSO	John Malson	581 HEM	Conen's	semi		no	none	none	No	Approved	no
1136	J. Parker	Isemoto Baseyard	2023	9/20/2023 13:26	9/24/2023 13:26	CSO	CSO	Wilfred Miyazu	6345TR	Isemoto	empty trailer		no	none	none	No	Approved	no
1137	J. Parker	Isemoto Baseyard	2023	9/20/2023 13:35	9/24/2023 13:35	CSO	CSO	Wilfred Miyazu	T17061	Isemoto	semi		no	none	none	No	Approved	no

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1138	J. Parker	Goodfellow Bros Waikoloa	2023	9/21/2023 16:00	9/25/2023 16:00	CSO	CSO	John Steen	725 HZA	Goodfellow Bros	FODS Mats (yellow)		Yes	none	none	No	Approved	no
1139	J. Parker	Saddle Road - Hilo	2023	9/26/2023 8:00	9/30/2023 8:00	CSO	CSO	Bruce Burley	789 MDT		Generator trailer and job boxes		No	none	none	No	Approved	no
1140	J. Parker	Edwin De Luz Waimea	2023	9/27/2023 16:30	10/1/2023 16:30	CSO	CSO	Lauren Balog	770 HEL		roll-off (empty)		no	none	none	No	Approved	yes
1142	J. Parker	Edwin De Luz Waimea	2023	10/2/2023 16:05	10/6/2023 16:05	CSO	CSO	Lauren Balog	770 HEL	De Luz	empty		Yes	silt in sidebox	washed out sidebox	No	Approved	no
1143	J. Parker	Conen's	2023	10/9/2023 7:35	10/13/2023 7:35	CSO	CSO	Edward Zander	278 HZF	Conen's	empty		no	none	none	No	Approved	no
1144	J. Parker	Conen's	2023	10/9/2023 7:35	10/13/2023 7:35	CSO	CSO	Edward Zander	149 HEL	Conen's	Hammar Trailer		no	none	none	No	Approved	no
1145	J. Parker	Conen's	2023	10/9/2023 7:45	10/9/2023 7:45	CSO	CSO	John Malson	903 HZH	Conen's	empty		no	none	none	No	Approved	no
1146	J. Parker	Conen's	2023	10/9/2023 7:50	10/9/2023 7:50	CSO	CSO	John Malson	581 HEM	Conen's	20' trailer		no	none	none	No	Approved	no
1147	J. Parker	BI Container sales	2023	10/18/2023 8:20	10/22/2023 8:20	CSO	CSO	Sayer Houseal		CSO	40' empty container		no	none	none	No	Approved	no
1148	J. Parker	BI Container sales	2023	10/18/2023 8:30	10/22/2023 8:30	CSO	CSO	Sayer Houseal		CSO	40' empty container		no	none	none	No	Approved	no
1149	J. Parker	Conen's	2023	10/19/2023 8:05	10/23/2023 8:05	CSO	CSO	Edward Zander	TR3111	Conen's	container with steel frames		no	none	none	No	Approved	no
1150	J. Parker	Conen's	2023	10/19/2023 8:15	10/23/2023 8:15	CSO	CSO	Edward Zander	278 HZF	Conen's	trailer with 40' container		no	none	none	No	Approved	no
1019	J. Parker	Conen's Hilo	2023	10/19/2023 8:20	10/23/2023 8:20	CSO	CSO	Edward Zander	149 HEL	Conen's	Hammar trailer		no	none	none	No	Approved	no
1020	J. Parker	Conen's	2023	10/19/2023 8:30	10/23/2023 8:30	CSO	CSO	Edward Zander	110 HEB	Conen's	blue container		no	none	none	No	Approved	no
1021	J. Parker	Goodfellow Bros Waikoloa	2023	11/20/2023 16:00	11/24/2023 16:00	CSO	CSO	Jon Steen	768 HEG	Goodfellow Bros	empty flatbed trailer		no	none	none	No	Approved	no
1022	J. Parker	Sunbelt Rentals	2023	12/5/2023 7:45	12/9/2023 7:45	CSO	CSO	Morgan Leopoldino	607 HEM		empty		no	none	none	No	Approved	no
1023	J. Parker	Conen's	2023	12/7/2023 8:15	12/11/2023 8:15	CSO	CSO	Edward Zander	758 HYW	Conen's	empty		no	none	none	No	Approved	no
1024	J. Parker	Conen's	2023	12/7/2023 8:20	12/11/2023 8:20	CSO	CSO	Edward Zander	149 HEL	Conen's	hammar trailer		no	none	none	No	Approved	no
1025	J. Parker	Conen's	2023	12/7/2023 8:25	12/11/2023 8:25	CSO	CSO	Edward Zander	278 HZF	Conen's	empty		no	none	none	No	Approved	no
1026	J. Parker	Conen's	2023	12/7/2023 8:30	12/11/2023 8:30	CSO	CSO	Edward Zander	611 HEJ	Conen's	flatbed trailer		no	none	none	No	Approved	no
1027	J. Parker	HELCO baseyard	2024	2/26/2024 14:37	3/1/2024 14:37	CSO	CSO	Wayne Rubio	T25905	HELCO	Empty		Yes	none	none	No	Approved	no
1028	J. Parker	HELCO baseyard	2024	2/26/2024 14:40	3/1/2024 14:40	CSO	CSO	Wayne Rubio	T20295	HELCO	Empty		Yes	none	none	No	Approved	no
1029	J. Parker	HELCO baseyard	2024	2/26/2024 14:45	3/1/2024 14:45	CSO	CSO	Wayne Rubio	T26248	HELCO	Trailer		Yes	none	none	No	Approved	no
1030	J. Parker	HELCO baseyard	2024	2/26/2024 14:50	3/1/2024 14:50	CSO	CSO	Wayne Rubio	6355TR	HELCO	trailer		Yes	none	none	No	Approved	no
1031	J. Parker	D&M Shop Hilo	2024	4/1/2024 15:05	4/5/2024 15:05	CSO	CSO	Abe Mahuna	249 TWS	D&M	generator/hoses		no	none	none	No	Approved	no

