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

AIR MONITORING SUMMARY REPORT 02 FOR PARCEL B REMOVAL SITE EVALUATION

HUNTERS POINT NAVAL SHIPYARD

SAN FRANCISCO, CALIFORNIA

July 7th, 2022 through October 13th, 2022

Approved for public release; distribution is unlimited

DCN: GLBN-0005-5305-0059

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Prepared for:

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Naval Facilities Engineering Systems Command Southwest
BRAC PMO West
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Contract Number: N62473-17-D-0005; Task Order No. N6247317F5305

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Acronyms and Abbreviations

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

1.0 Introduction

This Air Monitoring Summary Report (AMSR) was prepared by Gilbane Federal (Gilbane) 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. Gilbane 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 Gilbane at HPNS Parcel B from July 7th, 2022 through October 13th, 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 and radiological 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 in 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 (ug/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 µg/m^3	DTSC HERO developed action level (residents and public receptors)[a]
	5,000 µg/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) 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]
Cesium-137	4.00E-11µCi/mL	
Plutonium-239	4.00E-15 µCi/mL	
Radium-226	1.80E-13 µCi/mL	
Strontium-90	1.20E-12 µCi/mL	
Cobalt-60	1.00E-11 µCi/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 µg/m3 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).

µCi/mL microcurie per milliliter

µg/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

fiber/cm^3 = fibers per cubic centimeter
HPNS = Hunters Point Naval Shipyard
mg/m^3 = 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. Data were qualified for low-level contamination below the reporting limit in the field filter blanks, negative results, or for minimum detectable concentrations (MDCs) above the required detection level. Data, as qualified are considered usable for their intended purposes.

Table 5-1: Air Monitoring Report Summary

Air Monitoring Report Number	New Data Date Range
01	07/07/22 – 09/15/22
02	09/15/222 – 10/13/22

5.1 Report 01

Air monitoring results representing onsite activities did not exceed the threshold criteria and action levels for this reporting period.

5.2 Report 02

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

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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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San Francisco Bay

Wind Compass

N NW NE W E SW SE S

Inset Map

Bayview Manor Weather Station

Parcel B

APTIM HPNS Weather Station

Hilltop Park

Quesada Ave

Palou Ave

Innes Ave

Keith St

Jennings St

Ingalls St

Carroll Ave

Gilman Ave

0 3,000 Feet

Berth 64

DRY DOCK 7

DRY DOCK 6

DRY DOCK 5

Berth 61

146

130

MSB01 (Upwind) Air Monitoring Station

Real-time Dust Monitoring

Windsock

103

Donahue St.

113

114

113A

Lockwood St.

MSB113A (Downwind) Air Monitoring Station

Real-time Dust Monitoring

Galvez Ave.

Fischer Ave.

Robinson St.

Horne Ave.

157

142

140

Real-time Dust Monitoring (Co-located)

MSB02 (Downwind) Air Monitoring Station

DRY DOCK 3

DRY DOCK 2

Air Sampling Station
Real-time Dust Monitoring
Windsock
Phase 1
Phase 2
Parcel B Boundary
Buildings
Impacted Existing
Impacted Demolished
Surface Soil Investigation

Note:
Prevailing wind direction is from west to northwest.

NAVFAC Naval Facilities Engineering Command

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

G:\ArcGIS\Navy\HPS\PROJECTS\Parcel_B_rework\AirDust\ParcelBairDustLoc.mxd 11/4/2022

ATTACHMENT 1

AMBIENT PRESSURE, TEMPERATURE, AND PREVALENT WIND DIRECTION MONITORING RESULTS

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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

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

Start Date	Ambient Pressure (in Hg)	Ambient Temperature (°F)	Prevalent Wind Direction
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
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

Notes:

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

[2]Data 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

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)
MSB01-081622	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
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

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-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
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	10/6/22[2]	1	3.3	425	1402	3.5	< 0.002	No
MSB02-100622	10/6/22[2]	2	3.4	460	1564	2.0	< 0.002	No
MSB113A-100622	10/6/22[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

Notes:

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

[2]Air 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/cm^3 = 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+								
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								

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]
GESPM072622-145	MSB01	08/04/22	1641.25	0.011	0.002	2.000	0.0020	2.000	5,000	No	50	No
GESPM072622-146	MSB02	08/04/22	1607.65	0.013								
GESPM072622-147	MSB113A	08/04/22	1592.35	0.013 J								
GESPM072622-148	MSB01	08/05/22	1703.92	0.013	0.002	2.000	0.0010	1.000	5,000	No	50	No
GESPM072622-149	MSB02	08/05/22	1653.18	0.015								
GESPM072622-150	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								
GESPM072622-153	MSB01	08/10/22	1699.59	0.008	0.002	1.600	0.0008	0.800	5,000	No	50	No
GESPM072622-154	MSB02	08/10/22	1630.75	0.0096								
GESPM072622-155	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
GESPM072622-151	MSB02	08/11/22	1635.06	0.0094								
GESPM072622-152	MSB113A	08/11/22	1642.95	0.009								
GESPM072622-156	MSB01	08/12/22	1623.36	0.01	-0.001	-1.300	0.0040	4.000	5,000	No	50	No
GESPM072622-157	MSB02	08/12/22	1598.56	0.0087								
GESPM072622-158	MSB113A	08/12/22	1601.40	0.014								
GESPM072622-159	MSB01	08/16/22	1666.46	0.026	0.000	0.000	-0.0010	-1.000	5,000	No	50	No
GESPM072622-160	MSB02	08/16/22	1629.77	0.026								
GESPM072622-161	MSB113A	08/16/22	1641.67	0.025								
GESPM080822-163	MSB01	08/17/22	1669.85	0.0093	0.002	1.700	0.0047	4.700	5,000	No	50	No
GESPM080822-164	MSB02	08/17/22	1548.50	0.011								
GESPM080822-165	MSB113A	08/17/22	1532.16	0.014								
GESPM080822-166	MSB01	08/18/22	1638.74	0.0047	0.001	0.600	0.0006	0.600	5,000	No	50	No
GESPM080822-167	MSB02	08/18/22	1637.56	0.0053								
GESPM080822-168	MSB113A	08/18/22	1611.00	0.0053								
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								

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]
GESPM080822-189	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								
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								

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]
GESPM091922-292	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								
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								

Notes:

[1]Air sample was not collected on days with rain.

[2]PM10 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.

[3]Air sample was taken down during the afternoon after field activities ceased.

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 = estimated concentration. See data review report for details.

J+ = estimated concentration biased high. See data review report for details.

m^3 = cubic meters

mg/m^3 = milligrams per cubic meter

PEL = permissible exposure limit

PM10 = particulate matter smaller than 10 microns in diameter

ug/m^3 = micrograms per cubic meter

ATTACHMENT 4
LEAD AND MANGANESE MONITORING RESULTS

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Attachment 4: Copper, 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

Attachment 4: Copper, 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_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
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

