



Oregon

Tina Kotek, Governor

Department of Environmental Quality
Western Region Eugene Office
165 East 7th Avenue, Suite 100
Eugene, OR 97401
(541) 686-7838
FAX (541) 686-7551
TTY 711

CERTIFIED MAIL
Return Receipt Requested
9589 0710 5270 1465 0747 70

Nov. 25, 2024

Kenneth Pappas
PCS Blasting, LLC
7611 Jackson Hill Road SE
Salem, OR 97306

RE: Warning Letter with Opportunity to Correct
2024-WLOTC-9646
PCS Blasting, LLC
Lane County

Dear Mr. Pappas:

On September 27, 2024, the Oregon Department of Environmental Quality conducted an unannounced hazardous waste inspection at PCS Blasting, LLC located at 7611 Jackson Hill Road SE in Salem, Oregon to assess compliance with applicable state and federal regulations.

This letter is to inform you of a violation found during this compliance inspection so you can correct it. Based on the results of this inspection, DEQ concluded PCS Blasting is responsible for the violation of Oregon environmental law noted below.

Class I violations are the most serious violations, while Class III violations are the least serious. The hazardous waste and universal waste Code of Federal Regulations referenced in this letter or may apply to generators are as adopted in Oregon Administrative Rules 340-100-0002 through July 30, 2020 as modified by OAR 340 Divisions 100 through 106, 109, 111, 113, 120, 134 and 142. References to the 40 CFR Part 279 federal used oil regulations that may apply to generators of used oil are through July 30, 2003 as modified by OAR 340 Division 111.

Violation

Based on observations and information collected during the inspection, PCS Blasting's hazardous waste generator status is currently unknown until PCS Blasting performs hazardous waste determinations of its typical waste streams that contain paint coatings and uses this information to document its status following the guidance provided in 40 CFR 262.13.

PCS Blasting failed to conduct a complete and accurate hazardous waste determination in violation of Oregon Administrative Rules 340-102-0011. This is a Class I Violation as identified in OAR 340-012-0068(1)(a). DEQ inspected the PCS Blasting facility located at 7611 Jackson Hill Road SE and observed spent blast material on an impervious surface where PCS Blasting conducts its blasting operations. DEQ asked Mr. Pappas the owner of PCS Blasting if he performed a hazardous waste determination of the spent blast slurry. Mr. Pappas replied that he did not conduct a hazardous waste determination. A hazardous waste determination is a critical first step in determining how to properly manage a waste stream if this waste stream is a

hazardous waste. For more detailed information regarding this violation, please refer to the enclosed inspection report.

Corrective Action

By January 17, 2025, please provide Chris Bayham via chris.bayham@deq.oregon.gov a plan for DEQ approval that includes a schedule for performing a hazardous waste determinations during a calendar month on spent blast slurry generated during the removal of paint from surfaces such as an autobody, brick and wood surfaces with a paint coating, marine maintenance involving removal of a paint coating, or any surface having where PCS Blasting removes a paint coating. Once the plan with a schedule is approved, please provide Chris Bayham – via the email noted above – the result(s) of your hazardous waste determination(s) and your determination of your hazardous waste generator status using the guidance in [40 CFR 262.13](#) in accordance with the schedule in your plan. Please contact Chris Bayham if you need to adjust your plan's schedule during its implementation.

Recommendation

In the enclosed amended inspection report, DEQ provides information on a disposal service for very small quantity generators of hazardous waste. Additionally, DEQ provides information in the enclosed report information on the episodic generation rules for very small quantity and small quantity generators of hazardous waste to assist with reducing the cost of managing hazardous waste by operating, when appropriate, under more flexible requirements.

In summary, if the violation cited in this letter remains uncorrected or should you repeat any of this violation, DEQ may refer this violation to DEQ's Office of Compliance and Enforcement for formal enforcement action including possible assessment of a civil penalty or a department order. This letter is not a final agency action. If you believe any of the facts in this warning letter are in error, you may provide information to me at chris.bayham@deq.oregon.gov or 541-687-7356. DEQ will consider new information you submit and take appropriate action.

DEQ endeavors to assist you in your compliance efforts. If you have any questions about the content of this letter, please feel free to contact me using the information provided above.

Sincerely,

Chris Bayham

Chris Bayham
Hazardous Waste Compliance Inspector
Western Region

Enclosure: Inspection Report and Photolog

cc: Ken Pappas, PCS Blasting, LLC - kenPappas22@gmail.com
Denise Miller, Oregon DEQ



Oregon

Tina Koteck, Governor

Department of Environmental Quality

Western Region Eugene Office

165 East 7th Avenue, Suite 100

Eugene, OR 97401

(541) 686-7838

FAX (541) 686-7551

TTY 711

December 9, 2024

Kenneth Pappas
PCS Blasting, LLC
7611 Jackson Hill Road SE
Salem, OR 97306

Re: Warning Letter with Opportunity to Correct
2024-WLOTC-9646
PCS Blasting, LLC
Lane County

Dear Mr. Pappas:

The Department of Environmental Quality, DEQ, issued PCS Blasting, LLC a warning letter with opportunity to correct on November 25, 2024. This warning letter requested that PCS Blasting submit a schedule for performing a hazardous waste determination during a calendar month on the spent blast slurry from surfaces that it processes during its business operations.

PCS Blasting informed DEQ that its requests for blasting services are variable from month to month and types of surfaces blasted are variable. Moreover, prior to DEQ sending out the warning letter, PCS Blasting collected samples on November 22, 2024 and conducted testing on a spent blast slurry sample from a 1960's vehicle and the dried spent blast material from past activities. The test results are as follows:

TCLP Results vs. RCRA Hazardous Waste Threshold			
RCRA 8 Metal	Rolls Royce (mg/L)	General (mg/L)	RCRA HW Threshold (mg/L)
Arsenic	ND (0.00500)	ND (0.00500)	5.0
Barium	2.84	2.87	100.0
Cadmium	0.00826	0.0380	1.0
Chromium	0.160	0.0378	5.0
Lead	1.54	2.11	5.0
Mercury	ND (0.000500)	ND (0.000500)	0.2
Selenium	ND (0.0500)	ND (0.0500)	1.0
Silver	ND (0.00500)	ND (0.00500)	5.0

ND = non-detect above the respective method detection limit (MDL)

In previous communication, DEQ informed PCS Blasting that other coated surfaces may also require testing. In this letter, I provide an example of a coated surface that may not be covered by the findings from the above hazardous waste determination that PCS Blasting recently conducted.

For example, pressure treated wood may contain chemicals or heavy metals that add to the heavy metal content in paint coatings to make spent blast slurry a hazardous waste. For example, wood waste from removing paint from the surface of pressure treated wood may contain additional arsenic and chromium if the wood was treated with chromated copper

arsenate. If the wood was treated with pentachlorophenol, the spent blast slurry will contain 2,4,5-trichlorophenol and/or 2,4,6-trichlorophenol. When in waste at 400 parts per million (mg/L), 2,4,5-trichlorophenol would make blast material a D041 hazardous waste and subject to hazardous waste regulations. When in waste at 2.0 parts per million (mg/L), 2,4,6-trichlorophenol would make blast material a D042 hazardous waste and subject to hazardous waste regulations.

DEQ has reviewed PCS Blasting's response to the warning letter and finds this response addresses the intent of the warning letter. DEQ appreciates PCS Blasting's response and looks forward to PCS Blasting's future compliance with hazardous waste requirements.