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1032	J. Parker	D&M Shop Hilo	2024	4/9/2024 9:00	4/13/2024 9:00	CSO	CSO	Joseph Pasa	249 TWS	D&M	generator		no	none	none	No	Approved	Yes
1033	J. Parker	Goodfellow Bros	2024	4/16/2024 16:00	4/20/2024 16:00	CSO	CSO	Jon Steen	648 HZB	Goodfellow Bros	logs,plastic tarp, track mats		Yes	none	none	No	Approved	no
1034	J. Parker	Goodfellow Bros	2024	4/16/2024 16:10	4/20/2024 16:00	CSO	CSO	Jon Steen	768 HEG	Goodfellow Bros	cones, silt fence		Yes	none	none	No	Approved	no
1035	J. Parker	Goodfellow Bros	2024	4/16/2024 15:55	4/20/2024 15:55	CSO	CSO	Jon Steen	402 MUJ	Goodfellow Bros	front end loader		Yes	none	none	No	Approved	no
1036	J. Parker	Goodfellow Bros	2024	4/16/2024 15:50	4/20/2024 15:50	CSO	CSO	Jon Steen	542 HDY	Goodfellow Bros	Diesel tank trailer		Yes	none	none	No	Approved	no
1037	J. Parker	Goodfellow Bros	2024	4/16/2024 16:00	4/20/2024 16:00	CSO	CSO	Jon Steen	501 HEJ	Goodfellow Bros	low-boy trailer		Yes	none	none	No	Approved	no
1038	J. Parker	De Luz Waimea	2024	4/22/2024 16:00	4/26/2024 16:00	CSO	CSO	Bruce Burley	silver lowboy trailer	De Luz	Boom/shear/grapple		Yes	none	none	No	Approved	no
1039	J. Parker	De Luz Waimea	2024	4/22/2024 16:00	4/26/2024 16:00	CSO	CSO	Bruce Burley	208 HED	De Luz	silver lowboy		Yes	none	none	No	Approved	no
1040	J. Parker	De Luz Waimea	2024	4/22/2024 16:00	4/26/2024 16:00	CSO	CSO	Bruce Burley	881 HZB	De Luz	Hi-reach excavator		Yes	none	none	No	Approved	no
1041	J. Parker	De Luz Waimea	2024	4/22/2024 16:00	4/26/2024 16:00	CSO	CSO	Bruce Burley	temp license PUC 5093-C	De Luz	lowboy trailer		Yes	none	none	No	Approved	no
1042	J. Parker	De Luz Waimea	2024	4/22/2024 16:00	4/26/2024 16:00	CSO	CSO	Bruce Burley	excavator	NW Demo			Yes	none	none	No	Approved	no
1043	J. Parker	De Luz Waimea	2024	4/22/2024 16:00	4/26/2024 16:00	CSO	CSO	Bruce Burley	Man lift	Sunbelt Rentals			Yes	none	none	No	Approved	no
1044	J. Parker	De Luz Waimea	2024	4/22/2024 16:00	4/26/2024 16:00	CSO	CSO	Bruce Burley	TR2163	NW Demo	blue container		Yes	none	none	No	Approved	no
1045	J. Parker	De Luz Waimea	2024	4/22/2024 16:00	4/26/2024 16:00	CSO	CSO	Bruce Burley	190 HEB	De Luz	trailer w/ blue container		No	none	none	No	Approved	no
1046	J. Parker	De Luz Waimea	2024	4/24/2024 10:00	4/28/2024 10:00	CSO	CSO	Bruce Burley	Hi Reach excavator	NW Demo			Yes	none	none	No	Approved	no
1047	J. Parker	De Luz Waimea	2024	4/24/2024 10:00	4/28/2024 10:00	CSO	CSO	Bruce Burley	silver lowboy trailer	De Luz	manlift		Yes	none	none	No	Approved	Yes
1048	J. Parker	De Luz Waimea	2024	4/24/2024 10:00	4/28/2024 10:00	CSO	CSO	Bruce Burley	temp license PUC 5093-C	De Luz	lowboy trailer		Yes	none	none	No	Approved	Yes
1049	J. Parker	De Luz Waimea	2024	4/24/2024 10:00	4/28/2024 10:00	CSO	CSO	Bruce Burley	TR2163	De Luz	blue container		Yes	none	none	No	Approved	Yes
1725	J. Parker	De Luz Waimea	2024	4/24/2024 10:00	4/28/2024 10:00	CSO	CSO	Bruce Burley	187 HEB	De Luz	trailer w/ blue container		Yes	none	none	No	Approved	Yes
1726	J. Parker	De Luz Waimea	2024	4/25/2024 16:00	4/29/2024 16:00	CSO	CSO	Kevin Balog	190 HEB	De Luz	empty dump trailer		Yes	none	none	No	Approved	no
1727	J. Parker	De Luz Waimea	2024	4/25/2024 16:00	4/29/2024 16:00	CSO	CSO	Kevin Balog	159 HYX	De Luz	empty dump trailer		No	none	none	No	Approved	No
1641	J. Parker	De Luz Waimea	2024	4/25/2024 16:00	4/29/2024 16:00	CSO	CSO	Kevin Balog	303 HDV	De Luz	empty dump trailer		No	none	none	No	Approved	No
1610	J. Parker	De Luz Waimea	2024	4/25/2024 16:00	4/29/2024 16:00	CSO	CSO	Kevin Balog	710 HYP	De Luz	empty dump trailer		No	none	none	No	Approved	No
1609	J. Parker	De Luz Waimea	2024	4/25/2024 16:00	4/29/2024 16:00	CSO	CSO	Kevin Balog	188 HEB	De Luz	empty dump trailer		No	none	none	No	Approved	No

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1608	J. Parker	De Luz Waimea	2024	4/25/2024 16:00	4/29/2024 16:00	CSO	CSO	Kevin Balog	059 WDA	De Luz	empty dump trailer		No	none	none	No	Approved	No
1611	J. Parker	De Luz Waimea	2024	4/25/2024 16:00	4/29/2024 16:00	CSO	CSO	Kevin Balog	881 HEC	De Luz	empty dump trailer		No	none	none	No	Approved	No
1612	J. Parker	De Luz Waimea	2024	4/25/2024 16:00	4/29/2024 16:00	CSO	CSO	Kevin Balog	921 HZL	De Luz	empty		No	none	none	No	Approved	No
1613	J. Parker	Kenworth Hilo	2024	4/26/2024 16:00	4/30/2024 16:00	CSO	CSO	Keanu Kane	795 HYR	De Luz	empty		no	none	none	No	Approved	no
1614	J. Parker	Kenworth Hilo	2024	4/26/2024 16:00	4/30/2024 16:00	CSO	CSO	Keanu Kane	temp license PUC 5093-C	De Luz	empty dump trailer		No	none	none	No	Approved	no
1615	J. Parker	De Luz Waimea	2024	4/29/2024 15:30	5/3/2024 15:30	CSO	CSO	Lee Mohan	469 TXU	Goodfellow Bros	Empty		No	none	none	No	Approved	No
1618	J. Parker	De Luz Waimea	2024	4/29/2024 16:00	5/3/2024 16:00	CSO	CSO	Kevin Balog	187 HEB	De Luz	empty dump trailer		No	none	none	No	Approved	No
1621	J. Parker	De Luz Waimea	2024	4/29/2024 16:00	5/3/2024 16:00	CSO	CSO	Kevin Balog	710HYP	De Luz	empty		No	none	none	No	Approved	No
1620	J. Parker	De Luz Waimea	2024	4/29/2024 16:00	5/3/2024 16:00	CSO	CSO	Kevin Balog	881 HEC	De Luz	empty dump trailer		No	none	none	No	Approved	no
1619	J. Parker	De Luz Waimea	2024	4/29/2024 16:00	5/3/2024 16:00	CSO	CSO	Kevin Balog	921 HZL	De Luz	empty		No	none	none	No	Approved	No
1624	J. Parker	De Luz Waimea	2024	4/29/2024 16:00	5/3/2024 16:00	CSO	CSO	Kevin Balog	temp license PUC 5093-C	De Luz	empty dump trailer		No	none	none	No	Approved	No
1625	J. Parker	De Luz Waimea	2024	4/29/2024 16:00	5/3/2024 16:00	CSO	CSO	Kevin Balog	159 HYX	De Luz	empty		No	none	none	No	Approved	no
1626	J. Parker	De Luz Waimea	2024	4/29/2024 16:00	5/3/2024 16:00	CSO	CSO	Kevin Balog	190 HEB	De Luz	empty dump trailer		no	none	none	No	Approved	no
1623	J. Parker	De Luz Waimea	2024	4/29/2024 16:00	5/3/2024 16:00	CSO	CSO	Kevin Balog	795 HYR	De Luz	empty		no	none	none	No	Approved	no
1622	J. Parker	De Luz Waimea	2024	4/29/2024 16:00	5/3/2024 16:00	CSO	CSO	Kevin Balog	303 HDV	De Luz	empty dump trailer		no	none	none	No	Approved	no
1617	J. Parker	De Luz Waimea	2024	4/29/2024 16:00	5/3/2024 16:00	CSO	CSO	Kevin Balog	188 HEB	De Luz	empty dump trailer		no	none	none	No	Approved	no
1616	J. Parker	De Luz Waimea	2024	4/29/2024 16:00	5/3/2024 16:00	CSO	CSO	Kevin Balog	059 WDA	De Luz	empty		no	none	none	No	Approved	no
1628	J. Parker	De Luz Waimea	2024	5/2/2024 16:30	5/6/2024 16:30	CSO	CSO	Kevin Balog	921 HZL	De Luz	empty		no	none	none	No	Approved	no
1629	J. Parker	De Luz Waimea	2024	5/2/2024 16:30	5/6/2024 16:30	CSO	CSO	Kevin Balog	881 HEC	De Luz	empty dump trailer		no	none	none	No	Approved	no
1631	J. Parker	De Luz Waimea	2024	5/2/2024 16:30	5/6/2024 16:30	CSO	CSO	Kevin Balog	190 HEB	De Luz	empty dump trailer		no	none	none	No	Approved	no
1632	J. Parker	De Luz Waimea	2024	5/2/2024 16:30	5/6/2024 16:30	CSO	CSO	Kevin Balog	159 HYX	De Luz	empty		no	none	none	No	Approved	no
1634	J. Parker	De Luz Waimea	2024	5/2/2024 16:30	5/6/2024 16:30	CSO	CSO	Kevin Balog	710 HYP	De Luz	empty		no	none	none	No	Approved	no
1636	J. Parker	De Luz Waimea	2024	5/2/2024 16:30	5/6/2024 16:30	CSO	CSO	Kevin Balog	059 WDA	De Luz	empty		no	none	none	No	Approved	no
1627	J. Parker	De Luz Waimea	2024	5/2/2024 16:30	5/6/2024 16:30	CSO	CSO	Kevin Balog	temp license PUC 5093-C	De Luz	empty dump trailer		no	none	none	No	Approved	no
1630	J. Parker	De Luz Waimea	2024	5/2/2024 16:30	5/6/2024 16:30	CSO	CSO	Kevin Balog	795 HYR	De Luz	empty		no	none	none	No	Approved	no
1633	J. Parker	De Luz Waimea	2024	5/2/2024 16:30	5/6/2024 16:30	CSO	CSO	Kevin Balog	303 HDV	De Luz	empty dump trailer		no	none	none	No	Approved	no
1635	J. Parker	De Luz Waimea	2024	5/2/2024 16:30	5/6/2024 16:30	CSO	CSO	Kevin Balog	187 HEB	De Luz	empty dump trailer		no	none	none	No	Approved	no
1637	J. Parker	De Luz Waimea	2024	5/2/2024 16:30	5/6/2024 16:30	CSO	CSO	Kevin Balog	188 HEB	De Luz	empty dump trailer		no	none	none	No	Approved	no

