



October 1, 2024

Reply to Attn of: **JQ: 204-15**

Lucrina Jones
United States Environmental Protection Agency, Region 9
75 Hawthorne Street, M/C SFD-8-3
San Francisco, CA 94105

Mary Snow, PG
Regional Water Quality Control Board, San Francisco Bay Region
1515 Clay Street, Suite 1400
Oakland, CA 94612

SUBJECT: Revised Hangar 1 Action Memorandum Amendment
MFA Leasehold
Mountain View, California

Dear Ms. Jones and Ms. Snow:

Planetary Ventures, LLC (PV) is currently implementing a Non-Time Critical Removal Action (NTCRA) to control the release of polychlorinated biphenyls (PCBs) and lead from the above ground building materials at Hangar 1 (also known as Installation Restoration (IR) Site 29), located within the former Naval Air Station (NAS) Moffett Field, California by removing the PCB- and lead-impacted paint from the aboveground structural elements (e.g., the steel frame, concrete masonry unit (CMU) walls, and concrete floors) at Hangar 1. PV is conducting the NTCRA on behalf of the National Aeronautics and Space Administration (NASA), which is the lead federal agency at IR Site 29 and has the authority to undertake response actions, including removal actions, under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), Title 42 United States Code (USC) Section (§) 9604 and Federal Executive Order 12580.

The Hangar 1 Action Memorandum (AM) [EKI, 2020] documented NASA's decision to undertake the NTCRA for IR Site 29 and, based on the results of the Pilot Scale Abatement Study of Hangar 1 (Pilot Study) [ACC, 2017], adopted visual and numeric Cleanup Goals for the removal of impacted paints from non-porous (e.g., structural steel). Numeric Cleanup Goals were also developed for (1) porous (e.g., concrete masonry unit (CMU) walls and the concrete floor) building materials, (2) impacted soil, if baseline sampling data indicates that the exposed soil outside Hangar 1 has been impacted by degradation of the Carbomastic 15 (CM15) epoxy coating, and (3) asbestos containing material (ACM); these Cleanup Goals are summarized in the table below. A visual Cleanup Goal of "no visible paint to remain" was also adopted for porous surfaces.



While the ability to achieve the Cleanup Goals for non-porous surfaces was evaluated in the Pilot Scale Abatement Study for Hangar 1 (Pilot Study) [ACC, 2017], such an evaluation was not performed for the chemical stripping and manual scraping procedure proposed for porous surfaces. This AM Amendment has been prepared to revise the Cleanup Goals for porous surfaces (e.g., the concrete floor) based on recent experience implementing the NTCRA Work Plan [EKI, 2022].

For reference, the table below summarizes the original Cleanup Goals adopted in the AM.

Substrate	Chemicals	Elements	Cleanup Goals
Non-Porous Surfaces	<ul style="list-style-type: none"> • PCBs • Lead 	<ul style="list-style-type: none"> • Visual Inspection by qualified NACE/SSPC surface coating inspector • Collection and analysis of wipe confirmation samples 	<ul style="list-style-type: none"> • No visible paint remains • Achievement of NACE 3/SSPC SP-6 surface preparation and visible cleanliness standard • PCBs: ≤ 10 ug/100 cm² (high occupancy areas [a]) and < 100 ug/100 cm² (low occupancy areas [b]) • Lead: < 250 ug/ft²
Porous Surfaces	<ul style="list-style-type: none"> • PCBs • Lead 	<ul style="list-style-type: none"> • Visual Inspection by qualified NACE/SSPC surface coating inspector • Collection and analysis of bulk confirmation samples 	<ul style="list-style-type: none"> • No visible paint remains • PCBs: ≤ 1 mg/kg (high occupancy areas [a]) and ≤ 25 mg/kg (low occupancy areas [b]) • Lead: ≤ 320 mg/kg
Soil	<ul style="list-style-type: none"> • PCBs • Lead 	<ul style="list-style-type: none"> • Collection and analysis of bulk confirmation samples 	<ul style="list-style-type: none"> • PCBs: ≤ 1 mg/kg • Lead: ≤ 320 mg/kg
ACM	<ul style="list-style-type: none"> • Asbestos 	<ul style="list-style-type: none"> • Visual Inspection by qualified asbestos inspector 	<ul style="list-style-type: none"> • No ACM remains and that the abated area has been adequately cleaned

Abbreviations

ACM: asbestos containing materials
 mg/kg: milligrams per kilogram
 NACE/SSPC: National Association of Corrosion Engineers/Society for Protective Coatings
 ug/100 cm²: micrograms per 100 square centimeters
 ug/ft²: micrograms per square foot

Notes

- [a] Pursuant to 40 CFR §761.3, high occupancy areas are areas where individuals may be present, without dermal or respiratory protection, for 840 hours or more per year (an average of 16.8 hours or more per week) for non-porous surfaces and for 335 hours or more per year (an average of 6.7 hours or more per week) for porous surfaces and bulk PCB remediation waste.
- [b] Pursuant to 40 CFR §761.3, low-occupancy areas are areas where individuals may be present, without dermal or respiratory protection, for less than 840 hours per year (an average of less than 16.8 hours per week) for non-porous surfaces and for less than 335 hours per year (an average of less than 6.7 hours per week) for porous surfaces and bulk PCB remediation waste.



POROUS SURFACE ABATEMENT ACTIVITIES

As outlined in the NTCRA Work Plan, to minimize potential damage to the concrete floors that are considered part of the historical fabric of Hangar 1, chemical stripping and manual scraping is to be used to remove the existing PCB- and lead-impacted paint. Based on pre-NTCRA inspections by the abatement contractor, PCB- and lead-impacted paint was observed on the concrete floor in 10 areas at Hangar 1 and the total area of the painted concrete was estimated to be approximately 750 square feet.

In April 2024, following the completion of all overhead work in Zone 2, the contractor performing the abatement activities began abating the painted concrete in Zone 2 in accordance with Section 5.1.6 of the NTCRA Work Plan (i.e., by chemical stripping and manual scraping). As seen in the photos in Attachment A, despite application of the chemical stripper and manual scraping, traces of paint are visible on the concrete floor. While the abatement contractor reapplied the chemical stripper to the same section of concrete floor several times, no additional paint could be removed by manual scraping and some paint remained visible. As can be seen in the closeup photos in Attachment A, the residual paint appears to be located in areas where the concrete floor appears to be rougher (i.e., areas where the original smoother finish has been degraded).