Attachment 4: Copper, 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)
GESPM080822-182	MSB01	08/25/22[2]	513.61	0.0000014 J	No	0.0000044	No
GESPM080822-183	MSB02	08/25/22[2]	527.62	0.000001 J	No	0.0000034	No
GESPM080822-184	MSB113A	08/25/22[2]	510.18	0.0000011 J	No	0.0000036	No
GESPM080822-185	MSB01	08/30/22	1636.24	0.0000016	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	0.0000016	No	0.0000033	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	0.0000017 J	No	0.0000043	No
GESPM080822-196	MSB02	09/01/22[2]	450.62	0.0000012 J	No	0.0000068	No
GESPM080822-197	MSB113A	09/01/22[2]	431.76	0.0000019 J	No	0.0000054	No
GESPM080822-198	MSB01	09/07/22	1649.77	0.0000023	No	0.0000084	No
GESPM082222-199	MSB02	09/07/22	1630.41	0.0000012	No	0.0000076	No
GESPM082222-200	MSB113A	09/07/22	1611.43	0.0000019	No	0.0000068	No
GESPM082222-202	MSB01	09/08/22	1685.89	0.0000014	No	0.0000039	No
GESPM082222-203	MSB02	09/08/22	1668.92	0.0000013	No	0.0000043	No
GESPM082222-204	MSB113A	09/08/22	1661.41	0.0000012	No	0.0000033	No
GESPM082222-205	MSB01	09/08/22[2]	435.50	0.0000031	No	0.000021	No
GESPM082222-206	MSB02	09/08/22[2]	512.06	0.0000035	No	0.0000074	No
GESPM082222-207	MSB113A	09/08/22[2]	491.77	0.0000046	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	0.000001	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	0.0000011 J	No	0.0000056	No
GESPM090622-238	MSB113A	09/15/22[2]	472.73	0.0000016 J	No	0.0000062	No
GESPM090622-239	MSB01	09/20/22	1635.64	0.0000011 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	0.0000012 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	0.0000028	No	0.0000036	No

Attachment 4: Copper, 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)
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	0.000001	No	0.000003	No
GESPM091922-295	MSB01	09/29/22	1623.64	0.0000004 J	No	0.0000014 J	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
GESPM092122-307	MSB113A	10/05/22	1597.77	0.00000095	No	0.0000037 J+	No
GESPM092122-308	MSB01	10/06/22	1636.07	0.00000075	No	0.0000028 J+	No
GESPM092122-309	MSB02	10/06/22	1618.34	0.00000056 J	No	0.0000022 J+	No
GESPM092122-310	MSB113A	10/06/22	1593.63	0.00000098	No	0.0000031 J+	No
GESPM092122-311	MSB01	10/06/22[2]	486.80	0.0000013 J	No	0.0000039 J+	No
GESPM092122-312	MSB02	10/06/22[2]	513.71	0.0000013 J	No	0.0000038 J+	No
GESPM092122-313	MSB113A	10/06/22[2]	485.14	0.0000014 J	No	0.0000042 J+	No
GESPM092122-314	MSB01	10/11/22	1673.47	< 0.00000072	No	0.0000025	No
GESPM092122-315	MSB02	10/11/22	1632.85	< 0.00000073	No	0.0000019	No
GESPM092122-316	MSB113A	10/11/22	1625.79	< 0.00000074	No	0.0000022	No
GESPM092122-318	MSB01	10/12/22	1616.62	< 0.00000074	No	0.0000031	No
GESPM092122-319	MSB02	10/12/22	1628.68	< 0.00000074	No	0.0000024	No
GESPM092122-320	MSB113A	10/12/22	1582.42	< 0.00000076	No	0.000004	No
GESPM092122-321	MSB01	10/13/22	1604.98	< 0.00000075	No	0.0000023	No
GESPM092122-322	MSB02	10/13/22	1605.94	< 0.00000075	No	0.0000018 J+	No
GESPM092122-323	MSB113A	10/13/22	1574.95	< 0.00000076	No	0.0000038	No
GESPM092122-324	MSB01	10/13/22[2]	476.31	0.0000022	No	0.0000048	No
GESPM092122-325	MSB02	10/13/22[2]	498.56	0.0000014	No	0.0000038	No

Attachment 4: Copper, 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)
GESPM092122-326	MSB113A	10/13/22[2]	491.16	0.0000028	No	0.0000057	No

Notes:

[1]Air sample was not collected on days with rain.

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

Sample locations are shown on Figure 2-1

m^3 = cubic meters

mg/m^3 = 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. See data review report for details.

< = 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)	Concen-tration 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_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								

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)	Concen-tration 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_TSP070522-84	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
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								

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)	Concen-tration 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)
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								
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								

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)	Concen-tration 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)
GESTSP080822-179	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								
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								

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)	Concen-tration 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)
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								
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								

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)	Concen-tration 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)
GESTSP090622-251	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								
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								

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)	Concen-tration 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)
GESTSP092122-313	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								

Notes:

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

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

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. See data review report for details.

m^3 = cubic meters

mg/m^3 = milligrams per cubic meter

ATTACHMENT 6
RADIONUCLIDES OF CONCERN AIR SAMPLING RESULTS

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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)
Action Level			4.00E-15	4.00E-15	1.80E-13	2.00E-10	1.00E-09	
Units			µCi/mL	µCi/mL	µCi/mL	µCi/mL	µCi/mL	
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	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

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			4.00E-15		4.00E-15		1.80E-13		2.00E-10		1.00E-09		
Units			µCi/mL		µCi/mL		µCi/mL		µCi/mL		µCi/mL		
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
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

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

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Laboratory Analysis Report

Job ID : 22092944

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:	6
	Attn:	[redacted]	P.O.#. :	J310000900-005
	Client Address:	1501 West Fountainhead Parkway, Ste. #550	Date Received :	09/29/2022 16:59
	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-091922	9/19/2022 8:00	Cassette	22092944.01
MSB01-091922	9/20/2022 7:30	Cassette	22092944.02
MSB02-091922	9/20/2022 7:05	Cassette	22092944.03
MSB113A-091922	9/20/2022 7:18	Cassette	22092944.04
MSB01-092022	9/21/2022 7:59	Cassette	22092944.05
MSB02-092022	9/21/2022 7:30	Cassette	22092944.06
MSB113A-092022	9/21/2022 7:48	Cassette	22092944.07
MSB01-092122	9/22/2022 8:52	Cassette	22092944.08
MSB02-092122	9/22/2022 7:24	Cassette	22092944.09
MSB113A-092122	9/22/2022 7:38	Cassette	22092944.10
MSB01-092222	9/22/2022 14:30	Cassette	22092944.11
MSB02-092222	9/22/2022 14:33	Cassette	22092944.12
MSB113A-092222	9/22/2022 14:28	Cassette	22092944.13

[redacted]

Released By: [redacted]

Title: Senior Project Manager

Analyst: [redacted]

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 10/31/202

Job ID : 22092944
Analytical Method: NIOSH 7400-I2-Aug1994

Client: GES - ASRC Industrial Project: J310000900 / Hunters Point Shipyard, Parcel B Removal Site Evaluation Attn: [redacted]

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
22092944.01	FB-091922	09/19/2022						0	100	2	2.548			10/06/22	[redacted]
22092944.02	MSB01-091922	09/20/2022		3.4			1417	4817.	100	1.5	1.911	< 0.001		10/06/22	[redacted]
22092944.03	MSB02-091922	09/20/2022		3.4			1435	4879	100	4	5.096	< 0.005		10/06/22	[redacted]
22092944.04	MSB113A-091922	09/20/2022		3.5			1424	4984	100	2.0	2.548	< 0.000		10/06/22	[redacted]
22092944.05	MSB01-092022	09/21/2022		3.6			1466	5277.	100	3.5	4.459	< 0.001		10/06/22	[redacted]
22092944.06	MSB02-092022	09/21/2022		3			1463	4389	100	2.5	3.185	< 0.001		10/06/22	[redacted]
22092944.07	MSB113A-092022	09/21/2022		3			1469	4407	100	4.0	5.096	< 0.001		10/06/22	[redacted]
22092944.08	MSB01-092122	09/22/2022		3.4			1490	5066	100	2.5	3.185	< 0.001		10/06/22	[redacted]
22092944.09	MSB02-092122	09/22/2022		3			1433	4299	100	3	3.822	< 0.001		10/31/22	[redacted]
22092944.10	MSB113A-092122	09/22/2022		3			1428	4284	100	1.5	1.911	< 0.001		10/06/22	[redacted]
22092944.11	MSB01-092222	09/22/2022		3.3			335	1105.	100	1.5	1.911	< 0.002		10/06/22	[redacted]
22092944.12	MSB02-092222	09/22/2022		3.4			427	1451.	100	2	2.548	< 0.002		10/06/22	[redacted]
22092944.13	MSB113A-092222	09/22/2022		3.3			407	1343.	100	2	2.548	< 0.002		10/06/22	[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

