



**Naval Facilities Engineering Systems Command Southwest
BRAC PMO West
San Diego, CA**

AIR MONITORING SUMMARY REPORT 04 FOR PARCEL B REMOVAL SITE EVALUATION

HUNTERS POINT NAVAL SHIPYARD

SAN FRANCISCO, CALIFORNIA

July 7th, 2022 through December 8th, 2022

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July 7th, 2022 through December 8th, 2022

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Prepared for:

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Acronyms and Abbreviations

AMSR	<i>Air Monitoring Summary Report</i>
ASRC	<i>Arctic Slope Regional Corporation</i>
Cal/OSHA	<i>California Occupational Safety and Health Administration</i>
Cfm	<i>cubic feet per minute</i>
CFR	<i>Code of Federal Regulations</i>
CTO	<i>Contract Task Order</i>
DMCP	<i>Dust Monitoring and Control Plan</i>
DTSC	<i>State of California Department of Toxic Substances Control</i>
EPA	<i>United States Environmental Protection Agency</i>
fiber/cm ³	<i>fibers per cubic centimeter</i>
Gilbane	<i>Gilbane Federal</i>
HERO	<i>Human and Ecological Risk Office</i>
HPNS	<i>Hunters Point Naval Shipyard</i>
L/min	<i>liters per minute</i>
MDC	<i>minimum detectable concentration</i>
mg/m ³	<i>milligrams per cubic meter</i>
Navy	<i>U.S. Department of the Navy</i>
NIOSH	<i>National Institute for Occupational Safety and Health</i>
PEL	<i>permissible exposure limit</i>
PM10	<i>particulate matter less than 10 microns in diameter</i>
RAWP	<i>Remedial Action Work Plan</i>
RDL	<i>required detection limit</i>
ROC	<i>Radionuclide of concern</i>
TSP	<i>total suspended particulates</i>
TWA	<i>time-weighted average</i>
µg/m ³	<i>micrograms per cubic meter</i>

1.0 Introduction

This Air Monitoring Summary Report (AMSR) was prepared by GES as requested by the United States Department of the Navy (Navy) under Radiological Environmental Multiple Award Contract N62473-17-D-0005, Contract Task Order (CTO) N6247317F5364. GES is performing air monitoring at Hunters Point Naval Shipyard (HPNS) in accordance with the Final Dust Management and Air Monitoring Plan (DMAMP), included as Appendix E to *Final Parcel B Removal Site Evaluation Work Plan, Hunters Point Naval Shipyard, San Francisco, California* (WP; Gilbane, 2022). The DMAMP describes the procedures that minimize dust during work activities and requires air monitoring to ensure these procedures are effective. The methods and procedures detailed in the DMAMP help to prevent exposure of residents and construction crews to potential airborne chemicals of concern, and dust from the work area.

This summary report describes the following:

- Where and how air monitoring samples were collected.
- What test methods were used to analyze air monitoring samples.
- How air monitoring data were evaluated.

This AMSR summarizes the air monitoring activities conducted by GES at HPNS Parcel B from July 7th, 2022 through December 8th, 2022 and compares the results with the established action levels presented in the DMAMP (Appendix E of the WP [Gilbane, 2022]).

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2.0 Monitoring Site Locations

Air monitoring stations were deployed at the minimum of one upwind and one downwind location whenever active soil handling operations were in progress. In addition, a southernmost air monitoring station (near Building 113A) was operated as a supplemental air monitoring location during earthmoving activities. Additional radiological air monitors may be placed within the daily work areas to monitor for worker health and safety. Based on past meteorological data, the prevalent wind direction at HPNS was from the west or west-southwest. The locations of Parcel B air monitoring stations are presented on **Figure 2-1**.

Air monitoring was performed to estimate and assess the impact of field activities. The locations of air monitoring stations were determined based on the prevailing wind direction and were modified as needed for accessibility and worker safety considerations. Wind direction was monitored daily using a windsock and confirmed with the prevalent wind direction recorded for the APTIM – KCASANFR1504 or Bayview Manor - KCASANFR1775 published at Weather Underground (www.wunderground.com).

Upwind/downwind station designations were assigned based on the prevalent wind direction. Atmospheric parameters were checked daily at www.wunderground.com (see **Attachment 1**). Monitoring stations remained stationary while sampling was conducted. Each monitoring station included four different monitoring systems:

1. Asbestos
2. Particulate matter less than 10 microns in diameter (PM10) and Metals (Lead and Manganese)
3. Total suspended particulates (TSP)
4. Radionuclides

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3.0 Analytical Methods

3.1 Asbestos

Air samples were sampled and analyzed in accordance with National Institute for Occupational Safety and Health (NIOSH) Method 7400, from the NIOSH Manual of Analytical Methods (NIOSH, 1994). Method 7400 requires that samples be collected on three-piece cellulose ester filters fitted with conductive cowlings at a sampling rate of between 0.5 liters per minute (L/min) and 16 L/min. Each sample was collected over the course of a period not to exceed 25 hours and submitted to A&B Laboratories of Houston, TX for analysis. Asbestos results were reviewed for anomalies and compliance with the action levels listed below.

3.2 PM10, Lead and Manganese

Filter-based PM10 data are collected to ensure the protection of public health and safety during construction operations. Filter-based PM10 data are generated by sampling with calibrated air monitoring equipment that are operated continuously over the course of a period not to exceed 25 hours in accordance with the U.S. Environmental Protection Agency (EPA) reference sampling method for PM10 as described in Title 40 Code of Federal Regulations (CFR), Part 50, Subpart J (EPA, 1999a). During the sampling, measurements are taken to precisely calculate the volume of air that has passed through the filter media sample. The period sampled is dependent on the duration of the work activity. The sample is then shipped to Eurofins, West Sacramento, CA for analysis. The concentration is gravimetrically determined. The sample results are reviewed for field and laboratory anomalies to provide confidence in the data and compared to air quality criteria to ensure compliance with the action levels listed below. In this way the precise amount of PM10 present in each cubic meter of air is determined.

Once the PM10 concentration was gravimetrically determined, the filter was analyzed for manganese and lead in accordance with EPA Method 6020 (equivalent to IO-3.5 in the Compendium of Methods for the Determination of Inorganic Compounds in Ambient Air [EPA, 1999b]).

3.3 TSP

TSP samples were collected with a high-volume (39 to 60 cubic feet per minute [cfm]) air sampler in accordance with EPA's reference sampling method for TSP, described in 40 CFR 50, Subpart B. Each sample was collected on a filter over the course of a period not to exceed 25 hours (depending on the duration of the work activity). The filter was then weighed to determine the amount of TSP collected. The resulting concentration was compared to the HPNS Basewide level listed below to minimize permissible dust releases from the site.

3.4 Radionuclides of Concern

Radiological air samples were collected on filter media with a LV-1 low-volume air sampler. The air filter concentration is counted onsite following a decay period and are compared with public air concentration limits published in 10 CFR Part 20. Radiological air sampling methods and procedures are detailed in Gilbane Radiological Procedure PR-RP-150 *Radiological Survey and Sampling* (Gilbane, 2019).

Perimeter samples for ROCs were analyzed at ARS Aleut Analytical, of Port Allen, LA by the radiological methods listed below.

- Gamma Spectroscopy by EPA Method 901.1
- Alpha Spectroscopy/Eichrom Resin Separation by HASL 300 Pu-02RC
- Alpha Emitting Isotopes by EPA Method 9315
- Gas Flow Proportional Counting/Eichrom Resin Separation by EPA 905.0

The calculated airborne concentration in microcuries per filter was then compared to the effluent concentration limit specified in Table 2 of Appendix B to 10 CFR 20. The effluent concentration of a given radionuclide is the minimum concentration in air which, if inhaled continuously over the course of a year, results in an exposure equal to the annual regulatory limit specified in 10 CFR 20.1302. The threshold for radiological effluent concentration in air samples is 10 percent of the effluent concentration, which ensures work practices are evaluated and modified as necessary to ensure the limit is not reached.

The equipment specifications and sampling procedures have complied with the specifications provided in the regulations for the sampler, filter media, accuracy, calibration, and quality assurance.

4.0 Air Monitoring Data Interpretation and Action Levels

To facilitate the comparison to project action levels, the delta between the upwind and downwind PM10 and TSP analytical results was calculated for detected values.

Calculated negative values indicating that the upwind concentration was greater than the downwind concentration and non-detected values where no delta was calculated, are interpreted as acceptable.

The resulting deltas for PM10 and TSP and analytical data from air monitoring metals samples were compared with the threshold criteria listed in **Table 4-1** reproduced from Table 1; and radionuclide activities were compared to the airborne concentration action levels listed reproduced from Table 2 of the approved DMAMP (Appendix E of the WP [Gilbane, 2022]. The PM10 delta was additionally compared to the criterion taken from the *Final Basewide Dust Control Plan, Revision 1, Hunters Point Shipyard, San Francisco, California* (Tetra Tech EC, 2010) of 50 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$).

Table 4-1: Air Monitoring Threshold Criteria

Test Parameter	Threshold Criteria	Threshold Criteria Reference
Asbestos	0.1 fiber/cm ³	Cal/OSHA PEL (on-site workers)
PM10 ^a	50 $\mu\text{g}/\text{m}^3$	DTSC HERO developed action level (residents and public receptors) ^a
	5,000 $\mu\text{g}/\text{m}^3$	Cal/OSHA PEL (on-site workers) ^b
TSP	0.5 mg/m ³	Basewide HPNS Level selected to minimize overall permissible dust release from sites
Lead	0.050 mg/m ³	Cal/OSHA PEL (on-site workers)
Manganese	0.200 mg/m ³	Cal/OSHA PEL (on-site workers)
Cesium-137	4.00E-11 $\mu\text{Ci}/\text{mL}$	10 CFR, Part 20, Appendix B, Table 2 Column 1 adjusted from 50 mrem per year to maximum annual exposure of 10 mrem per year at the receptor (public receptor) ^c
Plutonium-239	4.00E-15 $\mu\text{Ci}/\text{mL}$	
Radium-226	1.80E-13 $\mu\text{Ci}/\text{mL}$	
Strontium-90	1.20E-12 $\mu\text{Ci}/\text{mL}$	
Cobalt-60	1.00E-11 $\mu\text{Ci}/\text{mL}$	

Notes:

^a = The DTSC HERO action level is based on the CSAAQS. The CSAAQS is designed to protect the general public from airborne particulates generated in the urban, suburban, and rural environments. The CSAAQS is not meant to be applied to general project-specific construction actions and related air quality. Rather, the standard is used to attain city- or regional-wide ambient air quality goals for the benefit of the general public. The current CSAAQS for PM10 is 50 $\mu\text{g}/\text{m}^3$ average per 24-hour day. The City and County of San Francisco is currently a nonattainment area for the CSAAQS for PM10.

^b = The Cal/OSHA PEL for particulates not otherwise regulated (respiratory) is used for PM10 comparison.

^c = Results may be evaluated using 40 CFR Appendix E to Part 61 to demonstrate compliance with the National Emission Standards for Hazardous Air Pollutants (40 CFR Part 61).

$\mu\text{Ci}/\text{mL}$ = microcurie per milliliter

$\mu\text{g}/\text{m}^3$ = micrograms per cubic meter

Cal/OSHA = California Division of Occupational Safety and Health Administration

DTSC HERO = California Department of Toxic Substances Control, Human and Ecological Risk Office

4.0 Air Monitoring Data Interpretation and Action Levels

fiber/cm³ = fibers per cubic centimeter

HPNS = Hunters Point Naval Shipyard

mg/m³ = milligrams per cubic meter

PEL = permissible exposure limit

PM10 = particulate matter less than 10 microns in diameter

TSP = total suspended particulates

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5.0 Air Monitoring Results

Weather information (including ambient pressure and temperature data) is presented in the table included as **Attachment 1**. Meteorological data for Stations 1, 2, and Building 113A were sourced from the Weather Underground (wunderground.com) station APTIM - KCASANFR1504 and Bayview Manor - KCASANFR1775. **Table 5-1** displays each air monitoring report and the associated dates covered in the report.

Air monitoring results are presented in the following attachments:

- Asbestos – **Attachment 2**
- PM10 – **Attachment 3**
- Lead and Manganese – **Attachment 4**
- TSP – **Attachment 5**
- Radiological – **Attachment 6**

Laboratory reports are included as **Attachment 7** and were subjected to cursory review by the Project Chemist. Radiological data were qualified for low-level contamination below the required detection limit (RDL) in the field filter blanks, negative results, or for minimum detectable concentrations (MDCs) above the RDL. PM10, TSP and metals had some data estimated due to low-level particulates collected on the field blank media. Data, as qualified are considered usable for their intended purposes.

Due to the nature of radiological laboratory analysis, radiological data will be presented as the contractor receives it. Ultimately the radiological results will be slightly delayed in comparison to the Asbestos, PM10, TSP, Lead, and Manganese results.

Table 5-1: Air Monitoring Report Summary

Air Monitoring Report Number	Data Date Range
01	07/07/22 – 09/15/22
02	09/16/22 – 10/13/22
03	10/14/22 – 11/03/22
04	11/04/22 – 12/08/22

5.1 Report 01

Air monitoring analytical results did not exceed project-specific screening criteria during this reporting period's site operations.

5.2 Report 02

Air monitoring analytical results did not exceed project-specific screening criteria during this reporting period's site operations.

5.3 Report 03

Air monitoring analytical results did not exceed project-specific screening criteria during this reporting period's site operations.

5.4 Report 04

Air monitoring analytical results did not exceed project-specific screening criteria during this reporting period's site operations. The delta was taken by switching the upwind and downwind results due to the change in wind direction for sample end dates 11/10/22, 11/15/22, 11/16/22, 11/22/22, and 11/23/22.

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6.0 References

California Department of Toxic Substances Control, 2021, *Human and Ecological Risk Office (HERO) Memorandum, Dust Action Levels for Parcel B, Hunters Point Naval Shipyard, San Francisco, California*, March 24.

National Institute for Occupational Safety and Health, 1994, *NIOSH Manual of Analytical Methods, Method 7400*, August.

United States Environmental Protection Agency (EPA), 1999a. Quality Assurance Handbook for Air Pollution Measurement Systems, Volume II: Ambient Air Specific Methods.

EPA, 1999b. Compendium of Methods for the Determination of Inorganic Compounds in Ambient Air.

Gilbane Federal (Gilbane), 2019. *PR-RP-150 “Radiological Survey and Sampling”*. November.

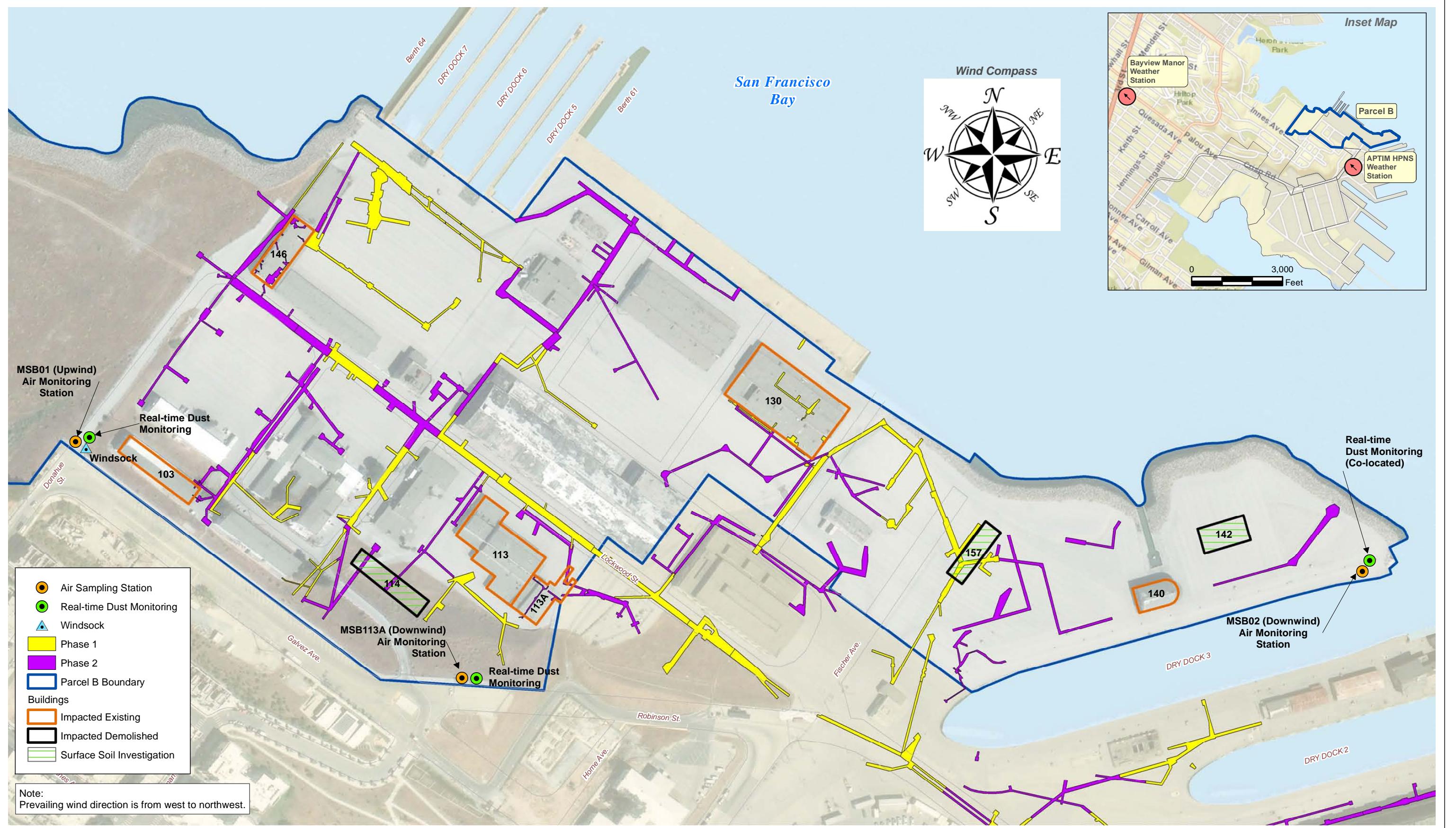
Gilbane, 2022. *Final Parcel B Removal Site Evaluation Work Plan, Former Hunters Point Naval Shipyard, San Francisco, California*. January.

Tetra Tech EC, 2010, *Final Basewide Dust Control Plan, Revision 1, Hunters Point Shipyard, San Francisco, California*, November 29.

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FIGURES

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Removal Site Evaluation Work Plan
Radiological Investigation, Survey, and Reporting, Parcel B
Hunters Point Naval Shipyard
San Francisco, California

200 0 200
Feet



Figure 2-1
Air Sampling and Dust Monitoring Locations

ATTACHMENT 1
AMBIENT PRESSURE, TEMPERATURE, AND
PREVALENT WIND DIRECTION MONITORING RESULTS

Air Monitoring Summary Report
Parcel B Removal Site Evaluation
Hunters Point Naval Shipyard, San Francisco, CA

Attachment 1

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Attachment 1: Ambient Pressure, Temperature, and Prevalent Wind Direction Monitoring Results

Start Date	Ambient Pressure (in Hg)	Ambient Temperature (°F)	Prevalent Wind Direction
7/7/2022 ¹	30.01	58.95	WSW
7/11/2022 ¹	29.89	58.88	WSW
7/12/2022 ¹	29.90	61.20	W
7/13/2022 ¹	29.95	59.13	WSW
7/14/2022 ¹	29.96	57.43	WSW
7/18/2022 ²	30.04	59.79	W
7/19/2022 ²	30.10	56.27	W
7/20/2022 ²	30.12	55.63	W
7/21/2022 ²	30.07	55.85	W
7/25/2022 ²	29.99	59.20	W
7/26/2022 ²	30.04	60.27	W
7/27/2022 ²	30.05	58.27	W
7/28/2022 ²	29.99	58.28	W
8/1/2022 ²	30.06	63.50	WNW
8/2/2022 ²	30.07	62.18	W
8/3/2022 ²	29.97	61.20	W
8/4/2022 ²	29.98	63.57	W
8/8/2022 ²	30.06	64.64	W
8/9/2022 ²	30.08	65.58	W
8/10/2022 ²	30.13	66.09	W
8/11/2022 ²	30.11	63.63	W
8/15/2022 ²	29.90	63.70	W
8/16/2022 ²	29.87	64.82	WNW
8/17/2022 ²	29.97	60.52	WNW
8/18/2022 ²	30.00	59.94	W
8/22/2022 ²	30.04	62.66	W
8/23/2022 ²	29.89	60.89	WSW
8/24/2022 ²	29.94	60.73	W
8/25/2022 ²	30.04	65.88	WSW
8/29/2022 ²	30.00	62.42	W
8/30/2022 ²	30.07	62.44	WSW
8/31/2022 ²	30.01	61.79	WSW
9/1/2022 ²	29.97	65.10	W
9/6/2022 ²	29.89	75.08	W
9/7/2022 ²	29.98	71.58	NW
9/8/2022 ²	29.87	74.28	WNW
9/12/2022 ²	30.00	61.63	WSW
9/13/2022 ²	29.98	61.93	W
9/14/2022 ²	30.04	63.16	W
9/15/2022 ²	30.11	62.63	W
9/19/2022 ²	29.92	64.57	S

Attachment 1: Ambient Pressure, Temperature, and Prevalent Wind Direction Monitoring Results

Start Date	Ambient Pressure (in Hg)	Ambient Temperature (°F)	Prevalent Wind Direction
9/20/2022 ²	29.99	64.78	NNW
9/21/2022 ²	30.07	65.29	W
9/22/2022 ²	30.15	66.46	WNW
9/26/2022 ²	30.05	58.51	W
9/27/2022 ¹	29.99	59.41	WSW
9/28/2022 ¹	30.04	59.95	WSW
9/29/2022 ¹	30.03	67.48	WSW
10/3/2022 ²	30.10	61.70	W
10/4/2022 ²	30.07	58.62	W
10/5/2022 ²	30.07	58.73	W
10/6/2022 ²	30.12	60.51	WNW
10/10/2022 ²	30.04	56.04	WSW
10/11/2022 ¹	30.01	56.86	WSW
10/12/2022 ¹	30.08	57.39	WSW
10/13/2022 ¹	30.05	57.88	WSW
10/17/2022 ¹	30.03	61.97	SE
10/18/2022 ¹	30.04	67.52	NW
10/19/2022 ¹	30.00	65.67	WSW
10/20/2022 ¹	29.97	59.54	WSW
10/24/2022 ²	30.26	59.41	WSW
10/25/2022 ²	30.17	55.60	W
10/26/2022 ²	30.12	57.13	WSW
10/27/2022 ²	30.14	60.51	SSW
10/31/2022 ²	29.95	56.90	SW
11/01/2022 ²	30.03	53.35	WSW
11/02/2022 ²	30.17	52.51	W
11/03/2022 ²	30.29	52.61	NNW
11/07/2022 ²	29.87	53.37	SW
11/09/2022 ²	30.28	53.11	W
11/10/2022 ²	30.35	53.65	ENE
11/14/2022 ²	30.23	53.12	SW
11/15/2022 ²	30.35	54.93	S
11/16/2022 ²	30.40	55.05	W
11/17/2022 ²	30.33	55.56	ENE
11/21/2022 ²	30.25	53.86	N
11/22/2022 ²	30.25	53.74	NNE
11/23/2022 ²	30.03	53.35	WNW
11/28/2022 ²	30.07	51.87	WNW
11/29/2022 ²	30.10	49.04	NNW
11/30/2022 ²	29.99	52.23	S
12/06/2022 ¹	30.09	49.88	ESE
12/07/2022 ¹	30.25	49.26	S

Attachment 1: Ambient Pressure, Temperature, and Prevalent Wind Direction Monitoring Results

Start Date	Ambient Pressure (in Hg)	Ambient Temperature (°F)	Prevalent Wind Direction
12/08/2022 ¹	30.21	50.71	SSE

Notes:

¹Data collected using wunderground.com from Bayview Manor - KCASANFR1775

²Data collected using wunderground.com from APTIM HPNS - KCASANFR1504

°F = degree Fareheit

in Hg = inches of mercury

E = East

N = North

S = South

W = West

ATTACHMENT 2
ASBESTOS MONITORING RESULTS

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Attachment 2: Asbestos Monitoring Results

Sample, Date and Station Information			Sampler Run Information			Asbestos Fibers		
Sample ID	Sample End Date ¹	Monitoring Station	Ave Flow Rate (l/min)	Duration of Run (min)	Total Air Volume Monitored (L)	Asbestos (fibers)	Conc Asbestos (fibers/cm ³)	Exceedance (Yes/No)
MSB01-070722	07/08/22	1	3.0	1,431	4293	13.0	0.001	No
MSB02-070722	07/08/22	2	3.0	1,437	4311	7.5	0.001	No
MSB113A-070722	07/08/22	113A	3.0	1,429	4287	12.5	0.001	No
MSB01-071122	07/11/22	1	2.4	443	1063	5.5	0.003	No
MSB02-071122	07/11/22	2	3.1	448	1388	6.0	0.002	No
MSB113A-071122	07/11/22	113A	2.3	436	1002	2.0	< 0.003	No
MSB01-071222	07/12/22	1	3.3	448	1478	5.5	0.002	No
MSB02-071222	07/12/22	2	2.8	440	1232	5.0	< 0.002	No
MSB113A-071222	07/12/22	113A	1.9	424	805.6	4.0	< 0.003	No
MSB01-071322	07/13/22	1	2.0	524	1048	9.5	0.004	No
MSB02-071322	07/13/22	2	3.0	417	1251	8.5	0.003	No
MSB113A-071322	07/13/22	113A	3.0	420	1260	2.5	< 0.002	No
MSB01-071422	07/15/22	1	2.3	1,466	3371	1.5	< 0.001	No
MSB02-071422	07/15/22	2	3.0	1,443	4329	3.0	< 0.001	No
MSB113A-071422	07/15/22	113A	2.1	1,472	3091	2.0	< 0.001	No
MSB01-071822	07/19/22	1	2.5	1,378	3445	1.0	< 0.001	No
MSB02-071822	07/19/22	2	2.6	1,419	3689	1.0	< 0.001	No
MSB113A-071822	07/19/22	113A	3.6	1,422	5119	1.0	< 0.001	No
MSB01-071922	07/20/22	1	3.2	1,429	4572	0.5	< 0.001	No
MSB02-071922	07/20/22	2	2.5	1,422	3555	2.0	< 0.001	No
MSB113A-071922	07/20/22	113A	2.3	1,424	3275	2.0	< 0.001	No
MSB01-072022	07/21/22	1	2.7	1,473	3387	0.5	< 0.001	No
MSB02-072022	07/21/22	2	2.3	1,462	3947	3.0	< 0.001	No
MSB113A-072022	07/21/22	113A	2.3	1,468	3376	0.0	< 0.001	No
MSB01-072122	07/22/22	1	2.7	1,433	3869	0.5	< 0.001	No
MSB02-072122	07/22/22	2	2.9	1,456	4222	2.0	< 0.001	No
MSB113A-072122	07/22/22	113A	2.3	1,441	3314	1.0	< 0.001	No
MSB01-072522	07/26/22	1	2.4	1,454	3490	3.5	< 0.002	No
MSB02-072522	07/26/22	2	2.9	1,443	4185	2.0	< 0.002	No
MSB113A-072522	07/26/22	113A	2.2	1,454	3199	4.0	< 0.002	No
MSB01-072622	07/27/22	1	3.7	1,431	5295	4.0	< 0.002	No
MSB02-072622	07/27/22	2	3.0	1,432	4296	0.5	< 0.002	No
MSB113A-072622	07/27/22	113A	3.4	1,422	4835	1.5	< 0.002	No
MSB01-072722	07/28/22	1	3.4	1,464	4978	0.5	< 0.002	No
MSB02-072722	07/28/22	2	3.0	1,475	4425	1.5	< 0.002	No
MSB113A-072722	07/28/22	113A	3.4	1,469	4995	7.0	0.002	No
MSB01-072822	07/29/22	1	3.3	1,455	4802	8.0	0.003	No
MSB02-072822	07/29/22	2	2.9	1,466	4251	4.5	< 0.002	No
MSB113A-072822	07/29/22	113A	3.4	1,462	4971	13.0	0.004	No
MSB01-080122	08/02/22	1	3.5	1,450	5075	3.5	< 0.001	No
MSB02-080122	08/02/22	2	3.1	1,439	4460	0.0	< 0.001	No
MSB113A-080122	08/02/22	113A	3.5	1,449	5071	5.0	< 0.001	No
MSB01-080222	08/03/22	1	3.5	1,421	4973	3.5	< 0.001	No
MSB02-080222	08/03/22	2	3.4	1,426	4848	2.0	< 0.001	No
MSB113A-080222	08/03/22	113A	3.6	1,424	5126	2.5	< 0.001	No
MSB01-080322	08/04/22	1	3.4	1,430	4862	3.0	< 0.001	No
MSB02-080322	08/04/22	2	3.6	1,429	5144	8.0	0.001	No
MSB113A-080322	08/04/22	113A	3.4	1,429	4858	1.5	< 0.001	No
MSB01-080422	08/05/22	1	3.4	1,480	5032	3.5	< 0.001	No
MSB02-080422	08/05/22	2	3.4	1,466	4984	11.0	0.001	No
MSB113A-080422	08/05/22	113A	3.5	1,468	5138	28.0	0.003	No
MSB01-080822	08/09/22	1	3.7	1,443	5339	9.0	0.001	No
MSB02-080822	08/09/22	2	3.0	1,438	4314	11.0	0.001	No
MSB113A-080822	08/09/22	113A	3.6	1,442	5191	1.0	< 0.001	No
MSB01-080922	08/10/22	1	3.6	1,448	5213	4.5	< 0.001	No
MSB02-080922	08/10/22	2	3.8	1,444	5487	8.5	0.001	No
MSB113A-080922	08/10/22	113A	3.3	1,441	4755	4.5	< 0.001	No
MSB01-081022	08/11/22	1	3.2	1,446	4627	5.5	0.001	No
MSB02-081022	08/11/22	2	3.4	1,449	4927	3.5	< 0.001	No
MSB113A-081022	08/11/22	113A	3.2	1,448	4634	3.0	< 0.001	No
MSB01-081122	08/12/22	1	3.0	1,418	4254	2.5	< 0.001	No
MSB02-081122	08/12/22	2	3.4	1,414	4808	2.0	< 0.001	No
MSB113A-081122	08/12/22	113A	3.0	1,415	4245	1.5	< 0.001	No
MSB01-081522	08/16/22	1	3.6	1,444	5198	3.0	< 0.001	No
MSB02-081522	08/16/22	2	3.3	1,431	4722	2.0	< 0.001	No
MSB113A-081522	08/16/22	113A	3.1	1,444	4476	2.0	< 0.001	No
MSB01-081622	08/17/22	1	3.2	1,434	4589	4.5	< 0.001	No
MSB02-081622	08/17/22	2	3.3	1,440	4752	4.0	< 0.001	No
MSB113A-081622	08/17/22	113A	3.2	1,433	4586	4.5	< 0.001	No
MSB01-081722	08/18/22	1	3.7	1,429	5287	0.0	< 0.001	No
MSB02-081722	08/18/22	2	3.1	1,428	4427	3.5	< 0.001	No
MSB113A-081722	08/18/22	113A	3.2	1,431	4579	3.0	< 0.001	No
MSB01-081822	08/19/22	1	3.4	1,457	4954	1.5	< 0.001	No
MSB02-081822	08/19/22	2	3.1	1,471	4560	1.0	< 0.001	No

Attachment 2: Asbestos Monitoring Results

Sample, Date and Station Information			Sampler Run Information			Asbestos Fibers		
Sample ID	Sample End Date ¹	Monitoring Station	Ave Flow Rate (l/min)	Duration of Run (min)	Total Air Volume Monitored (L)	Asbestos (fibers)	Conc Asbestos (fibers/cm ³)	Exceedance (Yes/No)
MSB113A-081822	08/19/22	113A	3.2	1,462	4678	1.5	<0.001	No
MSB01-082222	08/23/22	1	3.5	1,460	5110	4.0	<0.001	No
MSB02-082222	08/23/22	2	3.2	1,444	4621	10.0	0.001	No
MSB113A-082222	08/23/22	113A	3.0	1,452	4356	4.0	<0.001	No
MSB01-082322	08/22/22	1	3.3	1,413	4663	1.5	<0.001	No
MSB02-082322	08/22/22	2	3.1	1,421	4405	1.5	<0.001	No
MSB113A-082322	08/22/22	113A	2.9	1,417	4109	0.5	<0.001	No
MSB01-082422	08/25/22	1	3.2	1,418	4538	2.5	<0.001	No
MSB02-082422	08/25/22	2	3.3	1,442	4759	3.5	<0.001	No
MSB113A-082422	08/25/22	113A	3.3	1,418	4679	1.0	<0.001	No
MSB01-082522	08/25/22 ²	1	3.0	459	1377	1.0	<0.002	No
MSB02-082522	08/25/22 ²	2	3.1	473	1466	6.0	0.002	No
MSB113A-082522	08/25/22 ²	113A	3.3	462	1525	5.5	0.002	No
MSB01-082922	08/30/22	1	3.1	1,441	4467	7.0	0.001	No
MSB02-082922	08/30/22	2	3.3	1,453	4795	7.5	0.001	No
MSB113A-082922	08/30/22	113A	3.4	1,450	4930	7.0	0.001	No
MSB01-083022	08/31/22	1	3.2	1,438	4602	5.0	<0.001	No
MSB02-083022	08/31/22	2	3.3	1,444	4765	5.0	<0.001	No
MSB113A-083022	08/31/22	113A	3.1	1,438	4458	5.5	0.001	No
MSB01-083122	09/01/22	1	3.5	1,434	5019	6.5	0.001	No
MSB02-083122	09/01/22	2	3.3	1,438	4745	7.0	0.001	No
MSB113A-083122	09/01/22	113A	3.0	1,437	4311	5.5	0.001	No
MSB01-090122	09/01/22 ²	1	3.5	389	1362	6.5	0.002	No
MSB02-090122	09/01/22 ²	2	3.1	397	1231	4.0	<0.002	No
MSB113A-090122	09/01/22 ²	113A	3.1	393	1218	4.5	<0.002	No
MSB01-090622	09/07/22	1	3.5	1,423	4980	6.5	0.001	No
MSB02-090622	09/07/22	2	3.2	1,423	4553	5.0	<0.001	No
MSB113A-090622	09/07/22	113A	3.4	1,424	4841	4.0	<0.001	No
MSB01-090722	09/08/22	1	3.5	1,459	5106	1.0	<0.001	No
MSB02-090722	09/08/22	2	3.6	1,457	5245	4.5	<0.001	No
MSB113A-090722	09/08/22	113A	3.4	1,458	4957	2.5	<0.001	No
MSB01-090822	09/08/22 ²	1	3.3	421	1389	3.5	<0.002	No
MSB02-090822	09/08/22 ²	2	3.5	455	1592	2.5	<0.002	No
MSB113A-090822	09/08/22 ²	113A	3.5	441	1543	2.0	<0.002	No
MSB01-091222	09/13/22	1	3.5	1,429	5001	2.0	<0.001	No
MSB02-091222	09/13/22	2	3.1	1,425	4417	3.0	<0.001	No
MSB113A-091222	09/13/22	113A	3.6	1,426	5133	2.5	<0.001	No
MSB01-091322	09/14/22	1	3.1	1,456	4513	1.5	<0.001	No
MSB02-091322	09/14/22	2	3.5	1,453	5085	5.0	<0.001	No
MSB113A-091322	09/14/22	113A	3.3	1,457	4808	2.5	<0.001	No
MSB01-091422	09/15/22	1	3.3	1,456	4804	4.5	<0.001	No
MSB02-091422	09/15/22	2	3.2	1,456	4659	2.5	<0.001	No
MSB113A-091422	09/15/22	113A	3.4	1,453	4940	7.5	0.001	No
MSB01-091522	09/15/22 ²	1	3.2	407	1302	3.0	<0.002	No
MSB02-091522	09/15/22 ²	2	3.5	451	1578	2.5	<0.002	No
MSB113A-091522	09/15/22 ²	113A	3.2	424	1356	2.0	<0.002	No
MSB01-091922	09/20/22	1	3.4	1,417	4817	1.5	< 0.001	No
MSB02-091922	09/20/22	2	3.4	1,435	4879	4.0	< 0.005	No
MSB113A-091922	09/20/22	113A	3.5	1,424	4984	2.0	< 0.000	No
MSB01-092022	09/21/22	1	3.6	1,466	5277	3.5	< 0.001	No
MSB02-092022	09/21/22	2	3.0	1,463	4389	2.5	< 0.001	No
MSB113A-092022	09/21/22	113A	3.0	1,469	4407	4.0	< 0.001	No
MSB01-092122	09/22/22	1	3.4	1,490	5066	2.5	< 0.001	No
MSB02-092122	09/22/22	2	3.0	1,433	4299	3.0	< 0.001	No
MSB113A-092122	09/22/22	113A	3.0	1,428	4284	1.5	< 0.001	No
MSB01-092222	9/22/22 ²	1	3.3	335	1105	1.5	< 0.002	No
MSB02-092222	9/22/22 ²	2	3.4	427	1451	2.0	< 0.002	No
MSB113A-092222	9/22/22 ²	113A	3.3	407	1343	2.0	< 0.002	No
MSB01-092622	09/27/22	1	3.4	1,440	4896	4.5	< 0.001	No
MSB02-092622	09/27/22	2	3.5	1,438	5033	8.5	0.001	No
MSB113A-092622	09/27/22	113A	3.5	1,435	5022	4.0	< 0.001	No
MSB01-092722	09/28/22	1	3.3	1,434	4732	8.0	0.001	No
MSB02-092722	09/28/22	2	3.6	1,436	5169	2.0	< 0.001	No
MSB113A-092722	09/28/22	113A	3.3	1,439	4748	2.5	< 0.001	No
MSB01-092822	09/29/22	1	3.0	1,426	4278	4.5	< 0.001	No
MSB02-092822	09/29/22	2	3.4	1,422	4834	4.5	< 0.001	No
MSB113A-092822	09/29/22	113A	3.0	1,425	4275	3.5	< 0.001	No
MSB01-092922	9/29/22 ²	1	3.5	451	1578	5.0	< 0.002	No
MSB02-092922	9/29/22 ²	2	3.3	478	1577	2.0	< 0.002	No
MSB113A-092922	9/29/22 ²	113A	3.1	458	1419	1.5	< 0.002	No
MSB01-100322	10/04/22	1	3.1	1,471	4560	4.5	< 0.001	No
MSB02-100322	10/04/22	2	3.3	1,462	4824	2.0	< 0.001	No

Attachment 2: Asbestos Monitoring Results

Sample, Date and Station Information			Sampler Run Information			Asbestos Fibers		
Sample ID	Sample End Date ¹	Monitoring Station	Ave Flow Rate (l/min)	Duration of Run (min)	Total Air Volume Monitored (L)	Asbestos (fibers)	Conc Asbestos (fibers/cm ³)	Exceedance (Yes/No)
MSB113A-100322	10/04/22	113A	3.4	1,469	4994	1.5	< 0.001	No
MSB01-100422	10/05/22	1	3.4	1,435	4879	17.0	0.002	No
MSB02-100422	10/05/22	2	3.6	1,442	5191	1.0	< 0.001	No
MSB113A-100422	10/05/22	113A	3.4	1,436	4882	0.5	< 0.001	No
MSB01-100522	10/06/22	1	3.3	1,439	4748	17.5	0.002	No
MSB02-100522	10/06/22	2	3.4	1,434	4875	1.5	< 0.001	No
MSB113A-100522	10/06/22	113A	3.2	1,430	4576	7.0	0.001	No
MSB01-100622	10/06/22 ²	1	3.3	425	1402	3.5	< 0.002	No
MSB02-100622	10/06/22 ²	2	3.4	460	1564	2.0	< 0.002	No
MSB113A-100622	10/06/22 ²	113A	3.1	440	1364	0.0	< 0.002	No
MSB01-101022	10/11/22	1	3.8	1,480	5624	5.5	0.000	No
MSB02-101022	10/11/22	2	3.6	1,441	5187	1.0	< 0.001	No
MSB113A-101022	10/11/22	113A	3.1	1,468	4550	1.0	< 0.001	No
MSB01-101122	10/12/22	1	3.6	1,413	5086	1.5	< 0.001	No
MSB02-101122	10/12/22	2	3.1	1,447	4485	4.0	< 0.001	No
MSB113A-101122	10/12/22	113A	3.1	1,418	4395	3.5	< 0.001	No
MSB01-101222	10/13/22	1	3.5	1,416	4956	2.0	< 0.001	No
MSB02-101222	10/13/22	2	3.2	1,420	4544	2.5	< 0.001	No
MSB113A-101222	10/13/22	113A	3.3	1,417	4676	3.5	< 0.001	No
MSB01-101322	10/13/22 ²	1	3.4	419	1424	3.0	< 0.002	No
MSB02-101322	10/13/22 ²	2	3.1	439	1360	1.0	< 0.002	No
MSB113A-101322	10/13/22 ²	113A	3.2	431	1379	1.0	< 0.002	No
MSB01-101722	10/18/22	1	3.4	1,414	4807	2.0	< 0.001	No
MSB02-101722	10/18/22	2	3.1	1,424	4414	1.0	< 0.001	No
MSB113A-101722	10/18/22	113A	3.3	1,414	4666	2.5	< 0.001	No
MSB01-101822	10/19/22	1	3.3	1,455	4801	9.0	0.001	No
MSB02-101822	10/19/22	2	3.1	1,453	4504	3.0	< 0.001	No
MSB113A-101822	10/19/22	113A	3.5	1,456	5096	4.0	< 0.001	No
MSB01-101922	10/20/22	1	3.4	1,422	4834	4.0	< 0.001	No
MSB02-101922	10/20/22	2	3.1	1,421	4405	3.5	< 0.001	No
MSB113A-101922	10/20/22	113A	3.4	1,421	4831	5.5	0.001	No
MSB01-102022	10/20/22 ²	1	3.5	329	1151	2.5	< 0.002	No
MSB02-102022	10/20/22 ²	2	3.3	384	1267	3.0	< 0.002	No
MSB113A-102022	10/20/22 ²	113A	3.3	354	1168	4.0	< 0.002	No
MSB01-102422	10/25/22	1	3.4	1,449	4926	19.0	0.001	No
MSB02-102422	10/25/22	2	3.3	1,446	4771	8.5	0.000	No
MSB113A-102422	10/25/22	113A	3.5	1,447	5064	13.0	0.001	No
MSB01-102522	10/26/22	1	3.3	1,446	4771	15.5	0.001	No
MSB02-102522	10/26/22	2	3.2	1,449	4636	8.0	0.000	No
MSB113A-102522	10/26/22	113A	3.2	1,449	4636	17.0	0.001	No
MSB01-102622	10/27/22	1	3.2	1,429	4572	15.0	0.001	No
MSB02-102622	10/27/22	2	3.3	1,429	4715	8.5	0.000	No
MSB113A-102622	10/27/22	113A	3.3	1,430	4719	6.5	0.000	No
MSB01-102722	10/27/22 ²	1	3.3	437	1442	13.5	0.003	No
MSB02-102722	10/27/22 ²	2	3.2	472	1510	5.5	0.000	No
MSB113A-102722	10/27/22 ²	113A	3.4	454	1543	11.5	0.002	No
MSB01-103122	11/01/22	1	3.3	1,430	4719	3.5	< 0.001	No
MSB02-103122	11/01/22	2	3.2	1,424	4556.8	2.0	< 0.001	No
MSB113A-103122	11/01/22	113A	3.4	1,428	4855	2.0	< 0.001	No
MSB01-110122	11/02/22	1	3.3	1,434	4732	3.0	< 0.001	No
MSB02-110122	11/02/22	2	3.1	1,443	4473	3.0	< 0.001	No
MSB113A-110122	11/02/22	113A	3.4	1,438	4889	2.0	< 0.001	No
MSB01-110222	11/03/22	1	3.2	1,427	4566	2.0	< 0.001	No
MSB02-110222	11/03/22	2	3.1	1,424	4414	5.0	< 0.001	No
MSB113A-110222	11/03/22	113A	3.3	1,423	4695	14.0	0.001	No
MSB01-110322	11/03/22 ²	1	3.1	437	1354	1.5	< 0.002	No
MSB02-110322	11/03/22 ²	2	3.2	459	1468	3.0	< 0.002	No
MSB113A-110322	11/03/22 ²	113A	3.2	446	1427	3.5	< 0.002	No
MSB01-110722	11/08/22	1	3.1	1,410	4371	3.5	< 0.001	No
MSB02-110722	11/08/22	2	3.3	1,420	4686	6.0	0.001	No
MSB113A-110722	11/08/22	113A	3.6	1,415	5094	3.0	< 0.001	No
MSB01-111022	11/10/22	1	3.8	1,431	5437	3.5	< 0.000	No
MSB02-111022	11/10/22	2	3.5	1,438	5033	2.0	< 0.001	No
MSB113A-111022	11/10/22	113A	3.4	1,434	4875	3.0	< 0.001	No
MSB01-111022	11/10/22 ²	1	3.3	386	1273	1.0	< 0.002	No
MSB02-111022	11/10/22 ²	2	3.4	400	1360	1.0	< 0.002	No
MSB113A-111022	11/10/22 ²	113A	3.2	412	1318	1.5	< 0.002	No
MSB01-111422	11/15/22	1	3.4	1,429	4858.6	4.0	< 0.001	No
MSB02-111422	11/15/22	2	3.5	1,423	4980.5	3.5	< 0.001	No
MSB113A-111422	11/15/22	113A	3.4	1,428	4855.2	3.5	< 0.001	No
MSB01-111522	11/16/22	1	3.3	1,437	4742.1	6.5	0.001	No
MSB02-111522	11/16/22	2	3.5	1,436	5026	3.0	< 0.001	No

Attachment 2: Asbestos Monitoring Results

Sample, Date and Station Information			Sampler Run Information			Asbestos Fibers		
Sample ID	Sample End Date ¹	Monitoring Station	Ave Flow Rate (l/min)	Duration of Run (min)	Total Air Volume Monitored (L)	Asbestos (fibers)	Conc Asbestos (fibers/cm ³)	Exceedance (Yes/No)
MSB113A-111522	11/16/22	113A	3.3	1,437	4742.1	4.0	< 0.001	No
MSB01-111622	11/17/22	1	3.3	1,428	4712.4	7.0	0.001	No
MSB02-111622	11/17/22	2	3.4	1,441	4899.4	7.5	0.001	No
MSB113A-111622	11/17/22	113A	3.7	1,448	5357.6	9.0	0.001	No
MSB01-111722	11/17/22 ²	1	3.7	449	1661.3	3.5	< 0.002	No
MSB02-111722	11/17/22 ²	2	3.5	464	1624	4.5	< 0.002	No
MSB113A-111722	11/17/22 ²	113A	3.5	437	1529.5	2.5	< 0.002	No
MSB01-112122	11/22/22	1	3.7	1,468	5341.6	5.5	0.0004	No
MSB02-112122	11/22/22	2	3.4	1,469	4994.6	5.5	0.001	No
MSB113A-112122	11/22/22	113A	3.8	1,469	5582.2	9.0	0.001	No
MSB01-112222	11/23/22	1	3.5	1,473	5155.5	8.5	0.001	No
MSB02-112222	11/23/22	2	3.4	1,502	5106.8	6.0	0.001	No
MSB113A-112222	11/23/22	113A	3.7	1,485	5494.5	7.5	0.001	No
MSB01-112822	11/29/22	1	3.8	1,355	5149	6.0	0.001	No
MSB02-112822	11/29/22	2	3.6	1,389	5000	5.0	< 0.001	No
MSB113A-112822	11/29/22	113A	3.8	1,325	5035	2.5	< 0.001	No
MSB01-112922	11/30/22	1	3.4	1,443	4906	3.5	< 0.001	No
MSB02-112922	11/30/22	2	3.5	1,439	5036	3.0	< 0.001	No
MSB113A-112922	11/30/22	113A	3.5	1,439	5036	2.5	< 0.001	No
MSB01-113022	12/01/22	1	3.5	1,448	5068	12.0	0.001	No
MSB02-113022	12/01/22	2	3.6	1,450	5220	6.0	0.001	No
MSB113A-113022	12/01/22	113A	3.5	1,447	5064	1.5	< 0.001	No
MSB01-120622	12/07/22	1	3.4	1,437	4885	11.0	0.001	No
MSB02-120622	12/07/22	2	3.4	1,422	4834	2.0	< 0.001	No
MSB113A-120622	12/07/22	113A	3.5	1,480	5180	7.5	0.001	No
MSB01-120722	12/08/22	1	3.2	1,421	4547	4.0	< 0.001	No
MSB02-120722	12/08/22	2	3.7	1,466	5424	2.5	< 0.000	No
MSB113A-120722	12/08/22	113A	3.5	1,380	4830	9.0	0.001	No
MSB01-120822	12/8/2022 ²	1	3.2	379	1212	4.0	< 0.002	No
MSB02-120822	12/8/2022 ²	2	3.6	346	1245	4.5	< 0.002	No
MSB113A-120822	12/8/2022 ²	113A	3.4	382	1298	3.0	< 0.002	No

Notes:

¹Sample "end" date indicates the date upon which sample collection ended.

²Air sample was taken down during the afternoon after field activities ceased.

Sample locations are shown on Figure 2-1

l/min = liters per minute

L = liter

min = minutes

fibers/cm³ = fibers per cubic centimeter

< = below detection limit

ATTACHMENT 3
PARTICULATE MATTER, SMALLER THAN TEN MICRONS
(PM10) MONITORING RESULTS

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Attachment 3: Particulate Matter, Smaller than Ten Microns (PM10) Monitoring Results

Sample, Date and Station Information			Sampler Run Information	PM10								
Sample ID	Monitoring Station	Sample End Date ¹	Total Air Volume Monitored (m ³)	Concentration in Air (mg/m ³)	PM10 Perimeter Concentration (Downwind - Upwind) (mg/m ³)	PM10 Perimeter Concentration (Downwind - Upwind) (ug/m ³)	PM10 MSB113A Concentration (Downwind - Upwind) (mg/m ³)	PM10 MSB113A Perimeter Concentration (Downwind - Upwind) (ug/m ³)	Cal/OSHA PEL (ug/m ³)	Exceedance (Yes/No)	HERO Action Level ³ (ug/m ³)	Exceedance (Yes/No) ²
GES_PM061322-38	MSB01	7/8/2022	1575.14	0.019	-0.0170	-17.000	-0.0060	-6.000	5,000	No	50	No
GES_PM061322-39	MSB02	7/8/2022	1626.27	0.0020								
GES_PM061322-40	MSB113A	7/8/2022	1587.75	0.013								
GES_PM061322-41	MSB01	7/12/2022	1586.87	0.0081	0.0013	1.300	-0.0006	-0.600	5,000	No	50	No
GES_PM061322-42	MSB02	7/12/2022	1593.10	0.0094								
GES_PM061322-43	MSB113A	7/12/2022	1578.52	0.0075								
GES_PM061322-44	MSB01	7/13/2022	1668.76	0.0052	-0.0030	-3.000	-0.0015	-1.500	5,000	No	50	No
GES_PM061322-45	MSB02	7/13/2022	1607.71	0.0022								
GES_PM061322-46	MSB113A	7/13/2022	1600.23	0.0037								
GES_PM061322-47	MSB01	7/14/2022	1571.88	0.015	-0.0020	-2.000	0.0000	0.000	5,000	No	50	No
GES_PM061322-48	MSB02	7/14/2022	1547.49	0.013								
GES_PM061322-49	MSB113A	7/14/2022	1586.39	0.015								
GES_PM061322-50	MSB01	7/15/2022	1671.83	0.021	-0.0020	-2.000	0.0040	4.000	5,000	No	50	No
GES_PM061322-51	MSB02	7/15/2022	1636.90	0.019								
GES_PM061322-52	MSB113A	7/15/2022	1626.56	0.025								
GES_PM061322-53	MSB01	7/19/2022	1604.22	0.025	0.0000	0.000	-0.0010	-1.000	5,000	No	50	No
GES_PM061322-54	MSB02	7/19/2022	1584.87	0.025								
GES_PM070522-73	MSB113A	7/19/2022	1584.48	0.024 J								
GES_PM070522-74	MSB01	7/20/2022	1649.08	0.0082	-0.0007	-0.700	0.0038	3.800	5,000	No	50	No
GES_PM070522-75	MSB02	7/20/2022	1593.23	0.0075								
GES_PM070522-76	MSB113A	7/20/2022	1543.80	0.012 J								
GES_PM070522-78	MSB01	7/21/2022	1681.99	0.0056	0.0040	4.000	0.0020	2.000	5,000	No	50	No
GES_PM070522-79	MSB02	7/21/2022	1631.55	0.0096								
GES_PM070522-80	MSB113A	7/21/2022	1577.49	0.0076 J								
GES_PM070522-81	MSB01	7/22/2022	1645.32	0.012	0.0020	2.000	0.0000	0.000	5,000	No	50	No
GES_PM070522-82	MSB02	7/22/2022	1624.79	0.014								
GES_PM070522-83	MSB113A	7/22/2022	1609.69	0.012 J								
GES_PM070522-84	MSB01	7/26/2022	1656.40	0.0062	0.0009	0.900	-0.0001	-0.100	5,000	No	50	No
GES_PM070522-85	MSB02	7/26/2022	1640.17	0.0071								
GES_PM070522-86	MSB113A	7/26/2022	1621.60	0.0061								
GES_PM070522-87	MSB01	7/27/2022	1630.68	0.0074	0.0000	0.000	-0.0015	-1.500	5,000	No	50	No
GES_PM070522-88	MSB02	7/27/2022	1601.47	0.0074								
GES_PM070522-89	MSB113A	7/27/2022	1585.40	0.0059								
GES_PM071122-91	MSB01	7/28/2022	1652.35	0.0057	-0.0010	-1.000	-0.0036	-3.600	5,000	No	50	No
GES_PM071122-92	MSB02	7/28/2022	1645.25	0.0047								
GES_PM071122-93	MSB113A	7/28/2022	1618.52	0.0021 J+								

Attachment 3: Particulate Matter, Smaller than Ten Microns (PM10) Monitoring Results

Sample, Date and Station Information			Sampler Run Information	PM10								
Sample ID	Monitoring Station	Sample End Date ¹	Total Air Volume Monitored (m ³)	Concentration in Air (mg/m ³)	PM10 Perimeter Concentration (Downwind - Upwind) (mg/m ³)	PM10 Perimeter Concentration (Downwind - Upwind) (ug/m ³)	PM10 MSB113A Concentration (Downwind - Upwind) (mg/m ³)	PM10 MSB113A Perimeter Concentration (Downwind - Upwind) (ug/m ³)	Cal/OSHA PEL (ug/m ³)	Exceedance (Yes/No)	HERO Action Level ³ (ug/m ³)	Exceedance (Yes/No) ²
GES_PM071122-94	MSB01	7/29/2022	1656.03	0.0053	0.0007	0.700	-0.0035	-3.500	5,000	No	50	No
GES_PM071122-95	MSB02	7/29/2022	1630.44	0.0060								
GES_PM071122-96	MSB113A	7/29/2022	1602.17	0.0018 J+								
GES_PM071122-97	MSB01	08/02/22	1664.38	0.0084	0.001	0.900	0.0016	1.600	5,000	No	50	No
GES_PM071122-98	MSB02	08/02/22	1621.19	0.0093								
GES_PM071122-99	MSB113A	08/02/22	1620.16	0.01								
GES_PM071122-101	MSB01	08/03/22	1633.03	0.0087	0.003	3.300	0.0011	1.100	5,000	No	50	No
GES_PM071122-102	MSB02	08/03/22	1606.01	0.012								
GES_PM071122-103	MSB113A	08/03/22	1586.91	0.0098								
GESPBM072622-145	MSB01	08/04/22	1641.25	0.011	0.002	2.000	0.0020	2.000	5,000	No	50	No
GESPBM072622-146	MSB02	08/04/22	1607.65	0.013								
GESPBM072622-147	MSB113A	08/04/22	1592.35	0.013 J								
GESPBM072622-148	MSB01	08/05/22	1703.92	0.013	0.002	2.000	0.0010	1.000	5,000	No	50	No
GESPBM072622-149	MSB02	08/05/22	1653.18	0.015								
GESPBM072622-150	MSB113A	08/05/22	1484.68	0.014								
GES_PM071122-105	MSB01	08/09/22	1663.70	0.01	0.002	2.000	0.0000	0.000	5,000	No	50	No
GES_PM071122-106	MSB02	08/09/22	1622.89	0.012								
GES_PM071122-107	MSB113A	08/09/22	1623.49	0.01								
GESPBM072622-153	MSB01	08/10/22	1699.59	0.008	0.002	1.600	0.0008	0.800	5,000	No	50	No
GESPBM072622-154	MSB02	08/10/22	1630.75	0.0096								
GESPBM072622-155	MSB113A	08/10/22	1637.96	0.0088								
GES_PM072622-108	MSB01	08/11/22	1657.11	0.0097	0.000	-0.300	-0.0007	-0.700	5,000	No	50	No
GESPBM072622-151	MSB02	08/11/22	1635.06	0.0094								
GESPBM072622-152	MSB113A	08/11/22	1642.95	0.009								
GESPBM072622-156	MSB01	08/12/22	1623.36	0.01	-0.001	-1.300	0.0040	4.000	5,000	No	50	No
GESPBM072622-157	MSB02	08/12/22	1598.56	0.0087								
GESPBM072622-158	MSB113A	08/12/22	1601.40	0.014								
GESPBM072622-159	MSB01	08/16/22	1666.46	0.026	0.000	0.000	-0.0010	-1.000	5,000	No	50	No
GESPBM072622-160	MSB02	08/16/22	1629.77	0.026								
GESPBM072622-161	MSB113A	08/16/22	1641.67	0.025								
GESPBM080822-163	MSB01	08/17/22	1669.85	0.0093	0.002	1.700	0.0047	4.700	5,000	No	50	No
GESPBM080822-164	MSB02	08/17/22	1548.50	0.011								
GESPBM080822-165	MSB113A	08/17/22	1532.16	0.014								
GESPBM080822-166	MSB01	08/18/22	1638.74	0.0047	0.001	0.600	0.0006	0.600	5,000	No	50	No
GESPBM080822-167	MSB02	08/18/22	1637.56	0.0053								
GESPBM080822-168	MSB113A	08/18/22	1611.00	0.0053								

Attachment 3: Particulate Matter, Smaller than Ten Microns (PM10) Monitoring Results

Sample, Date and Station Information			Sampler Run Information	PM10									
Sample ID	Monitoring Station	Sample End Date ¹	Total Air Volume Monitored (m ³)	Concentration in Air (mg/m ³)	PM10 Perimeter Concentration (Downwind - Upwind) (mg/m ³)	PM10 Perimeter Concentration (Downwind - Upwind) (ug/m ³)	PM10 MSB113A Concentration (Downwind - Upwind) (mg/m ³)	PM10 MSB113A Perimeter Concentration (Downwind - Upwind) (ug/m ³)	Cal/OSHA PEL (ug/m ³)	Exceedance (Yes/No)	HERO Action Level ³ (ug/m ³)	Exceedance (Yes/No) ²	
GESPM080822-169	MSB01	08/19/22	1668.62	0.0025	0.006	6.100	0.0013	1.300	5,000	No	50	No	
GESPM080822-170	MSB02	08/19/22	1660.59	0.0086									
GESPM080822-171	MSB113A	08/19/22	1660.29	0.0038									
GESPM080822-172	MSB01	08/23/22	1674.26	0.0066	0.002	1.600	0.0006	0.600	5,000	No	50	No	
GESPM080822-173	MSB02	08/23/22	1639.37	0.0082									
GESPM080822-174	MSB113A	08/23/22	1601.43	0.0072									
GESPM080822-176	MSB01	08/24/22	1639.29	0.0068	-0.001	-0.800	0.0010	1.000	5,000	No	50	No	
GESPM080822-177	MSB02	08/24/22	1609.09	0.006									
GESPM080822-178	MSB113A	08/24/22	1571.14	0.0078									
GESPM080822-179	MSB01	08/25/22	1655.34	0.0048	-0.001	-0.900	0.0007	0.700	5,000	No	50	No	
GESPM080822-180	MSB02	08/25/22	1633.41	0.0039									
GESPM080822-181	MSB113A	08/25/22	1584.08	0.0055									
GESPM080822-182	MSB01	08/25/22 ³	513.61	0.006	-0.005	-5.000	0.0020	2.000	5,000	No	50	No	
GESPM080822-183	MSB02	08/25/22 ³	527.62	< 0.00095									
GESPM080822-184	MSB113A	08/25/22 ³	510.18	0.008									
GESPM080822-185	MSB01	08/30/22	1636.24	0.019	-0.001	-1.000	0.0020	2.000	5,000	No	50	No	
GESPM080822-186	MSB02	08/30/22	1617.12	0.018									
GESPM080822-187	MSB113A	08/30/22	1582.23	0.021									
GESPM080822-189	MSB01	08/31/22	1648.08	0.018	-0.005	-5.000	-0.0020	-2.000	5,000	No	50	No	
GESPM080822-190	MSB02	08/31/22	1637.85	0.013									
GESPM080822-191	MSB113A	08/31/22	1596.26	0.016									
GESPM080822-192	MSB01	09/01/22	1655.98	0.012	-0.001	-1.000	0.0030	3.000	5,000	No	50	No	
GESPM080822-193	MSB02	09/01/22	1629.07	0.011									
GESPM080822-194	MSB113A	09/01/22	1588.04	0.015									
GESPM080822-195	MSB01	09/01/22 ³	439.21	0.008	0.002	2.000	0.0010	1.000	5,000	No	50	No	
GESPM080822-196	MSB02	09/01/22 ³	450.62	0.01									
GESPM080822-197	MSB113A	09/01/22 ³	431.76	0.009									
GESPM080822-198	MSB01	09/07/22	1649.77	0.037	-0.009	-9.000	-0.0020	-2.000	5,000	No	50	No	
GESPM082222-199	MSB02	09/07/22	1630.41	0.028									
GESPM082222-200	MSB113A	09/07/22	1611.43	0.035									
GESPM082222-202	MSB01	09/08/22	1685.89	0.028	-0.003	-3.000	-0.0070	-7.000	5,000	No	50	No	
GESPM082222-203	MSB02	09/08/22	1668.92	0.025									
GESPM082222-204	MSB113A	09/08/22	1661.41	0.021									
GESPM082222-205	MSB01	09/08/22 ³	435.50	0.042	-0.016	-16.000	-0.0030	-3.000	5,000	No	50	No	
GESPM082222-206	MSB02	09/08/22 ³	512.06	0.026									
GESPM082222-207	MSB113A	09/08/22 ³	491.77	0.039									

Attachment 3: Particulate Matter, Smaller than Ten Microns (PM10) Monitoring Results

Sample, Date and Station Information			Sampler Run Information	PM10								
Sample ID	Monitoring Station	Sample End Date ¹	Total Air Volume Monitored (m ³)	Concentration in Air (mg/m ³)	PM10 Perimeter Concentration (Downwind - Upwind) (mg/m ³)	PM10 Perimeter Concentration (Downwind - Upwind) (ug/m ³)	PM10 MSB113A Concentration (Downwind - Upwind) (mg/m ³)	PM10 MSB113A Perimeter Concentration (Downwind - Upwind) (ug/m ³)	Cal/OSHA PEL (ug/m ³)	Exceedance (Yes/No)	HERO Action Level ³ (ug/m ³)	Exceedance (Yes/No) ²
GESPM082222-208	MSB01	09/13/22	1589.23	0.024	-0.001	-1.000	0.0030	3.000	5,000	No	50	No
GESPM082222-209	MSB02	09/13/22	1614.36	0.023								
GESPM082222-210	MSB113A	09/13/22	1608.82	0.027								
GESPM082222-212	MSB01	09/14/22	1674.65	0.0094	-0.001	-0.900	0.0002	0.200	5,000	No	50	No
GESPM082222-213	MSB02	09/14/22	1649.19	0.0085								
GESPM082222-214	MSB113A	09/14/22	1643.13	0.0096								
GESPM082222-215	MSB01	09/15/22	1670.91	0.010	-0.002	-2.100	0.0040	4.000	5,000	No	50	No
GESPM082222-216	MSB02	09/15/22	1648.13	0.0079								
GESPM090622-235	MSB113A	09/15/22	1648.11	0.014								
GESPM090622-236	MSB01	09/15/22 ³	469.15	0.0045	-0.001	-0.900	-0.0034	-3.400	5,000	No	50	No
GESPM090622-237	MSB02	09/15/22 ³	495.02	0.0036								
GESPM090622-238	MSB113A	09/15/22 ³	472.73	< 0.0011								
GESPM090622-239	MSB01	09/20/22	1635.64	0.0170	-0.0030	-3.000	0.0010	1.000	5,000	No	50	No
GESPM090622-240	MSB02	09/20/22	1637.45	0.0140								
GESPM090622-241	MSB113A	09/20/22	1593.05	0.0180								
GESPM090622-243	MSB01	09/21/22	1692.11	0.0150 J	-0.0030	-3.000	-0.001	-1.000	5,000	No	50	No
GESPM090622-244	MSB02	09/21/22	1669.66	0.0120								
GESPM090622-245	MSB113A	09/21/22	1630.46	0.0140								
GESPM090622-246	MSB01	09/22/22	1680.46	0.0140	-0.0020	-2.000	-0.0045	-4.500	5,000	No	50	No
GESPM090622-247	MSB02	09/22/22	1637.21	0.0120								
GESPM090622-248	MSB113A	09/22/22	1588.35	0.0095								
GESPM090622-249	MSB01	09/22/22 ³	373.53	< 0.0013 J	-0.0003	-0.300	0.00000	0.000	5,000	No	50	No
GESPM090622-250	MSB02	09/22/22 ³	479.58	< 0.001 J								
GESPM090622-251	MSB113A	09/22/22 ³	451.8	0.0013								
GESPM091922-289	MSB01	09/27/22	1640.65	0.0110	-0.0010	-1.000	0.0010	1.000	5,000	No	50	No
GESPM091922-290	MSB02	09/27/22	1624.03	0.0100								
GESPM091922-291	MSB113A	09/27/22	1603.22	0.0120								
GESPM091922-292	MSB01	09/28/22	1621.57	0.0120	-0.0010	-1.000	0.0020	2.000	5,000	No	50	No
GESPM091922-293	MSB02	09/28/22	1636.33	0.0110								
GESPM091922-294	MSB113A	09/28/22	1592.5	0.0140								
GESPM091922-295	MSB01	09/29/22	1623.64	0.0110	0.0000	0.000	0.0020	2.000	5,000	No	50	No
GESPM091922-296	MSB02	09/29/22	1618.33	0.0110								
GESPM091922-297	MSB113A	09/29/22	1589.08	0.0130								
GESPM091922-298	MSB01	09/29/22 ³	514.58	0.0310	-0.0150	-15.000	-0.0070	-7.000	5,000	No	50	No
GESPM091922-299	MSB02	09/29/22 ³	547.95	0.0160								
GESPM091922-300	MSB113A	09/29/22 ³	516.71	0.0240								

Attachment 3: Particulate Matter, Smaller than Ten Microns (PM10) Monitoring Results

Sample, Date and Station Information			Sampler Run Information	PM10									
Sample ID	Monitoring Station	Sample End Date ¹	Total Air Volume Monitored (m ³)	Concentration in Air (mg/m ³)	PM10 Perimeter Concentration (Downwind - Upwind) (mg/m ³)	PM10 Perimeter Concentration (Downwind - Upwind) (ug/m ³)	PM10 MSB113A Concentration (Downwind - Upwind) (mg/m ³)	PM10 MSB113A Perimeter Concentration (Downwind - Upwind) (ug/m ³)	Cal/OSHA PEL (ug/m ³)	Exceedance (Yes/No)	HERO Action Level ³ (ug/m ³)	Exceedance (Yes/No) ²	
GESPM091922-301	MSB01	10/04/22	1672.44	0.019	-0.0010	-1.000	0.0020	2.000	5,000	No	50	No	
GESPM091922-302	MSB02	10/04/22	1656.00	0.018									
GESPM091922-303	MSB113A	10/04/22	1631.28	0.021									
GESPM091922-305	MSB01	10/05/22	1635.08	0.020	-0.0020	-2.000	-0.0040	-4.000	5,000	No	50	No	
GESPM091922-306	MSB02	10/05/22	1627.94	0.018									
GESPM092122-307	MSB113A	10/05/22	1597.77	0.016									
GESPM092122-308	MSB01	10/06/22	1636.07	0.0076	-0.0014	-1.400	-0.0005	-0.500	5,000	No	50	No	
GESPM092122-309	MSB02	10/06/22	1618.34	0.0062									
GESPM092122-310	MSB113A	10/06/22	1593.63	0.0071									
GESPM092122-311	MSB01	10/06/22 ²	486.80	0.0043	-0.0004	-0.400	-0.0014	-1.400	5,000	No	50	No	
GESPM092122-312	MSB02	10/06/22 ²	513.71	0.0039 J									
GESPM092122-313	MSB113A	10/06/22 ²	485.14	0.0029									
GESPM092122-314	MSB01	10/11/22	1673.47	0.0084	-0.0003	-0.300	-0.0003	-0.300	5,000	No	50	No	
GESPM092122-315	MSB02	10/11/22	1632.85	0.0081									
GESPM092122-316	MSB113A	10/11/22	1625.79	0.0081									
GESPM092122-318	MSB01	10/12/22	1616.62	0.015	-0.0010	-1.000	0.0040	4.000	5,000	No	50	No	
GESPM092122-319	MSB02	10/12/22	1628.68	0.014									
GESPM092122-320	MSB113A	10/12/22	1582.42	0.019									
GESPM092122-321	MSB01	10/13/22	1604.98	0.0097	-0.0020	-2.000	0.0003	0.300	5,000	No	50	No	
GESPM092122-322	MSB02	10/13/22	1605.94	0.0077									
GESPM092122-323	MSB113A	10/13/22	1574.95	0.010									
GESPM092122-324	MSB01	10/13/22 ²	476.31	< 0.001 J	0.0004	0.400	0.0014	1.400	5,000	No	50	No	
GESPM092122-325	MSB02	10/13/22 ²	498.56	0.0014									
GESPM092122-326	MSB113A	10/13/22 ²	491.16	0.0024									
GESPM092122-327	MSB01	10/18/22	1614.25	0.021	-0.0040	-4.000	0.0000	0.000	5,000	No	50	No	
GESPM092122-328	MSB02	10/18/22	1612.96	0.017									
GESPM092122-329	MSB113A	10/18/22	1579.58	0.021									
GESPM092122-331	MSB01	10/19/22	1661.56	0.033	-0.0070	-7.000	0.0000	0.000	5,000	No	50	No	
GESPM092122-332	MSB02	10/19/22	1644.44	0.026									
GESPM092122-333	MSB113A	10/19/22	1626.73	0.033									
GESPM092122-334	MSB01	10/20/22	1627.83	0.018	-0.0010	-1.000	0.0030	3.000	5,000	No	50	No	
GESPM092122-335	MSB02	10/20/22	1611.53	0.017									
GESPM092122-336	MSB113A	10/20/22	1585.09	0.021									
GESPM092122-337	MSB01	10/20/22 ²	365.09	0.014	-0.0040	-4.000	-0.0056	-5.600	5,000	No	50	No	
GESPM092122-338	MSB02	10/20/22 ²	370.39	0.01									
GESPM092122-339	MSB113A	10/20/22 ²	391.25	0.0084									

Attachment 3: Particulate Matter, Smaller than Ten Microns (PM10) Monitoring Results

Sample, Date and Station Information			Sampler Run Information	PM10									
Sample ID	Monitoring Station	Sample End Date ¹	Total Air Volume Monitored (m ³)	Concentration in Air (mg/m ³)	PM10 Perimeter Concentration (Downwind - Upwind) (mg/m ³)	PM10 Perimeter Concentration (Downwind - Upwind) (ug/m ³)	PM10 MSB113A Concentration (Downwind - Upwind) (mg/m ³)	PM10 MSB113A Perimeter Concentration (Downwind - Upwind) (ug/m ³)	Cal/OSHA PEL (ug/m ³)	Exceedance (Yes/No)	HERO Action Level ³ (ug/m ³)	Exceedance (Yes/No) ²	
GESPM092122-340	MSB01	10/25/22	1646.41	0.013	-0.0020	-2.000	-0.0034	-3.400	5,000	No	50	No	
GESPM092122-341	MSB02	10/25/22	1633.73	0.011									
GESPM092122-342	MSB113A	10/25/22	1548.34	0.0096									
GESPM100322-344	MSB01	10/26/22	1645.67	0.018	0.0084	8.400	0.0020	2.000	5,000	No	50	No	
GESPM100322-345	MSB02	10/26/22	1592.33	0.032									
GESPM100322-346	MSB113A	10/26/22	1610.55	0.02									
GESPM100322-347	MSB01	10/27/22	1665.33	0.012	0.0050	5.000	0.0070	7.000	5,000	No	50	No	
GESPM100322-348	MSB02	10/27/22	1609.51	0.017									
GESPM100322-349	MSB113A	10/27/22	1592.94	0.019									
GESPM100322-350	MSB01	10/27/22 ²	496.95	0.0032	0.0039	3.900	0.0010	1.000	5,000	No	50	No	
GESPM100322-351	MSB02	10/27/22 ²	534.53	0.0071									
GESPM100322-352	MSB113A	10/27/22 ²	504.08	0.0042									
GESPM100322-356	MSB01	11/01/22	1624.14	0.019	-0.0010	-1.000	0.0010	1.000	5,000	No	50	No	
GESPM100322-355	MSB02	11/01/22	1605.49	0.018									
GESPM100322-354	MSB113A	11/01/22	1597.24	0.020									
GESPM100322-357	MSB01	11/02/22	1628.41	0.0092	-0.0017	-1.700	-0.0005	-0.500	5,000	No	50	No	
GESPM100322-359	MSB02	11/02/22	1613.51	0.0075									
GESPM100322-358	MSB113A	11/02/22	1594.35	0.0087									
GESPM100322-360	MSB01	11/03/22	1609.52	0.007	-0.0025	-2.500	-0.0051	-5.100	5,000	No	50	No	
GESPM100322-379	MSB02	11/03/22	1589.40	0.0045									
GESPM100322-380	MSB113A	11/03/22	1567.30	0.0019									
GESPM100322-381	MSB01	11/03/22 ²	500.38	0.0096 J	-0.0060	-6.000	0.0064	6.400	5,000	No	50	No	
GESPM100322-382	MSB02	11/03/22 ²	520.08	0.0036									
GESPM100322-383	MSB113A	11/03/22 ²	495.88	0.016 J									
GESPM100322-384	MSB01	11/08/22	1598.34	0.0083	0.0012	1.200	0.0007	0.700	5,000	No	50	No	
GESPM100322-385	MSB02	11/08/22	1579.76	0.0095									
GESPM100322-386	MSB113A	11/08/22	1562.49	0.0090									
GESPM100322-388	MSB01	11/10/22	1620.16	0.0092	-0.0030	-3.000	0.0018	1.800	5,000	No	50	No	
GESPM100322-389	MSB02	11/10/22	1201.38	0.0062									
GESPM100322-390	MSB113A	11/10/22	1589.02	0.011									
GESPM100322-391	MSB01	11/10/22 ²	435.87	0.020 J	0.0010	1.000	0.0080	8.000	5,000	No	50	No	
GESPM100322-392	MSB02	11/10/22 ²	425.15	0.019 J									
GESPM100322-393	MSB113A	11/10/22 ²	457.37	0.012									
GESPM100322-395	MSB01	11/15/22	1617.39	0.017	0.0040	4.000	0.0020	2.000	5,000	No	50	No	
GESPM100322-396	MSB02	11/15/22	1612.86	0.013									
GESPM101722-397	MSB113A	11/15/22	1585.58	0.015									

Attachment 3: Particulate Matter, Smaller than Ten Microns (PM10) Monitoring Results

Sample, Date and Station Information			Sampler Run Information	PM10								
Sample ID	Monitoring Station	Sample End Date ¹	Total Air Volume Monitored (m ³)	Concentration in Air (mg/m ³)	PM10 Perimeter Concentration (Downwind - Upwind) (mg/m ³)	PM10 Perimeter Concentration (Downwind - Upwind) (ug/m ³)	PM10 MSB113A Concentration (Downwind - Upwind) (mg/m ³)	PM10 MSB113A Perimeter Concentration (Downwind - Upwind) (ug/m ³)	Cal/OSHA PEL (ug/m ³)	Exceedance (Yes/No)	HERO Action Level ³ (ug/m ³)	Exceedance (Yes/No) ²
GESPM101722-398	MSB01	11/16/22	1636.05	0.022	0.0070	7.000	0.0040	4.000	5,000	No	50	No
GESPM101722-399	MSB02	11/16/22	1629.12	0.015								
GESPM101722-400	MSB113A	11/16/22	1595.95	0.018								
GESPM101722-401	MSB01	11/17/22	1634.27	0.016	-0.0010	-1.000	0.0010	1.000	5,000	No	50	No
GESPM101722-402	MSB02	11/17/22	1630.45	0.015								
GESPM101722-403	MSB113A	11/17/22	1606.86	0.017								
GESPM101722-404	MSB01	11/17/22 ²	507.01	0.029	-0.0120	-12.000	-0.0070	-7.000	5,000	No	50	No
GESPM101722-405	MSB02	11/17/22 ²	527.41	0.017								
GESPM101722-406	MSB113A	11/17/22 ²	484.19	0.022								
GESPM101722-408	MSB01	11/22/22	1667.55	0.022	0.0080	8.000	0.0030	3.000	5,000	No	50	No
GESPM101722-409	MSB02	11/22/22	1671.54	0.014								
GESPM101722-410	MSB113A	11/22/22	1629.20	0.019								
GESPM101722-411	MSB01	11/23/22	1677.36	0.019	0.0040	4.000	0.0030	3.000	5,000	No	50	No
GESPM101722-412	MSB02	11/23/22	1697.96	0.015								
GESPM101722-413	MSB113A	11/23/22	1646.43	0.016								
GESPM103122-657	MSB01	11/29/22	1529.47	0.0097	0.0001	0.100	0.0003	0.300	5,000	No	50	No
GESPM103122-658	MSB02	11/29/22	1572.93	0.0098								
GESPM103122-659	MSB113A	11/29/22	1481.59	0.010								
GESPM103122-660	MSB01	11/30/22	1630.88	0.015	-0.0040	-4.000	-0.0030	-3.000	5,000	No	50	No
GESPM103122-661	MSB02	11/30/22	1579.37	0.011								
GESPM103122-662	MSB113A	11/30/22	1586.43	0.012								
GESPM103122-663	MSB01	12/01/22	1645.42	0.0092	-0.0046	-4.600	-0.0040	-4.000	5,000	No	50	No
GESPM103122-664	MSB02	12/01/22	1592.92	0.0046								
GESPM103122-665	MSB113A	12/01/22	1604.75	0.0052								
GESPM103122-667	MSB01	12/07/22	1621.94	0.011	0.0010	1.000	0.0010	1.000	5,000	No	50	No
GESPM103122-668	MSB02	12/07/22	1621.53	0.012								
GESPM103122-669	MSB113A	12/7/2022 ³	835.78	0.012								
GESPM103122-670	MSB01	12/08/22	1547.62	0.013	-0.0010	-1.000	0.0010	1.000	5,000	No	50	No
GESPM103122-671	MSB02	12/08/22	1652.97	0.012								
GESPM103122-672	MSB113A	12/08/22	1530.56	0.014 J								

Attachment 3: Particulate Matter, Smaller than Ten Microns (PM10) Monitoring Results

Sample, Date and Station Information			Sampler Run Information	PM10								
Sample ID	Monitoring Station	Sample End Date ¹	Total Air Volume Monitored (m ³)	Concentration in Air (mg/m ³)	PM10 Perimeter Concentration (Downwind - Upwind) (mg/m ³)	PM10 Perimeter Concentration (Downwind - Upwind) (ug/m ³)	PM10 MSB113A Concentration (Downwind - Upwind) (mg/m ³)	PM10 MSB113A Perimeter Concentration (Downwind - Upwind) (ug/m ³)	Cal/OSHA PEL (ug/m ³)	Exceedance (Yes/No)	HERO Action Level ³ (ug/m ³)	Exceedance (Yes/No) ²
GESPM103122-673	MSB01	12/08/22 ²	422.08	0.018	-0.0157	-15.700	-0.0060	-6.000	5,000	No	50	No
GESPM103122-674	MSB02	12/08/22 ²	387.33	0.0023								
GESPM103122-675	MSB113A	12/08/22 ²	417.69	0.012								

Notes:

¹Air sample was not collected on days with rain.

²PM10 data is additionally compared to the recommended dust action level of 50 ug/m³ for total PM10 in accordance with the DTSC Human and Ecological Risk Office (HERO) Parcel E Memorandum dated April 29, 2019 (DTSC, 2019) for informational purposes only.

²Air sample was taken down during the afternoon after field activities ceased.

³Generator malfunction.