As the ability of manual scraping to access residual paint on the concrete floor is limited by the size of the scraper, the contractor also attempted to remove paint from the concrete floor by pressure washing. As seen in the photos in Attachment A, while pressure washing was able to remove the existing paint without damaging the concrete floor, residual paint still remained and overall, pressure washing was less effective than chemical stripping combined with manual scraping.

Concrete is not a uniform surface¹ and contains pores², thus it is not possible to achieve the visual Cleanup Goal of “no visible paint remains” using chemical stripping and manual scraping because manual scraping cannot remove paint that has accumulated in the valleys and/or pore spaces of the concrete. While achieving the visual Cleanup Goal might be possible using more aggressive techniques such as media blasting (which would likely wear down the surface of the concrete), the use of such techniques would damage the historic fabric of Hangar 1³. As a result, the use of such techniques would have to be approved by the State Historic

¹ It is rough and contains areas of both higher and lower elevations (i.e., peaks and valleys).

² While there are several types of pores within concrete, only the pores that are due to the presence of entrapped air within the concrete are large enough for a viscous liquid like paint to penetrate.

³ The Hangar 1: Phase I Rehabilitation (Abatement) Section 106 Technical Report [HRG, 2020] concluded that the Hangar’s concrete floor slab is a “character-defining feature” and recommends that “chemical paint stripper and manual scraping will be used to remove impacted paints [from the CMU walls and other concrete surfaces] instead of media blasting to avoid abrasion or damage to the historic surface texture.” In its concurrence letter [SHPO, 2020], the State Historic Preservation Office indicated that “based on the information submitted, the SHPO has no objection to the proposed Finding of No Adverse Effect for this undertaking as described,” which implies that the SHPO’s concurrence was based on the use of chemical stripping and manual scraping to avoid abrasion or damage to the historic surface texture of the concrete surfaces and that SHPO review and approval would be required if the abatement procedure for concrete surfaces were changed.



Preservation Office before they could be implemented and it is not certain that the use of such techniques would be approved.

CONFIRMATION SAMPLING RESULTS

Two representative composite samples were collected from the abated areas⁴ in accordance with the bulk concrete sampling procedures outlined in the Uniform Federal Policy Quality Assurance Project Plan (UFP-QAPP; Appendix D of the NTCRA Work Plan), to evaluate whether abated concrete achieved the numeric Cleanup Goals (i.e., ≤ 1 mg/kg for PCBs and ≤ 320 mg/kg for lead). For each sample, concrete from between 0 and 0.5-inches depth was collected from three areas and composited together (photos of the areas sampled within the chemical stripping and manual scraping test area are included in Attachment A).

In the two representative composite samples, PCBs were not detected at concentrations above an analytical reporting limit of 0.1 mg/kg and lead was reported at concentrations of 12 mg/kg and 13 mg/kg (Attachment B). These data indicate that while a small amount of paint may remain on or within the concrete floor after chemical stripping and manual scraping, the bulk concentration of PCBs and lead in the representative samples are below the numeric Cleanup Goals and below unrestricted use levels (i.e., 1 mg/kg for PCBs and 80 mg/kg for lead).

REMEDIAL ACTION OBJECTIVE

As outlined in the Action Memorandum [EKI, 2020], the Remedial Action Objective (RAO) for the NTCRA is to “control the release of PCBs and lead from remaining impacted paints at Hangar 1, thereby reducing potential risks to human health and the environment from these chemicals.” While small amounts of residual paint remain on or within some parts of the concrete floor after chemical stripping and manually scraping, the chemical stripping and manual scraping achieves the RAO because the majority of the paint has been removed from the concrete floor and the confirmation sampling results demonstrate that the abated concrete does not present a significant risk to human health or the environment.

REVISED CLEANUP GOALS FOR POROUS SURFACES

NASA intends to revise the visual Cleanup Goal for porous surfaces from “No visible paint remains” to “All paint removed to the extent practicable without damaging the historic fabric of the concrete floor” because the chemical stripping and manual scraping procedure is not capable of meeting the visual Cleanup Goal. This revised Cleanup Goal is appropriate because (1) the chemical stripping and manual scraping procedure meets the RAO of the AM and (2) the confirmation sampling data from the test areas indicates that the bulk concentrations of PCBs and lead in the abated concrete floor are below the numeric Cleanup Goals and below unrestricted use levels. Consistent with the visual Cleanup Goal for non-porous surfaces, a

⁴ One from the area that was abated using chemical stripping and manual scraping and the other from the area that was abated using pressure washing.



qualified NACE/SSPC surface coating inspector will be responsible for evaluating whether the paint has been removed to the extent practicable from the abated concrete surfaces.

The proposed change does not change the analytical sampling procedures or methodologies that will be used to demonstrate that the numerical Cleanup Goals have been met (i.e., consistent with the approach described in the Action Memorandum, the 95% Upper Confidence Limit (UCL) of the mean concentrations of PCBs and lead in the porous surface confirmation samples will be compared to the numeric Cleanup Goals) and, provided that the 95% UCLs are below the numeric Cleanup Goals, the abated concrete will not present a significant risk to human health or the environment even though residual paint may remain in the valleys and/or pore spaces of the abated concrete.

A table summarizing the revised Cleanup Goals for porous surfaces is below.

Substrate	Chemicals	Elements	Cleanup Goals
Porous Surfaces	<ul style="list-style-type: none"> • PCBs • Lead 	<ul style="list-style-type: none"> • Visual inspection by qualified NACE/SSPC surface coating inspector • Collection and analysis of bulk confirmation samples 	<ul style="list-style-type: none"> • All paint removed to the extent practicable without damaging the historic fabric of the concrete floor. • PCBs: ≤ 1 mg/kg [a] • Lead: ≤ 320 mg/kg

Notes

[a] While the original Cleanup Goals for porous surfaces included numeric goals for PCBs in high and low occupancy areas, on completion of redevelopment activities at Hangar 1, no porous surfaces will be located in areas that are considered low occupancy areas which are defined in 40 CFR §761.3 as being areas where individuals may be present, without dermal or respiratory protection, for less than 335 hours or more per year (an average of less than 6.7 hours per week). As a result, the revised Cleanup Goals for porous surfaces only include the numeric Cleanup Goal for high occupancy areas which are defined in 40 CFR §761.3 as areas where individuals may be present, without dermal or respiratory protection, for 335 hours or more per year (an average of 6.7 hours or more per week).