Intralaboratory Sr 5-20:0.06 20-50:0.04 50-100:0.02

Sample Condition Checklist

A&B JobID : **22092944**	Date Received : **09/29/2022**	Time Received : **4:59PM**
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 ☐ Soil ☐ Liquid ☐ Sludge ☐ Solid ☐ Cassette ☑ Tube ☐ Bulk ☐ Badge ☐ Food ☐ Other ☐			
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 sample in black cassettes. ~[redacted] 9/29/2022

Received by : [redacted]

Check in by/date : [redacted] / 09/29/2022

ab-s005-0321

CHAIN-OF-CUSTODY RECORD

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

COC ID # KT092822ASBB

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:

Equipment:

Code	Matrix
A	Air
AQ	Air Quality Control Matrix

Code	Container/Preservative
1	Filter/No Preservatives

Event: Parcel B Asbestos

	Sample ID	Matrix	Date	Time	Samp Init.	Analytical Test Method: Asbestos	Location ID	Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom	Cooler	Flow Rate (L/min), Total Time (mins)
01A	1 FB-091922	AQ	09/19/2022	0800	[redacted]	X	FB	FB1	0.00	0.00	1	
02A	2 MSB01-091922	A	09/20/2022	0730		X	MSB01	N1	0.00	0.00	1	3.4; 1417
03A	3 MSB02-091922	A	09/20/2022	0705		X	MSB02	N1	0.00	0.00	1	3.4; 1435
04A	4 MSB113A-091922	A	09/20/2022	0718		X	MSB113A	N1	0.00	0.00	1	3.5; 1424
05A	5 MSB01-092022	A	09/21/2022	0759		X	MSB01	N1	0.00	0.00	1	3.6; 1466
06A	6 MSB02-092022	A	09/21/2022	0730		X	MSB02	N1	0.00	0.00	1	3; 1463
07A	7 MSB113A-092022	A	09/21/2022	0748		X	MSB113A	N1	0.00	0.00	1	3; 1469
08A	8 MSB01-092122	A	09/22/2022	0852		X	MSB01	N1	0.00	0.00	1	3.4; 1490
09A	9 MSB02-092122	A	09/22/2022	0724		X	MSB02	N1	0.00	0.00	1	3; 1433
10A	10 MSB113A-092122	A	09/22/2022	0738		X	MSB113A	N1	0.00	0.00	1	3; 1428
11A	11 MSB01-092222	A	09/22/2022	1430		X	MSB01	N1	0.00	0.00	1	3.3; 335

Turnaround Time: 7 days

Relinquished by: *(Signature)*	Date	Time	Received by: *(Signature)*	Date	Time	Shipping Date / Carrier / Airbill Number
[redacted]	9-28-22	1600	FEDEX	9-28-22	1600	Shipping Date: 09/28/22/ FEDEX/ 7779 8665 6503
Fed ex	9/29/22	16:59	[redacted]	9-~~29~~-22 29	16:59	**Received by Laboratory:** *(Signature, Date, Time)* **& condition**

Job ID:22092944

09/29/2022 GES - ASRC Industrial ACH

22.1oc
IR4 [redacted]

CHAIN-OF-CUSTODY RECORD

Gilbane Federa [redacted]
1655 Grant Street, Suite 1200, Concord, CA 94520
[redacted]

COC ID # KT092822ASBB

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:

Equipment:

Code	Matrix
A	Air
AQ	Air Quality Control Matrix

Code	Container/Preservative
1	Filter/No Preservatives

Event: Parcel B Asbestos

	Sample ID	Matrix	Date	Time	Samp Init.	Analytical Test Method: Asbestos	Location ID	Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom	Cooler	Flow Rate (L/min); Total Time (mins)
12A	12 MSB02-092222	A	09/22/2022	1433	[redacted]	X	MSB02	N1	0.00	0.00	1	3.4; 427
13A	13 MSB113A-092222	A	09/22/2022	1428		X	MSB113A	N1	0.00	0.00	1	3.3; 407
	14											
	15											
	16											
	17											
	18											
	19											
	20											
	21											
	22											

N/A [redacted] 9-28-22

Turnaround Time: 7 days

Relinquished by: *(Signature)*	Date	Time	Received by: *(Signature)*	Date	Time	Shipping Date / Carrier / Airbill Number
[redacted]	9-28-22	1600	FEDEX	9-28-22	1600	Shipping Date: 09/28/22/ FEDEX/ 7779 8665 6503
Fed ex	9/29/22	16:59	[redacted]	9/29/22	16:59	**Received by Laboratory:** *(Signature, Date, Time)* **& condition**

22.1°C
IR4
[redacted]

ORIGIN ID: SGA [redacted]
SES-AIS
200 FISCHER AVE
SAN FRANCISCO, CA 94124
UNITED STATES US

SHIP DATE: 28SEP22
ACTWGT: 1.00 LB
CAD: 254128867/INET4530

BILL SENDER

TO [redacted]
A&B LABS
10100 EAST FREEWAY, SUITE 100
HOUSTON TX 77029

INV [redacted]
PO
REF: J31000900 00.03.14
DEPT

FedEx Express

J223022081201uv

581J1/EC8C/FE2D

TRK# 0201 7779 8665 6503

THU - 29 SEP 4:30P
STANDARD OVERNIGHT

UL HBYA

77029
IAH
TX-US

After printing this label:
1. Use the 'Print' button on this page to print your label to your laser or inkjet printer.
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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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CUSTODY SEAL
ENVIRONMENTAL SAMPLING SUPPLY
9-28-22

Date: 9-28-22
Signature: [redacted]

Laboratory Analysis Report

Job ID : 22100637

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:	6
	Attn:	[redacted]	P.O.#. :	J310000900-005
	Client Address:	1501 West Fountainhead Parkway, Ste. #550	Date Received :	10/06/2022 15:34
	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-092622	9/26/2022 8:00	Cassette	22100637.01
MSB01-092622	9/27/2022 7:49	Cassette	22100637.02
MSB02-092622	9/27/2022 7:20	Cassette	22100637.03
MSB113A-092622	9/27/2022 7:30	Cassette	22100637.04
MSB01-092722	9/28/2022 7:44	Cassette	22100637.05
MSB02-092722	9/28/2022 7:17	Cassette	22100637.06
MSB113A-092722	9/28/2022 7:30	Cassette	22100637.07
MSB01-092822	9/29/2022 7:31	Cassette	22100637.08
MSB02-092822	9/29/2022 7:03	Cassette	22100637.09
MSB113A-092822	9/29/2022 7:17	Cassette	22100637.10
MSB01-092922	9/29/2022 15:05	Cassette	22100637.11
MSB02-092922	9/29/2022 15:02	Cassette	22100637.12
MSB113A-092922	9/29/2022 15:00	Cassette	22100637.13

[redacted]

Released By: [redacted]

Title: Vice President Operations

Analyst: [redacted]

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 10/13/202

Job ID : 22100637
Analytical Method: NIOSH 7400-I2-Aug1994

Client: GES - ASRC Industrial Project: J310000900 / Hunters Point Shipyard, Parcel B Removal Site Evaluation Attn: [redacted]