Sample locations are shown on Figure 2-1

min = minutes

Cal/OSHA = California Division of Occupational Safety and Health

HERO = Human and Ecological Risk Office

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

J+ = estimated concentration biased high

m³ = cubic meters

mg/m³ = milligrams per cubic meter

PEL = permissible exposure limit

PM10 = particulate matter smaller than 10 microns in diameter

ug/m³ = micrograms per cubic meter

ATTACHMENT 4
LEAD AND MANGANESE MONITORING RESULTS

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Attachment 4: Lead and Manganese Monitoring Results

Sample, Date and Station Information			Sampler Run Information	Lead		Manganese	
Sample ID	Monitoring Station	Sample End Date ¹	Total Air Volume Monitored (m ³)	Concentration in Air (mg/m ³)	Exceedance (Yes/No)	Concentration in Air (mg/m ³)	Exceedance (Yes/No)
GES_PM061322-38	MSB01	7/8/2022	1575.14	0.0000029	No	0.0000075	No
GES_PM061322-39	MSB02	7/8/2022	1626.27	0.0000012	No	0.0000026	No
GES_PM061322-40	MSB113A	7/8/2022	1587.75	0.00000082	No	0.0000024	No
GES_PM061322-41	MSB01	7/12/2022	1586.87	0.0000012	No	0.0000030	No
GES_PM061322-42	MSB02	7/12/2022	1593.10	0.00000088	No	0.0000026	No
GES_PM061322-43	MSB113A	7/12/2022	1578.52	0.00000078	No	0.0000019	No
GES_PM061322-44	MSB01	7/13/2022	1668.76	0.00000063 J	No	0.0000024	No
GES_PM061322-45	MSB02	7/13/2022	1607.71	0.0000012	No	0.0000014	No
GES_PM061322-46	MSB113A	7/13/2022	1600.23	0.00000069 J	No	0.0000021	No
GES_PM061322-47	MSB01	7/14/2022	1571.88	0.00000076	No	0.0000029	No
GES_PM061322-48	MSB02	7/14/2022	1547.49	0.00000063 J	No	0.0000014	No
GES_PM061322-49	MSB113A	7/14/2022	1586.39	0.00000073 J	No	0.0000019	No
GES_PM061322-50	MSB01	7/15/2022	1671.83	0.00000090	No	0.0000020	No
GES_PM061322-51	MSB02	7/15/2022	1636.90	0.00000070 J	No	0.0000021	No
GES_PM061322-52	MSB113A	7/15/2022	1626.56	0.00000098	No	0.0000028	No
GES_PM061322-53	MSB01	7/19/2022	1604.22	0.0000013	No	0.0000029	No
GES_PM061322-54	MSB02	7/19/2022	1584.87	0.00000075 J	No	0.00000220	No
GES_PM070522-73	MSB113A	7/19/2022	1584.48	0.0000011	No	0.0000027	No
GES_PM070522-74	MSB01	7/20/2022	1649.08	0.00000076	No	0.0000020	No
GES_PM070522-75	MSB02	7/20/2022	1593.23	0.00000044 J	No	0.0000014	No
GES_PM070522-76	MSB113A	7/20/2022	1543.80	0.0000013	No	0.0000028	No
GES_PM070522-78	MSB01	7/21/2022	1681.99	0.0000010	No	0.0000028	No
GES_PM070522-79	MSB02	7/21/2022	1631.55	0.00000072 J	No	0.00000190	No
GES_PM070522-80	MSB113A	7/21/2022	1577.49	0.00000081	No	0.00000220	No
GES_PM070522-81	MSB01	7/22/2022	1645.32	0.0000010	No	0.0000031	No
GES_PM070522-82	MSB02	7/22/2022	1624.79	0.00000066 J	No	0.0000025	No
GES_PM070522-83	MSB113A	7/22/2022	1609.69	0.00000072 J	No	0.0000020	No
GES_PM070522-84	MSB01	7/26/2022	1656.40	0.00000090	No	0.0000025 J+	No
GES_PM070522-85	MSB02	7/26/2022	1640.17	0.00000055 J	No	0.0000015 J+	No
GES_PM070522-86	MSB113A	7/26/2022	1621.60	0.00000052 J	No	0.0000016 J+	No
GES_PM070522-87	MSB01	7/27/2022	1630.68	0.00000091	No	0.0000019 J+	No
GES_PM070522-88	MSB02	7/27/2022	1601.47	0.00000048 J	No	0.0000015 J+	No
GES_PM070522-89	MSB113A	7/27/2022	1585.40	0.00000075 J	No	0.0000018 J+	No
GES_PM071122-91	MSB01	7/28/2022	1652.35	0.0000011	No	0.0000028 J+	No
GES_PM071122-92	MSB02	7/28/2022	1645.25	0.00000064 J	No	0.0000014 J+	No
GES_PM071122-93	MSB113A	7/28/2022	1618.52	0.00000077	No	0.0000014 J+	No
GES_PM071122-94	MSB01	7/29/2022	1656.03	0.00000040 J	No	0.0000017 J+	No
GES_PM071122-95	MSB02	7/29/2022	1630.44	0.00000039 J	No	0.0000024 J+	No
GES_PM071122-96	MSB113A	7/29/2022	1602.17	0.00000058 J	No	0.0000012 J+	No
GES_PM071122-97	MSB01	08/02/22	1664.38	0.0000007 J	No	0.0000026	No
GES_PM071122-98	MSB02	08/02/22	1621.19	0.00000079	No	0.0000019	No
GES_PM071122-99	MSB113A	08/02/22	1620.16	0.00000093	No	0.0000028	No
GES_PM071122-101	MSB01	08/03/22	1633.03	0.00000089	No	0.0000025	No
GES_PM071122-102	MSB02	08/03/22	1606.01	0.0000007 J	No	0.0000031	No
GES_PM071122-103	MSB113A	08/03/22	1586.91	0.00000076	No	0.0000026	No
GESPM072622-145	MSB01	08/04/22	1641.25	0.00000046 J	No	0.0000016	No

Attachment 4: Lead and Manganese Monitoring Results

Sample, Date and Station Information			Sampler Run Information	Lead		Manganese	
Sample ID	Monitoring Station	Sample End Date ¹	Total Air Volume Monitored (m ³)	Concentration in Air (mg/m ³)	Exceedance (Yes/No)	Concentration in Air (mg/m ³)	Exceedance (Yes/No)
GESPM072622-146	MSB02	08/04/22	1607.65	0.00000059 J	No	0.0000025	No
GESPM072622-147	MSB113A	08/04/22	1592.35	0.00000044 J	No	0.0000017	No
GESPM072622-148	MSB01	08/05/22	1703.92	0.0000006 J	No	0.0000021	No
GESPM072622-149	MSB02	08/05/22	1653.18	0.0000012	No	0.0000031	No
GESPM072622-150	MSB113A	08/05/22	1484.68	0.00000069 J	No	0.0000021	No
GES_PM071122-105	MSB01	08/09/22	1663.70	< 0.00000072	No	0.000002	No
GES_PM071122-106	MSB02	08/09/22	1622.89	< 0.00000074	No	0.0000035	No
GES_PM071122-107	MSB113A	08/09/22	1623.49	< 0.00000074	No	0.0000018	No
GESPM072622-153	MSB01	08/10/22	1699.59	< 0.00000071	No	0.0000019	No
GESPM072622-154	MSB02	08/10/22	1630.75	< 0.00000074	No	0.0000026	No
GESPM072622-155	MSB113A	08/10/22	1637.96	< 0.00000073	No	0.000002	No
GES_PM072622-108	MSB01	08/11/22	1657.11	< 0.00000072	No	0.0000021	No
GESPM072622-151	MSB02	08/11/22	1635.06	< 0.00000073	No	0.0000016	No
GESPM072622-152	MSB113A	08/11/22	1642.95	< 0.00000073	No	0.0000018	No
GESPM072622-156	MSB01	08/12/22	1623.36	< 0.00000074	No	0.000002	No
GESPM072622-157	MSB02	08/12/22	1598.56	< 0.00000075	No	0.0000023	No
GESPM072622-158	MSB113A	08/12/22	1601.40	< 0.00000075	No	0.0000045	No
GESPM072622-159	MSB01	08/16/22	1666.46	< 0.00000072	No	0.0000034	No
GESPM072622-160	MSB02	08/16/22	1629.77	< 0.00000074	No	0.0000033	No
GESPM072622-161	MSB113A	08/16/22	1641.67	< 0.00000073	No	0.0000036	No
GESPM080822-163	MSB01	08/17/22	1669.85	< 0.00000072	No	0.0000025	No
GESPM080822-164	MSB02	08/17/22	1548.50	< 0.00000077	No	0.0000036	No
GESPM080822-165	MSB113A	08/17/22	1532.16	< 0.00000078	No	0.0000048	No
GESPM080822-166	MSB01	08/18/22	1638.74	< 0.00000073	No	0.0000022	No
GESPM080822-167	MSB02	08/18/22	1637.56	< 0.00000073	No	0.0000022	No
GESPM080822-168	MSB113A	08/18/22	1611.00	< 0.00000074	No	0.0000027	No
GESPM080822-169	MSB01	08/19/22	1668.62	< 0.00000072	No	0.0000019	No
GESPM080822-170	MSB02	08/19/22	1660.59	< 0.00000072	No	0.0000071	No
GESPM080822-171	MSB113A	08/19/22	1660.29	< 0.00000072	No	0.0000023	No
GESPM080822-172	MSB01	08/23/22	1674.26	0.00000075	No	0.0000028	No
GESPM080822-173	MSB02	08/23/22	1639.37	0.00000068 J	No	0.0000041	No
GESPM080822-174	MSB113A	08/23/22	1601.43	0.00000056 J	No	0.0000018	No
GESPM080822-176	MSB01	08/24/22	1639.29	0.0000006 J	No	0.0000015	No
GESPM080822-177	MSB02	08/24/22	1609.09	0.00000057 J	No	0.0000017	No
GESPM080822-178	MSB113A	08/24/22	1571.14	0.00000067 J	No	0.000002	No
GESPM080822-179	MSB01	08/25/22	1655.34	0.00000044 J	No	0.0000017	No
GESPM080822-180	MSB02	08/25/22	1633.41	0.00000061 J	No	0.0000025	No
GESPM080822-181	MSB113A	08/25/22	1584.08	0.00000051 J	No	0.0000019	No
GESPM080822-182	MSB01	08/25/22 ²	513.61	0.00000014 J	No	0.0000044	No
GESPM080822-183	MSB02	08/25/22 ²	527.62	0.0000001 J	No	0.0000034	No
GESPM080822-184	MSB113A	08/25/22 ²	510.18	0.00000011 J	No	0.0000036	No
GESPM080822-185	MSB01	08/30/22	1636.24	0.00000016	No	0.0000035	No
GESPM080822-186	MSB02	08/30/22	1617.12	0.00000071 J	No	0.0000048	No
GESPM080822-187	MSB113A	08/30/22	1582.23	0.00000073 J	No	0.0000028	No
GESPM080822-189	MSB01	08/31/22	1648.08	0.00000016	No	0.0000033	No

Attachment 4: Lead and Manganese Monitoring Results

Sample, Date and Station Information			Sampler Run Information	Lead		Manganese	
Sample ID	Monitoring Station	Sample End Date ¹	Total Air Volume Monitored (m ³)	Concentration in Air (mg/m ³)	Exceedance (Yes/No)	Concentration in Air (mg/m ³)	Exceedance (Yes/No)
GESPM080822-190	MSB02	08/31/22	1637.85	0.00000055 J	No	0.0000035	No
GESPM080822-191	MSB113A	08/31/22	1596.26	0.00000059 J	No	0.0000021	No
GESPM080822-192	MSB01	09/01/22	1655.98	0.00000046 J	No	0.0000017	No
GESPM080822-193	MSB02	09/01/22	1629.07	0.00000048 J	No	0.0000021	No
GESPM080822-194	MSB113A	09/01/22	1588.04	0.00000069 J	No	0.0000024	No
GESPM080822-195	MSB01	09/01/22 ²	439.21	0.00000017 J	No	0.0000043	No
GESPM080822-196	MSB02	09/01/22 ²	450.62	0.00000012 J	No	0.0000068	No
GESPM080822-197	MSB113A	09/01/22 ²	431.76	0.00000019 J	No	0.0000054	No
GESPM080822-198	MSB01	09/07/22	1649.77	0.00000023	No	0.0000084	No
GESPM082222-199	MSB02	09/07/22	1630.41	0.00000012	No	0.0000076	No
GESPM082222-200	MSB113A	09/07/22	1611.43	0.00000019	No	0.0000068	No
GESPM082222-202	MSB01	09/08/22	1685.89	0.00000014	No	0.0000039	No
GESPM082222-203	MSB02	09/08/22	1668.92	0.00000013	No	0.0000043	No
GESPM082222-204	MSB113A	09/08/22	1661.41	0.00000012	No	0.0000033	No
GESPM082222-205	MSB01	09/08/22 ²	435.50	0.00000031	No	0.000021	No
GESPM082222-206	MSB02	09/08/22 ²	512.06	0.00000035	No	0.0000074	No
GESPM082222-207	MSB113A	09/08/22 ²	491.77	0.00000046	No	0.000012	No
GESPM082222-208	MSB01	09/13/22	1589.23	0.00000091	No	0.0000026	No
GESPM082222-209	MSB02	09/13/22	1614.36	0.00000081	No	0.0000068	No
GESPM082222-210	MSB113A	09/13/22	1608.82	0.0000001	No	0.0000038	No
GESPM082222-212	MSB01	09/14/22	1674.65	0.00000059 J	No	0.0000016	No
GESPM082222-213	MSB02	09/14/22	1649.19	0.00000043 J	No	0.0000024	No
GESPM082222-214	MSB113A	09/14/22	1643.13	0.00000075	No	0.0000022	No
GESPM082222-215	MSB01	09/15/22	1670.91	0.00000042 J	No	0.0000022	No
GESPM082222-216	MSB02	09/15/22	1648.13	0.00000054 J	No	0.0000022	No
GESPM090622-235	MSB113A	09/15/22	1648.11	0.00000056 J	No	0.0000026	No
GESPM090622-236	MSB01	09/15/22 ²	469.15	0.00000072 J	No	0.0000046	No
GESPM090622-237	MSB02	09/15/22 ²	495.02	0.00000011 J	No	0.0000056	No
GESPM090622-238	MSB113A	09/15/22 ²	472.73	0.00000016 J	No	0.0000062	No
GESPM090622-239	MSB01	09/20/22	1635.64	0.00000011 J	No	0.0000023	No
GESPM090622-240	MSB02	09/20/22	1637.45	< 0.00000073 J	No	0.0000012 J	No
GESPM090622-241	MSB113A	09/20/22	1593.05	0.00000012 J	No	0.0000022	No
GESPM090622-243	MSB01	09/21/22	1692.11	0.00000075 J	No	0.0000029	No
GESPM090622-244	MSB02	09/21/22	1669.66	< 0.00000072 J	No	0.0000015	No
GESPM090622-245	MSB113A	09/21/22	1630.46	< 0.00000074 J	No	0.0000024	No
GESPM090622-246	MSB01	09/22/22	1680.46	< 0.00000071 J	No	0.0000026	No
GESPM090622-247	MSB02	09/22/22	1637.21	< 0.00000073 J	No	0.0000016	No
GESPM090622-248	MSB113A	09/22/22	1588.35	< 0.00000076 J	No	0.0000023	No
GESPM090622-249	MSB01	09/22/22 ²	373.53	< 0.0000032 J	No	0.0000034	No
GESPM090622-250	MSB02	09/22/22 ²	479.58	0.00000028	No	0.0000036	No
GESPM090622-251	MSB113A	09/22/22 ²	451.80	< 0.0000027 J	No	0.0000037	No
GESPM091922-289	MSB01	09/27/22	1640.65	0.00000061 J	No	0.0000027	No
GESPM091922-290	MSB02	09/27/22	1624.03	0.00000044 J	No	0.000002	No
GESPM091922-291	MSB113A	09/27/22	1603.22	0.00000067 J	No	0.0000024	No
GESPM091922-292	MSB01	09/28/22	1621.57	0.00000074	No	0.0000024	No
GESPM091922-293	MSB02	09/28/22	1636.33	0.00000053 J	No	0.0000019	No
GESPM091922-294	MSB113A	09/28/22	1592.50	0.0000001	No	0.0000003	No
GESPM091922-295	MSB01	09/29/22	1623.64	0.0000004 J	No	0.0000014 J	No

Attachment 4: Lead and Manganese Monitoring Results

Sample, Date and Station Information			Sampler Run Information	Lead		Manganese	
Sample ID	Monitoring Station	Sample End Date ¹	Total Air Volume Monitored (m ³)	Concentration in Air (mg/m ³)	Exceedance (Yes/No)	Concentration in Air (mg/m ³)	Exceedance (Yes/No)
GESPM091922-296	MSB02	09/29/22	1618.33	0.00000055 J	No	0.0000015	No
GESPM091922-297	MSB113A	09/29/22	1589.08	0.00000059 J	No	0.0000018	No
GESPM091922-298	MSB01	09/29/22 ²	514.58	0.0000013 J	No	0.000015	No
GESPM091922-299	MSB02	09/29/22 ²	547.95	0.0000012 J	No	0.0000034	No
GESPM091922-300	MSB113A	09/29/22 ²	516.71	0.0000013 J	No	0.0000046	No
GESPM091922-301	MSB01	10/04/22	1672.44	0.00000073	No	0.0000028 J+	No
GESPM091922-302	MSB02	10/04/22	1656.00	0.00000064 J	No	0.0000026 J+	No
GESPM091922-303	MSB113A	10/04/22	1631.28	0.00000087	No	0.0000033 J+	No
GESPM091922-305	MSB01	10/05/22	1635.08	0.00000072 J	No	0.0000042 J+	No
GESPM091922-306	MSB02	10/05/22	1627.94	0.00000054 J	No	0.0000024 J+	No
GESPM091222-307	MSB113A	10/05/22	1597.77	0.00000095	No	0.0000037 J+	No
GESPM091222-308	MSB01	10/06/22	1636.07	0.00000075	No	0.0000028 J+	No
GESPM091222-309	MSB02	10/06/22	1618.34	0.00000056 J	No	0.0000022 J+	No
GESPM091222-310	MSB113A	10/06/22	1593.63	0.00000098	No	0.0000031 J+	No
GESPM091222-311	MSB01	10/06/22 ²	486.80	0.0000013 J	No	0.0000039 J+	No
GESPM091222-312	MSB02	10/06/22 ²	513.71	0.0000013 J	No	0.0000038 J+	No
GESPM091222-313	MSB113A	10/06/22 ²	485.14	0.0000014 J	No	0.0000042 J+	No
GESPM091222-314	MSB01	10/11/22	1673.47	< 0.00000072	No	0.0000025	No
GESPM091222-315	MSB02	10/11/22	1632.85	< 0.00000073	No	0.0000019	No
GESPM091222-316	MSB113A	10/11/22	1625.79	< 0.00000074	No	0.0000022	No
GESPM091222-318	MSB01	10/12/22	1616.62	< 0.00000074	No	0.0000031	No
GESPM091222-319	MSB02	10/12/22	1628.68	< 0.00000074	No	0.0000024	No
GESPM091222-320	MSB113A	10/12/22	1582.42	< 0.00000076	No	0.000004	No
GESPM091222-321	MSB01	10/13/22	1604.98	< 0.00000075	No	0.0000023	No
GESPM091222-322	MSB02	10/13/22	1605.94	< 0.00000075	No	0.0000018 J+	No
GESPM091222-323	MSB113A	10/13/22	1574.95	< 0.00000076	No	0.0000038	No
GESPM091222-324	MSB01	10/13/22 ²	476.31	0.0000022	No	0.0000048	No
GESPM091222-325	MSB02	10/13/22 ²	498.56	0.0000014	No	0.0000038	No
GESPM091222-326	MSB113A	10/13/22 ²	491.16	0.0000028	No	0.0000057	No
GESPM091222-328	MSB02	10/18/22	1612.96	0.0000013	No	0.000007	No
GESPM091222-329	MSB113A	10/18/22	1579.58	0.0000011	No	0.0000046	No
GESPM091222-331	MSB01	10/19/22	1661.56	0.0000014	No	0.0000063	No
GESPM091222-332	MSB02	10/19/22	1644.44	0.0000026	No	0.000018	No
GESPM091222-333	MSB113A	10/19/22	1626.73	0.0000019	No	0.000011	No
GESPM091222-334	MSB01	10/20/22	1627.83	0.0000029	No	0.000017	No
GESPM091222-335	MSB02	10/20/22	1611.53	0.0000011	No	0.0000062	No
GESPM091222-336	MSB113A	10/20/22	1585.09	0.0000014	No	0.0000079	No
GESPM091222-337	MSB01	01/02/00	365.09	0.0000021 J	No	0.0000084	No
GESPM091222-338	MSB02	01/02/00	370.39	0.0000016 J	No	0.0000061	No
GESPM091222-339	MSB113A	10/20/22 ²	391.25	0.0000024 J	No	0.0000071	No
GESPM091222-340	MSB01	10/25/22	1646.41	0.0000072 J	No	0.0000053	No
GESPM091222-341	MSB02	10/25/22	1633.73	0.0000055 J	No	0.0000027	No
GESPM091222-342	MSB113A	10/25/22	1548.34	0.0000067 J	No	0.0000031	No
GESPM100322-344	MSB01	10/26/22	1645.67	0.0000071 J	No	0.0000026	No
GESPM100322-345	MSB02	10/26/22	1592.33	0.0000019	No	0.000017	No
GESPM100322-346	MSB113A	10/26/22	1610.55	0.0000085	No	0.0000032	No
GESPM100322-347	MSB01	10/27/22	1665.33	0.0000051 J	No	0.0000027	No
GESPM100322-348	MSB02	10/27/22	1609.51	0.0000093	No	0.0000036	No
GESPM100322-349	MSB113A	10/27/22	1592.94	0.0000012	No	0.0000048	No

Attachment 4: Lead and Manganese Monitoring Results

Sample, Date and Station Information			Sampler Run Information	Lead		Manganese	
Sample ID	Monitoring Station	Sample End Date ¹	Total Air Volume Monitored (m ³)	Concentration in Air (mg/m ³)	Exceedance (Yes/No)	Concentration in Air (mg/m ³)	Exceedance (Yes/No)
GESPM100322-350	MSB01	10/27/22 ²	496.95	0.0000017 J	No	0.0000069	No
GESPM100322-351	MSB02	10/27/22 ²	534.53	0.0000024 J	No	0.0000073	No
GESPM100322-352	MSB113A	10/27/22 ²	504.08	0.0000017 J	No	0.0000065	No
GESPM100322-356	MSB01	11/01/22	1624.14	0.00000084	No	0.0000029	No
GESPM100322-355	MSB02	11/01/22	1605.49	0.00000075	No	0.0000027	No
GESPM100322-354	MSB113A	11/01/22	1597.24	0.00000097	No	0.0000034	No
GESPM100322-357	MSB01	11/02/22	1628.41	0.00000037 J	No	0.0000018	No
GESPM100322-359	MSB02	11/02/22	1613.51	0.00000028 J	No	0.000001 J	No
GESPM100322-358	MSB113A	11/02/22	1594.35	0.00000037 J	No	0.0000015 J	No
GESPM100322-360	MSB01	11/03/22	1609.52	0.00000071 J	No	0.000003	No
GESPM100322-379	MSB02	11/03/22	1589.4	0.00000034 J	No	0.0000013 J	No
GESPM100322-380	MSB113A	11/03/22	1567.30	0.00000042 J	No	0.0000017	No
GESPM100322-381	MSB01	11/03/22 ²	500.38	0.0000014 J	No	0.0000047	No
GESPM100322-382	MSB02	11/03/22 ²	520.08	0.00000022 J	No	0.0000033	No
GESPM100322-383	MSB113A	11/03/22 ²	495.88	0.0000014 J	No	0.0000039	No
GESPM100322-384	MSB01	11/08/22	1598.34	< 0.00000075	No	0.0000019 J+	No
GESPM100322-385	MSB02	11/08/22	1579.76	< 0.00000076	No	0.0000012 J	No
GESPM100322-386	MSB113A	11/08/22	1562.49	< 0.00000077	No	0.0000015 J+	No
GESPM100322-388	MSB01	11/10/22	1620.16	0.0000013 J+	No	0.0000026 J+	No
GESPM100322-389	MSB02	11/10/22	1201.38	< 0.000001	No	0.0000019 J+	No
GESPM100322-390	MSB113A	11/10/22	1589.02	0.000001 J+	No	0.0000025 J+	No
GESPM100322-391	MSB01	11/10/22 ²	435.87	< 0.0000028	No	0.0000042 J+	No
GESPM100322-392	MSB02	11/10/22 ²	425.15	< 0.0000028	No	0.0000038 J+	No
GESPM100322-393	MSB113A	11/10/22 ²	457.37	< 0.0000026	No	0.0000041 J+	No
GESPM100322-395	MSB01	11/15/22	1617.39	0.00000170	No	0.0000042	No
GESPM100322-396	MSB02	11/15/22	1612.86	0.00000120	No	0.0000027	No
GESPM101722-397	MSB113A	11/15/22	1585.58	0.00000150	No	0.0000038	No
GESPM101722-398	MSB01	11/16/22	1636.05	0.0000017	No	0.0000069	No
GESPM101722-399	MSB02	11/16/22	1629.12	0.00000150	No	0.0000055	No
GESPM101722-400	MSB113A	11/16/22	1595.95	0.0000020	No	0.0000076	No
GESPM101722-401	MSB01	11/17/22	1634.27	0.00000170	No	0.0000056	No
GESPM101722-402	MSB02	11/17/22	1630.45	0.0000018	No	0.0000049	No
GESPM101722-403	MSB113A	11/17/22	1606.86	0.0000020	No	0.0000057	No
GESPM101722-404	MSB01	11/17/22 ²	507.01	0.0000035	No	0.000009	No
GESPM101722-405	MSB02	11/17/22 ²	527.41	0.0000042	No	0.000007	No
GESPM101722-406	MSB113A	11/17/22 ²	484.19	0.0000046	No	0.00001	No
GESPM101722-408	MSB01	11/22/22	1667.55	0.0000029	No	0.0000091	No
GESPM101722-409	MSB02	11/22/22	1671.54	0.0000021	No	0.0000064	No
GESPM101722-410	MSB113A	11/22/22	1629.20	0.0000027	No	0.0000093	No
GESPM101722-411	MSB01	11/23/22	1677.36	0.0000026	No	0.0000074	No
GESPM101722-412	MSB02	11/23/22	1697.96	0.0000021	No	0.000006	No
GESPM101722-413	MSB113A	11/23/22	1646.43	0.0000022	No	0.0000065	No
GESPM103122-657	MSB01	11/29/22	1529.47	0.0000012	No	0.0000032	No
GESPM103122-658	MSB02	11/29/22	1572.93	0.00000094	No	0.0000018	No
GESPM103122-659	MSB113A	11/29/22	1481.59	0.00000097	No	0.0000026	No
GESPM103122-660	MSB01	11/30/22	1630.88	0.0000016	No	0.0000047	No
GESPM103122-661	MSB02	11/30/22	1579.37	0.0000010	No	0.0000026	No
GESPM103122-662	MSB113A	11/30/22	1586.43	0.0000012	No	0.0000037	No
GESPM103122-663	MSB01	12/01/22	1645.42	0.0000010	No	0.0000031	No

Attachment 4: Lead and Manganese Monitoring Results

Sample, Date and Station Information			Sampler Run Information	Lead		Manganese	
Sample ID	Monitoring Station	Sample End Date ¹	Total Air Volume Monitored (m ³)	Concentration in Air (mg/m ³)	Exceedance (Yes/No)	Concentration in Air (mg/m ³)	Exceedance (Yes/No)
GESPM103122-664	MSB02	12/01/22	1592.92	0.00000068 J	No	0.0000017 J	No
GESPM103122-665	MSB113A	12/01/22	1604.75	0.00000083	No	0.0000027	No
GESPM103122-667	MSB01	12/07/22	1621.94	0.00000085 J+	No	0.000003 J+	No
GESPM103122-668	MSB02	12/07/22	1621.53	< 0.00000074	No	0.0000019 J+	No
GESPM103122-669	MSB113A	12/7/2022 ³	835.78	< 0.0000014	No	0.0000025 J+	No
GESPM103122-670	MSB01	12/08/22	1547.62	< 0.00000078	No	0.0000021 J+	No
GESPM103122-671	MSB02	12/08/22	1652.97	< 0.00000073	No	0.0000018 J+	No
GESPM103122-672	MSB113A	12/08/22	1530.56	< 0.00000078	No	0.0000025 J+	No
GESPM103122-673	MSB01	12/08/22 ²	422.08	< 0.0000028	No	0.000004 J+	No
GESPM103122-674	MSB02	12/08/22 ²	387.33	< 0.0000031	No	< 0.0000031	No
GESPM103122-675	MSB113A	12/08/22 ²	417.69	< 0.0000029	No	0.0000047 J+	No

Notes:

¹Air sample was not collected on days with rain.

²Air sample was taken down during the afternoon after field activities ceased.

³Generator malfunction.

Sample locations are shown on Figure 2-1

m³ = cubic meters

mg/m³ = milligrams per cubic meter

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

J+ = estimated concentration biased high

< = below detection limit

< = below detection limit

ATTACHMENT 5
TOTAL SUSPENDED PARTICULATES
MONITORING RESULTS

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Attachment 5: Total Suspended Particulates Monitoring Results

Sample, Date and Station Information			Sampler Run Information	TSP								
Sample ID	Monitoring Station	Sample End Date ¹		Total Air Volume Monitored (m ³)	Concentration in Air (mg/m ³)	TSP Perimeter Concentration (Downwind - Upwind) (mg/m ³)	TSP Perimeter Concentration (Downwind - Upwind) (ug/m ³)	TSP MSB113A Concentration (Downwind - Upwind) (mg/m ³)	TSP MSB113A Concentration (Downwind - Upwind) (ug/m ³)	Cal/OSHA PEL (ug/m ³)	Exceedance (Yes/No)	HERO Action Level (ug/m ³)
GES_TSP061322-38	MSB01	7/8/2022	1752.44	0.0180891	0.002305	2.305	0.0056	5.594	5,000	No	50	No
GES_TSP061322-39	MSB02	7/8/2022	1740.72	0.0203939								
GES_TSP061322-40	MSB113A	7/8/2022	1567.65	0.0236828								
GES_TSP061322-41	MSB01	7/12/2022	1764.96	0.0162610	0.0064	6.373	0.0026	2.590	5,000	No	50	No
GES_TSP061322-42	MSB02	7/12/2022	1745.16	0.0226340								
GES_TSP061322-43	MSB113A	7/12/2022	1554.26	0.0188514								
GES_TSP061322-44	MSB01	7/13/2022	1767.79	0.0098461	-0.000592	-0.592	0.0046	4.600	5,000	No	50	No
GES_TSP061322-45	MSB02	7/13/2022	1739.85	0.0092537								
GES_TSP061322-46	MSB113A	7/13/2022	1578.31	0.0144458								
GES_TSP061322-47	MSB01	7/14/2022	1755.31	0.0225031	-0.0008	-0.843	0.0056	5.631	5,000	No	50	No
GES_TSP061322-48	MSB02	7/14/2022	1675.92	0.0216597								
GES_TSP061322-49	MSB113A	7/14/2022	1567.5	0.0281340								
GES_TSP061322-50	MSB01	7/15/2022	1816.52	0.0218550	0.0084	8.438	0.0199	19.915	5,000	No	50	No
GES_TSP061322-51	MSB02	7/15/2022	1792.47	0.0302934								
GES_TSP061322-52	MSB113A	7/15/2022	1601.64	0.0417697								
GES_TSP061322-53	MSB01	7/19/2022	1735.87	0.0288616	0.0048	4.821	-0.0179	-17.859	5,000	No	50	No
GES_TSP061322-54	MSB02	7/19/2022	1730.85	0.0336829								
GES_TSP070522-73	MSB113A	7/19/2022	1645.04	0.0110028 J								
GES_TSP070522-74	MSB01	7/20/2022	1761.31	0.0118662	0.0009	0.927	-0.0028	-2.797	5,000	No	50	No
GES_TSP070522-75	MSB02	7/20/2022	1750.99	0.0127928								
GES_TSP070522-76	MSB113A	7/20/2022	1742.11	0.0090695 J								
GES_TSP070522-78	MSB01	7/21/2022	1808.34	0.0068018	0.0048	4.765	-0.0011	-1.131	5,000	No	50	No
GES_TSP070522-79	MSB02	7/21/2022	1806.85	0.0115671								
GES_TSP070522-80	MSB113A	7/21/2022	1639.99	0.0056708 J								
GES_TSP070522-81	MSB01	7/22/2022	1747.17	0.0186015	0.0125	12.465	-0.0133	-13.257	5,000	No	50	No
GES_TSP070522-82	MSB02	7/22/2022	1757.52	0.0310665								
GES_TSP070522-83	MSB113A	7/22/2022	1627.68	0.005345 J								
GES_TSP070522-84	MSB01	7/26/2022	1771.32	0.0108958	-0.0013	-1.322	-0.0035	-3.488	5,000	No	50	No
GES_TSP070522-85	MSB02	7/26/2022	1754.87	0.0095734								
GES_TSP070522-86	MSB113A	7/26/2022	1647.00	0.0074074								
GES_TSP070522-87	MSB01	7/27/2022	1743.98	0.0115254	0.0015	1.493	-0.0034	-3.375	5,000	No	50	No

Attachment 5: Total Suspended Particulates Monitoring Results

Sample, Date and Station Information			Sampler Run Information	TSP									
Sample ID	Monitoring Station	Sample End Date ¹		Total Air Volume Monitored (m ³)	Concentration in Air (mg/m ³)	TSP Perimeter Concentration (Downwind - Upwind) (mg/m ³)	TSP Perimeter Concentration (Downwind - Upwind) (ug/m ³)	TSP MSB113A Concentration (Downwind - Upwind) (mg/m ³)	TSP MSB113A Concentration (Downwind - Upwind) (ug/m ³)	Cal/OSHA PEL (ug/m ³)	Exceedance (Yes/No)	HERO Action Level (ug/m ³)	Exceedance (Yes/No)
GES_TSP070522-88	MSB02	7/27/2022	1736.02	0.0130183									
GES_TSP070522-89	MSB113A	7/27/2022	1607.22	0.0081507									
GES_TSP071122-91	MSB01	7/28/2022	1795.60	0.0074070	0.0021	2.120	-0.0035	-3.532	5,000	No	50	No	
GES_TSP071122-92	MSB02	7/28/2022	1815.93	0.0095268									
GES_TSP071122-93	MSB113A	7/28/2022	1651.72	0.0038747 J+									
GES_TSP071122-94	MSB01	7/29/2022	1767.63	0.0067322	0.0037	3.659	-0.0039	-3.945	5,000	No	50	No	
GES_TSP071122-95	MSB02	7/29/2022	1790.03	0.0103909									
GES_TSP071122-96	MSB113A	7/29/2022	1650.33	0.0027873 J+									
GES_TSP071122-97	MSB01	08/02/22	1786.84	0.0169573	0.001	0.703	-0.0073	-7.250	5,000	No	50	No	
GES_TSP071122-98	MSB02	08/02/22	1755.31	0.0176607									
GES_TSP071122-99	MSB113A	08/02/22	1637.99	0.009707									
GES_TSP071122-101	MSB01	08/03/22	1777.20	0.0108598	0.018	17.965	0.00013	0.131	5,000	No	50	No	
GES_TSP071122-102	MSB02	08/03/22	1734.64	0.0288244									
GES_TSP071122-103	MSB113A	08/03/22	1610.42	0.0109909									
GES_TSP071122-104	MSB01	08/04/22	1767.28	0.0158436	0.010	9.656	-0.0054	-5.387	5,000	No	50	No	
GES_TSP071122-105	MSB02	08/04/22	1745.16	0.0254991									
GES_TSP071122-106	MSB113A	08/04/22	1616.17	0.0104568 J									
GES_TSP071122-107	MSB01	08/05/22	1802.32	0.0221381	0.009	8.920	-0.0085	-8.539	5,000	No	50	No	
GES_TSP071122-108	MSB02	08/05/22	1790.20	0.031058									
GESTSP072622-145	MSB113A	08/05/22	1500.13	0.0135988									
GESTSP072622-147	MSB01	08/09/22	1788.65	0.0134179	0.009	8.551	-0.0010	-1.011	5,000	No	50	No	
GESTSP072622-148	MSB02	08/09/22	1761.55	0.0219693									
GESTSP072622-149	MSB113A	08/09/22	1636.18	0.0124069									
GESTSP072622-150	MSB01	08/10/22	1784.74	0.0141757	0.003	3.039	0.0025	2.526	5,000	No	50	No	
GESTSP072622-151	MSB02	08/10/22	1777.57	0.0172145									
GESTSP072622-152	MSB113A	08/10/22	1628.55	0.016702									
GESTSP072622-153	MSB01	08/11/22	1781.62	0.0146496	-0.001	-1.096	-0.0029	-2.933	5,000	No	50	No	
GESTSP072622-154	MSB02	08/11/22	1785.54	0.0135533									
GESTSP072622-155	MSB113A	08/11/22	1664.35	0.0117163									

Attachment 5: Total Suspended Particulates Monitoring Results

Sample, Date and Station Information			Sampler Run Information	TSP								
Sample ID	Monitoring Station	Sample End Date ¹		Total Air Volume Monitored (m ³)	Concentration in Air (mg/m ³)	TSP Perimeter Concentration (Downwind - Upwind) (mg/m ³)	TSP Perimeter Concentration (Downwind - Upwind) (ug/m ³)	TSP MSB113A Concentration (Downwind - Upwind) (mg/m ³)	TSP MSB113A Concentration (Downwind - Upwind) (ug/m ³)	Cal/OSHA PEL (ug/m ³)	Exceedance (Yes/No)	HERO Action Level (ug/m ³)
GESTSP072622-156	MSB01	08/12/22	1746.69	0.0168891	0.006	6.443	0.0212	21.213	5,000	No	50	No
GESTSP072622-157	MSB02	08/12/22	1735.79	0.0233323								
GESTSP072622-158	MSB113A	08/12/22	1585.22	0.038102								
GESTSP072622-159	MSB01	08/16/22	1812.54	0.0263167	0.010	9.794	0.0185	18.510	5,000	No	50	No
GESTSP072622-160	MSB02	08/16/22	1747.40	0.0361108								
GESTSP072622-161	MSB113A	08/16/22	1621.82	0.0448262								
GESTSP080822-163	MSB01	08/17/22	1755.57	0.0213036	0.002	1.720	0.0022	2.176	5,000	No	50	No
GESTSP080822-164	MSB02	08/17/22	1763.42	0.0230234								
GESTSP080822-165	MSB113A	08/17/22	1605.64	0.0234797								
GESTSP080822-166	MSB01	08/18/22	1747.10	0.0170568	0.003	3.056	-0.0071	-7.127	5,000	No	50	No
GESTSP080822-167	MSB02	08/18/22	1740.22	0.0201124								
GESTSP080822-168	MSB113A	08/18/22	1631.46	0.0099298								
GESTSP080822-169	MSB01	08/19/22	1766.07	0.010362	0.019	19.342	-0.0025	-2.478	5,000	No	50	No
GESTSP080822-170	MSB02	08/19/22	1794.36	0.0297042								
GESTSP080822-171	MSB113A	08/19/22	1648.85	0.0078843								
GESTSP080822-172	MSB01	08/23/22	1781.10	0.0152153	0.016	16.216	-0.0043	-4.263	5,000	No	50	No
GESTSP080822-173	MSB02	08/23/22	1759.39	0.0314313								
GESTSP080822-174	MSB113A	08/23/22	1625.25	0.0109522								
GESTSP080822-176	MSB01	08/24/22	1735.43	0.013138	0.001	0.959	0.0021	2.075	5,000	No	50	No
GESTSP080822-177	MSB02	08/24/22	1745.01	0.0140973								
GESTSP080822-178	MSB113A	08/24/22	1564.48	0.0152127								
GESTSP080822-179	MSB01	08/25/22	1759.01	0.0128481	-0.001	-0.848	-0.0028	-2.833	5,000	No	50	No
GESTSP080822-180	MSB02	08/25/22	1783.36	0.0119998								
GESTSP080822-181	MSB113A	08/25/22	1607.64	0.0100147								
GESTSP080822-182	MSB01	08/25/22 ²	552.01	0.0217387	-0.009	-8.750	-0.0061	-6.078	5,000	No	50	No
GESTSP080822-183	MSB02	08/25/22 ²	577.41	0.012989								
GESTSP080822-184	MSB113A	08/25/22 ²	510.83	0.0156608								
GESTSP080822-185	MSB01	08/30/22	1755.42	0.0225017	0.008	8.500	0.0082	8.241	5,000	No	50	No
GESTSP080822-186	MSB02	08/30/22	1761.22	0.0310012								

Attachment 5: Total Suspended Particulates Monitoring Results

Sample, Date and Station Information			Sampler Run Information	TSP								
Sample ID	Monitoring Station	Sample End Date ¹	Total Air Volume Monitored (m ³)	Concentration in Air (mg/m ³)	TSP Perimeter Concentration (Downwind - Upwind) (mg/m ³)	TSP Perimeter Concentration (Downwind - Upwind) (ug/m ³)	TSP MSB113A Concentration (Downwind - Upwind) (mg/m ³)	TSP MSB113A Concentration (Downwind - Upwind) (ug/m ³)	Cal/OSHA PEL (ug/m ³)	Exceedance (Yes/No)	HERO Action Level (ug/m ³)	Exceedance (Yes/No)
GESTSP080822-187	MSB113A	08/30/22	1567.83	0.0307431								
GESTSP080822-189	MSB01	08/31/22	1716.69	0.0155532	0.015	15.187	0.0082	8.153	5,000	No	50	No
GESTSP080822-190	MSB02	08/31/22	1763.17	0.0307401								
GESTSP080822-191	MSB113A	08/31/22	1590.28	0.0237065								
GESTSP080822-192	MSB01	09/01/22	1799.18	0.0161185	0.004	4.276	0.0052	5.210	5,000	No	50	No
GESTSP080822-193	MSB02	09/01/22	1765.21	0.0203942								
GESTSP080822-194	MSB113A	09/01/22	1580.07	0.0213282								
GESTSP080822-195	MSB01	09/01/22 ²	467.94	0.0170962	0.007	7.326	0.0007	0.689	5,000	No	50	No
GESTSP080822-196	MSB02	09/01/22 ²	483.17	0.024422								
GESTSP080822-197	MSB113A	09/01/22 ²	432.94	0.0177854								
GESTSP080822-198	MSB01	09/07/22	1781.31	0.0407565	0.005	5.394	0.0046	4.573	5,000	No	50	No
GESTSP082222-199	MSB02	09/07/22	1776.78	0.0461509								
GESTSP082222-200	MSB113A	09/07/22	1590.59	0.0453291								
GESTSP082222-202	MSB01	09/08/22	1824.13	0.0323442	0.004	3.854	0.0066	6.556	5,000	No	50	No
GESTSP082222-203	MSB02	09/08/22	1806.72	0.0361982								
GESTSP082222-204	MSB113A	09/08/22	1616.98	0.0388997								
GESTSP082222-205	MSB01	09/08/22 ²	510.35	0.0656412	-0.028	-28.256	-0.0138	-13.755	5,000	No	50	No
GESTSP082222-206	MSB02	09/08/22 ²	553.69	0.0373855								
GESTSP082222-207	MSB113A	09/08/22 ²	481.82	0.0518866								
GESTSP082222-208	MSB01	09/13/22	1736.06	0.0326602	0.032	31.865	0.0058	5.849	5,000	No	50	No
GESTSP082222-209	MSB02	09/13/22	1729.56	0.0645251								
GESTSP082222-210	MSB113A	09/13/22	1560.66	0.0385093								
GESTSP082222-212	MSB01	09/14/22	1770.83	0.0164894	0.004	4.374	0.0004	0.377	5,000	No	50	No
GESTSP082222-213	MSB02	09/14/22	1783.03	0.0208634								
GESTSP082222-214	MSB113A	09/14/22	1606.74	0.0168665								
GESTSP082222-215	MSB01	09/15/22	1769.49	0.0161628	0.003	3.408	0.0006	0.584	5,000	No	50	No
GESTSP082222-216	MSB02	09/15/22	1773.07	0.0195706								

Attachment 5: Total Suspended Particulates Monitoring Results

Sample, Date and Station Information			Sampler Run Information	TSP									
Sample ID	Monitoring Station	Sample End Date ¹		Total Air Volume Monitored (m ³)	Concentration in Air (mg/m ³)	TSP Perimeter Concentration (Downwind - Upwind) (mg/m ³)	TSP Perimeter Concentration (Downwind - Upwind) (ug/m ³)	TSP MSB113A Concentration (Downwind - Upwind) (mg/m ³)	TSP MSB113A Concentration (Downwind - Upwind) (ug/m ³)	Cal/OSHA PEL (ug/m ³)	Exceedance (Yes/No)	HERO Action Level (ug/m ³)	Exceedance (Yes/No)
GESTSP090622-235	MSB113A	09/15/22	1606.32	0.0167464									
GESTSP090622-236	MSB01	09/15/22 ²	493.50	0.0190476	0.004	3.986	0.0035	3.460	5,000	No	50	No	
GESTSP090622-237	MSB02	09/15/22 ²	534.01	0.0230333									
GESTSP090622-238	MSB113A	09/15/22 ²	457.62	0.0225078									
GESTSP090622-239	MSB01	09/20/22	1730.63	0.0222462	-0.005280	-5.280	0.000812	0.812	5,000	No	50	No	
GESTSP090622-240	MSB02	09/20/22	1750.57	0.0169659									
GESTSP090622-241	MSB113A	09/20/22	1552.58	0.0230584									
GESTSP090622-243	MSB01	09/21/22	1843.57	0.0117706 J	0.00242	2.420	0.006481	6.481	5,000	No	50	No	
GESTSP090622-244	MSB02	09/21/22	1796.97	0.0141906									
GESTSP090622-245	MSB113A	09/21/22	1605.33	0.0182517									
GESTSP090622-246	MSB01	09/22/22	1799.65	0.0174478	-0.003225	-3.225	0.001690	1.690	5,000	No	50	No	
GESTSP090622-247	MSB02	09/22/22	1771.84	0.0142225									
GESTSP090622-248	MSB113A	09/22/22	1562.37	0.0191376									
GESTSP090622-249	MSB01	09/22/22 ²	397.88	0.0178446	0.001092	1.092	-0.004405	-4.405	5,000	No	50	No	
GESTSP090622-250	MSB02	09/22/22 ²	517.52	0.0189365									
GESTSP090622-251	MSB113A	09/22/22 ²	446.44	0.0134397									
GESTSP091922-289	MSB01	09/27/22	1779.12	0.0147264	0.0000841	0.08410	0.0021317	2.1317	5,000	No	50	No	
GESTSP091922-290	MSB02	09/27/22	1769.02	0.0148105									
GESTSP091922-291	MSB113A	09/27/22	1613.47	0.0168581									
GESTSP091922-292	MSB01	09/28/22	1737.44	0.0179577	0.002240	2.240	0.003971	3.971	5,000	No	50	No	
GESTSP091922-293	MSB02	09/28/22	1757.61	0.0201981									
GESTSP091922-294	MSB113A	09/28/22	1586.00	0.0219283									
GESTSP091922-295	MSB01	09/29/22	1743.77	0.0192112	-0.0000366	-0.03660	0.002841	2.8410	5,000	No	50	No	
GESTSP091922-296	MSB02	09/29/22	1757.53	0.0191746									
GESTSP091922-297	MSB113A	09/29/22	1582.61	0.0220522									
GESTSP091922-298	MSB01	09/29/22 ²	552.30	0.0563100	-0.033822	-33.822	-0.029669	-29.669	5,000	No	50	No	
GESTSP091922-299	MSB02	09/29/22 ²	591.43	0.0224879									

Attachment 5: Total Suspended Particulates Monitoring Results

Sample, Date and Station Information			Sampler Run Information	TSP									
Sample ID	Monitoring Station	Sample End Date ¹		Total Air Volume Monitored (m ³)	Concentration in Air (mg/m ³)	TSP Perimeter Concentration (Downwind - Upwind) (mg/m ³)	TSP Perimeter Concentration (Downwind - Upwind) (ug/m ³)	TSP MSB113A Concentration (Downwind - Upwind) (mg/m ³)	TSP MSB113A Concentration (Downwind - Upwind) (ug/m ³)	Cal/OSHA PEL (ug/m ³)	Exceedance (Yes/No)	HERO Action Level (ug/m ³)	Exceedance (Yes/No)
GESTSP091922-300	MSB113A	09/29/22 ²	510.49	0.0266411									
GESTSP091922-301	MSB01	10/04/22	1787.57	0.0245585	0.000261	0.261	0.004486	4.486	5,000	No	50	No	
GESTSP091922-302	MSB02	10/04/22	1780.89	0.0248191									
GESTSP091922-303	MSB113A	10/04/22	1618.19	0.0290448									
GESTSP091922-305	MSB01	10/05/22	1757.08	0.0310743	-0.0075855	-7.58550	-0.0070168	-7.0168	5,000	No	50	No	
GESTSP091922-306	MSB02	10/05/22	1766.8	0.0234888									
GESTSP092122-307	MSB113A	10/05/22	1587.86	0.0240575									
GESTSP092122-308	MSB01	10/06/22	1751.65	0.0225502	-0.007436	-7.436	-0.007153	-7.153	5,000	No	50	No	
GESTSP092122-309	MSB02	10/06/22	1759.92	0.0151143									
GESTSP092122-310	MSB113A	10/06/22	1584.68	0.0153974									
GESTSP092122-311	MSB01	10/06/22 ²	513.65	0.0165482	-0.0138466	-13.84660	-0.012808	-12.8076	5,000	No	50	No	
GESTSP092122-312	MSB02	10/06/22 ²	555.23	0.0027016 J									
GESTSP092122-313	MSB113A	10/06/22 ²	481.21	0.0037406									
GESTSP092122-314	MSB01	10/11/22	1802.49	0.0161443	-0.003705	-3.705	-0.001389	-1.389	5,000	No	50	No	
GESTSP092122-315	MSB02	10/11/22	1752.47	0.0124396									
GESTSP092122-316	MSB113A	10/11/22	1612.94	0.0147557									
GESTSP092122-318	MSB01	10/12/22	1731.11	0.02819	-0.0068465	-6.84650	-0.0019413	-1.9413	5,000	No	50	No	
GESTSP092122-319	MSB02	10/12/22	1780.4	0.0213435									
GESTSP092122-320	MSB113A	10/12/22	1584.84	0.0262487									
GESTSP092122-321	MSB01	10/13/22	1750.7	0.0112526	0.002684	2.684	0.008636	8.636	5,000	No	50	No	
GESTSP092122-322	MSB02	10/13/22	1736.43	0.0139366									
GESTSP092122-323	MSB113A	10/13/22	1568.74	0.0198886									
GESTSP092122-324	MSB01	10/13/22 ²	509.23	0.0060876	0.0003870	0.38700	0.0006861	0.6861	5,000	No	50	No	
GESTSP092122-325	MSB02	10/13/22 ²	540.57	0.0064746									
GESTSP092122-326	MSB113A	10/13/22 ²	487.18	0.0067737									
GESTSP092122-327	MSB01	10/18/22	1733.23	0.0315	-0.007700	-7.700	-0.002900	-2.900	5,000	No	50	No	
GESTSP092122-328	MSB02	10/18/22	1678.02	0.0238									

Attachment 5: Total Suspended Particulates Monitoring Results

Sample, Date and Station Information			Sampler Run Information	TSP								
Sample ID	Monitoring Station	Sample End Date ¹	Total Air Volume Monitored (m ³)	Concentration in Air (mg/m ³)	TSP Perimeter Concentration (Downwind - Upwind) (mg/m ³)	TSP Perimeter Concentration (Downwind - Upwind) (ug/m ³)	TSP MSB113A Concentration (Downwind - Upwind) (mg/m ³)	TSP MSB113A Concentration (Downwind - Upwind) (ug/m ³)	Cal/OSHA PEL (ug/m ³)	Exceedance (Yes/No)	HERO Action Level (ug/m ³)	Exceedance (Yes/No)
GESTSP092122-329	MSB113A	10/18/22	1574.69	0.0286								
GESTSP092122-331	MSB01	10/19/22	1787.52	0.0505	-0.00780	-7.800	-0.001700	-1.700	5,000	No	50	No
GESTSP092122-332	MSB02	10/19/22	1784.04	0.0427								
GESTSP092122-333	MSB113A	10/19/22	1615.64	0.0488								
GESTSP092122-334	MSB01	10/20/22	1735.15	0.0274	-0.002200	-2.200	-0.001800	-1.800	5,000	No	50	No
GESTSP092122-335	MSB02	10/20/22	1740.50	0.0252								
GESTSP092122-336	MSB113A	10/20/22	1582.32	0.0256								
GESTSP092122-337	MSB01	10/20/22 ²	389.41	0.018	0.000900	0.900	0.005500	5.500	5,000	No	50	No
GESTSP092122-338	MSB02	10/20/22 ²	401.69	0.0189								
GESTSP092122-339	MSB113A	10/20/22 ²	387.63	0.0235								
GESTSP092122-340	MSB01	10/25/22	1765.19	0.0269	-0.0071000	-7.10000	-0.0096000	-9.6000	5,000	No	50	No
GESTSP092122-341	MSB02	10/25/22	1760.71	0.0198								
GESTSP092122-342	MSB113A	10/25/22	1607.80	0.0173								
GESTSP100322-344	MSB01	10/26/22	1753.17	0.031	-0.001800	-1.800	-0.000100	-0.100	5,000	No	50	No
GESTSP100322-345	MSB02	10/26/22	1771.46	0.0292								
GESTSP100322-346	MSB113A	10/26/22	1597.10	0.0309								
GESTSP100322-347	MSB01	10/27/22	1743.85	0.0369	-0.0047000	-4.70000	-0.005700	-5.7000	5,000	No	50	No
GESTSP100322-348	MSB02	10/27/22	1738.29	0.0322								
GESTSP100322-349	MSB113A	10/27/22	1582.60	0.0312								
GESTSP100322-350	MSB01	10/27/22 ²	529.97	0.0304	-0.013500	-13.500	-0.020930	-20.930	5,000	No	50	No
GESTSP100322-351	MSB02	10/27/22 ²	574.70	0.0169								
GESTSP100322-352	MSB113A	10/27/22 ²	506.80	0.00947								
GESTSP100322-356	MSB01	11/01/22	1736.22	0.0285	-0.000100	-0.100	-0.001100	-1.100	5,000	No	50	No
GESTSP100322-355	MSB02	11/01/22	1726.65	0.0284								
GESTSP100322-354	MSB113A	11/01/22	1648.44	0.0274								
GESTSP100322-357	MSB01	11/02/22	1763.47	0.0174	-0.0013000	-1.30000	0.0023000	2.3000	5,000	No	50	No

Attachment 5: Total Suspended Particulates Monitoring Results

Sample, Date and Station Information			Sampler Run Information	TSP									
Sample ID	Monitoring Station	Sample End Date ¹		Total Air Volume Monitored (m ³)	Concentration in Air (mg/m ³)	TSP Perimeter Concentration (Downwind - Upwind) (mg/m ³)	TSP Perimeter Concentration (Downwind - Upwind) (ug/m ³)	TSP MSB113A Concentration (Downwind - Upwind) (mg/m ³)	TSP MSB113A Concentration (Downwind - Upwind) (ug/m ³)	Cal/OSHA PEL (ug/m ³)	Exceedance (Yes/No)	HERO Action Level (ug/m ³)	Exceedance (Yes/No)
GESTSP100322-359	MSB02	11/02/22	1739.84	0.0161									
GESTSP100322-358	MSB113A	11/02/22	1506.65	0.0197									
GESTSP100322-360	MSB01	11/03/22	1721.92	0.0136	-0.002400	-2.400	-0.003850	-3.850	5,000	No	50	No	
GESTSP100322-379	MSB02	11/03/22	1727.34	0.0112									
GESTSP100322-380	MSB113A	11/03/22	1549.35	0.00975									
GESTSP100322-381	MSB01	11/03/22 ²	537.38	0.00707 J	-0.0014100	-1.41000	0.000040	0.0400	5,000	No	50	No	
GESTSP100322-382	MSB02	11/03/22 ²	565.00	0.005660									
GESTSP100322-383	MSB113A	11/03/22 ²	492.35	0.00711 J									
GESTSP100322-384	MSB01	11/08/22	1716.45	0.0187	0.0043000	4.30	0.0020	2.00	5,000	No	50	No	
GESTSP100322-385	MSB02	11/08/22	1716.47	0.023									
GESTSP100322-386	MSB113A	11/08/22	1549.17	0.0207									
GESTSP100322-388	MSB01	11/10/22	1732.65	0.0199	-0.001600	-1.60	0.00320	3.20	5,000	No	50	No	
GESTSP100322-389	MSB02	11/10/22	1297.52	0.0183									
GESTSP100322-390	MSB113A	11/10/22	1573.19	0.0231									
GESTSP100322-391	MSB01	11/10/22 ²	462.20	0.0132 J	0.003322	3.322	-0.003900	-3.900	5,000	No	50	No	
GESTSP100322-392	MSB02	11/10/22 ²	455.63	0.00988 J									
GESTSP100322-393	MSB113A	11/10/22 ²	449.01	0.0171									
GESTSP100322-395	MSB01	11/15/22	1764.80	0.0198	-0.0027000	-2.70000	-0.0034000	-3.4000	5,000	No	50	No	
GESTSP100322-396	MSB02	11/15/22	1733.28	0.0225									
GESTSP101722-397	MSB113A	11/15/22	1563.88	0.0232									
GESTSP101722-398	MSB01	11/16/22	1744.39	0.032	0.006900	6.900	0.004700	4.700	5,000	No	50	No	
GESTSP101722-399	MSB02	11/16/22	1744.77	0.0251									
GESTSP101722-400	MSB113A	11/16/22	1574.95	0.0273									
GESTSP101722-401	MSB01	11/17/22	1744.18	0.0256	-0.0010000	-1.00000	-0.002700	-2.7000	5,000	No	50	No	
GESTSP101722-402	MSB02	11/17/22	1743.46	0.0246									
GESTSP101722-403	MSB113A	11/17/22	1586.98	0.0229									

Attachment 5: Total Suspended Particulates Monitoring Results

Sample, Date and Station Information			Sampler Run Information	TSP								
Sample ID	Monitoring Station	Sample End Date ¹		Total Air Volume Monitored (m ³)	Concentration in Air (mg/m ³)	TSP Perimeter Concentration (Downwind - Upwind) (mg/m ³)	TSP Perimeter Concentration (Downwind - Upwind) (ug/m ³)	TSP MSB113A Concentration (Downwind - Upwind) (mg/m ³)	TSP MSB113A Concentration (Downwind - Upwind) (ug/m ³)	Cal/OSHA PEL (ug/m ³)	Exceedance (Yes/No)	HERO Action Level (ug/m ³)
GESTSP101722-404	MSB01	11/17/22 ²	542.45	0.0308	0.0011000	1.10000	0.003200	3.2000	5,000	No	50	No
GESTSP101722-405	MSB02	11/17/22 ²	561.74	0.0319								
GESTSP101722-406	MSB113A	11/17/22 ²	478.77	0.034								
GESTSP101722-408	MSB01	11/22/22	1801.18	0.0211	-0.003100	-3.100	-0.002000	-2.000	5,000	No	50	No
GESTSP101722-409	MSB02	11/22/22	1795.67	0.0242								
GESTSP101722-410	MSB113A	11/22/22	1616.44	0.0231								
GESTSP101722-411	MSB01	11/23/22	1821.48	0.0233	-0.000800	-0.800	-0.003200	-3.200	5,000	No	50	No
GESTSP101722-412	MSB02	11/23/22	1819.42	0.0241								
GESTSP101722-413	MSB113A	11/23/22	1627.35	0.0265								
GESTSP103122-657	MSB01	11/29/22	1644.00	0.0174	0.0036000	3.60000	0.0003000	0.3000	5,000	No	50	No
GESTSP103122-658	MSB02	11/29/22	1690.71	0.021								
GESTSP103122-659	MSB113A	11/29/22	1476.85	0.0177								
GESTSP103122-660	MSB01	11/30/22	1752.66	0.0139	0.005700	5.700	0.003700	3.700	5,000	No	50	No
GESTSP103122-661	MSB02	11/30/22	1749.07	0.0196								
GESTSP103122-662	MSB113A	11/30/22	1571.17	0.0176								
GESTSP103122-663	MSB01	12/01/22	1752.50	0.0210	-0.0067000	-6.70000	-0.000800	-0.8000	5,000	No	50	No
GESTSP103122-664	MSB02	12/01/22	1770.52	0.01430								
GESTSP103122-665	MSB113A	12/01/22	1596.90	0.0202								
GESTSP103122-667	MSB01	12/07/22	1758.18	0.0205	-0.003400	-3.400	0.006800	6.800	5,000	No	50	No
GESTSP103122-668	MSB02	12/07/22	1747.94	0.0171								
GESTSP103122-669	MSB113A	12/7/2022 ³	838.18	0.0273								
GESTSP103122-670	MSB01	12/08/22	1751.31	0.0187	0.0015000	1.50000	-0.003900	-3.9000	5,000	No	50	No
GESTSP103122-671	MSB02	12/08/22	1777.26	0.0202								
GESTSP103122-672	MSB113A	12/08/22	1534.09	0.0148								

Attachment 5: Total Suspended Particulates Monitoring Results

Sample, Date and Station Information			Sampler Run Information	TSP								
Sample ID	Monitoring Station	Sample End Date ¹	Total Air Volume Monitored (m ³)	Concentration in Air (mg/m ³)	TSP Perimeter Concentration (Downwind - Upwind) (mg/m ³)	TSP Perimeter Concentration (Downwind - Upwind) (ug/m ³)	TSP MSB113A Concentration (Downwind - Upwind) (mg/m ³)	TSP MSB113A Concentration (Downwind - Upwind) (ug/m ³)	Cal/OSHA PEL (ug/m ³)	Exceedance (Yes/No)	HERO Action Level (ug/m ³)	Exceedance (Yes/No)
GESTSP103122-673	MSB01	12/08/22 ²	458.17	0.0301	-0.0186000	-18.60000	-0.008200	-8.2000	5,000	No	50	No
GESTSP103122-674	MSB02	12/08/22 ²	416.13	0.0115								
GESTSP103122-675	MSB113A	12/08/22 ²	415.24	0.0219								

Notes:

¹Air sample was not collected on days with rain or when contaminated soil was not disturbed.

²Air sample was taken down during the afternoon after field activities ceased.

³Generator malfunction.

Sample locations are shown on Figure 2-1

HPNS = Hunters Point Naval Shipyard

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

J+ = estimated concentration biased high

m³ = cubic meters

mg/m³ = milligrams per cubic meter

ATTACHMENT 6
RADIONUCLIDES OF CONCERN AIR SAMPLING RESULTS

Air Monitoring Summary Report
Parcel B Removal Site Evaluation
Hunters Point Naval Shipyard, San Francisco, CA

Attachment 6

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Attachment 6: Radionuclides of Concern Air Sampling Results

Date	Sample Location	Duration of Run (min)	Cesium-137		Plutonium-239/240		Radium-226		Strontium-90		Cobalt-60		Exceedance (Yes/No)
			4.00E-11	μCi/mL	4.00E-15	μCi/mL	1.80E-13	μCi/mL	1.20E-12	μCi/mL	1.00E-11	μCi/mL	
Action Level		Units											
7/7/22 -7/8/22	1	1335	9.14E-15	U	1.16E-14	U	3.21E-15	UJ	7.43E-15	J	3.37E-14	U	No
	2	1443	2.17E-14	U	1.58E-14	U	2.93E-15	UJ	1.05E-14	J	2.58E-14	U	No
	113A	1362	8.82E-15	U	1.19E-14	U	3.28E-15	UJ	1.05E-14	UJ	2.41E-14	U	No
7/11/22-7/15/22	1	5803	1.97E-15	U	2.4E-15	U	7.51E-16	UJ	3.9E-15	J	5.81E-15	U	No
	2	5789	2.41E-15	U	3.14E-15	U	7.71E-16	UJ	2.37E-15	J	5.53E-15	U	No
	113A	5791	2.66E-15	U	3.05E-15	U	9.18E-16	UJ	3.35E-15	J	5.44E-15	U	No
7/18/22-7/22/22	1	5966	4.82E-15	U	4.71E-15	U	6.57E-16	UJ	3.03E-15	J	5.59E-15	U	No
	2	5944	2.04E-15	U	2.31E-15	U	7.33E-16	UJ	1.26E-15	U	6.28E-15	U	No
	113A	5954	2.57E-15	U	2.87E-15	U	8.37E-16	UJ	1.15E-15	U	6.02E-15	U	No
7/25/22-7/29/22	1	5988	2.75E-15	U	2.94E-15	U	1.04E-15	UJ	2.47E-15	U	5.95E-15	U	No
	1*	5987	1.94E-15	U	2.8E-15	U	5.65E-16	UJ	2.98E-15	U	7.63E-15	U	No
	2	5945	2.36E-15	U	2.31E-15	U	7.47E-16	UJ	3.46E-15	U	5.71E-15	UJ	No
	113A	5965	2.49E-15	U	2.47E-15	U	7.49E-16	UJ	3.4E-15	U	5.82E-15	U	No
8/1/22-8/5/22	1	5962	4.8E-15	U	5.16E-15	U	4.6E-16	UJ	1.3E-15		1.32E-14	U	No
	2	5925	2.54E-15	U	2.05E-15	U	6.54E-16	UJ	1.74E-15		5.71E-15	U	No
	113A	5942	2.57E-15	U	3.06E-15	U	7.79E-16	UJ	1.84E-15		6.17E-15	U	No
8/8/22-8/12/22	1	5988	2.05E-15	U	2.58E-15	UJ	5.93E-16	UJ	1.07E-15	UJ	7.65E-15	U	No
	2	5945	2.17E-15	U	2.47E-15	UJ	8.48E-16	UJ	1.03E-15	UJ	5.97E-15	U	No
	113A	5976	2.72E-15	U	3.18E-15	UJ	4.01E-16	UJ	1.15E-15	UJ	5.47E-15	U	No
8/15/22-8/19/22	1	6002	2.16E-15	U	2.87E-15	U	5.92E-16	UJ	1.01E-15	UJ	5.61E-15	U	No
	2	5967	2.6E-15	U	2.34E-15	U	6.19E-16	UJ	9.58E-16	UJ	5.76E-15	U	No
	113A	5971	2.45E-15	U	2.82E-15	U	4.9E-16	UJ	9.74E-16	UJ	5.84E-15	U	No
8/22/22-8/25/22	1	4992	4.68E-15	U	6.06E-15	U	6.54E-16	U	2.49E-15	U	9.06E-15	U	No
	2	4999	3.25E-15	U	3.11E-15	U	5.12E-16	U	9.3E-15	J	1.07E-14	J	No
	2*	4999	2.43E-15	U	2.77E-15	U	7.22E-16	U	2.65E-15	U	1.25E-14	UJ	No
	113A	5002	2.87E-15	U	3.55E-15	U	8.04E-16	U	2.47E-15	U	6.36E-15	U	No
8/29/22-9/1/22	1	4932	2.35E-15	U	3.24E-15	U	4.39E-16	U	2.82E-15	U	5.94E-15	U	No
	2	4944	3.24E-15	U	3.73E-15	U	6.33E-16	U	2.74E-15	U	1.22E-14	U	No
	113A	4949	5.53E-15	U	5.68E-15	U	5.02E-16	U	2.16E-14	J	6.42E-15	U	No
9/5/22-9/8/22	1	3535	3.86E-15	U	4.1E-15	U	3.81E-16	U	2.51E-15	J	2.32E-14	U	No
	2	3562	4.23E-15	U	5.01E-15	U	5.16E-16	U	1.67E-15	U	1.86E-14	U	No
	113A	3558	3.4E-15	U	4.74E-15	U	5.87E-16	U	3.86E-15	J	1.94E-14	U	No
9/12/22-9/15/22	1	4967	2.89E-15	U	3.35E-15	U	1.87E-16	U	1.77E-15		1.25E-14	U	No
	2	4995	5.7E-15	U	6.32E-15	U	1.55E-16	U	2.22E-15		1.21E-14	U	No
	113A	4972	5.67E-15	U	4.84E-15	U	3.03E-16	U	1.71E-15		1.3E-14	U	No
8/22/22-8/25/22	1	4992	4.68E-15	U	6.54E-16	U	2.49E-15	U	9.06E-15	U	6.06E-15	U	No
	2	4999	3.25E-15	U	5.12E-16	U	9.3E-15	J	1.07E-14	J	3.11E-15	U	No
	2*	4999	2.43E-15	U	7.22E-16	U	2.65E-15	U	1.25E-14	UJ	2.77E-15	U	No
	113A	5002	2.87E-15	U	8.04E-16	U	2.47E-15	U	6.36E-15	U	3.55E-15	U	No

Attachment 6: Radionuclides of Concern Air Sampling Results

Date	Sample Location	Duration of Run (min)	Cesium-137		Plutonium-239/240		Radium-226		Strontium-90		Cobalt-60		Exceedance (Yes/No)
			Action Level		Units								
8/29/22-9/1/22	1	4932	2.35E-15	U	4.39E-16	U	2.82E-15	U	5.94E-15	U	3.24E-15	U	No
	2	4944	3.24E-15	U	6.33E-16	U	2.74E-15	U	1.22E-14	U	3.73E-15	U	No
	113A	4949	5.53E-15	U	5.02E-16	U	2.16E-14	J	6.42E-15	U	5.68E-15	U	No
9/6/22-9/8/22	1	3535	3.86E-15	U	3.81E-16	UJ	2.51E-15	J	2.32E-14	U	4.1E-15	U	No
	2	3562	4.23E-15	U	5.16E-16	UJ	1.67E-15	U	1.86E-14	U	5.01E-15	U	No
	113A	3558	3.4E-15	U	5.87E-16	UJ	3.86E-15	J	1.94E-14	U	4.74E-15	U	No
9/12/22-9/15/22	1	4967	2.89E-15	U	1.87E-16	U	1.77E-15		1.25E-14	U	3.35E-15	U	No
	2	4995	5.7E-15	U	1.55E-16	U	2.22E-15		1.21E-14	U	6.32E-15	U	No
	113A	4972	5.67E-15	U	3.03E-16	UJ	1.71E-15		1.3E-14	U	4.84E-15	U	No
9/19/22-9/22/22	1	4943	2.43E-15	U	3.96E-16	U	3.81E-15		1.64E-14	U	3.68E-15	U	No
	2	4965	5.5E-15	U	3.23E-16	U	2.79E-15		1.37E-14	U	5.89E-15	U	No
	113A	4956	2.75E-15	U	3.46E-16	U	4.13E-15	J	1.28E-14	U	3.16E-15	U	No
	113A*	4955	2.74E-15	U	3.45E-16	U	6.6E-15	J	1.3E-14	U	3.08E-15	U	No
9/26/22-9/29/22	1	4980	2.28E-15	U	3.09E-16	UJ	3.67E-15		1.77E-14	U	2.95E-15	U	No
	2	4998	2.18E-15	U	3.63E-16	UJ	4.07E-15		1.41E-14	U	3.06E-15	U	No
	113A	4985	4.93E-15	U	3.91E-16	UJ	5.53E-15		1.39E-14	U	6.46E-15	U	No
10/03/22-10/06/22	1	4976	4.77E-15	U	3.74E-16	UJ	2.33E-15	U	1.85E-14	U	6.46E-15	U	No
	2	5004	3.18E-15	U	4.92E-16	UJ	5.33E-15	J	1.42E-14	U	3.26E-15	U	No
	113A	4990	2.74E-15	U	2.75E-16	UJ	2.21E-15	U	1.5E-14	U	3.13E-15	U	No
10/10/22-10/13/22	1	4731	3.23E-15	U	2.12E-16	UJ	3.15E-15	U	1.85E-14	UJ	3.78E-15	U	No
	2	4741	2.64E-15	U	3.67E-16	UJ	2.9E-15	U	1.49E-14	U	3.76E-15	U	No
	113A	4736	3.5E-15	U	3.84E-16	UJ	5.44E-15	J	1.49E-14	U	3.56E-15	U	No
10/17/22-10/20/22	1	4870	5.18E-15	U	4.4E-16	UJ	2.59E-15	U	1.53E-14	U	4.64E-15	U	No
	1*	4870	2.87E-15	U	2.82E-16	UJ	2.63E-15	U	1.61E-14		3.8E-15	U	No
	2	4861	3.16E-15	U	4.04E-16	UJ	2.64E-15	U	1.41E-14	U	3.37E-15	U	No
	113A	4891	3.15E-15	U	4.64E-16	UJ	2.9E-15	U	1.3E-14	U	3.31E-15	U	No
10/24/22-10/27/22	1	4985	2.39E-15	U	4.33E-16	UJ	2E-15	U	1.2E-14	U	2.7E-15	U	No
	2	5016	2.51E-15	U	2.57E-16	UJ	2.23E-15	U	1.23E-14	U	2.46E-15	U	No
	113A	5006	2.9E-15	U	2.64E-16	UJ	2.32E-15	U	1.33E-14	U	3.05E-15	U	No
10/31/22-11/03/22	1	4991	2.84E-15	U	2.64E-16	UJ	1.8E-15	U	1.79E-14	U	3.87E-15	U	No
	2	5006	3.15E-15	U	5.09E-16	UJ	2.83E-15	U	1.28E-14	U	3.09E-15	U	No
	113A	4991	2.18E-15	U	3.55E-16	UJ	2.9E-15	U	1.43E-14	U	2.38E-15	U	No
11/07/22-11/10/22	1	4928	3.3E-15	U	4.68E-16	UJ	2.57E-15	U	1.8E-14	U	5.07E-15	U	No
	2	4927	2.5E-15	U	3.96E-16	UJ	2.61E-15	U	1.4E-14	U	2.65E-15	U	No
	113A	4952	2.54E-15	U	3.75E-16	UJ	2.86E-15	U	1.35E-14	U	2.77E-15	U	No

Attachment 6: Radionuclides of Concern Air Sampling Results

Date	Sample Location	Duration of Run (min)	Cesium-137 4.00E-11 μCi/mL	Plutonium-239/240 4.00E-15 μCi/mL	Radium-226		Strontium-90		Cobalt-60		Exceedance (Yes/No)
					1.80E-13	μCi/mL	1.20E-12	μCi/mL	1.00E-11	μCi/mL	
Action Level		Units									
11/14/22-11/17/22	1	4965	2.23E-15 U	3.73E-16 UJ	3.72E-15 U		1.37E-14 U		3.26E-15 U		No
	2	4980	2.4E-15 U	4.3E-16 UJ	2.83E-15 U		1.28E-14 U		2.62E-15 U		No
	2*	4980	2.69E-15 U	2.8E-16 UJ	2.82E-15 U		1.27E-14 U		2.75E-15 U		No
	113A	4979	2.5E-15 U	2.27E-16 UJ	3.14E-15 U		1.42E-14 U		3.22E-15 U		No
11/21/22-11/23/22	1	3185	4.18E-15 U	4.42E-16 UJ	4.37E-15 U		2E-14 U		4.71E-15 U		No
	2	3215	3.53E-15 U	5.43E-16 UJ	4.23E-15 U		2.46E-14 U		4.58E-15 U		No
	113A	3175	4.83E-15 U	5.81E-16 UJ	5.58E-15		2.17E-14 U		5.43E-15 U		No

Notes:

* = duplicate sample

J = Activity is an approximate value.

min = minutes

U = Activity is less than the MDC.

μCi/mL=microcuries per milliliter

ATTACHMENT 7

LABORATORY REPORTS

Air Monitoring Summary Report
Parcel B Removal Site Evaluation
Hunters Point Naval Shipyard, San Francisco, CA

Attachment 7

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Laboratory Analysis Report

Job ID : 22112253



10100 East Freeway, Suite 100, Houston, TX 77029 tel: 713-453-6060, fax: 713-453-6091, http://www.ablabs.com

Client Project Name :
J310000900 / Hunters Point Shipyard, Parcel B Removal Site Evaluation

Report To :	Client Name: GES - ASRC Industrial	Total Number of Pages: 5
Attn:	[REDACTED]	P.O.#.: J310000900-005
Client Address:	1501 West Fountainhead Parkway, Ste. #550	Date Received : 11/18/2022 15:47
City, State, Zip:	Tempe, Arizona, 85282	Sample Collected By :

A&B Labs has analyzed the following samples...

Client Sample ID	Sample Collection Date & Time	Matrix	A&B Job Sample ID
FB-110722	11/7/2022 8:00	Cassette	22112253.01
MSB01-110722	11/8/2022 7:20	Cassette	22112253.02
MSB02-110722	11/8/2022 7:00	Cassette	22112253.03
MSB113A-110722	11/8/2022 7:10	Cassette	22112253.04
MSB01-110922	11/10/2022 7:58	Cassette	22112253.05
MSB02-110922	11/10/2022 7:27	Cassette	22112253.06
MSB113A-110922	11/10/2022 7:41	Cassette	22112253.07
MSB01-111022	11/10/2022 14:27	Cassette	22112253.08
MSB02-111022	11/10/2022 14:12	Cassette	22112253.09
MSB113A-111022	11/10/2022 14:00	Cassette	22112253.10

Released By: [REDACTED]

Analyst: [REDACTED]

Title: Vice President Operations

This report cannot be reproduced, except in full, without prior written permission of A&B Labs. Results shown relate only to the items tested. Results apply to the sample as received. Samples are assumed to be in acceptable condition unless otherwise noted. Blank correction is not made unless otherwise noted. Air concentrations reported are based on field sampling information provided by client. Any TWA calculations are based on client supplied data not lab observation.

ab-q210-0321

11/29/2022



**ANALYSIS OF AIRBORNE FIBER SAMPLING
SAMPLING PERFORMED BY CLIENT**

**ANALYSIS CONDUCTED BY A & B ENVIRONMENTAL SERVICES, INC.
AIHA Lab Accreditation # 101470 TDH PLM/PCM Lab License # 300080**

Date 11/29/202

Job ID : 22112253

Analytical Method: NIOSH 7400-I2-Aug1994

Client: GES - ASRC Industrial		Project: J310000900 / Hunters Point Shipyard, Parcel B Removal Site Evaluation											Attn:		
A&B Sample ID	Client Sample ID	Collected Date	Area/Person	Flow Rate L/m	Time On	Time Off	Total Time (min)	Volume (Liters)	Total Fields	Total Fibers	F/mm2	Fiber/cc	8 Hour TWA	Analysis Date	Analyzed By
22112253.01	FB-110722	11/07/2022					0	100	2.5	3.185	< 0.001		11/29/22	[REDACTED]	
22112253.02	MSB01-110722	11/08/2022	Area	3.1			1410	4371	100	3.5	4.459		11/29/22	[REDACTED]	
22112253.03	MSB02-110722	11/08/2022	Area	3.3			1420	4686	100	6	7.643	0.001	11/29/22	[REDACTED]	
22112253.04	MSB113A-110722	11/08/2022	Area	3.6			1415	5094	100	3.0	3.822	< 0.001	11/29/22	[REDACTED]	
22112253.05	MSB01-110922	11/10/2022	Area	3.8			1431	5437.	100	3.5	4.459	< 0.000	11/29/22	[REDACTED]	
22112253.06	MSB02-110922	11/10/2022	Area	3.5			1438	5033	100	2	2.548	< 0.001	11/29/22	[REDACTED]	
22112253.07	MSB113A-110922	11/10/2022	Area	3.4			1434	4875.	100	3.0	3.822	< 0.001	11/29/22	[REDACTED]	
22112253.08	MSB01-111022	11/10/2022	Area	3.3			386	1273.	100	1	1.274	< 0.002	11/29/22	[REDACTED]	
22112253.09	MSB02-111022	11/10/2022	Area	3.4			400	1360	100	1	1.274	< 0.002	11/29/22	[REDACTED]	
22112253.10	MSB113A-111022	11/10/2022	Area	3.2			412	1318.	100	1.5	1.911	< 0.002	11/29/22	[REDACTED]	

Detection limit of this method is estimated at 7 f/mm2 (5.5 fibers per 100 fields)

Sr Value

(Fiber Range*; Sr Value): (5-20; Sr = 0.06), (20-50; Sr = 0.05), (50-100; Sr = 0.04), (>100; Sr = 0.04)

*Fiber Range = # of Fibers / 100 Counts



Sample Condition Checklist

A&B JobID : 22112253	Date Received : 11/18/2022	Time Received : 3:47PM		
Client Name : GES - ASRC Industrial				
Temperature : 22.1°C	Sample pH : NA			
Thermometer ID : IR4	pH Paper ID : NA			
Perservative :				
	Check Points	Yes	No	N/A
1.	Cooler Seal present and signed.	X		
2.	Sample(s) in a cooler.		X	
3.	If yes, ice in cooler.			X
4.	Sample(s) received with chain-of-custody.	X		
5.	C-O-C signed and dated.	X		
6.	Sample(s) received with signed sample custody seal.		X	
7.	Sample containers arrived intact. (If No comment)	X		
8.	Matrix: Water <input type="checkbox"/> Soil <input type="checkbox"/> Liquid <input type="checkbox"/> Sludge <input type="checkbox"/> Solid <input type="checkbox"/> Cassette <input checked="" type="checkbox"/> Tube <input type="checkbox"/> Bulk <input type="checkbox"/> Badge <input type="checkbox"/> Food <input type="checkbox"/> Other <input type="checkbox"/>			
9.	Samples were received in appropriate container(s)	X		
10.	Sample(s) were received with Proper preservative			X
11.	All samples were tagged or labeled.	X		
12.	Sample ID labels match C-O-C ID's.	X		
13.	Bottle count on C-O-C matches bottles found.	X		
14.	Sample volume is sufficient for analyses requested.	X		
15.	Samples were received with in the hold time.	X		
16.	VOA vials completely filled.			X
17.	Sample accepted.	X		
18.	Has client been contacted about sub-out			X

Comments : Include actions taken to resolve discrepancies/problem:

No cooler was received, however samples are received in a box with a custody seal. Received black cassettes. ~ 11/18/2022

Received by : Check in by/date : / 11/18/2022

ab-s005-0321

**CHAIN-OF-CUSTODY
RECORD**

Gilbane Federal [REDACTED]
1655 Grant Street, Suite 1200, Concord, CA 94520
[REDACTED]

COC ID #MC111622ASBB



Project Name: Hunters Point Shipyard, Parcel B Removal Site Evaluation	Laboratory: A&B Labs	Event: Parcel B Asbestos
Project Number: J310000900	POC: [REDACTED]	
WBS Code: J310000900	Ship to: 10100 East Fwy Ste. 100 Houston TX 77029	

Comments:	Page 1 of 1																																																																																																												
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 10%;">Analytical Test Method</th> <th style="width: 10%;">Asbestos</th> <th style="width: 10%; text-align: center;">11/16/22</th> <th style="width: 10%; text-align: center;">11/17/22</th> <th style="width: 10%; text-align: center;">11/18/22</th> <th style="width: 10%; text-align: center;">11/19/22</th> <th style="width: 10%; text-align: center;">11/20/22</th> <th style="width: 10%; text-align: center;">11/21/22</th> <th style="width: 10%; text-align: center;">11/22/22</th> <th style="width: 10%; text-align: center;">11/23/22</th> <th style="width: 10%; text-align: center;">11/24/22</th> <th style="width: 10%; text-align: center;">11/25/22</th> <th style="width: 10%; text-align: center;">11/26/22</th> <th style="width: 10%; text-align: center;">11/27/22</th> <th style="width: 10%; text-align: center;">11/28/22</th> <th style="width: 10%; text-align: center;">11/29/22</th> <th style="width: 10%; text-align: center;">11/30/22</th> <th style="width: 10%; text-align: center;">11/31/22</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">Code</td> <td>Matrix</td> <td></td> </tr> <tr> <td style="text-align: center;">A</td> <td>Air</td> <td></td> </tr> <tr> <td style="text-align: center;">AQ</td> <td>Air Quality Control Matrix</td> <td></td> </tr> <tr> <td style="text-align: center;">Code</td> <td>Container/Preservative</td> <td></td> </tr> <tr> <td style="text-align: center;">1</td> <td>Filter/No Preservatives</td> <td></td> </tr> </tbody> </table>		Analytical Test Method	Asbestos	11/16/22	11/17/22	11/18/22	11/19/22	11/20/22	11/21/22	11/22/22	11/23/22	11/24/22	11/25/22	11/26/22	11/27/22	11/28/22	11/29/22	11/30/22	11/31/22	Code	Matrix																	A	Air																	AQ	Air Quality Control Matrix																	Code	Container/Preservative																	1	Filter/No Preservatives																
Analytical Test Method	Asbestos	11/16/22	11/17/22	11/18/22	11/19/22	11/20/22	11/21/22	11/22/22	11/23/22	11/24/22	11/25/22	11/26/22	11/27/22	11/28/22	11/29/22	11/30/22	11/31/22																																																																																												
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Code	Container/Preservative																																																																																																												
1	Filter/No Preservatives																																																																																																												

Equipment:					Samp Init.	1	Location ID	Sample Type	Depth (ft bgs)		Cooler	Flow Rate (L/min), Total Time (mins)
Event: Parcel B Asbestos									Top - Bottom	Bottom - Top		
1	FB-110722	AQ	11/07/2022	0800	X		FB	FB1	0.00	0.00	1	
2	MSB01-110722	AQ	11/08/2022	0720	X		MSB01	N1	0.00	0.00	1	3.1; 1410
3	MSB02-110722	AQ	11/08/2022	0700	X		MSB02	N1	0.00	0.00	1	3.3; 1420
4	MSB113A-110722	AQ	11/08/2022	0710	X		MSB113A	N1	0.00	0.00	1	3.6; 1415
5	MSB01-110922	AQ	11/10/2022	0758	X		MSB01	N1	0.00	0.00	1	3.8; 1431
6	MSB02-110922	AQ	11/10/2022	0727	X		MSB02	N1	0.00	0.00	1	3.5; 1438
7	MSB113A-110922	AQ	11/10/2022	0741	X		MSB113A	N1	0.00	0.00	1	3.4; 1434
8	MSB01-111022	AQ	11/10/2022	1427	X		MSB01	N1	0.00	0.00	1	3.3; 386
9	MSB02-111022	AQ	11/10/2022	1412	X		MSB02	N1	0.00	0.00	1	3.4; 400
10	MSB113A-111022	AQ	11/10/2022	1440	X		MSB113A	N1	0.00	0.00	1	3.2; 412
11												

Turnaround Time: 7 days												
Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time	Shipping Date / Carrier / Airbill Number						
[REDACTED]	11/16/22	1400	Fedex	11/16/22	1400	Shipping Date: 11/16/22 / FEDEX 7704 3755 4225						
Fed-ex	11/17/22	15:47	[REDACTED]	11/17/22	15:47	Received by Laboratory: (Signature, Date, Time) & condition						
				11/17/22								

Job ID:22112253



ORIGIN ID: ICCA [REDACTED]
GES-AIS
200 FISCHER AVE
SAN FRANCISCO, CA 94124
UNITED STATES US

SHIP DATE: 16NOV22
ACTWGT: 1.00 LB
CAD: 254128867/INET4530
BILL SENDER

TO [REDACTED]

A&B LABS
10100 EAST FREEWAY, SUITE 100

HOUSTON TX 77029

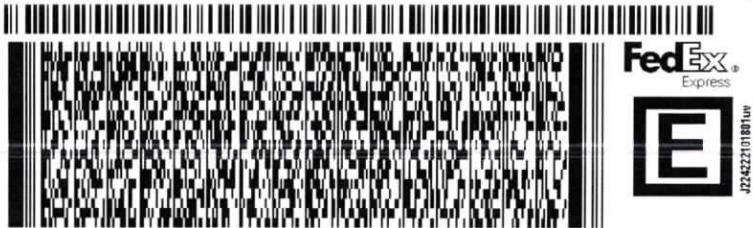
(713) 453-6060

REF J31000 900 00 03 14

INV

PO

DEPT:

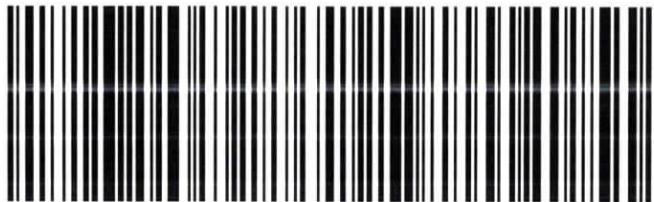


THU - 17 NOV 4:30P
STANDARD OVERNIGHT

TRK# 7704 3755 4225
0201

UL HBYA

77029
TX-US IAH



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Laboratory Analysis Report

Job ID : 22112756



10100 East Freeway, Suite 100, Houston, TX 77029 tel: 713-453-6060, fax: 713-453-6091, http://www.ablabs.com

Client Project Name :
J310000900 / Hunters Point Shipyard, Parcel B Removal Site Evaluation

Report To :	Client Name: GES - ASRC Industrial	Total Number of Pages: 7
	Attn: [REDACTED]	P.O.#.: J310000900-005
	Client Address: 1501 West Fountainhead Parkway, Ste. #550	Date Received : 11/28/2022 08:56
	City, State, Zip: Tempe, Arizona, 85282	Sample Collected By :

A&B Labs has analyzed the following samples...