If you have any questions, please feel free to contact me in writing or by phone at 541-687-7356 or by email at chris.bayham@deq.oregon.gov. If you generate any hazardous waste such as spent solvent that is an ignitable hazardous waste during your business operations, please use the [Salem-Keizer Transfer Station's Hazardous Waste Program](#) for small businesses for your hazardous waste disposal needs.

Sincerely,

Chris Bayham

Chris Bayham
Hazardous Waste Compliance Inspector
Western Region

cc: Ken Pappas, PCS Blasting, LLC - kenPappas22@gmail.com
Denise Miller, DEQ



Figure 1: Aerial photo of the property where hydroblasting of automotive paint, powder coating, marine equipment, and other surfaces occur at 7611 Jackson Hill Road SE Salem, Oregon. The red arrow shows the spent blasting material after the water has evaporated from the blast slurry after surface removal service provided by PCS Blasting, LLC using its Dustless Blasting equipment shown by the yellow arrow. Source: Aerial photo from CONNECTExplorer obtained on November 15, 2024.

Inspection

Introduction

The Department of Environmental Quality conducted an unannounced inspection of PCS Blasting, LLC (PCS Blasting) located at 7611 Jackson Hill Road SE Salem, Oregon on September 27, 2024 to determine compliance with the Oregon Revised Statutes and the Oregon Administrative Rules standards for managing hazardous waste. This inspection was in response to a complaint (2024-02073) regarding a "soda-blasting business" that was not using containment system around their blasting operations while blasting a 1960s vehicle that could contain paint with heavy metals. Since the spent blast material may be a hazardous waste (HW) due to heavy metals giving this waste a toxicity characteristic, I scheduled an unannounced inspection of PCS Blasting.

The U.S. Environmental Protection Agency authorizes DEQ to regulate hazardous waste management in Oregon. The purpose of these laws and rules is to prevent releases of hazardous waste onto the land, into the air, or to surface or ground water, and to ensure proper handling and cleanup if releases occur. The hazardous waste and universal waste Code of Federal Regulations referenced in this report, as adopted in OAR 340-100-0002, are through July 30, 2020 as modified by OAR 340 Divisions 100 through 106, 109, 111, 113, 120, 134 and 142. References to the 40 CFR Part 279 federal used oil regulations are as enacted through July 30, 2003 as modified by OAR 340 Division 111.

Pre-Inspection Interview

**OREGON DEPARTMENT OF ENVIRONMENTAL QUALITY**

SITE: PCS Blasting, LLC

DATE: September 27, 2024

INSPECTION REPORT AND PHOTOLOGDEQ INSPECTOR: *Chris Bayham*

Chris Bayham

I arrived at PCS Blasting on 9/27/2024 and walked towards gated driveway to Mr. Pappas' property. Mr. Pappas was outside of his building near a canopy on a paved driveway where blasting is performed by Mr. Pappas and spent blasting material was observed on this driveway (**Figure 1**). I introduced myself as a DEQ inspector and Mr. Pappas' property who graciously open the gate to allow me to enter his property. I explained to Mr. Pappas that I was responding to a complaint regarding the blasting of paint from an older vehicle. I informed Mr. Pappas that the pigments in paint can use heavy metals that can give spent blast material a toxicity characteristic potentially making this spent blast material a hazardous waste (HW). I explained to Mr. Pappas that, under state and federal rules, a HW must be managed in specific ways depending on the [quantity generated during a month](#).

Facility Inspection

Mr. Pappas stressed that his blasting method minimizes the production of dust given that the blasting material is mixed with water to create a slurry. My review of Mr. Pappas' website and manufacturer of his blasting equipment (i.e., Dustless Blasting) for his business confirms his this (**Exhibits 1 and 2**), and the paved area under his canopy where he recently performed blasting work showed a wetted paved surface under spent blast material. Mr. Pappas informed me that the water in the blast slurry drains to the edge of the paved area into the grass adjacent to this area. Mr. Pappas also informed me that he deposits the spent blast material from the paved blasting area on the crushed aggregate driveway just north of his blasting area.

I asked Mr. Pappas if he performed a [HW determination](#) on the spent blast material. I explained to Mr. Pappas that this determination can be performed using knowledge of process and/or lab testing. He indicated that he had not done a determination and emphasized that his blast material does that he used does not contain heavy metals. However, I emphasized to Mr. Pappas that the surfaces he removes such as paint may have heavy metals in it. I informed him that I have researched pigments and dyes that that dyes and pigment can sometimes use heavy metals for another site I inspected. I told Mr. Pappas that, when I return to my office, I would email him background information on paint pigments and the potential for these to use heavy metals ([follow-up 9/27/2024 email regarding heavy metals in paint](#)). The heavy metals lead and cadmium have been widely used by the coating industry and could make spent blasting material a HW (see [example 1](#) and [example 2](#)). Because of this concern, I stressed to Mr. Pappas that a HW determination is needed, and that lab testing is likely needed if his blasting industry cannot provide well-documented and well-designed studies showing the automotive paint removal using blasting does not generate a spent blasting slurry that is a not a HW. Mr. Pappas assured me that he would do the HW determination to evaluate his spent blast material.

Post-Inspection

In an [email exchange](#) in response to my 9/27/2024 email referenced above, Mr. Pappas informed me that he was working with Green Environmental Management to do the HW determinations on his blasting waste streams

Recommendation

If information regarding a surface coating is unknown to support a [knowledge of process HW determination](#) prior to blasting, I recommend that a sample of a surface coating be collected prior to blasting and lab tested for the presence of the [8 Resource Conservation and Recovery Act \(RCRA\) metals](#). If this shows that the levels of these metals are below thresholds in Table 1 in [40 CFR 261.24\(b\)](#), you can manage your spent blasting material as a solid waste and dispose of this blast material at a municipal landfill. However, if this coating sample is above the threshold in Table 1, there is a potential for your spent blast material to be a HW depending on the concentration of these metals in your spent blast slurry. If the sample of the coating shows a potential to have a toxicity characteristic, you will need to ensure that your spent blast slurry is captured and a sample of the spent blast slurry is collected to use in performing a [HW determination](#). If the amount of spent blast slurry is a HW and the rate of generation of this HW is below 220 pound per month, this waste can be discarded at the municipal landfill serving



Marion County rather than at a permitted treatment storage and disposal facility for HW. The Salem/Keizer Transfer Station has a webpage that provided a hyperlink for Business Hazardous Waste which includes a pre-registration and application process for disposing this HW.

Violation

Given the amount of spent blast material generated prior to my inspection, the violation below warrants a warning letter with opportunity to correct (WLOTC). This WLOTC is forthcoming.

Failure to conduct a complete and accurate HW determination

- Rule Violated: Oregon Administrative Rules (OAR) 340-102-0011.
- Class of Violation: Class I Violation as indicated in OAR 340-012-0068(1)(a).
- Evidence for Violation: See the Facility Inspection of this Report.