Please let me know if you have any questions or concerns. Otherwise, I respectfully request that you approve the AM Amendment, described herein, as soon as possible. Please contact me at 650-604-1406 or garrett.michael.turner@nasa.gov with any questions.

Sincerely,

Garrett Michael Turner, P.E.
Restoration Program Manager
Environmental Management Division

cc: Hannah Spade, Google LLC
Pamela Andes, Allen Matkins
Nihal Oztek, CBRE @ Google
Alex Saleh, CBRE @ Google
Puneet Moonach, CBRE @ Google
Frank Raya, CBRE @ Google

Attachments

Attachment A Photos from Concrete Floor Abatement Activities

Attachment B Analytical Laboratory Report for Representative Concrete Samples from Abated Concrete

References

- ACC, 2017. Pilot Scale Abatement Study of Hangar 1, Hangar One, Moffett Federal Airfield, Mountain View, California. ACC Environmental Consultants, 9 October 2017.
- EKI, 2020. Final Hangar 1 Action Memorandum, Former Naval Air Station Moffett Field, California. EKI Environment & Water, Inc. 4 November 2020.
- EKI, 2022. Final Hangar 1 NTCRA Work Plan, Former Naval Air Station Moffett Field, California. EKI Environment & Water, Inc. 14 March 2022.
- HRG, 2020. Hangar 1: Phase I Rehabilitation (Abatement) Section 106 Technical Report. Historic Resources Group, 13 April 2020.
(https://historicproperties.arc.nasa.gov/downloads/s106_hangar01_20200413_nasa_at_t1_redacted.pdf)
- SHPO, 2020. Letter from Julianne Polanco, State Historic Preservation Officer, to Jonathan Ikan, NASA Ames Research Center Cultural Resources Manager, dated 22 June 2020 with Subject Line "Hangar 1 Rehabilitation, NASA Ames Research Center."
(https://historicproperties.arc.nasa.gov/downloads/s106_hangar1_20200622_shpo.pdf)



Attachment A

Photos from Concrete Floor Abatement Activities



Paint
Stripper

S

Test Area for Paint Stripper



**Test Area for Paint Stripper -
Stripper Application**



Paint
Stripper

**Test Area for Paint Stripper -
Covering to minimize
evaporation**



Test Area for Paint Stripper - Scraping



Paint Stripper

Test Area for Paint Stripper - Scraping

Approximate areas where representative samples collected from



Paint Stripper

Test Area for Paint Stripper - Final Result

Areas of closeup photos
(see following pages)



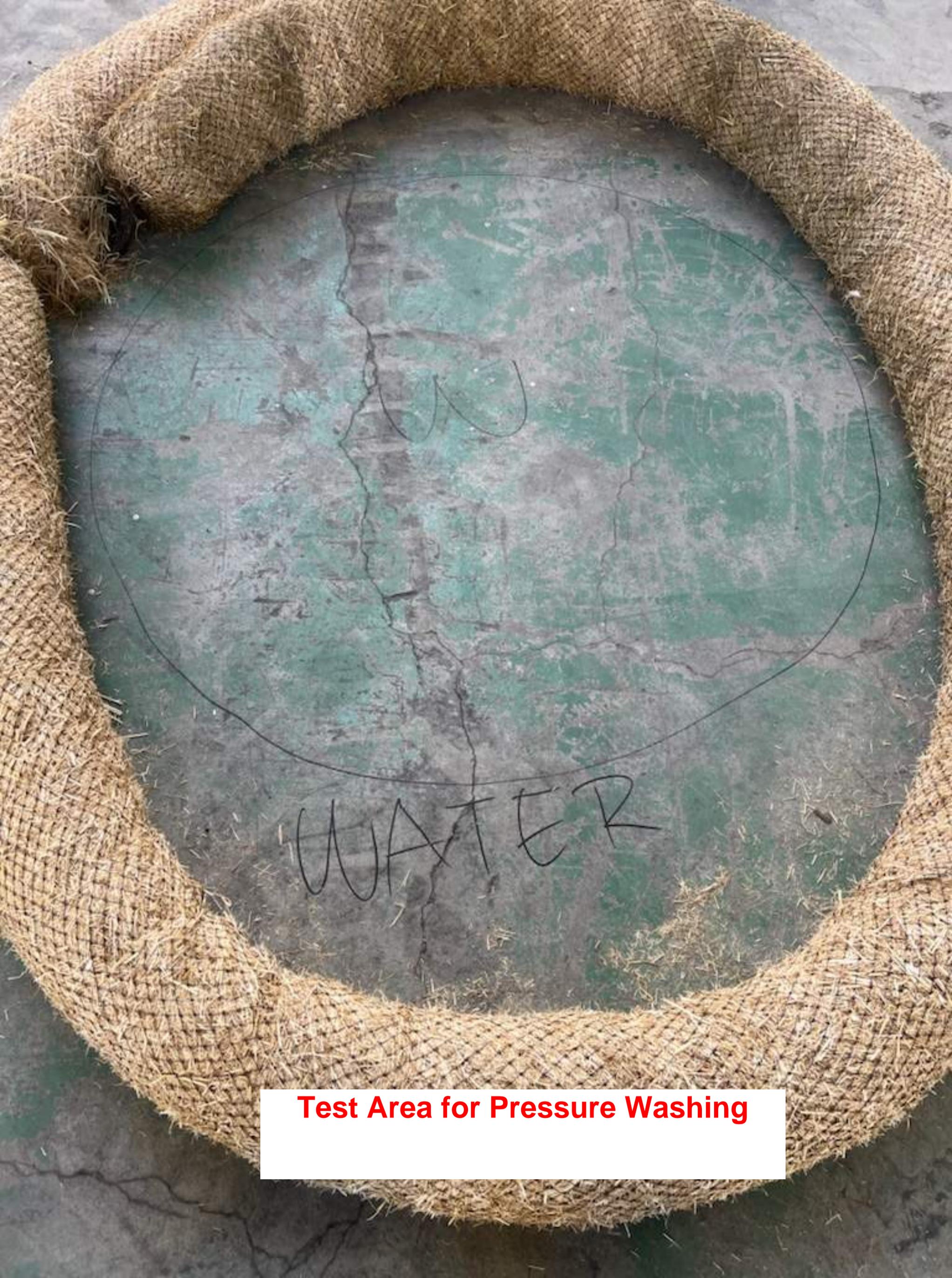
Areas where representative
samples were collected