Client Sample ID	Sample Collection Date & Time	Matrix	A&B Job Sample ID
MSB01-111622	11/17/2022 7:33	Cassette	22112756.01
MSB02-111622	11/17/2022 7:16	Cassette	22112756.02
MSB113A-111622	11/17/2022 7:42	Cassette	22112756.03
FB-111422	11/14/2022 8:00	Cassette	22112756.04
MSB01-111422	11/15/2022 7:45	Cassette	22112756.05
MSB02-111422	11/15/2022 7:17	Cassette	22112756.06
MSB113A-111422	11/15/2022 7:32	Cassette	22112756.07
MSB01-111722	11/17/2022 15:06	Cassette	22112756.08
MSB02-111722	11/17/2022 15:05	Cassette	22112756.09
MSB113A-111722	11/17/2022 15:04	Cassette	22112756.10
MSB01-111522	11/16/2022 7:44	Cassette	22112756.11
MSB02-111522	11/16/2022 7:14	Cassette	22112756.12
MSB113A-111522	11/16/2022 7:32	Cassette	22112756.13

Released By: [REDACTED]

Title: Senior Project Manager

Analyst: [REDACTED]

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ab-q210-0321

12/9/2022



**ANALYSIS OF AIRBORNE FIBER SAMPLING
SAMPLING PERFORMED BY CLIENT**
ANALYSIS CONDUCTED BY A & B ENVIRONMENTAL SERVICES, INC.
AIHA Lab Accreditation # 101470 TDH PLM/PCM Lab License # 300080

Date 12/9/2022

Job ID : 22112756

Analytical Method: NIOSH 7400-I2-Aug1994

Client: GES - ASRC Industrial		Project: J310000900 / Hunters Point Shipyard, Parcel B Removal Site Evaluation											Attn:		
A&B Sample ID	Client Sample ID	Collected Date	Area/Person	Flow Rate L/m	Time On	Time Off	Total Time (min)	Volume (Liters)	Total Fields	Total Fibers	F/mm2	Fiber/cc	8 Hour TWA	Analysis Date	Analyzed By
22112756.01	MSB01-111622	11/17/2022		3.3			1428	4712.4	100	7	8.917	0.001		12/05/22	[REDACTED]
22112756.02	MSB02-111622	11/17/2022		3.4			1441	4899.4	100	7.5	9.554	0.001		12/05/22	[REDACTED]
22112756.03	MSB113A-111622	11/17/2022		3.7			1448	5357.6	100	9.0	11.465	0.001		12/05/22	[REDACTED]
22112756.04	FB-111422	11/14/2022					0	100	4	5.096				12/05/22	[REDACTED]
22112756.05	MSB01-111422	11/15/2022		3.4			1429	4858.6	100	4.0	5.096	< 0.001		12/05/22	[REDACTED]
22112756.06	MSB02-111422	11/15/2022		3.5			1423	4980.5	100	3.5	4.459	< 0.001		12/05/22	[REDACTED]
22112756.07	MSB113A-111422	11/15/2022		3.4			1428	4855.2	100	3.5	4.459	< 0.001		12/05/22	[REDACTED]
22112756.08	MSB01-111722	11/17/2022		3.7			449	1661.3	100	3.5	4.459	< 0.002		12/05/22	[REDACTED]
22112756.09	MSB02-111722	11/17/2022		3.5			464	1624	100	4.5	5.732	< 0.002		12/05/22	[REDACTED]
22112756.10	MSB113A-111722	11/17/2022		3.5			437	1529.5	100	2.5	3.185	< 0.002		12/05/22	[REDACTED]
22112756.11	MSB01-111522	11/16/2022		3.3			1437	4742.1	100	6.5	8.280	0.001		12/05/22	[REDACTED]
22112756.12	MSB02-111522	11/16/2022		3.5			1436	5026	100	3.0	3.822	< 0.001		12/05/22	[REDACTED]
22112756.13	MSB113A-111522	11/16/2022		3.3			1437	4742.1	100	4.0	5.096	< 0.001		12/05/22	[REDACTED]

Detection limit of this method is estimated at 7 f/mm2 (5.5 fibers per 100 fields)

Sr Value

(Fiber Range*; Sr Value): (5-20; Sr = 0.06), (20-50; Sr = 0.05), (50-100; Sr = 0.04), (>100; Sr = 0.04)

*Fiber Range = # of Fibers / 100 Counts



Sample Condition Checklist

A&B JobID : 22112756	Date Received : 11/28/2022	Time Received : 8:56AM		
Client Name : GES - ASRC Industrial				
Temperature : 22.1°C	Sample pH : NA			
Thermometer ID : IR4	pH Paper ID : NA			
Perservative :				
	Check Points	Yes	No	N/A
1.	Cooler Seal present and signed.	X		
2.	Sample(s) in a cooler.		X	
3.	If yes, ice in cooler.			X
4.	Sample(s) received with chain-of-custody.	X		
5.	C-O-C signed and dated.	X		
6.	Sample(s) received with signed sample custody seal.		X	
7.	Sample containers arrived intact. (If No comment)	X		
8.	Matrix: Water <input type="checkbox"/> Soil <input type="checkbox"/> Liquid <input type="checkbox"/> Sludge <input type="checkbox"/> Solid <input type="checkbox"/> Cassette <input checked="" type="checkbox"/> Tube <input type="checkbox"/> Bulk <input type="checkbox"/> Badge <input type="checkbox"/> Food <input type="checkbox"/> Other <input type="checkbox"/>			
9.	Samples were received in appropriate container(s)	X		
10.	Sample(s) were received with Proper preservative			X
11.	All samples were tagged or labeled.	X		
12.	Sample ID labels match C-O-C ID's.	X		
13.	Bottle count on C-O-C matches bottles found.	X		
14.	Sample volume is sufficient for analyses requested.	X		
15.	Samples were received with in the hold time.	X		
16.	VOA vials completely filled.			X
17.	Sample accepted.	X		
18.	Has client been contacted about sub-out			X

Comments : Include actions taken to resolve discrepancies/problem:

No cooler was received, however samples are received in a box with a custody seal [REDACTED] 11/28/22. Flow rates and total times per client email = ACH 12/9/2022

Received by : [REDACTED]

Check in by/date : [REDACTED] / 11/28/2022

ab-s005-0321

**CHAIN-OF-CUSTODY
RECORD**

Gibane Federal
1655 Grant Street, Suite 1200, Concord, CA 94520
[REDACTED]

COC ID # MC112322ASBB



Project Name: Hunters Point Shipyard, Parcel B Removal Site Evaluation	Laboratory: A&B Labs	Event: Parcel B Asbestos
Project Number: J310000900	POC: [REDACTED]	
WBS Code: J310000900	Ship to: 10100 East Fwy Ste. 100 Houston TX 77028	

Comments:	A. Analytical Test Method	Code: Matrix	Page 1 of 1							
		A: Air								
		AQ: Air Quality Control-Matrix								
Equipment:	Aberrant's	Code: Container Preservation								
Event: Parcel B Asbestos	1	F: Filter/Flocculation								
01A	Sample ID	Matrix	Date	Time	Samp Int.	Location ID	Sample Type	Depth (ft bgs)	Cooler	Comments
✓2A	1 MSB01-111622	A	11-17-22	0733	[REDACTED]	MSB01	N	N1	0.00	1
✓3A	2 MSB02-111622	A	11-17-22	0746	[REDACTED]	MSB02	N	N1	0.00	1
	3 MSB113A-111622	A	11-17-22	0742	[REDACTED]	MSB113A	N	N1	0.00	1
	4									
	5									
	6									
	7									
	8									
	9									
	10									
	11									
Turnaround Time: 7 days										
Received by: (Signature)	Date	Time	Received by: (Signature)	Date	Time	Shipping Date / Carrier / Airbill Number				
[REDACTED]	11/23/22	1300	Fedex	11/23/22	1300	Shipping Date: 11/23/22 / FEDEX 7705 0211 3016				
Fedex						Received by Laboratory: (Signature, Date, Time) & condition				

Job ID:22112756



11/28/2022

GES - ASRC Industrial

ACH

271 TR4

**CHAIN-OF-CUSTODY
RECORD**

Gilbane Federal [REDACTED]
1655 Grant Street, Suite 1200, Concord, CA 94520

COC ID # MC112322ASBB



Project Name: Hunters Point Shipyard, Parcel B Removal Site Evaluation	Laboratory A&B Labs	Event: Parcel B Asbestos																																																																																																																																											
Project Number: J310000900	POC [REDACTED]																																																																																																																																												
WBS Code: J310000900	Ship to: 10100 East Fwy Ste. 100 Houston TX 77029																																																																																																																																												
<p>Comments:</p> <p style="text-align: center;">Analytical Test Method</p> <table border="1"> <tr> <td>Code</td> <td>Matrix</td> </tr> <tr> <td>A</td> <td>All</td> </tr> <tr> <td>AQ</td> <td>Air Quality Control Matrix</td> </tr> </table> <p style="text-align: right;">Page <u>1</u> of <u>1</u></p>			Code	Matrix	A	All	AQ	Air Quality Control Matrix																																																																																																																																					
Code	Matrix																																																																																																																																												
A	All																																																																																																																																												
AQ	Air Quality Control Matrix																																																																																																																																												
<p>Equipment:</p> <table border="1"> <tr> <td colspan="5">Event: Parcel B Asbestos</td> <td>1</td> </tr> <tr> <th>Sample ID</th> <th>Matrix</th> <th>Date</th> <th>Time</th> <th>Samp Init.</th> <th>Location ID</th> <th>Sample Type</th> <th colspan="2">Depth (ft bgs)</th> <th>Cooler</th> <th>Flow Rate (L/min)</th> <th>Total Time (mins)</th> </tr> <tr> <td>1 FB-111422</td> <td>AQ</td> <td>11-14-22</td> <td>0800</td> <td>[REDACTED]</td> <td>FB</td> <td>FB</td> <td>FB1</td> <td>0.00</td> <td>1</td> <td></td> </tr> <tr> <td>2 MSB01-111422</td> <td>A</td> <td>11-15-22</td> <td>0745</td> <td>[REDACTED]</td> <td>MSB01</td> <td>N</td> <td>N1</td> <td>0.00</td> <td>1</td> <td></td> </tr> <tr> <td>3 MSB02-111422</td> <td>A</td> <td>11-15-22</td> <td>0717</td> <td>[REDACTED]</td> <td>MSB02</td> <td>N</td> <td>N1</td> <td>0.00</td> <td>1</td> <td></td> </tr> <tr> <td>4 MSB113A-111422</td> <td>A</td> <td>11-15-22</td> <td>0732</td> <td>[REDACTED]</td> <td>MSB113A</td> <td>N</td> <td>N1</td> <td>0.00</td> <td>1</td> <td></td> </tr> <tr> <td>5</td> <td></td> </tr> <tr> <td>6</td> <td></td> </tr> <tr> <td>7</td> <td></td> </tr> <tr> <td>8</td> <td></td> </tr> <tr> <td>9</td> <td></td> </tr> <tr> <td>10</td> <td></td> </tr> <tr> <td>11</td> <td></td> </tr> </table>			Event: Parcel B Asbestos					1	Sample ID	Matrix	Date	Time	Samp Init.	Location ID	Sample Type	Depth (ft bgs)		Cooler	Flow Rate (L/min)	Total Time (mins)	1 FB-111422	AQ	11-14-22	0800	[REDACTED]	FB	FB	FB1	0.00	1		2 MSB01-111422	A	11-15-22	0745	[REDACTED]	MSB01	N	N1	0.00	1		3 MSB02-111422	A	11-15-22	0717	[REDACTED]	MSB02	N	N1	0.00	1		4 MSB113A-111422	A	11-15-22	0732	[REDACTED]	MSB113A	N	N1	0.00	1		5											6											7											8											9											10											11										
Event: Parcel B Asbestos					1																																																																																																																																								
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1 FB-111422	AQ	11-14-22	0800	[REDACTED]	FB	FB	FB1	0.00	1																																																																																																																																				
2 MSB01-111422	A	11-15-22	0745	[REDACTED]	MSB01	N	N1	0.00	1																																																																																																																																				
3 MSB02-111422	A	11-15-22	0717	[REDACTED]	MSB02	N	N1	0.00	1																																																																																																																																				
4 MSB113A-111422	A	11-15-22	0732	[REDACTED]	MSB113A	N	N1	0.00	1																																																																																																																																				
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Turnaround Time: 7 days																																																																																																																																													
Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time	Shipping Date / Carrier / Airbill Number																																																																																																																																							
[REDACTED]	11-15-22	7:00	Fedex	11-23-22	13:00	Shipping Date: 11/23/22 / FEDEX 7705 0211 3016																																																																																																																																							
Fedex			[REDACTED]	11-27-22	4:56	Received by Laboratory: (Signature, Date, Time) & condition																																																																																																																																							

221 IR4

**CHAIN-OF-CUSTODY
RECORD**

Gibano Federal [REDACTED]
1055 Grant Street, Suite 1200, Concord, CA 94520

COC ID # MC112322ASBB



Project Name: Hunters Point Shipyard, Parcel B Removal Site Evaluation	Laboratory: A&B Labs	Event: Parcel B Asbestos
Project Number: J310000900	POC: [REDACTED]	
WBS Code: J310000900	Ship to: 10100 East Fwy Ste. 100 Houston TX 77029	

Comments:	Code: Matrix	Page 1 of 1
	A: Air	
	AQ: Air Quality Control Matrix	

Equipment:	Code: Contaminant: Inorganic
Event: Parcel B Asbestos	1: Barium Preservatives

Sample ID	Matrix	Date	Time	Samp lnt	Analytical Test Method	Location ID	Sample Type	Depth (ft bgs)		Cooler	Comments
								Top - Bottom	Bottom - Top		
1/MSB01-111722	A	11-17-22	1506	x	[REDACTED]	MSB01	N	N1	0.00	1	
2/MSB02-111722	A	11-17-22	1505	x	[REDACTED]	MSB02	N	N1	0.00	1	
3/MSB113A-111722	A	11-17-22	1504	x	[REDACTED]	MSB113A	N	N1	0.00	1	
4											
5											
6											
7											
8											
9											
10											
11											

Turnaround Time: 7 days

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time	Shipping Date / Carrier / Airbill Number
[REDACTED]	11/23/22	13:00	FedEx	11/23/22	13:00	Shipping Date: 11/23/22 / FedEx 7703 0211 3016
[REDACTED]				11/23/22	8:56	Received by Laboratory: (Signature, Date, Time) & condition

**CHAIN-OF-CUSTODY
RECORD**

Gibran Feder
4925 Grant Street, Suite 1200, Concord, CA 94520
[REDACTED]

COC ID # MC112322ASBB



Project Name: Hunters Point Shipyard, Parcel B Removal Site Evaluation	Laboratory A&B Labs	Event: Parcel B Asbestos
Project Number: J310000900	POC [REDACTED]	
WBS Code: J310000900	Ship to: 10100 East Fwy Ste. 100 Houston TX 77029	

Comments:	Analytical Test Method	Asbestos	Code Matrix	Page 1 of 1			
[REDACTED]					A As		
			AQ Air Quality Control Matrix				
Equipment:	4	1	Code Container/Preservative				
Event: Parcel B Asbestos							F Ethanol Preservative
11A [REDACTED]							
12A [REDACTED]							
13A [REDACTED]							
4			Location ID	Sample Type	Depth (ft bgs)	Cooler	Comments
5					Top - Bottom		
6			MSB01	N N1	0.00	1	
7			MSB02	N N1	0.00	1	
8			MSB113A	N N1	0.00	1	
9							
10							
11							

Turnaround Time: 7 days

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time	Shipping Date / Carrier / Airbill Number
[REDACTED]	11/23/22	1300	FedEx	11/23/22	1300	Shipping Date: 11/23/22 Carrier: FedEx Airbill: 22-1 IR4
FedEx			[REDACTED]	11/23/22	9:56	Received by Laboratory: (Signature, Date, Time) & condition

Laboratory Analysis Report

Job ID : 22120133



10100 East Freeway, Suite 100, Houston, TX 77029 tel: 713-453-6060, fax: 713-453-6091, http://www.ablabs.com

Client Project Name :
J310000900 / Hunters Point Shipyard, Parcel B Removal Site Evaluation

Report To :	Client Name: GES - ASRC Industrial	Total Number of Pages: 7
	Attn: [REDACTED]	P.O.#.: J310000900-005
	Client Address: 1501 West Fountainhead Parkway, Ste. #550	Date Received : 12/01/2022 16:03
	City, State, Zip: Tempe, Arizona, 85282	Sample Collected By :

A&B Labs has analyzed the following samples...

Client Sample ID	Sample Collection Date & Time	Matrix	A&B Job Sample ID
FB-112122	11/21/2022 8:00	Cassette	22120133.01
MSB01-112122	11/22/2022 8:26	Cassette	22120133.02
MSB02-112122	11/22/2022 7:59	Cassette	22120133.03
MSB113A-112122	11/22/2022 8:12	Cassette	22120133.04
MSB01-112222	11/23/2022 9:00	Cassette	22120133.05
MSB02-112222	11/23/2022 9:03	Cassette	22120133.06
MSB113A-112222	11/23/2022 9:00	Cassette	22120133.07

Released By: [REDACTED]

Title: Senior Project Manager

Analyst: [REDACTED]

This report cannot be reproduced, except in full, without prior written permission of A&B Labs. Results shown relate only to the items tested. Results apply to the sample as received. Samples are assumed to be in acceptable condition unless otherwise noted. Blank correction is not made unless otherwise noted. Air concentrations reported are based on field sampling information provided by client. Any TWA calculations are based on client supplied data not lab observation.

ab-q210-0321

12/9/2022



**ANALYSIS OF AIRBORNE FIBER SAMPLING
SAMPLING PERFORMED BY CLIENT**

**ANALYSIS CONDUCTED BY A & B ENVIRONMENTAL SERVICES, INC.
AIHA Lab Accreditation # 101470 TDH PLM/PCM Lab License # 300080**

Date 12/9/2022

Job ID : 22120133

Analytical Method: NIOSH 7400-I2-Aug1994

Client: GES - ASRC Industrial		Project: J310000900 / Hunters Point Shipyard, Parcel B Removal Site Evaluation											Attn:		
A&B Sample ID	Client Sample ID	Collected Date	Area/Person	Flow Rate L/m	Time On	Time Off	Total Time (min)	Volume (Liters)	Total Fields	Total Fibers	F/mm2	Fiber/cc	8 Hour TWA	Analysis Date	Analyzed By
22120133.01	FB-112122	11/21/2022	Area				0	100	2	2.548			12/02/22		
22120133.02	MSB01-112122	11/22/2022	Area	3.7			1468	5431.6	100	5.5	7.006	0.0004		12/02/22	
22120133.03	MSB02-112122	11/22/2022	Area	3.4			1469	4994.6	100	5.5	7.006	0.001		12/02/22	
22120133.04	MSB113A-112122	11/22/2022	Area	3.8			1469	5582.2	100	9.0	11.465	0.001		12/02/22	
22120133.05	MSB01-112222	11/23/2022	Area	3.5			1473	5155.5	100	8.5	10.828	0.001		12/02/22	
22120133.06	MSB02-112222	11/23/2022	Area	3.4			1502	5106.8	100	6.0	7.643	0.001		12/02/22	
22120133.07	MSB113A-112222	11/23/2022	Area	3.7			1485	5494.5	100	7.5	9.554	0.001		12/02/22	

Detection limit of this method is estimated at 7 f/mm² (5.5 fibers per 100 fields)

Sr Value

(Fiber Range*; Sr Value): (5-20; Sr = 0.06), (20-50; Sr = 0.05), (50-100; Sr = 0.04), (>100; Sr = 0.04)

*Fiber Range = # of Fibers / 100 Counts



Sample Condition Checklist

A&B JobID : 22120133	Date Received : 12/01/2022	Time Received : 4:03PM		
Client Name : GES - ASRC Industrial				
Temperature : 19.8°C	Sample pH : NA			
Thermometer ID : IR4	pH Paper ID : NA			
Perservative :				
	Check Points	Yes	No	N/A
1.	Cooler Seal present and signed.	X		
2.	Sample(s) in a cooler.		X	
3.	If yes, ice in cooler.			X
4.	Sample(s) received with chain-of-custody.	X		
5.	C-O-C signed and dated.	X		
6.	Sample(s) received with signed sample custody seal.		X	
7.	Sample containers arrived intact. (If No comment)	X		
8.	Matrix: Water <input type="checkbox"/> Soil <input type="checkbox"/> Liquid <input type="checkbox"/> Sludge <input type="checkbox"/> Solid <input type="checkbox"/> Cassette <input checked="" type="checkbox"/> Tube <input type="checkbox"/> Bulk <input type="checkbox"/> Badge <input type="checkbox"/> Food <input type="checkbox"/> Other <input type="checkbox"/>			
9.	Samples were received in appropriate container(s)	X		
10.	Sample(s) were received with Proper preservative			X
11.	All samples were tagged or labeled.	X		
12.	Sample ID labels match C-O-C ID's.	X		
13.	Bottle count on C-O-C matches bottles found.	X		
14.	Sample volume is sufficient for analyses requested.	X		
15.	Samples were received with in the hold time.	X		
16.	VOA vials completely filled.			X
17.	Sample accepted.	X		
18.	Has client been contacted about sub-out			X

Comments : Include actions taken to resolve discrepancies/problem:

No cooler was received, however samples are received in a box with a custody seal. Received black air cassettes. [REDACTED] 12/1/22. Per client; combine both COC in one job. ~ [REDACTED] 12/02/22. Flow rates and total times per client email - [REDACTED] 12/9/2022

Received by : [REDACTED]

Check in by/date : [REDACTED] / 12/01/2022

ab-s005-0321

**CHAIN-OF-CUSTODY
RECORD**

Gilbane Federal
1655 Grant Street, Suite 1200, Concord, CA 94520

COC ID # MC113022ASBB



Project Name: Hunters Point Shipyard, Parcel B Removal Site Evaluation	Laboratory: A&B Labs	Event: Parcel B Asbestos
Project Number: J310000900	POC: [REDACTED]	
WBS Code: J310000900	Ship to: 10100 East Fwy Ste. 100 Houston TX 77029	

Comments:						Analytical Test Method			Asbestos			Code Matrix			Page 1 of 1			
													A	Air				
													AQ	Air Quality Control Matrix				
													Code Container/Preservative	Container/Preservative				
													1	Filter/No Preservatives				
Equipment:						Event: Parcel B Asbestos												
						1												
Sample ID	Matrix	Date	Time	Samp Init.									Location ID	Sample Type	Depth (ft bgs)		Cooler	Comments
															Top - Bottom			
1 FB-112122	01A	AQ	11/21/2022	0800	x								FB	FB1	0.00	0.00	1	
2 MSB01-112122	02A	A	11/22/2022	0826	x								MSB01	N1	0.00	0.00	1	
3 MSB02-112122	03A	A	11/22/2022	0759	x								MSB02	N1	0.00	0.00	1	
4 MSB113A-112122	04A	A	11/22/2022	0812	x								MSB113A	N1	0.00	0.00	1	
5																		
6																		
7																		
8																		
9																		
10																		
11																		
Turnaround Time: 7 days																		
Relinquished by: (Signature)		Date	Time	Received by: (Signature)			Date	Time	Shipping Date / Carrier / Airbill Number									
[REDACTED]		11-30-22	1600	FEDEX			11-30-22	1600	Shipping Date: 11/30/22 / FEDEX 7705 5657 5059									
Faded				[REDACTED]					Received by Laboratory: (Signature, Date, Time) & condition									
				[REDACTED]					[REDACTED] 12-1-22 4:03									
				[REDACTED]					[REDACTED] 19.8°c									
				[REDACTED]					[REDACTED] TIR									

Job ID:22120133



**CHAIN-OF-CUSTODY
RECORD**

Gilbane Federal
1655 Grant Street, Suite 1200, Concord, CA 94520

COC ID # MC113022ASBB



Project Name: Hunters Point Shipyard, Parcel B Removal Site Evaluation	Laboratory: A&B Labs	Event: Parcel B Asbestos
Project Number: J310000900	POC: [REDACTED]	
WBS Code: J310000900	Ship to: 10100 East Fwy Ste. 100 Houston TX 77029	

Comments:					Analytical Test Method	Asbestos	Code Matrix		Page 1 of 1				
							A Air						
							AQ Air Quality Control Matrix						
							Code Container/Preservative						
					1 Filter/No Preservatives								
Equipment:					1								
Event: Parcel B Asbestos													
OSA	Sample ID	Matrix	Date	Time	Samp Init.		Location ID	Sample Type	Depth (ft bgs)	Cooler	Comments		
06A	1 MSB01-112222	A	11/23/2022	0900	x		MSB01	N1	0.00	0.00	1		
07A	2 MSB02-112222	A	11/23/2022	0903	x		MSB02	N1	0.00	0.00	1		
08A	3 MSB113A-112222	A	11/23/2022	0900	x		MSB113A	N1	0.00	0.00	1		
4													
5													
6													
7													
8													
9													
10													
11													
Turnaround Time: 7 days													
Relinquished by: (Signature)		Date	Time	Received by: (Signature)		Date	Time	Shipping Date / Carrier / Airbill Number					
[REDACTED]		11-30-22	1600	FEDEX		11-30-22	1600	Shipping Date: 11/30/22 / FEDEX 7705 5657 5059					
Faded				[REDACTED]		12-1-22		Received by Laboratory: (Signature, Date, Time) & condition					
				[REDACTED]				12-1-22					
				[REDACTED]				19-8°C					

Job ID:22120133

 GES - ASRC Industrial ACH

COC ID # MC113022ASBB

Flow Rate, Total Time

Sample ID	End Date	End Time	Flow Rate (L/min), Total Time (mins)
FB-112122	11/21/22	8:00:00 AM	--
MSB01-112122	11/22/22	8:26:00 AM	3.7; 1468
MSB02-112122	11/22/22	7:59:00 AM	3.4; 1469
MSB113A-112122	11/22/22	8:12:00 AM	3.8; 1469
MSB01-112222	11/23/22	9:00:00 AM	3.5; 1473
MSB02-112222	11/23/22	9:03:00 AM	3.4; 1502
MSB113A-112222	11/23/22	9:00:00 AM	3.7; 1485

ORIGIN ID:JCCA [REDACTED]

GES-AIS
200 FISCHER AVE

SAN FRANCISCO, CA 94124
UNITED STATES US

TO [REDACTED]

SHIP DATE: 30NOV22
ACTWGT: 1.00 LB
CAD: 254128867/INET4530

BILL SENDER

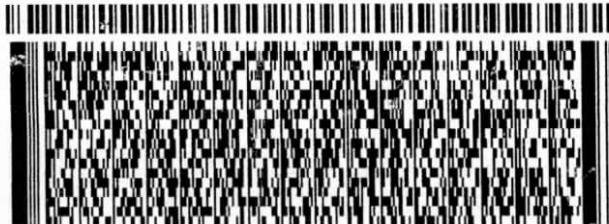
A&B LABS
10100 EAST FREEWAY, SUITE 100

HOUSTON TX 77029

(713) 453-6060
INV/
PO

REF: J31000.900 CO.03.14

DEPT:



581 J31000.900 CO.03.14

THU - 01 DEC 4:30P

STANDARD OVERNIGHT

TRK#
0201 7705 5657 5059

77029
TX-US IAH

UA HBYA



After printing this label:

1. Use the 'Print' button on this page to print your label to your laser or inkjet printer.
 2. Fold the printed page along the horizontal line.
 3. Place label in shipping pouch and affix it to your shipment so that the barcode portion of the label can be read and scanned in.
- Warning: Use only the printed original label for shipping. Using a photocopy of this label for shipping purposes is fraudulent and could result in additional billing charges, along with the cancellation of your FedEx account number. Use of this system constitutes your agreement to the service conditions in the current FedEx Service Guide, available on fedex.com. FedEx will not be responsible for any claim in excess of \$100 per package, whether the result of loss, damage, delay, non-delivery, misdelivery, or misinformation, unless you declare a higher value, pay an additional charge, document your actual loss and file a timely claim. Limitations found in the current FedEx Service Guide apply. Your right to recover from FedEx for any loss, including intrinsic value of the package, loss of sales, income interest, profit, attorney's fees, costs, and other forms of damage whether direct, incidental, consequential, or special is limited to the greater of \$100 or the authorized declared value. Recovery cannot exceed actual documented loss. Maximum for items of extrinsic ordinary value is \$1 000. Written claims must be filed within strict time limits, see current FedEx Service Guide.

Laboratory Analysis Report

Job ID : 22120898



10100 East Freeway, Suite 100, Houston, TX 77029 tel: 713-453-6060, fax: 713-453-6091, http://www.ablabs.com

Client Project Name :
Hunters Point Shipyard, Parcel B Removal Site Evaluation / J310000900

Report To :	Client Name: GES - ASRC Industrial	Total Number of Pages: 8
	Attn: [REDACTED]	P.O.#.: J310000900-005
	Client Address: 1501 West Fountainhead Parkway, Ste. #550	Date Received : 12/08/2022 17:28
	City, State, Zip: Tempe, Arizona, 85282	Sample Collected By :

A&B Labs has analyzed the following samples...

Client Sample ID	Sample Collection Date & Time	Matrix	A&B Job Sample ID
MSB01-113022	12/1/2022 7:58	Cassette	22120898.01
MSB02-113022	12/1/2022 7:45	Cassette	22120898.02
MSB113A-113022	12/1/2022 8:09	Cassette	22120898.03
FB-112822	11/28/2022 8:00	Cassette	22120898.04
MSB01-112822	11/29/2022 7:44	Cassette	22120898.05
MSB02-112822	11/29/2022 7:21	Cassette	22120898.06
MSB113A-112822	11/29/2022 7:47	Cassette	22120898.07
MSB01-112922	11/30/2022 7:50	Cassette	22120898.08
MSB02-112922	11/30/2022 7:28	Cassette	22120898.09
MSB113A-112922	11/30/2022 8:00	Cassette	22120898.10

Released By: [REDACTED]

Title: Vice President Operations

Analyst: [REDACTED]

This report cannot be reproduced, except in full, without prior written permission of A&B Labs. Results shown relate only to the items tested. Results apply to the sample as received. Samples are assumed to be in acceptable condition unless otherwise noted. Blank correction is not made unless otherwise noted. Air concentrations reported are based on field sampling information provided by client. Any TWA calculations are based on client supplied data not lab observation.

ab-q210-0321

12/15/2022



**ANALYSIS OF AIRBORNE FIBER SAMPLING
SAMPLING PERFORMED BY CLIENT**

**ANALYSIS CONDUCTED BY A & B ENVIRONMENTAL SERVICES, INC.
AIHA Lab Accreditation # 101470 TDH PLM/PCM Lab License # 300080**

Date 12/15/202

Job ID : 22120898

Analytical Method: NIOSH 7400-I2-Aug1994

Client: GES - ASRC Industrial		Project: Hunters Point Shipyard, Parcel B Removal Site Evaluation / J310000900											Attn:		
A&B Sample ID	Client Sample ID	Collected Date	Area/Person	Flow Rate L/m	Time On	Time Off	Total Time (min)	Volume (Liters)	Total Fields	Total Fibers	F/mm2	Fiber/cc	8 Hour TWA	Analysis Date	Analyzed By
22120898.01	MSB01-113022	12/01/2022	Area	3.5			1448	5068	100	12.0	15.287	0.001		12/15/22	[REDACTED]
22120898.02	MSB02-113022	12/01/2022	Area	3.6			1450	5220	100	6.0	7.643	0.001		12/15/22	[REDACTED]
22120898.03	MSB113A-113022	12/01/2022	Area	3.5			1447	5064.	100	1.5	1.911	< 0.001		12/15/22	[REDACTED]
22120898.04	FB-112822	11/28/2022	Area					0	100	1	1.274			12/15/22	[REDACTED]
22120898.05	MSB01-112822	11/29/2022	Area	3.8			1355	5149	100	6	7.643	0.001		12/15/22	[REDACTED]
22120898.06	MSB02-112822	11/29/2022	Area	3.6			1389	5000.	100	5.0	6.369	< 0.001		12/15/22	[REDACTED]
22120898.07	MSB113A-112822	11/29/2022	Area	3.8			1325	5035	100	2.5	3.185	< 0.001		12/15/22	[REDACTED]
22120898.08	MSB01-112922	11/30/2022	Area	3.4			1443	4906.	100	3.5	4.459	< 0.001		12/15/22	[REDACTED]
22120898.09	MSB02-112922	11/30/2022	Area	3.5			1439	5036.	100	3	3.822	< 0.001		12/15/22	[REDACTED]
22120898.10	MSB113A-112922	11/30/2022	Area	3.5			1439	5036.	100	2.5	3.185	< 0.001		12/15/22	[REDACTED]

Detection limit of this method is estimated at 7 f/mm2 (5.5 fibers per 100 fields)

Sr Value

(Fiber Range*; Sr Value): (5-20; Sr = 0.06), (20-50; Sr = 0.05), (50-100; Sr = 0.04), (>100; Sr = 0.04)

*Fiber Range = # of Fibers / 100 Counts



Sample Condition Checklist

A&B JobID : 22120898	Date Received : 12/08/2022	Time Received : 5:28PM		
Client Name : GES - ASRC Industrial				
Temperature : 22.1°C	Sample pH : NA			
Thermometer ID : IR4	pH Paper ID : NA			
Perservative :				
	Check Points	Yes	No	N/A
1.	Cooler Seal present and signed.	X		
2.	Sample(s) in a cooler.		X	
3.	If yes, ice in cooler.			X
4.	Sample(s) received with chain-of-custody.	X		
5.	C-O-C signed and dated.	X		
6.	Sample(s) received with signed sample custody seal.		X	
7.	Sample containers arrived intact. (If No comment)	X		
8.	Matrix: Water <input type="checkbox"/> Soil <input type="checkbox"/> Liquid <input type="checkbox"/> Sludge <input type="checkbox"/> Solid <input type="checkbox"/> Cassette <input checked="" type="checkbox"/> Tube <input type="checkbox"/> Bulk <input type="checkbox"/> Badge <input type="checkbox"/> Food <input type="checkbox"/> Other <input type="checkbox"/>			
9.	Samples were received in appropriate container(s)	X		
10.	Sample(s) were received with Proper preservative			X
11.	All samples were tagged or labeled.	X		
12.	Sample ID labels match C-O-C ID's.	X		
13.	Bottle count on C-O-C matches bottles found.	X		
14.	Sample volume is sufficient for analyses requested.	X		
15.	Samples were received with in the hold time.	X		
16.	VOA vials completely filled.			X
17.	Sample accepted.	X		
18.	Has client been contacted about sub-out			X

Comments : Include actions taken to resolve discrepancies/problem:

Black Cassettes. No cooler was received, however samples are received in a box with a custody seal. ~ [REDACTED] 12/09/22

Received by : [REDACTED]

Check in by/date : [REDACTED] / 12/09/2022

ab-s005-0321

**CHAIN-OF-CUSTODY
RECORD**

Gibbane Federal
1655 Grant Street, Suite 1200, Concord, CA 94520

COC ID # MC120722ASBB



Project Name: Hunters Point Shipyard, Parcel B Removal Site Evaluation	Laboratory: A&B Labs	Event: Parcel B Asbestos
Project Number: J310000900	POC: [REDACTED]	
WBS Code: J310000900	Ship to: 10100 East Fwy Ste. 100 Houston TX 77029	

12-7-22

Comments:					12-07-22																													
Job ID:22120898					Page 1 of 3																													
 12/08/2022 GES - ASRC Industrial ACH					<table border="1"> <tr> <td>Code</td> <td>Matrix</td> </tr> <tr> <td>A</td> <td>Air</td> </tr> <tr> <td>AQ</td> <td>Air Quality Control Matrix</td> </tr> </table> <table border="1"> <tr> <td>Code</td> <td>Container/Preservative</td> </tr> <tr> <td>1</td> <td>Filter/No Preservatives</td> </tr> </table>										Code	Matrix	A	Air	AQ	Air Quality Control Matrix	Code	Container/Preservative	1	Filter/No Preservatives										
Code	Matrix																																	
A	Air																																	
AQ	Air Quality Control Matrix																																	
Code	Container/Preservative																																	
1	Filter/No Preservatives																																	
Equipment:					Event: Parcel B Asbestos																													
					<table border="1"> <tr> <td>1</td> <td colspan="5"></td> <td rowspan="2">Location ID</td> <td rowspan="2">Sample Type</td> <td colspan="2">Depth (ft bgs)</td> <td rowspan="2">Cooler</td> <td rowspan="2">Comments</td> </tr> <tr> <td></td> <td colspan="5"></td> <td colspan="2">Top - Bottom</td> </tr> </table>										1						Location ID	Sample Type	Depth (ft bgs)		Cooler	Comments							Top - Bottom	
1						Location ID	Sample Type	Depth (ft bgs)		Cooler	Comments																							
								Top - Bottom																										
Sample ID	Matrix	Date	Time	Samp Init.	x					MSB01	N1	0.00	0.00	1	OSA 01A																			
1 MSB01-113022	A	12/01/2022	0758	[REDACTED]	x					MSB02	N1	0.00	0.00	1	OSA 02A																			
2 MSB02-113022	A	12/01/2022	0745	[REDACTED]	x					MSB113A	N1	0.00	0.00	1	OSA 03A																			
3 MSB113A-113022	A	12/01/2022	0809	[REDACTED]	x										HDR 03A																			
4																																		
5																																		
6																																		
7																																		
8																																		
9																																		
10																																		
11																																		
Turnaround Time: 7 days																																		
Relinquished by: (Signature)					Date	Time	Received by: (Signature)		Date	Time	Shipping Date / Carrier / Airbill Number																							
[REDACTED]					12-07-22	1600	FEDEX		12-07-22	1600	Shipping Date: 12/07/22 / FEDEX 7706 0701 3430																							
Fed-ex							[REDACTED]		12/08/22	1728	Received by Laboratory: (Signature, Date, Time) & condition																							

22.1 IR4

**CHAIN-OF-CUSTODY
RECORD**

Gilbane Federal
1655 Grant Street, Suite 1200, Concord, CA 94520

COC ID # MC120722ASBB



Project Name: Hunters Point Shipyard, Parcel B Removal Site Evaluation	Laboratory: A&B Labs	Event: Parcel B Asbestos
Project Number: J310000900	POC: [REDACTED]	
WBS Code: J310000900	Ship to: 10100 East Fwy Ste. 100 Houston TX 77029	

12-7-22

22.1 IR4

**CHAIN-OF-CUSTODY
RECORD**

Gibane Federal [REDACTED]
1655 Grant Street, Suite 1200, Concord, CA 94520

COC ID # MC120722ASBB



Project Name: Hunters Point Shipyard, Parcel B Removal Site Evaluation	Laboratory: A&B Labs	Event: Parcel B Asbestos
Project Number: J310000900	POC: [REDACTED]	
WBS Code: J310000900	Ship to: 10100 East Fwy Ste. 100 Houston TX 77029	

12-7-22

Comments:	Analytical Test Method	Code: Matrix	Page 1 of 3
A		Air	
AQ		Air Quality Control Matrix	
Code: Container/Preservative			
1	Filter/No Preservatives		

Equipment:	Event: Parcel B Asbestos	1	
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Sample ID	Matrix	Date	Time	Samp Init.	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	Location ID	Sample Type	Depth (ft bgs)		Cooler	Comments
												Top - Bottom			
1 MSB01-112922	A	11/30/2022	0750	[REDACTED]	x					MSB01	N1	0.00	0.00	1	08A
2 MSB02-112922	A	11/30/2022	0728	[REDACTED]	x					MSB02	N1	0.00	0.00	1	09A
3 MSB113A-112922	A	11/30/2022	0800	[REDACTED]	x					MSB113A	N1	0.00	0.00	1	10A
4															
5															
6															
7															
8															
9															
10															
11															

Turnaround Time: 7 days

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time	Shipping Date / Carrier / Airbill Number
[REDACTED]	12-07-22	1600	FEDEX	12-07-22	1600	Shipping Date: 12/07/22 / FEDEX 7706 0701 3430
Fed-ex			[REDACTED]	12/08/22	1700	Received by Laboratory: (Signature, Date, Time) & condition

221TR4

Flow Rate, Total Time

Sample ID	End Date	End Time	Flow Rate (L/min), Total Time (mins)
FB-112822	11/28/22	8:00:00 AM	--
MSB01-112822	11/29/22	7:44:00 AM	3.8; 1355
MSB02-112822	11/29/22	7:21:00 AM	3.6; 1389
MSB113A-112822	11/29/22	7:47:00 AM	3.8; 1325
MSB01-112922	11/30/22	7:50:00 AM	3.4; 1443
MSB02-112922	11/30/22	7:28:00 AM	3.5; 1439
MSB113A-112922	11/30/22	8:00:00 AM	3.5; 1439
MSB01-113022	12/1/22	7:58:00 AM	3.5; 1448
MSB02-113022	12/1/22	7:45:00 AM	3.6; 1450
MSB113A-113022	12/1/22	8:09:00 AM	3.5; 1447

ORIGIN ID: ICCA
[REDACTED]
GES-AIS
200 FISCHER AVE
SAN FRANCISCO, CA 94124
UNITED STATES US

SHIP DATE: 07DEC22
ACTWGT: 1.00 LB
CAD: 254128867/INET4530

BILL SENDER

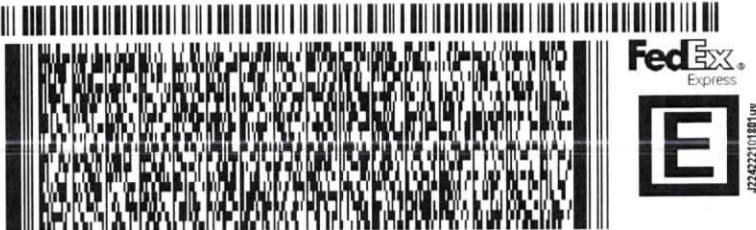
TO [REDACTED]

A&B LABS
10100 EAST FREEWAY, SUITE 100

HOUSTON TX 77029(713) 453-6060
INV
PO

REF: J31000.900 00.03.14

DEPT:



581 J39A97/FED

THU - 08 DEC 4:30P
STANDARD OVERNIGHT

TRK#
0201 7706 0701 3430

77029
UA HBYA
TX-US IAH

**After printing this label:**

1. Use the 'Print' button on this page to print your label to your laser or inkjet printer.
2. Fold the printed page along the horizontal line.
3. Place label in shipping pouch and affix it to your shipment so that the barcode portion of the label can be read and scanned.

Warning: Use only the printed original label for shipping. Using a photocopy of this label for shipping purposes is fraudulent and could result in additional billing charges, along with the cancellation of your FedEx account number.

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Laboratory Analysis Report

Job ID : 22121623



10100 East Freeway, Suite 100, Houston, TX 77029 tel: 713-453-6060, fax: 713-453-6091, http://www.ablabs.com

Client Project Name :
J310000900 / Hunters Point Shipyard, Parcel B Removal Site Evaluation

Report To :	Client Name: GES - ASRC Industrial	Total Number of Pages: 8
	Attn: [REDACTED]	P.O.#.: J310000900-005
	Client Address: 1501 West Fountainhead Parkway, Ste. #550	Date Received : 12/15/2022 17:07
	City, State, Zip: Tempe, Arizona, 85282	Sample Collected By :

A&B Labs has analyzed the following samples...

Client Sample ID	Sample Collection Date & Time	Matrix	A&B Job Sample ID
FB-120622	12/6/2022 8:00	Cassette	22121623.01
MSB01-120622	12/7/2022 7:40	Cassette	22121623.02
MSB02-120622	12/7/2022 7:11	Cassette	22121623.03
MSB113A-120622	12/7/2022 8:35	Cassette	22121623.04
MSB01-120722	12/8/2022 7:21	Cassette	22121623.05
MSB02-120722	12/8/2022 7:52	Cassette	22121623.06
MSB113A-120722	12/8/2022 7:35	Cassette	22121623.07
MSB01-120822	12/8/2022 13:40	Cassette	22121623.08
MSB02-120822	12/8/2022 13:38	Cassette	22121623.09
MSB113A-120822	12/8/2022 13:56	Cassette	22121623.10

[REDACTED]
Released By: [REDACTED]

Title: Vice President Operations

[REDACTED]
Analyst: [REDACTED]

12/22/2022

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ab-q210-0321



ANALYSIS OF AIRBORNE FIBER SAMPLING
SAMPLING PERFORMED BY CLIENT

ANALYSIS CONDUCTED BY A & B ENVIRONMENTAL SERVICES, INC.
AIHA Lab Accreditation # 101470 TDH PLM/PCM Lab License # 300080

Date 12/22/202

Job ID : 22121623

Analytical Method: NIOSH 7400-I2-Aug1994

Client: GES - ASRC Industrial		Project: J310000900 / Hunters Point Shipyard, Parcel B Removal Site Evaluation											Attn:		
A&B Sample ID	Client Sample ID	Collected Date	Area/Person	Flow Rate L/m	Time On	Time Off	Total Time (min)	Volume (Liters)	Total Fields	Total Fibers	F/mm2	Fiber/cc	8 Hour TWA	Analysis Date	Analyzed By
22121623.01	FB-120622	12/06/2022	Area				0	100	1	1.274			12/21/22	[REDACTED]	
22121623.02	MSB01-120622	12/07/2022	Area	3.4			1437	4885.	100	11.0	14.013	0.001	12/21/22	[REDACTED]	
22121623.03	MSB02-120622	12/07/2022	Area	3.4			1422	4834.	100	2	2.548	< 0.001	12/21/22	[REDACTED]	
22121623.04	MSB113A-120622	12/07/2022	Area	3.5			1480	5180	100	7.5	9.554	0.001	12/21/22	[REDACTED]	
22121623.05	MSB01-120722	12/08/2022	Area	3.2			1421	4547.	100	4	5.096	< 0.001	12/21/22	[REDACTED]	
22121623.06	MSB02-120722	12/08/2022	Area	3.7			1466	5424.	100	2.5	3.185	< 0.000	12/21/22	[REDACTED]	
22121623.07	MSB113A-120722	12/08/2022	Area	3.5			1380	4830	100	9.0	11.465	0.001	12/21/22	[REDACTED]	
22121623.08	MSB01-120822	12/08/2022	Area	3.2			379	1212.	100	4	5.096	< 0.002	12/21/22	[REDACTED]	
22121623.09	MSB02-120822	12/08/2022	Area	3.6			346	1245.	100	4.5	5.732	< 0.002	12/21/22	[REDACTED]	
22121623.10	MSB113A-120822	12/08/2022	Area	3.4			382	1298.	100	3	3.822	< 0.002	12/21/22	[REDACTED]	

Detection limit of this method is estimated at 7 f/mm2 (5.5 fibers per 100 fields)

Sr Value

(Fiber Range*; Sr Value): (5-20; Sr = 0.06), (20-50; Sr = 0.05), (50-100; Sr = 0.04), (>100; Sr = 0.04)

*Fiber Range = # of Fibers / 100 Counts



Sample Condition Checklist

A&B JobID : 22121623	Date Received : 12/15/2022	Time Received : 5:07PM		
Client Name : GES - ASRC Industrial				
Temperature : 22.0°C	Sample pH : NA			
Thermometer ID : IR4	pH Paper ID : NA			
Perservative :				
	Check Points	Yes	No	N/A
1.	Cooler Seal present and signed.	X		
2.	Sample(s) in a cooler.		X	
3.	If yes, ice in cooler.			X
4.	Sample(s) received with chain-of-custody.	X		
5.	C-O-C signed and dated.	X		
6.	Sample(s) received with signed sample custody seal.		X	
7.	Sample containers arrived intact. (If No comment)	X		
8.	Matrix: Water <input type="checkbox"/> Soil <input type="checkbox"/> Liquid <input type="checkbox"/> Sludge <input type="checkbox"/> Solid <input type="checkbox"/> Cassette <input checked="" type="checkbox"/> Tube <input type="checkbox"/> Bulk <input type="checkbox"/> Badge <input type="checkbox"/> Food <input type="checkbox"/> Other <input type="checkbox"/>			
9.	Samples were received in appropriate container(s)	X		
10.	Sample(s) were received with Proper preservative			X
11.	All samples were tagged or labeled.	X		
12.	Sample ID labels match C-O-C ID's.	X		
13.	Bottle count on C-O-C matches bottles found.	X		
14.	Sample volume is sufficient for analyses requested.	X		
15.	Samples were received with in the hold time.	X		
16.	VOA vials completely filled.			X
17.	Sample accepted.	X		
18.	Has client been contacted about sub-out			X

Comments : Include actions taken to resolve discrepancies/problem:

No cooler was received, however samples are received in a box with a custody seal. Black Cassettes. ~ [REDACTED] 12/16/22

Received by : [REDACTED]

Check in by/date : [REDACTED] / 12/16/2022

ab-s005-0321

**CHAIN-OF-CUSTODY
RECORD**

Gilbane Federal
1655 Grant Street, Suite 1200, Concord, CA 94520

COC ID # MC121422 ASBB



Project Name: Hunters Point Shipyard, Parcel B Removal Site Evaluation	Laboratory: A&B Labs	Event: Parcel B Asbestos
Project Number: J310000900	POC: [REDACTED]	
WBS Code: J310000900	Ship to: 10100 East Fwy Ste. 100 Houston TX 77029	

Comments: PLEASE CONSOLIDATE ALL COCs THAT SHARE THE SAME COC ID (TOP RIGHT CORNER) INTO ONE SDG.					Analytical Test Method	Asbestos	Code	Matrix	Code	Container/Preservative	Code	Filter/No Preservatives	Page 1 of 1
A	Air	1	Container/Preservative	1				Filter/No Preservatives					
AQ	Air Quality Control Matrix												
Equipment:													
Event: Parcel B Asbestos					1								
Sample ID	Matrix	Date	Time	Samp Init.					Location ID	Sample Type	Depth (ft bgs)	Cooler	Comments
1 FB-120622	AQ	12/06/22	0800	[REDACTED]	x				FB	FB1	0.00	0.00	1
2 MSB01-120622	A	12/07/22	0740	[REDACTED]	x				MSB01	N1	0.00	0.00	1
3 MSB02-120622	A	12/07/22	0711	[REDACTED]	x				MSB02	N1	0.00	0.00	1
4 MSB113A-120622	A	12/07/22	0835	[REDACTED]	x				MSB113A	N1	0.00	0.00	1
5													
6													
7													
8													
9													
10													
11													

Turnaround Time: 7 days

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time	Shipping Date / Carrier / Airbill Number
[REDACTED]	12-14-22	1600	FEDEX	12-14-22	1600	Shipping Date: 44909 / FEDEX 7706 8275 4251
FEDEX						(e) & condition
						12/15/22 1707
						22.0 °C 1R4

Job ID:22121623



12/15/2022

GES - ASRC Industrial

ACH

**CHAIN-OF-CUSTODY
RECORD**

Gilbane Federal
1655 Grant Street, Suite 1200, Concord, CA 94520

COC ID # MC121422 ASBB



Project Name: Hunters Point Shipyard, Parcel B Removal Site Evaluation	Laboratory: A&B Labs	Event: Parcel B Asbestos
Project Number: J310000900	POC: [REDACTED]	
WBS Code: J310000900	Ship to: 10100 East Fwy Ste. 100 Houston TX 77029	

Comments: PLEASE CONSOLIDATE ALL COCs THAT SHARE THE SAME COC ID (TOP RIGHT CORNER) INTO ONE SDG.

Test Method	Asbestos							Code	Matrix		
								A	Air		
								AQ	Air Quality Control Matrix		
				Code		Container/Preservative					
				1		Filter/No Preservatives					

Page 1 of 1

Equipment:

Analytical Test Method	Asbestos	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 10%;">Code</td><td>Container/Preservative</td></tr> <tr> <td style="width: 10%;">1</td><td>Filter/No Preservatives</td></tr> </table>	Code	Container/Preservative	1	Filter/No Preservatives
Code	Container/Preservative					
1	Filter/No Preservatives					

Event: Parcel B Asbestos

05A

06A

07A

Turnaround Time: 7 days

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time	Shipping Date / Carrier / Airbill Number
[REDACTED]	12-14-22	1600	FEDEX	12-14-22	1600	Shipping Date 44909 / FEDEX 7706 8275 4251
FEDEX						[REDACTED] 02/15/2
						22.0°C 1RY

2 1707

22.0°C IR4

**CHAIN-OF-CUSTODY
RECORD**

Gilbane Federal
1655 Grant Street, Suite 1200, Concord, CA 94520

COC ID # MC121422ASBB



Project Name: Hunters Point Shipyard, Parcel B Removal Site Evaluation	Laboratory: A&B Labs	Event: Parcel B Asbestos
Project Number: J310000900	POC: [REDACTED]	
WBS Code: J310000900	Ship to: 10100 East Fwy Ste. 100 Houston TX 77029	

Comments: PLEASE CONSOLIDATE ALL COCs THAT SHARE THE SAME COC ID (TOP RIGHT CORNER) INTO ONE SDG.	Code	Matrix	Page 3 of 3
	A	Air	
	AQ	Air Quality Control Matrix	
	Code	Container/Preservative	
	1	Filter/No Preservatives	

Equipment:					Analytical Test Method	Asbestos									Page 3 of 3												
Event: Parcel B Asbestos																											
Sample ID	Matrix	Date	Time	Samp Init.																							
1 MSB01-120822	A	12/08/22	1340	x						MSB01	N1	0.00	0.00	1	08A												
2 MSB02-120822	A	12/08/22	1338	x						MSB02	N1	0.00	0.00	1	09A												
3 MSB113A-120822	A	12/08/22	1356	x						MSB113A	N1	0.00	0.00	1	10A												
4																											
5																											
6																											
7																											
8																											
9																											
10																											
11																											

Turnaround Time: 7 days	Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time	Shipping Date / Carrier / Airbill Number
	[REDACTED]	12-14-22	1600	FEDEX	12-14-22	1600	Shipping Date: 44909 / FEDEX 7706 8275 4251
	FEDEX						

MC121422ASBB

Flow Rate, Total Time

Sample ID	End Date	End Time	Flow Rate (L/min), Total Time (mins)
FB-120622	12/6/22	8:00:00 AM	--
MSB01-120622	12/7/22	7:40:00 AM	3.4; 1437
MSB02-120622	12/7/22	7:11:00 AM	3.4; 1422
MSB113A-120622	12/7/22	8:35:00 AM	3.5; 1480
MSB01-120722	12/8/22	7:21:00 AM	3.2; 1421
MSB02-120722	12/8/22	7:52:00 AM	3.7; 1466
MSB113A-120722	12/8/22	7:35:00 AM	3.5; 1380
MSB01-120822	12/8/22	1:40:00 PM	3.2; 379
MSB02-120822	12/8/22	1:38:00 PM	3.6; 346
MSB113A-120822	12/8/22	1:56:00 PM	3.4; 382

ORIGIN ID:JCCA
[REDACTED]
GES-AIS
200 FISCHER AVE
SAN FRANCISCO, CA 94124
UNITED STATES US

SHIP DATE: 14DEC22
ACTWGT: 1.00 LB
CAD: 254128867/INET4530

BILL SENDER

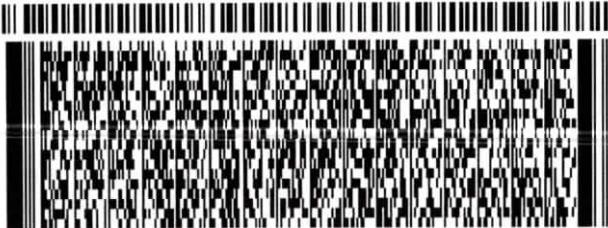
TO [REDACTED]

A&B LABS
10100 EAST FREEWAY, SUITE 100

HOUSTON TX 77029(713) 453-6060
INV:
PO:

REF: J31000 900 00.03.14

DEPT



581.030A97FF2D

THU - 15 DEC 4:30P
STANDARD OVERNIGHT

TRK#
0201 7706 8275 4251

UA HBYA

77029
TX-US IAH



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2609 North River Road
Port Allen, Louisiana 70767
(225) 228-1394

ARS Aleut Analytical, LLC

Laboratory Analytical Report

ARS1-22-02348

Gilbane Federal
[REDACTED]

1655 Grant Street
Suite 1200
Concord, CA 94520
[REDACTED]
[REDACTED]

COC Number: **KT102622RADB**

Job Number: **J310000900**

Job Location: **Hunters Point Shipyard**

Project Name: **Parcel B Air Monitoring RAD**

Questions regarding this analytical report should be addressed to ARS project manager, [REDACTED], who can be reached by email at projectmanagers@aaa.aleutfederal.com.

I certify that the test results presented in this report (in either hardcopy or electronic file (EDD)) meet the requirements of the laboratory's certifications and other applicable contract terms and conditions. A full list of the Port Allen, LA laboratory's certifications is provided with this report. Any exceptions to the certification or contract will be noted within the case narratives presented in the report. Any subcontracted sample results will be identified within the case narratives presented in the report. In the event this report is an amendment to a previously released report, the case narrative will clearly identify the original report as well as the reason(s) for reissuance. A statement of uncertainty for each analysis is available upon request. I authorize release and issuance of this report on the date signed below.

[REDACTED]

Laboratory Management, ARS Aleut Analytical

Signature

Date

Title

This report provides analytical results of the requested analysis and does not include any opinions or interpretations. ARS Aleut Analytical, LLC assumes no liability for the use or interpretation of analytical results. Results relate only to items tested. A partial reproduction of this test report is prohibited. Reproduction of this report in full requires the written approval of the laboratory.



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Certifications and Accreditations List

State or Accrediting Body (AB)	Certificate Number
AIHA LAP, LLC	209312
Alaska	LA01131
California	3085
ANAB DoD	ADE-1489
ANAB DOE	ADE-1489.01
Louisiana DEQ - NELAC	01949
Louisiana DHH	LA022
Nevada	LA011312023-1
New Jersey	LA009
New York	65039
Pennsylvania	68-04294-011
Texas	T104704447-21-17
Utah	LA011312022-13
Washington	C1010

For additional information related to the specific matrices, methods, and analytes recognized by each accrediting body, contact us at QA@aaa.aleutfederal.com for additional information.

ARS Aleut Analytical, LLC

Analytical Reports

for

Gilbane Federal

Case Narrative



2609 North River Road • Port Allen, Louisiana 70767

(225) 228-1394

**PROJECT SAMPLE IDENTIFICATION
CROSS-REFERENCE
TO ARS SAMPLE LABORATORY IDs**

Client Sample ID	ARS Aleut Analytical Sample ID
FB-101722	ARS1-22-02348-001
MSB01-101722	ARS1-22-02348-002
MSB01-101722D	ARS1-22-02348-003
MSB02-101722	ARS1-22-02348-004
MSB113A-101722	ARS1-22-02348-005

Sample	Date Collected	Date Received	Analysis	Basis	Prep Date/Time	Analysis Date/Time
001	10/17/22 08:00	10/27/22	ASP-PU239-AF	As Received	11/16/22 09:00	11/29/22 02:22
001	10/17/22 08:00	10/27/22	GAM-A-AF	As Received	N/A	11/01/22 14:09
001	10/17/22 08:00	10/27/22	GPC-RA226-AF	As Received	11/09/22 08:23	11/17/22 10:08
001	10/17/22 08:00	10/27/22	GPC-SR90-AF	As Received	11/18/22 06:45	11/22/22 11:51
002	10/20/22 13:25	10/27/22	ASP-PU239-AF	As Received	11/16/22 09:00	11/29/22 02:22
002	10/20/22 13:25	10/27/22	GAM-A-AF	As Received	N/A	11/01/22 14:10
002	10/20/22 13:25	10/27/22	GPC-RA226-AF	As Received	11/09/22 08:23	11/17/22 10:08
002	10/20/22 13:25	10/27/22	GPC-SR90-AF	As Received	11/18/22 06:45	11/22/22 11:51
003	10/20/22 13:25	10/27/22	ASP-PU239-AF	As Received	11/16/22 09:00	11/29/22 02:22
003	10/20/22 13:25	10/27/22	GAM-A-AF	As Received	N/A	11/02/22 14:00
003	10/20/22 13:25	10/27/22	GPC-RA226-AF	As Received	11/09/22 08:23	11/17/22 10:08
003	10/20/22 13:25	10/27/22	GPC-SR90-AF	As Received	11/18/22 06:45	11/22/22 11:51
004	10/20/22 13:01	10/27/22	ASP-PU239-AF	As Received	11/16/22 09:00	11/29/22 02:22



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Sample	Date Collected	Date Received	Analysis	Basis	Prep Date/Time	Analysis Date/Time
004	10/20/22 13:01	10/27/22	GAM-A-AF	As Received	N/A	11/03/22 14:12
004	10/20/22 13:01	10/27/22	GPC-RA226-AF	As Received	11/09/22 08:23	11/17/22 10:08
004	10/20/22 13:01	10/27/22	GPC-SR90-AF	As Received	11/18/22 06:45	11/22/22 11:51
005	10/20/22 13:36	10/27/22	ASP-PU239-AF	As Received	11/16/22 09:00	11/29/22 02:22
005	10/20/22 13:36	10/27/22	GAM-A-AF	As Received	N/A	11/04/22 14:10
005	10/20/22 13:36	10/27/22	GPC-RA226-AF	As Received	11/09/22 08:23	11/17/22 10:08
005	10/20/22 13:36	10/27/22	GPC-SR90-AF	As Received	11/18/22 06:45	11/22/22 11:51

SAMPLE RECEIPT/PREP

The samples arrived in good condition. The samples were screened for radioactive contamination as per procedure **PALA-SR-001-SOP Sample Receiving**. Sample date(s) and time(s) are listed as provided by the client. In regard to the Air Filters, no flow rate information was provided by the client. Turnaround time was set at 28 calendar days.

ANALYTICAL METHODS

Pu-239/240 analysis was performed using **PALA-RAD-026, "Americium, Plutonium and Uranium in Water, Soil and Vegetation Matrices by Sequential Separation Using Eichrom Stabilized Chemistry Resin (with Vacuum Box System Option) (Eichrom ACW-02 & Eichrom ACW-03)"**.

Co-60, Cs-137, Ra-226 analyses were performed using **PALA-RAD-007, "Modified Gamma Emitting Radionuclides in Soil, Air, and Biota Matrices (EPA 901.1 Mod, SM 7120B, & HASL-300 Ga-01-R)"**.

Ra-226 analysis was performed using **PALA-RAD-008, "Alpha Emitting Radium Isotopes in Water (EPA 903.0, EPA 9315, SM 7500-Ra C, SM 7500-Ra C)"**.

Sr-90 analysis was performed using **PALA-RAD-032, "Strontium 89, 90 and Total Strontium in Water, Soil and Vegetation Matrices by Eichrom Resin Separation (Eichrom SRW01, EPA 905.0, HASL 300 Sr-01-RC)"**.



ANALYTICAL RESULTS

All Batch QC criteria were met.

Fraction 001 has elevated MDC for Pu-239/240 with ACT of -3.711E-8 uCi/filter, MDC of 1.274E-7 uCi/filter and CRDL of 4.8E-08 uCi/filter.

Fraction 001 has elevated MDC for Ra-226 with ACT of -1.547E-5 uCi/filter, MDC of 1.528E-5 uCi/filter and CRDL of 4.4E-06 uCi/filter.

Fraction 002 has elevated MDC for Pu-239/240 with ACT of -5.599E-9 uCi/filter, MDC of 1.287E-7 uCi/filter and CRDL of 4.8E-08 uCi/filter.

Fraction 002 has elevated MDC for Ra-226 with ACT of -2.342E-6 uCi/filter, MDC of 2.637E-5 uCi/filter and CRDL of 4.4E-06 uCi/filter.

Fraction 003 has elevated MDC for Pu-239/240 with ACT of -5.201E-9 uCi/filter, MDC of 8.254E-8 uCi/filter and CRDL of 4.8E-08 uCi/filter.

Fraction 003 has elevated MDC for Ra-226 with ACT of -6.805E-6 uCi/filter, MDC of 1.275E-5 uCi/filter and CRDL of 4.4E-06 uCi/filter.

Fraction 004 has elevated MDC for Pu-239/240 with ACT of -7.543E-8 uCi/filter, MDC of 1.180E-7 uCi/filter and CRDL of 4.8E-08 uCi/filter.

Fraction 004 has elevated MDC for Ra-226 with ACT of 1.789E-6 uCi/filter, MDC of 1.287E-5 uCi/filter and CRDL of 4.4E-06 uCi/filter.

Fraction 005 has elevated MDC for Pu-239/240 with ACT of -1.111E-8 uCi/filter, MDC of 1.363E-7 uCi/filter and CRDL of 4.8E-08 uCi/filter.

Fraction 005 has elevated MDC for Ra-226 with ACT of -6.810E-6 uCi/filter, MDC of 1.553E-5 uCi/filter and CRDL of 4.4E-06 uCi/filter.

ARS1-B22-01775: ROI's adjusted to better fit the peaks of interest.

Notes (Case Narrative)

Definitions:

CRDL	Contract Required Detection Limit
CSU	Combined Standard Uncertainty
DLC	Decision Level Concentration (ANSI N42.23)
DO	Duplicate Original
DUP	Sample Duplicate
LCS/LCSD	Laboratory Control Sample/Laboratory Control Sample Duplicate
LOD	Limit of Detection
LOQ	Limit of Quantitation
MBL	Method Blank
MCL	Maximum Contaminant Level
MDA	Minimum Detectable Activity
MDL	Method Detection Limit
MS/MSD	Matrix Spike/Matrix Spike Duplicate
N/A	Not Applicable
NC	Not Calculated
NP	Not Provided
NR	Not Referenced
PQL	Practical Quantitation Limit

Data Qualifiers:

B	The result of both the method blank and the target sample are above the MDL.
D	Sample analysis accomplished through dilution.
J	The reported result is an estimated value above the LOD but below the LOQ, or above the MDL but below the PQL.
Q	One or more quality control criteria failed.
U	Result is below the MDA, MDL, PQL, LOD, or LOQ
*	LCS/LCSD or Sample DUP fails all Duplicate criteria.
S	Spike
SC	Subcontracted out to another qualified laboratory
H	Holding time exceeded
E	Exceeds MCL
**	Reporting Limit is higher than MCL; Target cannot be detected
#	Method/Matrix/Analyte not accredited for this certification

Radiochemistry Comments:

- 1.0) All MDA/MDC values are calculated on a sample specific basis.
- 2.0) Data in this report are within the limits of uncertainty specified in the reference method unless otherwise specified.
- 3.0) Total activity is actually total gamma activity and is determined utilizing the prominent gamma emitters from the naturally occurring radioactive decay chains and other prominent radioactive nuclides. Total activity may be lower than the actual total activity due to the extent of secular equilibrium achieved in the various decay chains at the time of analysis. The total activity is not representative of nuclides that emit solely alpha or beta particles.
- 4.0) Ra-228 is determined via secular equilibrium with its daughter, Actinium 228 (Gamma Spectroscopy only).
- 5.0) U-238 is determined via secular equilibrium with its daughter, Thorium 234 (Gamma Spectroscopy only).
- 6.0) All gamma spectroscopy was performed utilizing high purity germanium detectors (**HPGe**).
- 7.0) ARS makes every attempt to match sample density to calibrated density; however, in some cases, it is not practical or possible to do so and data results may be affected (Gamma Spectroscopy only).
- 8.0) Gamma spectroscopy results are calculated values based on the **ORTEC® GammaVision ENV32 Analysis Engine**.
- 9.0) DoD/DOE and ISO 17025 certifications through ANAB apply only to the following methods in **Non-Potable Water**:
 Gross Alpha and Gross Beta (EPA 900.0, EPA 9310); Radium 226 (EPA 903.0, EPA 903.1, EPA 9315); Radium 228 (EPA 904.0, EPA 9320); ICP/MS (EPA 6020B); ICP-OES (EPA 6010D); Mercury CVAA (EPA 7470A); Strontium-89 (EPA 905.0, Eichrom SRW01, HASL 300 Sr-01); Strontium-90 (EPA 905.0, Eichrom SRW01, HASL 300 Sr-02-RC); Tritium (EPA 906.0); Enriched Tritium (ARS-040), Carbon-14 (ARS-019), Tritium/Carbon (ARS-151); Gamma Emitters (EPA 901.1, SM 7120B, HASL 300 Ga-01-R); Americium-241 (Eichrom ACW03, HASL 300 Se-03, HASL 300 Am-03); Plutonium 238, Plutonium 239/240, Plutonium-241 (Eichrom ACW03, HASL 300 Se-03, HASL 300 Pu-10); Thorium-228, Thorium 230, Thorium-232 (Eichrom ACW10); Uranium-234, Uranium-235, Uranium-238 (Eichrom ACW03, HASL 300 Se-03); Technetium-99 (Eichrom TCW02)
- 10.0) DoD/DOE and ISO 17025 certifications through ANAB apply only to the following methods in **Solid and Chemical Materials**:
 Gross Alpha and Gross Beta (EPA 900.0 Mod, EPA 9310); ICP/MS (EPA 6020B); ICP-OES (EPA 6010D); Mercury CVAA (EPA 7471B); Strontium-89 (EPA 905.0 Mod, Eichrom SRW01, HASL 300 Sr-01); Strontium-90 (EPA 905.0 Mod, Eichrom SRW01, HASL 300 Sr-02); Tritium (EPA 906.0 Mod); Gamma Emitters (EPA 901.1, HASL 300 Ga-01-R); Americium-241 (Eichrom ACW03, HASL 300 Se-03, HASL 300 Am-01-RC); Plutonium 238, Plutonium 239/240, Plutonium-241 (Eichrom ACW03, HASL 300 Se-03, HASL 300 Pu-02-RC, HASL 300 Pu-03-RC); Thorium-228, Thorium 230, Thorium-232 (Eichrom ACW10); Uranium-234, Uranium-235, Uranium-238 (Eichrom ACW03, HASL 300 Se-03, HASL 300 U-02, HASL 300 U-04); Technetium-99 (Eichrom TCS01)
- 11.0) DoD/DOE and ISO 17025 certifications through ANAB apply only to the following methods in **Air and Emissions**:
 Gross Alpha and Gross Beta (EPA 900.0 Mod, EPA 9310); Strontium-89 (Eichrom SRW01, HASL 300 Sr-01-RC); Strontium-90 (Eichrom SRW01, HASL 300 Sr-02-RC); Gamma Emitters (EPA 901.1, HASL 300 Ga-01-R); Americium-241 (Eichrom ACW03, HASL 300 Se-03); Plutonium 238, Plutonium 239/240, Plutonium-241 (Eichrom ACW03, HASL 300 Se-03); Thorium-228, Thorium 230, Thorium-232 (Eichrom ACW10); Uranium-234, Uranium-235, Uranium-238 (Eichrom ACW03, HASL 300 Se-03); Technetium-99 (Eichrom TCW02, Eichrom TCS01)

General Comments:

- 1.0) Modified analysis procedures are procedures that are modified to meet the certain specifications. An example may be the use of a water method to analyze a solid matrix due to the lack of an officially recognized procedure for the analysis of the solid matrix. Modified analyses are indicated by the subsequent addition of "M" or "Mod" to the procedure number (i.e. 901.1M, 901.1 Mod).
- 2.0) All NIOSH method results are reported without blank corrections applied.
- 3.0) Basis: "As Received" = analyzed as received from client; "Dry" = dried prior to being analyzed; "Dry Weight Corrected" = analyzed as received; result corrected for percent moisture.