Exhibits

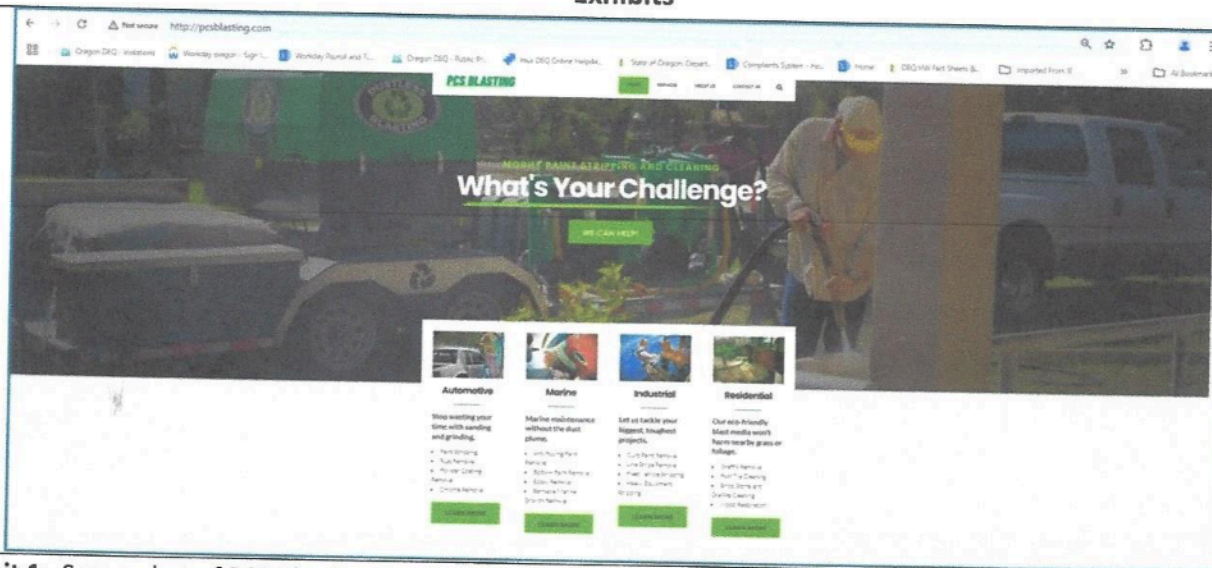


Exhibit 1: Screenshot of PCS Blasting LLC Website

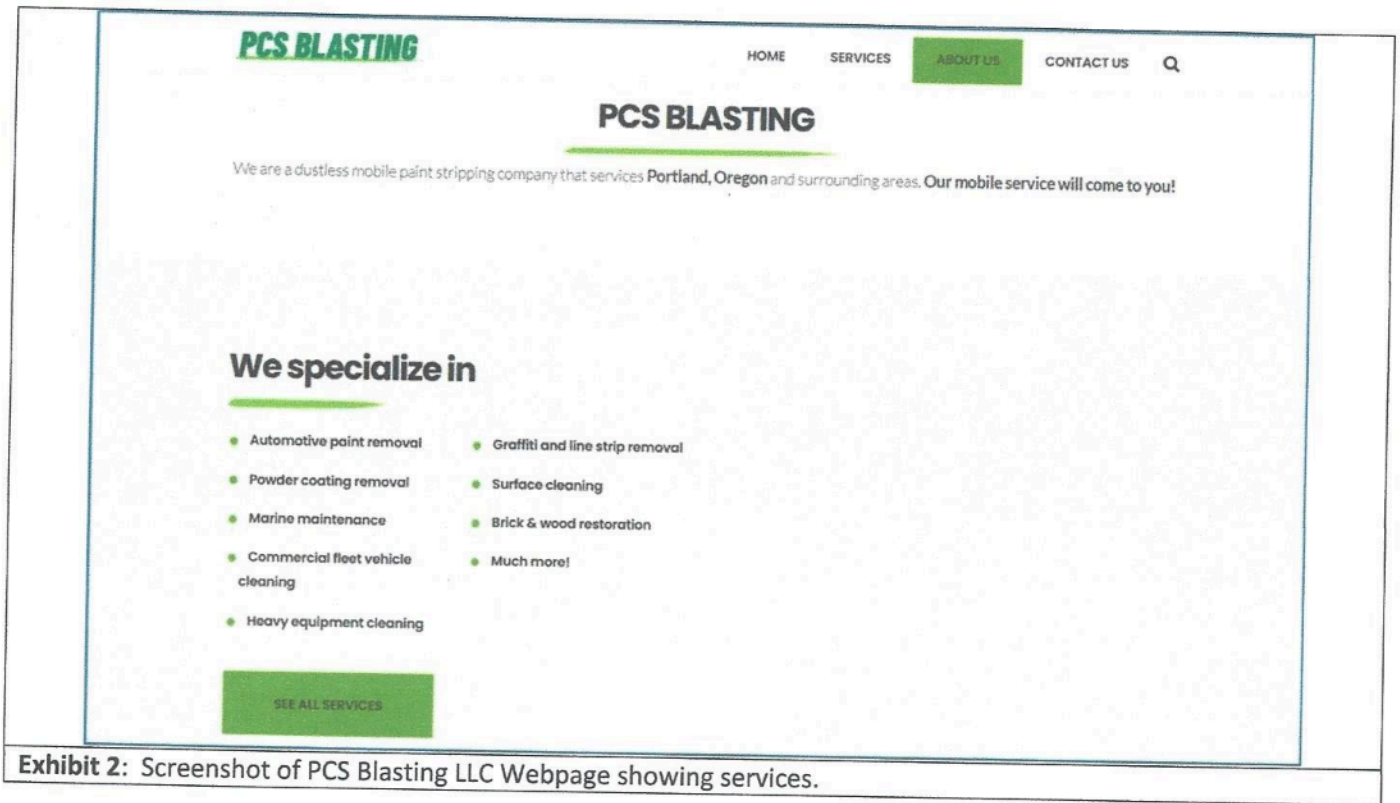


Exhibit 2: Screenshot of PCS Blasting LLC Webpage showing services.



SDS Document

Safety Data Sheet

GlassAction®

1. Product Identification

Product Name: GlassAction®, Crushed Glass Abrasive
Product Description: Abrasive media manufactured from recycled glass
Product Identifier: Soda-Lime Glass, Glass Oxide
Manufacturer: Environmental Abrasives Warehouse LLC
4301 Federal Way
Boise, ID 83715
(208) 947-1351
Emergency Phone: CHEMTREC
800-424-9300

2. Hazard Identification

Emergency Overview: Non-flammable white solid or powder. Abrasive particulate may cause minor eye and skin irritation. Inhalation of high concentrations may cause transient upper respiratory irritation. Product is noncombustible and stable.

Primary Route(s) of Entry: **Inhalation:** Yes, **Ingestion:** No, **Skin:** No, **Other:** No

Potential Health Effects

Acute:

Eye: Dusts may cause minor irritation, may scratch the cornea or cause other mechanical injury to the eye.

Skin: May cause minor irritation. Not absorbed through skin.

Ingestion: Relatively non-toxic. Ingestion is not anticipated under normal working conditions.

Inhalation: Product will act as a nuisance dust. Inhalation of high concentrations of dust may cause coughing and mild, transitory respiratory irritation. May cause slight to moderate irritation of mucous membranes.

Chronic:

Inhalation: Long-term dust inhalation in excess of the PEL or TLV may decrease the ability of the lungs to clear particulate matter which may cause shortness of breath and increased susceptibility to respiratory disease.

Signs And Symptoms: Irritation, redness, pain, tear formation, blurred vision, light sensitivity, shortness of breath, decreased chest expansion, dry cough, and fatigue.

Medical Conditions Aggravated By Exposure: Repeated inhalation of dusts over time may aggravate pre-existing respiratory disease. Precautions should be taken to alleviate the pre-existing medical condition.