-	Inspector	Inspection Location	Year	Date/Time of Inspection	Expiration Date/Time of Inspection	Destination	Observatories	Facility Representative	Vehicle Lic.	Vehicle Owner	Cargo Description	Inspection @ Origin	Bait (Attractant) used?	Concerns Identified	Remediation Taken	Reinspection	Approved for delivery	Rush Inspection?
1638	J. Parker	De Luz Waimea	2024	5/2/2024 16:30	5/6/2024 16:30	CSO	CSO	Kevin Balog	208 HED	De Luz	empty dump trailer		no	none	none	No	Approved	no
1639	J. Parker	De Luz Waimea	2024	5/6/2024 16:00	5/10/2024 16:00	CSO	CSO	Kevin Balog	187 HEB	De Luz	dump trailer		no	none	none	No	Approved	no
1640	J. Parker	De Luz Waimea	2024	5/6/2024 16:00	5/10/2024 16:00	CSO	CSO	Kevin Balog	059 WDA	De Luz	empty		no	none	none	No	Approved	no
1642	J. Parker	De Luz Waimea	2024	5/6/2024 16:00	5/10/2024 16:00	CSO	CSO	Kevin Balog	188 HEB	De Luz	dump trailer		no	none	none	No	Approved	no
1643	J. Parker	De Luz Waimea	2024	5/6/2024 16:00	5/10/2024 16:00	CSO	CSO	Kevin Balog	710 HYP	De Luz	empty		no	none	none	No	Approved	no
1644	J. Parker	De Luz Waimea	2024	5/6/2024 16:00	5/10/2024 16:00	CSO	CSO	Kevin Balog	303 HDV	De Luz	dump trailer		no	none	none	No	Approved	no
1645	J. Parker	De Luz Waimea	2024	5/6/2024 16:00	5/10/2024 16:00	CSO	CSO	Kevin Balog	795 HYR	De Luz	empty		no	none	none	No	Approved	no
1646	J. Parker	De Luz Waimea	2024	5/6/2024 16:00	5/10/2024 16:00	CSO	CSO	Kevin Balog	temp license	De Luz	dump trailer		no	none	none	No	Approved	no
1647	J. Parker	De Luz Waimea	2024	5/6/2024 16:00	5/10/2024 16:00	CSO	CSO	Kevin Balog	159 HYX	De Luz	empty		no	none	none	No	Approved	no
1648	J. Parker	De Luz Waimea	2024	5/6/2024 16:00	5/10/2024 16:00	CSO	CSO	Kevin Balog	190 HEB	De Luz	dump trailer		no	none	none	No	Approved	no
1692	J. Parker	De Luz Waimea	2024	5/6/2024 16:00	5/10/2024 16:00	CSO	CSO	Kevin Balog	921 HZL	De Luz	empty		no	none	none	No	Approved	no
1693	J. Parker	De Luz Waimea	2024	5/6/2024 16:00	5/10/2024 16:00	CSO	CSO	Kevin Balog	881 HEC	De Luz	dump trailer		no	none	none	No	Approved	no
1694	J. Parker	De Luz Waimea	2024	5/6/2024 16:00	5/10/2024 16:00	CSO	CSO	Kevin Balog	208 HED	De Luz	dump trailer		no	none	none	No	Approved	no
1695	J. Parker	De Luz Waimea	2024	5/13/2024 16:00	5/17/2024 16:00	CSO	CSO	Kevin Balog	881 HEC	De Luz	dump trailer		no	none	none	No	Approved	no
1696	J. Parker	De Luz Waimea	2024	5/13/2024 16:00	5/17/2024 16:00	CSO	CSO	Kevin Balog	921 HZL	De Luz	empty		no	none	none	No	Approved	no
1697	J. Parker	De Luz Waimea	2024	5/13/2024 16:00	5/17/2024 16:00	CSO	CSO	Kevin Balog	188 HEB	De Luz	dump trailer		no	none	none	No	Approved	no
1698	J. Parker	De Luz Waimea	2024	5/13/2024 16:00	5/17/2024 16:00	CSO	CSO	Kevin Balog	059 WDA	De Luz	empty		no	none	none	No	Approved	no
1699	J. Parker	De Luz Waimea	2024	5/13/2024 16:00	5/17/2024 16:00	CSO	CSO	Kevin Balog	303 HDV	De Luz	dump trailer		no	none	none	No	Approved	no
1700	J. Parker	De Luz Waimea	2024	5/13/2024 16:00	5/17/2024 16:00	CSO	CSO	Kevin Balog	710 HYP	De Luz	empty		no	none	none	No	Approved	no
1701	J. Parker	De Luz Waimea	2024	5/13/2024 16:00	5/17/2024 16:00	CSO	CSO	Kevin Balog	190 HEB	De Luz	dump trailer		no	none	none	No	Approved	no
1702	J. Parker	De Luz Waimea	2024	5/13/2024 16:00	5/17/2024 16:00	CSO	CSO	Kevin Balog	159 HYX	De Luz	empty		no	none	none	No	Approved	no
1703	J. Parker	De Luz Waimea	2024	5/13/2024 16:00	5/17/2024 16:00	CSO	CSO	Kevin Balog	187 HEB	De Luz	dump trailer		no	none	none	No	Approved	no
1704	J. Parker	De Luz Waimea	2024	5/13/2024 16:00	5/17/2024 16:00	CSO	CSO	Kevin Balog	temp license	De Luz	dump trailer		no	none	none	No	Approved	no
1705	J. Parker	De Luz Waimea	2024	5/13/2024 16:00	5/17/2024 16:00	CSO	CSO	Kevin Balog	795 HYR	De Luz	empty		no	none	none	No	Approved	no