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ARS Aleut Analytical, LLC

Analytical Reports

for

Gilbane Federal

Analytical Results



2609 North River Road • Port Allen, Louisiana 70767

(225) 228-1394

ARS Sample Delivery Group: ARS1-22-02348

Client Sample ID: FB-101722

Sample Collection Date: 10/17/22 8:00

Sample Matrix: Air Filter

Percent Solids: N/A

Request or PO Number: J310000900

ARS Sample ID: ARS1-22-02348-001

Date Received: 10/27/22

Report Date: 11/30/22

Radiochemistry

Analysis Method: Eichrom ACW03

Analysis Description	Analysis Results	CSU +/- 2 s	MDC	DLC	CRDL	Qual	Analysis Units	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
Pu-239/240	-3.711E-8	6.164E-8	1.274E-7	5.652E-8	4.8E-08	U	uCi/filter	11/29/22 2:22	[REDACTED]	57.8%

Analysis Method: EPA 901.1M

Analysis Description	Analysis Results	CSU +/- 2 s	MDC	DLC	CRDL	Qual	Analysis Units	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
Co-60	4.603E-8	8.682E-7	9.600E-7	4.800E-7	0.00024	U	uCi/filter	11/01/22 14:09	[REDACTED]	N/A
Cs-137	3.099E-7	7.587E-7	8.834E-7	4.417E-7	0.00048	U	uCi/filter	11/01/22 14:09	[REDACTED]	N/A
Ra-226	-1.547E-5	1.554E-5	1.528E-5	7.640E-6	4.4E-06	U	uCi/filter	11/01/22 14:09	[REDACTED]	N/A

Analysis Method: EPA 9315

Analysis Description	Analysis Results	CSU +/- 2 s	MDC	DLC	CRDL	Qual	Analysis Units	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
Ra-226	1.234E-6	7.755E-7	9.087E-7	3.403E-7	4.4E-06		uCi/filter	11/17/22 10:08	[REDACTED]	87.3%

Analysis Method: Eichrom SRW01

Analysis Description	Analysis Results	CSU +/- 2 s	MDC	DLC	CRDL	Qual	Analysis Units	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
SR-90	2.742E-6	2.445E-6	3.914E-6	1.801E-6	2.4E-05	U	uCi/filter	11/22/22 11:51	[REDACTED]	91.1%



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ARS Sample Delivery Group: ARS1-22-02348**Client Sample ID:** MSB01-101722**Sample Collection Date:** 10/20/22 13:25**Sample Matrix:** Air Filter**Percent Solids:** N/A**Request or PO Number:** J310000900**ARS Sample ID:** ARS1-22-02348-002**Date Received:** 10/27/22**Report Date:** 11/30/22

Radiochemistry

Analysis Method: Eichrom ACW03

Analysis Description	Analysis Results	CSU +/- 2 s	MDC	DLC	CRDL	Qual	Analysis Units	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
Pu-239/240	-5.599E-9	6.676E-8	1.287E-7	5.678E-8	4.8E-08	U	uCi/filter	11/29/22 2:22	[REDACTED]	55.8%

Analysis Method: EPA 901.1M

Analysis Description	Analysis Results	CSU +/- 2 s	MDC	DLC	CRDL	Qual	Analysis Units	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
Co-60	7.710E-7	1.328E-6	1.356E-6	6.780E-7	0.00024	U	uCi/filter	11/01/22 14:10	[REDACTED]	N/A
Cs-137	1.227E-7	1.340E-6	1.514E-6	7.570E-7	0.00048	U	uCi/filter	11/01/22 14:10	[REDACTED]	N/A
Ra-226	-2.342E-6	1.581E-5	2.637E-5	1.319E-5	4.4E-06	U	uCi/filter	11/01/22 14:10	[REDACTED]	N/A

Analysis Method: EPA 9315

Analysis Description	Analysis Results	CSU +/- 2 s	MDC	DLC	CRDL	Qual	Analysis Units	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
Ra-226	7.266E-7	5.715E-7	7.571E-7	2.808E-7	4.4E-06	U	uCi/filter	11/17/22 10:08	[REDACTED]	90.6%

Analysis Method: Eichrom SRW01

Analysis Description	Analysis Results	CSU +/- 2 s	MDC	DLC	CRDL	Qual	Analysis Units	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
SR-90	1.407E-6	2.625E-6	4.499E-6	2.096E-6	2.4E-05	U	uCi/filter	11/22/22 11:51	[REDACTED]	94.5%



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(225) 228-1394

ARS Sample Delivery Group: ARS1-22-02348**Client Sample ID:** MSB01-101722D**Sample Collection Date:** 10/20/22 13:25**Sample Matrix:** Air Filter**Percent Solids:** N/A**Request or PO Number:** J310000900**ARS Sample ID:** ARS1-22-02348-003**Date Received:** 10/27/22**Report Date:** 11/30/22

Radiochemistry

Analysis Method: Eichrom ACW03

Analysis Description	Analysis Results	CSU +/- 2 s	MDC	DLC	CRDL	Qual	Analysis Units	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
Pu-239/240	-5.201E-9	3.949E-8	8.254E-8	3.422E-8	4.8E-08	U	uCi/filter	11/29/22 2:22	[REDACTED]	62.3%

Analysis Method: EPA 901.1M

Analysis Description	Analysis Results	CSU +/- 2 s	MDC	DLC	CRDL	Qual	Analysis Units	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
Co-60	-5.996E-7	1.098E-6	1.113E-6	5.565E-7	0.00024	U	uCi/filter	11/02/22 14:00	[REDACTED]	N/A
Cs-137	3.528E-7	7.513E-7	8.398E-7	4.199E-7	0.00048	U	uCi/filter	11/02/22 14:00	[REDACTED]	N/A
Ra-226	-6.805E-6	1.201E-5	1.275E-5	6.375E-6	4.4E-06	U	uCi/filter	11/02/22 14:00	[REDACTED]	N/A

Analysis Method: EPA 9315

Analysis Description	Analysis Results	CSU +/- 2 s	MDC	DLC	CRDL	Qual	Analysis Units	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
Ra-226	7.649E-7	5.806E-7	7.690E-7	2.914E-7	4.4E-06	U	uCi/filter	11/17/22 10:08	[REDACTED]	90.2%

Analysis Method: Eichrom SRW01

Analysis Description	Analysis Results	CSU +/- 2 s	MDC	DLC	CRDL	Qual	Analysis Units	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
SR-90	4.711E-6	2.826E-6	4.216E-6	1.949E-6	2.4E-05		uCi/filter	11/22/22 11:51	[REDACTED]	92.0%



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ARS Sample Delivery Group: ARS1-22-02348**Client Sample ID:** MSB02-101722**Sample Collection Date:** 10/20/22 13:01**Sample Matrix:** Air Filter**Percent Solids:** N/A**Request or PO Number:** J310000900**ARS Sample ID:** ARS1-22-02348-004**Date Received:** 10/27/22**Report Date:** 11/30/22

Radiochemistry

Analysis Method: Eichrom ACW03

Analysis Description	Analysis Results	CSU +/- 2 s	MDC	DLC	CRDL	Qual	Analysis Units	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
Pu-239/240	-7.543E-8	5.142E-8	1.180E-7	5.260E-8	4.8E-08	U	uCi/filter	11/29/22 2:22	[REDACTED]	72.1%

Analysis Method: EPA 901.1M

Analysis Description	Analysis Results	CSU +/- 2 s	MDC	DLC	CRDL	Qual	Analysis Units	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
Co-60	-9.353E-8	9.556E-7	9.847E-7	4.924E-7	0.00024	U	uCi/filter	11/03/22 14:12	[REDACTED]	N/A
Cs-137	-4.354E-7	8.280E-7	9.229E-7	4.615E-7	0.00048	U	uCi/filter	11/03/22 14:12	[REDACTED]	N/A
Ra-226	1.789E-6	1.219E-5	1.287E-5	6.435E-6	4.4E-06	U	uCi/filter	11/03/22 14:12	[REDACTED]	N/A

Analysis Method: EPA 9315

Analysis Description	Analysis Results	CSU +/- 2 s	MDC	DLC	CRDL	Qual	Analysis Units	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
Ra-226	5.632E-7	5.312E-7	7.723E-7	2.883E-7	4.4E-06	U	uCi/filter	11/17/22 10:08	[REDACTED]	92.6%

Analysis Method: Eichrom SRW01

Analysis Description	Analysis Results	CSU +/- 2 s	MDC	DLC	CRDL	Qual	Analysis Units	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
SR-90	2.915E-6	2.579E-6	4.134E-6	1.912E-6	2.4E-05	U	uCi/filter	11/22/22 11:51	[REDACTED]	96.9%



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ARS Sample Delivery Group: ARS1-22-02348**Client Sample ID:** MSB113A-101722**Sample Collection Date:** 10/20/22 13:36**Sample Matrix:** Air Filter**Percent Solids:** N/A**Request or PO Number:** J310000900**ARS Sample ID:** ARS1-22-02348-005**Date Received:** 10/27/22**Report Date:** 11/30/22

Radiochemistry

Analysis Method: Eichrom ACW03

Analysis Description	Analysis Results	CSU +/- 2 s	MDC	DLC	CRDL	Qual	Analysis Units	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
Pu-239/240	-1.111E-8	7.059E-8	1.363E-7	6.063E-8	4.8E-08	U	uCi/filter	11/29/22 2:22	[REDACTED]	53.4%

Analysis Method: EPA 901.1M

Analysis Description	Analysis Results	CSU +/- 2 s	MDC	DLC	CRDL	Qual	Analysis Units	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
Co-60	1.994E-7	8.865E-7	9.737E-7	4.869E-7	0.00024	U	uCi/filter	11/04/22 14:10	[REDACTED]	N/A
Cs-137	3.332E-8	7.886E-7	9.263E-7	4.632E-7	0.00048	U	uCi/filter	11/04/22 14:10	[REDACTED]	N/A
Ra-226	-6.810E-6	1.565E-5	1.553E-5	7.765E-6	4.4E-06	U	uCi/filter	11/04/22 14:10	[REDACTED]	N/A

Analysis Method: EPA 9315

Analysis Description	Analysis Results	CSU +/- 2 s	MDC	DLC	CRDL	Qual	Analysis Units	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
Ra-226	1.494E-6	7.816E-7	8.523E-7	3.321E-7	4.4E-06		uCi/filter	11/17/22 10:08	[REDACTED]	89.3%

Analysis Method: Eichrom SRW01

Analysis Description	Analysis Results	CSU +/- 2 s	MDC	DLC	CRDL	Qual	Analysis Units	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
SR-90	3.128E-6	2.433E-6	3.816E-6	1.760E-6	2.4E-05	U	uCi/filter	11/22/22 11:51	[REDACTED]	97.8%



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QC Summary



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QC Sample Results

Analytical Batch: ARS1-B22-01653

Lab Sample ID: ARS1-B22-01653-01

Method: EPA 9315

Sample Type: LCS

Matrix: Air Filter

Analysis Date: 11/17/22 10:08

Analyte	Spike Added	Analysis Result	Qual	Analysis Units	% Rec	% Rec Limits
Ra-226	2.697E-5	2.439E-5		uCi/filter	90.4	75 - 125



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QC Sample Results

Analytical Batch: ARS1-B22-01653

Lab Sample ID: ARS1-B22-01653-02

Method: EPA 9315

Sample Type: LCSD

Matrix: Air Filter

Analysis Date: 11/17/22 10:08

Analyte	Spike Added	Analysis Result	Qual	Analysis Units	% Rec	% Rec Limits	RPD	RPD Limit	DER	DER Limit
Ra-226	2.684E-5	2.291E-5		uCi/filter	85.4	75 - 125	6.2	25	0.534	3



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QC Sample Results

Analytical Batch: ARS1-B22-01653

Lab Sample ID: ARS1-B22-01653-03

Method: EPA 9315

Sample Type: MBL

Matrix: Air Filter

Analysis Date: 11/17/22 10:08

Analyte	Analysis Result	CSU +/- 2 s	MDC	DLC	Qual	Analysis Units
Ra-226	6.145E-8	5.900E-8	8.844E-8	3.446E-8	U	uCi/filter



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QC Association Summary

ARS Sample Delivery Group: ARS1-22-02348

Analytical Batch: ARS1-B22-01653

Analysis: Radium-226 in Air Filter

Batch Sample ID	Lab Sample ID	Client Sample ID	Matrix	Method	Prep Method
ARS1-B22-01653-01		Lab Control Sample	Air Filter	EPA 9315	N/A
ARS1-B22-01653-02		Lab Control Sample Duplicate	Air Filter	EPA 9315	N/A
ARS1-B22-01653-03		Method Blank	Air Filter	EPA 9315	N/A
ARS1-B22-01653-08	ARS1-22-02348-001	FB-101722	Air Filter	EPA 9315	N/A
ARS1-B22-01653-09	ARS1-22-02348-002	MSB01-101722	Air Filter	EPA 9315	N/A
ARS1-B22-01653-10	ARS1-22-02348-003	MSB01-101722D	Air Filter	EPA 9315	N/A
ARS1-B22-01653-11	ARS1-22-02348-004	MSB02-101722	Air Filter	EPA 9315	N/A
ARS1-B22-01653-12	ARS1-22-02348-005	MSB113A-101722	Air Filter	EPA 9315	N/A



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QC Sample Results

Analytical Batch: ARS1-B22-01682

Lab Sample ID: ARS1-B22-01682-01

Method: EPA 901.1M

Sample Type: LCS

Matrix: Air Filter

Analysis Date: 11/02/22 7:38

Analyte	Spike Added	Analysis Result	Qual	Analysis Units	% Rec	% Rec Limits
Am-241	33.065	32.527		uCi/filter	98.4	75 - 125
Co-60	20.928	21.978		uCi/filter	105.0	75 - 125
Cs-137	12.996	12.987		uCi/filter	99.9	75 - 125



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QC Sample Results

Analytical Batch: ARS1-B22-01682

Lab Sample ID: ARS1-B22-01682-02

Method: EPA 901.1M

Sample Type: LCSD

Matrix: Air Filter

Analysis Date: 11/02/22 7:49

Analyte	Spike Added	Analysis Result	Qual	Analysis Units	% Rec	% Rec Limits	RPD	RPD Limit	DER	DER Limit
Am-241	33.065	32.591		uCi/filter	98.6	75 - 125	0.2	25	0.035	3
Co-60	20.928	20.768		uCi/filter	99.2	75 - 125	5.7	25	1.374	3
Cs-137	12.996	13.192		uCi/filter	101.5	75 - 125	1.6	25	0.407	3



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QC Sample Results

Analytical Batch: ARS1-B22-01682

Lab Sample ID: ARS1-B22-01682-03

Method: EPA 901.1M

Sample Type: MBL

Matrix: Air Filter

Analysis Date: 11/04/22 14:11

Analyte	Analysis Result	CSU +/- 2 s	MDC	DLC	Qual	Analysis Units
Co-60	-4.935E-4	0.002	0.002	8.650E-4	U	uCi/filter
Cs-137	-1.505E-4	0.001	0.002	7.950E-4	U	uCi/filter
Ra-226	-0.006	0.016	0.027	0.014	U	uCi/filter



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QC Association Summary

ARS Sample Delivery Group: ARS1-22-02348

Analytical Batch: ARS1-B22-01682

Analysis: Gamma Spec (Short) in (Air Filters, Smears [AF])

Batch Sample ID	Lab Sample ID	Client Sample ID	Matrix	Method	Prep Method
ARS1-B22-01682-01		Lab Control Sample	Air Filter	EPA 901.1M	N/A
ARS1-B22-01682-02		Lab Control Sample Duplicate	Air Filter	EPA 901.1M	N/A
ARS1-B22-01682-03		Method Blank	Air Filter	EPA 901.1M	N/A
ARS1-B22-01682-04	ARS1-22-02348-001	FB-101722	Air Filter	EPA 901.1M	N/A
ARS1-B22-01682-05	ARS1-22-02348-002	MSB01-101722	Air Filter	EPA 901.1M	N/A
ARS1-B22-01682-06	ARS1-22-02348-003	MSB01-101722D	Air Filter	EPA 901.1M	N/A
ARS1-B22-01682-07	ARS1-22-02348-004	MSB02-101722	Air Filter	EPA 901.1M	N/A
ARS1-B22-01682-08	ARS1-22-02348-005	MSB113A-101722	Air Filter	EPA 901.1M	N/A



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QC Sample Results

Analytical Batch: ARS1-B22-01775

Lab Sample ID: ARS1-B22-01775-01

Method: Eichrom ACW03

Sample Type: LCS

Matrix: Air Filter

Analysis Date: 11/29/22 2:22

Analyte	Spike Added	Analysis Result	Qual	Analysis Units	% Rec	% Rec Limits
Pu-239/240	7.691E-6	7.988E-6		uCi/filter	103.9	75 - 125



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QC Sample Results

Analytical Batch: ARS1-B22-01775

Lab Sample ID: ARS1-B22-01775-02

Method: Eichrom ACW03

Sample Type: LCSD

Matrix: Air Filter

Analysis Date: 11/29/22 2:22

Analyte	Spike Added	Analysis Result	Qual	Analysis Units	% Rec	% Rec Limits	RPD	RPD Limit	DER	DER Limit
Pu-239/240	7.649E-6	7.844E-6		uCi/filter	102.5	75 - 125	1.8	25	0.202	3



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QC Sample Results

Analytical Batch: ARS1-B22-01775

Lab Sample ID: ARS1-B22-01775-03

Method: Eichrom ACW03

Sample Type: MBL

Matrix: Air Filter

Analysis Date: 11/29/22 2:22

Analyte	Analysis Result	CSU +/- 2 s	MDC	DLC	Qual	Analysis Units
Pu-238	-1.200E-8	6.861E-8	1.347E-7	5.924E-8	U	uCi/filter
Pu-239/240	2.400E-8	4.410E-8	7.868E-8	3.121E-8	U	uCi/filter



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QC Association Summary

ARS Sample Delivery Group: ARS1-22-02348

Analytical Batch: ARS1-B22-01775

Analysis: Plutonium (239, 240Pu) in (Air Filters, Smears, Leak Test [AF, SM, LT])

Batch Sample ID	Lab Sample ID	Client Sample ID	Matrix	Method	Prep Method
ARS1-B22-01775-01		Lab Control Sample	Air Filter	Eichrom ACW03	N/A
ARS1-B22-01775-02		Lab Control Sample Duplicate	Air Filter	Eichrom ACW03	N/A
ARS1-B22-01775-03		Method Blank	Air Filter	Eichrom ACW03	N/A
ARS1-B22-01775-04	ARS1-22-02348-001	FB-101722	Air Filter	Eichrom ACW03	N/A
ARS1-B22-01775-05	ARS1-22-02348-002	MSB01-101722	Air Filter	Eichrom ACW03	N/A
ARS1-B22-01775-06	ARS1-22-02348-003	MSB01-101722D	Air Filter	Eichrom ACW03	N/A
ARS1-B22-01775-07	ARS1-22-02348-004	MSB02-101722	Air Filter	Eichrom ACW03	N/A
ARS1-B22-01775-08	ARS1-22-02348-005	MSB113A-101722	Air Filter	Eichrom ACW03	N/A



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QC Sample Results

Analytical Batch: ARS1-B22-01776

Lab Sample ID: ARS1-B22-01776-01

Method: Eichrom SRW01

Sample Type: LCS

Matrix: Air Filter

Analysis Date: 11/22/22 11:51

Analyte	Spike Added	Analysis Result	Qual	Analysis Units	% Rec	% Rec Limits
SR-90	2.011E-5	2.093E-5		uCi/filter	104.1	75 - 125



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QC Sample Results

Analytical Batch: ARS1-B22-01776

Sample Type: LCSD

Lab Sample ID: ARS1-B22-01776-02

Matrix: Air Filter

Method: Eichrom SRW01

Analysis Date: 11/22/22 11:51

Analyte	Spike Added	Analysis Result	Qual	Analysis Units	% Rec	% Rec Limits	RPD	RPD Limit	DER	DER Limit
SR-90	2.001E-5	2.063E-5		uCi/filter	103.1	75 - 125	1.5	25	0.132	3



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QC Sample Results

Analytical Batch: ARS1-B22-01776

Lab Sample ID: ARS1-B22-01776-03

Method: Eichrom SRW01

Sample Type: MBL

Matrix: Air Filter

Analysis Date: 11/22/22 11:51

Analyte	Analysis Result	CSU +/- 2 s	MDC	DLC	Qual	Analysis Units
SR-90	3.738E-6	2.474E-6	3.747E-6	1.721E-6	U	uCi/filter



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QC Association Summary

ARS Sample Delivery Group: ARS1-22-02348

Analytical Batch: ARS1-B22-01776

Analysis: Strontium-90 in (Air Filters, Smears [AF])

Batch Sample ID	Lab Sample ID	Client Sample ID	Matrix	Method	Prep Method
ARS1-B22-01776-01		Lab Control Sample	Air Filter	Eichrom SRW01	N/A
ARS1-B22-01776-02		Lab Control Sample Duplicate	Air Filter	Eichrom SRW01	N/A
ARS1-B22-01776-03		Method Blank	Air Filter	Eichrom SRW01	N/A
ARS1-B22-01776-04	ARS1-22-02348-001	FB-101722	Air Filter	Eichrom SRW01	N/A
ARS1-B22-01776-05	ARS1-22-02348-002	MSB01-101722	Air Filter	Eichrom SRW01	N/A
ARS1-B22-01776-06	ARS1-22-02348-003	MSB01-101722D	Air Filter	Eichrom SRW01	N/A
ARS1-B22-01776-07	ARS1-22-02348-004	MSB02-101722	Air Filter	Eichrom SRW01	N/A
ARS1-B22-01776-08	ARS1-22-02348-005	MSB113A-101722	Air Filter	Eichrom SRW01	N/A

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Analytical Reports

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Batch QC



QC Results per Analytical Batch

Analytical Batch	ARS1-B22-01653
SDG	ARS1-22-02348
Analysis	Radium-226 in Air Filter
Method	EPA 9315
Analysis Code	GPC-RA226-AF
Report Units	uCi/filter

Acceptable QC Performance Ranges

QC Sample Type	Performance Items and Ranges		
Laboratory Control Sample	Recovery (%):	> 75	< 125
Matrix Spike	Recovery (%):	> 60	< 140
Duplicate	Duplicate Error Ratio (DER):	< 3	
	Relative Percent Difference (RPD %):	≤ 25	

Laboratory Control Sample			Analysis Date	11/17/22 10:08	Analysis Technician	██████████	
Analysis Batch Sample ID	QC Type	Analyte	Results	CSU (2s)	Expected Value	LCS Rec (%)	MDC
ARS1-B22-01653-01	LCS	RA-226	2.439E-5	3.946E-6	2.697E-5	90.4	9.194E-8

Duplicate RER/DER/RPD			Analysis Date	11/17/22 10:08	Analysis Technician	██████████	
Analyte	Results LCS	CSU LCS (2s)	Results LCSD	CSU LCSD (2s)	DER	RPD	
RA-226	2.439E-5	3.946E-6	2.291E-5	3.709E-6	0.534	6.2	

Method Blank			Analysis Date	11/17/22 10:08	Analysis Technician	██████████	
Analysis Batch Sample ID	QC Type	Analyte	Results	CSU (2s)	MDC	Qual	
ARS1-B22-01653-03	MBL	RA-226	6.145E-8	5.900E-8	8.844E-8	U	



QC Results per Analytical Batch

Analytical Batch	ARS1-B22-01682
SDG	ARS1-22-02348
Analysis	Gamma Spec (Short) in (Air Filters, Smears [AF])
Method	EPA 901.1M
Analysis Code	GAM-A-AF
Report Units	uCi/filter

Acceptable QC Performance Ranges

QC Sample Type	Performance Items and Ranges		
Laboratory Control Sample	Recovery (%):	> 75	< 125
Matrix Spike	Recovery (%):	> 60	< 140
Duplicate	Duplicate Error Ratio (DER):		< 3
	Relative Percent Difference (RPD %):		≤ 25

Laboratory Control Sample			Analysis Date	11/02/22 07:38	Analysis Technician	█	
Analysis Batch Sample ID	QC Type	Analyte	Results	CSU (2s)	Expected Value	LCS Rec (%)	MDC
ARS1-B22-01682-01	LCS	AM-241	32.527	2.525	33.065	98.4	0.077
ARS1-B22-01682-01	LCS	CO-60	21.978	1.159	20.928	105.0	0.401
ARS1-B22-01682-01	LCS	CS-137	12.987	0.692	12.996	99.9	0.072

Duplicate RER/DER/RPD			Analysis Date	11/02/22 07:49	Analysis Technician	█	
Analyte	Results LCS	CSU LCS (2s)	Results LCSD	CSU LCSD (2s)	DER	RPD	
AM-241	32.527	2.525	32.591	2.530	0.035	0.2	
CO-60	21.978	1.159	20.768	1.278	1.374	5.7	
CS-137	12.987	0.692	13.192	0.703	0.407	1.6	

Method Blank			Analysis Date	11/04/22 14:11	Analysis Technician	█	
Analysis Batch Sample ID	QC Type	Analyte	Results	CSU (2s)	MDC	Qual	
ARS1-B22-01682-03	MBL	CO-60	-4.935E-4	0.002	0.002	U	
ARS1-B22-01682-03	MBL	CS-137	-1.505E-4	0.001	0.002	U	
ARS1-B22-01682-03	MBL	RA-226	-0.006	0.016	0.027	U	



QC Results per Analytical Batch

Analytical Batch	ARS1-B22-01775
SDG	ARS1-22-02348
Analysis	Plutonium (239, 240Pu) in (Air Filters, Smears, Leak Test [AF, SM, LT])
Method	Eichrom ACW03
Analysis Code	ASP-PU239-AF
Report Units	uCi/filter

Acceptable QC Performance Ranges

QC Sample Type	Performance Items and Ranges		
Laboratory Control Sample	Recovery (%):	> 75	< 125
Matrix Spike	Recovery (%):	> 60	< 140
Duplicate	Duplicate Error Ratio (DER):	< 3	
	Relative Percent Difference (RPD %):	≤ 25	

Laboratory Control Sample			Analysis Date	11/29/22 02:22	Analysis Technician	██████████	
Analysis Batch Sample ID	QC Type	Analyte	Results	CSU (2s)	Expected Value	LCS Rec (%)	MDC
ARS1-B22-01775-01	LCS	PU-239/240	7.988E-6	1.001E-6	7.691E-6	103.9	5.454E-8

Duplicate RER/DER/RPD			Analysis Date	11/29/22 02:22	Analysis Technician	██████████	
Analyte	Results LCS	CSU LCS (2s)	Results LCSD	CSU LCSD (2s)	DER	RPD	
PU-239/240	7.988E-6	1.001E-6	7.844E-6	9.827E-7	0.202	1.8	

Method Blank			Analysis Date	11/29/22 02:22	Analysis Technician	██████████	
Analysis Batch Sample ID	QC Type	Analyte	Results	CSU (2s)	MDC	Qual	
ARS1-B22-01775-03	MBL	PU-238	-1.200E-8	6.861E-8	1.347E-7	U	
ARS1-B22-01775-03	MBL	PU-239/240	2.400E-8	4.410E-8	7.868E-8	U	



QC Results per Analytical Batch

Analytical Batch	ARS1-B22-01776
SDG	ARS1-22-02348
Analysis	Strontium-90 in (Air Filters, Smears [AF])
Method	Eichrom SRW01
Analysis Code	GPC-SR90-AF
Report Units	uCi/filter

Acceptable QC Performance Ranges

QC Sample Type	Performance Items and Ranges		
Laboratory Control Sample	Recovery (%):	> 75	< 125
Matrix Spike	Recovery (%):	> 60	< 140
Duplicate	Duplicate Error Ratio (DER):	< 3	
	Relative Percent Difference (RPD %):	≤ 25	

Laboratory Control Sample			Analysis Date	11/22/22 11:51	Analysis Technician	██████████	
Analysis Batch Sample ID	QC Type	Analyte	Results	CSU (2s)	Expected Value	LCS Rec (%)	MDC
ARS1-B22-01776-01	LCS	SR-90	2.093E-5	3.195E-6	2.011E-5	104.1	3.438E-7

Duplicate RER/DER/RPD			Analysis Date	11/22/22 11:51	Analysis Technician	██████████	
Analyte	Results LCS	CSU LCS (2s)	Results LCSD	CSU LCSD (2s)	DER	RPD	
SR-90	2.093E-5	3.195E-6	2.063E-5	3.150E-6	0.132	1.5	

Method Blank			Analysis Date	11/22/22 11:51	Analysis Technician	██████████	
Analysis Batch Sample ID	QC Type	Analyte	Results	CSU (2s)	MDC	Qual	
ARS1-B22-01776-03	MBL	SR-90	3.738E-6	2.474E-6	3.747E-6	U	



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Analytical Reports

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Sample Management Records

**CHAIN-OF-CUSTODY
RECORD**

Gilbane Federal
[REDACTED]
2300 Clayton Road, Suite 1050, Concord, CA 94520

COC # KT102622RADB

Gilbane

Project Name: Hunters Point Shipyard, Parcel B Removal Site Evaluation	Laboratory: ARS Aleut Analytical (AAA), Port Allen, LA	Event: Parcel B Air Monitoring RAD
Project Number: J310000900	POC: [REDACTED]	
WBS Code: J310000900	Ship to: 2609 North River Road, Port Allen, LA 70767-3469	

Comments:

Equipment:

Code	Matrix
A	Air
AQ	Air Quality Control Matrix
Code	Container/Preservative
1	1x Filter, None
5	1x 1-L Plastic, HNO3, pH < 2
15	1x 250-mL Plastic, 4 Degrees C

Event: Parcel B Air Monitoring RAD

	Sample ID	Matrix	Date	Time	Samp Init.							Location ID	Sample Type	Depth (ft bgs)		Cooler	Comments	
														Top - Bottom	Bottom			
1	FB101722	AQ	10/17/2022	0800	[REDACTED]	X	X	X	X				FIELDQC	FB1	0.00	0.00	1	
2	MSB01-101722	A	10/20/2022	1325	[REDACTED]	X	X	X	X				MSB01	N1	0.00	0.00	1	TOTAL FLOW: 292,200 (L)
3	MSB01-101722D	A	10/20/2022	1325	[REDACTED]	X	X	X	X				MSB01	FD1	0.00	0.00	1	TOTAL FLOW: 292,200 (L)
4	MSB02-101722	A	10/20/2022	1301	[REDACTED]	X	X	X	X				MSB02	N1	0.00	0.00	1	TOTAL FLOW: 291,660 (L)
5	MSB113A-101722	A	10/20/2022	1336	[REDACTED]	X	X	X	X				MSB113A	N1	0.00	0.00	1	TOTAL FLOW: 293,460 (L)
6																		
7																		

Turnaround Time: NA

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time	Shipping Date / Carrier / Airbill Number
[REDACTED]	10/26/22	1330	Fedex	10/26/22	1330	Shipping Date: 10/26/2022 / FEDEX 7702 5480 8059
			[REDACTED]	10/27/22	1420	Received by Laboratory: (Signature, Date, Time) & condition

SDG Report - Samples and Containers

SDG Specific Data								
SDG	ARS1-22-02348		TAT Days	28 Calendar Days		Project Type	Environmental	
Sample Count	5	Rpt Level	4	Date Received	10/27/2022		COC Number	KT102622RADB
Client	Gilbane Federal		Discrepancy Resol	N/A		PO Number		
Client Code	1138		Client Deadline	11/28/2022		Job Number	J310000900	
Profile Number	PN-01411					Job Location	Hunters Point Shipyard	
Comment								

Samples and Containers Checked In Thus Far									Comments
FR	Name	Matrix	Start Date	End Date	Disp	Hold	Arch	Storage	Comments
001	FB-101722	Air Filter	10/17/2022 07:59	10/17/2022 08:00	H	30	10	PrePrep	
	IC_ID	Cnt	Container Type	AF Volume (L)	AF Units		Rate	Mins	
	426149	1	HDP Container	1	LPM			1	
			Mid-Sample Date:	10/17/2022 07:59	AF Volume (CuM):		0.001		
002	MSB01-101722	Air Filter	10/20/2022 13:24	10/20/2022 13:25	H	30	10	PrePrep	
	IC_ID	Cnt	Container Type	AF Volume (L)	AF Units		Rate	Mins	
	426150	1	HDP Container	1	LPM			1	
			Mid-Sample Date:	10/20/2022 13:24	AF Volume (CuM):		0.001		
003	MSB01-101722D	Air Filter	10/20/2022 13:24	10/20/2022 13:25	H	30	10	PrePrep	
	IC_ID	Cnt	Container Type	AF Volume (L)	AF Units		Rate	Mins	
	426151	1	HDP Container	1	LPM			1	
			Mid-Sample Date:	10/20/2022 13:24	AF Volume (CuM):		0.001		
004	MSB02-101722	Air Filter	10/20/2022 13:00	10/20/2022 13:01	H	30	10	PrePrep	
	IC_ID	Cnt	Container Type	AF Volume (L)	AF Units		Rate	Mins	
	426152	1	HDP Container	1	LPM			1	
			Mid-Sample Date:	10/20/2022 13:00	AF Volume (CuM):		0.001		
005	MSB113A-101722	Air Filter	10/20/2022 13:35	10/20/2022 13:36	H	30	10	PrePrep	
	IC_ID	Cnt	Container Type	AF Volume (L)	AF Units		Rate	Mins	
	426153	1	HDP Container	1	LPM			1	
			Mid-Sample Date:	10/20/2022 13:35	AF Volume (CuM):		0.001		

SDG Report - Analysis Assignments

SDG	ARS1-22-02348	Sample Count	5
Client	Gilbane Federal	Analysis Count	4-20

Sample Count Totals Per Analysis			
Analysis Code	Analysis Description	In/Out	Samples Count
ASP-PU239-AF	Plutonium (239, 240Pu) in (Air Filters, Smears, Leak Test [AF, SM, LT])	I	5
GAM-A-AF	Gamma Spec (Short) in (Air Filters, Smears [AF])	I	5
GPC-RA226-AF	Radium-226 in Air Filter	I	5
GPC-SR90-AF	Strontium-90 in (Air Filters, Smears [AF])	I	5

Analyses Assigned Per Fraction		
Fraction	Analysis Code	X = Assigned
001	ASP-PU239-AF	X
001	GAM-A-AF	X
001	GPC-RA226-AF	X
001	GPC-SR90-AF	X
002	ASP-PU239-AF	X
002	GAM-A-AF	X
002	GPC-RA226-AF	X
002	GPC-SR90-AF	X
003	ASP-PU239-AF	X
003	GAM-A-AF	X
003	GPC-RA226-AF	X
003	GPC-SR90-AF	X
004	ASP-PU239-AF	X
004	GAM-A-AF	X
004	GPC-RA226-AF	X
004	GPC-SR90-AF	X
005	ASP-PU239-AF	X
005	GAM-A-AF	X
005	GPC-RA226-AF	X
005	GPC-SR90-AF	X

Client Name: Gilbane Federal

Profile Name: Parcel B Rad Sampling

Report Level: 4

Analysis Code	Prep Type	Units	Aliquot	Prep Code	Procedure	Count Time					
ASP-PU239-AF	WRAD	uCi	filter	N/A	PALA-RAD-026						
	Analyte			RDL	LCS LL/UL	MS LL/UL	RadY LL/UL	GravY LL/UL	RER	RPD	Surr LL/UL
GAM-A-AF	Pu-239/240 (15117-48-3)			4.8E-08 uCi/filter	75/125	60/140	30/110	30/110	1	25	N/A
	WGAM	uCi	filter	N/A	PALA-RAD-007						
	Analyte			RDL	LCS LL/UL	MS LL/UL	RadY LL/UL	GravY LL/UL	RER	RPD	Surr LL/UL
	Co-60 (10198-40-0)			0.00024 uCi/filter	75/125	60/140	30/110	30/110	1	25	N/A
GPC-RA226-AF	Cs-137 (10045-97-3)			0.00048 uCi/filter	75/125	60/140	30/110	30/110	1	25	N/A
	Ra-226 (13982-63-3)			4.4E-06 uCi/filter	75/125	60/140	30/110	30/110	1	25	N/A
	WRAD	uCi	filter		PALA-RAD-008						
GPC-SR90-AF	Analyte			RDL	LCS LL/UL	MS LL/UL	RadY LL/UL	GravY LL/UL	RER	RPD	Surr LL/UL
	Ra-226 (13982-63-3)			4.4E-06 uCi/filter	75/125	60/140	30/110	30/110	1	25	N/A
GPC-SR90-AF	WRAD	uCi	filter	N/A	PALA-RAD-032						
	Analyte			RDL	LCS LL/UL	MS LL/UL	RadY LL/UL	GravY LL/UL	RER	RPD	Surr LL/UL
GPC-SR90-AF	Sr-90 (10098-97-2)			2.4E-05 uCi/filter	75/125	60/140	30/110	30/110	1	25	N/A

Analysis Code	Fraction	Units	Aliquot	Conductivity	Analyte Count
ASP-PU239-AF	001	uCi		N/A	
		Group		Analyte	
		Parcel B Rad Sampling		Pu-239/240	
ASP-PU239-AF	002	uCi		N/A	
		Group		Analyte	
		Parcel B Rad Sampling		Pu-239/240	

DQO Report for SDG

ARS1-22-02348

ASP-PU239-AF	003	uCi	filter	N/A	1
		Group		Analyte	
ASP-PU239-AF	004	Parcel B Rad Sampling		Pu-239/240	
		uCi	filter	N/A	1
ASP-PU239-AF	005	Group		Analyte	
		Parcel B Rad Sampling		Pu-239/240	
GAM-A-AF	001	uCi	filter	N/A	3
		Group		Analyte	
GAM-A-AF	002	Parcel B Rad Sampling		Cs-137	
		Parcel B Rad Sampling		Co-60	
GAM-A-AF	003	Parcel B Rad Sampling		Ra-226	
		uCi	filter	N/A	3
GAM-A-AF	004	Group		Analyte	
		Parcel B Rad Sampling		Cs-137	
GAM-A-AF	005	Parcel B Rad Sampling		Co-60	
		Parcel B Rad Sampling		Ra-226	
GAM-A-AF	001	uCi	filter	N/A	3
		Group		Analyte	
GAM-A-AF	002	Parcel B Rad Sampling		Cs-137	
		Parcel B Rad Sampling		Co-60	
GAM-A-AF	003	Parcel B Rad Sampling		Ra-226	
		uCi	filter	N/A	3
GAM-A-AF	004	Group		Analyte	
		Parcel B Rad Sampling		Cs-137	
GAM-A-AF	005	Parcel B Rad Sampling		Co-60	
		Parcel B Rad Sampling		Ra-226	

DQO Report for SDG

ARS1-22-02348

GPC-RA226-AF	001	uCi	filter	N/A	1
		Group		Analyte	
GPC-RA226-AF	002	Parcel B Rad Sampling		Ra-226	
		uCi	filter	N/A	1
GPC-RA226-AF	003	Group		Analyte	
		Parcel B Rad Sampling		Ra-226	
GPC-RA226-AF	004	uCi	filter	N/A	1
		Group		Analyte	
GPC-RA226-AF	005	Parcel B Rad Sampling		Ra-226	
		uCi	filter	N/A	1
GPC-SR90-AF	001	Group		Analyte	
		Parcel B Rad Sampling		Sr-90	
GPC-SR90-AF	002	uCi	filter	N/A	1
		Group		Analyte	
GPC-SR90-AF	003	Parcel B Rad Sampling		Sr-90	
		uCi	filter	N/A	1
GPC-SR90-AF	004	Group		Analyte	
		Parcel B Rad Sampling		Sr-90	
GPC-SR90-AF	005	uCi	filter	N/A	1
		Group		Analyte	
		Parcel B Rad Sampling		Sr-90	



Sample Custodian:	<u>[REDACTED]</u>	Survey Start Date:	<u>10/27/22</u>	Survey Start Time:	<u>1420</u>
Thermometer ID:	<u>E0064010085</u>	Calibration Due Date:	<u>2/28/23</u>	pH Paper Lot#	<u>NA</u>
Exposure Rate Meter + Probe Unit ID:	<u>269264</u>	Calibration Due Date:	<u>9/13/23</u>	Background:	<u>4</u> $\mu\text{R}/\text{hr}$
Count Rate Meter + Probe Unit ID:	<u>PR287372</u>	Calibration Due Date:	<u>9/13/23</u>	Background:	<u>20</u> cpm
Delivery Type (circle one):	Direct	Lock Box	Commercial Carrier	<u>FEDEX</u>	Total # of ESCs: <u>1</u>

*True temperature is recorded which includes any applicable correction factors.					
External Shipping Container Tracking:	Exposure Rate ($\mu\text{R}/\text{hr}$) (limit <500 $\mu\text{R}/\text{hr}$)	Max External Swipe Counts (cpm)	Max Internal Swipe Counts (cpm)	ESC True Temps* ($^{\circ}\text{C}$)	TRAX Matrix ID (circle all that apply): (See Section 4.3 of SOP)
A: <u>770254805059</u>	<u>5</u>	<u>40</u>	<u>50</u>	<u>NA</u>	AQ WD WG WO
B:					WS WW SI UR
C:					SO OL BI VG
D:					WP SM AF
E:					
F:					

Visual Inspection: <u>External Shipping Container</u>	(Circle response)	<u>COC/Sample Inspection</u>	(Circle response)
Good Condition with no Leaks or Tears	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Sample Containers in good condition	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Marked Radioactive	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	No spills or leaks	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
UN2910	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Marked Radioactive	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Security Seals	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Durable labels w/indelible ink	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
If yes, intact?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No N/A	COC relinquished/received correctly	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
<u>Internal Shipping Container</u>		Adequate volume/filled correctly	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
COC's Present	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Hold Time sufficient for analysis	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Well packaged container with no signs of leakage	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	For VOC/Radon, Head space?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A
		If yes, <6mm?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A
		# of containers received matches # on COC	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Comments:		Samples received on ice?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
		Type (circle one):	<input type="checkbox"/> Bagged Ice <input type="checkbox"/> Loose Ice <input type="checkbox"/> Blue Ice <input checked="" type="checkbox"/> N/A



PALA Sample Survey Form

Client Name: Gilbane
SDG: ARSI-22-02348

Sample Survey Form
PALA-SR-001-FM-02 r 0.1
Effective 08/30/2019

Pipette ID: NA

Tip Lot#: NA

Disposable pipette lot#: NA

Sample Custodian:

Survey End Date: 10/22/22 Survey/pH End Time: 1425

pH re-check required? YES or NO

NOTE: Any metals sample acidified at sample receiving must be re-checked after a 24 hour hold.

If YES: pH re-check date/time: _____ / _____

Analyst: _____

pH strip lot #: _____

Were all re-checked samples' pH < 2? YES or NO*

**If no, complete and send to Project Management:*

1. Section A of PALA-SR-001-FM-05 (24 Hour Hold pH Readjustment)

2 SR section of PAIA-SR-001-FM-03 (Discrepant Sample Receipt Report).

2. SR section of FALC-SR-001-1 M-03 (Discrepancy Sample Acceptance Report).

ORIGIN ID: ICCA

200 FISHER STREET

SAN FRANCISCO, CA 94124
UNITED STATES US

SHIP DATE: 26OCT22
ACTWGT: 1.00 LB
CAD: 254128867/INET4530

BILL SENDER

TC

ARS ALEUT ANALYTICAL, LLC
2609 NORTH RIVER ROAD

PORT ALLEN LA 70767

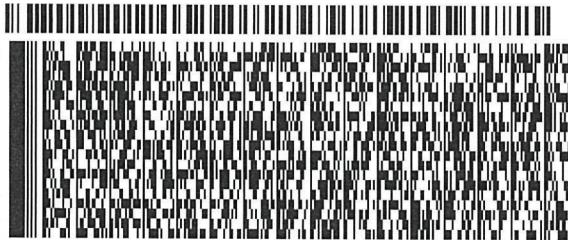
(225) 381-2991

INV:

PO

REF: J31000.900 01.21.06

DEPT



581 11AC5EE2D

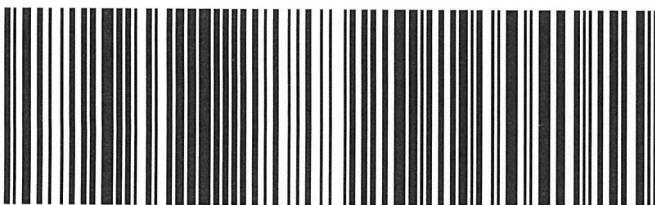
**THU - 27 OCT 4:30P
STANDARD OVERNIGHT**

TRK#
0201 7702 5480 8059

STANDARD OVERNIGHT

XN OPLA

70767
LA-US MSY



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2609 North River Road
Port Allen, Louisiana 70767
(225) 228-1394

ARS Aleut Analytical, LLC

Laboratory Analytical Report

ARS1-22-02458

Gilbane Federal

1655 Grant Street
Suite 1200
Concord, CA 94520

COC Number: **MC110922RADB**

Job Number: **J310000900**

Job Location: **Parcel B Air Monitoring RAD**

Project Name: **Parcel B Removal Site Evaluation**

Questions regarding this analytical report should be addressed to ARS project manager, [REDACTED], who can be reached by email at projectmanagers@aaa.aleutfederal.com.

I certify that the test results presented in this report (in either hardcopy or electronic file (EDD)) meet the requirements of the laboratory's certifications and other applicable contract terms and conditions. A full list of the Port Allen, LA laboratory's certifications is provided with this report. Any exceptions to the certification or contract will be noted within the case narratives presented in the report. Any subcontracted sample results will be identified within the case narratives presented in the report. In the event this report is an amendment to a previously released report, the case narrative will clearly identify the original report as well as the reason(s) for reissuance. A statement of uncertainty for each analysis is available upon request. I authorize release and issuance of this report on the date signed below.

[REDACTED]

Laboratory Management, ARS Aleut Analytical

Signature

Date

Title

This report provides analytical results of the requested analysis and does not include any opinions or interpretations. ARS Aleut Analytical, LLC assumes no liability for the use or interpretation of analytical results. Results relate only to items tested. A partial reproduction of this test report is prohibited. Reproduction of this report in full requires the written approval of the laboratory.



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Certifications and Accreditations List

State or Accrediting Body (AB)	Certificate Number
AIHA LAP, LLC	209312
Alaska	LA01131
California	3085
ANAB DoD	ADE-1489
ANAB DOE	ADE-1489.01
Louisiana DEQ - NELAC	01949
Louisiana DHH	LA022
Nevada	LA011312023-1
New Jersey	LA009
New York	65039
Pennsylvania	68-04294-011
Texas	T104704447-21-17
Utah	LA011312022-13
Washington	C1010

For additional information related to the specific matrices, methods, and analytes recognized by each accrediting body, contact us at QA@aaa.aleutfederal.com for additional information.

ARS Aleut Analytical, LLC

Analytical Reports

for

Gilbane Federal

Case Narrative



2609 North River Road • Port Allen, Louisiana 70767

(225) 228-1394

**PROJECT SAMPLE IDENTIFICATION
CROSS-REFERENCE
TO ARS SAMPLE LABORATORY IDs**

Client Sample ID	ARS Aleut Analytical Sample ID
FB-103122	ARS1-22-02458-001
MSB01-103122	ARS1-22-02458-002
MSB02-103122	ARS1-22-02458-003
MSB113A-103122	ARS1-22-02458-004

Sample	Date Collected	Date Received	Analysis	Basis	Prep Date/Time	Analysis Date/Time
001	10/31/22 08:00	11/10/22	ASP-PU239-AF	As Received	12/02/22 07:20	12/07/22 01:46
001	10/31/22 08:00	11/10/22	GAM-A-AF	As Received	N/A	11/15/22 14:20
001	10/31/22 08:00	11/10/22	GPC-RA226-AF	As Received	11/29/22 09:47	12/08/22 09:59
001	10/31/22 08:00	11/10/22	GPC-SR90-AF	As Received	11/22/22 07:01	11/30/22 10:34
002	11/03/22 03:55	11/10/22	ASP-PU239-AF	As Received	12/02/22 07:20	12/07/22 01:46
002	11/03/22 03:55	11/10/22	GAM-A-AF	As Received	N/A	11/16/22 14:33
002	11/03/22 03:55	11/10/22	GPC-RA226-AF	As Received	11/29/22 09:47	12/08/22 09:59
002	11/03/22 03:55	11/10/22	GPC-SR90-AF	As Received	11/22/22 07:01	11/30/22 10:34
003	11/03/22 03:30	11/10/22	ASP-PU239-AF	As Received	12/02/22 07:20	12/07/22 01:46
003	11/03/22 03:30	11/10/22	GAM-A-AF	As Received	N/A	11/16/22 14:39
003	11/03/22 03:30	11/10/22	GPC-RA226-AF	As Received	11/29/22 09:47	12/08/22 09:59
003	11/03/22 03:30	11/10/22	GPC-SR90-AF	As Received	11/22/22 07:01	11/30/22 10:34
004	11/03/22 03:45	11/10/22	ASP-PU239-AF	As Received	12/02/22 07:20	12/07/22 01:46
004	11/03/22 03:45	11/10/22	GAM-A-AF	As Received	N/A	11/16/22 14:30

004	11/03/22 03:45	11/10/22	GPC-RA226-AF	As Received	11/29/22 09:47	12/08/22 09:59
004	11/03/22 03:45	11/10/22	GPC-SR90-AF	As Received	11/22/22 07:01	11/30/22 10:34

SAMPLE RECEIPT/PREP

The samples arrived in good condition. The samples were screened for radioactive contamination as per procedure **PALA-SR-001-SOP Sample Receiving**. Sample date(s) and time(s) are listed as provided by the client. In regard to the Air Filters, no flow rate information was provided by the client. Turnaround time was set at 28 calendar days.

ANALYTICAL METHODS

Pu-239/240 analysis was performed using **PALA-RAD-026, "Americium, Plutonium and Uranium in Water, Soil and Vegetation Matrices by Sequential Separation Using Eichrom Stabilized Chemistry Resin (with Vacuum Box System Option) (Eichrom ACW-02 & Eichrom ACW-03)"**.

Co-60, Cs-137, Ra-226 analyses were performed using **PALA-RAD-007, "Modified Gamma Emitting Radionuclides in Soil, Air, and Biota Matrices (EPA 901.1 Mod, SM 7120B, & HASL-300 Ga-01-R)"**.

Ra-226 analysis was performed using **PALA-RAD-008, "Alpha Emitting Radium Isotopes in Water (EPA 903.0, EPA 9315, SM 7500-Ra C, SM 7500-Ra C)"**.

Sr-90 analysis was performed using **PALA-RAD-032, "Strontium 89, 90 and Total Strontium in Water, Soil and Vegetation Matrices by Eichrom Resin Separation (Eichrom SRW01, EPA 905.0, HASL 300 Sr-01-RC)"**.

ANALYTICAL RESULTS

Fraction 001 has elevated MDC for Pu-239/240 with ACT of 0.000 uCi/filter, MDC of 8.904E-8 uCi/filter and CRDL of 4.8E-08 uCi/filter.

Fraction 001 has elevated MDC for Ra-226 with ACT of 2.213E-6 uCi/filter, MDC of 8.924E-6 uCi/filter and CRDL of 4.4E-06 uCi/filter.

Fraction 002 has elevated MDC for Pu-239/240 with ACT of -3.325E-8 uCi/filter, MDC of 7.918E-8 uCi/filter and CRDL of 4.8E-08 uCi/filter.

Fraction 002 has elevated MDC for Ra-226 with ACT of -2.714E-5 uCi/filter, MDC of 1.519E-5 uCi/filter and CRDL of 4.4E-06 uCi/filter.

Fraction 003 has elevated MDC for Pu-239/240 with ACT of -5.618E-8 uCi/filter, MDC of 1.531E-7 uCi/filter and CRDL of 4.8E-08 uCi/filter.

Fraction 003 has elevated MDC for Ra-226 with ACT of -1.222E-5 uCi/filter, MDC of 1.597E-5 uCi/filter and CRDL of 4.4E-06 uCi/filter.

Fraction 004 has elevated MDC for Pu-239/240 with ACT of -4.635E-9 uCi/filter, MDC of 1.066E-7 uCi/filter and CRDL of 4.8E-08 uCi/filter.

Fraction 004 has elevated MDC for Ra-226 with ACT of -4.012E-6 uCi/filter, MDC of 9.857E-6 uCi/filter and CRDL of 4.4E-06 uCi/filter.

ARS1-B22-01866: ROI's adjusted to better fit the peaks of interest.

Notes (Case Narrative)

Definitions:

CRDL	Contract Required Detection Limit
CSU	Combined Standard Uncertainty
DLC	Decision Level Concentration (ANSI N42.23)
DO	Duplicate Original
DUP	Sample Duplicate
LCS/LCSD	Laboratory Control Sample/Laboratory Control Sample Duplicate
LOD	Limit of Detection
LOQ	Limit of Quantitation
MBL	Method Blank
MCL	Maximum Contaminant Level
MDA	Minimum Detectable Activity
MDL	Method Detection Limit
MS/MSD	Matrix Spike/Matrix Spike Duplicate
N/A	Not Applicable
NC	Not Calculated
NP	Not Provided
NR	Not Referenced
PQL	Practical Quantitation Limit

Data Qualifiers:

B	The result of both the method blank and the target sample are above the MDL.
D	Sample analysis accomplished through dilution.
J	The reported result is an estimated value above the LOD but below the LOQ, or above the MDL but below the PQL.
Q	One or more quality control criteria failed.
U	Result is below the MDA, MDL, PQL, LOD, or LOQ
*	LCS/LCSD or Sample DUP fails all Duplicate criteria.
S	Spike
SC	Subcontracted out to another qualified laboratory
H	Holding time exceeded
E	Exceeds MCL
**	Reporting Limit is higher than MCL; Target cannot be detected
#	Method/Matrix/Analyte not accredited for this certification

Radiochemistry Comments:

- 1.0) All MDA/MDC values are calculated on a sample specific basis.
- 2.0) Data in this report are within the limits of uncertainty specified in the reference method unless otherwise specified.
- 3.0) Total activity is actually total gamma activity and is determined utilizing the prominent gamma emitters from the naturally occurring radioactive decay chains and other prominent radioactive nuclides. Total activity may be lower than the actual total activity due to the extent of secular equilibrium achieved in the various decay chains at the time of analysis. The total activity is not representative of nuclides that emit solely alpha or beta particles.
- 4.0) Ra-228 is determined via secular equilibrium with its daughter, Actinium 228 (Gamma Spectroscopy only).
- 5.0) U-238 is determined via secular equilibrium with its daughter, Thorium 234 (Gamma Spectroscopy only).
- 6.0) All gamma spectroscopy was performed utilizing high purity germanium detectors (**HPGe**).
- 7.0) ARS makes every attempt to match sample density to calibrated density; however, in some cases, it is not practical or possible to do so and data results may be affected (Gamma Spectroscopy only).
- 8.0) Gamma spectroscopy results are calculated values based on the **ORTEC® GammaVision ENV32 Analysis Engine**.
- 9.0) DoD/DOE and ISO 17025 certifications through ANAB apply only to the following methods in **Non-Potable Water**:
 Gross Alpha and Gross Beta (EPA 900.0, EPA 9310); Radium 226 (EPA 903.0, EPA 903.1, EPA 9315); Radium 228 (EPA 904.0, EPA 9320); ICP/MS (EPA 6020B); ICP-OES (EPA 6010D); Mercury CVAA (EPA 7470A); Strontium-89 (EPA 905.0, Eichrom SRW01, HASL 300 Sr-01); Strontium-90 (EPA 905.0, Eichrom SRW01, HASL 300 Sr-02-RC); Tritium (EPA 906.0); Enriched Tritium (ARS-040), Carbon-14 (ARS-019), Tritium/Carbon (ARS-151); Gamma Emitters (EPA 901.1, SM 7120B, HASL 300 Ga-01-R); Americium-241 (Eichrom ACW03, HASL 300 Se-03, HASL 300 Am-03); Plutonium 238, Plutonium 239/240, Plutonium-241 (Eichrom ACW03, HASL 300 Se-03, HASL 300 Pu-10); Thorium-228, Thorium-230, Thorium-232 (Eichrom ACW10); Uranium-234, Uranium-235, Uranium-238 (Eichrom ACW03, HASL 300 Se-03); Technetium-99 (Eichrom TCW02)
- 10.0) DoD/DOE and ISO 17025 certifications through ANAB apply only to the following methods in **Solid and Chemical Materials**:
 Gross Alpha and Gross Beta (EPA 900.0 Mod, EPA 9310); ICP/MS (EPA 6020B); ICP-OES (EPA 6010D); Mercury CVAA (EPA 7471B); Strontium-89 (EPA 905.0 Mod, Eichrom SRW01, HASL 300 Sr-01); Strontium-90 (EPA 905.0 Mod, Eichrom SRW01, HASL 300 Sr-02); Tritium (EPA 906.0 Mod); Gamma Emitters (EPA 901.1, HASL 300 Ga-01-R); Americium-241 (Eichrom ACW03, HASL 300 Se-03, HASL 300 Am-01-RC); Plutonium 238, Plutonium 239/240, Plutonium-241 (Eichrom ACW03, HASL 300 Se-03, HASL 300 Pu-02-RC, HASL 300 Pu-03-RC); Thorium-228, Thorium 230, Thorium-232 (Eichrom ACW10); Uranium-234, Uranium-235, Uranium-238 (Eichrom ACW03, HASL 300 Se-03, HASL 300 U-02, HASL 300 U-04); Technetium-99 (Eichrom TCS01)
- 11.0) DoD/DOE and ISO 17025 certifications through ANAB apply only to the following methods in **Air and Emissions**:
 Gross Alpha and Gross Beta (EPA 900.0 Mod, EPA 9310); Strontium-89 (Eichrom SRW01, HASL 300 Sr-01-RC); Strontium-90 (Eichrom SRW01, HASL 300 Sr-02-RC); Gamma Emitters (EPA 901.1, HASL 300 Ga-01-R); Americium-241 (Eichrom ACW03, HASL 300 Se-03); Plutonium 238, Plutonium 239/240, Plutonium-241 (Eichrom ACW03, HASL 300 Se-03); Thorium-228, Thorium 230, Thorium-232 (Eichrom ACW10); Uranium-234, Uranium-235, Uranium-238 (Eichrom ACW03, HASL 300 Se-03); Technetium-99 (Eichrom TCW02, Eichrom TCS01)

General Comments:

- 1.0) Modified analysis procedures are procedures that are modified to meet the certain specifications. An example may be the use of a water method to analyze a solid matrix due to the lack of an officially recognized procedure for the analysis of the solid matrix. Modified analyses are indicated by the subsequent addition of "M" or "Mod" to the procedure number (i.e. 901.1M, 901.1 Mod).
- 2.0) All NIOSH method results are reported without blank corrections applied.
- 3.0) Basis: "As Received" = analyzed as received from client; "Dry" = dried prior to being analyzed; "Dry Weight Corrected" = analyzed as received; result corrected for percent moisture.



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Analytical Reports

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Analytical Results



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ARS Sample Delivery Group: ARS1-22-02458**Client Sample ID:** FB-103122**Sample Collection Date:** 10/31/22 8:00**Sample Matrix:** Air Filter**Percent Solids:** N/A**Request or PO Number:** J310000900**ARS Sample ID:** ARS1-22-02458-001**Date Received:** 11/10/22**Report Date:** 12/08/22

Radiochemistry

Analysis Method: Eichrom ACW03

Analysis Description	Analysis Results	CSU +/- 2 s	MDC	DLC	CRDL	Qual	Analysis Units	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
Pu-239/240	0.000	4.442E-8	8.904E-8	3.728E-8	4.8E-08	U	uCi/filter	12/07/22 1:46	[REDACTED]	58.7%

Analysis Method: EPA 901.1M

Analysis Description	Analysis Results	CSU +/- 2 s	MDC	DLC	CRDL	Qual	Analysis Units	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
Co-60	-5.619E-7	7.742E-7	1.279E-6	6.395E-7	0.00024	U	uCi/filter	11/15/22 14:20	[REDACTED]	N/A
Cs-137	-4.132E-7	7.285E-7	7.837E-7	3.919E-7	0.00048	U	uCi/filter	11/15/22 14:20	[REDACTED]	N/A
Ra-226	2.213E-6	7.061E-6	8.924E-6	4.462E-6	4.4E-06	U	uCi/filter	11/15/22 14:20	[REDACTED]	N/A

Analysis Method: EPA 9315

Analysis Description	Analysis Results	CSU +/- 2 s	MDC	DLC	CRDL	Qual	Analysis Units	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
Ra-226	1.297E-6	7.072E-7	7.501E-7	2.809E-7	4.4E-06		uCi/filter	12/08/22 9:59	[REDACTED]	91.2%

Analysis Method: Eichrom SRW01

Analysis Description	Analysis Results	CSU +/- 2 s	MDC	DLC	CRDL	Qual	Analysis Units	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
SR-90	2.439E-6	2.367E-6	3.838E-6	1.773E-6	2.4E-05	U	uCi/filter	11/30/22 10:34	[REDACTED]	96.9%



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ARS Sample Delivery Group: ARS1-22-02458**Client Sample ID:** MSB01-103122**Sample Collection Date:** 11/03/22 3:55**Sample Matrix:** Air Filter**Percent Solids:** N/A**Request or PO Number:** J310000900**ARS Sample ID:** ARS1-22-02458-002**Date Received:** 11/10/22**Report Date:** 12/08/22

Radiochemistry

Analysis Method: Eichrom ACW03

Analysis Description	Analysis Results	CSU +/- 2 s	MDC	DLC	CRDL	Qual	Analysis Units	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
Pu-239/240	-3.325E-8	3.114E-8	7.918E-8	3.315E-8	4.8E-08	U	uCi/filter	12/07/22 1:46	[REDACTED]	67.6%

Analysis Method: EPA 901.1M

Analysis Description	Analysis Results	CSU +/- 2 s	MDC	DLC	CRDL	Qual	Analysis Units	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
Co-60	-5.657E-7	1.143E-6	1.159E-6	5.795E-7	0.00024	U	uCi/filter	11/16/22 14:33	[REDACTED]	N/A
Cs-137	4.125E-7	7.626E-7	8.507E-7	4.254E-7	0.00048	U	uCi/filter	11/16/22 14:33	[REDACTED]	N/A
Ra-226	-2.714E-5	1.571E-5	1.519E-5	7.595E-6	4.4E-06	U	uCi/filter	11/16/22 14:33	[REDACTED]	N/A

Analysis Method: EPA 9315

Analysis Description	Analysis Results	CSU +/- 2 s	MDC	DLC	CRDL	Qual	Analysis Units	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
Ra-226	8.483E-7	5.403E-7	5.417E-7	1.751E-7	4.4E-06		uCi/filter	12/08/22 9:59	[REDACTED]	93.6%

Analysis Method: Eichrom SRW01

Analysis Description	Analysis Results	CSU +/- 2 s	MDC	DLC	CRDL	Qual	Analysis Units	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
SR-90	3.841E-6	3.333E-6	5.370E-6	2.525E-6	2.4E-05	U	uCi/filter	11/30/22 10:34	[REDACTED]	90.3%



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ARS Sample Delivery Group: ARS1-22-02458**Client Sample ID:** MSB02-103122**Sample Collection Date:** 11/03/22 3:30**Sample Matrix:** Air Filter**Percent Solids:** N/A**Request or PO Number:** J310000900**ARS Sample ID:** ARS1-22-02458-003**Date Received:** 11/10/22**Report Date:** 12/08/22

Radiochemistry

Analysis Method: Eichrom ACW03

Analysis Description	Analysis Results	CSU +/- 2 s	MDC	DLC	CRDL	Qual	Analysis Units	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
Pu-239/240	-5.618E-8	7.270E-8	1.531E-7	6.811E-8	4.8E-08	U	uCi/filter	12/07/22 1:46	[REDACTED]	47.4%

Analysis Method: EPA 901.1M

Analysis Description	Analysis Results	CSU +/- 2 s	MDC	DLC	CRDL	Qual	Analysis Units	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
Co-60	5.213E-7	8.586E-7	9.311E-7	4.656E-7	0.00024	U	uCi/filter	11/16/22 14:39	[REDACTED]	N/A
Cs-137	-2.212E-7	8.115E-7	9.470E-7	4.735E-7	0.00048	U	uCi/filter	11/16/22 14:39	[REDACTED]	N/A
Ra-226	-1.222E-5	1.594E-5	1.597E-5	7.985E-6	4.4E-06	U	uCi/filter	11/16/22 14:39	[REDACTED]	N/A

Analysis Method: EPA 9315

Analysis Description	Analysis Results	CSU +/- 2 s	MDC	DLC	CRDL	Qual	Analysis Units	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
Ra-226	3.719E-7	5.087E-7	8.516E-7	3.325E-7	4.4E-06	U	uCi/filter	12/08/22 9:59	[REDACTED]	91.0%

Analysis Method: Eichrom SRW01

Analysis Description	Analysis Results	CSU +/- 2 s	MDC	DLC	CRDL	Qual	Analysis Units	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
SR-90	2.284E-6	2.366E-6	3.869E-6	1.787E-6	2.4E-05	U	uCi/filter	11/30/22 10:34	[REDACTED]	99.4%



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ARS Sample Delivery Group: ARS1-22-02458**Client Sample ID:** MSB113A-103122**Sample Collection Date:** 11/03/22 3:45**Sample Matrix:** Air Filter**Percent Solids:** N/A**Request or PO Number:** J310000900**ARS Sample ID:** ARS1-22-02458-004**Date Received:** 11/10/22**Report Date:** 12/08/22

Radiochemistry

Analysis Method: Eichrom ACW03

Analysis Description	Analysis Results	CSU +/- 2 s	MDC	DLC	CRDL	Qual	Analysis Units	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
Pu-239/240	-4.635E-9	5.526E-8	1.066E-7	4.700E-8	4.8E-08	U	uCi/filter	12/07/22 1:46	[REDACTED]	65.3%

Analysis Method: EPA 901.1M

Analysis Description	Analysis Results	CSU +/- 2 s	MDC	DLC	CRDL	Qual	Analysis Units	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
Co-60	3.403E-7	6.960E-7	7.134E-7	3.567E-7	0.00024	U	uCi/filter	11/16/22 14:30	[REDACTED]	N/A
Cs-137	3.433E-7	6.068E-7	6.548E-7	3.274E-7	0.00048	U	uCi/filter	11/16/22 14:30	[REDACTED]	N/A
Ra-226	-4.012E-6	7.841E-6	9.857E-6	4.929E-6	4.4E-06	U	uCi/filter	11/16/22 14:30	[REDACTED]	N/A

Analysis Method: EPA 9315

Analysis Description	Analysis Results	CSU +/- 2 s	MDC	DLC	CRDL	Qual	Analysis Units	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
Ra-226	6.783E-7	6.059E-7	8.709E-7	3.318E-7	4.4E-06	U	uCi/filter	12/08/22 9:59	[REDACTED]	92.1%

Analysis Method: Eichrom SRW01

Analysis Description	Analysis Results	CSU +/- 2 s	MDC	DLC	CRDL	Qual	Analysis Units	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
SR-90	3.868E-6	2.776E-6	4.292E-6	1.979E-6	2.4E-05	U	uCi/filter	11/30/22 10:34	[REDACTED]	90.3%



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QC Summary



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QC Sample Results

Analytical Batch: ARS1-B22-01773

Lab Sample ID: ARS1-B22-01773-01

Method: EPA 901.1M

Sample Type: LCS

Matrix: Air Filter

Analysis Date: 11/16/22 14:04

Analyte	Spike Added	Analysis Result	Qual	Analysis Units	% Rec	% Rec Limits
Am-241	33.065	31.398		uCi/filter	95.0	75 - 125
Co-60	20.928	22.446		uCi/filter	107.3	75 - 125
Cs-137	12.996	13.189		uCi/filter	101.5	75 - 125



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QC Sample Results

Analytical Batch: ARS1-B22-01773

Lab Sample ID: ARS1-B22-01773-02

Method: EPA 901.1M

Sample Type: LCSD

Matrix: Air Filter

Analysis Date: 11/16/22 14:17

Analyte	Spike Added	Analysis Result	Qual	Analysis Units	% Rec	% Rec Limits	RPD	RPD Limit	DER	DER Limit
Am-241	33.065	31.505		uCi/filter	95.3	75 - 125	0.3	25	0.061	3
Co-60	20.928	22.023		uCi/filter	105.2	75 - 125	1.9	25	0.502	3
Cs-137	12.996	13.107		uCi/filter	100.9	75 - 125	0.6	25	0.162	3



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QC Sample Results

Analytical Batch: ARS1-B22-01773

Sample Type: MBL

Lab Sample ID: ARS1-B22-01773-03

Matrix: Air Filter

Method: EPA 901.1M

Analysis Date: 11/16/22 14:37

Analyte	Analysis Result	CSU +/- 2 s	MDC	DLC	Qual	Analysis Units
Co-60	2.913E-4	0.002	0.002	8.750E-4	U	uCi/filter
Cs-137	-3.206E-4	0.001	0.002	7.950E-4	U	uCi/filter
Ra-226	-0.007	0.016	0.026	0.013	U	uCi/filter



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QC Association Summary

ARS Sample Delivery Group: ARS1-22-02458

Analytical Batch: ARS1-B22-01773

Analysis: Gamma Spec (Short) in (Air Filters, Smears [AF])

Batch Sample ID	Lab Sample ID	Client Sample ID	Matrix	Method	Prep Method
ARS1-B22-01773-01		Lab Control Sample	Air Filter	EPA 901.1M	N/A
ARS1-B22-01773-02		Lab Control Sample Duplicate	Air Filter	EPA 901.1M	N/A
ARS1-B22-01773-03		Method Blank	Air Filter	EPA 901.1M	N/A
ARS1-B22-01773-04	ARS1-22-02458-001	FB-103122	Air Filter	EPA 901.1M	N/A
ARS1-B22-01773-05	ARS1-22-02458-002	MSB01-103122	Air Filter	EPA 901.1M	N/A
ARS1-B22-01773-06	ARS1-22-02458-003	MSB02-103122	Air Filter	EPA 901.1M	N/A
ARS1-B22-01773-07	ARS1-22-02458-004	MSB113A-103122	Air Filter	EPA 901.1M	N/A



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QC Sample Results

Analytical Batch: ARS1-B22-01825

Lab Sample ID: ARS1-B22-01825-01

Method: Eichrom SRW01

Sample Type: LCS

Matrix: Air Filter

Analysis Date: 11/30/22 10:34

Analyte	Spike Added	Analysis Result	Qual	Analysis Units	% Rec	% Rec Limits
SR-90	2.070E-5	2.243E-5		uCi/filter	108.4	75 - 125



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QC Sample Results

Analytical Batch: ARS1-B22-01825

Lab Sample ID: ARS1-B22-01825-02

Method: Eichrom SRW01

Sample Type: LCSD

Matrix: Air Filter

Analysis Date: 11/30/22 10:34

Analyte	Spike Added	Analysis Result	Qual	Analysis Units	% Rec	% Rec Limits	RPD	RPD Limit	DER	DER Limit
SR-90	2.070E-5	1.927E-5		uCi/filter	93.1	75 - 125	15.1	25	1.369	3



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QC Sample Results

Analytical Batch: ARS1-B22-01825

Sample Type: MBL

Lab Sample ID: ARS1-B22-01825-03

Matrix: Air Filter

Method: Eichrom SRW01

Analysis Date: 11/30/22 10:34

Analyte	Analysis Result	CSU +/- 2 s	MDC	DLC	Qual	Analysis Units
SR-90	3.034E-6	2.561E-6	4.067E-6	1.872E-6	U	uCi/filter



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QC Association Summary

ARS Sample Delivery Group: ARS1-22-02458

Analytical Batch: ARS1-B22-01825

Analysis: Strontium-90 in (Air Filters, Smears [AF])

Batch Sample ID	Lab Sample ID	Client Sample ID	Matrix	Method	Prep Method
ARS1-B22-01825-01		Lab Control Sample	Air Filter	Eichrom SRW01	N/A
ARS1-B22-01825-02		Lab Control Sample Duplicate	Air Filter	Eichrom SRW01	N/A
ARS1-B22-01825-03		Method Blank	Air Filter	Eichrom SRW01	N/A
ARS1-B22-01825-04	ARS1-22-02458-001	FB-103122	Air Filter	Eichrom SRW01	N/A
ARS1-B22-01825-05	ARS1-22-02458-002	MSB01-103122	Air Filter	Eichrom SRW01	N/A
ARS1-B22-01825-06	ARS1-22-02458-003	MSB02-103122	Air Filter	Eichrom SRW01	N/A
ARS1-B22-01825-07	ARS1-22-02458-004	MSB113A-103122	Air Filter	Eichrom SRW01	N/A



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QC Sample Results

Analytical Batch: ARS1-B22-01866

Lab Sample ID: ARS1-B22-01866-01

Method: Eichrom ACW03

Sample Type: LCS

Matrix: Air Filter

Analysis Date: 12/07/22 1:46

Analyte	Spike Added	Analysis Result	Qual	Analysis Units	% Rec	% Rec Limits
Pu-239/240	7.712E-6	7.818E-6		uCi/filter	101.4	75 - 125



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QC Sample Results

Analytical Batch: ARS1-B22-01866

Lab Sample ID: ARS1-B22-01866-02

Method: Eichrom ACW03

Sample Type: LCSD

Matrix: Air Filter

Analysis Date: 12/07/22 1:46

Analyte	Spike Added	Analysis Result	Qual	Analysis Units	% Rec	% Rec Limits	RPD	RPD Limit	DER	DER Limit
Pu-239/240	7.698E-6	7.392E-6		uCi/filter	96.0	75 - 125	5.6	25	0.619	3



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QC Sample Results

Analytical Batch: ARS1-B22-01866

Lab Sample ID: ARS1-B22-01866-03

Method: Eichrom ACW03

Sample Type: MBL

Matrix: Air Filter

Analysis Date: 12/07/22 1:46

Analyte	Analysis Result	CSU +/- 2 s	MDC	DLC	Qual	Analysis Units
Pu-238	4.896E-8	6.513E-8	1.094E-7	4.735E-8	U	uCi/filter
Pu-239/240	-5.439E-9	7.309E-8	1.387E-7	6.199E-8	U	uCi/filter



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QC Association Summary

ARS Sample Delivery Group: ARS1-22-02458

Analytical Batch: ARS1-B22-01866

Analysis: Plutonium (239, 240Pu) in (Air Filters, Smears, Leak Test [AF, SM, LT])

Batch Sample ID	Lab Sample ID	Client Sample ID	Matrix	Method	Prep Method
ARS1-B22-01866-01		Lab Control Sample	Air Filter	Eichrom ACW03	N/A
ARS1-B22-01866-02		Lab Control Sample Duplicate	Air Filter	Eichrom ACW03	N/A
ARS1-B22-01866-03		Method Blank	Air Filter	Eichrom ACW03	N/A
ARS1-B22-01866-04	ARS1-22-02458-001	FB-103122	Air Filter	Eichrom ACW03	N/A
ARS1-B22-01866-05	ARS1-22-02458-002	MSB01-103122	Air Filter	Eichrom ACW03	N/A
ARS1-B22-01866-06	ARS1-22-02458-003	MSB02-103122	Air Filter	Eichrom ACW03	N/A
ARS1-B22-01866-07	ARS1-22-02458-004	MSB113A-103122	Air Filter	Eichrom ACW03	N/A



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QC Sample Results

Analytical Batch: ARS1-B22-01826

Lab Sample ID: ARS1-B22-01826-01

Method: EPA 9315

Sample Type: LCS

Matrix: Air Filter

Analysis Date: 12/08/22 9:59

Analyte	Spike Added	Analysis Result	Qual	Analysis Units	% Rec	% Rec Limits
Ra-226	2.686E-5	2.426E-5		uCi/filter	90.3	75 - 125



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QC Sample Results

Analytical Batch: ARS1-B22-01826

Lab Sample ID: ARS1-B22-01826-02

Method: EPA 9315

Sample Type: LCSD

Matrix: Air Filter

Analysis Date: 12/08/22 9:59

Analyte	Spike Added	Analysis Result	Qual	Analysis Units	% Rec	% Rec Limits	RPD	RPD Limit	DER	DER Limit
Ra-226	2.692E-5	2.444E-5		uCi/filter	90.8	75 - 125	0.8	25	0.066	3



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QC Sample Results

Analytical Batch: ARS1-B22-01826

Lab Sample ID: ARS1-B22-01826-03

Method: EPA 9315

Sample Type: MBL

Matrix: Air Filter

Analysis Date: 12/08/22 9:59

Analyte	Analysis Result	CSU +/- 2 s	MDC	DLC	Qual	Analysis Units
Ra-226	6.398E-8	5.955E-8	8.803E-8	3.416E-8	U	uCi/filter



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QC Association Summary

ARS Sample Delivery Group: ARS1-22-02458

Analytical Batch: ARS1-B22-01826

Analysis: Radium-226 in Air Filter

Batch Sample ID	Lab Sample ID	Client Sample ID	Matrix	Method	Prep Method
ARS1-B22-01826-01		Lab Control Sample	Air Filter	EPA 9315	N/A
ARS1-B22-01826-02		Lab Control Sample Duplicate	Air Filter	EPA 9315	N/A
ARS1-B22-01826-03		Method Blank	Air Filter	EPA 9315	N/A
ARS1-B22-01826-04	ARS1-22-02458-001	FB-103122	Air Filter	EPA 9315	N/A
ARS1-B22-01826-05	ARS1-22-02458-002	MSB01-103122	Air Filter	EPA 9315	N/A
ARS1-B22-01826-06	ARS1-22-02458-003	MSB02-103122	Air Filter	EPA 9315	N/A
ARS1-B22-01826-07	ARS1-22-02458-004	MSB113A-103122	Air Filter	EPA 9315	N/A

ARS Aleut Analytical, LLC

Analytical Reports

for

Gilbane Federal

Batch QC



QC Results per Analytical Batch

Analytical Batch	ARS1-B22-01773
SDG	ARS1-22-02458
Analysis	Gamma Spec (Short) in (Air Filters, Smears [AF])
Method	EPA 901.1M
Analysis Code	GAM-A-AF
Report Units	uCi/filter

Acceptable QC Performance Ranges

QC Sample Type	Performance Items and Ranges		
Laboratory Control Sample	Recovery (%):	> 75	< 125
Matrix Spike	Recovery (%):	> 60	< 140
Duplicate	Duplicate Error Ratio (DER):	< 3	
	Relative Percent Difference (RPD %):	≤ 25	

Laboratory Control Sample			Analysis Date	11/16/22 14:04	Analysis Technician	█ █ █ █ █	
Analysis Batch Sample ID	QC Type	Analyte	Results	CSU (2s)	Expected Value	LCS Rec (%)	MDC
ARS1-B22-01773-01	LCS	AM-241	31.398	2.439	33.065	95.0	0.118
ARS1-B22-01773-01	LCS	CO-60	22.446	1.178	20.928	107.3	0.389
ARS1-B22-01773-01	LCS	CS-137	13.189	0.703	12.996	101.5	0.070

Duplicate RER/DER/RPD			Analysis Date	11/16/22 14:17	Analysis Technician	█ █ █ █ █	
Analyte	Results LCS	CSU LCS (2s)	Results LCSD	CSU LCSD (2s)	DER	RPD	
AM-241	31.398	2.439	31.505	2.447	0.061	0.3	
CO-60	22.446	1.178	22.023	1.158	0.502	1.9	
CS-137	13.189	0.703	13.107	0.699	0.162	0.6	

Method Blank			Analysis Date	11/16/22 14:37	Analysis Technician	█ █ █ █ █	
Analysis Batch Sample ID	QC Type	Analyte	Results	CSU (2s)	MDC	Qual	
ARS1-B22-01773-03	MBL	CO-60	2.913E-4	0.002	0.002	U	
ARS1-B22-01773-03	MBL	CS-137	-3.206E-4	0.001	0.002	U	
ARS1-B22-01773-03	MBL	RA-226	-0.007	0.016	0.026	U	



QC Results per Analytical Batch

Analytical Batch	ARS1-B22-01825
SDG	ARS1-22-02458
Analysis	Strontium-90 in (Air Filters, Smears [AF])
Method	Eichrom SRW01
Analysis Code	GPC-SR90-AF
Report Units	uCi/filter

Acceptable QC Performance Ranges

QC Sample Type	Performance Items and Ranges		
Laboratory Control Sample	Recovery (%):	> 75	< 125
Matrix Spike	Recovery (%):	> 60	< 140
Duplicate	Duplicate Error Ratio (DER):	< 3	
	Relative Percent Difference (RPD %):	≤ 25	

Laboratory Control Sample			Analysis Date	11/30/22 10:34	Analysis Technician		
Analysis Batch Sample ID	QC Type	Analyte	Results	CSU (2s)	Expected Value	LCS Rec (%)	MDC
ARS1-B22-01825-01	LCS	SR-90	2.243E-5	3.417E-6	2.070E-5	108.4	3.567E-7

Duplicate RER/DER/RPD			Analysis Date	11/30/22 10:34	Analysis Technician		
Analyte	Results LCS	CSU LCS (2s)	Results LCSD	CSU LCSD (2s)	DER	RPD	
SR-90	2.243E-5	3.417E-6	1.927E-5	2.960E-6	1.369	15.1	

Method Blank			Analysis Date	11/30/22 10:34	Analysis Technician		
Analysis Batch Sample ID	QC Type	Analyte	Results	CSU (2s)	MDC	Qual	
ARS1-B22-01825-03	MBL	SR-90	3.034E-6	2.561E-6	4.067E-6	U	



QC Results per Analytical Batch

Analytical Batch	ARS1-B22-01866
SDG	ARS1-22-02458
Analysis	Plutonium (239, 240Pu) in (Air Filters, Smears, Leak Test [AF, SM, LT])
Method	Eichrom ACW03
Analysis Code	ASP-PU239-AF
Report Units	uCi/filter

Acceptable QC Performance Ranges

QC Sample Type	Performance Items and Ranges		
Laboratory Control Sample	Recovery (%):	> 75	< 125
Matrix Spike	Recovery (%):	> 60	< 140
Duplicate	Duplicate Error Ratio (DER):	< 3	
	Relative Percent Difference (RPD %):	≤ 25	

Laboratory Control Sample			Analysis Date	12/07/22 01:46	Analysis Technician	██████████	
Analysis Batch Sample ID	QC Type	Analyte	Results	CSU (2s)	Expected Value	LCS Rec (%)	MDC
ARS1-B22-01866-01	LCS	PU-239/240	7.818E-6	9.819E-7	7.712E-6	101.4	4.274E-8

Duplicate RER/DER/RPD			Analysis Date	12/07/22 01:46	Analysis Technician	██████████	
Analyte	Results LCS	CSU LCS (2s)	Results LCSD	CSU LCSD (2s)	DER	RPD	
PU-239/240	7.818E-6	9.819E-7	7.392E-6	9.246E-7	0.619	5.6	

Method Blank			Analysis Date	12/07/22 01:46	Analysis Technician	██████████	
Analysis Batch Sample ID	QC Type	Analyte	Results	CSU (2s)	MDC	Qual	
ARS1-B22-01866-03	MBL	PU-238	4.896E-8	6.513E-8	1.094E-7	U	
ARS1-B22-01866-03	MBL	PU-239/240	-5.439E-9	7.309E-8	1.387E-7	U	



QC Results per Analytical Batch

Analytical Batch	ARS1-B22-01826
SDG	ARS1-22-02458
Analysis	Radium-226 in Air Filter
Method	EPA 9315
Analysis Code	GPC-RA226-AF
Report Units	uCi/filter

Acceptable QC Performance Ranges

QC Sample Type	Performance Items and Ranges		
Laboratory Control Sample	Recovery (%):	> 75	< 125
Matrix Spike	Recovery (%):	> 60	< 140
Duplicate	Duplicate Error Ratio (DER):	< 3	
	Relative Percent Difference (RPD %):	≤ 25	

Laboratory Control Sample			Analysis Date	12/08/22 09:59	Analysis Technician	██████████	
Analysis Batch Sample ID	QC Type	Analyte	Results	CSU (2s)	Expected Value	LCS Rec (%)	MDC
ARS1-B22-01826-01	LCS	RA-226	2.426E-5	3.924E-6	2.686E-5	90.3	9.404E-8

Duplicate RER/DER/RPD			Analysis Date	12/08/22 09:59	Analysis Technician	██████████	
Analyte	Results LCS	CSU LCS (2s)	Results LCSD	CSU LCSD (2s)	DER	RPD	
RA-226	2.426E-5	3.924E-6	2.444E-5	3.952E-6	0.066	0.8	

Method Blank			Analysis Date	12/08/22 09:59	Analysis Technician	██████████	
Analysis Batch Sample ID	QC Type	Analyte	Results	CSU (2s)	MDC	Qual	
ARS1-B22-01826-03	MBL	RA-226	6.398E-8	5.955E-8	8.803E-8	U	



Z Values per Analytical Batch

Analytical Batch	ARS1-B22-01773
SDG	ARS1-22-02458
Analysis	Gamma Spec (Short) in (Air Filters, Smears
Analysis Test Method	/EPA 901.1M
Analysis Code	GAM-A-AF
Report Units	uCi/filter

Acceptable QC Performance Ranges

QC Sample Type	Performance Items and Ranges		
Laboratory Control Sample		ZLCS	<= 3
Matrix Spike		ZMS	<= 3
Method Blank		ZBLANK	<= 3
Duplicate		ZDUP	<= 3

Laboratory Control Sample	Analysis Date	11/16/22 14:04	Analysis Technician			
QC Type	Analyte	Results	CSU (1s)	Expected Value	CSU (1s)	z
LCS	AM-241	31.398	1.244	33.065	0.001	1.339
LCSD	AM-241	31.505	1.249	33.065	0.001	1.249
LCS	CO-60	22.446	0.601	20.928	5.860E-4	2.526
LCSD	CO-60	22.023	0.591	20.928	5.860E-4	1.854
LCS	CS-137	13.189	0.358	12.996	3.119E-4	0.539
LCSD	CS-137	13.107	0.356	12.996	3.119E-4	0.312

Method Blank	Analysis Date	11/16/22 14:37	Analysis Technician			
QC Type	Analyte	Results	CSU (1s)	z		
MBL	CS-137	-3.206E-4	7.217E-4			0.444
MBL	CO-60	2.913E-4	8.677E-4			0.336
MBL	RA-226	-0.007	0.008			0.858

Duplicate Sample	Analysis Date	11/16/22 14:17	Analysis Technician			
QC Type	Analyte	Results Dup	CSU (1s)	Results DO	CSU (1s)	z
LCSD	AM-241	31.505	1.249	31.398	1.244	0.061
LCSD	CO-60	22.023	0.591	22.446	0.601	0.502
LCSD	CS-137	13.107	0.356	13.189	0.358	0.162



Z Values per Analytical Batch

Analytical Batch	ARS1-B22-01825
SDG	ARS1-22-02458
Analysis	Strontium-90 in (Air Filters, Smears [AF])
Analysis Test Method	/Eichrom SRW01, HASL 300 Sr-01-RC/Sr-02-
Analysis Code	GPC-SR90-AF
Report Units	uCi/filter

Acceptable QC Performance Ranges

QC Sample Type	Performance Items and Ranges					
Laboratory Control Sample					ZLCS	<= 3
Matrix Spike					ZMS	<= 3
Method Blank					ZBLANK	<= 3
Duplicate					ZDUP	<= 3

Laboratory Control Sample	Analysis Date	11/30/22 10:34	Analysis Technician	[REDACTED]		
QC Type	Analyte	Results	CSU (1s)	Expected Value	CSU (1s)	z
LCS	SR-90	2.243E-5	1.743E-6	2.070E-5	3.401E-7	0.975
LCSD	SR-90	1.927E-5	1.510E-6	2.070E-5	3.401E-7	0.921

Method Blank	Analysis Date	11/30/22 10:34	Analysis Technician	[REDACTED]		
QC Type	Analyte	Results	CSU (1s)	z		
MBL	SR-90	3.034E-6	1.307E-6	2.322		

Duplicate Sample	Analysis Date	11/30/22 10:34	Analysis Technician	[REDACTED]		
QC Type	Analyte	Results Dup	CSU (1s)	Results DO	CSU (1s)	z
LCSD	SR-90	1.927E-5	1.510E-6	2.243E-5	1.743E-6	1.369



Z Values per Analytical Batch

Analytical Batch	ARS1-B22-01866
SDG	ARS1-22-02458
Analysis	Plutonium (239, 240Pu) in (Air Filters,
Analysis Test Method	/Eichrom ACW-03
Analysis Code	ASP-PU239-AF
Report Units	uCi/filter

Acceptable QC Performance Ranges

QC Sample Type	Performance Items and Ranges		
Laboratory Control Sample		ZLCS	<= 3
Matrix Spike		ZMS	<= 3
Method Blank		ZBLANK	<= 3
Duplicate		ZDUP	<= 3

Laboratory Control Sample	Analysis Date	12/07/22 01:46	Analysis Technician			
QC Type	Analyte	Results	CSU (1s)	Expected Value	CSU (1s)	Z
LCS	PU-239/240	7.818E-6	5.010E-7	7.712E-6	1.263E-7	0.206
LCSD	PU-239/240	7.392E-6	4.717E-7	7.698E-6	1.263E-7	0.625

Method Blank	Analysis Date	12/07/22 01:46	Analysis Technician			
QC Type	Analyte	Results	CSU (1s)			Z
MBL	PU-238	4.896E-8	3.323E-8			1.473
MBL	PU-239/240	-5.439E-9	3.729E-8			0.146

Duplicate Sample	Analysis Date	12/07/22 01:46	Analysis Technician			
QC Type	Analyte	Results Dup	CSU (1s)	Results DO	CSU (1s)	Z
LCSD	PU-239/240	7.392E-6	4.717E-7	7.818E-6	5.010E-7	0.619



Z Values per Analytical Batch

Analytical Batch	ARS1-B22-01826
SDG	ARS1-22-02458
Analysis	Radium-226 in Air Filter
Analysis Test Method	PALA-RAD-008/Gas Proportional Counter
Analysis Code	GPC-RA226-AF
Report Units	uCi/filter

Acceptable QC Performance Ranges

QC Sample Type	Performance Items and Ranges					
Laboratory Control Sample						ZLCS <= 3
Matrix Spike						ZMS <= 3
Method Blank						ZBLANK <= 3
Duplicate						ZDUP <= 3

Laboratory Control Sample	Analysis Date	12/08/22 09:59	Analysis Technician	███████████		
QC Type	Analyte	Results	CSU (1s)	Expected Value	CSU (1s)	Z
LCS	RA-226	2.426E-5	2.002E-6	2.686E-5	3.148E-7	1.287
LCSD	RA-226	2.444E-5	2.017E-6	2.692E-5	3.148E-7	1.212

Method Blank	Analysis Date	12/08/22 09:59	Analysis Technician	███████████		
QC Type	Analyte	Results	CSU (1s)	Z		
MBL	RA-226	6.398E-8	3.038E-8	2.106		

Duplicate Sample	Analysis Date	12/08/22 09:59	Analysis Technician	███████████		
QC Type	Analyte	Results Dup	CSU (1s)	Results DO	CSU (1s)	Z
LCSD	RA-226	2.444E-5	2.017E-6	2.426E-5	2.002E-6	0.066



2609 North River Road • Port Allen, Louisiana 70767

(225) 228-1394

ARS Aleut Analytical, LLC

Analytical Reports

for

Gilbane Federal

Sample Management Records

**CHAIN-OF-CUSTODY
RECORD**

Gilbane Federal

2300 Clayton Road, Suite 1050, Concord, CA 94520

COC # MC110922RADB



Project Name: Hunters Point Shipyard, Parcel B Removal Site Evaluation	Laboratory: ARS Aleut Analytical (AAA), Port Allen, LA	Event: Parcel B Air Monitoring
Project Number: J310000900	POC: [REDACTED]	RAD
WBS Code: J310000900	Ship to: 2609 North River Road, Port Allen, LA 70767-3469	

Comments:						<table border="1"> <tr> <td>Code</td> <td>Matrix</td> </tr> <tr> <td>A</td> <td>Air</td> </tr> <tr> <td>AQ</td> <td>Air Quality Control Matrix</td> </tr> <tr> <td>Code</td> <td>Container/Preservative</td> </tr> <tr> <td>1</td> <td>1x Filter, None</td> </tr> <tr> <td>5</td> <td>1x 1-L Plastic, HNO3, pH < 2</td> </tr> <tr> <td>15</td> <td>1x 250-mL Plastic, 4 Degrees C</td> </tr> </table>										Code	Matrix	A	Air	AQ	Air Quality Control Matrix	Code	Container/Preservative	1	1x Filter, None	5	1x 1-L Plastic, HNO3, pH < 2	15	1x 250-mL Plastic, 4 Degrees C
Code	Matrix																												
A	Air																												
AQ	Air Quality Control Matrix																												
Code	Container/Preservative																												
1	1x Filter, None																												
5	1x 1-L Plastic, HNO3, pH < 2																												
15	1x 250-mL Plastic, 4 Degrees C																												
Equipment:																													
Event: Parcel B Air Monitoring RAD						15	15	5	1																				
	Sample ID	Matrix	Date	Time	Samp Init.	E901.1 - Gamma Spec Air	RC0240 - Pu Isotopes	SR02RC - Sr-89	SW9315 - Ra226	Location ID				Sample Type	Depth (ft bgs)		Cooler	Comments											
1	FB-103122	AQ	10/31/2022	0800	[REDACTED]	X X X X				FIELDQC				FB1	0.00	0.00	1												
2	MSB01-103122	A	11/03/2022	0355	[REDACTED]	X X X X				MSB01				N1	0.00	0.00	1	TOTAL FLOW: 299,460 (L)											
3	MSB02-103122	A	11/03/2022	0330	[REDACTED]	X X X X				MSB02				N1	0.00	0.00	1	TOTAL FLOW: 300,360 (L)											
4	MSB113A-103122	A	11/03/2022	0345	[REDACTED]	X X X X				MSB113A				N1	0.00	0.00	1	TOTAL FLOW: 299,460 (L)											
5																													
6																													
Turnaround Time: 28 days																													

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time	Shipping Date / Carrier / Airbill Number
[REDACTED]	11/09/22	1600	FedEx	11/09/22	1600	Shipping Date: 11/09/2022 / FEDEX 7704 0581 3515
			[REDACTED]	11/10/22	1000	Received by Laboratory: (Signature, Date, Time) & condition

SDG Report - Samples and Containers

SDG Specific Data							
SDG	ARS1-22-02458		TAT Days	28 Calendar Days		Project Type	Environmental
Sample Count	4	Rpt Level	4	Date Received	11/10/2022		COC Number
Client	Gilbane Federal		Discrepancy Resol	N/A		PO Number	
Client Code	1138		Client Deadline	12/08/2022		Job Number	J310000900
Profile Number	PN-01411					Job Location	Parcel B Air Monitoring RAD
Comment							

Samples and Containers Checked In Thus Far									
FR	Name	Matrix	Start Date	End Date	Disp	Hold	Arch	Storage	Comments
001	FB-103122	Air Filter	10/31/2022 07:59	10/31/2022 08:00	H	30	10	PrePrep	
	IC_ID	Cnt	Container Type	AF Volume (L)	AF Units		Rate	Mins	Comments
	426739	1	HDP Container	1	LPM			1	
			Mid-Sample Date:	10/31/2022 07:59	AF Volume (CuM):		0.001		
002	MSB01-103122	Air Filter	11/03/2022 03:54	11/03/2022 03:55	H	30	10	PrePrep	
	IC_ID	Cnt	Container Type	AF Volume (L)	AF Units		Rate	Mins	Comments
	426740	1	HDP Container	1	LPM			1	
			Mid-Sample Date:	11/03/2022 03:54	AF Volume (CuM):		0.001		
003	MSB02-103122	Air Filter	11/03/2022 03:29	11/03/2022 03:30	H	30	10	PrePrep	
	IC_ID	Cnt	Container Type	AF Volume (L)	AF Units		Rate	Mins	Comments
	426741	1	HDP Container	1	LPM			1	
			Mid-Sample Date:	11/03/2022 03:29	AF Volume (CuM):		0.001		
004	MSB113A-103122	Air Filter	11/03/2022 03:44	11/03/2022 03:45	H	30	10	PrePrep	
	IC_ID	Cnt	Container Type	AF Volume (L)	AF Units		Rate	Mins	Comments
	426742	1	HDP Container	1	LPM			1	
			Mid-Sample Date:	11/03/2022 03:44	AF Volume (CuM):		0.001		

SDG Report - Analysis Assignments

SDG	ARS1-22-02458	Sample Count	4
Client	Gilbane Federal	Analysis Count	4-16

Sample Count Totals Per Analysis			
Analysis Code	Analysis Description	In/Out	Samples Count
ASP-PU239-AF	Plutonium (239, 240Pu) in (Air Filters, Smears, Leak Test [AF, SM, LT])	I	4
GAM-A-AF	Gamma Spec (Short) in (Air Filters, Smears [AF])	I	4
GPC-RA226-AF	Radium-226 in Air Filter	I	4
GPC-SR90-AF	Strontium-90 in (Air Filters, Smears [AF])	I	4

Analyses Assigned Per Fraction		
Fraction	Analysis Code	X = Assigned
001	ASP-PU239-AF	X
001	GAM-A-AF	X
001	GPC-RA226-AF	X
001	GPC-SR90-AF	X
002	ASP-PU239-AF	X
002	GAM-A-AF	X
002	GPC-RA226-AF	X
002	GPC-SR90-AF	X
003	ASP-PU239-AF	X
003	GAM-A-AF	X
003	GPC-RA226-AF	X
003	GPC-SR90-AF	X
004	ASP-PU239-AF	X
004	GAM-A-AF	X
004	GPC-RA226-AF	X
004	GPC-SR90-AF	X

Client Name: Gilbane Federal

Profile Name: Parcel B Rad Sampling

Report Level: 4

Analysis Code	Prep Type	Units	Aliquot	Prep Code	Procedure	Count Time					
ASP-PU239-AF	WRAD	uCi	filter	N/A	PALA-RAD-026						
	Analyte			RDL	LCS LL/UL	MS LL/UL	RadY LL/UL	GravY LL/UL	RER	RPD	Surr LL/UL
GAM-A-AF	Pu-239/240 (15117-48-3)			4.8E-08 uCi/filter	75/125	60/140	30/110	30/110	1	25	N/A
	WGAM	uCi	filter	N/A	PALA-RAD-007						
	Analyte			RDL	LCS LL/UL	MS LL/UL	RadY LL/UL	GravY LL/UL	RER	RPD	Surr LL/UL
	Co-60 (10198-40-0)			0.00024 uCi/filter	75/125	60/140	30/110	30/110	1	25	N/A
GPC-RA226-AF	Cs-137 (10045-97-3)			0.00048 uCi/filter	75/125	60/140	30/110	30/110	1	25	N/A
	Ra-226 (13982-63-3)			4.4E-06 uCi/filter	75/125	60/140	30/110	30/110	1	25	N/A
	WRAD	uCi	filter		PALA-RAD-008						
GPC-SR90-AF	Analyte			RDL	LCS LL/UL	MS LL/UL	RadY LL/UL	GravY LL/UL	RER	RPD	Surr LL/UL
	Ra-226 (13982-63-3)			4.4E-06 uCi/filter	75/125	60/140	30/110	30/110	1	25	N/A
GPC-SR90-AF	WRAD	uCi	filter	N/A	PALA-RAD-032						
	Analyte			RDL	LCS LL/UL	MS LL/UL	RadY LL/UL	GravY LL/UL	RER	RPD	Surr LL/UL
GPC-SR90-AF	Sr-90 (10098-97-2)			2.4E-05 uCi/filter	75/125	60/140	30/110	30/110	1	25	N/A

Analysis Code	Fraction	Units	Aliquot	Conductivity	Analyte Count
ASP-PU239-AF	001	uCi		N/A	
		Group		Analyte	
		Parcel B Rad Sampling		Pu-239/240	
ASP-PU239-AF	002	uCi		N/A	
		Group		Analyte	
		Parcel B Rad Sampling		Pu-239/240	

DQO Report for SDG

ARS1-22-02458

ASP-PU239-AF	003	uCi	filter	N/A	1
		Group		Analyte	
ASP-PU239-AF	004	Parcel B Rad Sampling		Pu-239/240	
		uCi	filter	N/A	1
GAM-A-AF	001	Group		Analyte	
		Parcel B Rad Sampling		Cs-137	
GAM-A-AF	002	Parcel B Rad Sampling		Co-60	
		Parcel B Rad Sampling		Ra-226	
GAM-A-AF	003	uCi	filter	N/A	3
		Group		Analyte	
GAM-A-AF	004	Parcel B Rad Sampling		Cs-137	
		Parcel B Rad Sampling		Co-60	
GPC-RA226-AF	001	Parcel B Rad Sampling		Ra-226	
		uCi	filter	N/A	1
GPC-RA226-AF	002	Group		Analyte	
		Parcel B Rad Sampling		Ra-226	
GPC-RA226-AF	003	uCi	filter	N/A	1
		Group		Analyte	
		Parcel B Rad Sampling		Ra-226	

DQO Report for SDG

ARS1-22-02458

GPC-RA226-AF	004	uCi	filter	N/A	1
		Group		Analyte	
GPC-SR90-AF	001	Parcel B Rad Sampling		Ra-226	
		uCi	filter	N/A	1
GPC-SR90-AF	002	Group		Analyte	
		Parcel B Rad Sampling		Sr-90	
GPC-SR90-AF	003	uCi	filter	N/A	1
		Group		Analyte	
GPC-SR90-AF	004	Parcel B Rad Sampling		Sr-90	
		uCi	filter	N/A	1
		Group		Analyte	
		Parcel B Rad Sampling		Sr-90	



PALA Sample Receipt Inspection
Client Name: Gilbane
SDG: ARS1-22-02458

Sample Receipt Inspection Form
PALA-SR-001-FM-01 r 00.1
Effective 08/30/2019
Page 1 of 1

Sample Custodian: [REDACTED]	Survey Start Date: <u>11/10/22</u>	Survey Start Time: <u>1025</u>				
Thermometer ID: <u>E0064010085</u>	Calibration Due Date: <u>2/28/23</u>	pH Paper Lot#: <u>NA</u>				
Exposure Rate Meter + Probe Unit ID: <u>269264</u>	Calibration Due Date: <u>9/13/23</u>	Background: <u>4</u> µR/hr				
Count Rate Meter + Probe Unit ID: <u>PR287372</u>	Calibration Due Date: <u>9/13/23</u>	Background: <u>20</u> cpm				
Delivery Type (circle one): Direct Lock Box <u>Commercial Carrier</u> FEDEX	Total # of ESCs: <u>1</u>					
*True temperature is recorded which includes any applicable correction factors.						
External Shipping Container Tracking:	Exposure Rate (µR/hr) (limit <500 µR/hr)	Max External Swipe Counts (cpm)	Max Internal Swipe Counts (cpm)	ESC True Temps* (°C)	TRAX Matrix ID (circle all that apply): (See Section 4.3 of SOP)	
A: <u>770405813515</u>	<u>5</u>	<u>30</u>	<u>40</u>	<u>NA</u>	AQ WD WG WO	
B:					WS WW SI UR	
C:					SO OL BI VG	
D:					WP SM AF	
E:						
F:						
Visual Inspection: <u>External Shipping Container</u>	(Circle response)		<u>COC/Sample Inspection</u> (Circle response)			
Good Condition with no Leaks or Tears	<input checked="" type="checkbox"/> Yes	No	Sample Containers in good condition	<input checked="" type="checkbox"/> Yes	No	
Marked Radioactive	Yes	<input type="checkbox"/> No	No spills or leaks	<input checked="" type="checkbox"/> Yes	No	
UN2910	Yes	<input checked="" type="checkbox"/> No	Marked Radioactive	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
Security Seals	<input checked="" type="checkbox"/> Yes	No	Durable labels w/indelible ink	<input checked="" type="checkbox"/> Yes	No	
If yes, intact?	<input checked="" type="checkbox"/> Yes	No	COC relinquished/received correctly	<input checked="" type="checkbox"/> Yes	No	
<u>Internal Shipping Container</u>		N/A	Adequate volume/filled correctly	<input checked="" type="checkbox"/> Yes	No	
COC's Present	<input checked="" type="checkbox"/> Yes	No	Hold Time sufficient for analysis	<input checked="" type="checkbox"/> Yes	No	
Well packaged container with no signs of leakage	<input checked="" type="checkbox"/> Yes	No	For VOC/Radon, Head space?	Yes	No <input type="checkbox"/> N/A	
Comments:			If yes, <6mm?	Yes	No <input type="checkbox"/> N/A	
			# of containers received matches # on COC	<input checked="" type="checkbox"/> Yes	No	
			Samples received on ice?	Yes	<input type="checkbox"/> No	
			Type (circle one):	Bagged Ice	Loose Ice	Blue Ice <input type="checkbox"/> N/A



PALA Sample Survey Form
Client Name: Gilbano
SDG: ARS1-22-02458

Sample Survey Form
PALA-SR-001-FM-02 r 0.1
Effective 08/30/2019

Pipette ID: NA Tip Lot#: NA

Disposable pipette lot #: A/A

Sample Custodian

Survey End Date: 11/10/22 Survey/pH End Time: 1030

pH re-check required? YES or NO

NOTE: Any metals sample acidified at sample receiving must be rechecked after addition of dilute acid.