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
22100637.01	FB-092622	09/26/2022	Area					0	100	3	3.822			10/13/22	[redacted]
22100637.02	MSB01-092622	09/27/2022	Area	3.4			1440	4896	100	4.5	5.732	< 0.001		10/13/22	[redacted]
22100637.03	MSB02-092622	09/27/2022	Area	3.5			1438	5033	100	8.5	10.828	0.001		10/13/22	[redacted]
22100637.04	MSB113A-092622	09/27/2022	Area	3.5			1435	5022.	100	4	5.096	< 0.001		10/13/22	[redacted]
22100637.05	MSB01-092722	09/28/2022	Area	3.3			1434	4732.	100	8	10.191	0.001		10/13/22	[redacted]
22100637.06	MSB02-092722	09/28/2022	Area	3.6			1436	5169.	100	2	2.548	< 0.001		10/13/22	[redacted]
22100637.07	MSB113A-092722	09/28/2022	Area	3.3			1439	4748.	100	2.5	3.185	< 0.001		10/13/22	[redacted]
22100637.08	MSB01-092822	09/29/2022	Area	3			1426	4278	100	4.5	5.732	< 0.001		10/13/22	[redacted]
22100637.09	MSB02-092822	09/29/2022	Area	3.4			1422	4834.	100	4.5	5.732	< 0.001		10/13/22	[redacted]
22100637.10	MSB113A-092822	09/29/2022	Area	3			1425	4275	100	3.5	4.459	< 0.001		10/13/22	[redacted]
22100637.11	MSB01-092922	09/29/2022	Area	3.5			451	1578.	100	5.0	6.369	< 0.002		10/13/22	[redacted]
22100637.12	MSB02-092922	09/29/2022	Area	3.3			478	1577.	100	2	2.548	< 0.002		10/13/22	[redacted]
22100637.13	MSB113A-092922	09/29/2022	Area	3.1			458	1419.	100	1.5	1.911	< 0.002		10/13/22	[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

Intralaboratory Sr 5-20:0.06 20-50:0.04 50-100:0.02

Sample Condition Checklist

A&B JobID : **22100637**	Date Received : **10/06/2022**	Time Received : **3:34PM**
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 ☐ Soil ☐ Liquid ☐ Sludge ☐ Solid ☐ Cassette ☑ Tube ☐ Bulk ☐ Badge ☐ Food ☐ Other ☐			
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:

Received black cassettes. Samples came in a box with a custody seal. ~[redacted]10/7/2022

Received by : [redacted]

Check in by/date : [redacted] / 10/07/2022

ab-s005-0321

Job ID:22100637

10/06/2022 GES - ASRC Industrial ACH

CHAIN-OF-CUSTODY RECORD

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

COC ID # KT100522ASBB

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:

Equipment:

Event: Parcel B Asbestos

Code	Matrix
A	Air
AQ	Air Quality Control Matrix

Code	Container/Preservative
1	Filter/No Preservatives

	Sample ID	Matrix	Date	Time	Samp Init.	Analytical Test Method: Asbestos	Location ID	Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom	Cooler	Flow Rate (L/min), Total Time (mins)
01A	1 FB-092622	AQ	09/26/2022	0800	[redacted]	X	FB	FB1	0.00	0.00	1	
02A	2 MSB01-092622	A	09/27/2022	0749		X	MSB01	N1	0.00	0.00	1	3.4; 1440
03A	3 MSB02-092622	A	09/27/2022	0720		X	MSB02	N1	0.00	0.00	1	3.5; 1438
04A	4 MSB113A-092622	A	09/27/2022	0730		X	MSB113A	N1	0.00	0.00	1	3.5; 1435
05A	5 MSB01-092722	A	09/28/2022	0744		X	MSB01	N1	0.00	0.00	1	3.3; 1434
06A	6 MSB02-092722	A	09/28/2022	0717		X	MSB02	N1	0.00	0.00	1	3.6; 1436
07A	7 MSB113A-092722	A	09/28/2022	0730		X	MSB113A	N1	0.00	0.00	1	3.3; 1439
08A	8 MSB01-092822	A	09/29/2022	0731		X	MSB01	N1	0.00	0.00	1	3; 1426
09A	9 MSB02-092822	A	09/29/2022	0703		X	MSB02	N1	0.00	0.00	1	3.4; 1422
10A	10 MSB113A-092822	A	09/29/2022	0717		X	MSB113A	N1	0.00	0.00	1	3; 1425
11A	11 MSB01-092922	A	09/29/2022	1505		X	MSB01	N1	0.00	0.00	1	3.5; 451

Turnaround Time: 7 days

Relinquished by: *(Signature)*	Date	Time	Received by: *(Signature)*	Date	Time	Shipping Date / Carrier / Airbill Number
[redacted]	10/5/22	1400	Fedex	10/5/22	1400	Shipping Date: 10/05/22 / FEDEX 7700 6470 6975
Fedex	10/6/22	15:34	[redacted]	10/6/22	15:34	**Received by Laboratory:** *(Signature, Date, Time)* **& condition**

22.1°C
IR4
[redacted]

CHAIN-OF-CUSTODY RECORD

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

COC ID # KT100522ASBB

GES

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:

Equipment:

Analytical Test Method

Code	Matrix
A	Air
AQ	Air Quality Control Matrix

Code	Container/Preservative
1	Filter/No Preservatives

Event: Parcel B Asbestos

	Sample ID	Matrix	Date	Time	Samp Init.	Asbestos 1	Location ID	Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom	Cooler	Flow Rate (L/min); Total Time (mins)
12A	12 MSB02-092922	A	09/29/2022	1502	[redacted]	X	MSB02	N1	0.00	0.00	1	3.3; 478
13A	13 MSB113A-092922	A	09/29/2022	1500		X	MSB113A	N1	0.00	0.00	1	3.1; 458
	14											
	15											
	16											
	17											
	18											
	19											
	20											
	21											
	22											

Turnaround Time: 7 days

Relinquished by: *(Signature)*	Date	Time	Received by: *(Signature)*	Date	Time	Shipping Date / Carrier / Airbill Number
[redacted]	10/5/22	1400	Fedex	10/5/22	1400	Shipping Date: 10/05/22 / FEDEX 7700 6470 6975
Fedex			[redacted]			**Received by Laboratory:** *(Signature, Date, Time)* **& condition**

After printing this label:
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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.
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 extraordinary value is $1,000, e.g. jewelry, precious metals, negotiable instruments and other items listed in our ServiceGuide. Written claims must be filed within strict time limits, see current FedEx Service Guide.

Laboratory Analysis Report

Job ID : 22101206

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:	6
	Attn:	[redacted]	P.O.#. :	J310000900-005
	Client Address:	1501 West Fountainhead Parkway, Ste. #550	Date Received :	10/13/2022 14:46
	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-100322	10/3/2022 8:00	Cassette	22101206.01
MSB01-100322	10/4/2022 7:58	Cassette	22101206.02
MSB02-100322	10/4/2022 7:27	Cassette	22101206.03
MSB113A-100322	10/4/2022 7:45	Cassette	22101206.04
MSB01-100422	10/5/2022 7:55	Cassette	22101206.05
MSB02-100422	10/5/2022 7:31	Cassette	22101206.06
MSB113A-100422	10/5/2022 7:44	Cassette	22101206.07
MSB01-100522	10/6/2022 7:56	Cassette	22101206.08
MSB02-100522	10/6/2022 7:26	Cassette	22101206.09
MSB113A-100522	10/6/2022 7:36	Cassette	22101206.10
MSB01-100622	10/6/2022 15:03	Cassette	22101206.11
MSB02-100622	10/6/2022 15:08	Cassette	22101206.12
MSB113A-100622	10/6/2022 15:00	Cassette	22101206.13

[redacted]

Released By: [redacted]

Title: Vice President Operations

Analyst: [redacted]

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 10/20/202

Job ID : 22101206
Analytical Method: NIOSH 7400-I2-Aug1994

Client: GES - ASRC Industrial Project: Hunters Point Shipyard, Parcel B Removal Site Evaluation / J310000900 Attn: [redacted]