Target Organs: Lungs

Carcinogenicity: **NTP:** No, **IARC:** No, **OSHA:** No

Glass abrasive is not classified as a hazardous material by the criteria of the OSHA Hazard Communication Standard, Title 29, Code of Federal Regulations, Section 1910.1200, Hazard Communication. Nuisance Dust concern
Contains no free (or crystalline) silica; all components are amorphous/non-crystalline

3. Composition/Information on Ingredients

Common Name	Crushed Glass	Typically	
Synonyms	Recycled Glass, Soda-Lime Dioxide Glass	Silicon Dioxide (fused) SiO₂	72%
CAS Number	65997-17-3	Sodium Oxide - Na₂O	15%
Color/Appearance	Brownish	Soda Ash-CaO	10%
Odor	Odorless	Other	Trace

4. First Aid Information

- **Ingestion:** Do not induce vomiting.
- **Inhalation:** Remove to fresh air. If symptoms persist, obtain medical attention.
- **Skin Contact:** Soak in warm water.
- **Eye Contact:** Flush with water.

5. Fire Fighting Measures

- **Flash Point:** N/A



SDS Document

Safety Data Sheet

- **Flammable Properties:** Material will not burn. Use media that is appropriate for fighting surrounding fire.
- **Clothing:** Wear appropriate protective clothing.
- **Respirators:** Wear a NIOSH-approved (or equivalent) respirator.



SDS Document

Safety Data Sheet

6. Accidental Release Measures

Vacuum or sweep up material and place in a disposal container. Do not allow material to enter sewer or waterways. This material is not defined as hazardous under 40 CFR 261. Disposal in a landfill in accordance with all applicable federal, state, and local laws or regulations is recommended.

7. Handling and Storage

- **Handling**
Minimize dust generation and accumulation. Use with adequate ventilation, and avoid breathing dusts.
- **Storage**
Store in a dry place.

8. Exposure Controls and Personal Protection

- **VENTILATION AND ENGINEERING CONTROLS:** Use with adequate ventilation. Local exhaust ventilation is preferred, and should be designed by a professional industrial hygienist.
- **RESPIRATORY PROTECTION:** In enclosed spaces maintain oxygen levels above 19.5%. Use supplied air respiratory protection if oxygen levels are below 19.5%. If respiratory protection is required, follow the requirements of the Federal OSHA Respiratory Protection Standard (29 CFR 1910.134) or equivalent State standards.
- **EYE PROTECTION:** Splash goggles or safety glasses are recommended.
- **HAND PROTECTION:** Wear any polymer gloves resistant to tears if prolonged exposure to powder is expected.
- **BODY PROTECTION:** Use body protection appropriate for task.

9. Physical and Chemical Properties

CAS Number	65997-17-3	Physical State	Grain or Powder
Color/Appearance	Brownish	Specific Gravity	2.45 – 2.55 g/cm ³
pH	NA	Max Use Temperature	<680 °C
Solubility	Negligible	Melting Point	680 °C
Percent Volatile	0 %	Molecular Formula	Soda-Lime Glass

10. Stability and Reactivity

Material is stable. No known conditions causing instability. There are no known incompatible materials.

11. Toxicological Information

Poses little or no immediate hazard. This material is stable.

12. Ecological Information

Poses little or no immediate hazard. This material is stable.

13. Disposal Considerations

This material, if discarded, is not defined as hazardous under 40 CFR 261. Disposal in a landfill in accordance with applicable federal, state, and local laws or regulations is recommended.

14. Transportation Information

No DOT labels are required for this material, and no DOT Hazard I.D. Number has been assigned, and no DOT shipping restrictions apply.

15. Regulatory Information

Judgments as to the suitability of the information herein are for purchaser's purposes and are necessarily purchaser's responsibility. Although reasonable care has been taken in the preparation of such information, ENVIRONMENTAL ABRASIVES makes no representations, and assumes no responsibility as to the accuracy or suitability of such information for application to purchasers intended purposes or for consequences of its use.

16. Other Information

Reviewed As of 01/04/2021

December 5, 2024

Ken Pappas
7611 Jackson Hill Road SE
Salem, Oregon 97306

HAZARDOUS WASTE DETERMINATION – 7611 JACKSON HILL ROAD SE, SALEM, OREGON 97306

Valued Client,

Green Environmental Management (GEM) has completed this Hazardous Waste Determination in association with spent blasting material derived from abrasive blasting operations at the subject property noted above in response to a request from the Oregon Department of Environmental Quality (DEQ) on October 2, 2024. The purpose of this evaluation was to determine if spent blasting media contains Resource Conservation and Recover Act (RCRA) 8 metals at a total concentration above RCRA Hazardous Waste thresholds.

Site Activities

Per information provided by you, abrasive blasting is conducted at the subject property to strip the paint from vintage cars in preparation for fresh paint coating. The abrasive blasting media utilized for this process is glass beads. Accordingly, the potential metal content in the spent blasting media is the result of metals potentially present within the vintage paints used on the cars. Glass bead blasting media may also contain metals in some cases, notably lead and arsenic.

Given the potential source of contamination from your waste stream (i.e., paint surface coatings and glass beads), the DEQ agreed that the laboratory analysis of the spent media could be limited to the total metal content (RCRA 8 metals).

Sample Collection and Analytical Results

A total of two samples were collected for this evaluation as follows:

1. Spent blasting media accumulated from abrasive blasting of a 1964 Rolls Royce; and
2. Spent blasting media accumulated from abrasive blasting of several vintage cars.

The two respective samples were collected into their own glass jars, which were labeled "1964 Rolls Royce" and "General Spent Blasting Material", respectively. The samples were subsequently delivered to Specialty Analytical in Clackamas, Oregon under Chain of Custody on November 22, 2024. The samples were analyzed for total metal content (RCRA 8 metals) via method 1311, more commonly referred to as the Toxicity Characteristic Leaching Procedure (TCLP). The results of the analysis are summarized in milligrams per liter (mg/L) within the table below. For brevity, the term "Rolls Royce" in the table refers to the analytical results of the sample collected from the spent blasting media accumulated from abrasive blasting of a 1964 Rolls Royce, and the term "General" in the table refers to the analytical results of the sample collected from the Spent blasting media accumulated from abrasive blasting of several vintage cars

TCLP Results vs. RCRA Hazardous Waste Threshold			
RCRA 8 Metal	Rolls Royce (mg/L)	General (mg/L)	RCRA HW Threshold (mg/L)
Arsenic	ND (0.00500)	ND (0.00500)	5.0
Barium	2.84	2.87	100.0
Cadmium	0.00826	0.0380	1.0
Chromium	0.160	0.0378	5.0
Lead	1.54	2.11	5.0
Mercury	ND (0.000500)	ND (0.000500)	0.2
Selenium	ND (0.0500)	ND (0.0500)	1.0
Silver	ND (0.00500)	ND (0.00500)	5.0

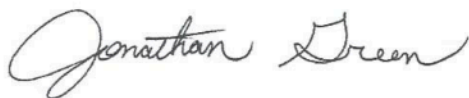
ND = non-detect above the respective method detection limit (MDL)

Findings and Conclusions

As shown within the analytical summary table above, the samples did not contain any of the RCRA 8 metals at a concentration high enough to be considered hazardous waste under RCRA law. As such, the spent blasting media from the abrasive blasting of vintage cars at the subject property is not hazardous and no special handling of the spent media is required.

If you have any questions, or if we can be of further service, please contact me at jgreen@green-em.com.