Closeup Photo #1



Closeup Photo #2





Test Area for Pressure Washing



00

WATER

**Test Area for Pressure Washing -
Final Result**



Attachment B

Analytical Laboratory Report for Representative Concrete Samples from Abated Concrete



ENTHALPY
ANALYTICAL

Enthalpy Analytical
931 West Barkley Ave
Orange, CA 92868
(714) 771-6900

enthalpy.com

Lab Job Number : 509037
Report Level : II
Report Date : 06/03/2024

Analytical Report *prepared for:*

Austin Moore
Rincon Consultants
449 15th Street
#303
Oakland, CA 94612

Project: 20-10491 - Hangar 1 NTCRA

Authorized for release by:

John Goyette, Service Center Manager
(510) 204-2233 Ext 13112
john.goyette@enthalpy.com

This data package has been reviewed for technical correctness and completeness. Release of this data has been authorized by the Laboratory Manager or the Manager's designee, as verified by the above signature which applies to this PDF file as well as any associated electronic data deliverable files. The results contained in this report meet all requirements of NELAP and pertain only to those samples which were submitted for analysis. This report may be reproduced only in its entirety.

CA ELAP# 1338, NELAP# 4038, SCAQMD LAP# 18LA0518, LACSD ID# 10105

Sample Summary

Austin Moore
 Rincon
 Consultants
 449 15th Street
 #303
 Oakland, CA
 94612

Lab Job #: 509037
 Project No: 20-10491
 Location: Hangar 1 NTCRA
 Date Received: 05/24/24

Sample ID	Lab ID	Collected	Matrix
20240523-B-CF-01	509037-001	05/23/24 08:20	Miscell. (Bulk Floor)
20240523-B-CF-02	509037-002	05/23/24 08:55	Miscell. (Bulk Floor)
20240523-B-CF-03	509037-003	05/23/24 09:25	Miscell. (Bulk Floor)
20240523-B-CF-01, 02, 03 COMP	509037-004	05/23/24 00:00	Miscell. (Bulk Floor)
20240523-B-CF-04	509037-005	05/23/24 10:00	Miscell. (Bulk Floor)
20240523-B-CF-05	509037-006	05/23/24 10:20	Miscell. (Bulk Floor)
20240523-B-CF-06	509037-007	05/23/24 10:45	Miscell. (Bulk Floor)
20240523-B-CF-04, 05, 06 COMP	509037-008	05/23/24 00:00	Miscell. (Bulk Floor)

Case Narrative

Rincon Consultants
449 15th Street
#303
Oakland, CA 94612
Austin Moore

Lab Job 509037
Number:
Project No: 20-10491
Location: Hangar 1
NTCRA

Date Received: 05/24/24

This data package contains sample and QC results for two three-point bulk floor composites, requested for the above referenced project on 05/24/24. The samples were received cold and intact.

PCBs (EPA 8082):

No analytical problems were encountered.

Metals (EPA 6010B and EPA 7471A):

- Low recoveries were observed for nickel, antimony, and vanadium in the MS/MSD for batch 341133; the parent sample was not a project sample, and the associated RPDs were within limits.
- No other analytical problems were encountered.

SAMPLE ACCEPTANCE CHECKLIST

Section 1
 Client: Rincon Consultants 509037 Project: Hangar 1 NTCRA
 Date Received: 5/24/24 Sampler's Name Present: Yes No

Section 2
 Sample(s) received in a cooler? Yes, How many? 1 No (skip section 2) Sample Temp (°C) (No Cooler) : _____
 Sample Temp (°C), One from each cooler: #1: 2.5 #2: _____ #3: _____ #4: _____
(Acceptance range is < 6°C but not frozen (for Microbiology samples, acceptance range is < 10°C but not frozen). It is acceptable for samples collected the same day as sample receipt to have a higher temperature as long as there is evidence that cooling has begun.)
 Shipping Information: _____

Section 3
 Was the cooler packed with: Ice Ice Packs Bubble Wrap Styrofoam
 Paper None Other _____
 Cooler Temp (°C): #1: 2.5 #2: _____ #3: _____ #4: _____

Section 4	YES	NO	N/A
Was a COC received?	✓		
Are sample IDs present?	✓		
Are sampling dates & times present?	✓		
Is a relinquished signature present?	✓		
Are the tests required clearly indicated on the COC?	✓		
Are custody seals present?	✓		
If custody seals are present, were they intact?	✓		
Are all samples sealed in plastic bags? (Recommended for Microbiology samples)	✓		
Did all samples arrive intact? If no, indicate in Section 4 below.	✓		
Did all bottle labels agree with COC? (ID, dates and times)	✓		
Were the samples collected in the correct containers for the required tests?	✓		
Are the containers labeled with the correct preservatives?			✓
Is there headspace in the VOA vials greater than 5-6 mm in diameter?			✓
Was a sufficient amount of sample submitted for the requested tests?	✓		

Section 5 Explanations/Comments
 Water observed in the bag. Ice water intrusion suspected for sample 003 affecting only the top layer.

Section 6
 For discrepancies, how was the Project Manager notified? Verbal PM Initials: _____ Date/Time _____
 Email (email sent to/on): _____ / _____
 Project Manager's response:

Completed By:  Date: 5/24/24

Polychlorinated Biphenyls (PCBs)

Lab #: 509037

Project#: 20-10491

Client: Rincon Consultants

Location: Hangar 1 NTCRA

Field ID: 20240523-B-CF-01, 02, 03 COMP

Diln Fac: 1.000

Analyzed: 06/01/24

Type: SAMPLE

Batch#: 341165

Prep: EPA 3546

Lab ID: 509037-004

Sampled: 05/23/24

Analysis: EPA 8082

Matrix: Miscell.