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
22101206.01	FB-100322	10/03/2022						0	100	0	0.000			10/20/22	[redacted]
22101206.02	MSB01-100322	10/04/2022	Area	3.1			1471	4560.	100	4.5	5.732	< 0.001		10/20/22	[redacted]
22101206.03	MSB02-100322	10/04/2022	Area	3.3			1462	4824.	100	2	2.548	< 0.001		10/20/22	[redacted]
22101206.04	MSB113A-100322	10/04/2022	Area	3.4			1469	4994.	100	1.5	1.911	< 0.001		10/20/22	[redacted]
22101206.05	MSB01-100422	10/05/2022	Area	3.4			1435	4879	100	17.0	21.656	0.002		10/20/22	[redacted]
22101206.06	MSB02-100422	10/05/2022	Area	3.6			1442	5191.	100	1	1.274	< 0.001		10/20/22	[redacted]
22101206.07	MSB113A-100422	10/05/2022	Area	3.4			1436	4882.	100	0.5	0.637	< 0.001		10/20/22	[redacted]
22101206.08	MSB01-100522	10/06/2022	Area	3.3			1439	4748.	100	17.5	22.293	0.002		10/20/22	[redacted]
22101206.09	MSB02-100522	10/06/2022	Area	3.4			1434	4875.	100	1.5	1.911	< 0.001		10/20/22	[redacted]
22101206.10	MSB113A-100522	10/06/2022	Area	3.2			1430	4576	100	7.0	8.917	0.001		10/20/22	[redacted]
22101206.11	MSB01-100622	10/06/2022	Area	3.3			425	1402.	100	3.5	4.459	< 0.002		10/20/22	[redacted]
22101206.12	MSB02-100622	10/06/2022	Area	3.4			460	1564	100	2	2.548	< 0.002		10/20/22	[redacted]
22101206.13	MSB113A-100622	10/06/2022	Area	3.1			440	1364	100	0	0.000	< 0.002		10/20/22	[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

Intralaboratory Sr 5-20:0.06 20-50:0.04 50-100:0.02

Sample Condition Checklist

A&B JobID : **22101206**	Date Received : **10/13/2022**	Time Received : **2:46PM**
Client Name : **GES - ASRC Industrial**		
Temperature : **25.1°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 ☐ Soil ☐ Liquid ☐ Sludge ☐ Solid ☐ Cassette ☑ Tube ☐ Bulk ☐ Badge ☐ Food ☐ Other ☐			
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:

Cassette=Black Cassette. No cooler was received, however samples are received in a box with a custody seal. [redacted] 10/13/22

Received by : [redacted]

Check in by/date : [redacted] / 10/13/2022

ab-s005-0321

Job ID:22101206

10/13/2022 GES - ASRC Industrial ACH

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

COC ID # KT101222ASBB

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:

Equipment:

Code	Matrix
A	Air
AQ	Air Quality Control Matrix

Code	Container/Preservative
1	Filter/No Preservatives

Event: Parcel B Asbestos

	Sample ID	Matrix	Date	Time	Samp Init.	Analytical Test Method: Asbestos	Location ID	Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom	Cooler	Flow Rate (L/min), Total Time (mins)
1	FB-100322	AQ	10/03/2022	0800	[redacted]	X	FB	FB1	0.00	0.00	1	
2	MSB01-100322	A	10/04/2022	0758		X	MSB01	N1	0.00	0.00	1	3.1; 1471
3	MSB02-100322	A	10/04/2022	0727		X	MSB02	N1	0.00	0.00	1	3.3; 1462
4	MSB113A-100322	A	10/04/2022	0745		X	MSB113A	N1	0.00	0.00	1	3.4; 1469
5	MSB01-100422	A	10/05/2022	0755		X	MSB01	N1	0.00	0.00	1	3.4; 1435
6	MSB02-100422	A	10/05/2022	0731		X	MSB02	N1	0.00	0.00	1	3.6; 1442
7	MSB113A-100422	A	10/05/2022	0744		X	MSB113A	N1	0.00	0.00	1	3.4; 1436
8	MSB01-100522	A	10/06/2022	0756		X	MSB01	N1	0.00	0.00	1	3.3; 1439
9	MSB02-100522	A	10/06/2022	0726		X	MSB02	N1	0.00	0.00	1	3.4; 1434
10	MSB113A-100522	A	10/06/2022	0736		X	MSB113A	N1	0.00	0.00	1	3.2; 1430
11	MSB01-100622	A	10/06/2022	1503		X	MSB01	N1	0.00	0.00	1	3.3; 425

Turnaround Time: 7 days

Relinquished by: *(Signature)*	Date	Time	Received by: *(Signature)*	Date	Time	Shipping Date / Carrier / Airbill Number
[redacted]	10-12-22	1600	FEDEX	10-12-22	1600	Shipping Date: 10/12/22 / FEDEX 7701 1464 2957
FEDEX	10-13-22	14:56	[redacted] 10/13/22			**Received by Labgratory:** *(Signature, Date, Time)* **& condition** [redacted] 14:56 10-13-22 25.1oC [redacted]

CHAIN-OF-CUSTODY RECORD

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

COC ID # KT101222ASBB

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:

Equipment:

Code	Matrix
A	Air
AQ	Air Quality Control Matrix

Code	Container/Preservative
1	Filter/No Preservatives

Event: Parcel B Asbestos

	Sample ID	Matrix	Date	Time	Samp Init.	Analytical Test Method: Asbestos	Location ID	Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom	Cooler	Flow Rate (L/min); Total Time (mins)
12	MSB02-100622	A	10/06/2022	1508	[redacted]	X	MSB02	N1	0.00	0.00	1	3.4; 460
13	MSB113A-100622	A	10/06/2022	1500		X	MSB113A	N1	0.00	0.00	1	3.1; 440
14												
15												
16												
17												
18												
19												
20												
21												
22												

N/A [redacted] 10-12-22

Turnaround Time: 7 days

Relinquished by: *(Signature)*	Date	Time	Received by: *(Signature)*	Date	Time	Shipping Date / Carrier / Airbill Number
[redacted]	10-12-22	1600	FEDEX	10-12-22	1600	Shipping Date: 10/12/22 / FEDEX 7701 1464 2957
FEDEX	10-13-22	14:56	[redacted] 10/13/22			**Received by Laboratory:** *(Signature, Date, Time)* **& condition** [redacted] 10-13-22 25;10C [redacted] 14:56

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2. Fold the printed page along the horizontal line.
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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 extraordinary value is $1,000, e.g. jewelry, precious metals, negotiable instruments and other items listed in our ServiceGuide. Written claims must be filed within strict time limits, see current FedEx Service Guide.

Laboratory Analysis Report

Job ID : 22101884

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:	6
	Attn:	[redacted]	P.O.#. :	J310000900-005
	Client Address:	1501 West Fountainhead Parkway, Ste. #550	Date Received :	10/20/2022 15:30
	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-101022	10/10/2022 8:00	Cassette	22101884.01
MSB01-101022	10/11/2022 8:34	Cassette	22101884.02
MSB02-101022	10/11/2022 7:26	Cassette	22101884.03
MSB113A-101022	10/11/2022 8:12	Cassette	22101884.04
MSB01-101122	10/12/2022 8:08	Cassette	22101884.05
MSB02-101122	10/12/2022 7:35	Cassette	22101884.06
MSB113A-10112	10/12/2022 7:51	Cassette	22101884.07
MSB01-101222	10/13/2022 7:46	Cassette	22101884.08
MSB02-101222	10/13/2022 7:19	Cassette	22101884.09
MSB113A-101222	10/13/2022 7:32	Cassette	22101884.10
MSB01-101322	10/13/2022 14:47	Cassette	22101884.11
MSB02-101322	10/13/2022 14:42	Cassette	22101884.12
MSB113A-101322	10/13/2022 14:46	Cassette	22101884.13

[redacted]

Released By: [redacted]

Title: Vice President Operations

Analyst: [redacted]

ab-q210-0321

10/27/2022

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 10/27/202

Job ID : 22101884
Analytical Method: NIOSH 7400-I2-Aug1994

Client: GES - ASRC Industrial Project: J310000900 / Hunters Point Shipyard, Parcel B Removal Site Evaluation Attn: [redacted]