If YES: pH re-check date/time:

Analyst: _____ pH strip lot #: _____

Were all re-checked samples pH < 12? Yes No

*If no, complete and send to Project Management:

1. Section A of PALA-SR-001-FM-05 (24 Hour Hold pH Readjustment)
2. SR section of PALA-SR-001-FM-03 (Discrepant Sample Receipt Report).

ENVIRONMENTAL SOLUTIONS / QUALITY CONSCIOUS

Page _____ of _____

ORIGIN ID:JCCA [REDACTED]

200 FISHER STREET

SAN FRANCISCO, CA 94124
UNITED STATES US

TO [REDACTED]

SHIP DATE: 09NOV22
ACTWGT: 1.00 LB
CAD: 254128867/INET4530

BILL SENDER

ARS ALEUT ANALYTICAL, LLC
2609 NORTH RIVER ROAD

PORT ALLEN LA 70767

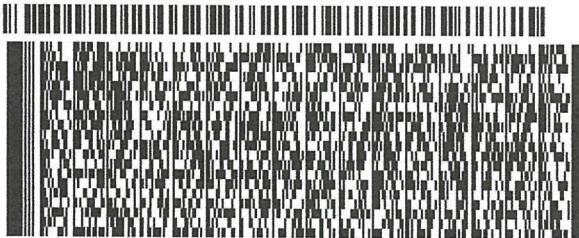
(225) 381-2991

INV:

PO:

REF: J31000.900 01.21.06

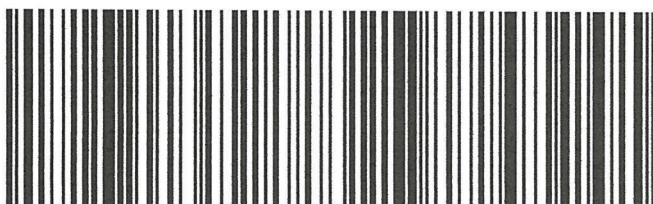
DEPT:



581 J40755FED2D

TRK#
0201 7704 0581 3515THU - 10 NOV 4:30P
STANDARD OVERNIGHT

XN OPLA

70767
LA-US MSY**After printing this label:**

1. Use the 'Print' button on this page to print your label to your laser or inkjet printer.
2. Fold the printed page along the horizontal line.
3. Place label in shipping pouch and affix it to your shipment so that the barcode portion of the label can be read and scanned.

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ARS Aleut Analytical, LLC

Laboratory Analytical Report

ARS1-22-02511

Gilbane Federal

1655 Grant Street
Suite 1200
Concord, CA 94520

COC Number: **MC111622RADB**

Job Number: **J310000900**

Job Location: **Hunters Point Shipyard, Parcel B Removal Site Evaluation**

Project Name: **Parcel B Air Monitoring RAD**

Questions regarding this analytical report should be addressed to ARS project manager, [REDACTED], who can be reached by email at projectmanagers@aaa.aleutfederal.com.

I certify that the test results presented in this report (in either hardcopy or electronic file (EDD)) meet the requirements of the laboratory's certifications and other applicable contract terms and conditions. A full list of the Port Allen, LA laboratory's certifications is provided with this report. Any exceptions to the certification or contract will be noted within the case narratives presented in the report. Any subcontracted sample results will be identified within the case narratives presented in the report. In the event this report is an amendment to a previously released report, the case narrative will clearly identify the original report as well as the reason(s) for reissuance. A statement of uncertainty for each analysis is available upon request. I authorize release and issuance of this report on the date signed below.

[REDACTED] Laboratory Management, ARS Aleut Analytical

Signature

Date

Title

This report provides analytical results of the requested analysis and does not include any opinions or interpretations. ARS Aleut Analytical, LLC assumes no liability for the use or interpretation of analytical results. Results relate only to items tested. A partial reproduction of this test report is prohibited. Reproduction of this report in full requires the written approval of the laboratory.



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Certifications and Accreditations List

State or Accrediting Body (AB)	Certificate Number
AIHA LAP, LLC	209312
Alaska	LA01131
California	3085
ANAB DoD	ADE-1489
ANAB DOE	ADE-1489.01
Louisiana DEQ - NELAC	01949
Louisiana DHH	LA022
Nevada	LA011312023-1
New Jersey	LA009
New York	65039
Pennsylvania	68-04294-011
Texas	T104704447-21-17
Utah	LA011312022-13
Washington	C1010

For additional information related to the specific matrices, methods, and analytes recognized by each accrediting body, contact us at QA@aaa.aleutfederal.com for additional information.

ARS Aleut Analytical, LLC

Analytical Reports

for

Gilbane Federal

Case Narrative



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**PROJECT SAMPLE IDENTIFICATION
CROSS-REFERENCE
TO ARS SAMPLE LABORATORY IDs**

Client Sample ID	ARS Aleut Analytical Sample ID
FB-110722	ARS1-22-02511-001
MSB01-110722	ARS1-22-02511-002
MSB02-110722	ARS1-22-02511-003
MSB113A-110722	ARS1-22-02511-004

Sample	Date Collected	Date Received	Analysis	Basis	Prep Date/Time	Analysis Date/Time
001	11/07/22 08:00	11/17/22	ASP-PU239-AF	As Received	12/02/22 07:20	12/07/22 01:46
001	11/07/22 08:00	11/17/22	GAM-A-AF	As Received	N/A	11/30/22 14:09
001	11/07/22 08:00	11/17/22	GPC-RA226-AF	As Received	12/05/22 07:47	12/14/22 10:04
001	11/07/22 08:00	11/17/22	GPC-SR90-AF	As Received	12/05/22 07:40	12/06/22 11:27
002	11/10/22 14:23	11/17/22	ASP-PU239-AF	As Received	12/02/22 07:20	12/07/22 01:46
002	11/10/22 14:23	11/17/22	GAM-A-AF	As Received	N/A	11/22/22 14:05
002	11/10/22 14:23	11/17/22	GPC-RA226-AF	As Received	12/05/22 07:47	12/14/22 10:04
002	11/10/22 14:23	11/17/22	GPC-SR90-AF	As Received	12/05/22 07:40	12/06/22 11:27
003	11/10/22 14:07	11/17/22	ASP-PU239-AF	As Received	12/02/22 07:20	12/07/22 01:46
003	11/10/22 14:07	11/17/22	GAM-A-AF	As Received	N/A	11/29/22 14:18
003	11/10/22 14:07	11/17/22	GPC-RA226-AF	As Received	12/05/22 07:47	12/14/22 10:04
003	11/10/22 14:07	11/17/22	GPC-SR90-AF	As Received	12/05/22 07:40	12/06/22 11:27
004	11/10/22 14:37	11/17/22	ASP-PU239-AF	As Received	12/02/22 07:20	12/07/22 01:46
004	11/10/22 14:37	11/17/22	GAM-A-AF	As Received	N/A	11/30/22 14:11

Sample	Date Collected	Date Received	Analysis	Basis	Prep Date/Time	Analysis Date/Time
004	11/10/22 14:37	11/17/22	GPC-RA226-AF	As Received	12/05/22 07:47	12/14/22 10:04
004	11/10/22 14:37	11/17/22	GPC-SR90-AF	As Received	12/05/22 07:40	12/06/22 11:27

SAMPLE RECEIPT/PREP

The samples arrived in good condition. The samples were screened for radioactive contamination as per procedure **PALA-SR-001-SOP Sample Receiving**. Sample date(s) and time(s) are listed as provided by the client. In regard to the Air Filters, no flow rate information was provided by the client. Turnaround time was set at 28 calendar days.

ANALYTICAL METHODS

Pu-239/240 analysis was performed using **PALA-RAD-026, "Americium, Plutonium and Uranium in Water, Soil and Vegetation Matrices by Sequential Separation Using Eichrom Stabilized Chemistry Resin (with Vacuum Box System Option) (Eichrom ACW-02 & Eichrom ACW-03)"**.

Co-60, Cs-137, Ra-226 analyses were performed using **PALA-RAD-007, "Modified Gamma Emitting Radionuclides in Soil, Air, and Biota Matrices (EPA 901.1 Mod, SM 7120B, & HASL-300 Ga-01-R)"**.

Ra-226 analysis was performed using **PALA-RAD-008, "Alpha Emitting Radium Isotopes in Water (EPA 903.0, EPA 9315, SM 7500-Ra C, SM 7500-Ra C)"**.

Sr-90 analysis was performed using **PALA-RAD-032, "Strontium 89, 90 and Total Strontium in Water, Soil and Vegetation Matrices by Eichrom Resin Separation (Eichrom SRW01, EPA 905.0, HASL 300 Sr-01-RC)"**.

ANALYTICAL RESULTS

Fraction 001 has elevated MDC for Pu-239/240 with ACT of -1.584E-8 uCi/filter, MDC of 9.944E-8 uCi/filter and CRDL of 4.8E-08 uCi/filter.

Fraction 001 has elevated MDC for Ra-226 with ACT of -2.376E-5 uCi/filter, MDC of 1.455E-5 uCi/filter and CRDL of 4.4E-06 uCi/filter.

Fraction 002 has elevated MDC for Pu-239/240 with ACT of 9.823E-9 uCi/filter, MDC of 1.386E-7 uCi/filter and CRDL of 4.8E-08 uCi/filter.

Fraction 002 has elevated MDC for Ra-226 with ACT of -2.358E-5 uCi/filter, MDC of 1.459E-5 uCi/filter and CRDL of 4.4E-06 uCi/filter.

Fraction 003 has elevated MDC for Pu-239/240 with ACT of -7.696E-8 uCi/filter, MDC of 1.172E-7 uCi/filter and CRDL of 4.8E-08 uCi/filter.

Fraction 003 has elevated MDC for Ra-226 with ACT of -3.433E-6 uCi/filter, MDC of 9.954E-6 uCi/filter and CRDL of 4.4E-06 uCi/filter.

Fraction 004 has elevated MDC for Pu-239/240 with ACT of -1.569E-8 uCi/filter, MDC of 1.115E-7 uCi/filter and CRDL of 4.8E-08 uCi/filter.

Fraction 004 has elevated MDC for Ra-226 with ACT of -3.928E-6 uCi/filter, MDC of 1.021E-5 uCi/filter and CRDL of 4.4E-06 uCi/filter.



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ARS1-B22-01866: ROI's adjusted to better fit the peaks of interest.

Notes (Case Narrative)

Definitions:

CRDL	Contract Required Detection Limit
CSU	Combined Standard Uncertainty
DLC	Decision Level Concentration (ANSI N42.23)
DO	Duplicate Original
DUP	Sample Duplicate
LCS/LCSD	Laboratory Control Sample/Laboratory Control Sample Duplicate
LOD	Limit of Detection
LOQ	Limit of Quantitation
MBL	Method Blank
MCL	Maximum Contaminant Level
MDA	Minimum Detectable Activity
MDL	Method Detection Limit
MS/MSD	Matrix Spike/Matrix Spike Duplicate
N/A	Not Applicable
NC	Not Calculated
NP	Not Provided
NR	Not Referenced
PQL	Practical Quantitation Limit

Data Qualifiers:

B	The result of both the method blank and the target sample are above the MDL.
D	Sample analysis accomplished through dilution.
J	The reported result is an estimated value above the LOD but below the LOQ, or above the MDL but below the PQL.
Q	One or more quality control criteria failed.
U	Result is below the MDA, MDL, PQL, LOD, or LOQ
*	LCS/LCSD or Sample DUP fails all Duplicate criteria.
S	Spike
SC	Subcontracted out to another qualified laboratory
H	Holding time exceeded
E	Exceeds MCL
**	Reporting Limit is higher than MCL; Target cannot be detected
#	Method/Matrix/Analyte not accredited for this certification

Radiochemistry Comments:

- 1.0) All MDA/MDC values are calculated on a sample specific basis.
- 2.0) Data in this report are within the limits of uncertainty specified in the reference method unless otherwise specified.
- 3.0) Total activity is actually total gamma activity and is determined utilizing the prominent gamma emitters from the naturally occurring radioactive decay chains and other prominent radioactive nuclides. Total activity may be lower than the actual total activity due to the extent of secular equilibrium achieved in the various decay chains at the time of analysis. The total activity is not representative of nuclides that emit solely alpha or beta particles.
- 4.0) Ra-228 is determined via secular equilibrium with its daughter, Actinium 228 (Gamma Spectroscopy only).
- 5.0) U-238 is determined via secular equilibrium with its daughter, Thorium 234 (Gamma Spectroscopy only).
- 6.0) All gamma spectroscopy was performed utilizing high purity germanium detectors (**HPGe**).
- 7.0) ARS makes every attempt to match sample density to calibrated density; however, in some cases, it is not practical or possible to do so and data results may be affected (Gamma Spectroscopy only).
- 8.0) Gamma spectroscopy results are calculated values based on the **ORTEC® GammaVision ENV32 Analysis Engine**.
- 9.0) DoD/DOE and ISO 17025 certifications through ANAB apply only to the following methods in **Non-Potable Water**:
 Gross Alpha and Gross Beta (EPA 900.0, EPA 9310); Radium 226 (EPA 903.0, EPA 903.1, EPA 9315); Radium 228 (EPA 904.0, EPA 9320); ICP/MS (EPA 6020B); ICP-OES (EPA 6010D); Mercury CVAA (EPA 7470A); Strontium-89 (EPA 905.0, Eichrom SRW01, HASL 300 Sr-01); Strontium-90 (EPA 905.0, Eichrom SRW01, HASL 300 Sr-02-RC); Tritium (EPA 906.0); Enriched Tritium (ARS-040), Carbon-14 (ARS-019), Tritium/Carbon (ARS-151); Gamma Emitters (EPA 901.1, SM 7120B, HASL 300 Ga-01-R); Americium-241 (Eichrom ACW03, HASL 300 Se-03, HASL 300 Am-03); Plutonium 238, Plutonium 239/240, Plutonium-241 (Eichrom ACW03, HASL 300 Se-03, HASL 300 Pu-10); Thorium-228, Thorium 230, Thorium-232 (Eichrom ACW10); Uranium-234, Uranium-235, Uranium-238 (Eichrom ACW03, HASL 300 Se-03); Technetium-99 (Eichrom TCW02)
- 10.0) DoD/DOE and ISO 17025 certifications through ANAB apply only to the following methods in **Solid and Chemical Materials**:
 Gross Alpha and Gross Beta (EPA 900.0 Mod, EPA 9310); ICP/MS (EPA 6020B); ICP-OES (EPA 6010D); Mercury CVAA (EPA 7471B); Strontium-89 (EPA 905.0 Mod, Eichrom SRW01, HASL 300 Sr-01); Strontium-90 (EPA 905.0 Mod, Eichrom SRW01, HASL 300 Sr-02); Tritium (EPA 906.0 Mod); Gamma Emitters (EPA 901.1, HASL 300 Ga-01-R); Americium-241 (Eichrom ACW03, HASL 300 Se-03, HASL 300 Am-01-RC); Plutonium 238, Plutonium 239/240, Plutonium-241 (Eichrom ACW03, HASL 300 Se-03, HASL 300 Pu-02-RC, HASL 300 Pu-03-RC); Thorium-228, Thorium 230, Thorium-232 (Eichrom ACW10); Uranium-234, Uranium-235, Uranium-238 (Eichrom ACW03, HASL 300 Se-03, HASL 300 U-02, HASL 300 U-04); Technetium-99 (Eichrom TCS01)
- 11.0) DoD/DOE and ISO 17025 certifications through ANAB apply only to the following methods in **Air and Emissions**:
 Gross Alpha and Gross Beta (EPA 900.0 Mod, EPA 9310); Strontium-89 (Eichrom SRW01, HASL 300 Sr-01-RC); Strontium-90 (Eichrom SRW01, HASL 300 Sr-02-RC); Gamma Emitters (EPA 901.1, HASL 300 Ga-01-R); Americium-241 (Eichrom ACW03, HASL 300 Se-03); Plutonium 238, Plutonium 239/240, Plutonium-241 (Eichrom ACW03, HASL 300 Se-03); Thorium-228, Thorium 230, Thorium-232 (Eichrom ACW10); Uranium-234, Uranium-235, Uranium-238 (Eichrom ACW03, HASL 300 Se-03); Technetium-99 (Eichrom TCW02, Eichrom TCS01)

General Comments:

- 1.0) Modified analysis procedures are procedures that are modified to meet the certain specifications. An example may be the use of a water method to analyze a solid matrix due to the lack of an officially recognized procedure for the analysis of the solid matrix. Modified analyses are indicated by the subsequent addition of "M" or "Mod" to the procedure number (i.e. 901.1M, 901.1 Mod).
- 2.0) All NIOSH method results are reported without blank corrections applied.
- 3.0) Basis: "As Received" = analyzed as received from client; "Dry" = dried prior to being analyzed; "Dry Weight Corrected" = analyzed as received; result corrected for percent moisture.



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Analytical Reports

for

Gilbane Federal

Analytical Results



2609 North River Road • Port Allen, Louisiana 70767

(225) 228-1394

ARS Sample Delivery Group: ARS1-22-02511

Client Sample ID: FB-110722

Sample Collection Date: 11/07/22 8:00

Sample Matrix: Air Filter

Percent Solids: N/A

Request or PO Number: J310000900

ARS Sample ID: ARS1-22-02511-001

Date Received: 11/17/22

Report Date: 12/14/22

Radiochemistry

Analysis Method: Eichrom ACW03

Analysis Description	Analysis Results	CSU +/- 2 s	MDC	DLC	CRDL	Qual	Analysis Units	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
Pu-239/240	-1.584E-8	4.748E-8	9.944E-8	4.256E-8	4.8E-08	U	uCi/filter	12/07/22 1:46	[REDACTED]	55.5%

Analysis Method: EPA 901.1M

Analysis Description	Analysis Results	CSU +/- 2 s	MDC	DLC	CRDL	Qual	Analysis Units	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
Co-60	3.050E-7	9.391E-7	9.619E-7	4.810E-7	0.00024	U	uCi/filter	11/30/22 14:09	[REDACTED]	N/A
Cs-137	8.603E-8	7.697E-7	8.673E-7	4.337E-7	0.00048	U	uCi/filter	11/30/22 14:09	[REDACTED]	N/A
Ra-226	-2.376E-5	1.562E-5	1.455E-5	7.275E-6	4.4E-06	U	uCi/filter	11/30/22 14:09	[REDACTED]	N/A

Analysis Method: EPA 9315

Analysis Description	Analysis Results	CSU +/- 2 s	MDC	DLC	CRDL	Qual	Analysis Units	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
Ra-226	6.268E-7	4.852E-7	6.245E-7	2.262E-7	4.4E-06		uCi/filter	12/14/22 10:04	[REDACTED]	93.4%

Analysis Method: Eichrom SRW01

Analysis Description	Analysis Results	CSU +/- 2 s	MDC	DLC	CRDL	Qual	Analysis Units	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
SR-90	-7.785E-7	2.057E-6	3.886E-6	1.791E-6	2.4E-05	U	uCi/filter	12/06/22 11:27	[REDACTED]	92.8%



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ARS Sample Delivery Group: ARS1-22-02511

Client Sample ID: MSB01-110722

Sample Collection Date: 11/10/22 14:23

Sample Matrix: Air Filter

Percent Solids: N/A

Request or PO Number: J310000900

ARS Sample ID: ARS1-22-02511-002

Date Received: 11/17/22

Report Date: 12/14/22

Radiochemistry

Analysis Method: Eichrom ACW03

Analysis Description	Analysis Results	CSU +/- 2 s	MDC	DLC	CRDL	Qual	Analysis Units	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
Pu-239/240	9.823E-9	6.943E-8	1.386E-7	5.597E-8	4.8E-08	U	uCi/filter	12/07/22 1:46	[REDACTED]	31.3%

Analysis Method: EPA 901.1M

Analysis Description	Analysis Results	CSU +/- 2 s	MDC	DLC	CRDL	Qual	Analysis Units	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
Co-60	-6.580E-7	9.081E-7	1.500E-6	7.500E-7	0.00024	U	uCi/filter	11/22/22 14:05	[REDACTED]	N/A
Cs-137	-4.618E-7	8.772E-7	9.769E-7	4.885E-7	0.00048	U	uCi/filter	11/22/22 14:05	[REDACTED]	N/A
Ra-226	-2.358E-5	1.621E-5	1.459E-5	7.295E-6	4.4E-06	U	uCi/filter	11/22/22 14:05	[REDACTED]	N/A

Analysis Method: EPA 9315

Analysis Description	Analysis Results	CSU +/- 2 s	MDC	DLC	CRDL	Qual	Analysis Units	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
Ra-226	7.348E-7	5.712E-7	7.603E-7	2.856E-7	4.4E-06	U	uCi/filter	12/14/22 10:04	[REDACTED]	91.7%

Analysis Method: Eichrom SRW01

Analysis Description	Analysis Results	CSU +/- 2 s	MDC	DLC	CRDL	Qual	Analysis Units	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
SR-90	3.246E-6	3.262E-6	5.344E-6	2.519E-6	2.4E-05	U	uCi/filter	12/06/22 11:27	[REDACTED]	93.6%



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ARS Sample Delivery Group: ARS1-22-02511**Client Sample ID:** MSB02-110722**Sample Collection Date:** 11/10/22 14:07**Sample Matrix:** Air Filter**Percent Solids:** N/A**Request or PO Number:** J310000900**ARS Sample ID:** ARS1-22-02511-003**Date Received:** 11/17/22**Report Date:** 12/14/22

Radiochemistry

Analysis Method: Eichrom ACW03

Analysis Description	Analysis Results	CSU +/- 2 s	MDC	DLC	CRDL	Qual	Analysis Units	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
Pu-239/240	-7.696E-8	4.665E-8	1.172E-7	5.116E-8	4.8E-08	U	uCi/filter	12/07/22 1:46	[REDACTED]	58.4%

Analysis Method: EPA 901.1M

Analysis Description	Analysis Results	CSU +/- 2 s	MDC	DLC	CRDL	Qual	Analysis Units	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
Co-60	2.344E-7	7.633E-7	7.851E-7	3.926E-7	0.00024	U	uCi/filter	11/29/22 14:18	[REDACTED]	N/A
Cs-137	6.385E-8	6.811E-7	7.419E-7	3.710E-7	0.00048	U	uCi/filter	11/29/22 14:18	[REDACTED]	N/A
Ra-226	-3.433E-6	7.907E-6	9.954E-6	4.977E-6	4.4E-06	U	uCi/filter	11/29/22 14:18	[REDACTED]	N/A

Analysis Method: EPA 9315

Analysis Description	Analysis Results	CSU +/- 2 s	MDC	DLC	CRDL	Qual	Analysis Units	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
Ra-226	1.230E-6	7.132E-7	7.737E-7	2.848E-7	4.4E-06		uCi/filter	12/14/22 10:04	[REDACTED]	89.5%

Analysis Method: Eichrom SRW01

Analysis Description	Analysis Results	CSU +/- 2 s	MDC	DLC	CRDL	Qual	Analysis Units	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
SR-90	3.418E-6	2.644E-6	4.148E-6	1.916E-6	2.4E-05	U	uCi/filter	12/06/22 11:27	[REDACTED]	92.0%



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ARS Sample Delivery Group: ARS1-22-02511

Client Sample ID: MSB113A-110722

Sample Collection Date: 11/10/22 14:37

Sample Matrix: Air Filter

Percent Solids: N/A

Request or PO Number: J310000900

ARS Sample ID: ARS1-22-02511-004

Date Received: 11/17/22

Report Date: 12/14/22

Radiochemistry

Analysis Method: Eichrom ACW03

Analysis Description	Analysis Results	CSU +/- 2 s	MDC	DLC	CRDL	Qual	Analysis Units	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
Pu-239/240	-1.569E-8	5.525E-8	1.115E-7	4.868E-8	4.8E-08	U	uCi/filter	12/07/22 1:46	[REDACTED]	58.4%

Analysis Method: EPA 901.1M

Analysis Description	Analysis Results	CSU +/- 2 s	MDC	DLC	CRDL	Qual	Analysis Units	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
Co-60	1.194E-7	7.990E-7	8.246E-7	4.123E-7	0.00024	U	uCi/filter	11/30/22 14:11	[REDACTED]	N/A
Cs-137	-3.752E-7	7.011E-7	7.553E-7	3.777E-7	0.00048	U	uCi/filter	11/30/22 14:11	[REDACTED]	N/A
Ra-226	-3.928E-6	8.122E-6	1.021E-5	5.105E-6	4.4E-06	U	uCi/filter	11/30/22 14:11	[REDACTED]	N/A

Analysis Method: EPA 9315

Analysis Description	Analysis Results	CSU +/- 2 s	MDC	DLC	CRDL	Qual	Analysis Units	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
Ra-226	1.113E-6	7.075E-7	8.521E-7	3.246E-7	4.4E-06		uCi/filter	12/14/22 10:04	[REDACTED]	93.9%

Analysis Method: Eichrom SRW01

Analysis Description	Analysis Results	CSU +/- 2 s	MDC	DLC	CRDL	Qual	Analysis Units	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
SR-90	3.336E-7	2.247E-6	4.025E-6	1.858E-6	2.4E-05	U	uCi/filter	12/06/22 11:27	[REDACTED]	96.9%



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for

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QC Summary



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QC Sample Results

Analytical Batch: ARS1-B22-01803

Lab Sample ID: ARS1-B22-01803-01

Method: EPA 901.1M

Sample Type: LCS

Matrix: Air Filter

Analysis Date: 11/22/22 10:52

Analyte	Spike Added	Analysis Result	Qual	Analysis Units	% Rec	% Rec Limits
Am-241	33.065	31.309		uCi/filter	94.7	75 - 125
Co-60	20.928	20.317		uCi/filter	97.1	75 - 125
Cs-137	12.996	13.402		uCi/filter	103.1	75 - 125



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QC Sample Results

Analytical Batch: ARS1-B22-01803

Sample Type: LCSD

Lab Sample ID: ARS1-B22-01803-02

Matrix: Air Filter

Method: EPA 901.1M

Analysis Date: 11/22/22 11:06

Analyte	Spike Added	Analysis Result	Qual	Analysis Units	% Rec	% Rec Limits	RPD	RPD Limit	DER	DER Limit
Am-241	33.065	31.943		uCi/filter	96.6	75 - 125	2.0	25	0.365	3
Co-60	20.928	20.437		uCi/filter	97.7	75 - 125	0.6	25	0.121	3
Cs-137	12.996	13.333		uCi/filter	102.6	75 - 125	0.5	25	0.110	3



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QC Sample Results

Analytical Batch: ARS1-B22-01803

Sample Type: MBL

Lab Sample ID: ARS1-B22-01803-03

Matrix: Air Filter

Method: EPA 901.1M

Analysis Date: 11/22/22 14:08

Analyte	Analysis Result	CSU +/- 2 s	MDC	DLC	Qual	Analysis Units
Co-60	1.524E-4	8.192E-4	8.440E-4	4.220E-4	U	uCi/filter
Cs-137	-2.312E-4	6.707E-4	7.260E-4	3.630E-4	U	uCi/filter
Ra-226	-7.904E-4	0.007	0.009	0.005	U	uCi/filter



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QC Association Summary

ARS Sample Delivery Group: ARS1-22-02511

Analytical Batch: ARS1-B22-01803

Analysis: Gamma Spec (Short) in (Air Filters, Smears [AF])

Batch Sample ID	Lab Sample ID	Client Sample ID	Matrix	Method	Prep Method
ARS1-B22-01803-01		Lab Control Sample	Air Filter	EPA 901.1M	N/A
ARS1-B22-01803-02		Lab Control Sample Duplicate	Air Filter	EPA 901.1M	N/A
ARS1-B22-01803-03		Method Blank	Air Filter	EPA 901.1M	N/A
ARS1-B22-01803-04	ARS1-22-02511-001	FB-110722	Air Filter	EPA 901.1M	N/A
ARS1-B22-01803-05	ARS1-22-02511-002	MSB01-110722	Air Filter	EPA 901.1M	N/A
ARS1-B22-01803-06	ARS1-22-02511-003	MSB02-110722	Air Filter	EPA 901.1M	N/A
ARS1-B22-01803-07	ARS1-22-02511-004	MSB113A-110722	Air Filter	EPA 901.1M	N/A



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QC Sample Results

Analytical Batch: ARS1-B22-01866

Lab Sample ID: ARS1-B22-01866-01

Method: Eichrom ACW03

Sample Type: LCS

Matrix: Air Filter

Analysis Date: 12/07/22 1:46

Analyte	Spike Added	Analysis Result	Qual	Analysis Units	% Rec	% Rec Limits
Pu-239/240	7.712E-6	7.818E-6		uCi/filter	101.4	75 - 125



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QC Sample Results

Analytical Batch: ARS1-B22-01866

Lab Sample ID: ARS1-B22-01866-02

Method: Eichrom ACW03

Sample Type: LCSD

Matrix: Air Filter

Analysis Date: 12/07/22 1:46

Analyte	Spike Added	Analysis Result	Qual	Analysis Units	% Rec	% Rec Limits	RPD	RPD Limit	DER	DER Limit
Pu-239/240	7.698E-6	7.392E-6		uCi/filter	96.0	75 - 125	5.6	25	0.619	3



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QC Sample Results

Analytical Batch: ARS1-B22-01866

Lab Sample ID: ARS1-B22-01866-03

Method: Eichrom ACW03

Sample Type: MBL

Matrix: Air Filter

Analysis Date: 12/07/22 1:46

Analyte	Analysis Result	CSU +/- 2 s	MDC	DLC	Qual	Analysis Units
Pu-238	4.896E-8	6.513E-8	1.094E-7	4.735E-8	U	uCi/filter
Pu-239/240	-5.439E-9	7.309E-8	1.387E-7	6.199E-8	U	uCi/filter



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QC Association Summary

ARS Sample Delivery Group: ARS1-22-02511

Analytical Batch: ARS1-B22-01866

Analysis: Plutonium (239, 240Pu) in (Air Filters, Smears, Leak Test [AF, SM, LT])

Batch Sample ID	Lab Sample ID	Client Sample ID	Matrix	Method	Prep Method
ARS1-B22-01866-01		Lab Control Sample	Air Filter	Eichrom ACW03	N/A
ARS1-B22-01866-02		Lab Control Sample Duplicate	Air Filter	Eichrom ACW03	N/A
ARS1-B22-01866-03		Method Blank	Air Filter	Eichrom ACW03	N/A
ARS1-B22-01866-08	ARS1-22-02511-001	FB-110722	Air Filter	Eichrom ACW03	N/A
ARS1-B22-01866-09	ARS1-22-02511-002	MSB01-110722	Air Filter	Eichrom ACW03	N/A
ARS1-B22-01866-10	ARS1-22-02511-003	MSB02-110722	Air Filter	Eichrom ACW03	N/A
ARS1-B22-01866-11	ARS1-22-02511-004	MSB113A-110722	Air Filter	Eichrom ACW03	N/A



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QC Sample Results

Analytical Batch: ARS1-B22-01872

Lab Sample ID: ARS1-B22-01872-01

Method: Eichrom SRW01

Sample Type: LCS

Matrix: Air Filter

Analysis Date: 12/06/22 11:27

Analyte	Spike Added	Analysis Result	Qual	Analysis Units	% Rec	% Rec Limits
SR-90	2.035E-5	2.152E-5		uCi/filter	105.7	75 - 125



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QC Sample Results

Analytical Batch: ARS1-B22-01872

Lab Sample ID: ARS1-B22-01872-02

Method: Eichrom SRW01

Sample Type: LCSD

Matrix: Air Filter

Analysis Date: 12/06/22 11:27

Analyte	Spike Added	Analysis Result	Qual	Analysis Units	% Rec	% Rec Limits	RPD	RPD Limit	DER	DER Limit
SR-90	2.007E-5	2.198E-5		uCi/filter	109.5	75 - 125	2.1	25	0.193	3



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QC Sample Results

Analytical Batch: ARS1-B22-01872

Lab Sample ID: ARS1-B22-01872-03

Method: Eichrom SRW01

Sample Type: MBL

Matrix: Air Filter

Analysis Date: 12/06/22 11:27

Analyte	Analysis Result	CSU +/- 2 s	MDC	DLC	Qual	Analysis Units
SR-90	2.865E-6	2.641E-6	4.247E-6	1.953E-6	U	uCi/filter



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QC Association Summary

ARS Sample Delivery Group: ARS1-22-02511

Analytical Batch: ARS1-B22-01872

Analysis: Strontium-90 in (Air Filters, Smears [AF])

Batch Sample ID	Lab Sample ID	Client Sample ID	Matrix	Method	Prep Method
ARS1-B22-01872-01		Lab Control Sample	Air Filter	Eichrom SRW01	N/A
ARS1-B22-01872-02		Lab Control Sample Duplicate	Air Filter	Eichrom SRW01	N/A
ARS1-B22-01872-03		Method Blank	Air Filter	Eichrom SRW01	N/A
ARS1-B22-01872-04	ARS1-22-02511-001	FB-110722	Air Filter	Eichrom SRW01	N/A
ARS1-B22-01872-05	ARS1-22-02511-002	MSB01-110722	Air Filter	Eichrom SRW01	N/A
ARS1-B22-01872-06	ARS1-22-02511-003	MSB02-110722	Air Filter	Eichrom SRW01	N/A
ARS1-B22-01872-07	ARS1-22-02511-004	MSB113A-110722	Air Filter	Eichrom SRW01	N/A



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QC Sample Results

Analytical Batch: ARS1-B22-01873

Lab Sample ID: ARS1-B22-01873-01

Method: EPA 9315

Sample Type: LCS

Matrix: Air Filter

Analysis Date: 12/14/22 10:04

Analyte	Spike Added	Analysis Result	Qual	Analysis Units	% Rec	% Rec Limits
Ra-226	2.673E-5	2.458E-5		uCi/filter	91.9	75 - 125



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QC Sample Results

Analytical Batch: ARS1-B22-01873

Lab Sample ID: ARS1-B22-01873-02

Method: EPA 9315

Sample Type: LCSD

Matrix: Air Filter

Analysis Date: 12/14/22 10:04

Analyte	Spike Added	Analysis Result	Qual	Analysis Units	% Rec	% Rec Limits	RPD	RPD Limit	DER	DER Limit
Ra-226	2.671E-5	2.174E-5		uCi/filter	81.4	75 - 125	12.2	25	1.049	3



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QC Sample Results

Analytical Batch: ARS1-B22-01873

Lab Sample ID: ARS1-B22-01873-03

Method: EPA 9315

Sample Type: MBL

Matrix: Air Filter

Analysis Date: 12/14/22 10:04

Analyte	Analysis Result	CSU +/- 2 s	MDC	DLC	Qual	Analysis Units
Ra-226	3.644E-8	4.688E-8	7.679E-8	2.902E-8	U	uCi/filter



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QC Association Summary

ARS Sample Delivery Group: ARS1-22-02511

Analytical Batch: ARS1-B22-01873

Analysis: Radium-226 in Air Filter

Batch Sample ID	Lab Sample ID	Client Sample ID	Matrix	Method	Prep Method
ARS1-B22-01873-01		Lab Control Sample	Air Filter	EPA 9315	N/A
ARS1-B22-01873-02		Lab Control Sample Duplicate	Air Filter	EPA 9315	N/A
ARS1-B22-01873-03		Method Blank	Air Filter	EPA 9315	N/A
ARS1-B22-01873-04	ARS1-22-02511-001	FB-110722	Air Filter	EPA 9315	N/A
ARS1-B22-01873-05	ARS1-22-02511-002	MSB01-110722	Air Filter	EPA 9315	N/A
ARS1-B22-01873-06	ARS1-22-02511-003	MSB02-110722	Air Filter	EPA 9315	N/A
ARS1-B22-01873-07	ARS1-22-02511-004	MSB113A-110722	Air Filter	EPA 9315	N/A

ARS Aleut Analytical, LLC

Analytical Reports

for

Gilbane Federal

Batch QC



QC Results per Analytical Batch

Analytical Batch	ARS1-B22-01803
SDG	ARS1-22-02511
Analysis	Gamma Spec (Short) in (Air Filters, Smears [AF])
Method	EPA 901.1M
Analysis Code	GAM-A-AF
Report Units	uCi/filter

Acceptable QC Performance Ranges

QC Sample Type	Performance Items and Ranges		
Laboratory Control Sample	Recovery (%):	> 75	< 125
Matrix Spike	Recovery (%):	> 60	< 140
Duplicate	Duplicate Error Ratio (DER):	< 3	
	Relative Percent Difference (RPD %):	≤ 25	

Laboratory Control Sample			Analysis Date	11/22/22 10:52	Analysis Technician	█	
Analysis Batch Sample ID	QC Type	Analyte	Results	CSU (2s)	Expected Value	LCS Rec (%)	MDC
ARS1-B22-01803-01	LCS	AM-241	31.309	2.383	33.065	94.7	0.112
ARS1-B22-01803-01	LCS	CO-60	20.317	1.387	20.928	97.1	0.417
ARS1-B22-01803-01	LCS	CS-137	13.402	0.874	12.996	103.1	0.068

Duplicate RER/DER/RPD			Analysis Date	11/22/22 11:06	Analysis Technician	█	
Analyte	Results LCS	CSU LCS (2s)	Results LCSD	CSU LCSD (2s)	DER	RPD	
AM-241	31.309	2.383	31.943	2.430	0.365	2.0	
CO-60	20.317	1.387	20.437	1.364	0.121	0.6	
CS-137	13.402	0.874	13.333	0.870	0.110	0.5	

Method Blank			Analysis Date	11/22/22 14:08	Analysis Technician	█	
Analysis Batch Sample ID	QC Type	Analyte	Results	CSU (2s)	MDC	Qual	
ARS1-B22-01803-03	MBL	CO-60	1.524E-4	8.192E-4	8.440E-4	U	
ARS1-B22-01803-03	MBL	CS-137	-2.312E-4	6.707E-4	7.260E-4	U	
ARS1-B22-01803-03	MBL	RA-226	-7.904E-4	0.007	0.009	U	



QC Results per Analytical Batch

Analytical Batch	ARS1-B22-01866
SDG	ARS1-22-02511
Analysis	Plutonium (239, 240Pu) in (Air Filters, Smears, Leak Test [AF, SM, LT])
Method	Eichrom ACW03
Analysis Code	ASP-PU239-AF
Report Units	uCi/filter

Acceptable QC Performance Ranges

QC Sample Type	Performance Items and Ranges		
Laboratory Control Sample	Recovery (%):	> 75	< 125
Matrix Spike	Recovery (%):	> 60	< 140
Duplicate	Duplicate Error Ratio (DER):	< 3	
	Relative Percent Difference (RPD %):	≤ 25	

Laboratory Control Sample			Analysis Date	12/07/22 01:46	Analysis Technician	██████████	
Analysis Batch Sample ID	QC Type	Analyte	Results	CSU (2s)	Expected Value	LCS Rec (%)	MDC
ARS1-B22-01866-01	LCS	PU-239/240	7.818E-6	9.819E-7	7.712E-6	101.4	4.274E-8

Duplicate RER/DER/RPD			Analysis Date	12/07/22 01:46	Analysis Technician	██████████	
Analyte	Results LCS	CSU LCS (2s)	Results LCSD	CSU LCSD (2s)	DER	RPD	
PU-239/240	7.818E-6	9.819E-7	7.392E-6	9.246E-7	0.619	5.6	

Method Blank			Analysis Date	12/07/22 01:46	Analysis Technician	██████████	
Analysis Batch Sample ID	QC Type	Analyte	Results	CSU (2s)	MDC	Qual	
ARS1-B22-01866-03	MBL	PU-238	4.896E-8	6.513E-8	1.094E-7	U	
ARS1-B22-01866-03	MBL	PU-239/240	-5.439E-9	7.309E-8	1.387E-7	U	



QC Results per Analytical Batch

Analytical Batch	ARS1-B22-01872
SDG	ARS1-22-02511
Analysis	Strontium-90 in (Air Filters, Smears [AF])
Method	Eichrom SRW01
Analysis Code	GPC-SR90-AF
Report Units	uCi/filter

Acceptable QC Performance Ranges

QC Sample Type	Performance Items and Ranges		
Laboratory Control Sample	Recovery (%):	> 75	< 125
Matrix Spike	Recovery (%):	> 60	< 140
Duplicate	Duplicate Error Ratio (DER):	< 3	
	Relative Percent Difference (RPD %):	≤ 25	

Laboratory Control Sample			Analysis Date	12/06/22 11:27	Analysis Technician		
Analysis Batch Sample ID	QC Type	Analyte	Results	CSU (2s)	Expected Value	LCS Rec (%)	MDC
ARS1-B22-01872-01	LCS	SR-90	2.152E-5	3.289E-6	2.035E-5	105.7	3.730E-7

Duplicate RER/DER/RPD			Analysis Date	12/06/22 11:27	Analysis Technician		
Analyte	Results LCS	CSU LCS (2s)	Results LCSD	CSU LCSD (2s)	DER	RPD	
SR-90	2.152E-5	3.289E-6	2.198E-5	3.362E-6	0.193	2.1	

Method Blank			Analysis Date	12/06/22 11:27	Analysis Technician		
Analysis Batch Sample ID	QC Type	Analyte	Results	CSU (2s)	MDC	Qual	
ARS1-B22-01872-03	MBL	SR-90	2.865E-6	2.641E-6	4.247E-6	U	



QC Results per Analytical Batch

Analytical Batch	ARS1-B22-01873
SDG	ARS1-22-02511
Analysis	Radium-226 in Air Filter
Method	EPA 9315
Analysis Code	GPC-RA226-AF
Report Units	uCi/filter

Acceptable QC Performance Ranges

QC Sample Type	Performance Items and Ranges		
Laboratory Control Sample	Recovery (%):	> 75	< 125
Matrix Spike	Recovery (%):	> 60	< 140
Duplicate	Duplicate Error Ratio (DER):	< 3	
	Relative Percent Difference (RPD %):	≤ 25	

Laboratory Control Sample			Analysis Date	12/14/22 10:04	Analysis Technician	██████████	
Analysis Batch Sample ID	QC Type	Analyte	Results	CSU (2s)	Expected Value	LCS Rec (%)	MDC
ARS1-B22-01873-01	LCS	RA-226	2.458E-5	3.967E-6	2.673E-5	91.9	6.353E-8

Duplicate RER/DER/RPD			Analysis Date	12/14/22 10:04	Analysis Technician	██████████	
Analyte	Results LCS	CSU LCS (2s)	Results LCSD	CSU LCSD (2s)	DER	RPD	
RA-226	2.458E-5	3.967E-6	2.174E-5	3.514E-6	1.049	12.2	

Method Blank			Analysis Date	12/14/22 10:04	Analysis Technician	██████████	
Analysis Batch Sample ID	QC Type	Analyte	Results	CSU (2s)	MDC	Qual	
ARS1-B22-01873-03	MBL	RA-226	3.644E-8	4.688E-8	7.679E-8	U	



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ARS Aleut Analytical, LLC

Analytical Reports

for

Gilbane Federal

Sample Management Records

**CHAIN-OF-CUSTODY
RECORD**

Gilbane Federal

2300 Clayton Road, Suite 1050, Concord, CA 94520

COC # MC111622RADB



Project Name: Hunters Point Shipyard, Parcel B Removal Site Evaluation	Laboratory: ARS Aleut Analytical (AAA), Port Allen, LA	Event: Parcel B Air Monitoring RAD
Project Number: J310000900	POC: [REDACTED]	
WBS Code: J310000900	Ship to: 2609 North River Road, Port Allen, LA 70767-3469	

Comments:

Equipment:

Code	Matrix
A	Air
AQ	Air Quality Control Matrix
Code	Container/Preservative
1	1x Filter, None
5	1x 1-L Plastic, HNO3, pH < 2
15	1x 250-mL Plastic, 4 Degrees C

Event: Parcel B Air Monitoring RAD						Location ID	Sample Type	Depth (ft bgs)		Cooler	Comments
	Sample ID	Matrix	Date	Time	Samp Init.			Top - Bottom			
1	FB-110722	AQ	11/07/2022	0800	[REDACTED]	X X X X				FB1	0.00 0.00 1
2	MSB01-110722	A	11/10/2022	1423	[REDACTED]	X X X X				N1	0.00 0.00 1 TOTAL FLOW: 295,680 (L)
3	MSB02-110722	A	11/10/2022	1407	[REDACTED]	X X X X				N1	0.00 0.00 1 TOTAL FLOW: 295,620 (L)
4	MSB113A-110722	A	11/10/2022	1437	[REDACTED]	X X X X				N1	0.00 0.00 1 TOTAL FLOW: 297,120 (L)
5											
6											

Turnaround Time: 28 days

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time	Shipping Date / Carrier / Airbill Number
[REDACTED]	11/16/22	1400	Fedex	11/16/22	1400	Shipping Date: 11/16/2022
			[REDACTED]	11/17/22	1145	Airbill # 7704 3749 5082
						Received by Laboratory: (Signature, Date, Time) & condition

SDG Report - Samples and Containers

SDG Specific Data								
SDG	ARS1-22-02511		TAT Days	28 Calendar Days		Project Type	Environmental	
Sample Count	4	Rpt Level	4	Date Received	11/17/2022		COC Number	MC111622RADB
Client	Gilbane Federal		Discrepancy Resol	N/A		PO Number		
Client Code	1138		Client Deadline	12/15/2022		Job Number	J310000900	
Profile Number	PN-01411					Job Location	Hunters Point Shipyard, Parcel B Removal Site Evaluation	
Comment								

Samples and Containers Checked In Thus Far										
FR	Name	Matrix	Start Date	End Date	Disp	Hold	Arch	Storage	Comments	
001	FB-110722	Air Filter	11/07/2022 07:59	11/07/2022 08:00	H	30	10	PrePrep		
			IC_ID	Cnt	Container Type	AF Volume (L)	AF Units	Rate	Mins	
	426991		1	HDP Container	1	LPM		1		
			Mid-Sample Date:	11/07/2022 07:59	AF Volume (CuM):		0.001			
002	MSB01-110722	Air Filter	11/10/2022 14:22	11/10/2022 14:23	H	30	10	PrePrep		
			IC_ID	Cnt	Container Type	AF Volume (L)	AF Units	Rate	Mins	
	426992		1	HDP Container	1	LPM		1		
			Mid-Sample Date:	11/10/2022 14:22	AF Volume (CuM):		0.001			
003	MSB02-110722	Air Filter	11/10/2022 14:06	11/10/2022 14:07	H	30	10	PrePrep		
			IC_ID	Cnt	Container Type	AF Volume (L)	AF Units	Rate	Mins	
	426993		1	HDP Container	1	LPM		1		
			Mid-Sample Date:	11/10/2022 14:06	AF Volume (CuM):		0.001			
004	MSB113A-110722	Air Filter	11/10/2022 14:36	11/10/2022 14:37	H	30	10	PrePrep		
			IC_ID	Cnt	Container Type	AF Volume (L)	AF Units	Rate	Mins	
	426994		1	HDP Container	1	LPM		1		
			Mid-Sample Date:	11/10/2022 14:36	AF Volume (CuM):		0.001			

SDG Report - Analysis Assignments

SDG	ARS1-22-02511	Sample Count	4
Client	Gilbane Federal	Analysis Count	4-16

Sample Count Totals Per Analysis			
Analysis Code	Analysis Description	In/Out	Samples Count
ASP-PU239-AF	Plutonium (239, 240Pu) in (Air Filters, Smears, Leak Test [AF, SM, LT])	I	4
GAM-A-AF	Gamma Spec (Short) in (Air Filters, Smears [AF])	I	4
GPC-RA226-AF	Radium-226 in Air Filter	I	4
GPC-SR90-AF	Strontium-90 in (Air Filters, Smears [AF])	I	4

Analyses Assigned Per Fraction		
Fraction	Analysis Code	X = Assigned
001	ASP-PU239-AF	X
001	GAM-A-AF	X
001	GPC-RA226-AF	X
001	GPC-SR90-AF	X
002	ASP-PU239-AF	X
002	GAM-A-AF	X
002	GPC-RA226-AF	X
002	GPC-SR90-AF	X
003	ASP-PU239-AF	X
003	GAM-A-AF	X
003	GPC-RA226-AF	X
003	GPC-SR90-AF	X
004	ASP-PU239-AF	X
004	GAM-A-AF	X
004	GPC-RA226-AF	X
004	GPC-SR90-AF	X

Client Name: Gilbane Federal

Profile Name: Parcel B Rad Sampling

Report Level: 4

Analysis Code	Prep Type	Units	Aliquot	Prep Code	Procedure	Count Time					
ASP-PU239-AF	WRAD	uCi	filter	N/A	PALA-RAD-026						
	Analyte			RDL	LCS LL/UL	MS LL/UL	RadY LL/UL	GravY LL/UL	RER	RPD	Surr LL/UL
GAM-A-AF	Pu-239/240 (15117-48-3)			4.8E-08 uCi/filter	75/125	60/140	30/110	30/110	1	25	N/A
	WGAM	uCi	filter	N/A	PALA-RAD-007						
	Analyte			RDL	LCS LL/UL	MS LL/UL	RadY LL/UL	GravY LL/UL	RER	RPD	Surr LL/UL
	Co-60 (10198-40-0)			0.00024 uCi/filter	75/125	60/140	30/110	30/110	1	25	N/A
GPC-RA226-AF	Cs-137 (10045-97-3)			0.00048 uCi/filter	75/125	60/140	30/110	30/110	1	25	N/A
	Ra-226 (13982-63-3)			4.4E-06 uCi/filter	75/125	60/140	30/110	30/110	1	25	N/A
	WRAD	uCi	filter		PALA-RAD-008						
GPC-SR90-AF	Analyte			RDL	LCS LL/UL	MS LL/UL	RadY LL/UL	GravY LL/UL	RER	RPD	Surr LL/UL
	Ra-226 (13982-63-3)			4.4E-06 uCi/filter	75/125	60/140	30/110	30/110	1	25	N/A
GPC-SR90-AF	WRAD	uCi	filter	N/A	PALA-RAD-032						
	Analyte			RDL	LCS LL/UL	MS LL/UL	RadY LL/UL	GravY LL/UL	RER	RPD	Surr LL/UL
GPC-SR90-AF	Sr-90 (10098-97-2)			2.4E-05 uCi/filter	75/125	60/140	30/110	30/110	1	25	N/A

Analysis Code	Fraction	Units	Aliquot	Conductivity	Analyte Count
ASP-PU239-AF	001	uCi		N/A	
		Group		Analyte	
		Parcel B Rad Sampling		Pu-239/240	
ASP-PU239-AF	002	uCi		N/A	
		Group		Analyte	
		Parcel B Rad Sampling		Pu-239/240	

DQO Report for SDG

ARS1-22-02511

ASP-PU239-AF	003	uCi	filter	N/A	1
		Group		Analyte	
ASP-PU239-AF	004	Parcel B Rad Sampling		Pu-239/240	
		uCi	filter	N/A	1
GAM-A-AF	001	Group		Analyte	
		Parcel B Rad Sampling		Cs-137	
GAM-A-AF	002	Parcel B Rad Sampling		Co-60	
		Parcel B Rad Sampling		Ra-226	
GAM-A-AF	003	uCi	filter	N/A	3
		Group		Analyte	
GAM-A-AF	004	Parcel B Rad Sampling		Cs-137	
		Parcel B Rad Sampling		Co-60	
GPC-RA226-AF	001	Parcel B Rad Sampling		Ra-226	
		uCi	filter	N/A	1
GPC-RA226-AF	002	Group		Analyte	
		Parcel B Rad Sampling		Ra-226	
GPC-RA226-AF	003	uCi	filter	N/A	1
		Group		Analyte	
		Parcel B Rad Sampling		Ra-226	

DQO Report for SDG

ARS1-22-02511

GPC-RA226-AF	004	uCi	filter	N/A	1
		Group		Analyte	
		Parcel B Rad Sampling			
GPC-SR90-AF	001	uCi	filter	N/A	1
		Group		Analyte	
		Parcel B Rad Sampling			
GPC-SR90-AF	002	uCi	filter	N/A	1
		Group		Analyte	
		Parcel B Rad Sampling			
GPC-SR90-AF	003	uCi	filter	N/A	1
		Group		Analyte	
		Parcel B Rad Sampling			
GPC-SR90-AF	004	uCi	filter	N/A	1
		Group		Analyte	
		Parcel B Rad Sampling			



Sample Custodian	Survey Start Date:	<u>11/17/22</u>	Survey Start Time:	<u>1150</u>	
Thermometer ID: <u>E0064010085</u>	Calibration Due Date:	<u>2/28/23</u>	pH Paper Lot#	<u>NA</u>	
Exposure Rate Meter + Probe Unit ID: <u>2691264</u>	Calibration Due Date:	<u>9/13/23</u>	Background:	<u>4</u> $\mu\text{R}/\text{hr}$	
Count Rate Meter + Probe Unit ID: <u>PR287372</u>	Calibration Due Date:	<u>9/13/23</u>	Background:	<u>20</u> cpm	
Delivery Type (circle one): Direct Lock Box <u>Commercial Carrier</u> : <u>FEDEX</u>	Total # of ESCs:	<u>1</u>			

External Shipping Container Tracking:	Exposure Rate ($\mu\text{R}/\text{hr}$) (limit <500 $\mu\text{R}/\text{hr}$)	Max External Swipe Counts (cpm)	Max Internal Swipe Counts (cpm)	ESC True Temps* ($^{\circ}\text{C}$)	*True temperature is recorded which includes any applicable correction factors. TRAX Matrix ID (circle all that apply): (See Section 4.3 of SOP)			
A: <u>770437495082</u>	<u>6</u>	<u>30</u>	<u>40</u>	<u>NA</u>	AQ	WD	WG	WO
B:					WS	WW	SI	UR
C:					SO	OL	BI	VG
D:					WP	SM	AF	
E:								
F:								

Visual Inspection: <u>External Shipping Container</u>	(Circle response)	<u>COC/Sample Inspection</u>	(Circle response)
Good Condition with no Leaks or Tears	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Sample Containers in good condition	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Marked Radioactive	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	No spills or leaks	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
UN2910	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Marked Radioactive	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Security Seals	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Durable labels w/indelible ink	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
If yes, intact?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	COC relinquished/received correctly	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
<u>Internal Shipping Container</u>		Adequate volume/filled correctly	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
COC's Present	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Hold Time sufficient for analysis	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Well packaged container with no signs of leakage	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	For VOC/Radon, Head space?	<input type="checkbox"/> Yes <input type="checkbox"/> No <u>N/A</u>
		If yes, <6mm?	<input type="checkbox"/> Yes <input type="checkbox"/> No <u>N/A</u>
Comments:		# of containers received matches # on COC	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
		Samples received on ice?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
		Type (circle one):	<input type="checkbox"/> Bagged Ice <input type="checkbox"/> Loose Ice <input type="checkbox"/> Blue Ice <input checked="" type="checkbox"/> N/A



PALA Sample Survey | 1

Client Name: Gillane
SDG: ARS1-22-02511

Sample Survey Form
PALA-SR-001-FM-02 r 0.1
Effective 08/30/2019

Pipette ID: NA

Tip Lot#: NA

Disposable pipette lot#: NA

Sample Custodial

Survey End Date: 11/17/22 Survey/pH End Time: 1154

pH re-check required? YES or NO

NOTE: Any metals sample acidified at sample receiving must be re-checked after a 24 hour hold.

If YES: pH re-check date/time: /

Analyst: _____ pH strip lot #: _____

Were all re-checked samples' pH < 23 YES or NO*

**If no, complete and send to Project Management:*

- 1. Section A of PALA-SR-001-FM-05 (24 Hour Hold pH Readjustment)*
- 2. SR section of PALA-SR-001-FM-03 (Discrepant Sample Receipt Report)*

ENVIRONMENTAL SOLUTIONS | QUALITY CONSCIOUS

Page _____ of _____

ORIGIN ID: JCCA [REDACTED]

200 FISHER STREET

SAN FRANCISCO, CA 94124
UNITED STATES US

TO [REDACTED]

SHIP DATE: 16NOV22
ACTWGT: 1.00 LB
CAD: 254128867/INET4530

BILL SENDER

ARS ALEUT ANALYTICAL, LLC
2609 NORTH RIVER ROAD

PORT ALLEN LA 70767

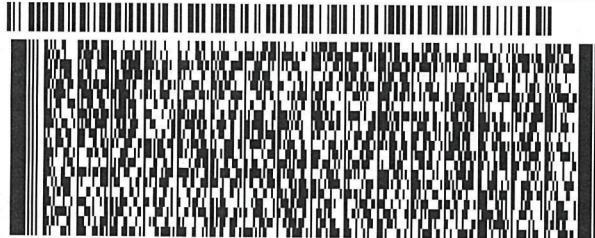
(225) 381-2991

REF: J31000.900 01.21.06

INV:

PO:

DEPT:



58114075FED

J224221010101uw

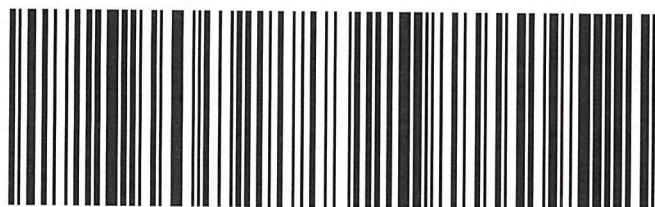
THU - 17 NOV 4:30P

STANDARD OVERNIGHT

TRK# [REDACTED] 7704 3749 5082

70767
LA-US MSY

XN OPLA



- After printing this label:**
1. Use the 'Print' button on this page to print your label to your laser or inkjet printer.
 2. Fold the printed page along the horizontal line.
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ARS Aleut Analytical, LLC

Laboratory Analytical Report

ARS1-22-02572

Gilbane Federal

1655 Grant Street
Suite 1200
Concord, CA 94520

COC Number: **MC112322RADB**

Job Number: **J310000900**

Job Location: **Hunters Point Shipyard, Parcel B Removal Site Evaluation**

Project Name: **Parcel B Air Monitoring RAD**

Questions regarding this analytical report should be addressed to ARS project manager, [REDACTED], who can be reached by email at projectmanagers@aaa.aleutfederal.com.

I certify that the test results presented in this report (in either hardcopy or electronic file (EDD)) meet the requirements of the laboratory's certifications and other applicable contract terms and conditions. A full list of the Port Allen, LA laboratory's certifications is provided with this report. Any exceptions to the certification or contract will be noted within the case narratives presented in the report. Any subcontracted sample results will be identified within the case narratives presented in the report. In the event this report is an amendment to a previously released report, the case narrative will clearly identify the original report as well as the reason(s) for reissuance. A statement of uncertainty for each analysis is available upon request. I authorize release and issuance of this report on the date signed below.

[REDACTED] Laboratory Management, ARS Aleut Analytical

Signature

Date

Title

This report provides analytical results of the requested analysis and does not include any opinions or interpretations. ARS Aleut Analytical, LLC assumes no liability for the use or interpretation of analytical results. Results relate only to items tested. A partial reproduction of this test report is prohibited. Reproduction of this report in full requires the written approval of the laboratory.





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Certifications and Accreditations List

State or Accrediting Body (AB)	Certificate Number
AIHA LAP, LLC	209312
Alaska	LA01131
California	3085
ANAB DoD	ADE-1489
ANAB DOE	ADE-1489.01
Louisiana DEQ - NELAC	01949
Louisiana DHH	LA022
Nevada	LA011312023-1
New Jersey	LA009
New York	65039
Pennsylvania	68-04294-011
Texas	T104704447-21-17
Utah	LA011312022-13
Washington	C1010

For additional information related to the specific matrices, methods, and analytes recognized by each accrediting body, contact us at QA@aaa.aleutfederal.com for additional information.



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ARS Aleut Analytical, LLC

Analytical Reports

for

Gilbane Federal

Case Narrative



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**PROJECT SAMPLE IDENTIFICATION
CROSS-REFERENCE
TO ARS SAMPLE LABORATORY IDs**

Client Sample ID	ARS Aleut Analytical Sample ID
FB-111422	ARS1-22-02572-001
MSB01-111422	ARS1-22-02572-002
MSB02-111422	ARS1-22-02572-003
MSB113A-111422	ARS1-22-02572-004
MSB02-111422D	ARS1-22-02572-005

Sample	Date Collected	Date Received	Analysis	Basis	Prep Date/Time	Analysis Date/Time
001	11/14/22 08:00	11/29/22	ASP-PU239-AF	As Received	12/14/22 11:22	12/20/22 23:31
001	11/14/22 08:00	11/29/22	GAM-A-AF	As Received	N/A	12/05/22 14:13
001	11/14/22 08:00	11/29/22	GPC-RA226-AF	As Received	12/14/22 07:14	12/23/22 10:05
001	11/14/22 08:00	11/29/22	GPC-SR90-AF	As Received	12/14/22 07:52	12/16/22 10:47
002	11/17/22 15:00	11/29/22	ASP-PU239-AF	As Received	12/14/22 11:22	12/20/22 23:31
002	11/17/22 15:00	11/29/22	GAM-A-AF	As Received	N/A	12/03/22 13:43
002	11/17/22 15:00	11/29/22	GPC-RA226-AF	As Received	12/14/22 07:14	12/23/22 10:05
002	11/17/22 15:00	11/29/22	GPC-SR90-AF	As Received	12/14/22 07:52	12/16/22 10:47
003	11/17/22 15:00	11/29/22	ASP-PU239-AF	As Received	12/14/22 11:22	12/20/22 23:31
003	11/17/22 15:00	11/29/22	GAM-A-AF	As Received	N/A	12/05/22 14:15
003	11/17/22 15:00	11/29/22	GPC-RA226-AF	As Received	12/14/22 07:14	12/23/22 10:05
003	11/17/22 15:00	11/29/22	GPC-SR90-AF	As Received	12/14/22 07:52	12/16/22 10:47
004	11/17/22 15:04	11/29/22	ASP-PU239-AF	As Received	12/14/22 11:22	12/20/22 23:31
004	11/17/22 15:04	11/29/22	GAM-A-AF	As Received	N/A	12/06/22 14:10



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Sample	Date Collected	Date Received	Analysis	Basis	Prep Date/Time	Analysis Date/Time
004	11/17/22 15:04	11/29/22	GPC-RA226-AF	As Received	12/14/22 07:14	12/23/22 10:05
004	11/17/22 15:04	11/29/22	GPC-SR90-AF	As Received	12/14/22 07:52	12/16/22 10:47
005	11/17/22 15:00	11/29/22	ASP-PU239-AF	As Received	12/14/22 11:22	12/20/22 23:31
005	11/17/22 15:00	11/29/22	GAM-A-AF	As Received	N/A	12/07/22 14:15
005	11/17/22 15:00	11/29/22	GPC-RA226-AF	As Received	12/14/22 07:14	12/23/22 10:05
005	11/17/22 15:00	11/29/22	GPC-SR90-AF	As Received	12/14/22 07:52	12/16/22 10:47

SAMPLE RECEIPT/PREP

The samples arrived in good condition. The samples were screened for radioactive contamination as per procedure **PALA-SR-001-SOP Sample Receiving**. Sample date(s) and time(s) are listed as provided by the client. In regard to the Air Filters, no flow rate information was provided by the client. Turnaround time was set at 28 calendar days.

ANALYTICAL METHODS

Pu-239/240 analysis was performed using **PALA-RAD-026, "Americium, Plutonium and Uranium in Water, Soil and Vegetation Matrices by Sequential Separation Using Eichrom Stabilized Chemistry Resin (with Vacuum Box System Option) (Eichrom ACW-02 & Eichrom ACW-03)"**.

Co-60, Cs-137, Ra-226 analyses were performed using **PALA-RAD-007, "Modified Gamma Emitting Radionuclides in Soil, Air, and Biota Matrices (EPA 901.1 Mod, SM 7120B, & HASL-300 Ga-01-R)"**.

Ra-226 analysis was performed using **PALA-RAD-008, "Alpha Emitting Radium Isotopes in Water (EPA 903.0, EPA 9315, SM 7500-Ra C, SM 7500-Ra C)"**.

Sr-90 analysis was performed using **PALA-RAD-032, "Strontium 89, 90 and Total Strontium in Water, Soil and Vegetation Matrices by Eichrom Resin Separation (Eichrom SRW01, EPA 905.0, HASL 300 Sr-01-RC)"**.

ANALYTICAL RESULTS

Fraction 001 has elevated MDC for Pu-239/240 with ACT of -1.334E-8 uCi/filter, MDC of 1.163E-7 uCi/filter and CRDL of 4.8E-08 uCi/filter.

Fraction 001 has elevated MDC for Ra-226 with ACT of -2.482E-5 uCi/filter, MDC of 1.471E-5 uCi/filter and CRDL of 4.4E-06 uCi/filter.

Fraction 002 has elevated MDC for Pu-239/240 with ACT of -7.722E-8 uCi/filter, MDC of 1.114E-7 uCi/filter and CRDL of 4.8E-08 uCi/filter.

Fraction 002 has elevated MDC for Ra-226 with ACT of 2.868E-6 uCi/filter, MDC of 9.510E-6 uCi/filter and



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CRDL of 4.4E-06 uCi/filter.

Fraction 003 has elevated MDC for Pu-239/240 with ACT of -4.950E-9 uCi/filter, MDC of 1.286E-7 uCi/filter and CRDL of 4.8E-08 uCi/filter.

Fraction 003 has elevated MDC for Ra-226 with ACT of -3.591E-6 uCi/filter, MDC of 9.576E-6 uCi/filter and CRDL of 4.4E-06 uCi/filter.

Fraction 004 has elevated MDC for Pu-239/240 with ACT of 0.000 uCi/filter, MDC of 6.783E-8 uCi/filter and CRDL of 4.8E-08 uCi/filter.

Fraction 004 has elevated MDC for Ra-226 with ACT of 1.107E-6 uCi/filter, MDC of 1.008E-5 uCi/filter and CRDL of 4.4E-06 uCi/filter.

Fraction 005 has elevated MDC for Pu-239/240 with ACT of -1.442E-8 uCi/filter, MDC of 8.376E-8 uCi/filter and CRDL of 4.8E-08 uCi/filter.

Fraction 005 has elevated MDC for Ra-226 with ACT of 2.258E-7 uCi/filter, MDC of 9.272E-6 uCi/filter and CRDL of 4.4E-06 uCi/filter.

ARS1-B22-01917: ROI's adjusted to better fit the peaks of interest.

Notes (Case Narrative)

Definitions:

CRDL	Contract Required Detection Limit
CSU	Combined Standard Uncertainty
DLC	Decision Level Concentration (ANSI N42.23)
DO	Duplicate Original
DUP	Sample Duplicate
LCS/LCSD	Laboratory Control Sample/Laboratory Control Sample Duplicate
LOD	Limit of Detection
LOQ	Limit of Quantitation
MBL	Method Blank
MCL	Maximum Contaminant Level
MDA	Minimum Detectable Activity
MDL	Method Detection Limit
MS/MSD	Matrix Spike/Matrix Spike Duplicate
N/A	Not Applicable
NC	Not Calculated
NP	Not Provided
NR	Not Referenced
PQL	Practical Quantitation Limit

Data Qualifiers:

B	The result of both the method blank and the target sample are above the MDL.
D	Sample analysis accomplished through dilution.
J	The reported result is an estimated value above the LOD but below the LOQ, or above the MDL but below the PQL.
Q	One or more quality control criteria failed.
U	Result is below the MDA, MDL, PQL, LOD, or LOQ
*	LCS/LCSD or Sample DUP fails all Duplicate criteria.
S	Spike
SC	Subcontracted out to another qualified laboratory
H	Holding time exceeded
E	Exceeds MCL
**	Reporting Limit is higher than MCL; Target cannot be detected
#	Method/Matrix/Analyte not accredited for this certification

Radiochemistry Comments:

- 1.0) All MDA/MDC values are calculated on a sample specific basis.
 2.0) Data in this report are within the limits of uncertainty specified in the reference method unless otherwise specified.
 3.0) Total activity is actually total gamma activity and is determined utilizing the prominent gamma emitters from the naturally occurring radioactive decay chains and other prominent radioactive nuclides. Total activity may be lower than the actual total activity due to the extent of secular equilibrium achieved in the various decay chains at the time of analysis. The total activity is not representative of nuclides that emit solely alpha or beta particles.
 4.0) Ra-228 is determined via secular equilibrium with its daughter, Actinium 228 (Gamma Spectroscopy only).
 5.0) U-238 is determined via secular equilibrium with its daughter, Thorium 234 (Gamma Spectroscopy only).
 6.0) All gamma spectroscopy was performed utilizing high purity germanium detectors (**HPGe**).
 7.0) ARS makes every attempt to match sample density to calibrated density; however, in some cases, it is not practical or possible to do so and data results may be affected (Gamma Spectroscopy only).
 8.0) Gamma spectroscopy results are calculated values based on the **ORTEC® GammaVision ENV32 Analysis Engine**.
 9.0) DoD/DOE and ISO 17025 certifications through ANAB apply only to the following methods in **Non-Potable Water**: Gross Alpha and Gross Beta (EPA 900.0, EPA 9310); Radium 226 (EPA 903.0, EPA 903.1, EPA 9315); Radium 228 (EPA 904.0, EPA 9320); ICP/MS (EPA 6020B); ICP-OES (EPA 6010D); Mercury CVAA (EPA 7470A); Strontium-89 (EPA 905.0, Eichrom SRW01, HASL 300 Sr-01); Strontium-90 (EPA 905.0, Eichrom SRW01, HASL 300 Sr-02-RC); Tritium (EPA 906.0); Enriched Tritium (ARS-040), Carbon-14 (ARS-019), Tritium/Carbon (ARS-151); Gamma Emitters (EPA 901.1, SM 7120B, HASL 300 Ga-01-R); Americium-241 (Eichrom ACW03, HASL 300 Se-03, HASL 300 Am-03); Plutonium 238, Plutonium 239/240, Plutonium-241 (Eichrom ACW03, HASL 300 Se-03, HASL 300 Pu-10); Thorium-228, Thorium 230, Thorium-232 (Eichrom ACW10); Uranium-234, Uranium-235, Uranium-238 (Eichrom ACW03, HASL 300 Se-03); Technetium-99 (Eichrom TCW02).
 10.0) DoD/DOE and ISO 17025 certifications through ANAB apply only to the following methods in **Solid and Chemical Materials**: Gross Alpha and Gross Beta (EPA 900.0 Mod, EPA 9310); ICP/MS (EPA 6020B); ICP-OES (EPA 6010D); Mercury CVAA (EPA 7471B); Strontium-89 (EPA 905.0 Mod, Eichrom SRW01, HASL 300 Sr-01); Strontium-90 (EPA 905.0 Mod, Eichrom SRW01, HASL 300 Sr-02); Tritium (EPA 906.0 Mod); Gamma Emitters (EPA 901.1, HASL 300 Ga-01-R); Americium-241 (Eichrom ACW03, HASL 300 Se-03, HASL 300 Am-01-RC); Plutonium 238, Plutonium 239/240, Plutonium-241 (Eichrom ACW03, HASL 300 Se-03, HASL 300 Pu-02-RC, HASL 300 Pu-03-RC); Thorium-228, Thorium 230, Thorium-232 (Eichrom ACW10); Uranium-234, Uranium-235, Uranium-238 (Eichrom ACW03, HASL 300 Se-03, HASL 300 U-02, HASL 300 U-04); Technetium-99 (Eichrom TCS01).
 11.0) DoD/DOE and ISO 17025 certifications through ANAB apply only to the following methods in **Air and Emissions**: Gross Alpha and Gross Beta (EPA 900.0 Mod, EPA 9310); Strontium-89 (Eichrom SRW01, HASL 300 Sr-01-RC); Strontium-90 (Eichrom SRW01, HASL 300 Sr-02-RC); Gamma Emitters (EPA 901.1, HASL 300 Ga-01-R); Americium-241 (Eichrom ACW03, HASL 300 Se-03); Plutonium 238, Plutonium 239/240, Plutonium-241 (Eichrom ACW03, HASL 300 Se-03); Thorium-228, Thorium 230, Thorium-232 (Eichrom ACW10); Uranium-234, Uranium-235, Uranium-238 (Eichrom ACW03, HASL 300 Se-03); Technetium-99 (Eichrom TCW02, Eichrom TCS01).

General Comments:

- 1.0) Modified analysis procedures are procedures that are modified to meet certain specifications. An example may be the use of a water method to analyze a solid matrix due to the lack of an officially recognized procedure for the analysis of the solid matrix. Modified analyses are indicated by the subsequent addition of "M" or "Mod" to the procedure number (i.e. 901.1M, 901.1 Mod).
 2.0) All NIOSH method results are reported without blank corrections applied.
 3.0) Basis: "As Received" = analyzed as received from client; "Dry" = dried prior to being analyzed; "Dry Weight Corrected" = analyzed as received; result corrected for percent moisture.