Received: 05/24/24

Analyst: MES

Basis: as received

Prepared: 05/25/24

509037-004 Analyte

	Result	RL	Units
Aroclor-1016	ND	100	ug/Kg
Aroclor-1221	ND	100	ug/Kg
Aroclor-1232	ND	100	ug/Kg
Aroclor-1242	ND	100	ug/Kg
Aroclor-1248	ND	100	ug/Kg
Aroclor-1254	ND	100	ug/Kg
Aroclor-1260	ND	100	ug/Kg
Aroclor-1262	ND	100	ug/Kg
Aroclor-1268	ND	100	ug/Kg

509037-004 Surrogate

	%REC	Limits
TCMX (PCB)	112	34-120
Decachlorobiphenyl (PCB)	88	19-121

Field ID: 20240523-B-CF-04, 05, 06 COMP

Diln Fac: 1.000

Analyzed: 06/01/24

Type: SAMPLE

Batch#: 341165

Prep: EPA 3546

Lab ID: 509037-008

Sampled: 05/23/24

Analysis: EPA 8082

Matrix: Miscell.

Received: 05/24/24

Analyst: MES

Basis: as received

Prepared: 05/25/24

509037-008 Analyte

	Result	RL	Units
Aroclor-1016	ND	100	ug/Kg
Aroclor-1221	ND	100	ug/Kg
Aroclor-1232	ND	100	ug/Kg
Aroclor-1242	ND	100	ug/Kg
Aroclor-1248	ND	100	ug/Kg
Aroclor-1254	ND	100	ug/Kg
Aroclor-1260	ND	100	ug/Kg
Aroclor-1262	ND	100	ug/Kg
Aroclor-1268	ND	100	ug/Kg

509037-008 Surrogate

	%REC	Limits
TCMX (PCB)	114	34-120
Decachlorobiphenyl (PCB)	97	19-121

Polychlorinated Biphenyls (PCBs)

Lab #: 509037

Project#: 20-10491

Client: Rincon Consultants

Location: Hangar 1 NTCRA

Type: BLANK

Batch#: 341165

Analysis: EPA 8082

Lab ID: QC1156010

Prepared: 05/25/24

Analyst: KLR

Matrix: Soil

Analyzed: 05/30/24

Diln Fac: 1.000

Prep: EPA 3546

QC1156010 Analyte	Result	RL	Units
Aroclor-1016	ND	50	ug/Kg
Aroclor-1221	ND	50	ug/Kg
Aroclor-1232	ND	50	ug/Kg
Aroclor-1242	ND	50	ug/Kg
Aroclor-1248	ND	50	ug/Kg
Aroclor-1254	ND	50	ug/Kg
Aroclor-1260	ND	50	ug/Kg
Aroclor-1262	ND	50	ug/Kg
Aroclor-1268	ND	50	ug/Kg
QC1156010 Surrogate		%REC	Limits
TCMX (PCB)		64	34-120
Decachlorobiphenyl (PCB)		57	19-121

Legend

ND: Not Detected

RL: Reporting Limit

Polychlorinated Biphenyls (PCBs): Batch QC

Lab #: 509037

Project#: 20-10491

Client: Rincon Consultants

Location: Hangar 1 NTCRA

Type: LCS

Batch#: 341165

Analysis: EPA 8082

Lab ID: QC1156011

Prepared: 05/25/24

Analyst: KLR

Matrix: Soil

Analyzed: 05/30/24

Diln Fac: 1.000

Prep: EPA 3546

QC1156011 Analyte	Spiked	Result	%REC	Limits	Units
Aroclor-1016	495.0	381.5	77	14-150	ug/Kg
Aroclor-1260	495.0	424.6	86	10-150	ug/Kg
QC1156011 Surrogate			%REC	Limits	
TCMX (PCB)			69	34-120	
Decachlorobiphenyl (PCB)			83	19-121	

Polychlorinated Biphenyls (PCBs): Batch QC

Lab #: 509037

Project#: 20-10491

Client: Rincon Consultants

Location: Hangar 1 NTCRA

Field ID: ZZZZZZZZZZ

Basis: as received

Prepared: 05/25/24

Type: MS

DiIn Fac: 1.000

Analyzed: 05/30/24

MSS Lab ID: 509090-012

Batch#: 341165

Prep: EPA 3546

Lab ID: QC1156012

Sampled: 05/22/24

Analysis: EPA 8082

Matrix: Soil

Received: 05/23/24

Analyst: KLR

QC1156012 Analyte	MSS Result	Spiked	Result	%REC	Limits	Units
Aroclor-1016	<21.65	510.2	448.5	88	42-127	ug/Kg
Aroclor-1260	<28.23	510.2	441.4	87	38-130	ug/Kg

QC1156012 Surrogate	%REC	Limits
TCMX (PCB)	67	34-120
Decachlorobiphenyl (PCB)	78	19-121

Field ID: ZZZZZZZZZZ

Basis: as received

Prepared: 05/25/24

Type: MSD

DiIn Fac: 1.000

Analyzed: 05/30/24

MSS Lab ID: 509090-012

Batch#: 341165

Prep: EPA 3546

Lab ID: QC1156013

Sampled: 05/22/24

Analysis: EPA 8082

Matrix: Soil

Received: 05/23/24

Analyst: KLR

QC1156013 Analyte	Spiked	Result	%REC	Limits	Units	RPD	Lim
Aroclor-1016	500.0	482.2	96	42-127	ug/Kg	9	30
Aroclor-1260	500.0	404.6	81	38-130	ug/Kg	7	30

QC1156013 Surrogate	%REC	Limits
TCMX (PCB)	64	34-120
Decachlorobiphenyl (PCB)	66	19-121

Legend

 RPD: Relative Percent
 Difference

California Title 22 Metals

Lab #: 509037

Project#: 20-10491

Client: Rincon Consultants

Location: Hangar 1 NTCRA

Field ID: 20240523-B-CF-01, 02, 03 COMP

Basis: as received

Received: 05/24/24

Lab ID: 509037-004

Diln Fac: 1.000

Matrix: Miscell.