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
22101884.01	FB-101022	10/10/2022	Area					0	100	4	5.096			10/27/22	[redacted]
22101884.02	MSB01-101022	10/11/2022	Area	3.8			1480	5624	100	5.5	7.006	0.000		10/27/22	[redacted]
22101884.03	MSB02-101022	10/11/2022	Area	3.6			1441	5187.	100	1	1.274	< 0.001		10/27/22	[redacted]
22101884.04	MSB113A-101022	10/11/2022	Area	3.1			1468	4550.	100	1.0	1.274	< 0.001		10/27/22	[redacted]
22101884.05	MSB01-101122	10/12/2022	Area	3.6			1413	5086.	100	1.5	1.911	< 0.001		10/27/22	[redacted]
22101884.06	MSB02-101122	10/12/2022	Area	3.1			1447	4485.	100	4.0	5.096	< 0.001		10/27/22	[redacted]
22101884.07	MSB113A-10112	10/12/2022	Area	3.1			1418	4395.	100	3.5	4.459	< 0.001		10/27/22	[redacted]
22101884.08	MSB01-101222	10/13/2022	Area	3.5			1416	4956	100	2	2.548	< 0.001		10/27/22	[redacted]
22101884.09	MSB02-101222	10/13/2022	Area	3.2			1420	4544	100	2.5	3.185	< 0.001		10/27/22	[redacted]
22101884.10	MSB113A-101222	10/13/2022	Area	3.3			1417	4676.	100	3.5	4.459	< 0.001		10/27/22	[redacted]
22101884.11	MSB01-101322	10/13/2022	Area	3.4			419	1424.	100	3	3.822	< 0.002		10/27/22	[redacted]
22101884.12	MSB02-101322	10/13/2022	Area	3.1			439	1360.	100	1	1.274	< 0.002		10/27/22	[redacted]
22101884.13	MSB113A-101322	10/13/2022	Area	3.2			431	1379.	100	1	1.274	< 0.002		10/27/22	[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

Intralaboratory Sr 5-20:0.06 20-50:0.04 50-100:0.02

Sample Condition Checklist

A&B JobID : **22101884**	Date Received : **10/20/2022**	Time Received : **3:30PM**
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 ☐ Soil ☐ Liquid ☐ Sludge ☐ Solid ☐ Cassette ☑ Tube ☐ Bulk ☐ Badge ☐ Food ☐ Other ☐			
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. Cassette=Black cassette. [redacted] 10/20/22

Received by : [redacted]

Check in by/date : [redacted] / 10/20/2022

ab-s005-0321

CHAIN-OF-CUSTODY RECORD

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

COC ID # KT101922ASBB

GES

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:

Job ID:22101884
10/20/2022 GES - ASRC Industrial ACH

Equipment:

Analytical: Asbestos

Code	Matrix
A	Air
AQ	Air Quality Control Matrix

Code	Container/Preservative
1	Filter/No Preservatives

Event: Parcel B Asbestos

	Sample ID	Matrix	Date	Time	Samp Init.	Asbestos	Location ID	Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom	Cooler	Flow Rate (L/min), Total Time (mins)
01A	1 FB-101022	AQ	10/10/2022	0800	[redacted]	X	FB	FB1	0.00	0.00	1	
02A	2 MSB01-101022	A	10/11/2022	0834		X	MSB01	N1	0.00	0.00	1	3.8; 1480
03A	3 MSB02-101022	A	10/11/2022	0726		X	MSB02	N1	0.00	0.00	1	3.6; 1441
04A	4 MSB113A-101022	A	10/11/2022	0812		X	MSB113A	N1	0.00	0.00	1	3.1; 1468
05A	5 MSB01-101122	A	10/12/2022	0808		X	MSB01	N1	0.00	0.00	1	3.6; 1413
06A	6 MSB02-101122	A	10/12/2022	0735		X	MSB02	N1	0.00	0.00	1	3.1; 1447
07A	7 MSB113A-101122	A	10/12/2022	0751		X	MSB113A	N1	0.00	0.00	1	3.1; 1418
08A	8 MSB01-101222	A	10/13/2022	0746		X	MSB01	N1	0.00	0.00	1	3.5; 1416
09A	9 MSB02-101222	A	10/13/2022	0719		X	MSB02	N1	0.00	0.00	1	3.2; 1420
10A	10 MSB113A-101222	A	10/13/2022	0732		X	MSB113A	N1	0.00	0.00	1	3.3; 1417
11A	11 MSB01-101322	A	10/13/2022	1447		X	MSB01	N1	0.00	0.00	1	3.4; 419

Turnaround Time: 7 days

Relinquished by: *(Signature)*	Date	Time	Received by: *(Signature)*	Date	Time	Shipping Date / Carrier / Airbill Number
[redacted]	10-19-22	1600	FEDEX	10-19-22	1600	Shipping Date: 10/19/22 / FEDEX 7701 7666 7319
Fed ex	10-20-22	15:30	[redacted]	10-20-22	15:30	**Received by Laboratory:** *(Signature, Date, Time)* **& condition** [redacted]

22.1 IR4

[redacted]

CHAIN-OF-CUSTODY RECORD

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

COC ID # KT101922ASBB

GES

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:

Equipment:

Code	Matrix
A	Air
AQ	Air Quality Control Matrix

Code	Container/Preservative
1	Filter/No Preservatives

Event: Parcel B Asbestos

	Sample ID	Matrix	Date	Time	Samp Init.	Analytical Test Method: Asbestos	Location ID	Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom	Cooler	Flow Rate (L/min); Total Time (mins)
12	MSB02-101322	A	10/13/2022	1442	[redacted]	X	MSB02	N1	0.00	0.00	1	3.1; 439
13	MSB113A-101322	A	10/13/2022	1446		X	MSB113A	N1	0.00	0.00	1	3.2; 431
14												
15												

N/A [redacted] 10-19-22

Turnaround Time: 7 days

Relinquished by: *(Signature)*	Date	Time	Received by: *(Signature)*	Date	Time	Shipping Date / Carrier / Airbill Number
[redacted]	10-19-22	1600	FEDEX	10-19-22	1600	Shipping Date: 10/19/22 / FEDEX 7701 7666 7319
Fed ex	10-20-22	15:30	[redacted]	10-20-22	15:30	**Received by Laboratory:** *(Signature, Date, Time)* **& condition** [redacted]

22.1 IR4

[redacted]

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.

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 extraordinary value is $1,000, e.g. jewelry, precious metals, negotiable instruments and other items listed in our ServiceGuide. Written claims must be filed within strict time limits, see current FedEx Service Guide.

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ARS Aleut Analytical, LLC

Laboratory Analytical Report

ARS1-22-01859

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

COC Number: **KT083122RADB**
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.

		Laboratory Management, ARS Aleut Analytical
Signature	**Date**	**Title**

ARS Aleut Analytical
2609 North River Road • Port Allen, Louisiana 70767
(225) 228-1394 • FAX (225) 381-2996

Table Of Contents

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

ARS Aleut Analytical
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PROJECT SAMPLE IDENTIFICATION CROSS-REFERENCE
TO ARS SAMPLE LABORATORY IDs

Client Sample ID	ARS Aleut Analytical Sample ID
FB-082222	**ARS1-22-01859-001**
MSB01-082222	**ARS1-22-01859-002**
MSB02-082222	**ARS1-22-01859-003**
MSB02-082222D	**ARS1-22-01859-004**
MSB113A-082222	**ARS1-22-01859-005**