-	Inspector	Inspection Location	Year	Date/Time of Inspection	Expiration Date/Time of Inspection	Destination	Observatories	Facility Representative	Vehicle Lic.	Vehicle Owner	Cargo Description	Inspection @ Origin	Bait (Attractant) used?	Concerns Identified	Remediation Taken	Reinspection	Approved for delivery	Rush Inspection?
1706	J. Parker	De Luz Waimea	2024	5/16/2024 17:00	5/20/2024 17:00	CSO	CSO	Kevin Balog	188 HEB	De Luz	dump trailer		no	none	none	No	Approved	no
1707	J. Parker	De Luz Waimea	2024	5/16/2024 17:00	5/20/2024 17:00	CSO	CSO	Kevin Balog	059 WDA	De Luz	empty		no	none	none	No	Approved	no
1708	J. Parker	De Luz Waimea	2024	5/16/2024 17:00	5/20/2024 17:00	CSO	CSO	Kevin Balog	190 HEB	De Luz	dump trailer		no	none	none	No	Approved	no
1709	J. Parker	De Luz Waimea	2024	5/16/2024 17:00	5/20/2024 17:00	CSO	CSO	Kevin Balog	159 HYX	De Luz	empty		no	none	none	No	Approved	no
1710	J. Parker	De Luz Waimea	2024	5/16/2024 17:00	5/20/2024 17:00	CSO	CSO	Kevin Balog	temp license	De Luz	dump trailer		no	none	none	No	Approved	no
1711	J. Parker	De Luz Waimea	2024	5/16/2024 17:00	5/20/2024 17:00	CSO	CSO	Kevin Balog	795 HYR	De Luz	empty		no	none	none	No	Approved	no
1712	J. Parker	De Luz Waimea	2024	5/16/2024 17:00	5/20/2024 17:00	CSO	CSO	Kevin Balog	303 HDV	De Luz	dump trailer		no	none	none	No	Approved	no
1713	J. Parker	De Luz Waimea	2024	5/16/2024 17:00	5/20/2024 17:00	CSO	CSO	Kevin Balog	710 HYP	De Luz	empty		no	none	none	No	Approved	no
1714	J. Parker	De Luz Waimea	2024	5/16/2024 17:00	5/20/2024 17:00	CSO	CSO	Kevin Balog	881 HEC	De Luz	dump trailer		no	none	none	No	Approved	no
1715	J. Parker	De Luz Waimea	2024	5/16/2024 17:00	5/20/2024 17:00	CSO	CSO	Kevin Balog	921 HZL	De Luz	empty		no	none	none	No	Approved	no
1716	J. Parker	De Luz Waimea	2024	5/16/2024 17:00	5/20/2024 17:00	CSO	CSO	Kevin Balog	187 HEB	De Luz	dump trailer		no	none	none	No	Approved	no
1717	J. Parker	De Luz Waimea	2024	5/20/2024 17:00	5/24/2024 17:00	CSO	CSO	Kevin Balog	188 HEB	De Luz	dump trailer		no	none	none	No	Approved	no
1718	J. Parker	De Luz Waimea	2024	5/20/2024 17:00	5/24/2024 17:00	CSO	CSO	Kevin Balog	059 WDA	De Luz	empty		no	none	none	No	Approved	no
1719	J. Parker	De Luz Waimea	2024	5/20/2024 17:00	5/24/2024 17:00	CSO	CSO	Kevin Balog	187 HEB	De Luz	dump trailer		no	none	none	No	Approved	no
1720	J. Parker	De Luz Waimea	2024	5/20/2024 17:00	5/24/2024 17:00	CSO	CSO	Kevin Balog	795 HYR	De Luz	empty		no	none	none	No	Approved	no
1721	J. Parker	De Luz Waimea	2024	5/20/2024 17:00	5/24/2024 17:00	CSO	CSO	Kevin Balog	190 HEB	De Luz	dump trailer		no	none	none	No	Approved	no
1722	J. Parker	De Luz Waimea	2024	5/20/2024 17:00	5/24/2024 17:00	CSO	CSO	Kevin Balog	159 HYX	De Luz	empty		no	none	none	No	Approved	no
1723	J. Parker	De Luz Waimea	2024	5/20/2024 17:00	5/24/2024 17:00	CSO	CSO	Kevin Balog	881 HEC	De Luz	dump trailer		no	none	none	No	Approved	no
1724	J. Parker	De Luz Waimea	2024	5/20/2024 17:00	5/24/2024 17:00	CSO	CSO	Kevin Balog	921 HZL	De Luz	empty		no	none	none	No	Approved	no
1728	J. Parker	De Luz Waimea	2024	5/20/2024 17:00	5/24/2024 17:00	CSO	CSO	Kevin Balog	303 HDV	De Luz	dump trailer		no	none	none	No	Approved	no
1729	J. Parker	De Luz Waimea	2024	5/20/2024 17:00	5/24/2024 17:00	CSO	CSO	Kevin Balog	710 HYP	De Luz	empty		no	none	none	No	Approved	no
1730	J. Parker	De Luz Waimea	2024	5/20/2024 17:00	5/24/2024 17:00	CSO	CSO	Kevin Balog	208 HED	De Luz	dump trailer		no	none	none	No	Approved	no
1731	J. Parker	De Luz Waimea	2024	5/23/2024 17:00	5/27/2024 17:00	CSO	CSO	Kevin Balog	temp license	De Luz	dump trailer		no	none	none	No	Approved	no
1732	J. Parker	De Luz Waimea	2024	5/23/2024 17:00	5/27/2024 17:00	CSO	CSO	Kevin Balog	795 HYR	De Luz	empty		no	none	none	No	Approved	no

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1733	J. Parker	De Luz Waimea	2024	5/23/2024 17:00	5/27/2024 17:00	CSO	CSO	Kevin Balog	190 HEB	De Luz	dump trailer		no	none	none	No	Approved	no
1734	J. Parker	De Luz Waimea	2024	5/23/2024 17:00	5/27/2024 17:00	CSO	CSO	Kevin Balog	159 HYX	De Luz	empty		no	none	none	No	Approved	no
1735	J. Parker	De Luz Waimea	2024	5/23/2024 17:00	5/27/2024 17:00	CSO	CSO	Kevin Balog	881 HEC	De Luz	dump trailer		no	none	none	No	Approved	no
1736	J. Parker	De Luz Waimea	2024	5/23/2024 17:00	5/27/2024 17:00	CSO	CSO	Kevin Balog	921 HZL	De Luz	empty		no	none	none	No	Approved	no
1737	J. Parker	De Luz Waimea	2024	5/23/2024 17:00	5/27/2024 17:00	CSO	CSO	Kevin Balog	188 HEB	De Luz	dump trailer		no	none	none	No	Approved	no
1738	J. Parker	De Luz Waimea	2024	5/23/2024 17:00	5/27/2024 17:00	CSO	CSO	Kevin Balog	059 WDA	De Luz	empty		no	none	none	No	Approved	no
1739	J. Parker	De Luz Waimea	2024	5/23/2024 17:00	5/27/2024 17:00	CSO	CSO	Kevin Balog	303 HDV	De Luz	dump trailer		no	none	none	No	Approved	no
1740	J. Parker	De Luz Waimea	2024	5/23/2024 17:00	5/27/2024 17:00	CSO	CSO	Kevin Balog	710 HYP	De Luz	empty		no	none	none	No	Approved	no
1741	J. Parker	De Luz Waimea	2024	5/24/2024 15:00	5/28/2024 15:00	CSO	CSO	Kevin Balog	temp license	De Luz	dump trailer		no	none	none	No	Approved	no
1742	J. Parker	De Luz Waimea	2024	5/24/2024 15:00	5/28/2024 15:00	CSO	CSO	Kevin Balog	795 HYR	De Luz	empty		no	none	none	No	Approved	no
1743	J. Parker	De Luz Waimea	2024	5/24/2024 15:00	5/28/2024 15:00	CSO	CSO	Kevin Balog	188 HEB	De Luz	dump trailer		no	none	none	No	Approved	no
1744	J. Parker	De Luz Waimea	2024	5/24/2024 15:00	5/28/2024 15:00	CSO	CSO	Kevin Balog	059 WDA	De Luz	empty		no	none	none	No	Approved	no
1745	J. Parker	De Luz Waimea	2024	5/24/2024 15:00	5/28/2024 15:00	CSO	CSO	Kevin Balog	190 HEB	De Luz	dump trailer		no	none	none	No	Approved	no
1746	J. Parker	De Luz Waimea	2024	5/24/2024 15:00	5/28/2024 15:00	CSO	CSO	Kevin Balog	159 HYX	De Luz	empty		no	none	none	No	Approved	no
1747	J. Parker	De Luz Waimea	2024	5/24/2024 15:00	5/28/2024 15:00	CSO	CSO	Kevin Balog	881 HEC	De Luz	dump trailer		no	none	none	No	Approved	no
1748	J. Parker	De Luz Waimea	2024	5/24/2024 15:00	5/28/2024 15:00	CSO	CSO	Kevin Balog	921 HZL	De Luz	empty		no	none	none	No	Approved	no
1749	J. Parker	De Luz Waimea	2024	5/28/2024 17:00	6/1/2024 17:00	CSO	CSO	Kevin Balog	190 HEB	De Luz	dump trailer		no	none	none	No	Approved	no
1750	J. Parker	De Luz Waimea	2024	5/28/2024 17:00	6/1/2024 17:00	CSO	CSO	Kevin Balog	159 HYX	De Luz	empty		no	none	none	No	Approved	no
1551	J. Parker	Goodfellow Bros	2024	5/28/2024 7:00	6/1/2024 7:00	CSO	CSO	Sam Peck	501 HEJ	Island Topsoil	lowboy trailer		yes	none	none	No	Approved	no
1552	J. Parker	Goodfellow Bros	2024	5/28/2024 7:00	6/1/2024 7:00	CSO	CSO	Sam Peck	402 MUJ	Island Topsoil	excavator		yes	none	none	No	Approved	no
1553	J. Parker	Goodfellow Bros	2024	5/28/2024 7:00	6/1/2024 7:00	CSO	CSO	Sam Peck	Excavator BH 621	Goodfellow Bros			yes	none	none	No	Approved	no
1554	J. Parker	Goodfellow Bros	2024	5/28/2024 7:00	6/1/2024 7:00	CSO	CSO	Sam Peck	Excavator 245	Goodfellow Bros			yes	none	none	No	Approved	no
1555	J. Parker	Goodfellow Bros	2024	5/28/2024 7:00	6/1/2024 7:00	CSO	CSO	Sam Peck	768 HEG	Goodfellow Bros	Rolls of mesh		yes	none	none	No	Approved	no
1556	J. Parker	De Luz Waimea	2024	5/28/2024 17:00	6/1/2024 17:00	CSO	CSO	Kevin Balog	188 HEB	De Luz	flat trailer		no	none	none	No	Approved	no
1557	J. Parker	De Luz Waimea	2024	5/28/2024 17:00	6/1/2024 17:00	CSO	CSO	Kevin Balog	652 HYZ	De Luz	empty		no	none	none	No	Approved	no