Sincerely,
Green Environmental Management



Jonathan Green
CEO, REPA



Enclosed: Laboratory Analytical Report

Specialty Analytical

9011 SE Jannsen Rd
Clackamas, OR 97015
TEL: (503) 607-1331

Website: www.specialtyanalytical.com

December 03, 2024

Ken Pappas
Ken Pappas
7611 Jackson Hill Road
Salem, OR 97306
TEL: (971) 599-0757
FAX:

RE:

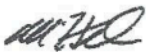
Order No.: 2411272

Dear Ken Pappas:

There were no problems with the analysis and all data for associated QC met EPA or laboratory specifications, except where noted in the Case Narrative, or as qualified with flags. Results apply only to the samples analyzed. Without approval of the laboratory, the reproduction of this report is only permitted in its entirety.

If you have any questions regarding these tests, please feel free to call.

Sincerely,



Marty French
Lab Director

Specialty Analytical Analytical Report

9011 SE Jannsen Rd
Clackamas, OR 97015
TEL: (503) 607-1331

Website: www.specialtyanalytical.com

(Consolidated-ORELAP)

WO#: 2411272

Date Reported: 12/3/2024

CLIENT: Ken Pappas

Collection Date: 11/14/2024 2:00:00 PM

Project:

Lab ID: 2411272-001

Matrix: SOLID

Client Sample ID 1964 Rolls Royce

Analyses	Result	RL	Qual	Units	DF	Date Analyze	ORELAP Status
TCLP METALS							
ICP/MS METALS-TCLP LEACHED					E1311/6020	SW3010A	Analyst: AC
Arsenic, TCLP	ND	0.00500		mg/L	10	11/26/24 15:15	
Barium, TCLP	2.84	0.0500		mg/L	10	11/26/24 15:15	
Cadmium, TCLP	0.00826	0.00500		mg/L	10	11/26/24 15:15	
Chromium, TCLP	0.160	0.00500		mg/L	10	11/26/24 15:15	
Lead, TCLP	1.54	0.00500		mg/L	10	11/26/24 15:15	
Selenium, TCLP	ND	0.0500		mg/L	10	11/26/24 15:15	
Silver, TCLP	ND	0.00500		mg/L	10	11/26/24 15:15	
TCLP METALS							
CVAF MERCURY-TCLP LEACHED					1311/7470	E245.2	Analyst: AC
Mercury	ND	0.000500		mg/L	1	11/27/24 11:34	

QUALIFIERS

H Holding times for preparation or analysis exceeded
S Spike Recovery outside accepted recovery limits

R RPD outside accepted recovery limits

Specialty Analytical Analytical Report

9011 SE Jannsen Rd
Clackamas, OR 97015
TEL: (503) 607-1331

Website: www.specialtyanalytical.com

(Consolidated-ORELAP)

WO#: 2411272

Date Reported: 12/3/2024

CLIENT: Ken Pappas

Collection Date: 11/21/2024 1:00:00 PM

Project:

Lab ID: 2411272-002

Matrix: SOLID

Client Sample ID General Spent Blast Material

Analyses	Result	RL	Qual	Units	DF	Date Analyze	ORELAP Status
TCLP METALS							
ICP/MS METALS-TCLP LEACHED					E1311/6020	SW3010A	Analyst: AC
Arsenic, TCLP	ND	0.00500		mg/L	10	11/26/24 15:18	
Barium, TCLP	2.87	0.0500		mg/L	10	11/26/24 15:18	
Cadmium, TCLP	0.0380	0.00500		mg/L	10	11/26/24 15:18	
Chromium, TCLP	0.0378	0.00500		mg/L	10	11/26/24 15:18	
Lead, TCLP	2.11	0.00500		mg/L	10	11/26/24 15:18	
Selenium, TCLP	ND	0.0500		mg/L	10	11/26/24 15:18	
Silver, TCLP	ND	0.00500		mg/L	10	11/26/24 15:18	
TCLP METALS							
CVAF MERCURY-TCLP LEACHED					1311/7470	E245.2	Analyst: AC
Mercury	ND	0.000500		mg/L	1	11/27/24 11:36	

QUALIFIERS

H Holding times for preparation or analysis exceeded
S Spike Recovery outside accepted recovery limits

R RPD outside accepted recovery limits

QC SUMMARY REPORT

Specialty Analytical

WO#: 2411272
12/3/2024

Client: Ken Pappas

Project:

TestCode: 6020_TCLP

Sample ID: ICV	SampType: ICV	TestCode: 6020_TCLP	Units: mg/L	Prep Date:	RunNo: 56602						
Client ID: ICV	Batch ID: 24948	TestNo: E1311/6020	SW3010A	Analysis Date: 11/26/2024	SeqNo: 735655						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic, TCLP	0.0485	0.000100	0.0500	0	97.1	90	110				
Barium, TCLP	0.0495	0.00100	0.0500	0	98.9	90	110				
Cadmium, TCLP	0.0506	0.000100	0.0500	0	101	90	110				
Chromium, TCLP	0.0496	0.000100	0.0500	0	99.1	90	110				
Lead, TCLP	0.0497	0.000100	0.0500	0	99.4	90	110				
Selenium, TCLP	0.0502	0.00100	0.0500	0	100	90	110				
Silver, TCLP	0.0528	0.000100	0.0500	0	106	90	110				

Sample ID: CCB	SampType: CCB	TestCode: 6020_TCLP	Units: mg/L	Prep Date:	RunNo: 56602						
Client ID: CCB	Batch ID: 24948	TestNo: E1311/6020	SW3010A	Analysis Date: 11/26/2024	SeqNo: 735658						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic, TCLP	ND	0.000100									
Barium, TCLP	ND	0.00100									
Cadmium, TCLP	ND	0.000100									
Chromium, TCLP	ND	0.000100									
Lead, TCLP	ND	0.000100									
Selenium, TCLP	ND	0.00100									
Silver, TCLP	ND	0.000100									

Qualifiers: H Holding times for preparation or analysis exceeded

R RPD outside accepted recovery limits

S Spike Recovery outside accepted recovery limits

QC SUMMARY REPORT

Specialty Analytical

WO#: 2411272
12/3/2024

Client: Ken Pappas
Project:

TestCode: 6020_TCLP

Sample ID: CCV	SampType: CCV	TestCode: 6020_TCLP	Units: mg/L	Prep Date:	RunNo: 56602						
Client ID: CCV	Batch ID: 24948	TestNo: E1311/6020	SW3010A	Analysis Date: 11/26/2024	SeqNo: 735662						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic, TCLP	0.0491	0.000100	0.0500	0	98.3	90	110				
Barium, TCLP	0.0486	0.00100	0.0500	0	97.2	90	110				
Cadmium, TCLP	0.0497	0.000100	0.0500	0	99.5	90	110				
Chromium, TCLP	0.0501	0.000100	0.0500	0	100	90	110				
Lead, TCLP	0.0485	0.000100	0.0500	0	96.9	90	110				
Selenium, TCLP	0.0499	0.00100	0.0500	0	99.8	90	110				
Silver, TCLP	0.0482	0.000100	0.0500	0	96.3	90	110				

Sample ID: CCB	SampType: CCB	TestCode: 6020_TCLP	Units: mg/L	Prep Date:	RunNo: 56602						
Client ID: CCB	Batch ID: 24948	TestNo: E1311/6020	SW3010A	Analysis Date: 11/26/2024	SeqNo: 735663						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic, TCLP	ND	0.000100									
Barium, TCLP	ND	0.00100									
Cadmium, TCLP	ND	0.000100									
Chromium, TCLP	ND	0.000100									
Lead, TCLP	ND	0.000100									
Selenium, TCLP	ND	0.00100									
Silver, TCLP	ND	0.000100									