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Analytical Results



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(225) 228-1394

ARS Sample Delivery Group: ARS1-22-02572**Client Sample ID:** FB-111422**Sample Collection Date:** 11/14/22 8:00**Sample Matrix:** Air Filter**Percent Solids:** N/A**Request or PO Number:** J310000900**ARS Sample ID:** ARS1-22-02572-001**Date Received:** 11/29/22**Report Date:** 12/27/22

Radiochemistry

Analysis Method: Eichrom ACW03

Analysis Description	Analysis Results	CSU +/- 2 s	MDC	DLC	CRDL	Qual	Analysis Units	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
Pu-239/240	-1.334E-8	5.551E-8	1.163E-7	4.909E-8	4.8E-08	U	uCi/filter	12/20/22 23:31	[REDACTED]	48.5%

Analysis Method: EPA 901.1M

Analysis Description	Analysis Results	CSU +/- 2 s	MDC	DLC	CRDL	Qual	Analysis Units	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
Co-60	-5.857E-7	7.569E-7	1.248E-6	6.240E-7	0.00024	U	uCi/filter	12/05/22 14:13	[REDACTED]	N/A
Cs-137	4.205E-7	7.632E-7	8.513E-7	4.257E-7	0.00048	U	uCi/filter	12/05/22 14:13	[REDACTED]	N/A
Ra-226	-2.482E-5	1.594E-5	1.471E-5	7.355E-6	4.4E-06	U	uCi/filter	12/05/22 14:13	[REDACTED]	N/A

Analysis Method: EPA 9315

Analysis Description	Analysis Results	CSU +/- 2 s	MDC	DLC	CRDL	Qual	Analysis Units	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
Ra-226	5.916E-7	5.850E-7	8.780E-7	3.354E-7	4.4E-06	U	uCi/filter	12/23/22 10:05	[REDACTED]	85.6%

Analysis Method: Eichrom SRW01

Analysis Description	Analysis Results	CSU +/- 2 s	MDC	DLC	CRDL	Qual	Analysis Units	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
SR-90	1.367E-6	2.337E-6	3.993E-6	1.848E-6	2.4E-05	U	uCi/filter	12/16/22 10:47	[REDACTED]	97.8%



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ARS Sample Delivery Group: ARS1-22-02572**Client Sample ID:** MSB01-111422**Sample Collection Date:** 11/17/22 15:00**Sample Matrix:** Air Filter**Percent Solids:** N/A**Request or PO Number:** J310000900**ARS Sample ID:** ARS1-22-02572-002**Date Received:** 11/29/22**Report Date:** 12/27/22

Radiochemistry

Analysis Method: Eichrom ACW03

Analysis Description	Analysis Results	CSU +/- 2 s	MDC	DLC	CRDL	Qual	Analysis Units	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
Pu-239/240	-7.722E-8	4.847E-8	1.114E-7	4.990E-8	4.8E-08	U	uCi/filter	12/20/22 23:31	[REDACTED]	79.3%

Analysis Method: EPA 901.1M

Analysis Description	Analysis Results	CSU +/- 2 s	MDC	DLC	CRDL	Qual	Analysis Units	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
Co-60	-5.258E-7	9.599E-7	9.740E-7	4.870E-7	0.00024	U	uCi/filter	12/03/22 13:43	[REDACTED]	N/A
Cs-137	3.492E-7	6.171E-7	6.657E-7	3.329E-7	0.00048	U	uCi/filter	12/03/22 13:43	[REDACTED]	N/A
Ra-226	2.868E-6	7.542E-6	9.510E-6	4.755E-6	4.4E-06	U	uCi/filter	12/03/22 13:43	[REDACTED]	N/A

Analysis Method: EPA 9315

Analysis Description	Analysis Results	CSU +/- 2 s	MDC	DLC	CRDL	Qual	Analysis Units	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
Ra-226	1.109E-6	7.296E-7	8.944E-7	3.398E-7	4.4E-06		uCi/filter	12/23/22 10:05	[REDACTED]	82.7%

Analysis Method: Eichrom SRW01

Analysis Description	Analysis Results	CSU +/- 2 s	MDC	DLC	CRDL	Qual	Analysis Units	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
SR-90	-8.633E-7	2.187E-6	4.100E-6	1.901E-6	2.4E-05	U	uCi/filter	12/16/22 10:47	[REDACTED]	97.8%



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ARS Sample Delivery Group: ARS1-22-02572**Client Sample ID:** MSB02-111422**Sample Collection Date:** 11/17/22 15:00**Sample Matrix:** Air Filter**Percent Solids:** N/A**Request or PO Number:** J310000900**ARS Sample ID:** ARS1-22-02572-003**Date Received:** 11/29/22**Report Date:** 12/27/22

Radiochemistry

Analysis Method: Eichrom ACW03

Analysis Description	Analysis Results	CSU +/- 2 s	MDC	DLC	CRDL	Qual	Analysis Units	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
Pu-239/240	-4.950E-9	6.792E-8	1.286E-7	5.758E-8	4.8E-08	U	uCi/filter	12/20/22 23:31	[REDACTED]	59.9%

Analysis Method: EPA 901.1M

Analysis Description	Analysis Results	CSU +/- 2 s	MDC	DLC	CRDL	Qual	Analysis Units	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
Co-60	4.516E-7	7.705E-7	7.848E-7	3.924E-7	0.00024	U	uCi/filter	12/05/22 14:15	[REDACTED]	N/A
Cs-137	1.676E-7	6.606E-7	7.174E-7	3.587E-7	0.00048	U	uCi/filter	12/05/22 14:15	[REDACTED]	N/A
Ra-226	-3.591E-6	7.609E-6	9.576E-6	4.788E-6	4.4E-06	U	uCi/filter	12/05/22 14:15	[REDACTED]	N/A

Analysis Method: EPA 9315

Analysis Description	Analysis Results	CSU +/- 2 s	MDC	DLC	CRDL	Qual	Analysis Units	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
Ra-226	5.593E-7	5.588E-7	8.474E-7	3.282E-7	4.4E-06	U	uCi/filter	12/23/22 10:05	[REDACTED]	86.0%

Analysis Method: Eichrom SRW01

Analysis Description	Analysis Results	CSU +/- 2 s	MDC	DLC	CRDL	Qual	Analysis Units	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
SR-90	-6.563E-7	2.043E-6	3.829E-6	1.768E-6	2.4E-05	U	uCi/filter	12/16/22 10:47	[REDACTED]	92.0%



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ARS Sample Delivery Group: ARS1-22-02572**Client Sample ID:** MSB113A-111422**Sample Collection Date:** 11/17/22 15:04**Sample Matrix:** Air Filter**Percent Solids:** N/A**Request or PO Number:** J310000900**ARS Sample ID:** ARS1-22-02572-004**Date Received:** 11/29/22**Report Date:** 12/27/22

Radiochemistry

Analysis Method: Eichrom ACW03

Analysis Description	Analysis Results	CSU +/- 2 s	MDC	DLC	CRDL	Qual	Analysis Units	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
Pu-239/240	0.000	3.384E-8	6.783E-8	2.840E-8	4.8E-08	U	uCi/filter	12/20/22 23:31	[REDACTED]	77.1%

Analysis Method: EPA 901.1M

Analysis Description	Analysis Results	CSU +/- 2 s	MDC	DLC	CRDL	Qual	Analysis Units	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
Co-60	-3.282E-7	9.451E-7	9.647E-7	4.824E-7	0.00024	U	uCi/filter	12/06/22 14:10	[REDACTED]	N/A
Cs-137	6.917E-8	6.878E-7	7.489E-7	3.745E-7	0.00048	U	uCi/filter	12/06/22 14:10	[REDACTED]	N/A
Ra-226	1.107E-6	7.966E-6	1.008E-5	5.040E-6	4.4E-06	U	uCi/filter	12/06/22 14:10	[REDACTED]	N/A

Analysis Method: EPA 9315

Analysis Description	Analysis Results	CSU +/- 2 s	MDC	DLC	CRDL	Qual	Analysis Units	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
Ra-226	6.336E-7	6.266E-7	9.404E-7	3.592E-7	4.4E-06	U	uCi/filter	12/23/22 10:05	[REDACTED]	82.3%

Analysis Method: Eichrom SRW01

Analysis Description	Analysis Results	CSU +/- 2 s	MDC	DLC	CRDL	Qual	Analysis Units	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
SR-90	2.629E-7	2.368E-6	4.248E-6	1.967E-6	2.4E-05	U	uCi/filter	12/16/22 10:47	[REDACTED]	92.0%



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ARS Sample Delivery Group: ARS1-22-02572**Client Sample ID:** MSB02-111422D**Sample Collection Date:** 11/17/22 15:00**Sample Matrix:** Air Filter**Percent Solids:** N/A**Request or PO Number:** J310000900**ARS Sample ID:** ARS1-22-02572-005**Date Received:** 11/29/22**Report Date:** 12/27/22

Radiochemistry

Analysis Method: Eichrom ACW03

Analysis Description	Analysis Results	CSU +/- 2 s	MDC	DLC	CRDL	Qual	Analysis Units	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
Pu-239/240	-1.442E-8	3.889E-8	8.376E-8	3.537E-8	4.8E-08	U	uCi/filter	12/20/22 23:31	[REDACTED]	66.8%

Analysis Method: EPA 901.1M

Analysis Description	Analysis Results	CSU +/- 2 s	MDC	DLC	CRDL	Qual	Analysis Units	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
Co-60	1.705E-8	7.956E-7	8.246E-7	4.123E-7	0.00024	U	uCi/filter	12/07/22 14:15	[REDACTED]	N/A
Cs-137	-4.254E-7	7.498E-7	8.063E-7	4.032E-7	0.00048	U	uCi/filter	12/07/22 14:15	[REDACTED]	N/A
Ra-226	2.258E-7	7.302E-6	9.272E-6	4.636E-6	4.4E-06	U	uCi/filter	12/07/22 14:15	[REDACTED]	N/A

Analysis Method: EPA 9315

Analysis Description	Analysis Results	CSU +/- 2 s	MDC	DLC	CRDL	Qual	Analysis Units	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
Ra-226	7.984E-7	6.286E-7	8.443E-7	3.181E-7	4.4E-06	U	uCi/filter	12/23/22 10:05	[REDACTED]	81.6%

Analysis Method: Eichrom SRW01

Analysis Description	Analysis Results	CSU +/- 2 s	MDC	DLC	CRDL	Qual	Analysis Units	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
SR-90	2.125E-6	2.325E-6	3.824E-6	1.765E-6	2.4E-05	U	uCi/filter	12/16/22 10:47	[REDACTED]	94.5%



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QC Summary



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QC Sample Results

Analytical Batch: ARS1-B22-01870

Lab Sample ID: ARS1-B22-01870-01

Method: EPA 901.1M

Sample Type: LCS

Matrix: Air Filter

Analysis Date: 12/02/22 14:09

Analyte	Spike Added	Analysis Result	Qual	Analysis Units	% Rec	% Rec Limits
Am-241	33.065	31.674		uCi/filter	95.8	75 - 125
Co-60	20.928	21.667		uCi/filter	103.5	75 - 125
Cs-137	12.996	13.389		uCi/filter	103.0	75 - 125



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QC Sample Results

Analytical Batch: ARS1-B22-01870

Sample Type: LCSD

Lab Sample ID: ARS1-B22-01870-02

Matrix: Air Filter

Method: EPA 901.1M

Analysis Date: 12/02/22 14:21

Analyte	Spike Added	Analysis Result	Qual	Analysis Units	% Rec	% Rec Limits	RPD	RPD Limit	DER	DER Limit
Am-241	33.065	32.067		uCi/filter	97.0	75 - 125	1.2	25	0.220	3
Co-60	20.928	20.415		uCi/filter	97.5	75 - 125	6.0	25	1.441	3
Cs-137	12.996	13.350		uCi/filter	102.7	75 - 125	0.3	25	0.076	3



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QC Sample Results

Analytical Batch: ARS1-B22-01870

Sample Type: MBL

Lab Sample ID: ARS1-B22-01870-03

Matrix: Air Filter

Method: EPA 901.1M

Analysis Date: 12/08/22 14:32

Analyte	Analysis Result	CSU +/- 2 s	MDC	DLC	Qual	Analysis Units
Co-60	3.722E-4	0.002	0.002	7.800E-4	U	uCi/filter
Cs-137	-7.247E-4	0.001	0.002	8.300E-4	U	uCi/filter
Ra-226	-0.086	0.033	0.031	0.015	U	uCi/filter



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QC Association Summary

ARS Sample Delivery Group: ARS1-22-02572

Analytical Batch: ARS1-B22-01870

Analysis: Gamma Spec (Short) in (Air Filters, Smears [AF])

Batch Sample ID	Lab Sample ID	Client Sample ID	Matrix	Method	Prep Method
ARS1-B22-01870-01		Lab Control Sample	Air Filter	EPA 901.1M	N/A
ARS1-B22-01870-02		Lab Control Sample Duplicate	Air Filter	EPA 901.1M	N/A
ARS1-B22-01870-03		Method Blank	Air Filter	EPA 901.1M	N/A
ARS1-B22-01870-04	ARS1-22-02572-001	FB-111422	Air Filter	EPA 901.1M	N/A
ARS1-B22-01870-05	ARS1-22-02572-002	MSB01-111422	Air Filter	EPA 901.1M	N/A
ARS1-B22-01870-06	ARS1-22-02572-003	MSB02-111422	Air Filter	EPA 901.1M	N/A
ARS1-B22-01870-07	ARS1-22-02572-004	MSB113A-111422	Air Filter	EPA 901.1M	N/A
ARS1-B22-01870-08	ARS1-22-02572-005	MSB02-111422D	Air Filter	EPA 901.1M	N/A



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QC Sample Results

Analytical Batch: ARS1-B22-01917

Lab Sample ID: ARS1-B22-01917-01

Method: Eichrom ACW03

Sample Type: LCS

Matrix: Air Filter

Analysis Date: 12/20/22 23:31

Analyte	Spike Added	Analysis Result	Qual	Analysis Units	% Rec	% Rec Limits
Pu-239/240	7.810E-6	7.894E-6		uCi/filter	101.1	75 - 125



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QC Sample Results

Analytical Batch: ARS1-B22-01917

Sample Type: LCSD

Lab Sample ID: ARS1-B22-01917-02

Matrix: Air Filter

Method: Eichrom ACW03

Analysis Date: 12/20/22 23:31

Analyte	Spike Added	Analysis Result	Qual	Analysis Units	% Rec	% Rec Limits	RPD	RPD Limit	DER	DER Limit
Pu-239/240	7.845E-6	8.167E-6		uCi/filter	104.1	75 - 125	3.4	25	0.376	3



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QC Sample Results

Analytical Batch: ARS1-B22-01917

Sample Type: MBL

Lab Sample ID: ARS1-B22-01917-03

Matrix: Air Filter

Method: Eichrom ACW03

Analysis Date: 12/20/22 23:31

Analyte	Analysis Result	CSU +/- 2 s	MDC	DLC	Qual	Analysis Units
Pu-238	3.887E-8	8.496E-8	1.515E-7	6.520E-8	U	uCi/filter
Pu-239/240	-6.995E-8	7.664E-8	1.702E-7	7.455E-8	U	uCi/filter



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QC Association Summary

ARS Sample Delivery Group: ARS1-22-02572

Analytical Batch: ARS1-B22-01917

Analysis: Plutonium (239, 240Pu) in (Air Filters, Smears, Leak Test [AF, SM, LT])

Batch Sample ID	Lab Sample ID	Client Sample ID	Matrix	Method	Prep Method
ARS1-B22-01917-01		Lab Control Sample	Air Filter	Eichrom ACW03	N/A
ARS1-B22-01917-02		Lab Control Sample Duplicate	Air Filter	Eichrom ACW03	N/A
ARS1-B22-01917-03		Method Blank	Air Filter	Eichrom ACW03	N/A
ARS1-B22-01917-04	ARS1-22-02572-001	FB-111422	Air Filter	Eichrom ACW03	N/A
ARS1-B22-01917-05	ARS1-22-02572-002	MSB01-111422	Air Filter	Eichrom ACW03	N/A
ARS1-B22-01917-06	ARS1-22-02572-003	MSB02-111422	Air Filter	Eichrom ACW03	N/A
ARS1-B22-01917-07	ARS1-22-02572-004	MSB113A-111422	Air Filter	Eichrom ACW03	N/A
ARS1-B22-01917-08	ARS1-22-02572-005	MSB02-111422D	Air Filter	Eichrom ACW03	N/A



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QC Sample Results

Analytical Batch: ARS1-B22-01918

Lab Sample ID: ARS1-B22-01918-01

Method: EPA 9315

Sample Type: LCS

Matrix: Air Filter

Analysis Date: 12/23/22 10:05

Analyte	Spike Added	Analysis Result	Qual	Analysis Units	% Rec	% Rec Limits
Ra-226	2.692E-5	2.154E-5		uCi/filter	80.0	75 - 125



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QC Sample Results

Analytical Batch: ARS1-B22-01918

Sample Type: LCSD

Lab Sample ID: ARS1-B22-01918-02

Matrix: Air Filter

Method: EPA 9315

Analysis Date: 12/23/22 10:05

Analyte	Spike Added	Analysis Result	Qual	Analysis Units	% Rec	% Rec Limits	RPD	RPD Limit	DER	DER Limit
Ra-226	2.692E-5	2.448E-5		uCi/filter	91.0	75 - 125	12.8	25	1.096	3



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QC Sample Results

Analytical Batch: ARS1-B22-01918

Lab Sample ID: ARS1-B22-01918-03

Method: EPA 9315

Sample Type: MBL

Matrix: Air Filter

Analysis Date: 12/23/22 10:05

Analyte	Analysis Result	CSU +/- 2 s	MDC	DLC	Qual	Analysis Units
Ra-226	6.477E-7	6.083E-7	9.080E-7	3.565E-7	U	uCi/filter



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QC Association Summary

ARS Sample Delivery Group: ARS1-22-02572

Analytical Batch: ARS1-B22-01918

Analysis: Radium-226 in Air Filter

Batch Sample ID	Lab Sample ID	Client Sample ID	Matrix	Method	Prep Method
ARS1-B22-01918-01		Lab Control Sample	Air Filter	EPA 9315	N/A
ARS1-B22-01918-02		Lab Control Sample Duplicate	Air Filter	EPA 9315	N/A
ARS1-B22-01918-03		Method Blank	Air Filter	EPA 9315	N/A
ARS1-B22-01918-04	ARS1-22-02572-001	FB-111422	Air Filter	EPA 9315	N/A
ARS1-B22-01918-05	ARS1-22-02572-002	MSB01-111422	Air Filter	EPA 9315	N/A
ARS1-B22-01918-06	ARS1-22-02572-003	MSB02-111422	Air Filter	EPA 9315	N/A
ARS1-B22-01918-07	ARS1-22-02572-004	MSB113A-111422	Air Filter	EPA 9315	N/A
ARS1-B22-01918-08	ARS1-22-02572-005	MSB02-111422D	Air Filter	EPA 9315	N/A



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QC Sample Results

Analytical Batch: ARS1-B22-01919

Lab Sample ID: ARS1-B22-01919-01

Method: Eichrom SRW01

Sample Type: LCS

Matrix: Air Filter

Analysis Date: 12/16/22 10:47

Analyte	Spike Added	Analysis Result	Qual	Analysis Units	% Rec	% Rec Limits
SR-90	2.018E-5	1.985E-5		uCi/filter	98.4	75 - 125



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QC Sample Results

Analytical Batch: ARS1-B22-01919

Sample Type: LCSD

Lab Sample ID: ARS1-B22-01919-02

Matrix: Air Filter

Method: Eichrom SRW01

Analysis Date: 12/16/22 10:47

Analyte	Spike Added	Analysis Result	Qual	Analysis Units	% Rec	% Rec Limits	RPD	RPD Limit	DER	DER Limit
SR-90	2.020E-5	2.141E-5		uCi/filter	106.0	75 - 125	7.6	25	0.680	3



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QC Sample Results

Analytical Batch: ARS1-B22-01919

Sample Type: MBL

Lab Sample ID: ARS1-B22-01919-03

Matrix: Air Filter

Method: Eichrom SRW01

Analysis Date: 12/16/22 10:47

Analyte	Analysis Result	CSU +/- 2 s	MDC	DLC	Qual	Analysis Units
SR-90	8.305E-7	2.319E-6	4.067E-6	1.874E-6	U	uCi/filter



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QC Association Summary

ARS Sample Delivery Group: ARS1-22-02572

Analytical Batch: ARS1-B22-01919

Analysis: Strontium-90 in (Air Filters, Smears [AF])

Batch Sample ID	Lab Sample ID	Client Sample ID	Matrix	Method	Prep Method
ARS1-B22-01919-01		Lab Control Sample	Air Filter	Eichrom SRW01	N/A
ARS1-B22-01919-02		Lab Control Sample Duplicate	Air Filter	Eichrom SRW01	N/A
ARS1-B22-01919-03		Method Blank	Air Filter	Eichrom SRW01	N/A
ARS1-B22-01919-04	ARS1-22-02572-001	FB-111422	Air Filter	Eichrom SRW01	N/A
ARS1-B22-01919-05	ARS1-22-02572-002	MSB01-111422	Air Filter	Eichrom SRW01	N/A
ARS1-B22-01919-06	ARS1-22-02572-003	MSB02-111422	Air Filter	Eichrom SRW01	N/A
ARS1-B22-01919-07	ARS1-22-02572-004	MSB113A-111422	Air Filter	Eichrom SRW01	N/A
ARS1-B22-01919-08	ARS1-22-02572-005	MSB02-111422D	Air Filter	Eichrom SRW01	N/A



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ARS Aleut Analytical, LLC

Analytical Reports

for

Gilbane Federal

Batch QC



QC Results per Analytical Batch

Analytical Batch	ARS1-B22-01870
SDG	ARS1-22-02572
Analysis	Gamma Spec (Short) in (Air Filters, Smears [AF])
Method	EPA 901.1M
Analysis Code	GAM-A-AF
Report Units	uCi/filter

Acceptable QC Performance Ranges

QC Sample Type	Performance Items and Ranges		
Laboratory Control Sample	Recovery (%):	> 75	< 125
Matrix Spike	Recovery (%):	> 60	< 140
Duplicate	Duplicate Error Ratio (DER):	< 3	
	Relative Percent Difference (RPD %):	≤ 25	

Laboratory Control Sample			Analysis Date	12/02/22 14:09	Analysis Technician	█ █ █ █ █	
Analysis Batch Sample ID	QC Type	Analyte	Results	CSU (2s)	Expected Value	LCS Rec (%)	MDC
ARS1-B22-01870-01	LCS	AM-241	31.674	2.461	33.065	95.8	0.121
ARS1-B22-01870-01	LCS	CO-60	21.667	1.143	20.928	103.5	0.328
ARS1-B22-01870-01	LCS	CS-137	13.389	0.713	12.996	103.0	0.077

Duplicate RER/DER/RPD			Analysis Date	12/02/22 14:21	Analysis Technician	█ █ █ █ █	
Analyte	Results LCS	CSU LCS (2s)	Results LCSD	CSU LCSD (2s)	DER	RPD	
AM-241	31.674	2.461	32.067	2.491	0.220	1.2	
CO-60	21.667	1.143	20.415	1.262	1.441	6.0	
CS-137	13.389	0.713	13.350	0.711	0.076	0.3	

Method Blank			Analysis Date	12/08/22 14:32	Analysis Technician	█ █ █ █ █	
Analysis Batch Sample ID	QC Type	Analyte	Results	CSU (2s)	MDC	Qual	
ARS1-B22-01870-03	MBL	CO-60	3.722E-4	0.002	0.002	U	
ARS1-B22-01870-03	MBL	CS-137	-7.247E-4	0.001	0.002	U	
ARS1-B22-01870-03	MBL	RA-226	-0.086	0.033	0.031	U	



QC Results per Analytical Batch

Analytical Batch	ARS1-B22-01917
SDG	ARS1-22-02572
Analysis	Plutonium (239, 240Pu) in (Air Filters, Smears, Leak Test [AF, SM, LT])
Method	Eichrom ACW03
Analysis Code	ASP-PU239-AF
Report Units	uCi/filter

Acceptable QC Performance Ranges

QC Sample Type	Performance Items and Ranges		
Laboratory Control Sample	Recovery (%):	> 75	< 125
Matrix Spike	Recovery (%):	> 60	< 140
Duplicate	Duplicate Error Ratio (DER):	< 3	
	Relative Percent Difference (RPD %):	≤ 25	

Laboratory Control Sample			Analysis Date	12/20/22 23:31	Analysis Technician	██████████	
Analysis Batch Sample ID	QC Type	Analyte	Results	CSU (2s)	Expected Value	LCS Rec (%)	MDC
ARS1-B22-01917-01	LCS	PU-239/240	7.894E-6	9.893E-7	7.810E-6	101.1	4.502E-8

Duplicate RER/DER/RPD			Analysis Date	12/20/22 23:31	Analysis Technician	██████████	
Analyte	Results LCS	CSU LCS (2s)	Results LCSD	CSU LCSD (2s)	DER	RPD	
PU-239/240	7.894E-6	9.893E-7	8.167E-6	1.023E-6	0.376	3.4	

Method Blank			Analysis Date	12/20/22 23:31	Analysis Technician	██████████	
Analysis Batch Sample ID	QC Type	Analyte	Results	CSU (2s)	MDC	Qual	
ARS1-B22-01917-03	MBL	PU-238	3.887E-8	8.496E-8	1.515E-7	U	
ARS1-B22-01917-03	MBL	PU-239/240	-6.995E-8	7.664E-8	1.702E-7	U	



QC Results per Analytical Batch

Analytical Batch	ARS1-B22-01918
SDG	ARS1-22-02572
Analysis	Radium-226 in Air Filter
Method	EPA 9315
Analysis Code	GPC-RA226-AF
Report Units	uCi/filter

Acceptable QC Performance Ranges

QC Sample Type	Performance Items and Ranges		
Laboratory Control Sample	Recovery (%):	> 75	< 125
Matrix Spike	Recovery (%):	> 60	< 140
Duplicate	Duplicate Error Ratio (DER):	< 3	
	Relative Percent Difference (RPD %):	≤ 25	

Laboratory Control Sample			Analysis Date	12/23/22 10:05	Analysis Technician	██████████	
Analysis Batch Sample ID	QC Type	Analyte	Results	CSU (2s)	Expected Value	LCS Rec (%)	MDC
ARS1-B22-01918-01	LCS	RA-226	2.154E-5	3.487E-6	2.692E-5	80.0	6.483E-8

Duplicate RER/DER/RPD			Analysis Date	12/23/22 10:05	Analysis Technician	██████████	
Analyte	Results LCS	CSU LCS (2s)	Results LCSD	CSU LCSD (2s)	DER	RPD	
RA-226		2.154E-5	3.487E-6	2.448E-5	3.948E-6	1.096	12.8

Method Blank			Analysis Date	12/23/22 10:05	Analysis Technician	██████████	
Analysis Batch Sample ID	QC Type	Analyte	Results	CSU (2s)	MDC	Qual	
ARS1-B22-01918-03	MBL	RA-226	6.477E-7	6.083E-7	9.080E-7	U	



QC Results per Analytical Batch

Analytical Batch	ARS1-B22-01919
SDG	ARS1-22-02572
Analysis	Strontium-90 in (Air Filters, Smears [AF])
Method	Eichrom SRW01
Analysis Code	GPC-SR90-AF
Report Units	uCi/filter

Acceptable QC Performance Ranges

QC Sample Type	Performance Items and Ranges		
Laboratory Control Sample	Recovery (%):	> 75	< 125
Matrix Spike	Recovery (%):	> 60	< 140
Duplicate	Duplicate Error Ratio (DER):	< 3	
	Relative Percent Difference (RPD %):	≤ 25	

Laboratory Control Sample			Analysis Date	12/16/22 10:47	Analysis Technician	██████████	
Analysis Batch Sample ID	QC Type	Analyte	Results	CSU (2s)	Expected Value	LCS Rec (%)	MDC
ARS1-B22-01919-01	LCS	SR-90	1.985E-5	3.065E-6	2.018E-5	98.4	5.918E-7

Duplicate RER/DER/RPD			Analysis Date	12/16/22 10:47	Analysis Technician	██████████	
Analyte	Results LCS	CSU LCS (2s)	Results LCSD	CSU LCSD (2s)	DER	RPD	
SR-90		1.985E-5	3.065E-6	2.141E-5	3.282E-6	0.680	7.6

Method Blank			Analysis Date	12/16/22 10:47	Analysis Technician	██████████	
Analysis Batch Sample ID	QC Type	Analyte	Results	CSU (2s)	MDC	Qual	
ARS1-B22-01919-03	MBL	SR-90	8.305E-7	2.319E-6	4.067E-6	U	



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ARS Aleut Analytical, LLC

Analytical Reports

for

Gilbane Federal

Sample Management Records

**CHAIN-OF-CUSTODY
RECORD**

Gibane Federal [REDACTED]
1655 Grant Street, Suite 1200, Concord, CA 94520

COC ID #: MC112322RADB



Project Name: Hunters Point Shipyard, Parcel B Removal Site Evaluation	Laboratory: ARS Aleut Analytical (AAA), Port Allen, LA	Event: Parcel B Air Monitoring RAD
Project Number: J310000900	POC: [REDACTED]	
WBS Code: J310000900	Ship to: 2609 North River Road, Port Allen, LA 70767-3469	

Comments:					Code Matrix					Page 1 of	
					A	Air					
					AQ	Air Quality Control Matrix					
					Container/Preservative						
					1	1x Filter, None					
					5	1x 1-L Plastic, HNO3, pH < 2					
					15	1x 250-mL Plastic, 4 Degrees C					
Equipment:					Event: Parcel B Air Monitoring RAD						
	Sample ID	Matrix	Date	Time	Samp Init.	15	15	5	1		
1	FB-111422	AQ	11/14/22	0800						FB	FB
2	MSB01-111422	A	11/17/22	1500		x	x	x	x	FB1	0.00
3	MSB02-111422	A		1500		x	x	x	x	N	0.00
4	MSB113A-111422	A		1504		x	x	x	x	N1	1
5	MSB02-111422D	A		1500		X	X	X	X	MSB02 (DUP)	N
6										N1	0.00
7											i
8											
9											
10											
11											
Turnaround Time: 7 days											
Relinquished by: (Signature)		Date	Time	Received by: (Signature)			Date	Time	Shipping Date / Carrier / Airbill Number		
[REDACTED]		11/23/22	1300	FedEx			11/23/22	1300	Shipping Date: 11/23/22 / FEDEX 7705 0200 1421		
[REDACTED]				[REDACTED]			11/25/22	800	Received by Laboratory: (Signature, Date, Time) & condition		



Procedures GES-003 / EPA 900.0M

Start Date

Stop Date

11/14/22

11/17/22

111422

File ID Number: MC112322RADB

Field Entry

Station	Sample ID	Date In:	Time In:	Date Out:	Time Out:	(LPM)	Initial Flow Rate	Final Flow Rate	Flow volume Cu.M	Average Flow				Average Flow				
										Julian Date for Date Out	Total Run Time (Days)	Total Run Time (Hours)	Total Run Time (Minutes)	(LPM)	Initial Flow Rate (CFM)	Final Flow Rate (CFM)	Average Flow Rate (Cu M/h)	Flow Rate (Cu M/min)
1 MSB01	MSB01-111422	11/14/22	4:15	11/17/22	15:00	60	60	297.9	321	3.45	82.75	4965.0	60	2.11888	2.11888	3.6	0.06	297,900
2 MSB02	MSB02-111422	11/14/22	4:00	11/17/22	15:00	60	60	298.8	321	3.46	83.00	4980.0	60	2.11888	2.11888	3.6	0.06	298,800
3 MSB02	MSB02-111422D	11/14/22	4:00	11/17/22	15:00	60	60	298.8	321	3.46	83.00	4980.0	60	2.11888	2.11888	3.6	0.06	298,800
3 MSB113A	MSB113A-111422	11/14/22	4:05	11/17/22	15:04	60	60	298.7	321	3.46	82.98	4979.0	60	2.11888	2.11888	3.6	0.06	298,740

FORMULAS:

Number of Days = (Date Out + Time Out) minus (Date In+Time In)

Number of Minutes = # of Days X 24hr X 60min

Flow Rate (m³/h) = Flow Rate (CFM) x 60min x (12in x 2.54cm/in / 100cm/m)^3 :

Mid-Sample Date/Time = [(Date+Time Out) + (Date+Time In)] / 2

Flow Rate (Cu M/min) = CFM X 0.0283168466 Cu.M/CF

Flow Rate (LPM) = Cu M X 1000

Total Flow (L) = LPM X Total Minutes

SDG Report - Samples and Containers

SDG Specific Data								
SDG	ARS1-22-02572		TAT Days	28 Calendar Days		Project Type	Environmental	
Sample Count	5	Rpt Level	4	Date Received	11/29/2022		COC Number	MC112322RADB
Client	Gilbane Federal		Discrepancy Resol	N/A		PO Number		
Client Code	1138		Client Deadline	12/27/2022		Job Number	J310000900	
Profile Number	PN-01411					Job Location	Hunters Point Shipyard, Parcel B Removal Site Evaluation	
Comment								

Samples and Containers Checked In Thus Far									Comments
FR	Name	Matrix	Start Date	End Date	Disp	Hold	Arch	Storage	Comments
001	FB-111422	Air Filter	11/14/2022 07:59	11/14/2022 08:00	H	30	10	PrePrep	
			IC_ID	Cnt	Container Type	AF Volume (L)	AF Units	Rate	Mins
	427351		1	HDP Container	1	LPM		1	
			Mid-Sample Date:	11/14/2022 07:59	AF Volume (CuM):		0.001		
002	MSB01-111422	Air Filter	11/17/2022 14:59	11/17/2022 15:00	H	30	10	PrePrep	
			IC_ID	Cnt	Container Type	AF Volume (L)	AF Units	Rate	Mins
	427352		1	HDP Container	1	LPM		1	
			Mid-Sample Date:	11/17/2022 14:59	AF Volume (CuM):		0.001		
003	MSB02-111422	Air Filter	11/17/2022 14:59	11/17/2022 15:00	H	30	10	PrePrep	
			IC_ID	Cnt	Container Type	AF Volume (L)	AF Units	Rate	Mins
	427353		1	HDP Container	1	LPM		1	
			Mid-Sample Date:	11/17/2022 14:59	AF Volume (CuM):		0.001		
004	MSB113A-111422	Air Filter	11/17/2022 15:03	11/17/2022 15:04	H	30	10	PrePrep	
			IC_ID	Cnt	Container Type	AF Volume (L)	AF Units	Rate	Mins
	427354		1	HDP Container	1	LPM		1	
			Mid-Sample Date:	11/17/2022 15:03	AF Volume (CuM):		0.001		
005	MSB02-111422D	Air Filter	11/17/2022 14:59	11/17/2022 15:00	H	30	10	PrePrep	
			IC_ID	Cnt	Container Type	AF Volume (L)	AF Units	Rate	Mins
	427355		1	HDP Container	1	LPM		1	
			Mid-Sample Date:	11/17/2022 14:59	AF Volume (CuM):		0.001		

SDG Report - Analysis Assignments

SDG	ARS1-22-02572	Sample Count	5
Client	Gilbane Federal	Analysis Count	4-20

Sample Count Totals Per Analysis			
Analysis Code	Analysis Description	In/Out	Samples Count
ASP-PU239-AF	Plutonium (239, 240Pu) in (Air Filters, Smears, Leak Test [AF, SM, LT])	I	5
GAM-A-AF	Gamma Spec (Short) in (Air Filters, Smears [AF])	I	5
GPC-RA226-AF	Radium-226 in Air Filter	I	5
GPC-SR90-AF	Strontium-90 in (Air Filters, Smears [AF])	I	5

Analyses Assigned Per Fraction		
Fraction	Analysis Code	X = Assigned
001	ASP-PU239-AF	X
001	GAM-A-AF	X
001	GPC-RA226-AF	X
001	GPC-SR90-AF	X
002	ASP-PU239-AF	X
002	GAM-A-AF	X
002	GPC-RA226-AF	X
002	GPC-SR90-AF	X
003	ASP-PU239-AF	X
003	GAM-A-AF	X
003	GPC-RA226-AF	X
003	GPC-SR90-AF	X
004	ASP-PU239-AF	X
004	GAM-A-AF	X
004	GPC-RA226-AF	X
004	GPC-SR90-AF	X
005	ASP-PU239-AF	X
005	GAM-A-AF	X
005	GPC-RA226-AF	X
005	GPC-SR90-AF	X

Client Name: Gilbane Federal

Profile Name: Parcel B Rad Sampling

Report Level: 4

Analysis Code	Prep Type	Units	Aliquot	Prep Code	Procedure	Count Time					
ASP-PU239-AF	WRAD	uCi	filter	N/A	PALA-RAD-026						
	Analyte			RDL	LCS LL/UL	MS LL/UL	RadY LL/UL	GravY LL/UL	RER	RPD	Surr LL/UL
GAM-A-AF	Pu-239/240 (15117-48-3)			4.8E-08 uCi/filter	75/125	60/140	30/110	30/110	1	25	N/A
	WGAM	uCi	filter	N/A	PALA-RAD-007						
	Analyte			RDL	LCS LL/UL	MS LL/UL	RadY LL/UL	GravY LL/UL	RER	RPD	Surr LL/UL
	Co-60 (10198-40-0)			0.00024 uCi/filter	75/125	60/140	30/110	30/110	1	25	N/A
GPC-RA226-AF	Cs-137 (10045-97-3)			0.00048 uCi/filter	75/125	60/140	30/110	30/110	1	25	N/A
	Ra-226 (13982-63-3)			4.4E-06 uCi/filter	75/125	60/140	30/110	30/110	1	25	N/A
	WRAD	uCi	filter		PALA-RAD-008						
GPC-SR90-AF	Analyte			RDL	LCS LL/UL	MS LL/UL	RadY LL/UL	GravY LL/UL	RER	RPD	Surr LL/UL
	Ra-226 (13982-63-3)			4.4E-06 uCi/filter	75/125	60/140	30/110	30/110	1	25	N/A
GPC-SR90-AF	WRAD	uCi	filter	N/A	PALA-RAD-032						
	Analyte			RDL	LCS LL/UL	MS LL/UL	RadY LL/UL	GravY LL/UL	RER	RPD	Surr LL/UL
GPC-SR90-AF	Sr-90 (10098-97-2)			2.4E-05 uCi/filter	75/125	60/140	30/110	30/110	1	25	N/A

Analysis Code	Fraction	Units	Aliquot	Conductivity	Analyte Count
ASP-PU239-AF	001	uCi		N/A	
		Group		Analyte	
		Parcel B Rad Sampling		Pu-239/240	
ASP-PU239-AF	002	uCi		N/A	
		Group		Analyte	
		Parcel B Rad Sampling		Pu-239/240	

DQO Report for SDG

ARS1-22-02572

ASP-PU239-AF	003	uCi	filter	N/A	1
		Group		Analyte	
ASP-PU239-AF	004	Parcel B Rad Sampling		Pu-239/240	
		uCi	filter	N/A	1
ASP-PU239-AF	005	Group		Analyte	
		Parcel B Rad Sampling		Pu-239/240	
GAM-A-AF	001	uCi	filter	N/A	3
		Group		Analyte	
GAM-A-AF	002	Parcel B Rad Sampling		Cs-137	
		Parcel B Rad Sampling		Co-60	
GAM-A-AF	003	Parcel B Rad Sampling		Ra-226	
		uCi	filter	N/A	3
GAM-A-AF	004	Group		Analyte	
		Parcel B Rad Sampling		Cs-137	
GAM-A-AF	005	Parcel B Rad Sampling		Co-60	
		Parcel B Rad Sampling		Ra-226	
GAM-A-AF	001	uCi	filter	N/A	3
		Group		Analyte	
GAM-A-AF	002	Parcel B Rad Sampling		Cs-137	
		Parcel B Rad Sampling		Co-60	
GAM-A-AF	003	Parcel B Rad Sampling		Ra-226	
		uCi	filter	N/A	3
GAM-A-AF	004	Group		Analyte	
		Parcel B Rad Sampling		Cs-137	
GAM-A-AF	005	Parcel B Rad Sampling		Co-60	
		Parcel B Rad Sampling		Ra-226	

DQO Report for SDG

ARS1-22-02572

GPC-RA226-AF	001	uCi	filter	N/A	1
		Group		Analyte	
GPC-RA226-AF	002	Parcel B Rad Sampling		Ra-226	
		uCi	filter	N/A	1
GPC-RA226-AF	003	Group		Analyte	
		Parcel B Rad Sampling		Ra-226	
GPC-RA226-AF	004	uCi	filter	N/A	1
		Group		Analyte	
GPC-RA226-AF	005	Parcel B Rad Sampling		Ra-226	
		uCi	filter	N/A	1
GPC-SR90-AF	001	Group		Analyte	
		Parcel B Rad Sampling		Sr-90	
GPC-SR90-AF	002	uCi	filter	N/A	1
		Group		Analyte	
GPC-SR90-AF	003	Parcel B Rad Sampling		Sr-90	
		uCi	filter	N/A	1
GPC-SR90-AF	004	Group		Analyte	
		Parcel B Rad Sampling		Sr-90	
GPC-SR90-AF	005	uCi	filter	N/A	1
		Group		Analyte	
		Parcel B Rad Sampling		Sr-90	



Sample Custodian:	Survey Start Date:	11/29/22	Survey Start Time:	900	
Thermometer ID:	E0064010085	Calibration Due Date:	2/28/23	pH Paper Lot#	NA
Exposure Rate Meter + Probe Unit ID:	269264	Calibration Due Date:	9/13/23	Background:	4 µR/hr
Count Rate Meter + Probe Unit ID:	PR287372	Calibration Due Date:	9/13/23	Background:	20 cpm
Delivery Type (circle one):	Direct	Lock Box	Commercial Carrier:	FEDEX	Total # of ESCs: 1

*True temperature is recorded which includes any applicable correction factors.					
External Shipping Container Tracking:	Exposure Rate (µR/hr) (limit <500 µR/hr)	Max External Swipe Counts (cpm)	Max Internal Swipe Counts (cpm)	ESC True Temps* (°C)	TRAX Matrix ID (circle all that apply): (See Section 4.3 of SOP)
A: 220502001421	5	30	40	NA	AQ WD WG WO
B:					WS WW SI UR
C:					SO OL BI VG
D:					WP SM AF
E:					
F:					

Visual Inspection: <u>External Shipping Container</u>	(Circle response)		<u>COC/Sample Inspection</u>	(Circle response)	
Good Condition with no Leaks or Tears	<input checked="" type="checkbox"/> Yes	No	Sample Containers in good condition	<input checked="" type="checkbox"/> Yes	No
Marked Radioactive	Yes	<input checked="" type="checkbox"/> No	No spills or leaks	<input checked="" type="checkbox"/> Yes	No
UN2910	Yes	<input checked="" type="checkbox"/> No	Marked Radioactive	<input checked="" type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Security Seals	<input checked="" type="checkbox"/> Yes	No	Durable labels w/indelible ink	<input checked="" type="checkbox"/> Yes	No
If yes, intact?	<input checked="" type="checkbox"/> Yes	No	COC relinquished/received correctly	<input checked="" type="checkbox"/> Yes	No
<u>Internal Shipping Container</u>			Adequate volume/filled correctly	<input checked="" type="checkbox"/> Yes	No
COC's Present	<input checked="" type="checkbox"/> Yes	No	Hold Time sufficient for analysis	<input checked="" type="checkbox"/> Yes	No
Well packaged container with no signs of leakage	<input checked="" type="checkbox"/> Yes	No	For VOC/Radon, Head space?	Yes	No <input checked="" type="checkbox"/> N/A
			If yes, <6mm?	Yes	No <input checked="" type="checkbox"/> N/A
			# of containers received matches # on COC	<input checked="" type="checkbox"/> Yes	No
Comments:			Samples received on ice?	Yes	<input checked="" type="checkbox"/> No
			Type (circle one):	Bagged Ice	Loose Ice
				Blue Ice	<input checked="" type="checkbox"/> N/A



PALA Sample Survey m

Client Name: Gilbane
SDG: ARS1-22-02592

Sample Survey Form
PALA-SR-001-FM-02 r 0.1
Effective 08/30/2019

Pipette ID: NA

Tip Lot#: N/A

Disposable pipette lot#: NA

Sample Custodian

Survey End Date: 11/29/22 Survey/pH End Time: 9:10

pH re-check required? YES or NO

NOTE: Any metals sample acidified at sample receiving must be re-acidified after sample analysis.

If YES: pH re-check date/time:

Analyst:

pH strip lot #:

Were all re-checked samples' pH < 23 YES or NOT

**If no, complete and send to Project Management*

- If no, complete and send to Project Management:*

 - 1. Section A of PALA-SR-001-FM-05 (24 Hour Hold pH Readjustment)*
 - 2. SR section of PALA-SR-001-FM-03 (Discrepant Sample Receipt Report)*

ENVIRONMENTAL SOLUTIONS / **QUALITY CONSCIOUS**

Page _____ of _____

ORIGIN ID: JCCA [REDACTED]
 200 FISHER STREET
 SAN FRANCISCO, CA 94124
 UNITED STATES US

SHIP DATE: 23NOV22
 ACTWGT: 1.00 LB
 CAD: 254128867/INET4530

BILL SENDER

TO [REDACTED]

ARS ALEUT ANALYTICAL, LLC
2609 NORTH RIVER ROAD

PORT ALLEN LA 70767

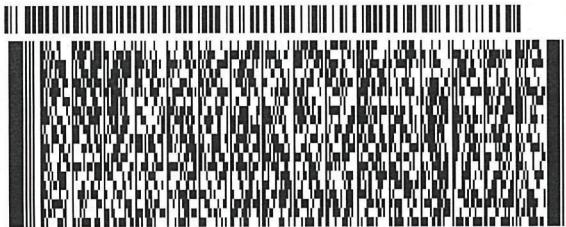
(225) 381-2991

INV:
PO

REF: J31000 900 01 21 06

DEPT: _____

581161E4B01FE2D

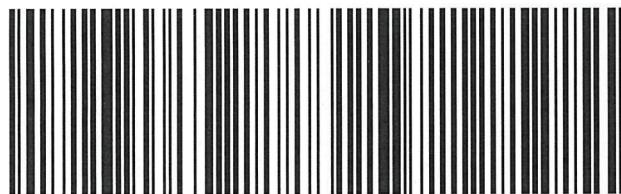


TRK#
0201 7705 0200 1421

FRI - 25 NOV 4:30P
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XN OPLA

70767
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ARS Aleut Analytical, LLC

Laboratory Analytical Report

ARS1-22-02605

Gilbane Federal

[REDACTED]
1655 Grant Street
Suite 1200
Concord, CA 94520

COC Number: **MC113022RADB**

Job Number: **J310000900**

Job Location: **Hunters Point Shipyard, Parcel B Removal Site Evaluation**

Project Name: **Parcel B Air Monitoring RAD**

Questions regarding this analytical report should be addressed to ARS project manager, [REDACTED]
who can be reached by email at projectmanagers@aaa.aleutfederal.com.

I certify that the test results presented in this report (in either hardcopy or electronic file (EDD)) meet the requirements of the laboratory's certifications and other applicable contract terms and conditions. A full list of the Port Allen, LA laboratory's certifications is provided with this report. Any exceptions to the certification or contract will be noted within the case narratives presented in the report. Any subcontracted sample results will be identified within the case narratives presented in the report. In the event this report is an amendment to a previously released report, the case narrative will clearly identify the original report as well as the reason(s) for reissuance. A statement of uncertainty for each analysis is available upon request. I authorize release and issuance of this report on the date signed below.

 Digitally signed by [REDACTED]

Signature	Date	Laboratory Management, ARS Aleut Analytical
		Title

This report provides analytical results of the requested analysis and does not include any opinions or interpretations. ARS Aleut Analytical, LLC assumes no liability for the use or interpretation of analytical results. Results relate only to items tested. A partial reproduction of this test report is prohibited. Reproduction of this report in full requires the written approval of the laboratory.





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Certifications and Accreditations List

State or Accrediting Body (AB)	Certificate Number
AIHA LAP, LLC	209312
Alaska	LA01131
California	3085
ANAB DoD	ADE-1489
ANAB DOE	ADE-1489.01
Louisiana DEQ - NELAC	01949
Louisiana DHH	LA022
Nevada	LA011312023-1
New Jersey	LA009
New York	65039
Pennsylvania	68-04294-011
Texas	T104704447-21-17
Utah	LA011312022-13
Washington	C1010

For additional information related to the specific matrices, methods, and analytes recognized by each accrediting body, contact us at QA@aaa.aleutfederal.com for additional information.



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ARS Aleut Analytical, LLC

Analytical Reports

for

Gilbane Federal

Case Narrative



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**PROJECT SAMPLE IDENTIFICATION
CROSS-REFERENCE
TO ARS SAMPLE LABORATORY IDs**

Client Sample ID	ARS Aleut Analytical Sample ID
FB-112122	ARS1-22-02605-001
MSB01-112122	ARS1-22-02605-002
MSB02-112122	ARS1-22-02605-003
MSB113A-112122	ARS1-22-02605-004

Sample	Date Collected	Date Received	Analysis	Basis	Prep Date/Time	Analysis Date/Time
001	11/21/22 08:00	12/01/22	ASP-PU239-AF	As Received	12/14/22 11:22	12/20/22 23:31
001	11/21/22 08:00	12/01/22	GAM-A-AF	As Received	N/A	12/08/22 14:14
001	11/21/22 08:00	12/01/22	GPC-RA226-AF	As Received	12/14/22 07:14	12/23/22 10:05
001	11/21/22 08:00	12/01/22	GPC-SR90-AF	As Received	12/14/22 07:52	12/16/22 10:47
002	11/23/22 09:05	12/01/22	ASP-PU239-AF	As Received	12/14/22 11:22	12/20/22 23:31
002	11/23/22 09:05	12/01/22	GAM-A-AF	As Received	N/A	12/12/22 14:05
002	11/23/22 09:05	12/01/22	GPC-RA226-AF	As Received	12/14/22 07:14	12/23/22 10:05
002	11/23/22 09:05	12/01/22	GPC-SR90-AF	As Received	12/14/22 07:52	12/16/22 10:47
003	11/23/22 09:05	12/01/22	ASP-PU239-AF	As Received	12/14/22 11:22	12/20/22 23:31
003	11/23/22 09:05	12/01/22	GAM-A-AF	As Received	N/A	12/09/22 14:07
003	11/23/22 09:05	12/01/22	GPC-RA226-AF	As Received	12/14/22 07:14	12/23/22 10:05
003	11/23/22 09:05	12/01/22	GPC-SR90-AF	As Received	12/14/22 07:52	12/16/22 10:47
004	11/23/22 09:00	12/01/22	ASP-PU239-AF	As Received	12/14/22 11:22	12/20/22 23:31
004	11/23/22 09:00	12/01/22	GAM-A-AF	As Received	N/A	12/09/22 14:17
004	11/23/22 09:00	12/01/22	GPC-RA226-AF	As Received	12/14/22 07:14	12/23/22 10:05



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Sample	Date Collected	Date Received	Analysis	Basis	Prep Date/Time	Analysis Date/Time
004	11/23/22 09:00	12/01/22	GPC-SR90-AF	As Received	12/14/22 07:52	12/16/22 10:47

SAMPLE RECEIPT/PREP

The samples arrived in good condition. The samples were screened for radioactive contamination as per procedure **PALA-SR-001-SOP Sample Receiving**. Sample date(s) and time(s) are listed as provided by the client. In regard to the Air Filters, no flow rate information was provided by the client. Turnaround time was set at 28 calendar days.

ANALYTICAL METHODS

Pu-239/240 analysis was performed using **PALA-RAD-026, "Americium, Plutonium and Uranium in Water, Soil and Vegetation Matrices by Sequential Separation Using Eichrom Stabilized Chemistry Resin (with Vacuum Box System Option) (Eichrom ACW-02 & Eichrom ACW-03)"**.

Co-60, Cs-137, Ra-226 analyses were performed using **PALA-RAD-007, "Modified Gamma Emitting Radionuclides in Soil, Air, and Biota Matrices (EPA 901.1 Mod, SM 7120B, & HASL-300 Ga-01-R)"**.

Ra-226 analysis was performed using **PALA-RAD-008, "Alpha Emitting Radium Isotopes in Water (EPA 903.0, EPA 9315, SM 7500-Ra C, SM 7500-Ra C)"**.

Sr-90 analysis was performed using **PALA-RAD-032, "Strontium 89, 90 and Total Strontium in Water, Soil and Vegetation Matrices by Eichrom Resin Separation (Eichrom SRW01, EPA 905.0, HASL 300 Sr-01-RC)"**.

ANALYTICAL RESULTS

Fraction 001 has elevated MDC for Pu-239/240 with ACT of -3.792E-8 uCi/filter, MDC of 1.020E-7 uCi/filter and CRDL of 4.8E-08 uCi/filter.

Fraction 001 has elevated MDC for Ra-226 with ACT of -2.281E-6 uCi/filter, MDC of 9.430E-6 uCi/filter and CRDL of 4.4E-06 uCi/filter.

Fraction 002 has elevated MDC for Pu-239/240 with ACT of 5.988E-9 uCi/filter, MDC of 8.447E-8 uCi/filter and CRDL of 4.8E-08 uCi/filter.

Fraction 002 has elevated MDC for Ra-226 with ACT of 3.780E-6 uCi/filter, MDC of 9.007E-6 uCi/filter and CRDL of 4.4E-06 uCi/filter.

Fraction 003 has elevated MDC for Pu-239/240 with ACT of -2.952E-8 uCi/filter, MDC of 1.049E-7 uCi/filter and CRDL of 4.8E-08 uCi/filter.

Fraction 003 has elevated MDC for Ra-226 with ACT of -1.039E-6 uCi/filter, MDC of 9.819E-6 uCi/filter and CRDL of 4.4E-06 uCi/filter.

Fraction 004 has elevated MDC for Pu-239/240 with ACT of -2.024E-8 uCi/filter, MDC of 1.108E-7 uCi/filter and CRDL of 4.8E-08 uCi/filter.

Fraction 004 has elevated MDC for Ra-226 with ACT of -1.550E-5 uCi/filter, MDC of 1.548E-5 uCi/filter and CRDL of 4.4E-06 uCi/filter.

ARS1-B22-01917: ROI's adjusted to better fit the peaks of interest.

Notes (Case Narrative)

Definitions:

CRDL	Contract Required Detection Limit
CSU	Combined Standard Uncertainty
DLC	Decision Level Concentration (ANSI N42.23)
DO	Duplicate Original
DUP	Sample Duplicate
LCS/LCSD	Laboratory Control Sample/Laboratory Control Sample Duplicate
LOD	Limit of Detection
LOQ	Limit of Quantitation
MBL	Method Blank
MCL	Maximum Contaminant Level
MDA	Minimum Detectable Activity
MDL	Method Detection Limit
MS/MSD	Matrix Spike/Matrix Spike Duplicate
N/A	Not Applicable
NC	Not Calculated
NP	Not Provided
NR	Not Referenced
PQL	Practical Quantitation Limit

Data Qualifiers:

B	The result of both the method blank and the target sample are above the MDL.
D	Sample analysis accomplished through dilution.
J	The reported result is an estimated value above the LOD but below the LOQ, or above the MDL but below the PQL.
Q	One or more quality control criteria failed.
U	Result is below the MDA, MDL, PQL, LOD, or LOQ
*	LCS/LCSD or Sample DUP fails all Duplicate criteria.
S	Spike
SC	Subcontracted out to another qualified laboratory
H	Holding time exceeded
E	Exceeds MCL
**	Reporting Limit is higher than MCL; Target cannot be detected
#	Method/Matrix/Analyte not accredited for this certification

Radiochemistry Comments:

- 1.0) All MDA/MDC values are calculated on a sample specific basis.
 2.0) Data in this report are within the limits of uncertainty specified in the reference method unless otherwise specified.
 3.0) Total activity is actually total gamma activity and is determined utilizing the prominent gamma emitters from the naturally occurring radioactive decay chains and other prominent radioactive nuclides. Total activity may be lower than the actual total activity due to the extent of secular equilibrium achieved in the various decay chains at the time of analysis. The total activity is not representative of nuclides that emit solely alpha or beta particles.
 4.0) Ra-228 is determined via secular equilibrium with its daughter, Actinium 228 (Gamma Spectroscopy only).
 5.0) U-238 is determined via secular equilibrium with its daughter, Thorium 234 (Gamma Spectroscopy only).
 6.0) All gamma spectroscopy was performed utilizing high purity germanium detectors (**HPGe**).
 7.0) ARS makes every attempt to match sample density to calibrated density; however, in some cases, it is not practical or possible to do so and data results may be affected (Gamma Spectroscopy only).
 8.0) Gamma spectroscopy results are calculated values based on the **ORTEC® GammaVision ENV32 Analysis Engine**.
 9.0) DoD/DOE and ISO 17025 certifications through ANAB apply only to the following methods in **Non-Potable Water**: Gross Alpha and Gross Beta (EPA 900.0, EPA 9310); Radium 226 (EPA 903.0, EPA 903.1, EPA 9315); Radium 228 (EPA 904.0, EPA 9320); ICP/MS (EPA 6020B); ICP-OES (EPA 6010D); Mercury CVAA (EPA 7470A); Strontium-89 (EPA 905.0, Eichrom SRW01, HASL 300 Sr-01); Strontium-90 (EPA 905.0, Eichrom SRW01, HASL 300 Sr-02-RC); Tritium (EPA 906.0); Enriched Tritium (ARS-040), Carbon-14 (ARS-019), Tritium/Carbon (ARS-151); Gamma Emitters (EPA 901.1, SM 7120B, HASL 300 Ga-01-R); Americium-241 (Eichrom ACW03, HASL 300 Se-03, HASL 300 Am-03); Plutonium 238, Plutonium 239/240, Plutonium-241 (Eichrom ACW03, HASL 300 Se-03, HASL 300 Pu-10); Thorium-228, Thorium 230, Thorium-232 (Eichrom ACW10); Uranium-234, Uranium-235, Uranium-238 (Eichrom ACW03, HASL 300 Se-03); Technetium-99 (Eichrom TCW02).
 10.0) DoD/DOE and ISO 17025 certifications through ANAB apply only to the following methods in **Solid and Chemical Materials**: Gross Alpha and Gross Beta (EPA 900.0 Mod, EPA 9310); ICP/MS (EPA 6020B); ICP-OES (EPA 6010D); Mercury CVAA (EPA 7471B); Strontium-89 (EPA 905.0 Mod, Eichrom SRW01, HASL 300 Sr-01); Strontium-90 (EPA 905.0 Mod, Eichrom SRW01, HASL 300 Sr-02); Tritium (EPA 906.0 Mod); Gamma Emitters (EPA 901.1, HASL 300 Ga-01-R); Americium-241 (Eichrom ACW03, HASL 300 Se-03, HASL 300 Am-01-RC); Plutonium 238, Plutonium 239/240, Plutonium-241 (Eichrom ACW03, HASL 300 Se-03, HASL 300 Pu-02-RC, HASL 300 Pu-03-RC); Thorium-228, Thorium 230, Thorium-232 (Eichrom ACW10); Uranium-234, Uranium-235, Uranium-238 (Eichrom ACW03, HASL 300 Se-03, HASL 300 U-02, HASL 300 U-04); Technetium-99 (Eichrom TCS01).
 11.0) DoD/DOE and ISO 17025 certifications through ANAB apply only to the following methods in **Air and Emissions**: Gross Alpha and Gross Beta (EPA 900.0 Mod, EPA 9310); Strontium-89 (Eichrom SRW01, HASL 300 Sr-01-RC); Strontium-90 (Eichrom SRW01, HASL 300 Sr-02-RC); Gamma Emitters (EPA 901.1, HASL 300 Ga-01-R); Americium-241 (Eichrom ACW03, HASL 300 Se-03); Plutonium 238, Plutonium 239/240, Plutonium-241 (Eichrom ACW03, HASL 300 Se-03); Thorium-228, Thorium 230, Thorium-232 (Eichrom ACW10); Uranium-234, Uranium-235, Uranium-238 (Eichrom ACW03, HASL 300 Se-03); Technetium-99 (Eichrom TCW02, Eichrom TCS01).

General Comments:

- 1.0) Modified analysis procedures are procedures that are modified to meet certain specifications. An example may be the use of a water method to analyze a solid matrix due to the lack of an officially recognized procedure for the analysis of the solid matrix. Modified analyses are indicated by the subsequent addition of "M" or "Mod" to the procedure number (i.e. 901.1M, 901.1 Mod).
 2.0) All NIOSH method results are reported without blank corrections applied.
 3.0) Basis: "As Received" = analyzed as received from client; "Dry" = dried prior to being analyzed; "Dry Weight Corrected" = analyzed as received; result corrected for percent moisture.



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ARS Aleut Analytical, LLC

Analytical Reports

for

Gilbane Federal

Analytical Results



2609 North River Road • Port Allen, Louisiana 70767

(225) 228-1394

ARS Sample Delivery Group: ARS1-22-02605**Client Sample ID:** FB-112122**Sample Collection Date:** 11/21/22 8:00**Sample Matrix:** Air Filter**Percent Solids:** N/A**Request or PO Number:** J310000900**ARS Sample ID:** ARS1-22-02605-001**Date Received:** 12/01/22**Report Date:** 12/27/22

Radiochemistry

Analysis Method: Eichrom ACW03

Analysis Description	Analysis Results	CSU +/- 2 s	MDC	DLC	CRDL	Qual	Analysis Units	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
Pu-239/240	-3.792E-8	4.402E-8	1.020E-7	4.366E-8	4.8E-08	U	uCi/filter	12/20/22 23:31	[REDACTED]	54.1%

Analysis Method: EPA 901.1M

Analysis Description	Analysis Results	CSU +/- 2 s	MDC	DLC	CRDL	Qual	Analysis Units	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
Co-60	3.705E-7	8.312E-7	8.489E-7	4.245E-7	0.00024	U	uCi/filter	12/08/22 14:14	[REDACTED]	N/A
Cs-137	-4.070E-7	7.284E-7	7.838E-7	3.919E-7	0.00048	U	uCi/filter	12/08/22 14:14	[REDACTED]	N/A
Ra-226	-2.281E-6	7.467E-6	9.430E-6	4.715E-6	4.4E-06	U	uCi/filter	12/08/22 14:14	[REDACTED]	N/A

Analysis Method: EPA 9315

Analysis Description	Analysis Results	CSU +/- 2 s	MDC	DLC	CRDL	Qual	Analysis Units	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
Ra-226	3.662E-7	5.218E-7	8.804E-7	3.307E-7	4.4E-06	U	uCi/filter	12/23/22 10:05	[REDACTED]	87.1%

Analysis Method: Eichrom SRW01

Analysis Description	Analysis Results	CSU +/- 2 s	MDC	DLC	CRDL	Qual	Analysis Units	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
SR-90	1.349E-6	2.215E-6	3.777E-6	1.743E-6	2.4E-05	U	uCi/filter	12/16/22 10:47	[REDACTED]	91.1%



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ARS Sample Delivery Group: ARS1-22-02605**Client Sample ID:** MSB01-112122**Sample Collection Date:** 11/23/22 9:05**Sample Matrix:** Air Filter**Percent Solids:** N/A**Request or PO Number:** J310000900**ARS Sample ID:** ARS1-22-02605-002**Date Received:** 12/01/22**Report Date:** 12/27/22

Radiochemistry

Analysis Method: Eichrom ACW03

Analysis Description	Analysis Results	CSU +/- 2 s	MDC	DLC	CRDL	Qual	Analysis Units	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
Pu-239/240	5.988E-9	4.232E-8	8.447E-8	3.412E-8	4.8E-08	U	uCi/filter	12/20/22 23:31	[REDACTED]	51.4%

Analysis Method: EPA 901.1M

Analysis Description	Analysis Results	CSU +/- 2 s	MDC	DLC	CRDL	Qual	Analysis Units	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
Co-60	-1.897E-7	8.785E-7	9.019E-7	4.510E-7	0.00024	U	uCi/filter	12/12/22 14:05	[REDACTED]	N/A
Cs-137	-4.133E-7	7.433E-7	7.996E-7	3.998E-7	0.00048	U	uCi/filter	12/12/22 14:05	[REDACTED]	N/A
Ra-226	3.780E-6	7.160E-6	9.007E-6	4.504E-6	4.4E-06	U	uCi/filter	12/12/22 14:05	[REDACTED]	N/A

Analysis Method: EPA 9315

Analysis Description	Analysis Results	CSU +/- 2 s	MDC	DLC	CRDL	Qual	Analysis Units	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
Ra-226	1.482E-7	4.315E-7	8.366E-7	3.179E-7	4.4E-06	U	uCi/filter	12/23/22 10:05	[REDACTED]	80.1%

Analysis Method: Eichrom SRW01

Analysis Description	Analysis Results	CSU +/- 2 s	MDC	DLC	CRDL	Qual	Analysis Units	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
SR-90	1.678E-6	2.285E-6	3.840E-6	1.776E-6	2.4E-05	U	uCi/filter	12/16/22 10:47	[REDACTED]	94.5%



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ARS Sample Delivery Group: ARS1-22-02605**Client Sample ID:** MSB02-112122**Sample Collection Date:** 11/23/22 9:05**Sample Matrix:** Air Filter**Percent Solids:** N/A**Request or PO Number:** J310000900**ARS Sample ID:** ARS1-22-02605-003**Date Received:** 12/01/22**Report Date:** 12/27/22

Radiochemistry

Analysis Method: Eichrom ACW03

Analysis Description	Analysis Results	CSU +/- 2 s	MDC	DLC	CRDL	Qual	Analysis Units	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
Pu-239/240	-2.952E-8	4.930E-8	1.049E-7	4.578E-8	4.8E-08	U	uCi/filter	12/20/22 23:31	[REDACTED]	65.3%

Analysis Method: EPA 901.1M

Analysis Description	Analysis Results	CSU +/- 2 s	MDC	DLC	CRDL	Qual	Analysis Units	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
Co-60	7.662E-8	8.578E-7	8.846E-7	4.423E-7	0.00024	U	uCi/filter	12/09/22 14:07	[REDACTED]	N/A
Cs-137	1.756E-7	6.273E-7	6.816E-7	3.408E-7	0.00048	U	uCi/filter	12/09/22 14:07	[REDACTED]	N/A
Ra-226	-1.039E-6	7.755E-6	9.819E-6	4.910E-6	4.4E-06	U	uCi/filter	12/09/22 14:07	[REDACTED]	N/A

Analysis Method: EPA 9315

Analysis Description	Analysis Results	CSU +/- 2 s	MDC	DLC	CRDL	Qual	Analysis Units	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
Ra-226	6.672E-7	5.785E-7	8.177E-7	3.099E-7	4.4E-06	U	uCi/filter	12/23/22 10:05	[REDACTED]	87.7%

Analysis Method: Eichrom SRW01

Analysis Description	Analysis Results	CSU +/- 2 s	MDC	DLC	CRDL	Qual	Analysis Units	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
SR-90	-1.169E-6	2.536E-6	4.756E-6	2.213E-6	2.4E-05	U	uCi/filter	12/16/22 10:47	[REDACTED]	90.3%



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(225) 228-1394

ARS Sample Delivery Group: ARS1-22-02605**Client Sample ID:** MSB113A-112122**Sample Collection Date:** 11/23/22 9:00**Sample Matrix:** Air Filter**Percent Solids:** N/A**Request or PO Number:** J310000900**ARS Sample ID:** ARS1-22-02605-004**Date Received:** 12/01/22**Report Date:** 12/27/22

Radiochemistry

Analysis Method: Eichrom ACW03

Analysis Description	Analysis Results	CSU +/- 2 s	MDC	DLC	CRDL	Qual	Analysis Units	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
Pu-239/240	-2.024E-8	5.437E-8	1.108E-7	4.853E-8	4.8E-08	U	uCi/filter	12/20/22 23:31	[REDACTED]	60.4%

Analysis Method: EPA 901.1M

Analysis Description	Analysis Results	CSU +/- 2 s	MDC	DLC	CRDL	Qual	Analysis Units	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
Co-60	-7.674E-8	9.401E-7	1.035E-6	5.175E-7	0.00024	U	uCi/filter	12/09/22 14:17	[REDACTED]	N/A
Cs-137	-8.330E-8	7.853E-7	9.211E-7	4.606E-7	0.00048	U	uCi/filter	12/09/22 14:17	[REDACTED]	N/A
Ra-226	-1.550E-5	1.450E-5	1.548E-5	7.740E-6	4.4E-06	U	uCi/filter	12/09/22 14:17	[REDACTED]	N/A

Analysis Method: EPA 9315

Analysis Description	Analysis Results	CSU +/- 2 s	MDC	DLC	CRDL	Qual	Analysis Units	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
Ra-226	1.064E-6	6.282E-7	7.328E-7	2.826E-7	4.4E-06		uCi/filter	12/23/22 10:05	[REDACTED]	96.0%

Analysis Method: Eichrom SRW01

Analysis Description	Analysis Results	CSU +/- 2 s	MDC	DLC	CRDL	Qual	Analysis Units	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
SR-90	1.667E-7	2.298E-6	4.138E-6	1.915E-6	2.4E-05	U	uCi/filter	12/16/22 10:47	[REDACTED]	92.0%



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(225) 228-1394

ARS Aleut Analytical, LLC

Analytical Reports

for

Gilbane Federal

QC Summary



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QC Sample Results

Analytical Batch: ARS1-B22-01870

Lab Sample ID: ARS1-B22-01870-01

Method: EPA 901.1M

Sample Type: LCS

Matrix: Air Filter

Analysis Date: 12/02/22 14:09

Analyte	Spike Added	Analysis Result	Qual	Analysis Units	% Rec	% Rec Limits
Am-241	33.065	31.674		uCi/filter	95.8	75 - 125
Co-60	20.928	21.667		uCi/filter	103.5	75 - 125
Cs-137	12.996	13.389		uCi/filter	103.0	75 - 125



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QC Sample Results

Analytical Batch: ARS1-B22-01870

Sample Type: LCSD

Lab Sample ID: ARS1-B22-01870-02

Matrix: Air Filter

Method: EPA 901.1M

Analysis Date: 12/02/22 14:21

Analyte	Spike Added	Analysis Result	Qual	Analysis Units	% Rec	% Rec Limits	RPD	RPD Limit	DER	DER Limit
Am-241	33.065	32.067		uCi/filter	97.0	75 - 125	1.2	25	0.220	3
Co-60	20.928	20.415		uCi/filter	97.5	75 - 125	6.0	25	1.441	3
Cs-137	12.996	13.350		uCi/filter	102.7	75 - 125	0.3	25	0.076	3



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QC Sample Results

Analytical Batch: ARS1-B22-01870

Sample Type: MBL

Lab Sample ID: ARS1-B22-01870-03

Matrix: Air Filter

Method: EPA 901.1M

Analysis Date: 12/08/22 14:32

Analyte	Analysis Result	CSU +/- 2 s	MDC	DLC	Qual	Analysis Units
Co-60	3.722E-4	0.002	0.002	7.800E-4	U	uCi/filter
Cs-137	-7.247E-4	0.001	0.002	8.300E-4	U	uCi/filter
Ra-226	-0.086	0.033	0.031	0.015	U	uCi/filter



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QC Association Summary

ARS Sample Delivery Group: ARS1-22-02605

Analytical Batch: ARS1-B22-01870

Analysis: Gamma Spec (Short) in (Air Filters, Smears [AF])

Batch Sample ID	Lab Sample ID	Client Sample ID	Matrix	Method	Prep Method
ARS1-B22-01870-01		Lab Control Sample	Air Filter	EPA 901.1M	N/A
ARS1-B22-01870-02		Lab Control Sample Duplicate	Air Filter	EPA 901.1M	N/A
ARS1-B22-01870-03		Method Blank	Air Filter	EPA 901.1M	N/A
ARS1-B22-01870-09	ARS1-22-02605-001	FB-112122	Air Filter	EPA 901.1M	N/A
ARS1-B22-01870-10	ARS1-22-02605-002	MSB01-112122	Air Filter	EPA 901.1M	N/A
ARS1-B22-01870-11	ARS1-22-02605-003	MSB02-112122	Air Filter	EPA 901.1M	N/A
ARS1-B22-01870-12	ARS1-22-02605-004	MSB113A-112122	Air Filter	EPA 901.1M	N/A



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QC Sample Results

Analytical Batch: ARS1-B22-01917

Lab Sample ID: ARS1-B22-01917-01

Method: Eichrom ACW03

Sample Type: LCS

Matrix: Air Filter

Analysis Date: 12/20/22 23:31

Analyte	Spike Added	Analysis Result	Qual	Analysis Units	% Rec	% Rec Limits
Pu-239/240	7.810E-6	7.894E-6		uCi/filter	101.1	75 - 125



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QC Sample Results

Analytical Batch: ARS1-B22-01917

Sample Type: LCSD

Lab Sample ID: ARS1-B22-01917-02

Matrix: Air Filter

Method: Eichrom ACW03

Analysis Date: 12/20/22 23:31

Analyte	Spike Added	Analysis Result	Qual	Analysis Units	% Rec	% Rec Limits	RPD	RPD Limit	DER	DER Limit
Pu-239/240	7.845E-6	8.167E-6		uCi/filter	104.1	75 - 125	3.4	25	0.376	3



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QC Sample Results

Analytical Batch: ARS1-B22-01917

Sample Type: MBL

Lab Sample ID: ARS1-B22-01917-03

Matrix: Air Filter

Method: Eichrom ACW03

Analysis Date: 12/20/22 23:31

Analyte	Analysis Result	CSU +/- 2 s	MDC	DLC	Qual	Analysis Units
Pu-238	3.887E-8	8.496E-8	1.515E-7	6.520E-8	U	uCi/filter
Pu-239/240	-6.995E-8	7.664E-8	1.702E-7	7.455E-8	U	uCi/filter



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QC Association Summary

ARS Sample Delivery Group: ARS1-22-02605

Analytical Batch: ARS1-B22-01917

Analysis: Plutonium (239, 240Pu) in (Air Filters, Smears, Leak Test [AF, SM, LT])

Batch Sample ID	Lab Sample ID	Client Sample ID	Matrix	Method	Prep Method
ARS1-B22-01917-01		Lab Control Sample	Air Filter	Eichrom ACW03	N/A
ARS1-B22-01917-02		Lab Control Sample Duplicate	Air Filter	Eichrom ACW03	N/A
ARS1-B22-01917-03		Method Blank	Air Filter	Eichrom ACW03	N/A
ARS1-B22-01917-09	ARS1-22-02605-001	FB-112122	Air Filter	Eichrom ACW03	N/A
ARS1-B22-01917-10	ARS1-22-02605-002	MSB01-112122	Air Filter	Eichrom ACW03	N/A
ARS1-B22-01917-11	ARS1-22-02605-003	MSB02-112122	Air Filter	Eichrom ACW03	N/A
ARS1-B22-01917-12	ARS1-22-02605-004	MSB113A-112122	Air Filter	Eichrom ACW03	N/A



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QC Sample Results

Analytical Batch: ARS1-B22-01918

Lab Sample ID: ARS1-B22-01918-01

Method: EPA 9315

Sample Type: LCS

Matrix: Air Filter

Analysis Date: 12/23/22 10:05

Analyte	Spike Added	Analysis Result	Qual	Analysis Units	% Rec	% Rec Limits
Ra-226	2.692E-5	2.154E-5		uCi/filter	80.0	75 - 125



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QC Sample Results

Analytical Batch: ARS1-B22-01918

Sample Type: LCSD

Lab Sample ID: ARS1-B22-01918-02

Matrix: Air Filter

Method: EPA 9315

Analysis Date: 12/23/22 10:05

Analyte	Spike Added	Analysis Result	Qual	Analysis Units	% Rec	% Rec Limits	RPD	RPD Limit	DER	DER Limit
Ra-226	2.692E-5	2.448E-5		uCi/filter	91.0	75 - 125	12.8	25	1.096	3



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QC Sample Results

Analytical Batch: ARS1-B22-01918

Lab Sample ID: ARS1-B22-01918-03

Method: EPA 9315

Sample Type: MBL

Matrix: Air Filter

Analysis Date: 12/23/22 10:05

Analyte	Analysis Result	CSU +/- 2 s	MDC	DLC	Qual	Analysis Units
Ra-226	6.477E-7	6.083E-7	9.080E-7	3.565E-7	U	uCi/filter



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QC Association Summary

ARS Sample Delivery Group: ARS1-22-02605

Analytical Batch: ARS1-B22-01918

Analysis: Radium-226 in Air Filter

Batch Sample ID	Lab Sample ID	Client Sample ID	Matrix	Method	Prep Method
ARS1-B22-01918-01		Lab Control Sample	Air Filter	EPA 9315	N/A
ARS1-B22-01918-02		Lab Control Sample Duplicate	Air Filter	EPA 9315	N/A
ARS1-B22-01918-03		Method Blank	Air Filter	EPA 9315	N/A
ARS1-B22-01918-09	ARS1-22-02605-001	FB-112122	Air Filter	EPA 9315	N/A
ARS1-B22-01918-10	ARS1-22-02605-002	MSB01-112122	Air Filter	EPA 9315	N/A
ARS1-B22-01918-11	ARS1-22-02605-003	MSB02-112122	Air Filter	EPA 9315	N/A
ARS1-B22-01918-12	ARS1-22-02605-004	MSB113A-112122	Air Filter	EPA 9315	N/A



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QC Sample Results

Analytical Batch: ARS1-B22-01919

Lab Sample ID: ARS1-B22-01919-01

Method: Eichrom SRW01

Sample Type: LCS

Matrix: Air Filter

Analysis Date: 12/16/22 10:47

Analyte	Spike Added	Analysis Result	Qual	Analysis Units	% Rec	% Rec Limits
SR-90	2.018E-5	1.985E-5		uCi/filter	98.4	75 - 125



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QC Sample Results

Analytical Batch: ARS1-B22-01919

Sample Type: LCSD

Lab Sample ID: ARS1-B22-01919-02

Matrix: Air Filter

Method: Eichrom SRW01

Analysis Date: 12/16/22 10:47

Analyte	Spike Added	Analysis Result	Qual	Analysis Units	% Rec	% Rec Limits	RPD	RPD Limit	DER	DER Limit
SR-90	2.020E-5	2.141E-5		uCi/filter	106.0	75 - 125	7.6	25	0.680	3



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QC Sample Results

Analytical Batch: ARS1-B22-01919

Sample Type: MBL

Lab Sample ID: ARS1-B22-01919-03

Matrix: Air Filter

Method: Eichrom SRW01

Analysis Date: 12/16/22 10:47

Analyte	Analysis Result	CSU +/- 2 s	MDC	DLC	Qual	Analysis Units
SR-90	8.305E-7	2.319E-6	4.067E-6	1.874E-6	U	uCi/filter



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QC Association Summary

ARS Sample Delivery Group: ARS1-22-02605

Analytical Batch: ARS1-B22-01919

Analysis: Strontium-90 in (Air Filters, Smears [AF])

Batch Sample ID	Lab Sample ID	Client Sample ID	Matrix	Method	Prep Method
ARS1-B22-01919-01		Lab Control Sample	Air Filter	Eichrom SRW01	N/A
ARS1-B22-01919-02		Lab Control Sample Duplicate	Air Filter	Eichrom SRW01	N/A
ARS1-B22-01919-03		Method Blank	Air Filter	Eichrom SRW01	N/A
ARS1-B22-01919-09	ARS1-22-02605-001	FB-112122	Air Filter	Eichrom SRW01	N/A
ARS1-B22-01919-10	ARS1-22-02605-002	MSB01-112122	Air Filter	Eichrom SRW01	N/A
ARS1-B22-01919-11	ARS1-22-02605-003	MSB02-112122	Air Filter	Eichrom SRW01	N/A
ARS1-B22-01919-12	ARS1-22-02605-004	MSB113A-112122	Air Filter	Eichrom SRW01	N/A



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ARS Aleut Analytical, LLC

Analytical Reports

for

Gilbane Federal

Batch QC



QC Results per Analytical Batch

Analytical Batch	ARS1-B22-01870
SDG	ARS1-22-02605
Analysis	Gamma Spec (Short) in (Air Filters, Smears [AF])
Method	EPA 901.1M
Analysis Code	GAM-A-AF
Report Units	uCi/filter

Acceptable QC Performance Ranges

QC Sample Type	Performance Items and Ranges		
Laboratory Control Sample	Recovery (%):	> 75	< 125
Matrix Spike	Recovery (%):	> 60	< 140
Duplicate	Duplicate Error Ratio (DER):	< 3	
	Relative Percent Difference (RPD %):	≤ 25	

Laboratory Control Sample			Analysis Date	12/02/22 14:09	Analysis Technician	█ █	
Analysis Batch Sample ID	QC Type	Analyte	Results	CSU (2s)	Expected Value	LCS Rec (%)	MDC
ARS1-B22-01870-01	LCS	AM-241	31.674	2.461	33.065	95.8	0.121
ARS1-B22-01870-01	LCS	CO-60	21.667	1.143	20.928	103.5	0.328
ARS1-B22-01870-01	LCS	CS-137	13.389	0.713	12.996	103.0	0.077

Duplicate RER/DER/RPD			Analysis Date	12/02/22 14:21	Analysis Technician	█ █	
Analyte	Results LCS	CSU LCS (2s)	Results LCSD	CSU LCSD (2s)	DER	RPD	
AM-241	31.674	2.461	32.067	2.491	0.220	1.2	
CO-60	21.667	1.143	20.415	1.262	1.441	6.0	
CS-137	13.389	0.713	13.350	0.711	0.076	0.3	

Method Blank			Analysis Date	12/08/22 14:32	Analysis Technician	█ █	
Analysis Batch Sample ID	QC Type	Analyte	Results	CSU (2s)	MDC	Qual	
ARS1-B22-01870-03	MBL	CO-60	3.722E-4	0.002	0.002	U	
ARS1-B22-01870-03	MBL	CS-137	-7.247E-4	0.001	0.002	U	
ARS1-B22-01870-03	MBL	RA-226	-0.086	0.033	0.031	U	



QC Results per Analytical Batch

Analytical Batch	ARS1-B22-01917
SDG	ARS1-22-02605
Analysis	Plutonium (239, 240Pu) in (Air Filters, Smears, Leak Test [AF, SM, LT])
Method	Eichrom ACW03
Analysis Code	ASP-PU239-AF
Report Units	uCi/filter

Acceptable QC Performance Ranges

QC Sample Type	Performance Items and Ranges		
Laboratory Control Sample	Recovery (%):	> 75	< 125
Matrix Spike	Recovery (%):	> 60	< 140
Duplicate	Duplicate Error Ratio (DER):	< 3	
	Relative Percent Difference (RPD %):	≤ 25	

Laboratory Control Sample			Analysis Date	12/20/22 23:31	Analysis Technician	██████████	
Analysis Batch Sample ID	QC Type	Analyte	Results	CSU (2s)	Expected Value	LCS Rec (%)	MDC
ARS1-B22-01917-01	LCS	PU-239/240	7.894E-6	9.893E-7	7.810E-6	101.1	4.502E-8

Duplicate RER/DER/RPD			Analysis Date	12/20/22 23:31	Analysis Technician	██████████	
Analyte	Results LCS	CSU LCS (2s)	Results LCSD	CSU LCSD (2s)	DER	RPD	
PU-239/240	7.894E-6	9.893E-7	8.167E-6	1.023E-6	0.376	3.4	

Method Blank			Analysis Date	12/20/22 23:31	Analysis Technician	██████████	
Analysis Batch Sample ID	QC Type	Analyte	Results	CSU (2s)	MDC	Qual	
ARS1-B22-01917-03	MBL	PU-238	3.887E-8	8.496E-8	1.515E-7	U	
ARS1-B22-01917-03	MBL	PU-239/240	-6.995E-8	7.664E-8	1.702E-7	U	



QC Results per Analytical Batch

Analytical Batch	ARS1-B22-01918
SDG	ARS1-22-02605
Analysis	Radium-226 in Air Filter
Method	EPA 9315
Analysis Code	GPC-RA226-AF
Report Units	uCi/filter

Acceptable QC Performance Ranges

QC Sample Type	Performance Items and Ranges		
Laboratory Control Sample	Recovery (%):	> 75	< 125
Matrix Spike	Recovery (%):	> 60	< 140
Duplicate	Duplicate Error Ratio (DER):	< 3	
	Relative Percent Difference (RPD %):	≤ 25	