Sample	Date Collected	Date Received	Analysis	Basis	Prep Date/Time	Analysis Date/Time
001	08/22/22 08:00	09/01/22	ASP-PU239-AF	As Received	09/14/22 11:22	09/27/22 03:32
001	08/22/22 08:00	09/01/22	ASP-TH-AF	As Received	09/14/22 11:22	09/22/22 23:14
001	08/22/22 08:00	09/01/22	ASP-U-AF	As Received	09/14/22 11:22	09/24/22 02:24
001	08/22/22 08:00	09/01/22	GAM-A-AF	As Received	N/A	09/02/22 14:09
001	08/22/22 08:00	09/01/22	GPC-RA226-AF	As Received	09/29/22 14:26	10/07/22 09:50
001	08/22/22 08:00	09/01/22	GPC-SR90-AF	As Received	09/29/22 12:30	10/03/22 10:28
002	08/25/22 15:12	09/01/22	ASP-PU239-AF	As Received	09/14/22 11:22	09/27/22 03:32
002	08/25/22 15:12	09/01/22	ASP-TH-AF	As Received	09/14/22 11:22	09/24/22 02:21
002	08/25/22 15:12	09/01/22	ASP-U-AF	As Received	09/14/22 11:22	09/24/22 02:24
002	08/25/22 15:12	09/01/22	GAM-A-AF	As Received	N/A	09/02/22 14:11
002	08/25/22 15:12	09/01/22	GPC-RA226-AF	As Received	09/29/22 14:26	10/07/22 09:50
002	08/25/22 15:12	09/01/22	GPC-SR90-AF	As Received	09/20/22 11:45	09/26/22 11:26
003	08/25/22 14:54	09/01/22	ASP-PU239-AF	As Received	09/14/22 11:22	09/27/22 03:32
003	08/25/22 14:54	09/01/22	ASP-TH-AF	As Received	09/14/22 11:22	09/24/22 02:21

003	08/25/22 14:54	09/01/22	ASP-U-AF	As Received	09/14/22 11:22	09/24/22 02:24
003	08/25/22 14:54	09/01/22	GAM-A-AF	As Received	N/A	09/02/22 14:13
003	08/25/22 14:54	09/01/22	GPC-RA226-AF	As Received	09/22/22 10:47	10/03/22 10:22
003	08/25/22 14:54	09/01/22	GPC-SR90-AF	As Received	09/20/22 11:45	09/26/22 11:26
004	08/25/22 14:54	09/01/22	ASP-PU239-AF	As Received	09/14/22 11:22	09/27/22 03:32
004	08/25/22 14:54	09/01/22	ASP-TH-AF	As Received	09/14/22 11:22	09/22/22 23:14
004	08/25/22 14:54	09/01/22	ASP-U-AF	As Received	09/14/22 11:22	09/24/22 02:24
004	08/25/22 14:54	09/01/22	GAM-A-AF	As Received	N/A	09/06/22 14:22
004	08/25/22 14:54	09/01/22	GPC-RA226-AF	As Received	09/29/22 14:26	10/07/22 09:50
004	08/25/22 14:54	09/01/22	GPC-SR90-AF	As Received	09/29/22 12:30	10/03/22 10:28
005	08/25/22 15:04	09/01/22	ASP-PU239-AF	As Received	09/14/22 11:22	09/27/22 03:32
005	08/25/22 15:04	09/01/22	ASP-TH-AF	As Received	09/14/22 11:22	09/22/22 23:14
005	08/25/22 15:04	09/01/22	ASP-U-AF	As Received	09/14/22 11:22	09/24/22 02:24
005	08/25/22 15:04	09/01/22	GAM-A-AF	As Received	N/A	09/06/22 14:24
005	08/25/22 15:04	09/01/22	GPC-RA226-AF	As Received	09/29/22 14:26	10/07/22 09:50
005	08/25/22 15:04	09/01/22	GPC-SR90-AF	As Received	09/20/22 11:45	09/26/22 11:26

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)"**.

Th-232 analysis was performed using **PALA-RAD-031, "Thorium in Water, Soil and Vegetation Matrices by Eichrom Resin Separation (Eichrom ACW-08 & Eichrom ACW-10)"**.

U-235 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

Batch ARS1-B22-01373: Fraction 003 has tracer recovery of 28.4%, which is outside limits of 30%-110%. The sample results have been qualified with a "Q".

Batch ARS1-B22-01454: The Method Blank is greater than the MDC for Ra-226; all positive detects for Ra-226 in this analytical batch are qualified with a 'B'.

Fraction 001 has elevated MDC for Pu-239/240 with ACT of -3.413E-8 uCi/filter, MDC of 2.050E-7 uCi/filter and CRDL of 4.8E-08 uCi/filter.
Fraction 001 has elevated MDC for U-235 with ACT of 5.652E-8 uCi/filter, MDC of 2.029E-7 uCi/filter and CRDL of 4.8E-08 uCi/filter.
Fraction 001 has elevated MDC for Th-232 with ACT of 4.997E-8 uCi/filter, MDC of 7.358E-8 uCi/filter and CRDL of 4.8E-08 uCi/filter.
Fraction 001 has elevated MDC for Ra-226 with ACT of -1.258E-5 uCi/filter, MDC of 1.615E-5 uCi/filter and CRDL of 4.4E-06 uCi/filter.
Fraction 002 has elevated MDC for Pu-239/240 with ACT of -2.837E-8 uCi/filter, MDC of 1.961E-7 uCi/filter and CRDL of 4.8E-08 uCi/filter.
Fraction 002 has elevated MDC for U-235 with ACT of 4.161E-8 uCi/filter, MDC of 1.532E-7 uCi/filter and CRDL of 4.8E-08 uCi/filter.
Fraction 002 has elevated MDC for Th-232 with ACT of -3.517E-8 uCi/filter, MDC of 1.537E-7 uCi/filter and CRDL of 4.8E-08 uCi/filter.
Fraction 002 has elevated MDC for Ra-226 with ACT of -8.867E-5 uCi/filter, MDC of 3.167E-5 uCi/filter and CRDL of 4.4E-06 uCi/filter.
Fraction 003 has elevated MDC for Pu-239/240 with ACT of -3.072E-8 uCi/filter, MDC of 1.538E-7 uCi/filter and CRDL of 4.8E-08 uCi/filter.
Fraction 003 has elevated MDC for Th-232 with ACT of 2.894E-8 uCi/filter, MDC of 1.681E-7 uCi/filter and CRDL of 4.8E-08 uCi/filter.
Fraction 003 has elevated MDC for Ra-226 with ACT of 0.000 uCi/filter, MDC of 1.490E-5 uCi/filter and CRDL of 4.4E-06 uCi/filter.
Fraction 004 has elevated MDC for Pu-239/240 with ACT of -8.684E-8 uCi/filter, MDC of 2.166E-7 uCi/filter and CRDL of 4.8E-08 uCi/filter.
Fraction 004 has elevated MDC for U-235 with ACT of 0.000 uCi/filter, MDC of 1.572E-7 uCi/filter and CRDL of 4.8E-08 uCi/filter.

Fraction 004 has elevated MDC for Th-232 with ACT of 6.012E-8 uCi/filter, MDC of 1.079E-7 uCi/filter and CRDL of 4.8E-08 uCi/filter.
Fraction 004 has elevated MDC for Ra-226 with ACT of -3.388E-6 uCi/filter, MDC of 9.549E-6 uCi/filter and CRDL of 4.4E-06 uCi/filter.
Fraction 005 has elevated MDC for Pu-239/240 with ACT of -9.837E-8 uCi/filter, MDC of 2.413E-7 uCi/filter and CRDL of 4.8E-08 uCi/filter.
Fraction 005 has elevated MDC for U-235 with ACT of 2.255E-8 uCi/filter, MDC of 1.660E-7 uCi/filter and CRDL of 4.8E-08 uCi/filter.
Fraction 005 has elevated MDC for Th-232 with ACT of 3.797E-8 uCi/filter, MDC of 1.660E-7 uCi/filter and CRDL of 4.8E-08 uCi/filter.
Fraction 005 has elevated MDC for Ra-226 with ACT of 0.000 uCi/filter, MDC of 1.454E-5 uCi/filter and CRDL of 4.4E-06 uCi/filter.

ARS1-B22-01370: ROI's adjusted to better fit the peaks of interest.

ARS1-B22-01370: FWHM is greater than 100 keV for Th-229 on batch sample -12.