Qualifiers: H Holding times for preparation or analysis exceeded

R RPD outside accepted recovery limits

S Spite Recovery outside accepted recovery limits

QC SUMMARY REPORT

Specialty Analytical

WO#: 2411272
12/3/2024

Client: Ken Pappas
Project:

TestCode: 6020_TCLP

Sample ID: CCV	SampType: CCV	TestCode: 6020_TCLP	Units: mg/L	Prep Date:	RunNo: 56602						
Client ID: CCV	Batch ID: 24948	TestNo: E1311/6020	SW3010A	Analysis Date: 11/26/2024	SeqNo: 735664						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic, TCLP	0.0515	0.000100	0.0500	0	103	90	110				
Barium, TCLP	0.0504	0.00100	0.0500	0	101	90	110				
Cadmium, TCLP	0.0506	0.000100	0.0500	0	101	90	110				
Chromium, TCLP	0.0521	0.000100	0.0500	0	104	90	110				
Lead, TCLP	0.0506	0.000100	0.0500	0	101	90	110				
Selenium, TCLP	0.0515	0.00100	0.0500	0	103	90	110				
Silver, TCLP	0.0487	0.000100	0.0500	0	97.3	90	110				

Sample ID: CCB	SampType: CCB	TestCode: 6020_TCLP	Units: mg/L	Prep Date:	RunNo: 56602						
Client ID: CCB	Batch ID: 24948	TestNo: E1311/6020	SW3010A	Analysis Date: 11/26/2024	SeqNo: 735665						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic, TCLP	ND	0.000100									
Barium, TCLP	ND	0.00100									
Cadmium, TCLP	ND	0.000100									
Chromium, TCLP	ND	0.000100									
Lead, TCLP	ND	0.000100									
Selenium, TCLP	ND	0.00100									
Silver, TCLP	ND	0.000100									

Qualifiers: H Holding times for preparation or analysis exceeded R RPD outside accepted recovery limits S Spike Recovery outside accepted recovery limits

QC SUMMARY REPORT

Specialty Analytical

WO#: 2411272
12/3/2024

Client: Ken Pappas
Project:

TestCode: 6020 TCLP

Sample ID: MB-24948	SampType: MBLK	TestCode: 6020_TCLP	Units: mg/L	Prep Date: 11/26/2024	RunNo: 56602						
Client ID: PBW	Batch ID: 24948	TestNo: E1311/6020	SW3010A	Analysis Date: 11/26/2024	SeqNo: 735666						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic, TCLP	ND	0.000100									
Barium, TCLP	ND	0.00100									
Cadmium, TCLP	ND	0.000100									
Chromium, TCLP	ND	0.000100									
Lead, TCLP	ND	0.000100									
Selenium, TCLP	ND	0.00100									
Silver, TCLP	ND	0.000100									

Sample ID: LCS-24948	SampType: LCS	TestCode: 6020_TCLP	Units: mg/L	Prep Date: 11/26/2024	RunNo: 56602						
Client ID: LCSW	Batch ID: 24948	TestNo: E1311/6020	SW3010A	Analysis Date: 11/26/2024	SeqNo: 735667						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic, TCLP	0.0496	0.000100	0.0500	0	99.2	80	120				
Barium, TCLP	0.0499	0.00100	0.0500	0	99.7	80	120				
Cadmium, TCLP	0.0502	0.000100	0.0500	0	100	80	120				
Chromium, TCLP	0.0470	0.000100	0.0500	0	94.0	80	120				
Lead, TCLP	0.0506	0.000100	0.0500	0	101	80	120				
Selenium, TCLP	0.0509	0.00100	0.0500	0	102	80	120				
Silver, TCLP	0.0498	0.000100	0.0500	0	99.6	80	120				

Qualifiers: H Holding times for preparation or analysis exceeded R RPD outside accepted recovery limits S Spike Recovery outside accepted recovery limits

QC SUMMARY REPORT

Specialty Analytical

WO#: 2411272
12/3/2024

Client: Ken Pappas
Project:

TestCode: 6020_TCLP

Sample ID: LCSD-24948	SampType: LCSD	TestCode: 6020_TCLP	Units: mg/L	Prep Date: 11/26/2024	RunNo: 56602						
Client ID: LCSS02	Batch ID: 24948	TestNo: E1311/6020	SW3010A	Analysis Date: 11/26/2024	SeqNo: 735668						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic, TCLP	0.0478	0.000100	0.0500	0	95.6	80	120	0.0496	3.69	20	
Barium, TCLP	0.0487	0.00100	0.0500	0	97.3	80	120	0.0499	2.40	20	
Cadmium, TCLP	0.0496	0.000100	0.0500	0	99.2	80	120	0.0502	1.16	20	
Chromium, TCLP	0.0449	0.000100	0.0500	0	89.7	80	120	0.0470	4.68	20	
Lead, TCLP	0.0488	0.000100	0.0500	0	97.7	80	120	0.0506	3.51	20	
Selenium, TCLP	0.0498	0.00100	0.0500	0	99.7	80	120	0.0509	2.14	20	
Silver, TCLP	0.0494	0.000100	0.0500	0	98.9	80	120	0.0498	0.763	20	

Sample ID: 2411302-001ADUP		SampType: DUP		TestCode: 6020_TCLP		Units: mg/L		Prep Date: 11/26/2024		RunNo: 56602	
Client ID: BatchQC		Batch ID: 24948		TestNo: E1311/6020		SW3010A		Analysis Date: 11/26/2024		SeqNo: 735670	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic, TCLP	ND	0.00500						0	0	20	
Barium, TCLP	3.02	0.0500						2.70	11.4	20	
Cadmium, TCLP	ND	0.00500						0	0	20	RRF
Chromium, TCLP	0.00749	0.00500						0.00679	9.81	20	
Lead, TCLP	0.956	0.00500						0.857	11.0	20	
Selenium, TCLP	ND	0.0500						0	0	20	RRF
Silver, TCLP	ND	0.00500						0	0	20	RRF

Qualifiers: H Holding times for preparation or analysis exceeded

R RPD outside accepted recovery limits

S Spike Recovery outside accepted recovery limits

QC SUMMARY REPORT

Specialty Analytical

WO#: 2411272
12/3/2024

Client: Ken Pappas
Project:

TestCode: 6020_TCLP

Sample ID: CCV	SampType: CCV	TestCode: 6020_TCLP	Units: mg/L	Prep Date:	RunNo: 56602						
Client ID: CCV	Batch ID: 24948	TestNo: E1311/6020	SW3010A	Analysis Date: 11/26/2024	SeqNo: 735673						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic, TCLP	0.0511	0.000100	0.0500	0	102	90	110				
Barium, TCLP	0.0499	0.00100	0.0500	0	99.8	90	110				
Cadmium, TCLP	0.0498	0.000100	0.0500	0	99.6	90	110				
Chromium, TCLP	0.0513	0.000100	0.0500	0	103	90	110				
Lead, TCLP	0.0515	0.000100	0.0500	0	103	90	110				
Selenium, TCLP	0.0516	0.00100	0.0500	0	103	90	110				
Silver, TCLP	0.0483	0.000100	0.0500	0	96.6	90	110				