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1558	J. Parker	De Luz Waimea	2024	5/28/2024 17:00	6/1/2024 17:00	CSO	CSO	Kevin Balog	222 HEM	De Luz	empty		no	none	none	No	Approved	no
1559	J. Parker	De Luz Waimea	2024	5/28/2024 17:00	6/1/2024 17:00	CSO	CSO	Kevin Balog	temp license	De Luz	flat trailer		no	none	none	No	Approved	no
1560	J. Parker	De Luz Waimea	2024	5/28/2024 17:00	6/1/2024 17:00	CSO	CSO	Kevin Balog	187 HEB	De Luz	trailer		no	none	none	No	Approved	no
1561	J. Parker	De Luz Waimea	2024	5/28/2024 17:00	6/1/2024 17:00	CSO	CSO	Kevin Balog	208 HED	De Luz	lowboy trailer		no	none	none	No	Approved	no
1562	J. Parker	De Luz Waimea	2024	5/28/2024 17:00	6/1/2024 17:00	CSO	CSO	Kevin Balog	no plate	De Luz	lowboy trailer		no	none	none	No	Approved	no
1563	J. Parker	De Luz Waimea	2024	5/28/2024 17:00	6/1/2024 17:00	CSO	CSO	Kevin Balog	880 HZB	De Luz	empty		no	none	none	No	Approved	no
1564	J. Parker	De Luz Waimea	2024	5/30/2024 16:00	6/3/2024 16:00	CSO	CSO	Kevin Balog	187 HEB	De Luz	empty trailer		no	none	none	No	Approved	no
1565	J. Parker	De Luz Waimea	2024	5/30/2024 16:00	6/3/2024 16:00	CSO	CSO	Kevin Balog	577 WDG	De Luz	empty		no	none	none	No	Approved	no
1566	J. Parker	De Luz Waimea	2024	5/30/2024 16:00	6/3/2024 16:00	CSO	CSO	Kevin Balog	190 HEB	De Luz	dump trailer		no	none	none	No	Approved	no
1567	J. Parker	De Luz Waimea	2024	5/30/2024 16:00	6/3/2024 16:00	CSO	CSO	Kevin Balog	159 HYX	De Luz	empty		no	none	none	No	Approved	no
1568	J. Parker	De Luz Waimea	2024	6/3/2024 17:00	6/7/2024 17:00	CSO	CSO	Kevin Balog	188 HEB	De Luz	dump trailer		no	none	none	No	Approved	no
1569	J. Parker	De Luz Waimea	2024	6/3/2024 17:00	6/7/2024 17:00	CSO	CSO	Kevin Balog	059 WDA	De Luz	empty		no	none	none	No	Approved	no
1570	J. Parker	De Luz Waimea	2024	6/3/2024 17:00	6/7/2024 17:00	CSO	CSO	Kevin Balog	881 HEC	De Luz	dump trailer		no	none	none	No	Approved	no
1571	J. Parker	De Luz Waimea	2024	6/3/2024 17:00	6/7/2024 17:00	CSO	CSO	Kevin Balog	921 HZL	De Luz	empty		no	none	none	No	Approved	no
1572	J. Parker	De Luz Waimea	2024	6/3/2024 17:00	6/7/2024 17:00	CSO	CSO	Kevin Balog	190 HEB	De Luz	dump trailer		no	none	none	No	Approved	no
1573	J. Parker	De Luz Waimea	2024	6/3/2024 17:00	6/7/2024 17:00	CSO	CSO	Kevin Balog	159 HYX	De Luz	empty		no	none	none	No	Approved	no
1574	J. Parker	De Luz Waimea	2024	6/3/2024 17:00	6/7/2024 17:00	CSO	CSO	Kevin Balog	303 HDV	De Luz	dump trailer		no	none	none	No	Approved	no
1575	J. Parker	De Luz Waimea	2024	6/3/2024 17:00	6/7/2024 17:00	CSO	CSO	Kevin Balog	710 HYP	De Luz	empty		no	none	none	No	Approved	no
1576	J. Parker	De Luz Waimea	2024	6/3/2024 17:00	6/7/2024 17:00	CSO	CSO	Kevin Balog	temp license	De Luz	dump trailer		no	none	none	No	Approved	no
1577	J. Parker	De Luz Waimea	2024	6/3/2024 17:00	6/7/2024 17:00	CSO	CSO	Kevin Balog	795 HYR	De Luz	empty		no	none	none	No	Approved	no
1578	J. Parker	De Luz Waimea	2024	6/6/2024 17:00	6/10/2024 17:00	CSO	CSO	Kevin Balog	188 HEB	De Luz	dump trailer		no	none	none	No	Approved	no
1579	J. Parker	De Luz Waimea	2024	6/6/2024 17:00	6/10/2024 17:00	CSO	CSO	Kevin Balog	059 WDA	De Luz	empty		no	none	none	No	Approved	no
1580	J. Parker	De Luz Waimea	2024	6/6/2024 17:00	6/10/2024 17:00	CSO	CSO	Kevin Balog	190 HEB	De Luz	dump trailer		no	none	none	No	Approved	no
1581	J. Parker	De Luz Waimea	2024	6/6/2024 17:00	6/10/2024 17:00	CSO	CSO	Kevin Balog	159 HYX	De Luz	empty		no	none	none	No	Approved	no
1582	J. Parker	De Luz Waimea	2024	6/6/2024 17:00	6/10/2024 17:00	CSO	CSO	Kevin Balog	881 HEC	De Luz	dump trailer		no	none	none	No	Approved	no
1583	J. Parker	De Luz Waimea	2024	6/6/2024 17:00	6/10/2024 17:00	CSO	CSO	Kevin Balog	921 HZL	De Luz	empty		no	none	none	No	Approved	no
1584	J. Parker	De Luz Waimea	2024	6/10/2024 17:00	6/14/2024 17:00	CSO	CSO	Kevin Balog	881 HEC	De Luz	dump trailer		no	none	none	No	Approved	no
1585	J. Parker	De Luz Waimea	2024	6/10/2024 17:00	6/14/2024 17:00	CSO	CSO	Kevin Balog	921 HZL	De Luz	empty		no	none	none	No	Approved	no