Laboratory Control Sample			Analysis Date	12/23/22 10:05	Analysis Technician	██████████	
Analysis Batch Sample ID	QC Type	Analyte	Results	CSU (2s)	Expected Value	LCS Rec (%)	MDC
ARS1-B22-01918-01	LCS	RA-226	2.154E-5	3.487E-6	2.692E-5	80.0	6.483E-8

Duplicate RER/DER/RPD			Analysis Date	12/23/22 10:05	Analysis Technician	██████████	
Analyte	Results LCS	CSU LCS (2s)	Results LCSD	CSU LCSD (2s)	DER	RPD	
RA-226		2.154E-5	3.487E-6	2.448E-5	3.948E-6	1.096	12.8

Method Blank			Analysis Date	12/23/22 10:05	Analysis Technician	██████████	
Analysis Batch Sample ID	QC Type	Analyte	Results	CSU (2s)	MDC	Qual	
ARS1-B22-01918-03	MBL	RA-226	6.477E-7	6.083E-7	9.080E-7	U	



QC Results per Analytical Batch

Analytical Batch	ARS1-B22-01919
SDG	ARS1-22-02605
Analysis	Strontium-90 in (Air Filters, Smears [AF])
Method	Eichrom SRW01
Analysis Code	GPC-SR90-AF
Report Units	uCi/filter

Acceptable QC Performance Ranges

QC Sample Type	Performance Items and Ranges		
Laboratory Control Sample	Recovery (%):	> 75	< 125
Matrix Spike	Recovery (%):	> 60	< 140
Duplicate	Duplicate Error Ratio (DER):	< 3	
	Relative Percent Difference (RPD %):	≤ 25	

Laboratory Control Sample			Analysis Date	12/16/22 10:47	Analysis Technician	██████████	
Analysis Batch Sample ID	QC Type	Analyte	Results	CSU (2s)	Expected Value	LCS Rec (%)	MDC
ARS1-B22-01919-01	LCS	SR-90	1.985E-5	3.065E-6	2.018E-5	98.4	5.918E-7

Duplicate RER/DER/RPD			Analysis Date	12/16/22 10:47	Analysis Technician	██████████	
Analyte	Results LCS	CSU LCS (2s)	Results LCSD	CSU LCSD (2s)	DER	RPD	
SR-90		1.985E-5	3.065E-6	2.141E-5	3.282E-6	0.680	7.6

Method Blank			Analysis Date	12/16/22 10:47	Analysis Technician	██████████	
Analysis Batch Sample ID	QC Type	Analyte	Results	CSU (2s)	MDC	Qual	
ARS1-B22-01919-03	MBL	SR-90	8.305E-7	2.319E-6	4.067E-6	U	



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ARS Aleut Analytical, LLC

Analytical Reports

for

Gilbane Federal

Sample Management Records

**CHAIN-OF-CUSTODY
RECORD**

Gilbane Federal

2300 Clayton Road, Suite 1050, Concord, CA 94520

COC # MC113022RADB



Project Name: Hunters Point Shipyard, Parcel B Removal Site Evaluation	Laboratory: ARS Aleut Analytical (AAA), Port Allen, LA	Event: Parcel B Air Monitoring
Project Number: J310000900	POC: [REDACTED]	RAD
WBS Code: J310000900	Ship to: 2609 North River Road, Port Allen, LA 70767-3469	

Comments:					Analytical Test Method E901.1 - Gamma Spec Air RC0240 - Pu Isotopes SR02RC - Sr90 SW9315 - Ra226	Code Matrix A Air AQ Air Quality Control Matrix Code Container/Preservative 1 1x Filter, None 5 1x 1-L Plastic, HNO3, pH < 2 15 1x 250-mL Plastic, 4 Degrees C				
Equipment:										
Event: Parcel B Air Monitoring RAD					15 15 5 1					
	Sample ID	Matrix	Date	Time	Samp Init.	Location ID	Sample Type	Depth (ft bgs)	Cooler	Comments
1	FB-112122	AQ	11/21/2022	0800	[REDACTED]	FIELDDQC	FB1	0.00		
2	MSB01-112122	A	11/23/2022	0905	[REDACTED]	MSB01	N1	0.00	0.00	1
3	MSB02-112122	A	11/23/2022	0905	[REDACTED]	MSB02	N1	0.00	0.00	1
4	MSB113A-112122	A	11/23/2022	0900	[REDACTED]	MSB113A	N1	0.00	0.00	1
5										
6										
Turnaround Time: 28 days										

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time	Shipping Date / Carrier / Airbill Number
[REDACTED]	11-30-22	1600	FEDEX	11-30-22	1600	Shipping Date: 11/30/2022 / FEDEX / 7705 5648 3672
			[REDACTED]			Received by Laboratory: (Signature, Date, Time) & condition



Procedures: GES-003 / EPA 900.0M

Start Date: 11/21/22
Stop Date: 11/23/22
112122

11/20/22 11/22

File ID Number: MC113022RADB

Field Entry

Station	Sample ID	Date In:	Time In:	Date Out:	Time Out:	Initial Flow Rate (LPM)	Final Flow Rate (LPM)	Flow volume Cu.M	Julian Date for Date Out	Average Flow			Average Flow						
										(Days)	Total Run Time (Hours)	Total Run Time (Minutes)	Ave Flow Rate (LPM)	Initial Flow Rate (CFM)	Final Flow Rate (CFM)	Average Flow Rate (Cu.M/h)	Flow Rate (Cu.M/min)	Total Flow (L)	
1 MSB01	MSB01-112122	11/21/22	4:00	11/23/22	9:05	60	60	191.1	327	2.21	53.08	3185.0	60	2.11888	2.11888	2.11888	3.6	0.06	191,100
2 MSB02	MSB02-112122	11/21/22	3:30	11/23/22	9:05	60	60	192.9	327	2.23	53.58	3215.0	60	2.11888	2.11888	2.11888	3.6	0.06	192,900
3 MSB113A	MSB113A-112122	11/21/22	4:05	11/23/22	9:00	60	60	190.5	327	2.20	52.92	3175.0	60	2.11888	2.11888	2.11888	3.6	0.06	190,500

FORMULAS:

Number of Days = (Date Out + Time Out) minus (Date In+ Time In)

Number of Minutes = # of Days X 24hr X 60min

Flow Rate (m3/h) = Flow Rate (CFM) x 60min x (12in x 2.54cm/in / 100cm/m)^3 ;

Mid-Sample Date/Time = [(Date+Time Out) + (Date+Time In)] / 2

Flow Rate (Cu.M/min) = CFM X 0.0283168466 Cu.M/CF

Flow Rate (LPM) = Cu.M X 1000

Total Flow (L) = LPM X Total Minutes

SDG Report - Samples and Containers

SDG Specific Data								
SDG	ARS1-22-02605		TAT Days	28 Calendar Days		Project Type	Environmental	
Sample Count	4	Rpt Level	4	Date Received	12/01/2022		COC Number	MC113022RADB
Client	Gilbane Federal		Discrepancy Resol	N/A		PO Number		
Client Code	1138		Client Deadline	12/30/2022		Job Number	J310000900	
Profile Number	PN-01411					Job Location	Hunters Point Shipyard, Parcel B Removal Site Evaluation	
Comment								

Samples and Containers Checked In Thus Far									Comments
FR	Name	Matrix	Start Date	End Date	Disp	Hold	Arch	Storage	
001	FB-112122	Air Filter	11/21/2022 07:59	11/21/2022 08:00	H	30	10	PrePrep	
			IC_ID	Cnt	Container Type	AF Volume (L)	AF Units	Rate	Mins
			427591	1	HDP Container	1	LPM		1
					Mid-Sample Date:	11/21/2022 07:59	AF Volume (CuM):		0.001
002	MSB01-112122	Air Filter	11/23/2022 09:04	11/23/2022 09:05	H	30	10	PrePrep	
			IC_ID	Cnt	Container Type	AF Volume (L)	AF Units	Rate	Mins
			427592	1	HDP Container	1	LPM		1
					Mid-Sample Date:	11/23/2022 09:04	AF Volume (CuM):		0.001
003	MSB02-112122	Air Filter	11/23/2022 09:04	11/23/2022 09:05	H	30	10	PrePrep	
			IC_ID	Cnt	Container Type	AF Volume (L)	AF Units	Rate	Mins
			427593	1	HDP Container	1	LPM		1
					Mid-Sample Date:	11/23/2022 09:04	AF Volume (CuM):		0.001
004	MSB113A-112122	Air Filter	11/23/2022 08:59	11/23/2022 09:00	H	30	10	PrePrep	
			IC_ID	Cnt	Container Type	AF Volume (L)	AF Units	Rate	Mins
			427594	1	HDP Container	1	LPM		1
					Mid-Sample Date:	11/23/2022 08:59	AF Volume (CuM):		0.001

SDG Report - Analysis Assignments

SDG	ARS1-22-02605	Sample Count	4
Client	Gilbane Federal	Analysis Count	4-16

Sample Count Totals Per Analysis			
Analysis Code	Analysis Description	In/Out	Samples Count
ASP-PU239-AF	Plutonium (239, 240Pu) in (Air Filters, Smears, Leak Test [AF, SM, LT])	I	4
GAM-A-AF	Gamma Spec (Short) in (Air Filters, Smears [AF])	I	4
GPC-RA226-AF	Radium-226 in Air Filter	I	4
GPC-SR90-AF	Strontium-90 in (Air Filters, Smears [AF])	I	4

Analyses Assigned Per Fraction		
Fraction	Analysis Code	X = Assigned
001	ASP-PU239-AF	X
001	GAM-A-AF	X
001	GPC-RA226-AF	X
001	GPC-SR90-AF	X
002	ASP-PU239-AF	X
002	GAM-A-AF	X
002	GPC-RA226-AF	X
002	GPC-SR90-AF	X
003	ASP-PU239-AF	X
003	GAM-A-AF	X
003	GPC-RA226-AF	X
003	GPC-SR90-AF	X
004	ASP-PU239-AF	X
004	GAM-A-AF	X
004	GPC-RA226-AF	X
004	GPC-SR90-AF	X

Client Name: Gilbane Federal

Profile Name: Parcel B Rad Sampling

Report Level: 4

Analysis Code	Prep Type	Units	Aliquot	Prep Code	Procedure	Count Time					
ASP-PU239-AF	WRAD	uCi	filter	N/A	PALA-RAD-026						
	Analyte			RDL	LCS LL/UL	MS LL/UL	RadY LL/UL	GravY LL/UL	RER	RPD	Surr LL/UL
GAM-A-AF	Pu-239/240 (15117-48-3)			4.8E-08 uCi/filter	75/125	60/140	30/110	30/110	1	25	N/A
	WGAM	uCi	filter	N/A	PALA-RAD-007						
	Analyte			RDL	LCS LL/UL	MS LL/UL	RadY LL/UL	GravY LL/UL	RER	RPD	Surr LL/UL
	Co-60 (10198-40-0)			0.00024 uCi/filter	75/125	60/140	30/110	30/110	1	25	N/A
GPC-RA226-AF	Cs-137 (10045-97-3)			0.00048 uCi/filter	75/125	60/140	30/110	30/110	1	25	N/A
	Ra-226 (13982-63-3)			4.4E-06 uCi/filter	75/125	60/140	30/110	30/110	1	25	N/A
	WRAD	uCi	filter		PALA-RAD-008						
GPC-SR90-AF	Analyte			RDL	LCS LL/UL	MS LL/UL	RadY LL/UL	GravY LL/UL	RER	RPD	Surr LL/UL
	Ra-226 (13982-63-3)			4.4E-06 uCi/filter	75/125	60/140	30/110	30/110	1	25	N/A
GPC-SR90-AF	WRAD	uCi	filter	N/A	PALA-RAD-032						
	Analyte			RDL	LCS LL/UL	MS LL/UL	RadY LL/UL	GravY LL/UL	RER	RPD	Surr LL/UL
GPC-SR90-AF	Sr-90 (10098-97-2)			2.4E-05 uCi/filter	75/125	60/140	30/110	30/110	1	25	N/A

Analysis Code	Fraction	Units	Aliquot	Conductivity	Analyte Count
ASP-PU239-AF	001	uCi		N/A	
		Group		Analyte	
		Parcel B Rad Sampling		Pu-239/240	
ASP-PU239-AF	002	uCi		N/A	
		Group		Analyte	
		Parcel B Rad Sampling		Pu-239/240	

DQO Report for SDG

ARS1-22-02605

ASP-PU239-AF	003	uCi	filter	N/A	1
		Group		Analyte	
ASP-PU239-AF	004	Parcel B Rad Sampling		Pu-239/240	
		uCi	filter	N/A	1
GAM-A-AF	001	Group		Analyte	
		Parcel B Rad Sampling		Cs-137	
GAM-A-AF	002	Parcel B Rad Sampling		Co-60	
		Parcel B Rad Sampling		Ra-226	
GAM-A-AF	003	uCi	filter	N/A	3
		Group		Analyte	
GAM-A-AF	004	Parcel B Rad Sampling		Cs-137	
		Parcel B Rad Sampling		Co-60	
GPC-RA226-AF	001	Parcel B Rad Sampling		Ra-226	
		uCi	filter	N/A	1
GPC-RA226-AF	002	Group		Analyte	
		Parcel B Rad Sampling		Ra-226	
GPC-RA226-AF	003	uCi	filter	N/A	1
		Group		Analyte	
		Parcel B Rad Sampling		Ra-226	

DQO Report for SDG

ARS1-22-02605

GPC-RA226-AF	004	uCi	filter	N/A	1
		Group		Analyte	
		Parcel B Rad Sampling			
GPC-SR90-AF	001	uCi	filter	N/A	1
		Group		Analyte	
		Parcel B Rad Sampling			
GPC-SR90-AF	002	uCi	filter	N/A	1
		Group		Analyte	
		Parcel B Rad Sampling			
GPC-SR90-AF	003	uCi	filter	N/A	1
		Group		Analyte	
		Parcel B Rad Sampling			
GPC-SR90-AF	004	uCi	filter	N/A	1
		Group		Analyte	
		Parcel B Rad Sampling			



Sample Custodian:	<u>[REDACTED]</u>	Survey Start Date:	<u>12/2/22</u>	Survey Start Time:	<u>840</u>
Thermometer ID:	<u>E0064010085</u>	Calibration Due Date:	<u>2/28/23</u>	pH Paper Lot#	<u>NA</u>
Exposure Rate Meter + Probe Unit ID:	<u>2691264</u>	Calibration Due Date:	<u>9/13/23</u>	Background:	<u>4</u> $\mu\text{R}/\text{hr}$
Count Rate Meter + Probe Unit ID:	<u>PR287372</u>	Calibration Due Date:	<u>9/13/23</u>	Background:	<u>20</u> cpm
Delivery Type (circle one):	Direct	Lock Box	Commercial Carrier: <u>FEDEX</u>	Total # of ESCs:	<u>1</u>

External Shipping Container Tracking:	Exposure Rate ($\mu\text{R}/\text{hr}$) (limit <500 $\mu\text{R}/\text{hr}$)	Max External Swipe Counts (cpm)	Max Internal Swipe Counts (cpm)	ESC True Temps* ($^{\circ}\text{C}$)	*True temperature is recorded which includes any applicable correction factors. TRAX Matrix ID (circle all that apply): (See Section 4.3 of SOP)			
					AQ	WD	WG	WO
A: <u>770556483672</u>	<u>6</u>	<u>30</u>	<u>40</u>	<u>NA</u>				
B:						WS	WW	SI
C:						SO	OL	BI
D:						WP	SM	AF
E:								
F:								

Visual Inspection: <u>External Shipping Container</u>	(Circle response)	<u>COC/Sample Inspection</u>	(Circle response)
Good Condition with no Leaks or Tears	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Sample Containers in good condition	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Marked Radioactive	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	No spills or leaks	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
UN2910	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Marked Radioactive	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Security Seals	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Durable labels w/indelible ink	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
If yes, intact?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No N/A	COC relinquished/received correctly	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
<u>Internal Shipping Container</u>		Adequate volume/filled correctly	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
COC's Present	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Hold Time sufficient for analysis	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Well packaged container with no signs of leakage	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	For VOC/Radon, Head space?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A
		If yes, <6mm?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A
		# of containers received matches # on COC	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Comments:		Samples received on ice?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
		Type (circle one):	<input type="checkbox"/> Bagged Ice <input type="checkbox"/> Loose Ice <input type="checkbox"/> Blue Ice <input checked="" type="checkbox"/> N/A



PALA Sample Survey Form

Client Name: Gilbane
SDG: ARS1-22-02605

Sample Survey Form
PALA-SR-001-FM-02 r 0.1
Effective 08/30/2019

Pipette ID: NA Tip Lot#: NA

Disposable pipette lot#: NA

Sample Custodian: _____

Survey End Date: 12/2/22 Survey/pH End Time: 845

pH re-check required? YES or NO

NOTE: Any metals sample acidified at sample receiving must be re-checked after a 24 hr. delay.

If YES: pH re-check date/times:

Was all your work done by hand?

pH strip lot #: _____

Were all re-checked samples' pH < 2? YES or NO*

**If no, complete and send to Project Management:*
1. Section A of PALA-SR-001-FM-05 (24 Hour Hold pH Readjustment)
2. SR section of PALA-SR-001-FM-02 (Discrepant Sample Receipt Report)

ENVIRONMENTAL SOLUTIONS | QUALITY CONCIOUS

Page _____ of _____

ORIGIN ID: ICCA

200 FISHER STREET

SAN FRANCISCO, CA 94124
UNITED STATES US

TO [REDACTED]

SHIP DATE: 30NOV22
ACTWGT: 1.00 LB
CAD: 254128867/INET4530
[REDACTED]ARS ALEUT ANALYTICAL, LLC
2609 NORTH RIVER ROAD

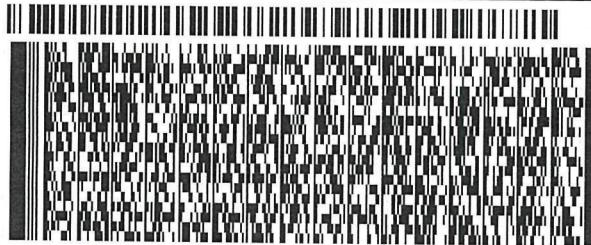
PORT ALLEN LA 70767

(225) 381-2991

INV:
PO:

REF: J31000900 01.21.06

DEPT:



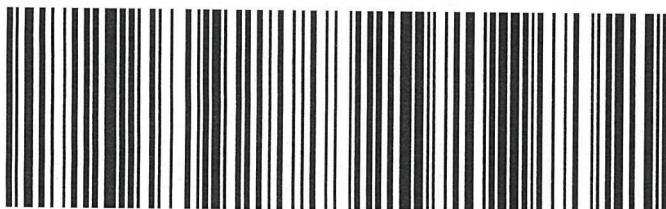
581139AG7/FED20

THU - 01 DEC 4:30P

STANDARD OVERNIGHT

TRK#
0201 7705 5648 3672

XN OPLA

70767
LA-US MSY**After printing this label:**

1. Use the 'Print' button on this page to print your label to your laser or inkjet printer.
2. Fold the printed page along the horizontal line.
3. Place label in shipping pouch and affix it to your shipment so that the barcode portion of the label can be read and scanned.

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ANALYTICAL REPORT

PREPARED FOR

Attn: [REDACTED]

GES-AIS LLC
1501 W Fountainhead Parkway
Ste 550
Tempe, Arizona 85282

Generated 12/1/2022 11:19:05 AM

JOB DESCRIPTION

Hunters Point, Parcel B, Removal Site Evaluation

JOB NUMBER

320-94490-1

Eurofins Sacramento

Job Notes

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The data in the report relate to the field sample(s) as received by the laboratory and associated QC. All results have been reviewed and have been found to be compliant with laboratory and accreditation requirements, with the exception of the noted deviation(s). For questions, please contact the Project Manager.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Environment Testing Northern California, LLC Project Manager.

Authorization

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[REDACTED] Project Manager I
[REDACTED]
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Definitions/Glossary

Client: GES-AIS LLC

Project/Site: Hunters Point, Parcel B, Removal Site Evaluation

Job ID: 320-94490-1

Qualifiers

Metals

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

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

Case Narrative

Client: GES-AIS LLC

Project/Site: Hunters Point, Parcel B, Removal Site Evaluation

Job ID: 320-94490-1

Job ID: 320-94490-1

Laboratory: Eurofins Sacramento

Narrative

Job Narrative
320-94490-1

Comments

No additional comments.

Receipt

The samples were received on 11/17/2022 9:35 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 19.5° C.

Metals

Method PM10: The following sample in analytical batch 320-634627 was recorded with a negative net weight: GESPM100322-387 (320-94490-7) . No particulate loading on the filter or damage to the filter could be observed.

Method 40CFR50 App B: The following sample in preparation batch 320-634625 and analytical batch 320-634765 was recorded with a negative net weight: GESTSP100322-387 (320-94490-8) . No particulate loading on the filter or damage to the filter could be observed.

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

Detection Summary

Client: GES-AIS LLC

Job ID: 320-94490-1

Project/Site: Hunters Point, Parcel B, Removal Site Evaluation

Client Sample ID: GESPM100322-384

Lab Sample ID: 320-94490-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lead	0.00040	J	0.00075	0.00011	ug/m ³ (Air)	1	6020		Total/NA
Manganese	0.0019	B	0.00075	0.00011	ug/m ³ (Air)	1	6020		Total/NA
Particulate Matter as PM 10	8.3		0.31	0.31	ug/m ³	1	PM10		Total/NA

Client Sample ID: GESTSP100322-384

Lab Sample ID: 320-94490-2

Analyte	Result	Qualifier	RL	RL	Unit	Dil Fac	D	Method	Prep Type
Total Suspended Particulates	18.7014		0.2913	0.2913	ug/m ³ (Air)	1		40CFR50 App B	Total/NA

Client Sample ID: GESPM100322-385

Lab Sample ID: 320-94490-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lead	0.00039	J	0.00076	0.00011	ug/m ³ (Air)	1	6020		Total/NA
Manganese	0.0012	B	0.00076	0.00011	ug/m ³ (Air)	1	6020		Total/NA
Particulate Matter as PM 10	9.5		0.32	0.32	ug/m ³	1	PM10		Total/NA

Client Sample ID: GESTSP100322-385

Lab Sample ID: 320-94490-4

Analyte	Result	Qualifier	RL	RL	Unit	Dil Fac	D	Method	Prep Type
Total Suspended Particulates	22.9541		0.2913	0.2913	ug/m ³ (Air)	1		40CFR50 App B	Total/NA

Client Sample ID: GESPM100322-386

Lab Sample ID: 320-94490-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lead	0.00028	J	0.00077	0.00012	ug/m ³ (Air)	1	6020		Total/NA
Manganese	0.0015	B	0.00077	0.00011	ug/m ³ (Air)	1	6020		Total/NA
Particulate Matter as PM 10	9.0		0.32	0.32	ug/m ³	1	PM10		Total/NA

Client Sample ID: GESTSP100322-386

Lab Sample ID: 320-94490-6

Analyte	Result	Qualifier	RL	RL	Unit	Dil Fac	D	Method	Prep Type
Total Suspended Particulates	20.7208		0.3228	0.3228	ug/m ³ (Air)	1		40CFR50 App B	Total/NA

Client Sample ID: GESPM100322-387

Lab Sample ID: 320-94490-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lead	0.0053		0.0012	0.00018	ug/m ³ (Air)	1	6020		Total/NA
Manganese	0.015	B	0.0012	0.00017	ug/m ³ (Air)	1	6020		Total/NA

Client Sample ID: GESTSP100322-387

Lab Sample ID: 320-94490-8

No Detections.

Client Sample ID: GESPM100322-388

Lab Sample ID: 320-94490-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lead	0.0013		0.00074	0.00011	ug/m ³ (Air)	1	6020		Total/NA
Manganese	0.0026	B	0.00074	0.00010	ug/m ³ (Air)	1	6020		Total/NA
Particulate Matter as PM 10	9.2		0.31	0.31	ug/m ³	1	PM10		Total/NA

Client Sample ID: GESTSP100322-388

Lab Sample ID: 320-94490-10

Analyte	Result	Qualifier	RL	RL	Unit	Dil Fac	D	Method	Prep Type
Total Suspended Particulates	19.9117		0.2886	0.2886	ug/m ³ (Air)	1		40CFR50 App B	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Sacramento

Detection Summary

Client: GES-AIS LLC

Job ID: 320-94490-1

Project/Site: Hunters Point, Parcel B, Removal Site Evaluation

Client Sample ID: GESPM100322-389

Lab Sample ID: 320-94490-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lead	0.0010		0.0010	0.00015	ug/m3 (Air)	1		6020	Total/NA
Manganese	0.0019	B	0.0010	0.00014	ug/m3 (Air)	1		6020	Total/NA
Particulate Matter as PM 10	6.2		0.42	0.42	ug/m3	1		PM10	Total/NA

Client Sample ID: GESTSP100322-389

Lab Sample ID: 320-94490-12

Analyte	Result	Qualifier	RL	RL	Unit	Dil Fac	D	Method	Prep Type
Total Suspended Particulates	18.2656		0.3854	0.3854	ug/m3 (Air)	1		40CFR50 App B	Total/NA

Client Sample ID: GESPM100322-390

Lab Sample ID: 320-94490-13

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lead	0.0010		0.00076	0.00011	ug/m3 (Air)	1		6020	Total/NA
Manganese	0.0025	B	0.00076	0.00011	ug/m3 (Air)	1		6020	Total/NA
Particulate Matter as PM 10	11		0.31	0.31	ug/m3	1		PM10	Total/NA

Client Sample ID: GESTSP100322-390

Lab Sample ID: 320-94490-14

Analyte	Result	Qualifier	RL	RL	Unit	Dil Fac	D	Method	Prep Type
Total Suspended Particulates	23.1377		0.3178	0.3178	ug/m3 (Air)	1		40CFR50 App B	Total/NA

Client Sample ID: GESPM100322-391

Lab Sample ID: 320-94490-15

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lead	0.0015	J	0.0028	0.00041	ug/m3 (Air)	1		6020	Total/NA
Manganese	0.0042	B	0.0028	0.00039	ug/m3 (Air)	1		6020	Total/NA
Particulate Matter as PM 10	20		1.1	1.1	ug/m3	1		PM10	Total/NA

Client Sample ID: GESTSP100322-391

Lab Sample ID: 320-94490-16

Analyte	Result	Qualifier	RL	RL	Unit	Dil Fac	D	Method	Prep Type
Total Suspended Particulates	13.1977		1.0818	1.0818	ug/m3 (Air)	1		40CFR50 App B	Total/NA

Client Sample ID: GESPM100322-392

Lab Sample ID: 320-94490-17

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lead	0.0018	J	0.0028	0.00042	ug/m3 (Air)	1		6020	Total/NA
Manganese	0.0038	B	0.0028	0.00040	ug/m3 (Air)	1		6020	Total/NA
Particulate Matter as PM 10	19		1.2	1.2	ug/m3	1		PM10	Total/NA

Client Sample ID: GESTSP100322-392

Lab Sample ID: 320-94490-18

Analyte	Result	Qualifier	RL	RL	Unit	Dil Fac	D	Method	Prep Type
Total Suspended Particulates	9.8764		1.0974	1.0974	ug/m3 (Air)	1		40CFR50 App B	Total/NA

Client Sample ID: GESPM100322-393

Lab Sample ID: 320-94490-19

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lead	0.0023	J	0.0026	0.00039	ug/m3 (Air)	1		6020	Total/NA
Manganese	0.0041	B	0.0026	0.00037	ug/m3 (Air)	1		6020	Total/NA
Particulate Matter as PM 10	12		1.1	1.1	ug/m3	1		PM10	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Sacramento

Detection Summary

Client: GES-AIS LLC

Project/Site: Hunters Point, Parcel B, Removal Site Evaluation

Job ID: 320-94490-1

Client Sample ID: GESTSP100322-393

Lab Sample ID: 320-94490-20

Analyte	Result	Qualifier	RL	RL	Unit	Dil Fac	D	Method	Prep Type
Total Suspended Particulates	17.1488		1.1136	1.1136	ug/m3 (Air)	1		40CFR50 App B	Total/NA



This Detection Summary does not include radiochemical test results.

Eurofins Sacramento

Client Sample Results

Client: GES-AIS LLC

Job ID: 320-94490-1

Project/Site: Hunters Point, Parcel B, Removal Site Evaluation

Client Sample ID: GESPM100322-384

Lab Sample ID: 320-94490-1

Matrix: Air

Date Collected: 11/08/22 07:20

Date Received: 11/17/22 09:35

Sample Container: Folder/Filter

Method: SW846 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	0.00040	J	0.00075	0.00011	ug/m3 (Air)		11/28/22 06:20	11/30/22 10:03	1
Manganese	0.0019	B	0.00075	0.00011	ug/m3 (Air)		11/28/22 06:20	11/30/22 10:03	1

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Particulate Matter as PM 10 (40CFR50J PM10)	8.3		0.31	0.31	ug/m3			11/18/22 08:00	1

Client Sample ID: GESTSP100322-384

Lab Sample ID: 320-94490-2

Matrix: Air

Date Collected: 11/08/22 07:20

Date Received: 11/17/22 09:35

Sample Container: Folder/Filter

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Particulates (EPA 40CFR50 App B)	18.7014		0.2913	0.2913	ug/m3 (Air)			11/18/22 08:00	1

Client Sample ID: GESPM100322-385

Lab Sample ID: 320-94490-3

Matrix: Air

Date Collected: 11/08/22 07:00

Date Received: 11/17/22 09:35

Sample Container: Folder/Filter

Method: SW846 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	0.00039	J	0.00076	0.00011	ug/m3 (Air)		11/28/22 06:20	11/30/22 10:12	1
Manganese	0.0012	B	0.00076	0.00011	ug/m3 (Air)		11/28/22 06:20	11/30/22 10:12	1

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Particulate Matter as PM 10 (40CFR50J PM10)	9.5		0.32	0.32	ug/m3			11/18/22 08:00	1

Client Sample ID: GESTSP100322-385

Lab Sample ID: 320-94490-4

Matrix: Air

Date Collected: 11/08/22 07:00

Date Received: 11/17/22 09:35

Sample Container: Folder/Filter

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Particulates (EPA 40CFR50 App B)	22.9541		0.2913	0.2913	ug/m3 (Air)			11/18/22 08:00	1

Client Sample ID: GESPM100322-386

Lab Sample ID: 320-94490-5

Matrix: Air

Date Collected: 11/08/22 07:10

Date Received: 11/17/22 09:35

Sample Container: Folder/Filter

Method: SW846 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	0.00028	J	0.00077	0.00012	ug/m3 (Air)		11/28/22 06:20	11/30/22 10:15	1
Manganese	0.0015	B	0.00077	0.00011	ug/m3 (Air)		11/28/22 06:20	11/30/22 10:15	1

Eurofins Sacramento

Client Sample Results

Client: GES-AIS LLC

Job ID: 320-94490-1

Project/Site: Hunters Point, Parcel B, Removal Site Evaluation

Client Sample ID: GESPM100322-386

Lab Sample ID: 320-94490-5

Matrix: Air

Date Collected: 11/08/22 07:10

Date Received: 11/17/22 09:35

Sample Container: Folder/Filter

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Particulate Matter as PM 10 (40CFR50J PM10)	9.0		0.32	0.32	ug/m3			11/18/22 08:00	1

Client Sample ID: GESTSP100322-386

Lab Sample ID: 320-94490-6

Matrix: Air

Date Collected: 11/08/22 07:10

Date Received: 11/17/22 09:35

Sample Container: Folder/Filter

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Particulates (EPA 40CFR50 App B)	20.7208		0.3228	0.3228	ug/m3 (Air)			11/18/22 08:00	1

Client Sample ID: GESPM100322-387

Lab Sample ID: 320-94490-7

Matrix: Air

Date Collected: 11/07/22 08:00

Date Received: 11/17/22 09:35

Sample Container: Folder/Filter

Method: SW846 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	0.0053		0.0012	0.00018	ug/m3 (Air)		11/28/22 06:20	11/30/22 10:19	1
Manganese	0.015	B	0.0012	0.00017	ug/m3 (Air)		11/28/22 06:20	11/30/22 10:19	1

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Particulate Matter as PM 10 (40CFR50J PM10)	ND		0.50	0.50	ug/m3			11/18/22 08:00	1

Client Sample ID: GESTSP100322-387

Lab Sample ID: 320-94490-8

Matrix: Air

Date Collected: 11/07/22 08:00

Date Received: 11/17/22 09:35

Sample Container: Folder/Filter

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Particulates (EPA 40CFR50 App B)	ND		0.5000	0.5000	ug/m3 (Air)			11/18/22 08:00	1

Client Sample ID: GESPM100322-388

Lab Sample ID: 320-94490-9

Matrix: Air

Date Collected: 11/10/22 07:56

Date Received: 11/17/22 09:35

Sample Container: Folder/Filter

Method: SW846 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	0.0013		0.00074	0.00011	ug/m3 (Air)		11/28/22 06:20	11/30/22 10:28	1
Manganese	0.0026	B	0.00074	0.00010	ug/m3 (Air)		11/28/22 06:20	11/30/22 10:28	1

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Particulate Matter as PM 10 (40CFR50J PM10)	9.2		0.31	0.31	ug/m3			11/18/22 08:00	1

Eurofins Sacramento

Client Sample Results

Client: GES-AIS LLC

Job ID: 320-94490-1

Project/Site: Hunters Point, Parcel B, Removal Site Evaluation

Client Sample ID: GESTSP100322-388

Lab Sample ID: 320-94490-10

Matrix: Air

Date Collected: 11/10/22 07:56

Date Received: 11/17/22 09:35

Sample Container: Folder/Filter

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Particulates (EPA 40CFR50 App B)	19.9117		0.2886	0.2886	ug/m3 (Air)			11/18/22 08:00	1

Client Sample ID: GESPM100322-389

Lab Sample ID: 320-94490-11

Matrix: Air

Date Collected: 11/10/22 07:26

Date Received: 11/17/22 09:35

Sample Container: Folder/Filter

Method: SW846 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	0.0010		0.0010	0.00015	ug/m3 (Air)		11/28/22 06:20	11/30/22 10:32	1
Manganese	0.0019	B	0.0010	0.00014	ug/m3 (Air)		11/28/22 06:20	11/30/22 10:32	1

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Particulate Matter as PM 10 (40CFR50J PM10)	6.2		0.42	0.42	ug/m3			11/18/22 08:00	1

Client Sample ID: GESTSP100322-389

Lab Sample ID: 320-94490-12

Matrix: Air

Date Collected: 11/10/22 07:26

Date Received: 11/17/22 09:35

Sample Container: Folder/Filter

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Particulates (EPA 40CFR50 App B)	18.2656		0.3854	0.3854	ug/m3 (Air)			11/18/22 08:00	1

Client Sample ID: GESPM100322-390

Lab Sample ID: 320-94490-13

Matrix: Air

Date Collected: 11/10/22 07:41

Date Received: 11/17/22 09:35

Sample Container: Folder/Filter

Method: SW846 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	0.0010		0.00076	0.00011	ug/m3 (Air)		11/28/22 06:20	11/30/22 10:35	1
Manganese	0.0025	B	0.00076	0.00011	ug/m3 (Air)		11/28/22 06:20	11/30/22 10:35	1

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Particulate Matter as PM 10 (40CFR50J PM10)	11		0.31	0.31	ug/m3			11/18/22 08:00	1

Client Sample ID: GESTSP100322-390

Lab Sample ID: 320-94490-14

Matrix: Air

Date Collected: 11/10/22 07:41

Date Received: 11/17/22 09:35

Sample Container: Folder/Filter

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Particulates (EPA 40CFR50 App B)	23.1377		0.3178	0.3178	ug/m3 (Air)			11/18/22 08:00	1

Eurofins Sacramento

Client Sample Results

Client: GES-AIS LLC

Job ID: 320-94490-1

Project/Site: Hunters Point, Parcel B, Removal Site Evaluation

Client Sample ID: GESPM100322-391

Lab Sample ID: 320-94490-15

Matrix: Air

Date Collected: 11/10/22 14:23

Date Received: 11/17/22 09:35

Sample Container: Folder/Filter

Method: SW846 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	0.0015	J	0.0028	0.00041	ug/m3 (Air)		11/28/22 06:20	11/30/22 10:38	1
Manganese	0.0042	B	0.0028	0.00039	ug/m3 (Air)		11/28/22 06:20	11/30/22 10:38	1

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Particulate Matter as PM 10 (40CFR50J PM10)	20		1.1	1.1	ug/m3			11/18/22 08:00	1

Client Sample ID: GESTSP100322-391

Lab Sample ID: 320-94490-16

Matrix: Air

Date Collected: 11/10/22 14:23

Date Received: 11/17/22 09:35

Sample Container: Folder/Filter

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Particulates (EPA 40CFR50 App B)	13.1977		1.0818	1.0818	ug/m3 (Air)			11/18/22 08:00	1

Client Sample ID: GESPM100322-392

Lab Sample ID: 320-94490-17

Matrix: Air

Date Collected: 11/10/22 14:08

Date Received: 11/17/22 09:35

Sample Container: Folder/Filter

Method: SW846 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	0.0018	J	0.0028	0.00042	ug/m3 (Air)		11/28/22 06:20	11/30/22 10:41	1
Manganese	0.0038	B	0.0028	0.00040	ug/m3 (Air)		11/28/22 06:20	11/30/22 10:41	1

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Particulate Matter as PM 10 (40CFR50J PM10)	19		1.2	1.2	ug/m3			11/18/22 08:00	1

Client Sample ID: GESTSP100322-392

Lab Sample ID: 320-94490-18

Matrix: Air

Date Collected: 11/10/22 14:08

Date Received: 11/17/22 09:35

Sample Container: Folder/Filter

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Particulates (EPA 40CFR50 App B)	9.8764		1.0974	1.0974	ug/m3 (Air)			11/18/22 08:00	1

Client Sample ID: GESPM100322-393

Lab Sample ID: 320-94490-19

Matrix: Air

Date Collected: 11/10/22 14:38

Date Received: 11/17/22 09:35

Sample Container: Folder/Filter

Method: SW846 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	0.0023	J	0.0026	0.00039	ug/m3 (Air)		11/28/22 06:20	11/30/22 10:45	1
Manganese	0.0041	B	0.0026	0.00037	ug/m3 (Air)		11/28/22 06:20	11/30/22 10:45	1

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Client Sample Results

Client: GES-AIS LLC

Job ID: 320-94490-1

Project/Site: Hunters Point, Parcel B, Removal Site Evaluation

Client Sample ID: GESPM100322-393

Lab Sample ID: 320-94490-19

Matrix: Air

Date Collected: 11/10/22 14:38

Date Received: 11/17/22 09:35

Sample Container: Folder/Filter

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Particulate Matter as PM 10 (40CFR50J PM10)	12		1.1	1.1	ug/m3			11/18/22 08:00	1

Client Sample ID: GESTSP100322-393

Lab Sample ID: 320-94490-20

Matrix: Air

Date Collected: 11/10/22 14:38

Date Received: 11/17/22 09:35

Sample Container: Folder/Filter

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Particulates (EPA 40CFR50 App B)	17.1488		1.1136	1.1136	ug/m3 (Air)			11/18/22 08:00	1

QC Sample Results

Client: GES-AIS LLC

Job ID: 320-94490-1

Project/Site: Hunters Point, Parcel B, Removal Site Evaluation

Method: 6020 - Metals (ICP/MS)

Lab Sample ID: MB 320-635616/1-B

Matrix: Air

Analysis Batch: 636310

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 635619

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	ND		0.0012	0.00018	ug/m3 (Air)		11/28/22 06:20	11/30/22 09:53	1
Manganese	0.000286	J	0.0012	0.00017	ug/m3 (Air)		11/28/22 06:20	11/30/22 09:53	1

Lab Sample ID: LCS 320-635616/2-B

Matrix: Air

Analysis Batch: 636310

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 635619

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits	
Lead	0.240	0.258		ug/m3 (Air)		107	86 - 111	
Manganese	0.240	0.251		ug/m3 (Air)		104	88 - 110	

Lab Sample ID: LCSD 320-635616/3-B

Matrix: Air

Analysis Batch: 636310

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 635619

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Lead	0.240	0.262		ug/m3 (Air)		109	86 - 111	1	15
Manganese	0.240	0.250		ug/m3 (Air)		104	88 - 110	0	15

QC Association Summary

Client: GES-AIS LLC

Project/Site: Hunters Point, Parcel B, Removal Site Evaluation

Job ID: 320-94490-1

Metals

Pre Prep Batch: 635616

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-94490-1	GESPM100322-384	Total/NA	Air	Filter to Air	
320-94490-3	GESPM100322-385	Total/NA	Air	Filter to Air	
320-94490-5	GESPM100322-386	Total/NA	Air	Filter to Air	
320-94490-7	GESPM100322-387	Total/NA	Air	Filter to Air	
320-94490-9	GESPM100322-388	Total/NA	Air	Filter to Air	
320-94490-11	GESPM100322-389	Total/NA	Air	Filter to Air	
320-94490-13	GESPM100322-390	Total/NA	Air	Filter to Air	
320-94490-15	GESPM100322-391	Total/NA	Air	Filter to Air	
320-94490-17	GESPM100322-392	Total/NA	Air	Filter to Air	
320-94490-19	GESPM100322-393	Total/NA	Air	Filter to Air	
MB 320-635616/1-B	Method Blank	Total/NA	Air	Filter to Air	
LCS 320-635616/2-B	Lab Control Sample	Total/NA	Air	Filter to Air	
LCSD 320-635616/3-B	Lab Control Sample Dup	Total/NA	Air	Filter to Air	

Prep Batch: 635619

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-94490-1	GESPM100322-384	Total/NA	Air	3050B	635616
320-94490-3	GESPM100322-385	Total/NA	Air	3050B	635616
320-94490-5	GESPM100322-386	Total/NA	Air	3050B	635616
320-94490-7	GESPM100322-387	Total/NA	Air	3050B	635616
320-94490-9	GESPM100322-388	Total/NA	Air	3050B	635616
320-94490-11	GESPM100322-389	Total/NA	Air	3050B	635616
320-94490-13	GESPM100322-390	Total/NA	Air	3050B	635616
320-94490-15	GESPM100322-391	Total/NA	Air	3050B	635616
320-94490-17	GESPM100322-392	Total/NA	Air	3050B	635616
320-94490-19	GESPM100322-393	Total/NA	Air	3050B	635616
MB 320-635616/1-B	Method Blank	Total/NA	Air	3050B	635616
LCS 320-635616/2-B	Lab Control Sample	Total/NA	Air	3050B	635616
LCSD 320-635616/3-B	Lab Control Sample Dup	Total/NA	Air	3050B	635616

Analysis Batch: 636310

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-94490-1	GESPM100322-384	Total/NA	Air	6020	635619
320-94490-3	GESPM100322-385	Total/NA	Air	6020	635619
320-94490-5	GESPM100322-386	Total/NA	Air	6020	635619
320-94490-7	GESPM100322-387	Total/NA	Air	6020	635619
320-94490-9	GESPM100322-388	Total/NA	Air	6020	635619
320-94490-11	GESPM100322-389	Total/NA	Air	6020	635619
320-94490-13	GESPM100322-390	Total/NA	Air	6020	635619
320-94490-15	GESPM100322-391	Total/NA	Air	6020	635619
320-94490-17	GESPM100322-392	Total/NA	Air	6020	635619
320-94490-19	GESPM100322-393	Total/NA	Air	6020	635619
MB 320-635616/1-B	Method Blank	Total/NA	Air	6020	635619
LCS 320-635616/2-B	Lab Control Sample	Total/NA	Air	6020	635619
LCSD 320-635616/3-B	Lab Control Sample Dup	Total/NA	Air	6020	635619

General Chemistry

Pre Prep Batch: 634625

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-94490-2	GESTSP100322-384	Total/NA	Air	Filter to Air	

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QC Association Summary

Client: GES-AIS LLC

Project/Site: Hunters Point, Parcel B, Removal Site Evaluation

Job ID: 320-94490-1

General Chemistry (Continued)

Pre Prep Batch: 634625 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-94490-4	GESTSP100322-385	Total/NA	Air	Filter to Air	
320-94490-6	GESTSP100322-386	Total/NA	Air	Filter to Air	
320-94490-8	GESTSP100322-387	Total/NA	Air	Filter to Air	
320-94490-10	GESTSP100322-388	Total/NA	Air	Filter to Air	
320-94490-12	GESTSP100322-389	Total/NA	Air	Filter to Air	
320-94490-14	GESTSP100322-390	Total/NA	Air	Filter to Air	
320-94490-16	GESTSP100322-391	Total/NA	Air	Filter to Air	
320-94490-18	GESTSP100322-392	Total/NA	Air	Filter to Air	
320-94490-20	GESTSP100322-393	Total/NA	Air	Filter to Air	

Analysis Batch: 634627

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-94490-1	GESPM100322-384	Total/NA	Air	PM10	
320-94490-3	GESPM100322-385	Total/NA	Air	PM10	
320-94490-5	GESPM100322-386	Total/NA	Air	PM10	
320-94490-7	GESPM100322-387	Total/NA	Air	PM10	
320-94490-9	GESPM100322-388	Total/NA	Air	PM10	
320-94490-11	GESPM100322-389	Total/NA	Air	PM10	
320-94490-13	GESPM100322-390	Total/NA	Air	PM10	
320-94490-15	GESPM100322-391	Total/NA	Air	PM10	
320-94490-17	GESPM100322-392	Total/NA	Air	PM10	
320-94490-19	GESPM100322-393	Total/NA	Air	PM10	

Analysis Batch: 634765

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-94490-2	GESTSP100322-384	Total/NA	Air	40CFR50 App B	634625
320-94490-4	GESTSP100322-385	Total/NA	Air	40CFR50 App B	634625
320-94490-6	GESTSP100322-386	Total/NA	Air	40CFR50 App B	634625
320-94490-8	GESTSP100322-387	Total/NA	Air	40CFR50 App B	634625
320-94490-10	GESTSP100322-388	Total/NA	Air	40CFR50 App B	634625
320-94490-12	GESTSP100322-389	Total/NA	Air	40CFR50 App B	634625
320-94490-14	GESTSP100322-390	Total/NA	Air	40CFR50 App B	634625
320-94490-16	GESTSP100322-391	Total/NA	Air	40CFR50 App B	634625
320-94490-18	GESTSP100322-392	Total/NA	Air	40CFR50 App B	634625
320-94490-20	GESTSP100322-393	Total/NA	Air	40CFR50 App B	634625

Lab Chronicle

Client: GES-AIS LLC

Job ID: 320-94490-1

Project/Site: Hunters Point, Parcel B, Removal Site Evaluation

Client Sample ID: GESPM100322-384

Lab Sample ID: 320-94490-1

Matrix: Air

Date Collected: 11/08/22 07:20

Date Received: 11/17/22 09:35

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Pre Prep	Filter to Air					635616	11/28/22 05:00	[REDACTED]	EET SAC
Total/NA	Prep	3050B			0.08333 Sample	100 mL	635619	11/28/22 06:20	[REDACTED]	EET SAC
Total/NA	Analysis	6020		1			636310	11/30/22 10:03	[REDACTED]	EET SAC
Total/NA	Analysis	PM10		1	0 g	0.0133 g	634627	11/18/22 08:00	[REDACTED]	EET SAC

Client Sample ID: GESTSP100322-384

Lab Sample ID: 320-94490-2

Matrix: Air

Date Collected: 11/08/22 07:20

Date Received: 11/17/22 09:35

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	40CFR50 App B		1			634765	11/18/22 08:00	[REDACTED]	EET SAC
Total/NA	Pre Prep	Filter to Air					634625	11/21/22 16:59	[REDACTED]	EET SAC

Client Sample ID: GESPM100322-385

Lab Sample ID: 320-94490-3

Matrix: Air

Date Collected: 11/08/22 07:00

Date Received: 11/17/22 09:35

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Pre Prep	Filter to Air					635616	11/28/22 05:00	[REDACTED]	EET SAC
Total/NA	Prep	3050B			0.08333 Sample	100 mL	635619	11/28/22 06:20	[REDACTED]	EET SAC
Total/NA	Analysis	6020		1			636310	11/30/22 10:12	[REDACTED]	EET SAC
Total/NA	Analysis	PM10		1	0 g	0.0150 g	634627	11/18/22 08:00	[REDACTED]	EET SAC

Client Sample ID: GESTSP100322-385

Lab Sample ID: 320-94490-4

Matrix: Air

Date Collected: 11/08/22 07:00

Date Received: 11/17/22 09:35

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	40CFR50 App B		1			634765	11/18/22 08:00	[REDACTED]	EET SAC
Total/NA	Pre Prep	Filter to Air					634625	11/21/22 16:59	[REDACTED]	EET SAC

Client Sample ID: GESPM100322-386

Lab Sample ID: 320-94490-5

Matrix: Air

Date Collected: 11/08/22 07:10

Date Received: 11/17/22 09:35

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Pre Prep	Filter to Air					635616	11/28/22 05:00	[REDACTED]	EET SAC
Total/NA	Prep	3050B			0.08333 Sample	100 mL	635619	11/28/22 06:20	[REDACTED]	EET SAC
Total/NA	Analysis	6020		1			636310	11/30/22 10:15	[REDACTED]	EET SAC
Total/NA	Analysis	PM10		1	0 g	0.0140 g	634627	11/18/22 08:00	[REDACTED]	EET SAC

Eurofins Sacramento

Lab Chronicle

Client: GES-AIS LLC

Job ID: 320-94490-1

Project/Site: Hunters Point, Parcel B, Removal Site Evaluation

Client Sample ID: GESTSP100322-386

Date Collected: 11/08/22 07:10

Date Received: 11/17/22 09:35

Lab Sample ID: 320-94490-6

Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	40CFR50 App B		1			634765	11/18/22 08:00	[REDACTED]	EET SAC
Total/NA	Pre Prep	Filter to Air					634625	11/21/22 16:59	[REDACTED]	EET SAC

Client Sample ID: GESPM100322-387

Date Collected: 11/07/22 08:00

Date Received: 11/17/22 09:35

Lab Sample ID: 320-94490-7

Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Pre Prep	Filter to Air					635616	11/28/22 05:00	[REDACTED]	EET SAC
Total/NA	Prep	3050B			0.08333 Sample	100 mL	635619	11/28/22 06:20	[REDACTED]	EET SAC
Total/NA	Analysis	6020		1			636310	11/30/22 10:19	[REDACTED]	EET SAC
Total/NA	Analysis	PM10		1	0 g	-0.0002 g	634627	11/18/22 08:00	[REDACTED]	EET SAC

Client Sample ID: GESTSP100322-387

Date Collected: 11/07/22 08:00

Date Received: 11/17/22 09:35

Lab Sample ID: 320-94490-8

Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	40CFR50 App B		1			634765	11/18/22 08:00	[REDACTED]	EET SAC
Total/NA	Pre Prep	Filter to Air					634625	11/21/22 16:59	[REDACTED]	EET SAC

Client Sample ID: GESPM100322-388

Date Collected: 11/10/22 07:56

Date Received: 11/17/22 09:35

Lab Sample ID: 320-94490-9

Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Pre Prep	Filter to Air					635616	11/28/22 05:00	[REDACTED]	EET SAC
Total/NA	Prep	3050B			0.08333 Sample	100 mL	635619	11/28/22 06:20	[REDACTED]	EET SAC
Total/NA	Analysis	6020		1			636310	11/30/22 10:28	[REDACTED]	EET SAC
Total/NA	Analysis	PM10		1	0 g	0.0149 g	634627	11/18/22 08:00	[REDACTED]	EET SAC

Client Sample ID: GESTSP100322-388

Date Collected: 11/10/22 07:56

Date Received: 11/17/22 09:35

Lab Sample ID: 320-94490-10

Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	40CFR50 App B		1			634765	11/18/22 08:00	[REDACTED]	EET SAC
Total/NA	Pre Prep	Filter to Air					634625	11/21/22 16:59	[REDACTED]	EET SAC

Eurofins Sacramento

Lab Chronicle

Client: GES-AIS LLC

Job ID: 320-94490-1

Project/Site: Hunters Point, Parcel B, Removal Site Evaluation

Client Sample ID: GESPM100322-389

Lab Sample ID: 320-94490-11

Matrix: Air

Date Collected: 11/10/22 07:26

Date Received: 11/17/22 09:35

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Pre Prep	Filter to Air					635616	11/28/22 05:00	[REDACTED]	EET SAC
Total/NA	Prep	3050B			0.08333 Sample	100 mL	635619	11/28/22 06:20	[REDACTED]	EET SAC
Total/NA	Analysis	6020		1			636310	11/30/22 10:32	[REDACTED]	EET SAC
Total/NA	Analysis	PM10		1	0 g	0.0074 g	634627	11/18/22 08:00	[REDACTED]	EET SAC

Client Sample ID: GESTSP100322-389

Lab Sample ID: 320-94490-12

Matrix: Air

Date Collected: 11/10/22 07:26

Date Received: 11/17/22 09:35

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	40CFR50 App B		1			634765	11/18/22 08:00	[REDACTED]	EET SAC
Total/NA	Pre Prep	Filter to Air					634625	11/21/22 16:59	[REDACTED]	EET SAC

Client Sample ID: GESPM100322-390

Lab Sample ID: 320-94490-13

Matrix: Air

Date Collected: 11/10/22 07:41

Date Received: 11/17/22 09:35

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Pre Prep	Filter to Air					635616	11/28/22 05:00	[REDACTED]	EET SAC
Total/NA	Prep	3050B			0.08333 Sample	100 mL	635619	11/28/22 06:20	[REDACTED]	EET SAC
Total/NA	Analysis	6020		1			636310	11/30/22 10:35	[REDACTED]	EET SAC
Total/NA	Analysis	PM10		1	0 g	0.0173 g	634627	11/18/22 08:00	[REDACTED]	EET SAC

Client Sample ID: GESTSP100322-390

Lab Sample ID: 320-94490-14

Matrix: Air

Date Collected: 11/10/22 07:41

Date Received: 11/17/22 09:35

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	40CFR50 App B		1			634765	11/18/22 08:00	[REDACTED]	EET SAC
Total/NA	Pre Prep	Filter to Air					634625	11/21/22 16:59	[REDACTED]	EET SAC

Client Sample ID: GESPM100322-391

Lab Sample ID: 320-94490-15

Matrix: Air

Date Collected: 11/10/22 14:23

Date Received: 11/17/22 09:35

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Pre Prep	Filter to Air					635616	11/28/22 05:00	[REDACTED]	EET SAC
Total/NA	Prep	3050B			0.08333 Sample	100 mL	635619	11/28/22 06:20	[REDACTED]	EET SAC
Total/NA	Analysis	6020		1			636310	11/30/22 10:38	[REDACTED]	EET SAC
Total/NA	Analysis	PM10		1	0 g	0.0089 g	634627	11/18/22 08:00	[REDACTED]	EET SAC

Eurofins Sacramento

Lab Chronicle

Client: GES-AIS LLC

Job ID: 320-94490-1

Project/Site: Hunters Point, Parcel B, Removal Site Evaluation

Client Sample ID: GESTSP100322-391

Lab Sample ID: 320-94490-16

Matrix: Air

Date Collected: 11/10/22 14:23

Date Received: 11/17/22 09:35

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	40CFR50 App B		1			634765	11/18/22 08:00	[REDACTED]	EET SAC
Total/NA	Pre Prep	Filter to Air					634625	11/21/22 16:59	[REDACTED]	EET SAC

Client Sample ID: GESPM100322-392

Lab Sample ID: 320-94490-17

Matrix: Air

Date Collected: 11/10/22 14:08

Date Received: 11/17/22 09:35

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Pre Prep	Filter to Air					635616	11/28/22 05:00	[REDACTED]	EET SAC
Total/NA	Prep	3050B			0.08333 Sample	100 mL	635619	11/28/22 06:20	[REDACTED]	EET SAC
Total/NA	Analysis	6020		1			636310	11/30/22 10:41	[REDACTED]	EET SAC
Total/NA	Analysis	PM10		1	0 g	0.0080 g	634627	11/18/22 08:00	[REDACTED]	EET SAC

Client Sample ID: GESTSP100322-392

Lab Sample ID: 320-94490-18

Matrix: Air

Date Collected: 11/10/22 14:08

Date Received: 11/17/22 09:35

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	40CFR50 App B		1			634765	11/18/22 08:00	[REDACTED]	EET SAC
Total/NA	Pre Prep	Filter to Air					634625	11/21/22 16:59	[REDACTED]	EET SAC

Client Sample ID: GESPM100322-393

Lab Sample ID: 320-94490-19

Matrix: Air

Date Collected: 11/10/22 14:38

Date Received: 11/17/22 09:35

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Pre Prep	Filter to Air					635616	11/28/22 05:00	[REDACTED]	EET SAC
Total/NA	Prep	3050B			0.08333 Sample	100 mL	635619	11/28/22 06:20	[REDACTED]	EET SAC
Total/NA	Analysis	6020		1			636310	11/30/22 10:45	[REDACTED]	EET SAC
Total/NA	Analysis	PM10		1	0 g	0.0054 g	634627	11/18/22 08:00	[REDACTED]	EET SAC

Client Sample ID: GESTSP100322-393

Lab Sample ID: 320-94490-20

Matrix: Air

Date Collected: 11/10/22 14:38

Date Received: 11/17/22 09:35

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	40CFR50 App B		1			634765	11/18/22 08:00	[REDACTED]	EET SAC
Total/NA	Pre Prep	Filter to Air					634625	11/21/22 16:59	[REDACTED]	EET SAC

Laboratory References:

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

Eurofins Sacramento

Accreditation/Certification Summary

Client: GES-AIS LLC

Project/Site: Hunters Point, Parcel B, Removal Site Evaluation

Job ID: 320-94490-1

Laboratory: Eurofins Sacramento

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
ANAB	Dept. of Defense ELAP	L2468	01-20-24
Oregon	NELAP	4040	01-29-23

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

Analysis Method	Prep Method	Matrix	Analyte
40CFR50 App B		Air	Total Suspended Particulates
PM10		Air	Particulate Matter as PM 10

1

2

3

4

5

6

7

8

9

10

11

12

13

14

Eurofins Sacramento

Method Summary

Client: GES-AIS LLC

Project/Site: Hunters Point, Parcel B, Removal Site Evaluation

Job ID: 320-94490-1

Method	Method Description	Protocol	Laboratory
6020	Metals (ICP/MS)	SW846	EET SAC
40CFR50 App B	Suspended Particulate Matter in Ambient Air	EPA	EET SAC
PM10	Particulate Matter	40CFR50J	EET SAC
3050B	Preparation, Metals	SW846	EET SAC
Filter to Air	Filter to Air volume ratio	None	EET SAC

Protocol References:

40CFR50J = 40 CFR Part 50 Appendix J

EPA = US Environmental Protection Agency

None = None

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

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

Sample Summary

Client: GES-AIS LLC

Project/Site: Hunters Point, Parcel B, Removal Site Evaluation

Job ID: 320-94490-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	
320-94490-1	GESPM100322-384	Air	11/08/22 07:20	11/17/22 09:35	1
320-94490-2	GESTSP100322-384	Air	11/08/22 07:20	11/17/22 09:35	2
320-94490-3	GESPM100322-385	Air	11/08/22 07:00	11/17/22 09:35	3
320-94490-4	GESTSP100322-385	Air	11/08/22 07:00	11/17/22 09:35	4
320-94490-5	GESPM100322-386	Air	11/08/22 07:10	11/17/22 09:35	5
320-94490-6	GESTSP100322-386	Air	11/08/22 07:10	11/17/22 09:35	6
320-94490-7	GESPM100322-387	Air	11/07/22 08:00	11/17/22 09:35	7
320-94490-8	GESTSP100322-387	Air	11/07/22 08:00	11/17/22 09:35	8
320-94490-9	GESPM100322-388	Air	11/10/22 07:56	11/17/22 09:35	9
320-94490-10	GESTSP100322-388	Air	11/10/22 07:56	11/17/22 09:35	10
320-94490-11	GESPM100322-389	Air	11/10/22 07:26	11/17/22 09:35	11
320-94490-12	GESTSP100322-389	Air	11/10/22 07:26	11/17/22 09:35	12
320-94490-13	GESPM100322-390	Air	11/10/22 07:41	11/17/22 09:35	13
320-94490-14	GESTSP100322-390	Air	11/10/22 07:41	11/17/22 09:35	14
320-94490-15	GESPM100322-391	Air	11/10/22 14:23	11/17/22 09:35	
320-94490-16	GESTSP100322-391	Air	11/10/22 14:23	11/17/22 09:35	
320-94490-17	GESPM100322-392	Air	11/10/22 14:08	11/17/22 09:35	
320-94490-18	GESTSP100322-392	Air	11/10/22 14:08	11/17/22 09:35	
320-94490-19	GESPM100322-393	Air	11/10/22 14:38	11/17/22 09:35	
320-94490-20	GESTSP100322-393	Air	11/10/22 14:38	11/17/22 09:35	
	GESTSP100322-393	Air	11/10/22 14:38	11/17/22 09:35	

CHAIN-OF-CUSTODY RECORD

Gilbane Federal
[REDACTED]
2300 Clayton Road, Suite 1050, Concord, CA 94520

COC # MC111622AIRB



Project Name: Hunters Point Shipyard, Parcel B Removal Site Evaluation	Laboratory: EUROFINS ENVIRONMENT TESTING NORTHERN CALIFORNIA, LLC (EETN)	Event: Parcel B Air Monitoring
Project Number: J310000900	POC: [REDACTED]	
WBS Code: J310000900	Ship to: 880 Riverside Parkway, West Sacramento, CA 95605	

Comments:															
Equipment:															
Event: Parcel B Air Monitoring															
Sample ID	Matrix	Date	Time	Samp Init.						Location ID	Sample Type	Depth (ft bgs)		Cooler	Comments
												Top	Bottom		
1 GESPM100322-384	A	11/08/2022	0720		X	X				MSB01	N1	0.00	0.00	1	VOLUME: 1598.34 (M3)
2 GESTSP100322-384	A	11/08/2022	0720		X					MSB01	N1	0.00	0.00	1	VOLUME: 1716.45 (M3)
3 GESPM100322-385	A	11/08/2022	0700		X	X				MSB02	N1	0.00	0.00	1	VOLUME: 1579.76 (M3)
4 GESTSP100322-385	A	11/08/2022	0700		X					MSB02	N1	0.00	0.00	1	VOLUME: 1716.47 (M3)
5 GESPM100322-386	A	11/08/2022	0710		X	X				MSB113A	N1	0.00	0.00	1	VOLUME: 1562.49 (M3)
6 GESTSP100322-386	A	11/08/2022	0710		X					MSB113A	N1	0.00	0.00	1	VOLUME: 1549.17 (M3)
7 GESPM100322-387	AQ	11/07/2022	0800		X	X				FIELDQC	FB1	0.00	0.00	1	
8 GESTSP100322-387	AQ	11/07/2022	0800		X					FIELDQC	FB1	0.00	0.00	1	
9 GESPM100322-388	A	11/10/2022	0756		X	X				MSB01	N1	0.00	0.00	1	VOLUME: 1620.16 (M3)
10 GESTSP100322-388	A	11/10/2022	0756		X					MSB01	N1	0.00	0.00	1	VOLUME: 1732.65 (M3)
11 GESPM100322-389	A	11/10/2022	0726		X	X				MSB02	N1	0.00	0.00	1	VOLUME: 1201.38 (M3)

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time	Shipping Date / Carrier / Airbill Number
[REDACTED]	11/16/22	1400	FedEx	11/16/22	1400	Shipping Date: 11/16/2022 / FEDEX 7704 3733 5382
[REDACTED]			[REDACTED]	11/17/22	978	
						Received by Laboratory: (Signature, Date, Time) & condition

**CHAIN-OF-CUSTODY
RECORD**

Gibbons Federal

2300 Clayton Road, Suite 1050, Concord, CA 94520

COC # MC111622AIRB



Project Name: Hunters Point Shipyard, Parcel B Removal Site Evaluation	Laboratory: EUROFINS ENVIRONMENT TESTING NORTHERN CALIFORNIA, LLC (EETN)	Event: Parcel B Air Monitoring
Project Number: J310000900	POC: [REDACTED]	
WBS Code: J310000900	Ship to: 880 Riverside Parkway, West Sacramento, CA 95605	

Comments:					Analytical Test Method	Code	Matrix				
							A				
					AQ	Air Quality Control Matrix					
Equipment:					Code	Container/Preservative					
					1	1x 250-mL Plastic, 4 Degrees C					
					1	1x Envelope, None					
Event: Parcel B Air Monitoring					1	1	1				
Sample ID	Matrix	Date	Time	Samp Init.		Location ID	Sample Type	Depth (ft bgs)	Cooler	Comments	
12 GESTSP100322-389	A	11/10/2022	0726	[REDACTED]	X	MSB02	N1	0.00	0.00	1	VOLUME: 1297.52 (M3)
13 GESPM100322-390	A	11/10/2022	0741	[REDACTED]	X X	MSB113A	N1	0.00	0.00	1	VOLUME: 1589.02 (M3)
14 GESTSP100322-390	A	11/10/2022	0741	[REDACTED]	X	MSB113A	N1	0.00	0.00	1	VOLUME: 1573.19 (M3)
15 GESPM100322-391	A	11/10/2022	1423	[REDACTED]	X X	MSB01	N1	0.00	0.00	1	VOLUME: 435.87 (M3)
16 GESTSP100322-391	A	11/10/2022	1423	[REDACTED]	X	MSB01	N1	0.00	0.00	1	VOLUME: 462.20 (M3)
17 GESPM100322-392	A	11/10/2022	1408	[REDACTED]	X X	MSB02	N1	0.00	0.00	1	VOLUME: 425.15 (M3)
18 GESTSP100322-392	A	11/10/2022	1408	[REDACTED]	X	MSB02	N1	0.00	0.00	1	VOLUME: 455.63 (M3)
19 GESPM100322-393	A	11/10/2022	1438	[REDACTED]	X X	MSB113A	N1	0.00	0.00	1	VOLUME: 457.37 (M3)
20 GESTSP100322-393	A	11/10/2022	1438	[REDACTED]	X	MSB113A	N1	0.00	0.00	1	VOLUME: 449.01 (M3)
21											
22											

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time	Shipping Date / Carrier / Airbill Number
[REDACTED]	11/16/22	1400	[REDACTED] Fedex	11/16/22	1400	Shipping Date: 11/16/2022 / FEDEX 7704 3733 5382
						Received by Laboratory: (Signature, Date, Time) & condition

Login Sample Receipt Checklist

Client: GES-AIS LLC

Job Number: 320-94490-1

Login Number: 94490

List Source: Eurofins Sacramento

List Number: 1

Creator: [REDACTED]

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	seal
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	False	Thermal preservation not required.
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

ANALYTICAL REPORT

PREPARED FOR

Attn: [REDACTED]

GES-AIS LLC
1501 W Fountainhead Parkway
Ste 550
Tempe, Arizona 85282

Generated 12/6/2022 2:25:25 PM

JOB DESCRIPTION

Hunters Point, Parcel B, Removal Site Evaluation

JOB NUMBER

320-94692-1

Eurofins Sacramento

Job Notes

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The data in the report relate to the field sample(s) as received by the laboratory and associated QC. All results have been reviewed and have been found to be compliant with laboratory and accreditation requirements, with the exception of the noted deviation(s). For questions, please contact the Project Manager.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Environment Testing Northern California, LLC Project Manager.

Authorization

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12/6/2022 2:25:25 PM

Authorized for release by
[REDACTED], Project Manager I
[REDACTED]
[REDACTED]

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Definitions/Glossary

Client: GES-AIS LLC

Project/Site: Hunters Point, Parcel B, Removal Site Evaluation

Job ID: 320-94692-1

Qualifiers

Metals

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

Glossary

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

Case Narrative

Client: GES-AIS LLC

Project/Site: Hunters Point, Parcel B, Removal Site Evaluation

Job ID: 320-94692-1

Job ID: 320-94692-1

Laboratory: Eurofins Sacramento

Narrative

Job Narrative 320-94692-1

Comments

No additional comments.

Receipt

The samples were received on 11/28/2022 10:30 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 21.5° C.

Metals

Method PM10: The following sample in analytical batch 320-636847 was recorded with a negative net weight: GESPM100322-394 (320-94692-1). No particulate loading on the filter or damage to the filter could be observed.

Method 40CFR50 App B: The following sample in preparation batch 320-636830 and analytical batch 320-637705 was recorded with a negative net weight: GESTSP100322-394 (320-94692-2). No particulate loading on the filter or damage to the filter could be observed.

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

Detection Summary

Client: GES-AIS LLC

Job ID: 320-94692-1

Project/Site: Hunters Point, Parcel B, Removal Site Evaluation

Client Sample ID: GESPM100322-394

Lab Sample ID: 320-94692-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Manganese	0.00042	J	0.0012	0.00017	ug/m3 (Air)	1	6020		Total/NA

Client Sample ID: GESTSP100322-394

Lab Sample ID: 320-94692-2

No Detections.

Client Sample ID: GESPM100322-395

Lab Sample ID: 320-94692-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lead	0.0017		0.00074	0.00011	ug/m3 (Air)	1	6020		Total/NA
Manganese	0.0042		0.00074	0.00010	ug/m3 (Air)	1	6020		Total/NA
Particulate Matter as PM 10	17		0.31	0.31	ug/m3	1	PM10		Total/NA

Client Sample ID: GESTSP100322-395

Lab Sample ID: 320-94692-4

Analyte	Result	Qualifier	RL	RL	Unit	Dil Fac	D	Method	Prep Type
Total Suspended Particulates	19.8323		0.2833	0.2833	ug/m3 (Air)	1	40CFR50 App B		Total/NA

Client Sample ID: GESPM100322-396

Lab Sample ID: 320-94692-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lead	0.0012		0.00074	0.00011	ug/m3 (Air)	1	6020		Total/NA
Manganese	0.0027		0.00074	0.00010	ug/m3 (Air)	1	6020		Total/NA
Particulate Matter as PM 10	13		0.31	0.31	ug/m3	1	PM10		Total/NA

Client Sample ID: GESTSP100322-396

Lab Sample ID: 320-94692-6

Analyte	Result	Qualifier	RL	RL	Unit	Dil Fac	D	Method	Prep Type
Total Suspended Particulates	22.5007		0.2885	0.2885	ug/m3 (Air)	1	40CFR50 App B		Total/NA

Client Sample ID: GESPM101722-397

Lab Sample ID: 320-94692-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lead	0.0015		0.00076	0.00011	ug/m3 (Air)	1	6020		Total/NA
Manganese	0.0038		0.00076	0.00011	ug/m3 (Air)	1	6020		Total/NA
Particulate Matter as PM 10	15		0.32	0.32	ug/m3	1	PM10		Total/NA

Client Sample ID: GESTSP101722-397

Lab Sample ID: 320-94692-8

Analyte	Result	Qualifier	RL	RL	Unit	Dil Fac	D	Method	Prep Type
Total Suspended Particulates	23.2115		0.3197	0.3197	ug/m3 (Air)	1	40CFR50 App B		Total/NA

Client Sample ID: GESPM101722-398

Lab Sample ID: 320-94692-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lead	0.0017		0.00073	0.00011	ug/m3 (Air)	1	6020		Total/NA
Manganese	0.0069		0.00073	0.00010	ug/m3 (Air)	1	6020		Total/NA
Particulate Matter as PM 10	22		0.31	0.31	ug/m3	1	PM10		Total/NA

Client Sample ID: GESTSP101722-398

Lab Sample ID: 320-94692-10

Analyte	Result	Qualifier	RL	RL	Unit	Dil Fac	D	Method	Prep Type
Total Suspended Particulates	31.9883		0.2866	0.2866	ug/m3 (Air)	1	40CFR50 App B		Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Sacramento

Detection Summary

Client: GES-AIS LLC

Job ID: 320-94692-1

Project/Site: Hunters Point, Parcel B, Removal Site Evaluation

Client Sample ID: GESPM101722-399

Lab Sample ID: 320-94692-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lead	0.0015		0.00074	0.00011	ug/m3 (Air)	1		6020	Total/NA
Manganese	0.0055		0.00074	0.00010	ug/m3 (Air)	1		6020	Total/NA
Particulate Matter as PM 10	15		0.31	0.31	ug/m3	1		PM10	Total/NA

Client Sample ID: GESTSP101722-399

Lab Sample ID: 320-94692-12

Analyte	Result	Qualifier	RL	RL	Unit	Dil Fac	D	Method	Prep Type
Total Suspended Particulates	25.1036		0.2866	0.2866	ug/m3 (Air)	1		40CFR50 App B	Total/NA

Client Sample ID: GESPM101722-400

Lab Sample ID: 320-94692-13

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lead	0.0020		0.00075	0.00011	ug/m3 (Air)	1		6020	Total/NA
Manganese	0.0076		0.00075	0.00011	ug/m3 (Air)	1		6020	Total/NA
Particulate Matter as PM 10	18		0.31	0.31	ug/m3	1		PM10	Total/NA

Client Sample ID: GESTSP101722-400

Lab Sample ID: 320-94692-14

Analyte	Result	Qualifier	RL	RL	Unit	Dil Fac	D	Method	Prep Type
Total Suspended Particulates	27.3025		0.3175	0.3175	ug/m3 (Air)	1		40CFR50 App B	Total/NA

Client Sample ID: GESPM101722-401

Lab Sample ID: 320-94692-15

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lead	0.0017		0.00073	0.00011	ug/m3 (Air)	1		6020	Total/NA
Manganese	0.0056		0.00073	0.00010	ug/m3 (Air)	1		6020	Total/NA
Particulate Matter as PM 10	16		0.31	0.31	ug/m3	1		PM10	Total/NA

Client Sample ID: GESTSP101722-401

Lab Sample ID: 320-94692-16

Analyte	Result	Qualifier	RL	RL	Unit	Dil Fac	D	Method	Prep Type
Total Suspended Particulates	25.6281		0.2867	0.2867	ug/m3 (Air)	1		40CFR50 App B	Total/NA

Client Sample ID: GESPM101722-402

Lab Sample ID: 320-94692-17

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lead	0.0018		0.00074	0.00011	ug/m3 (Air)	1		6020	Total/NA
Manganese	0.0049		0.00074	0.00010	ug/m3 (Air)	1		6020	Total/NA
Particulate Matter as PM 10	15		0.31	0.31	ug/m3	1		PM10	Total/NA

Client Sample ID: GESTSP101722-402

Lab Sample ID: 320-94692-18

Analyte	Result	Qualifier	RL	RL	Unit	Dil Fac	D	Method	Prep Type
Total Suspended Particulates	24.6062		0.2868	0.2868	ug/m3 (Air)	1		40CFR50 App B	Total/NA

Client Sample ID: GESPM101722-403

Lab Sample ID: 320-94692-19

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lead	0.0020		0.00075	0.00011	ug/m3 (Air)	1		6020	Total/NA
Manganese	0.0057		0.00075	0.00010	ug/m3 (Air)	1		6020	Total/NA
Particulate Matter as PM 10	17		0.31	0.31	ug/m3	1		PM10	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Sacramento

Detection Summary

Client: GES-AIS LLC

Project/Site: Hunters Point, Parcel B, Removal Site Evaluation

Job ID: 320-94692-1

Client Sample ID: GESTSP101722-403

Lab Sample ID: 320-94692-20

Analyte	Result	Qualifier	RL	RL	Unit	Dil Fac	D	Method	Prep Type
Total Suspended Particulates	22.8736		0.3151	0.3151	ug/m3 (Air)	1		40CFR50 App B	Total/NA

Client Sample ID: GESPM101722-404

Lab Sample ID: 320-94692-21

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lead	0.0035		0.0024	0.00036	ug/m3 (Air)	1		6020	Total/NA
Manganese	0.0090		0.0024	0.00033	ug/m3 (Air)	1		6020	Total/NA
Particulate Matter as PM 10	29		0.99	0.99	ug/m3	1		PM10	Total/NA

Client Sample ID: GESTSP101722-404

Lab Sample ID: 320-94692-22

Analyte	Result	Qualifier	RL	RL	Unit	Dil Fac	D	Method	Prep Type
Total Suspended Particulates	30.7862		0.9217	0.9217	ug/m3 (Air)	1		40CFR50 App B	Total/NA

Client Sample ID: GESPM101722-405

Lab Sample ID: 320-94692-23

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lead	0.0042		0.0023	0.00034	ug/m3 (Air)	1		6020	Total/NA
Manganese	0.0070		0.0023	0.00032	ug/m3 (Air)	1		6020	Total/NA
Particulate Matter as PM 10	17		0.95	0.95	ug/m3	1		PM10	Total/NA

Client Sample ID: GESTSP101722-405

Lab Sample ID: 320-94692-24

Analyte	Result	Qualifier	RL	RL	Unit	Dil Fac	D	Method	Prep Type
Total Suspended Particulates	31.8653		0.8901	0.8901	ug/m3 (Air)	1		40CFR50 App B	Total/NA

Client Sample ID: GESPM101722-406

Lab Sample ID: 320-94692-25

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lead	0.0046		0.0025	0.00037	ug/m3 (Air)	1		6020	Total/NA
Manganese	0.010		0.0025	0.00035	ug/m3 (Air)	1		6020	Total/NA
Particulate Matter as PM 10	22		1.0	1.0	ug/m3	1		PM10	Total/NA

Client Sample ID: GESTSP101722-406

Lab Sample ID: 320-94692-26

Analyte	Result	Qualifier	RL	RL	Unit	Dil Fac	D	Method	Prep Type
Total Suspended Particulates	34.0456		1.0443	1.0443	ug/m3 (Air)	1		40CFR50 App B	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Sacramento

Client Sample Results

Client: GES-AIS LLC

Job ID: 320-94692-1

Project/Site: Hunters Point, Parcel B, Removal Site Evaluation

Client Sample ID: GESPM100322-394

Lab Sample ID: 320-94692-1

Matrix: Air

Date Collected: 11/14/22 08:00

Date Received: 11/28/22 10:30

Sample Container: Folder/Filter

Method: SW846 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	ND		0.0012	0.00018	ug/m3 (Air)		12/02/22 06:00	12/02/22 12:07	1
Manganese	0.00042	J	0.0012	0.00017	ug/m3 (Air)		12/02/22 06:00	12/02/22 12:07	1

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Particulate Matter as PM 10 (40CFR50J PM10)	ND		0.50	0.50	ug/m3			11/30/22 07:30	1

Client Sample ID: GESTSP100322-394

Lab Sample ID: 320-94692-2

Matrix: Air

Date Collected: 11/14/22 08:00

Date Received: 11/28/22 10:30

Sample Container: Folder/Filter

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Particulates (EPA 40CFR50 App B)	ND		0.5000	0.5000	ug/m3 (Air)			12/06/22 10:01	1

Client Sample ID: GESPM100322-395

Lab Sample ID: 320-94692-3

Matrix: Air

Date Collected: 11/15/22 07:44

Date Received: 11/28/22 10:30

Sample Container: Folder/Filter

Method: SW846 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	0.0017		0.00074	0.00011	ug/m3 (Air)		12/02/22 06:00	12/02/22 12:10	1
Manganese	0.0042		0.00074	0.00010	ug/m3 (Air)		12/02/22 06:00	12/02/22 12:10	1

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Particulate Matter as PM 10 (40CFR50J PM10)	17		0.31	0.31	ug/m3			11/30/22 07:30	1

Client Sample ID: GESTSP100322-395

Lab Sample ID: 320-94692-4

Matrix: Air

Date Collected: 11/15/22 07:44

Date Received: 11/28/22 10:30

Sample Container: Folder/Filter

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Particulates (EPA 40CFR50 App B)	19.8323		0.2833	0.2833	ug/m3 (Air)			12/06/22 10:01	1

Client Sample ID: GESPM100322-396

Lab Sample ID: 320-94692-5

Matrix: Air

Date Collected: 11/15/22 07:16

Date Received: 11/28/22 10:30

Sample Container: Folder/Filter

Method: SW846 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	0.0012		0.00074	0.00011	ug/m3 (Air)		12/02/22 06:00	12/02/22 12:14	1
Manganese	0.0027		0.00074	0.00010	ug/m3 (Air)		12/02/22 06:00	12/02/22 12:14	1

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Client Sample Results

Client: GES-AIS LLC

Job ID: 320-94692-1

Project/Site: Hunters Point, Parcel B, Removal Site Evaluation

Client Sample ID: GESPM100322-396

Lab Sample ID: 320-94692-5

Matrix: Air

Date Collected: 11/15/22 07:16

Date Received: 11/28/22 10:30

Sample Container: Folder/Filter

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Particulate Matter as PM 10 (40CFR50J PM10)	13		0.31	0.31	ug/m3			11/30/22 07:30	1

Client Sample ID: GESTSP100322-396

Lab Sample ID: 320-94692-6

Matrix: Air

Date Collected: 11/15/22 07:16

Date Received: 11/28/22 10:30

Sample Container: Folder/Filter

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Particulates (EPA 40CFR50 App B)	22.5007		0.2885	0.2885	ug/m3 (Air)			12/06/22 10:01	1

Client Sample ID: GESPM101722-397

Lab Sample ID: 320-94692-7

Matrix: Air

Date Collected: 11/15/22 07:31

Date Received: 11/28/22 10:30

Sample Container: Folder/Filter

Method: SW846 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	0.0015		0.00076	0.00011	ug/m3 (Air)		12/02/22 06:00	12/02/22 12:17	1
Manganese	0.0038		0.00076	0.00011	ug/m3 (Air)		12/02/22 06:00	12/02/22 12:17	1

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Particulate Matter as PM 10 (40CFR50J PM10)	15		0.32	0.32	ug/m3			11/30/22 07:30	1

Client Sample ID: GESTSP101722-397

Lab Sample ID: 320-94692-8

Matrix: Air

Date Collected: 11/15/22 07:31

Date Received: 11/28/22 10:30

Sample Container: Folder/Filter

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Particulates (EPA 40CFR50 App B)	23.2115		0.3197	0.3197	ug/m3 (Air)			12/06/22 10:01	1

Client Sample ID: GESPM101722-398

Lab Sample ID: 320-94692-9

Matrix: Air

Date Collected: 11/16/22 07:42

Date Received: 11/28/22 10:30

Sample Container: Folder/Filter

Method: SW846 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	0.0017		0.00073	0.00011	ug/m3 (Air)		12/02/22 06:00	12/02/22 12:20	1
Manganese	0.0069		0.00073	0.00010	ug/m3 (Air)		12/02/22 06:00	12/02/22 12:20	1

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Particulate Matter as PM 10 (40CFR50J PM10)	22		0.31	0.31	ug/m3			11/30/22 07:30	1

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Client Sample Results

Client: GES-AIS LLC

Job ID: 320-94692-1

Project/Site: Hunters Point, Parcel B, Removal Site Evaluation

Client Sample ID: GESTSP101722-398

Lab Sample ID: 320-94692-10

Matrix: Air

Date Collected: 11/16/22 07:42

Date Received: 11/28/22 10:30

Sample Container: Folder/Filter

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Particulates (EPA 40CFR50 App B)	31.9883		0.2866	0.2866	ug/m3 (Air)			12/06/22 10:01	1

Client Sample ID: GESPM101722-399

Lab Sample ID: 320-94692-11

Matrix: Air

Date Collected: 11/16/22 07:16

Date Received: 11/28/22 10:30

Sample Container: Folder/Filter

Method: SW846 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	0.0015		0.00074	0.00011	ug/m3 (Air)			12/02/22 06:00	12/02/22 12:24
Manganese	0.0055		0.00074	0.00010	ug/m3 (Air)			12/02/22 06:00	12/02/22 12:24

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Particulate Matter as PM 10 (40CFR50J PM10)	15		0.31	0.31	ug/m3			11/30/22 07:30	1

Client Sample ID: GESTSP101722-399

Lab Sample ID: 320-94692-12

Matrix: Air

Date Collected: 11/16/22 07:16

Date Received: 11/28/22 10:30

Sample Container: Folder/Filter

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Particulates (EPA 40CFR50 App B)	25.1036		0.2866	0.2866	ug/m3 (Air)			12/06/22 10:01	1