Sampled: 05/23/24

509037-004 Analyte	Result	RL	Units	Batch#	Prepared	Analyzed	Prep	Analysis	Analyst
Antimony	ND	3.0	mg/Kg	341133	05/24/24	05/25/24	EPA 3050B	EPA 6010B	SBW
Arsenic	3.1	0.99	mg/Kg	341133	05/24/24	05/25/24	EPA 3050B	EPA 6010B	SBW
Barium	400	0.99	mg/Kg	341133	05/24/24	05/25/24	EPA 3050B	EPA 6010B	SBW
Beryllium	ND	0.50	mg/Kg	341133	05/24/24	05/25/24	EPA 3050B	EPA 6010B	SBW
Cadmium	ND	0.50	mg/Kg	341133	05/24/24	05/25/24	EPA 3050B	EPA 6010B	SBW
Chromium	41	0.99	mg/Kg	341133	05/24/24	05/25/24	EPA 3050B	EPA 6010B	SBW
Cobalt	5.5	0.50	mg/Kg	341133	05/24/24	05/25/24	EPA 3050B	EPA 6010B	SBW
Copper	23	0.99	mg/Kg	341133	05/24/24	05/25/24	EPA 3050B	EPA 6010B	SBW
Lead	13	0.99	mg/Kg	341133	05/24/24	05/25/24	EPA 3050B	EPA 6010B	SBW
Mercury	ND	0.14	mg/Kg	341230	05/28/24	05/28/24	METHOD	EPA 7471A	MLL
Molybdenum	ND	0.99	mg/Kg	341133	05/24/24	05/25/24	EPA 3050B	EPA 6010B	SBW
Nickel	27	0.99	mg/Kg	341133	05/24/24	05/25/24	EPA 3050B	EPA 6010B	SBW
Selenium	ND	3.0	mg/Kg	341133	05/24/24	05/25/24	EPA 3050B	EPA 6010B	SBW
Silver	ND	0.50	mg/Kg	341133	05/24/24	05/25/24	EPA 3050B	EPA 6010B	SBW
Thallium	ND	3.0	mg/Kg	341133	05/24/24	05/25/24	EPA 3050B	EPA 6010B	SBW
Vanadium	54	0.99	mg/Kg	341133	05/24/24	05/25/24	EPA 3050B	EPA 6010B	SBW
Zinc	60	5.0	mg/Kg	341133	05/24/24	05/25/24	EPA 3050B	EPA 6010B	SBW

Legend

ND: Not Detected

RL: Reporting Limit

California Title 22 Metals

Lab #: 509037

Project#: 20-10491

Client: Rincon Consultants

Location: Hangar 1 NTCRA

Field ID: 20240523-B-CF-04, 05, 06 COMP

Matrix: Miscell.

DiIn Fac: 1.000

Received: 05/24/24

Lab ID: 509037-008

Basis: as received

Sampled: 05/23/24

Prepared: 05/24/24

509037-008 Analyte	Result	RL	Units	Batch#	Analyzed	Prep	Analysis	Analyst
Antimony	ND	3.0	mg/Kg	341133	05/25/24	EPA 3050B	EPA 6010B	SBW
Arsenic	3.0	0.99	mg/Kg	341133	05/25/24	EPA 3050B	EPA 6010B	SBW
Barium	420	0.99	mg/Kg	341133	05/25/24	EPA 3050B	EPA 6010B	SBW
Beryllium	ND	0.50	mg/Kg	341133	05/25/24	EPA 3050B	EPA 6010B	SBW
Cadmium	ND	0.50	mg/Kg	341133	05/25/24	EPA 3050B	EPA 6010B	SBW
Chromium	42	0.99	mg/Kg	341133	05/25/24	EPA 3050B	EPA 6010B	SBW
Cobalt	5.7	0.50	mg/Kg	341133	05/25/24	EPA 3050B	EPA 6010B	SBW
Copper	22	0.99	mg/Kg	341133	05/25/24	EPA 3050B	EPA 6010B	SBW
Lead	12	0.99	mg/Kg	341133	05/25/24	EPA 3050B	EPA 6010B	SBW
Mercury	ND	0.16	mg/Kg	341126	05/28/24	METHOD	EPA 7471A	MLL
Molybdenum	ND	0.99	mg/Kg	341133	05/25/24	EPA 3050B	EPA 6010B	SBW
Nickel	29	0.99	mg/Kg	341133	05/25/24	EPA 3050B	EPA 6010B	SBW
Selenium	ND	3.0	mg/Kg	341133	05/25/24	EPA 3050B	EPA 6010B	SBW
Silver	ND	0.50	mg/Kg	341133	05/25/24	EPA 3050B	EPA 6010B	SBW
Thallium	ND	3.0	mg/Kg	341133	05/25/24	EPA 3050B	EPA 6010B	SBW
Vanadium	54	0.99	mg/Kg	341133	05/25/24	EPA 3050B	EPA 6010B	SBW
Zinc	58	5.0	mg/Kg	341133	05/25/24	EPA 3050B	EPA 6010B	SBW

Legend

ND: Not Detected

RL: Reporting Limit

California Title 22 Metals: Batch QC

Lab #: 509037

Project#: 20-10491

Client: Rincon Consultants

Location: Hangar 1 NTCRA

Type: BLANK

Batch#: 341126

Analysis: EPA 7471A

Lab ID: QC1155883

Prepared: 05/24/24

Analyst: MLL

Matrix: Soil

Analyzed: 05/28/24

Diln Fac: 1.000

Prep: METHOD

QC1155883 Analyte	Result	RL	Units
Mercury	ND	0.14	mg/Kg

Legend

ND: Not Detected

RL: Reporting Limit

California Title 22 Metals: Batch QC

Lab #: 509037	Project#: 20-10491	
Client: Rincon Consultants	Location: Hangar 1 NTCRA	
Type: LCS	Batch#: 341126	Analysis: EPA 7471A
Lab ID: QC1155884	Prepared: 05/24/24	Analyst: MLL
Matrix: Soil	Analyzed: 05/28/24	
Diln Fac: 1.000	Prep: METHOD	

QC1155884 Analyte	Spiked	Result	%REC	Limits	Units
Mercury	0.8333	0.8373	100	80-120	mg/Kg