-	Inspector	Inspection Location	Year	Date/Time of Inspection	Expiration Date/Time of Inspection	Destination	Observatories	Facility Representative	Vehicle Lic.	Vehicle Owner	Cargo Description	Inspection @ Origin	Bait (Attractant) used?	Concerns Identified	Remediation Taken	Reinspection	Approved for delivery	Rush Inspection?
1586	J. Parker	De Luz Waimea	2024	6/10/2024 17:00	6/14/2024 17:00	CSO	CSO	Kevin Balog	190 HEB	De Luz	dump trailer		no	none	none	No	Approved	no
1587	J. Parker	De Luz Waimea	2024	6/10/2024 17:00	6/14/2024 17:00	CSO	CSO	Kevin Balog	159 HYX	De Luz	empty		no	none	none	No	Approved	no
1588	J. Parker	De Luz Waimea	2024	6/10/2024 17:00	6/14/2024 17:00	CSO	CSO	Kevin Balog	188 HEB	De Luz	dump trailer		no	none	none	No	Approved	no
1589	J. Parker	De Luz Waimea	2024	6/10/2024 17:00	6/14/2024 17:00	CSO	CSO	Kevin Balog	059 WDA	De Luz	empty		no	none	none	No	Approved	no
1590	J. Parker	De Luz Waimea	2024	6/10/2024 17:00	6/14/2024 17:00	CSO	CSO	Kevin Balog	silver trailer no tag	De Luz	roll-off bin (empty)		no	none	none	No	Approved	no
1591	J. Parker	De Luz Waimea	2024	6/10/2024 17:00	6/14/2024 17:00	CSO	CSO	Kevin Balog	temp license	De Luz	flatbed silver trailer		no	none	none	No	Approved	no
1592	J. Parker	De Luz Waimea	2024	6/13/2024 17:00	6/17/2024 17:00	CSO	CSO	Kevin Balog	881 HEC	De Luz	dump trailer		no	none	none	No	Approved	no
1593	J. Parker	De Luz Waimea	2024	6/13/2024 17:00	6/17/2024 17:00	CSO	CSO	Kevin Balog	921 HZL	De Luz	empty		no	none	none	No	Approved	no
1594	J. Parker	De Luz Waimea	2024	6/13/2024 17:00	6/17/2024 17:00	CSO	CSO	Kevin Balog	190 HEB	De Luz	dump trailer		no	none	none	No	Approved	no
1595	J. Parker	De Luz Waimea	2024	6/13/2024 17:00	6/17/2024 17:00	CSO	CSO	Kevin Balog	159 HYX	De Luz	empty		no	none	none	No	Approved	no
1596	J. Parker	De Luz Waimea	2024	6/13/2024 17:00	6/17/2024 17:00	CSO	CSO	Kevin Balog	188 HEB	De Luz	dump trailer		no	none	none	No	Approved	no
1597	J. Parker	De Luz Waimea	2024	6/13/2024 17:00	6/17/2024 17:00	CSO	CSO	Kevin Balog	059 WDA	De Luz	empty		no	none	none	No	Approved	no
1598	J. Parker	De Luz Waimea	2024	6/17/2024 17:00	6/21/2024 17:00	CSO	CSO	Kevin Balog	silver lowboy no tag	De Luz	empty		no	none	none	No	Approved	no
1599	J. Parker	De Luz Waimea	2024	6/17/2024 17:00	6/21/2024 17:00	CSO	CSO	Kevin Balog	temp license	De Luz	lowboy trailer		no	none	none	No	Approved	no
1601	J. Parker	Island Topsoil	2024	6/20/2024 7:00	6/24/2024 7:00	CSO	CSO	Jesse Derego	501 HEJ	Island Topsoil	lowboy trailer		no	none	none	No	Approved	no
1602	J. Parker	Island Topsoil	2024	6/20/2024 7:00	6/24/2024 7:00	CSO	CSO	Jesse Derego	402 MUJ	Island Topsoil	empty		no	none	none	No	Approved	yes
1603	J. Parker	De Luz Waimea	2024	6/24/2024 7:00	6/28/2024 7:00	CSO	CSO	Kevin Balog	300 HDV	De Luz	dump trailer		no	none	none	No	Approved	yes
1604	J. Parker	De Luz Waimea	2024	6/24/2024 7:00	6/28/2024 7:00	CSO	CSO	Kevin Balog	159 HYX	De Luz	empty		no	none	none	No	Approved	yes
1605	J. Parker	De Luz Waimea	2024	6/24/2024 7:00	6/28/2024 7:00	CSO	CSO	Kevin Balog	188 HEB	De Luz	lowboy trailer		no	none	none	No	Approved	yes
1606	J. Parker	De Luz Waimea	2024	6/24/2024 7:00	6/28/2024 7:00	CSO	CSO	Kevin Balog	silver lowboy no tag	De Luz	bin (empty)		no	none	none	No	Approved	yes
1607	J. Parker	Island Topsoil	2024	6/24/2024 17:00	6/28/2024 17:00	CSO	CSO	Jesse Derego	402 MUJ	Island Topsoil	empty		no	none	none	No	Approved	yes
1649	J. Parker	Island Topsoil	2024	6/24/2024 17:00	6/28/2024 17:00	CSO	CSO	Jesse Derego	501 HEJ	Island Topsoil	lowboy trailer		no	none	none	No	Approved	yes
1651	J. Parker	De Luz Waimea	2024	6/24/2024 17:00	6/28/2024 17:00	CSO	CSO	Kevin Balog	190 HEB	De Luz	dump trailer		no	none	none	No	Approved	yes
1652	J. Parker	De Luz Waimea	2024	6/24/2024 17:00	6/28/2024 17:00	CSO	CSO	Kevin Balog	silver roll-off bin (empty)	De Luz			no	none	none	No	Approved	yes

Cert. Number	Inspector	Inspection Location	Date/Time of Inspection
1112	J. Parker	Kona Trans	9/1/2022 15:30
1113	J. Parker	Kona Trans	9/7/2022 15:50
1114	J. Parker	Kona Trans	9/7/2022 15:55
1115	J. Parker	Conen's	10/12/2022 7:00
1116	J. Parker	CSO Office	3/22/2023 15:00
1117	J. Parker	Conen's Baseyard	8/1/2023 7:45
1118	J. Parker	Conen's Baseyard	8/1/2023 7:45
1119	J. Parker	CSO Office	8/15/2023 7:15
1120	J. Parker	Sunbelt Rentals	8/16/2023 7:45
1121	J. Parker	Sunbelt Rentals	8/16/2023 7:50
1122	J. Parker	Sunbelt Rentals	8/22/2023 7:55
1123	J. Parker	Sunbelt Rentals	8/22/2023 8:00
1124	J. Parker	Conen's Baseyard	8/31/2023 8:40
1125	J. Parker	Conen's Baseyard	8/31/2023 8:50
1126	J. Parker	Isemoto Baseyard	9/7/2023 14:46
1127	J. Parker	Isemoto Baseyard	9/7/2023 14:50
1128	J. Parker	Isemoto Baseyard	9/7/2023 15:00
1129	J. Parker	Isemoto Baseyard	9/7/2023 15:15
1130	J. Parker	Isemoto Baseyard	9/7/2023 16:00
1131	J. Parker	Isemoto Baseyard	9/7/2023 15:50
1132	J. Parker	Conen's Hilo	9/15/2023 8:40
1133	J. Parker	Conen's Hilo	9/15/2023 8:50
1134	J. Parker	Conen's Hilo	9/18/2023 8:25
1135	J. Parker	Conen's Hilo	9/18/2023 8:30
1136	J. Parker	Isemoto Baseyard	9/20/2023 13:26
1137	J. Parker	Isemoto Baseyard	9/20/2023 13:35
1138	J. Parker	Goodfellow Bros Waikoloa	9/21/2023 16:00
1139	J. Parker	Saddle Road - Hilo	9/26/2023 8:00
1140	J. Parker	Edwin De Luz Waimea	9/27/2023 16:30
1142	J. Parker	Edwin De Luz Waimea	10/2/2023 16:05
1143	J. Parker	Conen's	10/9/2023 7:35
1144	J. Parker	Conen's	10/9/2023 7:35
1145	J. Parker	Conen's	10/9/2023 7:45
1146	J. Parker	Conen's	10/9/2023 7:50
1147	J. Parker	BI Container sales	10/18/2023 8:20
1148	J. Parker	BI Container sales	10/18/2023 8:30
1149	J. Parker	Conen's	10/19/2023 8:05
1150	J. Parker	Conen's	10/19/2023 8:15
1019	J. Parker	Conen's Hilo	10/19/2023 8:20