Client Sample ID: GESPM101722-400

Lab Sample ID: 320-94692-13

Matrix: Air

Date Collected: 11/16/22 07:30

Date Received: 11/28/22 10:30

Sample Container: Folder/Filter

Method: SW846 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	0.0020		0.00075	0.00011	ug/m3 (Air)			12/02/22 06:00	12/02/22 12:33
Manganese	0.0076		0.00075	0.00011	ug/m3 (Air)			12/02/22 06:00	12/02/22 12:33

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Particulate Matter as PM 10 (40CFR50J PM10)	18		0.31	0.31	ug/m3			11/30/22 07:30	1

Client Sample ID: GESTSP101722-400

Lab Sample ID: 320-94692-14

Matrix: Air

Date Collected: 11/16/22 07:30

Date Received: 11/28/22 10:30

Sample Container: Folder/Filter

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Particulates (EPA 40CFR50 App B)	27.3025		0.3175	0.3175	ug/m3 (Air)			12/06/22 10:01	1

Eurofins Sacramento

Client Sample Results

Client: GES-AIS LLC

Job ID: 320-94692-1

Project/Site: Hunters Point, Parcel B, Removal Site Evaluation

Client Sample ID: GESPM101722-401

Lab Sample ID: 320-94692-15

Matrix: Air

Date Collected: 11/17/22 07:31

Date Received: 11/28/22 10:30

Sample Container: Folder/Filter

Method: SW846 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	0.0017		0.00073	0.00011	ug/m3 (Air)		12/02/22 06:00	12/02/22 12:37	1
Manganese	0.0056		0.00073	0.00010	ug/m3 (Air)		12/02/22 06:00	12/02/22 12:37	1

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Particulate Matter as PM 10 (40CFR50J PM10)	16		0.31	0.31	ug/m3			11/30/22 07:30	1

Client Sample ID: GESTSP101722-401

Lab Sample ID: 320-94692-16

Matrix: Air

Date Collected: 11/17/22 07:31

Date Received: 11/28/22 10:30

Sample Container: Folder/Filter

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Particulates (EPA 40CFR50 App B)	25.6281		0.2867	0.2867	ug/m3 (Air)			12/06/22 10:01	1

Client Sample ID: GESPM101722-402

Lab Sample ID: 320-94692-17

Matrix: Air

Date Collected: 11/17/22 07:15

Date Received: 11/28/22 10:30

Sample Container: Folder/Filter

Method: SW846 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	0.0018		0.00074	0.00011	ug/m3 (Air)		12/02/22 06:00	12/02/22 12:40	1
Manganese	0.0049		0.00074	0.00010	ug/m3 (Air)		12/02/22 06:00	12/02/22 12:40	1

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Particulate Matter as PM 10 (40CFR50J PM10)	15		0.31	0.31	ug/m3			11/30/22 07:30	1

Client Sample ID: GESTSP101722-402

Lab Sample ID: 320-94692-18

Matrix: Air

Date Collected: 11/17/22 07:15

Date Received: 11/28/22 10:30

Sample Container: Folder/Filter

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Particulates (EPA 40CFR50 App B)	24.6062		0.2868	0.2868	ug/m3 (Air)			12/06/22 10:01	1

Client Sample ID: GESPM101722-403

Lab Sample ID: 320-94692-19

Matrix: Air

Date Collected: 11/17/22 07:42

Date Received: 11/28/22 10:30

Sample Container: Folder/Filter

Method: SW846 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	0.0020		0.00075	0.00011	ug/m3 (Air)		12/02/22 06:00	12/02/22 12:43	1
Manganese	0.0057		0.00075	0.00010	ug/m3 (Air)		12/02/22 06:00	12/02/22 12:43	1

Eurofins Sacramento

Client Sample Results

Client: GES-AIS LLC

Job ID: 320-94692-1

Project/Site: Hunters Point, Parcel B, Removal Site Evaluation

Client Sample ID: GESPM101722-403

Lab Sample ID: 320-94692-19

Matrix: Air

Date Collected: 11/17/22 07:42

Date Received: 11/28/22 10:30

Sample Container: Folder/Filter

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Particulate Matter as PM 10 (40CFR50J PM10)	17		0.31	0.31	ug/m3			11/30/22 07:30	1

Client Sample ID: GESTSP101722-403

Lab Sample ID: 320-94692-20

Matrix: Air

Date Collected: 11/17/22 07:42

Date Received: 11/28/22 10:30

Sample Container: Folder/Filter

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Particulates (EPA 40CFR50 App B)	22.8736		0.3151	0.3151	ug/m3 (Air)			12/06/22 10:01	1

Client Sample ID: GESPM101722-404

Lab Sample ID: 320-94692-21

Matrix: Air

Date Collected: 11/17/22 15:00

Date Received: 11/28/22 10:30

Sample Container: Folder/Filter

Method: SW846 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	0.0035		0.0024	0.00036	ug/m3 (Air)		12/02/22 06:00	12/02/22 12:46	1
Manganese	0.0090		0.0024	0.00033	ug/m3 (Air)		12/02/22 06:00	12/02/22 12:46	1

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Particulate Matter as PM 10 (40CFR50J PM10)	29		0.99	0.99	ug/m3			11/30/22 07:30	1

Client Sample ID: GESTSP101722-404

Lab Sample ID: 320-94692-22

Matrix: Air

Date Collected: 11/17/22 15:00

Date Received: 11/28/22 10:30

Sample Container: Folder/Filter

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Particulates (EPA 40CFR50 App B)	30.7862		0.9217	0.9217	ug/m3 (Air)			12/06/22 10:01	1

Client Sample ID: GESPM101722-405

Lab Sample ID: 320-94692-23

Matrix: Air

Date Collected: 11/17/22 14:55

Date Received: 11/28/22 10:30

Sample Container: Folder/Filter

Method: SW846 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	0.0042		0.0023	0.00034	ug/m3 (Air)		12/02/22 06:00	12/02/22 12:50	1
Manganese	0.0070		0.0023	0.00032	ug/m3 (Air)		12/02/22 06:00	12/02/22 12:50	1

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Particulate Matter as PM 10 (40CFR50J PM10)	17		0.95	0.95	ug/m3			11/30/22 07:30	1

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Client Sample Results

Client: GES-AIS LLC

Job ID: 320-94692-1

Project/Site: Hunters Point, Parcel B, Removal Site Evaluation

Client Sample ID: GESTSP101722-405

Lab Sample ID: 320-94692-24

Matrix: Air

Date Collected: 11/17/22 14:55

Date Received: 11/28/22 10:30

Sample Container: Folder/Filter

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Particulates (EPA 40CFR50 App B)	31.8653		0.8901	0.8901	ug/m3 (Air)			12/06/22 10:01	1

Client Sample ID: GESPM101722-406

Lab Sample ID: 320-94692-25

Matrix: Air

Date Collected: 11/17/22 15:00

Date Received: 11/28/22 10:30

Sample Container: Folder/Filter

Method: SW846 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	0.0046		0.0025	0.00037	ug/m3 (Air)		12/02/22 06:00	12/02/22 12:53	1
Manganese	0.010		0.0025	0.00035	ug/m3 (Air)		12/02/22 06:00	12/02/22 12:53	1

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Particulate Matter as PM 10 (40CFR50J PM10)	22		1.0	1.0	ug/m3			11/30/22 07:30	1

Client Sample ID: GESTSP101722-406

Lab Sample ID: 320-94692-26

Matrix: Air

Date Collected: 11/17/22 15:00

Date Received: 11/28/22 10:30

Sample Container: Folder/Filter

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Particulates (EPA 40CFR50 App B)	34.0456		1.0443	1.0443	ug/m3 (Air)			12/06/22 10:01	1

QC Sample Results

Client: GES-AIS LLC

Job ID: 320-94692-1

Project/Site: Hunters Point, Parcel B, Removal Site Evaluation

Method: 6020 - Metals (ICP/MS)

Lab Sample ID: MB 320-636765/1-B

Matrix: Air

Analysis Batch: 636896

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 636772

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	ND		0.0012	0.00018	ug/m3 (Air)		12/02/22 06:00	12/02/22 11:32	1
Manganese	ND		0.0012	0.00017	ug/m3 (Air)		12/02/22 06:00	12/02/22 11:32	1

Lab Sample ID: LCS 320-636765/2-B

Matrix: Air

Analysis Batch: 636896

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 636772

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits	
Lead	0.240	0.256		ug/m3 (Air)		107	86 - 111	
Manganese	0.240	0.257		ug/m3 (Air)		107	88 - 110	

Lab Sample ID: LCSD 320-636765/3-B

Matrix: Air

Analysis Batch: 636896

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 636772

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Lead	0.240	0.249		ug/m3 (Air)		104	86 - 111	3	15
Manganese	0.240	0.257		ug/m3 (Air)		107	88 - 110	0	15

QC Association Summary

Client: GES-AIS LLC

Job ID: 320-94692-1

Project/Site: Hunters Point, Parcel B, Removal Site Evaluation

Metals

Pre Prep Batch: 636765

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-94692-1	GESPM100322-394	Total/NA	Air	Filter to Air	
320-94692-3	GESPM100322-395	Total/NA	Air	Filter to Air	
320-94692-5	GESPM100322-396	Total/NA	Air	Filter to Air	
320-94692-7	GESPM101722-397	Total/NA	Air	Filter to Air	
320-94692-9	GESPM101722-398	Total/NA	Air	Filter to Air	
320-94692-11	GESPM101722-399	Total/NA	Air	Filter to Air	
320-94692-13	GESPM101722-400	Total/NA	Air	Filter to Air	
320-94692-15	GESPM101722-401	Total/NA	Air	Filter to Air	
320-94692-17	GESPM101722-402	Total/NA	Air	Filter to Air	
320-94692-19	GESPM101722-403	Total/NA	Air	Filter to Air	
320-94692-21	GESPM101722-404	Total/NA	Air	Filter to Air	
320-94692-23	GESPM101722-405	Total/NA	Air	Filter to Air	
320-94692-25	GESPM101722-406	Total/NA	Air	Filter to Air	
MB 320-636765/1-B	Method Blank	Total/NA	Air	Filter to Air	
LCS 320-636765/2-B	Lab Control Sample	Total/NA	Air	Filter to Air	
LCSD 320-636765/3-B	Lab Control Sample Dup	Total/NA	Air	Filter to Air	

Prep Batch: 636772

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-94692-1	GESPM100322-394	Total/NA	Air	3050B	636765
320-94692-3	GESPM100322-395	Total/NA	Air	3050B	636765
320-94692-5	GESPM100322-396	Total/NA	Air	3050B	636765
320-94692-7	GESPM101722-397	Total/NA	Air	3050B	636765
320-94692-9	GESPM101722-398	Total/NA	Air	3050B	636765
320-94692-11	GESPM101722-399	Total/NA	Air	3050B	636765
320-94692-13	GESPM101722-400	Total/NA	Air	3050B	636765
320-94692-15	GESPM101722-401	Total/NA	Air	3050B	636765
320-94692-17	GESPM101722-402	Total/NA	Air	3050B	636765
320-94692-19	GESPM101722-403	Total/NA	Air	3050B	636765
320-94692-21	GESPM101722-404	Total/NA	Air	3050B	636765
320-94692-23	GESPM101722-405	Total/NA	Air	3050B	636765
320-94692-25	GESPM101722-406	Total/NA	Air	3050B	636765
MB 320-636765/1-B	Method Blank	Total/NA	Air	3050B	636765
LCS 320-636765/2-B	Lab Control Sample	Total/NA	Air	3050B	636765
LCSD 320-636765/3-B	Lab Control Sample Dup	Total/NA	Air	3050B	636765

Analysis Batch: 636896

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-94692-1	GESPM100322-394	Total/NA	Air	6020	636772
320-94692-3	GESPM100322-395	Total/NA	Air	6020	636772
320-94692-5	GESPM100322-396	Total/NA	Air	6020	636772
320-94692-7	GESPM101722-397	Total/NA	Air	6020	636772
320-94692-9	GESPM101722-398	Total/NA	Air	6020	636772
320-94692-11	GESPM101722-399	Total/NA	Air	6020	636772
320-94692-13	GESPM101722-400	Total/NA	Air	6020	636772
320-94692-15	GESPM101722-401	Total/NA	Air	6020	636772
320-94692-17	GESPM101722-402	Total/NA	Air	6020	636772
320-94692-19	GESPM101722-403	Total/NA	Air	6020	636772
320-94692-21	GESPM101722-404	Total/NA	Air	6020	636772
320-94692-23	GESPM101722-405	Total/NA	Air	6020	636772
320-94692-25	GESPM101722-406	Total/NA	Air	6020	636772

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QC Association Summary

Client: GES-AIS LLC

Job ID: 320-94692-1

Project/Site: Hunters Point, Parcel B, Removal Site Evaluation

Metals (Continued)

Analysis Batch: 636896 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 320-636765/1-B	Method Blank	Total/NA	Air	6020	636772
LCS 320-636765/2-B	Lab Control Sample	Total/NA	Air	6020	636772
LCSD 320-636765/3-B	Lab Control Sample Dup	Total/NA	Air	6020	636772

General Chemistry

Pre Prep Batch: 636830

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-94692-2	GESTSP100322-394	Total/NA	Air	Filter to Air	8
320-94692-4	GESTSP100322-395	Total/NA	Air	Filter to Air	9
320-94692-6	GESTSP100322-396	Total/NA	Air	Filter to Air	10
320-94692-8	GESTSP101722-397	Total/NA	Air	Filter to Air	11
320-94692-10	GESTSP101722-398	Total/NA	Air	Filter to Air	12
320-94692-12	GESTSP101722-399	Total/NA	Air	Filter to Air	13
320-94692-14	GESTSP101722-400	Total/NA	Air	Filter to Air	14
320-94692-16	GESTSP101722-401	Total/NA	Air	Filter to Air	
320-94692-18	GESTSP101722-402	Total/NA	Air	Filter to Air	
320-94692-20	GESTSP101722-403	Total/NA	Air	Filter to Air	
320-94692-22	GESTSP101722-404	Total/NA	Air	Filter to Air	
320-94692-24	GESTSP101722-405	Total/NA	Air	Filter to Air	
320-94692-26	GESTSP101722-406	Total/NA	Air	Filter to Air	

Analysis Batch: 636847

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-94692-1	GESPM100322-394	Total/NA	Air	PM10	
320-94692-3	GESPM100322-395	Total/NA	Air	PM10	
320-94692-5	GESPM100322-396	Total/NA	Air	PM10	
320-94692-7	GESPM101722-397	Total/NA	Air	PM10	
320-94692-9	GESPM101722-398	Total/NA	Air	PM10	
320-94692-11	GESPM101722-399	Total/NA	Air	PM10	
320-94692-13	GESPM101722-400	Total/NA	Air	PM10	
320-94692-15	GESPM101722-401	Total/NA	Air	PM10	
320-94692-17	GESPM101722-402	Total/NA	Air	PM10	
320-94692-19	GESPM101722-403	Total/NA	Air	PM10	
320-94692-21	GESPM101722-404	Total/NA	Air	PM10	
320-94692-23	GESPM101722-405	Total/NA	Air	PM10	
320-94692-25	GESPM101722-406	Total/NA	Air	PM10	

Analysis Batch: 637705

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-94692-2	GESTSP100322-394	Total/NA	Air	40CFR50 App B	636830
320-94692-4	GESTSP100322-395	Total/NA	Air	40CFR50 App B	636830
320-94692-6	GESTSP100322-396	Total/NA	Air	40CFR50 App B	636830
320-94692-8	GESTSP101722-397	Total/NA	Air	40CFR50 App B	636830
320-94692-10	GESTSP101722-398	Total/NA	Air	40CFR50 App B	636830
320-94692-12	GESTSP101722-399	Total/NA	Air	40CFR50 App B	636830
320-94692-14	GESTSP101722-400	Total/NA	Air	40CFR50 App B	636830
320-94692-16	GESTSP101722-401	Total/NA	Air	40CFR50 App B	636830
320-94692-18	GESTSP101722-402	Total/NA	Air	40CFR50 App B	636830
320-94692-20	GESTSP101722-403	Total/NA	Air	40CFR50 App B	636830
320-94692-22	GESTSP101722-404	Total/NA	Air	40CFR50 App B	636830

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QC Association Summary

Client: GES-AIS LLC

Project/Site: Hunters Point, Parcel B, Removal Site Evaluation

Job ID: 320-94692-1

General Chemistry (Continued)

Analysis Batch: 637705 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-94692-24	GESTSP101722-405	Total/NA	Air	40CFR50 App B	636830
320-94692-26	GESTSP101722-406	Total/NA	Air	40CFR50 App B	636830

Lab Chronicle

Client: GES-AIS LLC

Job ID: 320-94692-1

Project/Site: Hunters Point, Parcel B, Removal Site Evaluation

Client Sample ID: GESPM100322-394

Date Collected: 11/14/22 08:00

Date Received: 11/28/22 10:30

Lab Sample ID: 320-94692-1

Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Pre Prep	Filter to Air					636765	12/02/22 05:08	[REDACTED]	EET SAC
Total/NA	Prep	3050B			0.08333 Sample	100 mL	636772	12/02/22 06:00	[REDACTED]	EET SAC
Total/NA	Analysis	6020		1			636896	12/02/22 12:07	[REDACTED]	EET SAC
Total/NA	Analysis	PM10		1	0 g	-0.0001 g	636847	11/30/22 07:30	[REDACTED]	EET SAC

Client Sample ID: GESTSP100322-394

Date Collected: 11/14/22 08:00

Date Received: 11/28/22 10:30

Lab Sample ID: 320-94692-2

Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Pre Prep	Filter to Air					636830	12/02/22 09:45	[REDACTED]	EET SAC
Total/NA	Analysis	40CFR50 App B		1			637705	12/06/22 10:01	[REDACTED]	EET SAC

Client Sample ID: GESPM100322-395

Date Collected: 11/15/22 07:44

Date Received: 11/28/22 10:30

Lab Sample ID: 320-94692-3

Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Pre Prep	Filter to Air					636765	12/02/22 05:08	[REDACTED]	EET SAC
Total/NA	Prep	3050B			0.08333 Sample	100 mL	636772	12/02/22 06:00	[REDACTED]	EET SAC
Total/NA	Analysis	6020		1			636896	12/02/22 12:10	[REDACTED]	EET SAC
Total/NA	Analysis	PM10		1	0 g	0.0270 g	636847	11/30/22 07:30	[REDACTED]	EET SAC

Client Sample ID: GESTSP100322-395

Date Collected: 11/15/22 07:44

Date Received: 11/28/22 10:30

Lab Sample ID: 320-94692-4

Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Pre Prep	Filter to Air					636830	12/02/22 09:45	[REDACTED]	EET SAC
Total/NA	Analysis	40CFR50 App B		1			637705	12/06/22 10:01	[REDACTED]	EET SAC

Client Sample ID: GESPM100322-396

Date Collected: 11/15/22 07:16

Date Received: 11/28/22 10:30

Lab Sample ID: 320-94692-5

Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Pre Prep	Filter to Air					636765	12/02/22 05:08	[REDACTED]	EET SAC
Total/NA	Prep	3050B			0.08333 Sample	100 mL	636772	12/02/22 06:00	[REDACTED]	EET SAC
Total/NA	Analysis	6020		1			636896	12/02/22 12:14	[REDACTED]	EET SAC
Total/NA	Analysis	PM10		1	0 g	0.0217 g	636847	11/30/22 07:30	[REDACTED]	EET SAC

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Lab Chronicle

Client: GES-AIS LLC

Job ID: 320-94692-1

Project/Site: Hunters Point, Parcel B, Removal Site Evaluation

Client Sample ID: GESTSP100322-396

Date Collected: 11/15/22 07:16

Date Received: 11/28/22 10:30

Lab Sample ID: 320-94692-6

Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Pre Prep	Filter to Air					636830	12/02/22 09:45	[REDACTED]	EET SAC
Total/NA	Analysis	40CFR50 App B		1			637705	12/06/22 10:01	[REDACTED]	EET SAC

Client Sample ID: GESPM101722-397

Lab Sample ID: 320-94692-7

Matrix: Air

Date Collected: 11/15/22 07:31

Date Received: 11/28/22 10:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Pre Prep	Filter to Air					636765	12/02/22 05:08	[REDACTED]	EET SAC
Total/NA	Prep	3050B			0.08333 Sample	100 mL	636772	12/02/22 06:00	[REDACTED]	EET SAC
Total/NA	Analysis	6020		1			636896	12/02/22 12:17	[REDACTED]	EET SAC
Total/NA	Analysis	PM10		1	0 g	0.0237 g	636847	11/30/22 07:30	[REDACTED]	EET SAC

Client Sample ID: GESTSP101722-397

Lab Sample ID: 320-94692-8

Matrix: Air

Date Collected: 11/15/22 07:31

Date Received: 11/28/22 10:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Pre Prep	Filter to Air					636830	12/02/22 09:45	[REDACTED]	EET SAC
Total/NA	Analysis	40CFR50 App B		1			637705	12/06/22 10:01	[REDACTED]	EET SAC

Client Sample ID: GESPM101722-398

Lab Sample ID: 320-94692-9

Matrix: Air

Date Collected: 11/16/22 07:42

Date Received: 11/28/22 10:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Pre Prep	Filter to Air					636765	12/02/22 05:08	[REDACTED]	EET SAC
Total/NA	Prep	3050B			0.08333 Sample	100 mL	636772	12/02/22 06:00	[REDACTED]	EET SAC
Total/NA	Analysis	6020		1			636896	12/02/22 12:20	[REDACTED]	EET SAC
Total/NA	Analysis	PM10		1	0 g	0.0359 g	636847	11/30/22 07:30	[REDACTED]	EET SAC

Client Sample ID: GESTSP101722-398

Lab Sample ID: 320-94692-10

Matrix: Air

Date Collected: 11/16/22 07:42

Date Received: 11/28/22 10:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Pre Prep	Filter to Air					636830	12/02/22 09:45	[REDACTED]	EET SAC
Total/NA	Analysis	40CFR50 App B		1			637705	12/06/22 10:01	[REDACTED]	EET SAC

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Lab Chronicle

Client: GES-AIS LLC

Job ID: 320-94692-1

Project/Site: Hunters Point, Parcel B, Removal Site Evaluation

Client Sample ID: GESPM101722-399

Lab Sample ID: 320-94692-11

Matrix: Air

Date Collected: 11/16/22 07:16

Date Received: 11/28/22 10:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Pre Prep	Filter to Air					636765	12/02/22 05:08	[REDACTED]	EET SAC
Total/NA	Prep	3050B			0.08333 Sample	100 mL	636772	12/02/22 06:00	[REDACTED]	EET SAC
Total/NA	Analysis	6020		1			636896	12/02/22 12:24	[REDACTED]	EET SAC
Total/NA	Analysis	PM10		1	0 g	0.0248 g	636847	11/30/22 07:30	[REDACTED]	EET SAC

Client Sample ID: GESTSP101722-399

Lab Sample ID: 320-94692-12

Matrix: Air

Date Collected: 11/16/22 07:16

Date Received: 11/28/22 10:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Pre Prep	Filter to Air					636830	12/02/22 09:45	[REDACTED]	EET SAC
Total/NA	Analysis	40CFR50 App B		1			637705	12/06/22 10:01	[REDACTED]	EET SAC

Client Sample ID: GESPM101722-400

Lab Sample ID: 320-94692-13

Matrix: Air

Date Collected: 11/16/22 07:30

Date Received: 11/28/22 10:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Pre Prep	Filter to Air					636765	12/02/22 05:08	[REDACTED]	EET SAC
Total/NA	Prep	3050B			0.08333 Sample	100 mL	636772	12/02/22 06:00	[REDACTED]	EET SAC
Total/NA	Analysis	6020		1			636896	12/02/22 12:33	[REDACTED]	EET SAC
Total/NA	Analysis	PM10		1	0 g	0.0283 g	636847	11/30/22 07:30	[REDACTED]	EET SAC

Client Sample ID: GESTSP101722-400

Lab Sample ID: 320-94692-14

Matrix: Air

Date Collected: 11/16/22 07:30

Date Received: 11/28/22 10:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Pre Prep	Filter to Air					636830	12/02/22 09:45	[REDACTED]	EET SAC
Total/NA	Analysis	40CFR50 App B		1			637705	12/06/22 10:01	[REDACTED]	EET SAC

Client Sample ID: GESPM101722-401

Lab Sample ID: 320-94692-15

Matrix: Air

Date Collected: 11/17/22 07:31

Date Received: 11/28/22 10:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Pre Prep	Filter to Air					636765	12/02/22 05:08	[REDACTED]	EET SAC
Total/NA	Prep	3050B			0.08333 Sample	100 mL	636772	12/02/22 06:00	[REDACTED]	EET SAC
Total/NA	Analysis	6020		1			636896	12/02/22 12:37	[REDACTED]	EET SAC
Total/NA	Analysis	PM10		1	0 g	0.0268 g	636847	11/30/22 07:30	[REDACTED]	EET SAC

Eurofins Sacramento

Lab Chronicle

Client: GES-AIS LLC

Job ID: 320-94692-1

Project/Site: Hunters Point, Parcel B, Removal Site Evaluation

Client Sample ID: GESTSP101722-401

Lab Sample ID: 320-94692-16

Matrix: Air

Date Collected: 11/17/22 07:31

Date Received: 11/28/22 10:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Pre Prep	Filter to Air					636830	12/02/22 09:45	[REDACTED]	EET SAC
Total/NA	Analysis	40CFR50 App B		1			637705	12/06/22 10:01	[REDACTED]	EET SAC

Client Sample ID: GESPM101722-402

Lab Sample ID: 320-94692-17

Matrix: Air

Date Collected: 11/17/22 07:15

Date Received: 11/28/22 10:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Pre Prep	Filter to Air					636765	12/02/22 05:08	[REDACTED]	EET SAC
Total/NA	Prep	3050B			0.08333 Sample	100 mL	636772	12/02/22 06:00	[REDACTED]	EET SAC
Total/NA	Analysis	6020		1			636896	12/02/22 12:40	[REDACTED]	EET SAC
Total/NA	Analysis	PM10		1	0 g	0.0252 g	636847	11/30/22 07:30	[REDACTED]	EET SAC

Client Sample ID: GESTSP101722-402

Lab Sample ID: 320-94692-18

Matrix: Air

Date Collected: 11/17/22 07:15

Date Received: 11/28/22 10:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Pre Prep	Filter to Air					636830	12/02/22 09:45	[REDACTED]	EET SAC
Total/NA	Analysis	40CFR50 App B		1			637705	12/06/22 10:01	[REDACTED]	EET SAC

Client Sample ID: GESPM101722-403

Lab Sample ID: 320-94692-19

Matrix: Air

Date Collected: 11/17/22 07:42

Date Received: 11/28/22 10:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Pre Prep	Filter to Air					636765	12/02/22 05:08	[REDACTED]	EET SAC
Total/NA	Prep	3050B			0.08333 Sample	100 mL	636772	12/02/22 06:00	[REDACTED]	EET SAC
Total/NA	Analysis	6020		1			636896	12/02/22 12:43	[REDACTED]	EET SAC
Total/NA	Analysis	PM10		1	0 g	0.0281 g	636847	11/30/22 07:30	[REDACTED]	EET SAC

Client Sample ID: GESTSP101722-403

Lab Sample ID: 320-94692-20

Matrix: Air

Date Collected: 11/17/22 07:42

Date Received: 11/28/22 10:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Pre Prep	Filter to Air					636830	12/02/22 09:45	[REDACTED]	EET SAC
Total/NA	Analysis	40CFR50 App B		1			637705	12/06/22 10:01	[REDACTED]	EET SAC

Eurofins Sacramento

Lab Chronicle

Client: GES-AIS LLC

Job ID: 320-94692-1

Project/Site: Hunters Point, Parcel B, Removal Site Evaluation

Client Sample ID: GESPM101722-404

Lab Sample ID: 320-94692-21

Matrix: Air

Date Collected: 11/17/22 15:00

Date Received: 11/28/22 10:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Pre Prep	Filter to Air					636765	12/02/22 05:08	[REDACTED]	EET SAC
Total/NA	Prep	3050B			0.08333 Sample	100 mL	636772	12/02/22 06:00	[REDACTED]	EET SAC
Total/NA	Analysis	6020		1			636896	12/02/22 12:46	[REDACTED]	EET SAC
Total/NA	Analysis	PM10		1	0 g	0.0146 g	636847	11/30/22 07:30	[REDACTED]	EET SAC

Client Sample ID: GESTSP101722-404

Lab Sample ID: 320-94692-22

Matrix: Air

Date Collected: 11/17/22 15:00

Date Received: 11/28/22 10:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Pre Prep	Filter to Air					636830	12/02/22 09:45	[REDACTED]	EET SAC
Total/NA	Analysis	40CFR50 App B		1			637705	12/06/22 10:01	[REDACTED]	EET SAC

Client Sample ID: GESPM101722-405

Lab Sample ID: 320-94692-23

Matrix: Air

Date Collected: 11/17/22 14:55

Date Received: 11/28/22 10:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Pre Prep	Filter to Air					636765	12/02/22 05:08	[REDACTED]	EET SAC
Total/NA	Prep	3050B			0.08333 Sample	100 mL	636772	12/02/22 06:00	[REDACTED]	EET SAC
Total/NA	Analysis	6020		1			636896	12/02/22 12:50	[REDACTED]	EET SAC
Total/NA	Analysis	PM10		1	0 g	0.0092 g	636847	11/30/22 07:30	[REDACTED]	EET SAC

Client Sample ID: GESTSP101722-405

Lab Sample ID: 320-94692-24

Matrix: Air

Date Collected: 11/17/22 14:55

Date Received: 11/28/22 10:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Pre Prep	Filter to Air					636830	12/02/22 09:45	[REDACTED]	EET SAC
Total/NA	Analysis	40CFR50 App B		1			637705	12/06/22 10:01	[REDACTED]	EET SAC

Client Sample ID: GESPM101722-406

Lab Sample ID: 320-94692-25

Matrix: Air

Date Collected: 11/17/22 15:00

Date Received: 11/28/22 10:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Pre Prep	Filter to Air					636765	12/02/22 05:08	[REDACTED]	EET SAC
Total/NA	Prep	3050B			0.08333 Sample	100 mL	636772	12/02/22 06:00	[REDACTED]	EET SAC
Total/NA	Analysis	6020		1			636896	12/02/22 12:53	[REDACTED]	EET SAC
Total/NA	Analysis	PM10		1	0 g	0.0108 g	636847	11/30/22 07:30	[REDACTED]	EET SAC

Eurofins Sacramento

Lab Chronicle

Client: GES-AIS LLC

Job ID: 320-94692-1

Project/Site: Hunters Point, Parcel B, Removal Site Evaluation

Client Sample ID: GESTSP101722-406

Lab Sample ID: 320-94692-26

Matrix: Air

Date Collected: 11/17/22 15:00

Date Received: 11/28/22 10:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Pre Prep	Filter to Air					636830	12/02/22 09:45	[REDACTED]	EET SAC
Total/NA	Analysis	40CFR50 App B		1			637705	12/06/22 10:01	[REDACTED]	EET SAC

Laboratory References:

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

Accreditation/Certification Summary

Client: GES-AIS LLC

Project/Site: Hunters Point, Parcel B, Removal Site Evaluation

Job ID: 320-94692-1

Laboratory: Eurofins Sacramento

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
ANAB	Dept. of Defense ELAP	L2468	01-20-24
Oregon	NELAP	4040	01-29-23

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

Analysis Method	Prep Method	Matrix	Analyte
40CFR50 App B		Air	Total Suspended Particulates
PM10		Air	Particulate Matter as PM 10

1

2

3

4

5

6

7

8

9

10

11

12

13

14

Eurofins Sacramento

Method Summary

Client: GES-AIS LLC

Project/Site: Hunters Point, Parcel B, Removal Site Evaluation

Job ID: 320-94692-1

Method	Method Description	Protocol	Laboratory
6020	Metals (ICP/MS)	SW846	EET SAC
40CFR50 App B	Suspended Particulate Matter in Ambient Air	EPA	EET SAC
PM10	Particulate Matter	40CFR50J	EET SAC
3050B	Preparation, Metals	SW846	EET SAC
Filter to Air	Filter to Air volume ratio	None	EET SAC

Protocol References:

40CFR50J = 40 CFR Part 50 Appendix J

EPA = US Environmental Protection Agency

None = None

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

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

Sample Summary

Client: GES-AIS LLC

Job ID: 320-94692-1

Project/Site: Hunters Point, Parcel B, Removal Site Evaluation

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	
320-94692-1	GESPM100322-394	Air	11/14/22 08:00	11/28/22 10:30	1
320-94692-2	GESTSP100322-394	Air	11/14/22 08:00	11/28/22 10:30	2
320-94692-3	GESPM100322-395	Air	11/15/22 07:44	11/28/22 10:30	3
320-94692-4	GESTSP100322-395	Air	11/15/22 07:44	11/28/22 10:30	4
320-94692-5	GESPM100322-396	Air	11/15/22 07:16	11/28/22 10:30	5
320-94692-6	GESTSP100322-396	Air	11/15/22 07:16	11/28/22 10:30	6
320-94692-7	GESPM101722-397	Air	11/15/22 07:31	11/28/22 10:30	7
320-94692-8	GESTSP101722-397	Air	11/15/22 07:31	11/28/22 10:30	8
320-94692-9	GESPM101722-398	Air	11/16/22 07:42	11/28/22 10:30	9
320-94692-10	GESTSP101722-398	Air	11/16/22 07:42	11/28/22 10:30	10
320-94692-11	GESPM101722-399	Air	11/16/22 07:16	11/28/22 10:30	11
320-94692-12	GESTSP101722-399	Air	11/16/22 07:16	11/28/22 10:30	12
320-94692-13	GESPM101722-400	Air	11/16/22 07:30	11/28/22 10:30	13
320-94692-14	GESTSP101722-400	Air	11/16/22 07:30	11/28/22 10:30	14
320-94692-15	GESPM101722-401	Air	11/17/22 07:31	11/28/22 10:30	
320-94692-16	GESTSP101722-401	Air	11/17/22 07:31	11/28/22 10:30	
320-94692-17	GESPM101722-402	Air	11/17/22 07:15	11/28/22 10:30	
320-94692-18	GESTSP101722-402	Air	11/17/22 07:15	11/28/22 10:30	
320-94692-19	GESPM101722-403	Air	11/17/22 07:42	11/28/22 10:30	
320-94692-20	GESTSP101722-403	Air	11/17/22 07:42	11/28/22 10:30	
320-94692-21	GESPM101722-404	Air	11/17/22 15:00	11/28/22 10:30	
320-94692-22	GESTSP101722-404	Air	11/17/22 15:00	11/28/22 10:30	
320-94692-23	GESPM101722-405	Air	11/17/22 14:55	11/28/22 10:30	
320-94692-24	GESTSP101722-405	Air	11/17/22 14:55	11/28/22 10:30	
320-94692-25	GESPM101722-406	Air	11/17/22 15:00	11/28/22 10:30	
320-94692-26	GESTSP101722-406	Air	11/17/22 15:00	11/28/22 10:30	

**CHAIN-OF-CUSTODY
RECORD**

Gilbane Federal
2300 Clayton Road, Suite 1050, Concord, CA 94520

COC # MC112322AIRB



Project Name: Hunters Point Shipyard, Parcel B Removal Site Evaluation	Laboratory: EUROFINS ENVIRONMENT TESTING NORTHERN CALIFORNIA, LLC (EETN)	Event: Parcel B Air Monitoring
Project Number: J310000900	POC: [REDACTED]	
WBS Code: J310000900	Ship to: 880 Riverside Parkway, West Sacramento, CA 95605	

Comments:						<table border="1"> <tr><td>Code</td><td>Matrix</td></tr> <tr><td>A</td><td>Air</td></tr> <tr><td>AQ</td><td>Air Quality Control Matrix</td></tr> <tr><td>Code</td><td>Container/Preservative</td></tr> <tr><td>1</td><td>1x 250 mL Plastic, 4 Degrees C</td></tr> <tr><td>1</td><td>1x Envelope, None</td></tr> </table>		Code	Matrix	A	Air	AQ	Air Quality Control Matrix	Code	Container/Preservative	1	1x 250 mL Plastic, 4 Degrees C	1	1x Envelope, None			
Code	Matrix																					
A	Air																					
AQ	Air Quality Control Matrix																					
Code	Container/Preservative																					
1	1x 250 mL Plastic, 4 Degrees C																					
1	1x Envelope, None																					
Equipment:						 320-94692 Chain of Custody																
Event: Parcel B Air Monitoring																						
	Sample ID	Matrix	Date	Time	Samp Init.			Location ID	Sample Type	Depth (ft bgs)	Comments											
									Top - Bottom	Cooler												
1	GESPM100322-394	AQ	11/14/2022	0800	[REDACTED]	X X		FIELDQC	FB1	0.00 0.00	1											
2	GESTSP100322-394	AQ	11/14/2022	0800	[REDACTED]	X		FIELDQC	FB1	0.00 0.00	1											
3	GESPM100322-395	A	11/15/2022	0744	[REDACTED]	X X	[REDACTED]	MSB01	N1	0.00 0.00	1											
4	GESTSP100322-395	A	11/15/2022	0744	[REDACTED]	X	[REDACTED]	MSB01	N1	0.00 0.00	1											
5	GESPM100322-396	A	11/15/2022	0716	[REDACTED]	X X	[REDACTED]	MSB02	N1	0.00 0.00	1											
6	GESTSP100322-396	A	11/15/2022	0716	[REDACTED]	X	[REDACTED]	MSB02	N1	0.00 0.00	1											
7	GESPM101722-397	A	11/15/2022	0731	[REDACTED]	X X	[REDACTED]	MSB113A	N1	0.00 0.00	1											
8	GESTSP101722-397	A	11/15/2022	0731	[REDACTED]	X	[REDACTED]	MSB113A	N1	0.00 0.00	1											
9					[REDACTED]																	
10					[REDACTED]																	
Turnaround Time: 5 days																						

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time	Shipping Date / Carrier / Airbill Number
[REDACTED]	11/23/22	1300	Kodex	11/23/22	1300	Shipping Date: 11/23/2022
			[REDACTED]	11/28/22	1030	TRK: 7705 0203 3585
Received by Laboratory: (Signature, Date, Time) & condition						

GES.Navy COC Field
November 14, 2022

21, 5°c

Page 1 of 1

**CHAIN-OF-CUSTODY
RECORD**

Gilbane Federal
2300 Clayton Road, Suite 1050, Concord, CA 94520

COC # MC112322AIRB



Project Name: Hunters Point Shipyard, Parcel B Removal Site Evaluation					Laboratory: EUROFINS ENVIRONMENT TESTING NORTHERN CALIFORNIA, LLC (EETN)					Event: Parcel B Air Monitoring																																																																																																																																					
Project Number: J310000900					POC: [REDACTED]																																																																																																																																										
WBS Code: J310000900					Ship to: 880 Riverside Parkway, West Sacramento, CA 95605																																																																																																																																										
<p>Comments:</p> <p>Equipment:</p>					<table border="1"> <tr> <td>Code</td> <td>Matrix</td> </tr> <tr> <td>A</td> <td>Air</td> </tr> <tr> <td colspan="2">Container/Preservative</td> </tr> <tr> <td>1</td> <td>1x 250-mL Plastic, 4 Degrees C</td> </tr> <tr> <td>1</td> <td>1x Envelope, None</td> </tr> </table>					Code	Matrix	A	Air	Container/Preservative		1	1x 250-mL Plastic, 4 Degrees C	1	1x Envelope, None																																																																																																																												
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<table border="1"> <thead> <tr> <th colspan="5">Analytical Test Method</th> <th colspan="5">Location ID</th> <th>Sample Type</th> <th>Depth (ft bgs)</th> <th>Cooler</th> <th>Comments</th> </tr> <tr> <th></th> <th>CAIR - Air PM10</th> <th>NDS00 - Air TSP</th> <th>SW6020 - Air Pb Mn</th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th>Top - Bottom</th> <th></th> <th></th> </tr> </thead> <tbody> <tr> <td>1</td> <td>1</td> <td>1</td> <td>1</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>0.00</td> <td>0.00</td> <td>1</td> </tr> <tr> <td>2</td> <td></td> <td></td> <td></td> <td>X</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>0.00</td> <td>0.00</td> <td>1</td> </tr> <tr> <td>3</td> <td></td> <td></td> <td>X</td> <td>X</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>0.00</td> <td>0.00</td> <td>1</td> </tr> <tr> <td>4</td> <td></td> <td></td> <td>X</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>0.00</td> <td>0.00</td> <td>1</td> </tr> <tr> <td>5</td> <td></td> <td></td> <td>X</td> <td>X</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>0.00</td> <td>0.00</td> <td>1</td> </tr> <tr> <td>6</td> <td></td> <td></td> <td>X</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>0.00</td> <td>0.00</td> <td>1</td> </tr> <tr> <td>7</td> <td></td> </tr> <tr> <td>8</td> <td></td> </tr> </tbody> </table>										Analytical Test Method					Location ID					Sample Type	Depth (ft bgs)	Cooler	Comments		CAIR - Air PM10	NDS00 - Air TSP	SW6020 - Air Pb Mn							Top - Bottom			1	1	1	1							0.00	0.00	1	2				X						0.00	0.00	1	3			X	X						0.00	0.00	1	4			X							0.00	0.00	1	5			X	X						0.00	0.00	1	6			X							0.00	0.00	1	7													8													Turnaround Time: 5 days		
Analytical Test Method					Location ID					Sample Type	Depth (ft bgs)	Cooler	Comments																																																																																																																																		
	CAIR - Air PM10	NDS00 - Air TSP	SW6020 - Air Pb Mn							Top - Bottom																																																																																																																																					
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Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time	Shipping Date / Carrier / Airbill Number
[REDACTED]	11/23/22	1300	FedEx	11/23/22	1300	Shipping Date: 11/23/2022
			[REDACTED]	11/28/22	1030	FEDEX 7705 0203 3585
						Received by Laboratory: (Signature, Date, Time) & condition

**CHAIN-OF-CUSTODY
RECORD**

Gilbane Federal

2300 Clayton Road, Suite 1050, Concord, CA 94520

COC # MC112322AIRB



Project Name: Hunters Point Shipyard, Parcel B Removal Site Evaluation	Laboratory: EUROFINS ENVIRONMENT TESTING NORTHERN CALIFORNIA, LLC (EETN)	Event: Parcel B Air Monitoring																			
Project Number: J310000900	POC: [REDACTED]																				
WBS Code: J310000900	Ship to: 880 Riverside Parkway, West Sacramento, CA 95605																				
Comments: Equipment: Event: Parcel B Air Monitoring																					
<table border="1"> <thead> <tr> <th colspan="2">Analytical Test Method</th> <th rowspan="2">Code</th> <th rowspan="2">Matrix</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>1</td> <td>A</td> <td>Air</td> </tr> <tr> <th colspan="2"></th> <th>Code</th> <th>Container/Preservative</th> </tr> <tr> <td>1</td> <td>1</td> <td>1</td> <td>1x 250-mL Plastic, 4 Degrees C</td> </tr> <tr> <td>1</td> <td>1</td> <td>1</td> <td>1x Envelope, None</td> </tr> </tbody> </table>		Analytical Test Method		Code	Matrix	1	1	A	Air			Code	Container/Preservative	1	1	1	1x 250-mL Plastic, 4 Degrees C	1	1	1	1x Envelope, None
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Sample ID	Matrix	Date	Time	Samp Init.	Location ID	Sample Type	Depth (ft bgs)		Cooler	Comments											
1 GESPM101722-401	A	11/17/2022	0731	X X	MSB01	N1	0.00	0.00	1												
2 GESTSP101722-401	A	11/17/2022	0731	X	MSB01	N1	0.00	0.00	1												
3 GESPM101722-402	A	11/17/2022	0715	X X	MSB02	N1	0.00	0.00	1												
4 GESTSP101722-402	A	11/17/2022	0715	X	MSB02	N1	0.00	0.00	1												
5 GESPM101722-403	A	11/17/2022	0742	X X	MSB113A	N1	0.00	0.00	1												
6 GESTSP101722-403	A	11/17/2022	0742	X	MSB113A	N1	0.00	0.00	1												
7																					
8																					
Turnaround Time: 5 days																					

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time	Shipping Date / Carrier / Airbill Number
[REDACTED]	11/23/22	1300	[REDACTED] Fortex	11/23/22	1300	Shipping Date: 11/23/2022
			[REDACTED]	11/23/22	1030	FEDEX 7705 0203 3585
						Received by Laboratory: (Signature, Date, Time) & condition
						21.5°C

**CHAIN-OF-CUSTODY
RECORD**

Gilbane Federal
[REDACTED]
2300 Clayton Road, Suite 1050, Concord, CA 94520

COC # MC112322AIRB



Project Name: Hunters Point Shipyard, Parcel B Removal Site Evaluation				Laboratory: EUROFINS ENVIRONMENT TESTING NORTHERN CALIFORNIA, LLC (EETN)				Event: Parcel B Air Monitoring																																																																																										
Project Number: J310000900				POC: Laura Turpen Laura.Turpen@et.eurofinsus.com																																																																																														
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[REDACTED]	11/23/22	1300	[REDACTED] FedEx [REDACTED]	11/23/22	1300	Shipping Date: 11/23/2022
						FEDEX 7705 0203 3585
						Received by Laboratory: (Signature, Date, Time) & condition

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COC # MC112322AIRB

VOLUME (M3)

GESPM100322-394	11/14/2022	0800	--
GESTSP100322-394	11/14/2022	0800	--
GESPM100322-395	11/15/2022	0744	VOLUME: 1617.39 (M3)
GESTSP100322-395	11/15/2022	0744	VOLUME: 1764.80 (M3)
GESPM100322-396	11/15/2022	0716	VOLUME: 1612.86 (M3)
GESTSP100322-396	11/15/2022	0716	VOLUME: 1733.28 (M3)
GESPM101722-397	11/15/2022	0731	VOLUME: 1585.58 (M3)
GESTSP101722-397	11/15/2022	0731	VOLUME: 1563.88 (M3)
GESPM101722-398	11/16/2022	0742	VOLUME: 1636.05 (M3)
GESTSP101722-398	11/16/2022	0742	VOLUME: 1744.39 (M3)
GESPM101722-399	11/16/2022	0716	VOLUME: 1629.12 (M3)
GESTSP101722-399	11/16/2022	0716	VOLUME: 1744.77 (M3)
GESPM101722-400	11/16/2022	0730	VOLUME: 1595.95 (M3)
GESTSP101722-400	11/16/2022	0730	VOLUME: 1574.95 (M3)
GESPM101722-401	11/17/2022	0731	VOLUME: 1634.27 (M3)
GESTSP101722-401	11/17/2022	0731	VOLUME: 1744.18 (M3)
GESPM101722-402	11/17/2022	0715	VOLUME: 1630.45 (M3)
GESTSP101722-402	11/17/2022	0715	VOLUME: 1743.46 (M3)
GESPM101722-403	11/17/2022	0742	VOLUME: 1606.86 (M3)
GESTSP101722-403	11/17/2022	0742	VOLUME: 1586.98 (M3)
GESPM101722-404	11/17/2022	1500	VOLUME: 507.01 (M3)
GESTSP101722-404	11/17/2022	1500	VOLUME: 542.45 (M3)
GESPM101722-405	11/17/2022	1455	VOLUME: 527.41 (M3)
GESTSP101722-405	11/17/2022	1455	VOLUME: 561.74 (M3)
GESPM101722-406	11/17/2022	1500	VOLUME: 484.19 (M3)
GESTSP101722-406	11/17/2022	1500	VOLUME: 478.77 (M3)

Login Sample Receipt Checklist

Client: GES-AIS LLC

Job Number: 320-94692-1

Login Number: 94692

List Source: Eurofins Sacramento

List Number: 1

Creator: [REDACTED]

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	Seal
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	False	Thermal preservation not required.
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

ANALYTICAL REPORT

PREPARED FOR

Attn: [REDACTED]

GES-AIS LLC
1501 W Fountainhead Parkway
Ste 550
Tempe, Arizona 85282

Generated 12/7/2022 3:49:21 PM

JOB DESCRIPTION

Hunters Point, Parcel B, Removal Site Evaluation

JOB NUMBER

320-94806-1

Eurofins Sacramento

Job Notes

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The data in the report relate to the field sample(s) as received by the laboratory and associated QC. All results have been reviewed and have been found to be compliant with laboratory and accreditation requirements, with the exception of the noted deviation(s). For questions, please contact the Project Manager.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Environment Testing Northern California, LLC Project Manager.

Authorization

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12/7/2022 3:49:21 PM

Authorized for release by
[REDACTED], Project Manager I
[REDACTED]
[REDACTED]

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Definitions/Glossary

Client: GES-AIS LLC

Project/Site: Hunters Point, Parcel B, Removal Site Evaluation

Job ID: 320-94806-1

Qualifiers

Metals

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

Glossary

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

Case Narrative

Client: GES-AIS LLC

Project/Site: Hunters Point, Parcel B, Removal Site Evaluation

Job ID: 320-94806-1

Job ID: 320-94806-1

Laboratory: Eurofins Sacramento

Narrative

Job Narrative
320-94806-1

Comments

No additional comments.

Receipt

The samples were received on 12/1/2022 10:30 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 21.3° C.

Metals

Method PM10: The following sample in analytical batch 320-637785 was recorded with a negative net weight. No particulate loading on the filter or damage to the filter could be observed.

GESPM101722-407 (320-94806-1)

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

Detection Summary

Client: GES-AIS LLC

Job ID: 320-94806-1

Project/Site: Hunters Point, Parcel B, Removal Site Evaluation

Client Sample ID: GESPM101722-407

Lab Sample ID: 320-94806-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Manganese	0.00044	J	0.0012	0.00017	ug/m3 (Air)	1	6020		Total/NA

Client Sample ID: GESTSP101722-407

Lab Sample ID: 320-94806-2

No Detections.

Client Sample ID: GESPM101722-408

Lab Sample ID: 320-94806-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lead	0.0029		0.00072	0.00011	ug/m3 (Air)	1	6020		Total/NA
Manganese	0.0091		0.00072	0.00010	ug/m3 (Air)	1	6020		Total/NA
Particulate Matter as PM 10	22		0.30	0.30	ug/m3	1	PM10		Total/NA

Client Sample ID: GESTSP101722-408

Lab Sample ID: 320-94806-4

Analyte	Result	Qualifier	RL	RL	Unit	Dil Fac	D	Method	Prep Type
Total Suspended Particulates	21.0973		0.2776	0.2776	ug/m3 (Air)	1	40CFR50 App B		Total/NA

Client Sample ID: GESPM101722-409

Lab Sample ID: 320-94806-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lead	0.0021		0.00072	0.00011	ug/m3 (Air)	1	6020		Total/NA
Manganese	0.0064		0.00072	0.00010	ug/m3 (Air)	1	6020		Total/NA
Particulate Matter as PM 10	14		0.30	0.30	ug/m3	1	PM10		Total/NA

Client Sample ID: GESTSP101722-409

Lab Sample ID: 320-94806-6

Analyte	Result	Qualifier	RL	RL	Unit	Dil Fac	D	Method	Prep Type
Total Suspended Particulates	24.2249		0.2784	0.2784	ug/m3 (Air)	1	40CFR50 App B		Total/NA

Client Sample ID: GESPM101722-410

Lab Sample ID: 320-94806-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lead	0.0027		0.00074	0.00011	ug/m3 (Air)	1	6020		Total/NA
Manganese	0.0093		0.00074	0.00010	ug/m3 (Air)	1	6020		Total/NA
Particulate Matter as PM 10	19		0.31	0.31	ug/m3	1	PM10		Total/NA

Client Sample ID: GESTSP101722-410

Lab Sample ID: 320-94806-8

Analyte	Result	Qualifier	RL	RL	Unit	Dil Fac	D	Method	Prep Type
Total Suspended Particulates	23.1373		0.3093	0.3093	ug/m3 (Air)	1	40CFR50 App B		Total/NA

Client Sample ID: GESPM101722-411

Lab Sample ID: 320-94806-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lead	0.0026		0.00072	0.00011	ug/m3 (Air)	1	6020		Total/NA
Manganese	0.0074		0.00072	0.00010	ug/m3 (Air)	1	6020		Total/NA
Particulate Matter as PM 10	19		0.30	0.30	ug/m3	1	PM10		Total/NA

Client Sample ID: GESTSP101722-411

Lab Sample ID: 320-94806-10

Analyte	Result	Qualifier	RL	RL	Unit	Dil Fac	D	Method	Prep Type
Total Suspended Particulates	23.3327		0.2745	0.2745	ug/m3 (Air)	1	40CFR50 App B		Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Sacramento

Detection Summary

Client: GES-AIS LLC

Job ID: 320-94806-1

Project/Site: Hunters Point, Parcel B, Removal Site Evaluation

Client Sample ID: GESPM101722-412

Lab Sample ID: 320-94806-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lead	0.0021		0.00071	0.00011	ug/m3 (Air)	1		6020	Total/NA
Manganese	0.0060		0.00071	0.000099	ug/m3 (Air)	1		6020	Total/NA
Particulate Matter as PM 10	15		0.29	0.29	ug/m3	1		PM10	Total/NA

Client Sample ID: GESTSP101722-412

Lab Sample ID: 320-94806-12

Analyte	Result	Qualifier	RL	RL	Unit	Dil Fac	D	Method	Prep Type
Total Suspended Particulates	24.0736		0.2748	0.2748	ug/m3 (Air)	1		40CFR50 App B	Total/NA

Client Sample ID: GESPM101722-413

Lab Sample ID: 320-94806-13

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lead	0.0022		0.00073	0.00011	ug/m3 (Air)	1		6020	Total/NA
Manganese	0.0065		0.00073	0.00010	ug/m3 (Air)	1		6020	Total/NA
Particulate Matter as PM 10	16		0.30	0.30	ug/m3	1		PM10	Total/NA

Client Sample ID: GESTSP101722-413

Lab Sample ID: 320-94806-14

Analyte	Result	Qualifier	RL	RL	Unit	Dil Fac	D	Method	Prep Type
Total Suspended Particulates	26.5462		0.3072	0.3072	ug/m3 (Air)	1		40CFR50 App B	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Sacramento

Client Sample Results

Client: GES-AIS LLC

Job ID: 320-94806-1

Project/Site: Hunters Point, Parcel B, Removal Site Evaluation

Client Sample ID: GESPM101722-407

Lab Sample ID: 320-94806-1

Matrix: Air

Date Collected: 11/21/22 08:00

Date Received: 12/01/22 10:30

Sample Container: Folder/Filter

Method: SW846 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	ND		0.0012	0.00018	ug/m3 (Air)		12/06/22 05:49	12/06/22 15:38	1
Manganese	0.00044 J		0.0012	0.00017	ug/m3 (Air)		12/06/22 05:49	12/06/22 15:38	1

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Particulate Matter as PM 10 (40CFR50J PM10)	ND		0.50	0.50	ug/m3			12/02/22 15:30	1

Client Sample ID: GESTSP101722-407

Lab Sample ID: 320-94806-2

Matrix: Air

Date Collected: 11/21/22 08:00

Date Received: 12/01/22 10:30

Sample Container: Folder/Filter

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Particulates (EPA 40CFR50 App B)	ND		0.5000	0.5000	ug/m3 (Air)			12/02/22 15:30	1

Client Sample ID: GESPM101722-408

Lab Sample ID: 320-94806-3

Matrix: Air

Date Collected: 11/22/22 08:25

Date Received: 12/01/22 10:30

Sample Container: Folder/Filter

Method: SW846 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	0.0029		0.00072	0.00011	ug/m3 (Air)		12/06/22 05:49	12/06/22 15:41	1
Manganese	0.0091		0.00072	0.00010	ug/m3 (Air)		12/06/22 05:49	12/06/22 15:41	1

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Particulate Matter as PM 10 (40CFR50J PM10)	22		0.30	0.30	ug/m3			12/02/22 15:30	1

Client Sample ID: GESTSP101722-408

Lab Sample ID: 320-94806-4

Matrix: Air

Date Collected: 11/22/22 08:25

Date Received: 12/01/22 10:30

Sample Container: Folder/Filter

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Particulates (EPA 40CFR50 App B)	21.0973		0.2776	0.2776	ug/m3 (Air)			12/02/22 15:30	1

Client Sample ID: GESPM101722-409

Lab Sample ID: 320-94806-5

Matrix: Air

Date Collected: 11/22/22 08:00

Date Received: 12/01/22 10:30

Sample Container: Folder/Filter

Method: SW846 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	0.0021		0.00072	0.00011	ug/m3 (Air)		12/06/22 05:49	12/06/22 15:44	1
Manganese	0.0064		0.00072	0.00010	ug/m3 (Air)		12/06/22 05:49	12/06/22 15:44	1

Eurofins Sacramento

Client Sample Results

Client: GES-AIS LLC

Job ID: 320-94806-1

Project/Site: Hunters Point, Parcel B, Removal Site Evaluation

Client Sample ID: GESPM101722-409

Lab Sample ID: 320-94806-5

Matrix: Air

Date Collected: 11/22/22 08:00

Date Received: 12/01/22 10:30

Sample Container: Folder/Filter

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Particulate Matter as PM 10 (40CFR50J PM10)	14		0.30	0.30	ug/m3			12/02/22 15:30	1

Client Sample ID: GESTSP101722-409

Lab Sample ID: 320-94806-6

Matrix: Air

Date Collected: 11/22/22 08:00

Date Received: 12/01/22 10:30

Sample Container: Folder/Filter

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Particulates (EPA 40CFR50 App B)	24.2249		0.2784	0.2784	ug/m3 (Air)			12/02/22 15:30	1

Client Sample ID: GESPM101722-410

Lab Sample ID: 320-94806-7

Matrix: Air

Date Collected: 11/22/22 08:12

Date Received: 12/01/22 10:30

Sample Container: Folder/Filter

Method: SW846 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	0.0027		0.00074	0.00011	ug/m3 (Air)		12/06/22 05:49	12/06/22 15:48	1
Manganese	0.0093		0.00074	0.00010	ug/m3 (Air)		12/06/22 05:49	12/06/22 15:48	1

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Particulate Matter as PM 10 (40CFR50J PM10)	19		0.31	0.31	ug/m3			12/02/22 15:30	1

Client Sample ID: GESTSP101722-410

Lab Sample ID: 320-94806-8

Matrix: Air

Date Collected: 11/22/22 08:12

Date Received: 12/01/22 10:30

Sample Container: Folder/Filter

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Particulates (EPA 40CFR50 App B)	23.1373		0.3093	0.3093	ug/m3 (Air)			12/02/22 15:30	1

Client Sample ID: GESPM101722-411

Lab Sample ID: 320-94806-9

Matrix: Air

Date Collected: 11/23/22 09:05

Date Received: 12/01/22 10:30

Sample Container: Folder/Filter

Method: SW846 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	0.0026		0.00072	0.00011	ug/m3 (Air)		12/06/22 05:49	12/06/22 15:51	1
Manganese	0.0074		0.00072	0.00010	ug/m3 (Air)		12/06/22 05:49	12/06/22 15:51	1

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Particulate Matter as PM 10 (40CFR50J PM10)	19		0.30	0.30	ug/m3			12/02/22 15:30	1

Eurofins Sacramento

Client Sample Results

Client: GES-AIS LLC

Job ID: 320-94806-1

Project/Site: Hunters Point, Parcel B, Removal Site Evaluation

Client Sample ID: GESTSP101722-411

Lab Sample ID: 320-94806-10

Matrix: Air

Date Collected: 11/23/22 09:05

Date Received: 12/01/22 10:30

Sample Container: Folder/Filter

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Particulates (EPA 40CFR50 App B)	23.3327		0.2745	0.2745	ug/m3 (Air)			12/02/22 15:30	1

Client Sample ID: GESPM101722-412

Lab Sample ID: 320-94806-11

Matrix: Air

Date Collected: 11/23/22 09:00

Date Received: 12/01/22 10:30

Sample Container: Folder/Filter

Method: SW846 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	0.0021		0.00071	0.00011	ug/m3 (Air)			12/06/22 05:49	12/06/22 15:54
Manganese	0.0060		0.00071	0.000099	ug/m3 (Air)			12/06/22 05:49	12/06/22 15:54

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Particulate Matter as PM 10 (40CFR50J PM10)	15		0.29	0.29	ug/m3			12/02/22 15:30	1

Client Sample ID: GESTSP101722-412

Lab Sample ID: 320-94806-12

Matrix: Air

Date Collected: 11/23/22 09:00

Date Received: 12/01/22 10:30

Sample Container: Folder/Filter

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Particulates (EPA 40CFR50 App B)	24.0736		0.2748	0.2748	ug/m3 (Air)			12/02/22 15:30	1

Client Sample ID: GESPM101722-413

Lab Sample ID: 320-94806-13

Matrix: Air

Date Collected: 11/23/22 08:58

Date Received: 12/01/22 10:30

Sample Container: Folder/Filter

Method: SW846 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	0.0022		0.00073	0.00011	ug/m3 (Air)			12/06/22 05:49	12/06/22 15:57
Manganese	0.0065		0.00073	0.00010	ug/m3 (Air)			12/06/22 05:49	12/06/22 15:57

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Particulate Matter as PM 10 (40CFR50J PM10)	16		0.30	0.30	ug/m3			12/02/22 15:30	1

Client Sample ID: GESTSP101722-413

Lab Sample ID: 320-94806-14

Matrix: Air

Date Collected: 11/23/22 08:58

Date Received: 12/01/22 10:30

Sample Container: Folder/Filter

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Particulates (EPA 40CFR50 App B)	26.5462		0.3072	0.3072	ug/m3 (Air)			12/02/22 15:30	1

Eurofins Sacramento

QC Sample Results

Client: GES-AIS LLC

Job ID: 320-94806-1

Project/Site: Hunters Point, Parcel B, Removal Site Evaluation

Method: 6020 - Metals (ICP/MS)

Lab Sample ID: MB 320-637681/1-B

Matrix: Air

Analysis Batch: 637942

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 637683

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	ND		0.0012	0.00018	ug/m3 (Air)		12/06/22 05:49	12/06/22 15:02	1
Manganese	ND		0.0012	0.00017	ug/m3 (Air)		12/06/22 05:49	12/06/22 15:02	1

Lab Sample ID: LCS 320-637681/2-B

Matrix: Air

Analysis Batch: 637942

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 637683

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits	
Lead	0.240	0.243		ug/m3 (Air)		101	86 - 111	
Manganese	0.240	0.246		ug/m3 (Air)		102	88 - 110	

Lab Sample ID: LCSD 320-637681/3-B

Matrix: Air

Analysis Batch: 637942

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 637683

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Lead	0.240	0.235		ug/m3 (Air)		98	86 - 111	3	15
Manganese	0.240	0.237		ug/m3 (Air)		99	88 - 110	4	15

QC Association Summary

Client: GES-AIS LLC

Job ID: 320-94806-1

Project/Site: Hunters Point, Parcel B, Removal Site Evaluation

Metals

Pre Prep Batch: 637681

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-94806-1	GESPM101722-407	Total/NA	Air	Filter to Air	
320-94806-3	GESPM101722-408	Total/NA	Air	Filter to Air	
320-94806-5	GESPM101722-409	Total/NA	Air	Filter to Air	
320-94806-7	GESPM101722-410	Total/NA	Air	Filter to Air	
320-94806-9	GESPM101722-411	Total/NA	Air	Filter to Air	
320-94806-11	GESPM101722-412	Total/NA	Air	Filter to Air	
320-94806-13	GESPM101722-413	Total/NA	Air	Filter to Air	
MB 320-637681/1-B	Method Blank	Total/NA	Air	Filter to Air	
LCS 320-637681/2-B	Lab Control Sample	Total/NA	Air	Filter to Air	
LCSD 320-637681/3-B	Lab Control Sample Dup	Total/NA	Air	Filter to Air	

Prep Batch: 637683

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-94806-1	GESPM101722-407	Total/NA	Air	3050B	637681
320-94806-3	GESPM101722-408	Total/NA	Air	3050B	637681
320-94806-5	GESPM101722-409	Total/NA	Air	3050B	637681
320-94806-7	GESPM101722-410	Total/NA	Air	3050B	637681
320-94806-9	GESPM101722-411	Total/NA	Air	3050B	637681
320-94806-11	GESPM101722-412	Total/NA	Air	3050B	637681
320-94806-13	GESPM101722-413	Total/NA	Air	3050B	637681
MB 320-637681/1-B	Method Blank	Total/NA	Air	3050B	637681
LCS 320-637681/2-B	Lab Control Sample	Total/NA	Air	3050B	637681
LCSD 320-637681/3-B	Lab Control Sample Dup	Total/NA	Air	3050B	637681

Analysis Batch: 637942

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-94806-1	GESPM101722-407	Total/NA	Air	6020	637683
320-94806-3	GESPM101722-408	Total/NA	Air	6020	637683
320-94806-5	GESPM101722-409	Total/NA	Air	6020	637683
320-94806-7	GESPM101722-410	Total/NA	Air	6020	637683
320-94806-9	GESPM101722-411	Total/NA	Air	6020	637683
320-94806-11	GESPM101722-412	Total/NA	Air	6020	637683
320-94806-13	GESPM101722-413	Total/NA	Air	6020	637683
MB 320-637681/1-B	Method Blank	Total/NA	Air	6020	637683
LCS 320-637681/2-B	Lab Control Sample	Total/NA	Air	6020	637683
LCSD 320-637681/3-B	Lab Control Sample Dup	Total/NA	Air	6020	637683

General Chemistry

Pre Prep Batch: 637743

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-94806-2	GESTSP101722-407	Total/NA	Air	Filter to Air	
320-94806-4	GESTSP101722-408	Total/NA	Air	Filter to Air	
320-94806-6	GESTSP101722-409	Total/NA	Air	Filter to Air	
320-94806-8	GESTSP101722-410	Total/NA	Air	Filter to Air	
320-94806-10	GESTSP101722-411	Total/NA	Air	Filter to Air	
320-94806-12	GESTSP101722-412	Total/NA	Air	Filter to Air	
320-94806-14	GESTSP101722-413	Total/NA	Air	Filter to Air	

Eurofins Sacramento

QC Association Summary

Client: GES-AIS LLC

Project/Site: Hunters Point, Parcel B, Removal Site Evaluation

Job ID: 320-94806-1

General Chemistry

Analysis Batch: 637785

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-94806-1	GESPM101722-407	Total/NA	Air	PM10	5
320-94806-3	GESPM101722-408	Total/NA	Air	PM10	6
320-94806-5	GESPM101722-409	Total/NA	Air	PM10	7
320-94806-7	GESPM101722-410	Total/NA	Air	PM10	8
320-94806-9	GESPM101722-411	Total/NA	Air	PM10	9
320-94806-11	GESPM101722-412	Total/NA	Air	PM10	10
320-94806-13	GESPM101722-413	Total/NA	Air	PM10	11

Analysis Batch: 638006

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-94806-2	GESTSP101722-407	Total/NA	Air	40CFR50 App B	637743
320-94806-4	GESTSP101722-408	Total/NA	Air	40CFR50 App B	637743
320-94806-6	GESTSP101722-409	Total/NA	Air	40CFR50 App B	637743
320-94806-8	GESTSP101722-410	Total/NA	Air	40CFR50 App B	637743
320-94806-10	GESTSP101722-411	Total/NA	Air	40CFR50 App B	637743
320-94806-12	GESTSP101722-412	Total/NA	Air	40CFR50 App B	637743
320-94806-14	GESTSP101722-413	Total/NA	Air	40CFR50 App B	637743

Lab Chronicle

Client: GES-AIS LLC

Job ID: 320-94806-1

Project/Site: Hunters Point, Parcel B, Removal Site Evaluation

Client Sample ID: GESPM101722-407

Date Collected: 11/21/22 08:00

Date Received: 12/01/22 10:30

Lab Sample ID: 320-94806-1

Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Pre Prep	Filter to Air					637681	12/06/22 05:06	[REDACTED]	EET SAC
Total/NA	Prep	3050B			0.083333 Sample	100 mL	637683	12/06/22 05:49	[REDACTED]	EET SAC
Total/NA	Analysis	6020		1			637942	12/06/22 15:38	[REDACTED]	EET SAC
Total/NA	Analysis	PM10		1	0 g	-0.0002 g	637785	12/02/22 15:30	[REDACTED]	EET SAC

Client Sample ID: GESTSP101722-407

Date Collected: 11/21/22 08:00

Date Received: 12/01/22 10:30

Lab Sample ID: 320-94806-2

Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	40CFR50 App B		1			638006	12/02/22 15:30	[REDACTED]	EET SAC
Total/NA	Pre Prep	Filter to Air					637743	12/06/22 11:52	[REDACTED]	EET SAC

Client Sample ID: GESPM101722-408

Date Collected: 11/22/22 08:25

Date Received: 12/01/22 10:30

Lab Sample ID: 320-94806-3

Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Pre Prep	Filter to Air					637681	12/06/22 05:06	[REDACTED]	EET SAC
Total/NA	Prep	3050B			0.083333 Sample	100 mL	637683	12/06/22 05:49	[REDACTED]	EET SAC
Total/NA	Analysis	6020		1			637942	12/06/22 15:41	[REDACTED]	EET SAC
Total/NA	Analysis	PM10		1	0 g	0.0368 g	637785	12/02/22 15:30	[REDACTED]	EET SAC

Client Sample ID: GESTSP101722-408

Date Collected: 11/22/22 08:25

Date Received: 12/01/22 10:30

Lab Sample ID: 320-94806-4

Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	40CFR50 App B		1			638006	12/02/22 15:30	[REDACTED]	EET SAC
Total/NA	Pre Prep	Filter to Air					637743	12/06/22 11:52	[REDACTED]	EET SAC

Client Sample ID: GESPM101722-409

Date Collected: 11/22/22 08:00

Date Received: 12/01/22 10:30

Lab Sample ID: 320-94806-5

Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Pre Prep	Filter to Air					637681	12/06/22 05:06	[REDACTED]	EET SAC
Total/NA	Prep	3050B			0.083333 Sample	100 mL	637683	12/06/22 05:49	[REDACTED]	EET SAC
Total/NA	Analysis	6020		1			637942	12/06/22 15:44	[REDACTED]	EET SAC
Total/NA	Analysis	PM10		1	0 g	0.0230 g	637785	12/02/22 15:30	[REDACTED]	EET SAC

Eurofins Sacramento

Lab Chronicle

Client: GES-AIS LLC

Job ID: 320-94806-1

Project/Site: Hunters Point, Parcel B, Removal Site Evaluation

Client Sample ID: GESTSP101722-409

Lab Sample ID: 320-94806-6

Matrix: Air

Date Collected: 11/22/22 08:00

Date Received: 12/01/22 10:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	40CFR50 App B		1			638006	12/02/22 15:30	[REDACTED]	EET SAC
Total/NA	Pre Prep	Filter to Air					637743	12/06/22 11:52	[REDACTED]	EET SAC

Client Sample ID: GESPM101722-410

Lab Sample ID: 320-94806-7

Matrix: Air

Date Collected: 11/22/22 08:12

Date Received: 12/01/22 10:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Pre Prep	Filter to Air					637681	12/06/22 05:06	[REDACTED]	EET SAC
Total/NA	Prep	3050B			0.083333 Sample	100 mL	637683	12/06/22 05:49	[REDACTED]	EET SAC
Total/NA	Analysis	6020		1			637942	12/06/22 15:48	[REDACTED]	EET SAC
Total/NA	Analysis	PM10		1	0 g	0.0313 g	637785	12/02/22 15:30	[REDACTED]	EET SAC

Client Sample ID: GESTSP101722-410

Lab Sample ID: 320-94806-8

Matrix: Air

Date Collected: 11/22/22 08:12

Date Received: 12/01/22 10:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	40CFR50 App B		1			638006	12/02/22 15:30	[REDACTED]	EET SAC
Total/NA	Pre Prep	Filter to Air					637743	12/06/22 11:52	[REDACTED]	EET SAC

Client Sample ID: GESPM101722-411

Lab Sample ID: 320-94806-9

Matrix: Air

Date Collected: 11/23/22 09:05

Date Received: 12/01/22 10:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Pre Prep	Filter to Air					637681	12/06/22 05:06	[REDACTED]	EET SAC
Total/NA	Prep	3050B			0.083333 Sample	100 mL	637683	12/06/22 05:49	[REDACTED]	EET SAC
Total/NA	Analysis	6020		1			637942	12/06/22 15:51	[REDACTED]	EET SAC
Total/NA	Analysis	PM10		1	0 g	0.0316 g	637785	12/02/22 15:30	[REDACTED]	EET SAC

Client Sample ID: GESTSP101722-411

Lab Sample ID: 320-94806-10

Matrix: Air

Date Collected: 11/23/22 09:05

Date Received: 12/01/22 10:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	40CFR50 App B		1			638006	12/02/22 15:30	[REDACTED]	EET SAC
Total/NA	Pre Prep	Filter to Air					637743	12/06/22 11:52	[REDACTED]	EET SAC

Eurofins Sacramento

Lab Chronicle

Client: GES-AIS LLC

Job ID: 320-94806-1

Project/Site: Hunters Point, Parcel B, Removal Site Evaluation

Client Sample ID: GESPM101722-412

Lab Sample ID: 320-94806-11

Matrix: Air

Date Collected: 11/23/22 09:00

Date Received: 12/01/22 10:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Pre Prep	Filter to Air					637681	12/06/22 05:06	[REDACTED]	EET SAC
Total/NA	Prep	3050B			0.083333 Sample	100 mL	637683	12/06/22 05:49	[REDACTED]	EET SAC
Total/NA	Analysis	6020		1			637942	12/06/22 15:54	[REDACTED]	EET SAC
Total/NA	Analysis	PM10		1	0 g	0.0248 g	637785	12/02/22 15:30	[REDACTED]	EET SAC

Client Sample ID: GESTSP101722-412

Lab Sample ID: 320-94806-12

Matrix: Air

Date Collected: 11/23/22 09:00

Date Received: 12/01/22 10:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	40CFR50 App B		1			638006	12/02/22 15:30	[REDACTED]	EET SAC
Total/NA	Pre Prep	Filter to Air					637743	12/06/22 11:52	[REDACTED]	EET SAC

Client Sample ID: GESPM101722-413

Lab Sample ID: 320-94806-13

Matrix: Air

Date Collected: 11/23/22 08:58

Date Received: 12/01/22 10:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Pre Prep	Filter to Air					637681	12/06/22 05:06	[REDACTED]	EET SAC
Total/NA	Prep	3050B			0.083333 Sample	100 mL	637683	12/06/22 05:49	[REDACTED]	EET SAC
Total/NA	Analysis	6020		1			637942	12/06/22 15:57	[REDACTED]	EET SAC
Total/NA	Analysis	PM10		1	0 g	0.0270 g	637785	12/02/22 15:30	[REDACTED]	EET SAC

Client Sample ID: GESTSP101722-413

Lab Sample ID: 320-94806-14

Matrix: Air

Date Collected: 11/23/22 08:58

Date Received: 12/01/22 10:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	40CFR50 App B		1			638006	12/02/22 15:30	[REDACTED]	EET SAC
Total/NA	Pre Prep	Filter to Air					637743	12/06/22 11:52	[REDACTED]	EET SAC

Laboratory References:

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

Eurofins Sacramento

Accreditation/Certification Summary

Client: GES-AIS LLC

Project/Site: Hunters Point, Parcel B, Removal Site Evaluation

Job ID: 320-94806-1

Laboratory: Eurofins Sacramento

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
ANAB	Dept. of Defense ELAP	L2468	01-20-24
Oregon	NELAP	4040	01-29-23

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

Analysis Method	Prep Method	Matrix	Analyte
40CFR50 App B		Air	Total Suspended Particulates
PM10		Air	Particulate Matter as PM 10

1

2

3

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Eurofins Sacramento

Method Summary

Client: GES-AIS LLC

Project/Site: Hunters Point, Parcel B, Removal Site Evaluation

Job ID: 320-94806-1

Method	Method Description	Protocol	Laboratory
6020	Metals (ICP/MS)	SW846	EET SAC
40CFR50 App B	Suspended Particulate Matter in Ambient Air	EPA	EET SAC
PM10	Particulate Matter	40CFR50J	EET SAC
3050B	Preparation, Metals	SW846	EET SAC
Filter to Air	Filter to Air volume ratio	None	EET SAC

Protocol References:

40CFR50J = 40 CFR Part 50 Appendix J

EPA = US Environmental Protection Agency

None = None

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

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

Sample Summary

Client: GES-AIS LLC

Project/Site: Hunters Point, Parcel B, Removal Site Evaluation

Job ID: 320-94806-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
320-94806-1	GESPM101722-407	Air	11/21/22 08:00	12/01/22 10:30
320-94806-2	GESTSP101722-407	Air	11/21/22 08:00	12/01/22 10:30
320-94806-3	GESPM101722-408	Air	11/22/22 08:25	12/01/22 10:30
320-94806-4	GESTSP101722-408	Air	11/22/22 08:25	12/01/22 10:30
320-94806-5	GESPM101722-409	Air	11/22/22 08:00	12/01/22 10:30
320-94806-6	GESTSP101722-409	Air	11/22/22 08:00	12/01/22 10:30
320-94806-7	GESPM101722-410	Air	11/22/22 08:12	12/01/22 10:30
320-94806-8	GESTSP101722-410	Air	11/22/22 08:12	12/01/22 10:30
320-94806-9	GESPM101722-411	Air	11/23/22 09:05	12/01/22 10:30
320-94806-10	GESTSP101722-411	Air	11/23/22 09:05	12/01/22 10:30
320-94806-11	GESPM101722-412	Air	11/23/22 09:00	12/01/22 10:30
320-94806-12	GESTSP101722-412	Air	11/23/22 09:00	12/01/22 10:30
320-94806-13	GESPM101722-413	Air	11/23/22 08:58	12/01/22 10:30
320-94806-14	GESTSP101722-413	Air	11/23/22 08:58	12/01/22 10:30

**CHAIN-OF-CUSTODY
RECORD**

Gilbane Federal
[REDACTED]
2300 Clayton Road, Suite 1050, Concord, CA 94520

COC # MC113022AIRB



Project Name: Hunters Point Shipyard, Parcel B Removal Site Evaluation	Laboratory: EUROFINS ENVIRONMENT TESTING NORTHERN CALIFORNIA, LLC (EETN)	Event: Parcel B Air Monitoring
Project Number: J310000900	POC: [REDACTED]	
WBS Code: J310000900	Ship to: 880 Riverside Parkway, West Sacramento, CA 95605	

Comments:	<table border="1"> <tr> <td>Code</td><td>Matrix</td></tr> <tr> <td>A</td><td>Air</td></tr> <tr> <td>AQ</td><td>Air Quality Control Matrix</td></tr> </table> <table border="1"> <tr> <td>Code</td><td>Container/Preservative</td></tr> <tr> <td>1</td><td>1x 250-mL Plastic, 4 Degrees C</td></tr> <tr> <td>1</td><td>1x Envelope, None</td></tr> </table>	Code	Matrix	A	Air	AQ	Air Quality Control Matrix	Code	Container/Preservative	1	1x 250-mL Plastic, 4 Degrees C	1	1x Envelope, None
Code	Matrix												
A	Air												
AQ	Air Quality Control Matrix												
Code	Container/Preservative												
1	1x 250-mL Plastic, 4 Degrees C												
1	1x Envelope, None												

Equipment:	[REDACTED]	 320-94806 Chain of Custody
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Event: Parcel B Air Monitoring														
	Sample ID	Matrix	Date	Time	Samp Init.					Location ID	Sample Type	Depth (ft bgs)	Cooler	Comments
1	GESPM101722-407	AQ	11/21/2022	0800	X	X				FIELDQC	FB1	0.00	0.00	1
2	GESTSP101722-407	AQ	11/21/2022	0800		X				FIELDQC	FB1	0.00	0.00	1
3	GESPM101722-408	A	11/22/2022	0825	X	X				MSB01	N1	0.00	0.00	1
4	GESTSP101722-408	A	11/22/2022	0825		X				MSB01	N1	0.00	0.00	1
5	GESPM101722-409	A	11/22/2022	0800	X	X				MSB02	N1	0.00	0.00	1
6	GESTSP101722-409	A	11/22/2022	0800		X				MSB02	N1	0.00	0.00	1
7	GESPM101722-410	A	11/22/2022	0812	X	X				MSB113A	N1	0.00	0.00	1
8	GESTSP101722-410	A	11/22/2022	0812		X				MSB113A	N1	0.00	0.00	1
9														
10														

Turnaround Time: 5 days

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time	Shipping Date / Carrier / Airbill Number
[REDACTED]	11-30-22	1600	FEDEX	11-30-22	1600	Shipping Date: / FEDEX / 7705 5707 3357
			[REDACTED]	12-1-22	1030	Received by Laboratory: (Signature, Date, Time) & condition

**CHAIN-OF-CUSTODY
RECORD**

Gilbane Federal

2300 Clayton Road, Suite 1050, Concord, CA 94520

COC # MC113022AIRB



Project Name: Hunters Point Shipyard, Parcel B Removal Site Evaluation	Laboratory: EUROFINS ENVIRONMENT TESTING NORTHERN CALIFORNIA, LLC (EETN)	Event: Parcel B Air Monitoring
Project Number: J310000900	POC: [REDACTED]	
WBS Code: J310000900	Ship to: 880 Riverside Parkway, West Sacramento, CA 95605	

Comments:	Code Matrix												
	A Air												
Equipment:	Code Container/Preservative												
	1 1x 250-mL Plastic, 4 Degrees C												
	1 1x Envelope, None												
Event: Parcel B Air Monitoring													
Sample ID	Matrix	Date	Time	Samp Init.	CAIR - Air PM10	SW6020 - Air PM10	SW6020 - Air PM10	Location ID	Sample Type	Depth (ft bgs)	Top - Bottom	Cooler	Comments
1 GESPM101722-411	A	11/23/2022	0905	[REDACTED]	X	X		MSB01	N1	0.00	0.00	1	
2 GESTSP101722-411	A	11/23/2022	0905			X		MSB01	N1	0.00	0.00	1	
3 GESPM101722-412	A	11/23/2022	0900		X	X		MSB02	N1	0.00	0.00	1	
4 GESTSP101722-412	A	11/23/2022	0900			X		MSB02	N1	0.00	0.00	1	
5 GESPM101722-413	A	11/23/2022	0858		X	X		MSB113A	N1	0.00	0.00	1	
6 GESTSP101722-413	A	11/23/2022	0858		X			MSB113A	N1	0.00	0.00	1	
7													
8													
Turnaround Time: 5 days													

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time	Shipping Date / Carrier / Airbill Number
[REDACTED]	11-30-22	1600	FEDEX	11-30-22	1600	Shipping Date: / FEDEX / 7705 5707 3357
Received by Laboratory: (Signature, Date, Time) & condition						

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COC # MC113022AIRB

Volume (M³)

Sample ID	Date	Time	Sampler	Volume (M ³)
GESPM101722-407	11/21/2022	0800	MC	
GESTSP101722-407	11/21/2022	0800	MC	
GESPM101722-408	11/22/2022	0825	MC	1667.55
GESTSP101722-408	11/22/2022	0825	MC	1801.18
GESPM101722-409	11/22/2022	0800	MC	1671.54
GESTSP101722-409	11/22/2022	0800	MC	1795.67
GESPM101722-410	11/22/2022	0812	MC	1629.2
GESTSP101722-410	11/22/2022	0812	MC	1616.44
GESPM101722-411	11/23/2022	0905	MC	1677.36
GESTSP101722-411	11/23/2022	0905	MC	1821.48
GESPM101722-412	11/23/2022	0900	MC	1697.96
GESTSP101722-412	11/23/2022	0900	MC	1819.42
GESPM101722-413	11/23/2022	0858	MC	1646.43
GESTSP101722-413	11/23/2022	0858	MC	1627.35

Login Sample Receipt Checklist

Client: GES-AIS LLC

Job Number: 320-94806-1

Login Number: 94806

List Source: Eurofins Sacramento

List Number: 1

Creator: [REDACTED]

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	SEAL
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	False	Thermal preservation not required.
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	