California Title 22 Metals: Batch QC

Lab #: 509037

Project#: 20-10491

Client: Rincon Consultants

Location: Hangar 1 NTCRA

Field ID: ZZZZZZZZZZ

Basis: as received

Prepared: 05/24/24

Type: MS

Diln Fac: 1.000

Analyzed: 05/28/24

MSS Lab ID: 509013-001

Batch#: 341126

Prep: METHOD

Lab ID: QC1155885

Sampled: 05/23/24

Analysis: EPA 7471A

Matrix: Soil

Received: 05/23/24

Analyst: MLL

QC1155885 Analyte	MSS Result	Spiked	Result	%REC	Limits	Units
Mercury	<0.04035	0.8929	0.8663	97	75-125	mg/Kg

Field ID: ZZZZZZZZZZ

Basis: as received

Prepared: 05/24/24

Type: MSD

Diln Fac: 1.000

Analyzed: 05/28/24

MSS Lab ID: 509013-001

Batch#: 341126

Prep: METHOD

Lab ID: QC1155886

Sampled: 05/23/24

Analysis: EPA 7471A

Matrix: Soil

Received: 05/23/24

Analyst: MLL

QC1155886 Analyte	Spiked	Result	%REC	Limits	Units	RPD	Lim
Mercury	0.8772	0.8694	99	75-125	mg/Kg	2	20

Legend

RPD: Relative Percent
 Difference

California Title 22 Metals: Batch QC

Lab #: 509037

Project#: 20-10491

Client: Rincon Consultants

Location: Hangar 1 NTCRA

Type: BLANK

Batch#: 341133

Analysis: EPA 6010B

Lab ID: QC1155895

Prepared: 05/24/24

Analyst: SBW

Matrix: Soil

Analyzed: 05/25/24

Diln Fac: 1.000

Prep: EPA 3050B

QC1155895 Analyte	Result	RL	Units
Antimony	ND	3.0	mg/Kg
Arsenic	ND	1.0	mg/Kg
Barium	ND	1.0	mg/Kg
Beryllium	ND	0.50	mg/Kg
Cadmium	ND	0.50	mg/Kg
Chromium	ND	1.0	mg/Kg
Cobalt	ND	0.50	mg/Kg
Copper	ND	1.0	mg/Kg
Lead	ND	1.0	mg/Kg
Molybdenum	ND	1.0	mg/Kg
Nickel	ND	1.0	mg/Kg
Selenium	ND	3.0	mg/Kg
Silver	ND	0.50	mg/Kg
Thallium	ND	3.0	mg/Kg
Vanadium	ND	1.0	mg/Kg
Zinc	ND	5.0	mg/Kg

Legend

ND: Not Detected

RL: Reporting Limit

California Title 22 Metals: Batch QC

Lab #: 509037	Project#: 20-10491
Client: Rincon Consultants	Location: Hangar 1 NTCRA
Type: LCS	Batch#: 341133
Lab ID: QC1155896	Prepared: 05/24/24
Matrix: Soil	Analyzed: 05/25/24
Diln Fac: 1.000	Prep: EPA 3050B
Analysis: EPA 6010B	
Analyst: SBW	

QC1155896 Analyte	Spiked	Result	%REC	Limits	Units
Antimony	100.0	102.1	102	80-120	mg/Kg
Arsenic	100.0	100.1	100	80-120	mg/Kg
Barium	100.0	106.6	107	80-120	mg/Kg
Beryllium	100.0	102.9	103	80-120	mg/Kg
Cadmium	100.0	101.5	102	80-120	mg/Kg
Chromium	100.0	101.9	102	80-120	mg/Kg
Cobalt	100.0	107.9	108	80-120	mg/Kg
Copper	100.0	101.9	102	80-120	mg/Kg
Lead	100.0	108.3	108	80-120	mg/Kg
Molybdenum	100.0	102.0	102	80-120	mg/Kg
Nickel	100.0	108.1	108	80-120	mg/Kg
Selenium	100.0	94.66	95	80-120	mg/Kg
Silver	50.00	50.25	101	80-120	mg/Kg
Thallium	100.0	105.4	105	80-120	mg/Kg
Vanadium	100.0	102.5	103	80-120	mg/Kg
Zinc	100.0	101.7	102	80-120	mg/Kg

California Title 22 Metals: Batch QC

Lab #: 509037

Project#: 20-10491

Client: Rincon Consultants

Location: Hangar 1 NTCRA

Field ID: ZZZZZZZZZZ

Basis: as received

Prepared: 05/24/24

Type: MS

Diln Fac: 1.000

Analyzed: 05/25/24

MSS Lab ID: 508991-001

Batch#: 341133

Prep: EPA 3050B

Lab ID: QC1155897

Sampled: 05/23/24

Analysis: EPA 6010B

Matrix: Miscell.

Received: 05/23/24

Analyst: SBW

QC1155897 Analyte	MSS Result	Spiked	Result	%REC	Limits	Units
Antimony	<0.8456	95.24	63.26	66 *	75-125	mg/Kg
Arsenic	<0.2437	95.24	87.76	92	75-125	mg/Kg
Barium	0.6341	95.24	94.61	99	75-125	mg/Kg
Beryllium	<0.006039	95.24	91.80	96	75-125	mg/Kg
Cadmium	<0.03501	95.24	91.04	96	75-125	mg/Kg
Chromium	<0.2186	95.24	90.63	95	75-125	mg/Kg
Cobalt	0.4092	95.24	96.32	101	75-125	mg/Kg
Copper	<0.1362	95.24	91.95	97	75-125	mg/Kg
Lead	<0.2507	95.24	97.09	102	75-125	mg/Kg
Molybdenum	1.641	95.24	85.93	88	75-125	mg/Kg
Nickel	78.67	95.24	157.7	83	75-125	mg/Kg
Selenium	<0.5197	95.24	83.31	87	75-125	mg/Kg
Silver	<0.05942	47.62	45.19	95	75-125	mg/Kg
Thallium	<0.3242	95.24	78.03	82	75-125	mg/Kg
Vanadium	240.0	95.24	280.6	43 *	75-125	mg/Kg
Zinc	1.825	95.24	93.09	96	75-125	mg/Kg

Field ID: ZZZZZZZZZZ

Basis: as received

Prepared: 05/24/24

Type: MSD

Diln Fac: 1.000

Analyzed: 05/25/24

MSS Lab ID: 508991-001

Batch#: 341133

Prep: EPA 3050B

Lab ID: QC1155898

Sampled: 05/23/24

Analysis: EPA 6010B

Matrix: Miscell.