Cert. Number	Inspector	Inspection Location	Date/Time of Inspection
1020	J. Parker	Conen's	10/19/2023 8:30
1021	J. Parker	Goodfellow Bros Waikoloa	11/20/2023 16:00
1022	J. Parker	Sunbelt Rentals	12/5/2023 7:45
1023	J. Parker	Conen's	12/7/2023 8:15
1024	J. Parker	Conen's	12/7/2023 8:20
1025	J. Parker	Conen's	12/7/2023 8:25
1026	J. Parker	Conen's	12/7/2023 8:30
1027	J. Parker	HELCO baseyard	2/26/2024 14:37
1028	J. Parker	HELCO baseyard	2/26/2024 14:40
1029	J. Parker	HELCO baseyard	2/26/2024 14:45
1030	J. Parker	HELCO baseyard	2/26/2024 14:50
1031	J. Parker	D&M Shop Hilo	4/1/2024 15:05
1032	J. Parker	D&M Shop Hilo	4/9/2024 9:00
1033	J. Parker	Goodfellow Bros	4/16/2024 16:00
1034	J. Parker	Goodfellow Bros	4/16/2024 16:10
1035	J. Parker	Goodfellow Bros	4/16/2024 15:55
1036	J. Parker	Goodfellow Bros	4/16/2024 15:50
1037	J. Parker	Goodfellow Bros	4/16/2024 16:00
1038	J. Parker	De Luz Waimea	4/22/2024 16:00
1039	J. Parker	De Luz Waimea	4/22/2024 16:00
1040	J. Parker	De Luz Waimea	4/22/2024 16:00
1041	J. Parker	De Luz Waimea	4/22/2024 16:00
1042	J. Parker	De Luz Waimea	4/22/2024 16:00
1043	J. Parker	De Luz Waimea	4/22/2024 16:00
1044	J. Parker	De Luz Waimea	4/22/2024 16:00
1045	J. Parker	De Luz Waimea	4/22/2024 16:00
1046	J. Parker	De Luz Waimea	4/24/2024 10:00
1047	J. Parker	De Luz Waimea	4/24/2024 10:00
1048	J. Parker	De Luz Waimea	4/24/2024 10:00
1049	J. Parker	De Luz Waimea	4/24/2024 10:00
1725	J. Parker	De Luz Waimea	4/24/2024 10:00
1726	J. Parker	De Luz Waimea	4/25/2024 16:00
1727	J. Parker	De Luz Waimea	4/25/2024 16:00
1641	J. Parker	De Luz Waimea	4/25/2024 16:00
1610	J. Parker	De Luz Waimea	4/25/2024 16:00
1609	J. Parker	De Luz Waimea	4/25/2024 16:00
1608	J. Parker	De Luz Waimea	4/25/2024 16:00
1611	J. Parker	De Luz Waimea	4/25/2024 16:00
1612	J. Parker	De Luz Waimea	4/25/2024 16:00

Cert. Number	Inspector	Inspection Location	Date/Time of Inspection
1613	J. Parker	Kenworth Hilo	4/26/2024 16:00
1614	J. Parker	Kenworth Hilo	4/26/2024 16:00
1615	J. Parker	De Luz Waimea	4/29/2024 15:30
1618	J. Parker	De Luz Waimea	4/29/2024 16:00
1621	J. Parker	De Luz Waimea	4/29/2024 16:00
1620	J. Parker	De Luz Waimea	4/29/2024 16:00
1619	J. Parker	De Luz Waimea	4/29/2024 16:00
1624	J. Parker	De Luz Waimea	4/29/2024 16:00
1625	J. Parker	De Luz Waimea	4/29/2024 16:00
1626	J. Parker	De Luz Waimea	4/29/2024 16:00
1623	J. Parker	De Luz Waimea	4/29/2024 16:00
1622	J. Parker	De Luz Waimea	4/29/2024 16:00
1617	J. Parker	De Luz Waimea	4/29/2024 16:00
1616	J. Parker	De Luz Waimea	4/29/2024 16:00
1628	J. Parker	De Luz Waimea	5/2/2024 16:30
1629	J. Parker	De Luz Waimea	5/2/2024 16:30
1631	J. Parker	De Luz Waimea	5/2/2024 16:30
1632	J. Parker	De Luz Waimea	5/2/2024 16:30
1634	J. Parker	De Luz Waimea	5/2/2024 16:30
1636	J. Parker	De Luz Waimea	5/2/2024 16:30
1627	J. Parker	De Luz Waimea	5/2/2024 16:30
1630	J. Parker	De Luz Waimea	5/2/2024 16:30
1633	J. Parker	De Luz Waimea	5/2/2024 16:30
1635	J. Parker	De Luz Waimea	5/2/2024 16:30
1637	J. Parker	De Luz Waimea	5/2/2024 16:30
1638	J. Parker	De Luz Waimea	5/2/2024 16:30
1639	J. Parker	De Luz Waimea	5/6/2024 16:00
1640	J. Parker	De Luz Waimea	5/6/2024 16:00
1642	J. Parker	De Luz Waimea	5/6/2024 16:00
1643	J. Parker	De Luz Waimea	5/6/2024 16:00
1644	J. Parker	De Luz Waimea	5/6/2024 16:00
1645	J. Parker	De Luz Waimea	5/6/2024 16:00
1646	J. Parker	De Luz Waimea	5/6/2024 16:00
1647	J. Parker	De Luz Waimea	5/6/2024 16:00
1648	J. Parker	De Luz Waimea	5/6/2024 16:00
1692	J. Parker	De Luz Waimea	5/6/2024 16:00
1693	J. Parker	De Luz Waimea	5/6/2024 16:00
1694	J. Parker	De Luz Waimea	5/6/2024 16:00
1695	J. Parker	De Luz Waimea	5/13/2024 16:00

Cert. Number	Inspector	Inspection Location	Date/Time of Inspection
1696	J. Parker	De Luz Waimea	5/13/2024 16:00
1697	J. Parker	De Luz Waimea	5/13/2024 16:00
1698	J. Parker	De Luz Waimea	5/13/2024 16:00
1699	J. Parker	De Luz Waimea	5/13/2024 16:00
1700	J. Parker	De Luz Waimea	5/13/2024 16:00
1701	J. Parker	De Luz Waimea	5/13/2024 16:00
1702	J. Parker	De Luz Waimea	5/13/2024 16:00
1703	J. Parker	De Luz Waimea	5/13/2024 16:00
1704	J. Parker	De Luz Waimea	5/13/2024 16:00
1705	J. Parker	De Luz Waimea	5/13/2024 16:00
1706	J. Parker	De Luz Waimea	5/16/2024 17:00
1707	J. Parker	De Luz Waimea	5/16/2024 17:00
1708	J. Parker	De Luz Waimea	5/16/2024 17:00
1709	J. Parker	De Luz Waimea	5/16/2024 17:00
1710	J. Parker	De Luz Waimea	5/16/2024 17:00
1711	J. Parker	De Luz Waimea	5/16/2024 17:00
1712	J. Parker	De Luz Waimea	5/16/2024 17:00
1713	J. Parker	De Luz Waimea	5/16/2024 17:00
1714	J. Parker	De Luz Waimea	5/16/2024 17:00
1715	J. Parker	De Luz Waimea	5/16/2024 17:00
1716	J. Parker	De Luz Waimea	5/16/2024 17:00
1717	J. Parker	De Luz Waimea	5/20/2024 17:00
1718	J. Parker	De Luz Waimea	5/20/2024 17:00
1719	J. Parker	De Luz Waimea	5/20/2024 17:00
1720	J. Parker	De Luz Waimea	5/20/2024 17:00
1721	J. Parker	De Luz Waimea	5/20/2024 17:00
1722	J. Parker	De Luz Waimea	5/20/2024 17:00
1723	J. Parker	De Luz Waimea	5/20/2024 17:00
1724	J. Parker	De Luz Waimea	5/20/2024 17:00
1728	J. Parker	De Luz Waimea	5/20/2024 17:00
1729	J. Parker	De Luz Waimea	5/20/2024 17:00
1730	J. Parker	De Luz Waimea	5/20/2024 17:00
1731	J. Parker	De Luz Waimea	5/23/2024 17:00
1732	J. Parker	De Luz Waimea	5/23/2024 17:00
1733	J. Parker	De Luz Waimea	5/23/2024 17:00
1734	J. Parker	De Luz Waimea	5/23/2024 17:00
1735	J. Parker	De Luz Waimea	5/23/2024 17:00
1736	J. Parker	De Luz Waimea	5/23/2024 17:00
1737	J. Parker	De Luz Waimea	5/23/2024 17:00