Sample ID: CCB	SampType: CCB	TestCode: 6020_TCLP	Units: mg/L	Prep Date:	RunNo: 56602						
Client ID: CCB	Batch ID: 24948	TestNo: E1311/6020	SW3010A	Analysis Date: 11/26/2024	SeqNo: 735674						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic, TCLP	ND	0.000100									
Barium, TCLP	ND	0.00100									
Cadmium, TCLP	ND	0.000100									
Chromium, TCLP	ND	0.000100									
Lead, TCLP	ND	0.000100									
Selenium, TCLP	ND	0.00100									
Silver, TCLP	ND	0.000100									

Qualifiers: H Holding times for preparation or analysis exceeded R RPD outside accepted recovery limits S Spike Recovery outside accepted recovery limits

QC SUMMARY REPORT

Specialty Analytical

WO#: 2411272
12/3/2024

Client: Ken Pappas

Project:

TestCode: 6020_TCLP

Sample ID: CCV	SampType: CCV	TestCode: 6020_TCLP	Units: mg/L	Prep Date:	RunNo: 56602						
Client ID: CCV	Batch ID: 24948	TestNo: E1311/6020	SW3010A	Analysis Date: 11/26/2024	SeqNo: 735680						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic, TCLP	0.0504	0.000100	0.0500	0	101	90	110				
Barium, TCLP	0.0515	0.00100	0.0500	0	103	90	110				
Cadmium, TCLP	0.0510	0.000100	0.0500	0	102	90	110				
Chromium, TCLP	0.0512	0.000100	0.0500	0	102	90	110				
Lead, TCLP	0.0511	0.000100	0.0500	0	102	90	110				
Selenium, TCLP	0.0507	0.00100	0.0500	0	101	90	110				
Silver, TCLP	0.0490	0.000100	0.0500	0	98.0	90	110				

Sample ID: CCB	SampType: CCB	TestCode: 6020_TCLP	Units: mg/L	Prep Date:	RunNo: 56602						
Client ID: CCB	Batch ID: 24948	TestNo: E1311/6020	SW3010A	Analysis Date: 11/26/2024	SeqNo: 735681						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic, TCLP	ND	0.000100									
Barium, TCLP	ND	0.00100									
Cadmium, TCLP	ND	0.000100									
Chromium, TCLP	ND	0.000100									
Lead, TCLP	ND	0.000100									
Selenium, TCLP	ND	0.00100									
Silver, TCLP	ND	0.000100									

Qualifiers: H Holding times for preparation or analysis exceeded

R RPD outside accepted recovery limits

S Spike Recovery outside accepted recovery limits

QC SUMMARY REPORT

Specialty Analytical

WO#: 2411272
12/3/2024

Client: Ken Pappas
Project:

TestCode: HG_TCLP

Sample ID: LCS-R56629	SampType: LCS	TestCode: HG_TCLP	Units: mg/L	Prep Date:	RunNo: 56629
Client ID: LCSW	Batch ID: 24954	TestNo: 1311/7470	E245.2	Analysis Date: 11/27/2024	SeqNo: 736031
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Mercury	0.00418	0.000100	0.00400	0	104 85.4 116

Sample ID: MB-R56629	SampType: MBLK	TestCode: HG_TCLP	Units: mg/L	Prep Date:	RunNo: 56629
Client ID: PBW	Batch ID: 24954	TestNo: 1311/7470	E245.2	Analysis Date: 11/27/2024	SeqNo: 736032
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Mercury	ND	0.000100			

Sample ID: 2411239-001ADUP	SampType: DUP	TestCode: HG_TCLP	Units: mg/L	Prep Date: 11/26/2024	RunNo: 56629
Client ID: BatchQC	Batch ID: 24954	TestNo: 1311/7470	E245.2	Analysis Date: 11/27/2024	SeqNo: 736035
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Mercury	ND	0.000500			0 0 0 20

Sample ID: 2411239-001AMS	SampType: MS	TestCode: HG_TCLP	Units: mg/L	Prep Date: 11/26/2024	RunNo: 56629
Client ID: BatchQC	Batch ID: 24954	TestNo: 1311/7470	E245.2	Analysis Date: 11/27/2024	SeqNo: 736036
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Mercury	0.0208	0.000500	0.0200	0	104 69.5 125

Qualifiers: H Holding times for preparation or analysis exceeded R RPD outside accepted recovery limits S Spike Recovery outside accepted recovery limits

QC SUMMARY REPORT

Specialty Analytical

WO#: 2411272
12/3/2024

Client: Ken Pappas

Project:

TestCode: HG_TCLP

Sample ID: 2411239-001AMS	SampType: MS	TestCode: HG_TCLP	Units: mg/L	Prep Date: 11/26/2024	RunNo: 56629
Client ID: BatchQC	Batch ID: 24954	TestNo: 13117470	E245.2	Analysis Date: 11/27/2024	SeqNo: 736036
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC
				LowLimit	HighLimit
				RPD Ref Val	%RPD
				RPDLimit	Qual

Sample ID: 2411239-001AMS	SampType: MSD	TestCode: HG_TCLP	Units: mg/L	Prep Date: 11/26/2024	RunNo: 56629
Client ID: BatchQC	Batch ID: 24954	TestNo: 13117470	E245.2	Analysis Date: 11/27/2024	SeqNo: 736037
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC
				LowLimit	HighLimit
				RPD Ref Val	%RPD
				RPDLimit	Qual
Mercury	0.0210	0.000500	0.0200	0	105
				69.5	125
				0.0208	0.717
					20

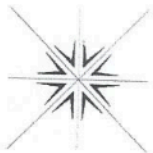
Sample ID: CCV-R56629	SampType: CCV	TestCode: HG_TCLP	Units: mg/L	Prep Date: 11/27/2024	RunNo: 56629
Client ID: CCV	Batch ID: 24954	TestNo: 13117470	E245.2	Analysis Date: 11/27/2024	SeqNo: 736041
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC
				LowLimit	HighLimit
				RPD Ref Val	%RPD
				RPDLimit	Qual
Mercury	0.00420	0.000100	0.00400	0	105
				90	110

Sample ID: CCB-R56629	SampType: CCB	TestCode: HG_TCLP	Units: mg/L	Prep Date: 11/27/2024	RunNo: 56629
Client ID: CCB	Batch ID: 24954	TestNo: 13117470	E245.2	Analysis Date: 11/27/2024	SeqNo: 736042
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC
				LowLimit	HighLimit
				RPD Ref Val	%RPD
				RPDLimit	Qual
Mercury	ND	0.000100			

Qualifiers: H Holding times for preparation or analysis exceeded

R RPD outside accepted recovery limits

S Spike Recovery outside accepted recovery limits



Specialty Analytical
9011 SE Jannsen Rd
Clackamas, Oregon 97015
TEL: 503-607-1331 FAX: 503-607-1336
Website: www.specialtyanalytical.com

Sample Receipt Checklist

Client Name: PAPPAS_KEN

Work Order Number 2411272

RcptNo: 1

Date and Time Received: 11/22/2024 8:38:43 AM

Received by: Mandy Wehe

Completed by:

Reviewed by:

Completed Date:

11/22/2024

Reviewed Date:

11/22/2024 10:50:56 AM

Carrier name: SA

Chain of custody present?	Yes ☒	No ☐	
Chain of custody signed when relinquished and received?	Yes ☒	No ☐	
Chain of custody agrees with sample labels?	Yes ☒	No ☐	Not Present ☐
Are matrices correctly identified on Chain of custody?	Yes ☒	No ☐	
Is it clear what analyses were requested?	Yes ☒	No ☐	
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☒
Samples in proper container/bottle?	Yes ☒	No ☐	
Were correct preservatives used and noted?	Yes ☒	No ☐	NA ☐
Sample containers intact?	Yes ☒	No ☐	
Sufficient sample volume for indicated test?	Yes ☒	No ☐	
Were container labels complete (ID, Pres, Date)?	Yes ☒	No ☐	
All samples received within holding time?	Yes ☒	No ☐	
Was an attempt made to cool the samples?	Yes ☐	No ☐	NA ☒
All samples received at a temp. of > 0° C to 6.0° C?	Yes ☐	No ☐	NA ☒
Response when temperature is outside of range:			
Preservative added to bottles:			
Sample Temp. taken and recorded upon receipt?	Yes ☒	No ☐	To 17.6° C
Water - Were bubbles absent in VOC vials?	Yes ☐	No ☐	No Vials ☒
Water - Was there Chlorine Present?	Yes ☐	No ☐	NA ☒
Water - pH acceptable upon receipt?	Yes ☐	No ☐	NA ☒
Are Samples considered acceptable?	Yes ☒	No ☐	
Custody Seals present?	Yes ☐	No ☒	
Traffic Report or Packing Lists present?	Yes ☐	No ☒	
Airbill or Sticker?	Air Bill ☐	Sticker ☐	Not Present ☒
Sample Tags Present?	Yes ☐	No ☒	
Sample Tags Listed on COC?	Yes ☐	No ☒	
Tag Numbers:			
Sample Condition?	Intact ☒	Broken ☐	Leaking ☐

Case Number:

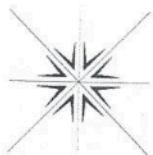
SDG:

SAS:

Adjusted? _____

Checked by _____

Any No and/or NA (not applicable) response must be detailed in the comments section below.



Specialty Analytical
9011 SE Jannsen Rd
Clackamas, Oregon 97015
TEL: 503-607-1331 FAX: 503-607-1336
Website: www.specialtyanalytical.com

Sample Receipt Checklist

Client Contacted? ☐ Yes ☒ No ☐ NA Person Contacted: _____ Comments: _____
Contact Mode: ☐ Phone: ☐ Fax: ☐ Email: ☐ In Person: _____
Client Instructions: _____
Date Contacted: _____ Contacted By: _____
Regarding: _____
CorrectiveAction: _____



**Specialty
Analytical**

9011 SE Jannsen Rd
Clackamas, OR 97015
Phone: 503-607-1331
www.specialtyanalytical.com

Chain of Custody Record

Date: _____ of: _____
Project Name: _____
Project No: _____ PO No: _____
Collected by: _____
State Collected: OR WA OTHER
Report To (PM): _____
PM Email(s): _____

Laboratory Project No (internal): 2411272
Temperature on Receipt: 17.6 °C
Cooling: n/a Shipped Via: client
Custody Seal: Y (N) Intact / Broken Cooler / Bottle
MDL TIER IV EDD
Sample Disposal: ☐ Return to client ☒ Disposal by lab (after 60 days)

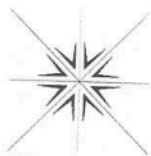
Client: Ken Pappas
Address: 7611 Jackson Hill Rd SE
City, State, Zip: Salem, OR 97306
Telephone: 971-599-0757
Invoice Email: KenPappas22@Comcast.com

Sample Name	Sample Date	Sample Time	Sample Matrix*	# of Containers	Requested Tests	Comments (Please note potential hazards)
1 1964 Rolls Royce	11/14	2pm	SL	1	X	
2 ^{Spent} General Blast Material	11/21	1pm	SL	1	X	
3						
4						
5						
6						
7						
8						
9						
10						

*Matrix: A = Air, AQ = Aqueous, L = Liquid, O = Oil, P = Product, S = Soil, SD = Sediment, SL = Solid, W = Water, DW = Drinking Water, GW = Ground Water, SW = Storm Water, WW = Waste Water, M = Miscellaneous

Turn-around Time: _____ Standard: ~~X~~ 3 Day: _____ 2 Day: _____ Next Day: _____ Same Day: _____
Expedited turn-around requests should be coordinated in advance

Relinquished	Date/Time	Received	Date/Time
X <i>[Signature]</i>	11/22/24 8:29 AM	X	11/22/24 8:27
Relinquished	Date/Time	Received	Date/Time
X		X	
Relinquished	Date/Time	Received	Date/Time
X		X	



Specialty Analytical
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Website: www.specialtyanalytical.com

Definition Only

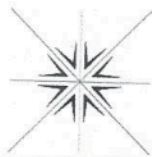
WO#: 2411272

Date: 12/3/2024

Definitions:

KEY TO FLAGS

- A: This sample contains a Gasoline Range Organic not identified as a specific hydrocarbon product. The result was qualified against gasoline calibration standards.
- A1: This sample contains a Diesel Range Organic not identified as a specific hydrocarbon product. The result was qualified against diesel calibration standards.
- A2: This sample contains a Lube Oil Range Organic not identified as a specific hydrocarbon product. The result was qualified against lube oil calibration standards.
- A3: The results was determined to be Non-Detect based on hydrocarbon pattern recognition. The product was carry-over from another hydrocarbon type.
- A4: The product appears to be aged or degraded.
- B: The blank exhibited a positive result greater than the reporting limit for this compound.
- BC: Sample concentration is >10x positive result in blank. Data is considered acceptable.
- CN: See Case Narrative.
- E: Result exceeds the calibration range for this compound. The result should be considered an estimate.
- F: The positive result for this hydrocarbon is due to single component contamination. The product does not match any hydrocarbon in the fuels library.
- FS: Follow-up testing is suggested.
- G: Result may be biased high due to biogenic interferences. Clean up is recommended.
- H: Sample was analyzed outside recommended holding time.
- HT: ☐ At client's request, samples was analyzed outside of recommended holding time.
- HP: Sample was analyzed outside recommended holding time due to VOA having pH >2.
-



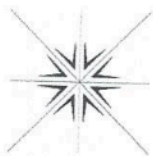
Specialty Analytical
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Definitions:

- J: The results for this analyte is between the MDL and the PQL and should be considered an estimated concentration.
- K: Diesel result is biased high due to amount of Oil contained in the sample.
- L: Diesel result is biased high due to amount of Gasoline contained in the sample.
- M: Oil result is biased high due to amount of Diesel contained in the sample.
- N: Gasoline result is biased high due to amount of Diesel contained in the sample.
- MC: Sample concentration is greater than 4x the spiked value, the spiked value is considered insignificant.
- MI: Result is outside control limits due to matrix interference.
- NH: Sample matrix is non-homogeneous
- MSA: Value determined by Method of Standard Addition.
- O: Laboratory Control Standard (LCS) exceeded laboratory control limits but meets CCV criteria. Data meets EPA requirements.
- Q: Detection levels elevated due to sample matrix.
- R: RPD control limits were exceeded
- RF: Duplicate failed due to result being at or near the method-reporting limit.
- RP: Matrix spike values exceed established QC limits; post digestion spike is in control.
- S: Recovery is outside control limits.
- SC: CCV or LCS exceeded high recovery control limits, but associated samples are non-detect. Data meets EPA requirements.
-



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SL: LCS exceeded recovery control limits, but associated MS/MSD passing. Data meets EPA requirements.

SV: CCV exceeded low recovery control limits. ND as reported evaluated using EPA method 8260D section 11.4.3.2

TA: Sample treated with ascorbic acid for the removal of thiocyanates.

TS: Sample treated with Sodium Sulfite for the removal of chlorine.