Received: 05/23/24

Analyst: SBW

QC1155898 Analyte	Spiked	Result	%REC	Limits	Units	RPD	Lim
Antimony	99.01	69.41	70 *	75-125	mg/Kg	5	41
Arsenic	99.01	91.79	93	75-125	mg/Kg	1	35
Barium	99.01	98.70	99	75-125	mg/Kg	0	20
Beryllium	99.01	95.68	97	75-125	mg/Kg	0	20
Cadmium	99.01	94.21	95	75-125	mg/Kg	0	20
Chromium	99.01	94.47	95	75-125	mg/Kg	0	20
Cobalt	99.01	100.5	101	75-125	mg/Kg	0	20
Copper	99.01	95.64	97	75-125	mg/Kg	0	20
Lead	99.01	101.1	102	75-125	mg/Kg	0	20
Molybdenum	99.01	90.70	90	75-125	mg/Kg	2	20
Nickel	99.01	151.4	73 *	75-125	mg/Kg	6	20
Selenium	99.01	86.79	88	75-125	mg/Kg	0	20
Silver	49.50	47.01	95	75-125	mg/Kg	0	20
Thallium	99.01	84.24	85	75-125	mg/Kg	4	20
Vanadium	99.01	257.7	18 *	75-125	mg/Kg	10	20
Zinc	99.01	96.07	95	75-125	mg/Kg	1	20

Legend

*: Value is outside QC limits

RPD: Relative Percent Difference

California Title 22 Metals: Batch QC

Lab #: 509037

Project#: 20-10491

Client: Rincon Consultants

Location: Hangar 1 NTCRA

Field ID: ZZZZZZZZZZ

Basis: as received

Analyzed: 05/25/24

Type: Post Digest Spike

Diln Fac: 1.000

Prep: EPA 3050B

MSS Lab ID: 508991-001

Batch#: 341133

Analysis: EPA 6010B

Lab ID: QC1155899

Sampled: 05/23/24

Analyst: SBW

Matrix: Miscell.

Received: 05/23/24

QC1155899 Analyte	MSS Result	Spiked	Result	%REC	Limits	Units
Antimony	<0.8456	96.15	96.11	100	75-125	mg/Kg
Arsenic	<0.2437	96.15	93.19	97	75-125	mg/Kg
Barium	0.6341	96.15	100.3	104	75-125	mg/Kg
Beryllium	<0.006039	96.15	96.30	100	75-125	mg/Kg
Cadmium	<0.03501	96.15	96.30	100	75-125	mg/Kg
Chromium	<0.2186	96.15	95.53	99	75-125	mg/Kg
Cobalt	0.4092	96.15	101.7	105	75-125	mg/Kg
Copper	<0.1362	96.15	97.83	102	75-125	mg/Kg
Lead	<0.2507	96.15	102.3	106	75-125	mg/Kg
Molybdenum	1.641	96.15	97.31	99	75-125	mg/Kg
Nickel	78.67	96.15	176.9	102	75-125	mg/Kg
Selenium	<0.5197	96.15	89.71	93	75-125	mg/Kg
Silver	<0.05942	48.08	47.38	99	75-125	mg/Kg
Thallium	<0.3242	96.15	99.53	104	75-125	mg/Kg
Vanadium	240.0	96.15	330.7	94	75-125	mg/Kg
Zinc	1.825	96.15	98.74	101	75-125	mg/Kg

California Title 22 Metals: Batch QC

Lab #: 509037

Project#: 20-10491

Client: Rincon Consultants

Location: Hangar 1 NTCRA

Type: BLANK

Batch#: 341230

Analysis: EPA 7471A

Lab ID: QC1156272

Prepared: 05/28/24

Analyst: MLL

Matrix: Soil

Analyzed: 05/28/24

Diln Fac: 1.000

Prep: METHOD

QC1156272 Analyte	Result	RL	Units
Mercury	ND	0.14	mg/Kg

Legend

ND: Not Detected

RL: Reporting Limit

California Title 22 Metals: Batch QC

Lab #: 509037	Project#: 20-10491	
Client: Rincon Consultants	Location: Hangar 1 NTCRA	
Type: LCS	Batch#: 341230	Analysis: EPA 7471A
Lab ID: QC1156273	Prepared: 05/28/24	Analyst: MLL
Matrix: Soil	Analyzed: 05/28/24	
Diln Fac: 1.000	Prep: METHOD	

QC1156273 Analyte	Spiked	Result	%REC	Limits	Units
Mercury	0.8333	0.8782	105	80-120	mg/Kg

California Title 22 Metals: Batch QC

Lab #: 509037

Project#: 20-10491

Client: Rincon Consultants

Location: Hangar 1 NTCRA

Field ID: ZZZZZZZZZZ	Basis: as received	Prepared: 05/28/24
Type: MS	Diln Fac: 1.000	Analyzed: 05/28/24
MSS Lab ID: 508991-001	Batch#: 341230	Prep: METHOD
Lab ID: QC1156274	Sampled: 05/23/24	Analysis: EPA 7471A
Matrix: Miscell.	Received: 05/23/24	Analyst: MLL

QC1156274 Analyte	MSS Result	Spiked	Result	%REC	Limits	Units
Mercury	<0.03885	0.9091	0.9019	99	75-125	mg/Kg

Field ID: ZZZZZZZZZZ	Basis: as received	Prepared: 05/28/24
Type: MSD	Diln Fac: 1.000	Analyzed: 05/28/24
MSS Lab ID: 508991-001	Batch#: 341230	Prep: METHOD
Lab ID: QC1156275	Sampled: 05/23/24	Analysis: EPA 7471A
Matrix: Miscell.	Received: 05/23/24	Analyst: MLL

QC1156275 Analyte	Spiked	Result	%REC	Limits	Units	RPD	Lim
Mercury	0.9804	1.013	103	75-125	mg/Kg	4	20

Legend
 RPD: Relative Percent
 Difference