Cert. Number	Inspector	Inspection Location	Date/Time of Inspection
1738	J. Parker	De Luz Waimea	5/23/2024 17:00
1739	J. Parker	De Luz Waimea	5/23/2024 17:00
1740	J. Parker	De Luz Waimea	5/23/2024 17:00
1741	J. Parker	De Luz Waimea	5/24/2024 15:00
1742	J. Parker	De Luz Waimea	5/24/2024 15:00
1743	J. Parker	De Luz Waimea	5/24/2024 15:00
1744	J. Parker	De Luz Waimea	5/24/2024 15:00
1745	J. Parker	De Luz Waimea	5/24/2024 15:00
1746	J. Parker	De Luz Waimea	5/24/2024 15:00
1747	J. Parker	De Luz Waimea	5/24/2024 15:00
1748	J. Parker	De Luz Waimea	5/24/2024 15:00
1749	J. Parker	De Luz Waimea	5/28/2024 17:00
1750	J. Parker	De Luz Waimea	5/28/2024 17:00
1551	J. Parker	Goodfellow Bros	5/28/2024 7:00
1552	J. Parker	Goodfellow Bros	5/28/2024 7:00
1553	J. Parker	Goodfellow Bros	5/28/2024 7:00
1554	J. Parker	Goodfellow Bros	5/28/2024 7:00
1555	J. Parker	Goodfellow Bros	5/28/2024 7:00
1556	J. Parker	De Luz Waimea	5/28/2024 17:00
1557	J. Parker	De Luz Waimea	5/28/2024 17:00
1558	J. Parker	De Luz Waimea	5/28/2024 17:00
1559	J. Parker	De Luz Waimea	5/28/2024 17:00
1560	J. Parker	De Luz Waimea	5/28/2024 17:00
1561	J. Parker	De Luz Waimea	5/28/2024 17:00
1562	J. Parker	De Luz Waimea	5/28/2024 17:00
1563	J. Parker	De Luz Waimea	5/28/2024 17:00
1564	J. Parker	De Luz Waimea	5/30/2024 16:00
1565	J. Parker	De Luz Waimea	5/30/2024 16:00
1566	J. Parker	De Luz Waimea	5/30/2024 16:00
1567	J. Parker	De Luz Waimea	5/30/2024 16:00
1568	J. Parker	De Luz Waimea	6/3/2024 17:00
1569	J. Parker	De Luz Waimea	6/3/2024 17:00
1570	J. Parker	De Luz Waimea	6/3/2024 17:00
1571	J. Parker	De Luz Waimea	6/3/2024 17:00
1572	J. Parker	De Luz Waimea	6/3/2024 17:00
1573	J. Parker	De Luz Waimea	6/3/2024 17:00
1574	J. Parker	De Luz Waimea	6/3/2024 17:00
1575	J. Parker	De Luz Waimea	6/3/2024 17:00
1576	J. Parker	De Luz Waimea	6/3/2024 17:00

Cert. Number	Inspector	Inspection Location	Date/Time of Inspection
1577	J. Parker	De Luz Waimea	6/3/2024 17:00
1578	J. Parker	De Luz Waimea	6/6/2024 17:00
1579	J. Parker	De Luz Waimea	6/6/2024 17:00
1580	J. Parker	De Luz Waimea	6/6/2024 17:00
1581	J. Parker	De Luz Waimea	6/6/2024 17:00
1582	J. Parker	De Luz Waimea	6/6/2024 17:00
1583	J. Parker	De Luz Waimea	6/6/2024 17:00
1584	J. Parker	De Luz Waimea	6/10/2024 17:00
1585	J. Parker	De Luz Waimea	6/10/2024 17:00
1586	J. Parker	De Luz Waimea	6/10/2024 17:00
1587	J. Parker	De Luz Waimea	6/10/2024 17:00
1588	J. Parker	De Luz Waimea	6/10/2024 17:00
1589	J. Parker	De Luz Waimea	6/10/2024 17:00
1590	J. Parker	De Luz Waimea	6/10/2024 17:00
1591	J. Parker	De Luz Waimea	6/10/2024 17:00
1592	J. Parker	De Luz Waimea	6/13/2024 17:00
1593	J. Parker	De Luz Waimea	6/13/2024 17:00
1594	J. Parker	De Luz Waimea	6/13/2024 17:00
1595	J. Parker	De Luz Waimea	6/13/2024 17:00
1596	J. Parker	De Luz Waimea	6/13/2024 17:00
1597	J. Parker	De Luz Waimea	6/13/2024 17:00
1598	J. Parker	De Luz Waimea	6/17/2024 17:00
1599	J. Parker	De Luz Waimea	6/17/2024 17:00
1601	J. Parker	Island Topsoil	6/20/2024 7:00
1602	J. Parker	Island Topsoil	6/20/2024 7:00
1603	J. Parker	De Luz Waimea	6/24/2024 7:00
1604	J. Parker	De Luz Waimea	6/24/2024 7:00
1605	J. Parker	De Luz Waimea	6/24/2024 7:00
1606	J. Parker	De Luz Waimea	6/24/2024 7:00
1607	J. Parker	Island Topsoil	6/24/2024 17:00
1649	J. Parker	Island Topsoil	6/24/2024 17:00
1651	J. Parker	De Luz Waimea	6/24/2024 17:00
1652	J. Parker	De Luz Waimea	6/24/2024 17:00

Appendix B – Additional Photo Documentation

Dried Mud in Excavator Tracks Upon Arrival to the Site

Crew Scrapes Dried Mud on Plastic Sheeting for Proper Disposal

Excavator Oil Leak Clean Up in Progress on 4/29/2024

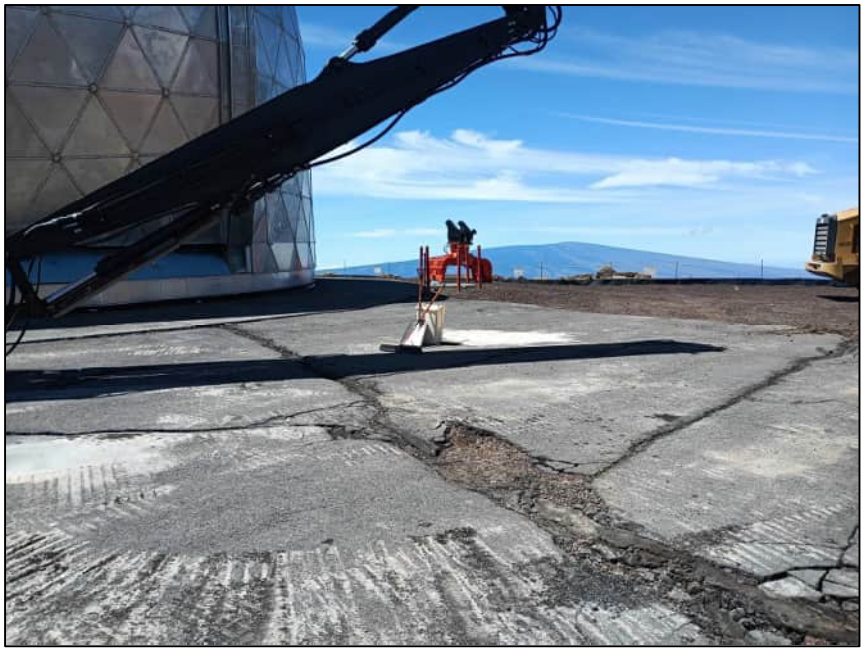
Containerizing and Disposal of Clean Up Material on 4/29/2024

Absorbent Socks from Spill Kit Deployed on 4/30/2024 to Clean up Oil Spill

Applying Absorbent Pads to Spill on 4/30/2024

Crew Cleans Up Used Absorbent Material on 4/30/2024

Additional View of Clean Up Effort



General View of Ground Condition Following Clean Up

Staining Remains Post-Clean Up

Crack in Pavement Creates Pathway for Oil to Impact Soil Below