ARS1-B22-01372: ROI's adjusted to better fit the peaks of interest.

ARS1-B22-01373: ROI's adjusted to better fit the peaks of interest.

ARS1-B22-01374: Approximately 5mL of batch sample 2, the LCS, was lost during procedure due to cracked beaker.

ARS1-B22-01374: The Method Blank had a detect for Sr-90. All reported fractions (-05, 08, 09, 10 and 12) were non-detects, therefore the activity in the Method Blank did not contribute to the concentration in client samples. Fraction -06 was a detect but could not be rerun since there was no remaining sample. All positive detects for SR-90 in this analytical batch are qualified with a 'B'.

ARS1-B22-01386: Batch sample 6 was lost during centrifuging; the sample was removed from the batch.

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
ǂ 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

ARS Aleut Analytical

2609 North River Road • Port Allen, Louisiana 70767

(225) 228-1394 • FAX (225) 381-2996

ARS Sample Delivery Group: ARS1-22-01859
Client Sample ID: FB-082222
Sample Collection Date: 08/22/22 8:00
Sample Matrix: Air Filter
Percent Solids: N/A

Request or PO Number: J310000900
ARS Sample ID: ARS1-22-01859-001
Date Received: 09/01/22
Report Date: 10/07/22

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	-3.413E-8	1.032E-7	2.050E-7	9.096E-8	4.8E-08	U	uCi/filter	09/27/22 3:32	[redacted]	69.6%

Analysis Method: Eichrom ACW10

Analysis Description	Analysis Results	CSU +/- 2 s	MDC	DLC	CRDL	Qual	Analysis Units	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
Th-232	4.997E-8	5.217E-8	7.358E-8	2.325E-8	4.8E-08	U	uCi/filter	09/22/22 23:14	[redacted]	64.2%

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
U-235	5.652E-8	1.110E-7	2.029E-7	7.592E-8	4.8E-08	U	uCi/filter	09/24/22 2:24	[redacted]	37.3%

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	-5.822E-7	1.050E-6	1.136E-6	5.680E-7	0.00024	U	uCi/filter	09/02/22 14:09	[redacted]	N/A
Cs-137	4.263E-7	7.618E-7	8.832E-7	4.416E-7	0.00048	U	uCi/filter	09/02/22 14:09	[redacted]	N/A
Ra-226	-1.258E-5	1.423E-5	1.615E-5	8.075E-6	4.4E-06	U	uCi/filter	09/02/22 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	8.349E-7	5.874E-7	7.526E-7	2.875E-7	4.4E-06	B	uCi/filter	10/07/22 9:50	[redacted]	99.9%

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	2.667E-6	2.465E-6	3.976E-6	1.841E-6	2.4E-05	U	uCi/filter	10/03/22 10:28	[redacted]	98.6%

ARS Aleut Analytical

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ARS Sample Delivery Group: ARS1-22-01859
Client Sample ID: MSB01-082222
Sample Collection Date: 08/25/22 15:12
Sample Matrix: Air Filter
Percent Solids: N/A

Request or PO Number: J310000900
ARS Sample ID: ARS1-22-01859-002
Date Received: 09/01/22
Report Date: 10/07/22

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	-2.837E-8	9.638E-8	1.961E-7	8.521E-8	4.8E-08	U	uCi/filter	09/27/22 3:32	[redacted]	66.3%

Analysis Method: Eichrom ACW10

Analysis Description	Analysis Results	CSU +/- 2 s	MDC	DLC	CRDL	Qual	Analysis Units	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
Th-232	-3.517E-8	6.094E-8	1.537E-7	6.099E-8	4.8E-08	U	uCi/filter	09/24/22 2:21	[redacted]	58.0%

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
U-235	4.161E-8	8.170E-8	1.532E-7	4.840E-8	4.8E-08	U	uCi/filter	09/24/22 2:24	[redacted]	33.9%

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	-5.598E-7	1.777E-6	1.816E-6	9.080E-7	0.00024	U	uCi/filter	09/02/22 14:11	[redacted]	N/A
Cs-137	1.216E-6	1.270E-6	1.403E-6	7.015E-7	0.00048	U	uCi/filter	09/02/22 14:11	[redacted]	N/A
Ra-226	-8.867E-5	3.209E-5	3.167E-5	1.584E-5	4.4E-06	U	uCi/filter	09/02/22 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	6.705E-7	5.413E-7	7.471E-7	2.868E-7	4.4E-06	U	uCi/filter	10/07/22 9:50	[redacted]	99.0%

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	4.467E-7	1.560E-6	2.716E-6	1.282E-6	2.4E-05	U	uCi/filter	09/26/22 11:26	[redacted]	94.5%

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ARS Sample Delivery Group: ARS1-22-01859
Client Sample ID: MSB02-082222
Sample Collection Date: 08/25/22 14:54
Sample Matrix: Air Filter
Percent Solids: N/A

Request or PO Number: J310000900
ARS Sample ID: ARS1-22-01859-003
Date Received: 09/01/22
Report Date: 10/07/22

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	-3.072E-8	6.667E-8	1.538E-7	6.303E-8	4.8E-08	U	uCi/filter	09/27/22 3:32	[redacted]	62.7%

Analysis Method: Eichrom ACW10

Analysis Description	Analysis Results	CSU +/- 2 s	MDC	DLC	CRDL	Qual	Analysis Units	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
Th-232	2.894E-8	9.076E-8	1.681E-7	7.098E-8	4.8E-08	U	uCi/filter	09/24/22 2:21	[redacted]	61.5%

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
U-235	7.258E-8	8.260E-8	6.556E-8	0.000	4.8E-08	Q	uCi/filter	09/24/22 2:24	[redacted]	28.4%

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	3.220E-7	9.127E-7	9.348E-7	4.674E-7	0.00024	U	uCi/filter	09/02/22 14:13	[redacted]	N/A
Cs-137	-4.616E-7	8.773E-7	9.771E-7	4.886E-7	0.00048	U	uCi/filter	09/02/22 14:13	[redacted]	N/A
Ra-226	0.000	9.244E-6	1.490E-5	7.450E-6	4.4E-06	U	uCi/filter	09/02/22 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	2.792E-6	7.367E-7	3.456E-7	1.320E-7	4.4E-06		uCi/filter	10/03/22 10:22	[redacted]	97.5%

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	3.213E-6	1.419E-6	1.930E-6	8.923E-7	2.4E-05	B	uCi/filter	09/26/22 11:26	[redacted]	99.4%

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ARS Sample Delivery Group: ARS1-22-01859
Client Sample ID: MSB02-082222D
Sample Collection Date: 08/25/22 14:54
Sample Matrix: Air Filter
Percent Solids: N/A

Request or PO Number: J310000900
ARS Sample ID: ARS1-22-01859-004
Date Received: 09/01/22
Report Date: 10/07/22

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	-8.684E-8	9.883E-8	2.166E-7	9.524E-8	4.8E-08	U	uCi/filter	09/27/22 3:32	[redacted]	61.4%

Analysis Method: Eichrom ACW10

Analysis Description	Analysis Results	CSU +/- 2 s	MDC	DLC	CRDL	Qual	Analysis Units	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
Th-232	6.012E-8	6.841E-8	1.079E-7	4.037E-8	4.8E-08	U	uCi/filter	09/22/22 23:14	[redacted]	60.1%

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
U-235	0.000	6.632E-8	1.572E-7	5.566E-8	4.8E-08	U	uCi/filter	09/24/22 2:24	[redacted]	41.3%

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	3.401E-8	8.044E-7	8.326E-7	4.163E-7	0.00024	U	uCi/filter	09/06/22 14:22	[redacted]	N/A
Cs-137	-1.596E-8	6.678E-7	7.290E-7	3.645E-7	0.00048	U	uCi/filter	09/06/22 14:22	[redacted]	N/A
Ra-226	-3.388E-6	7.583E-6	9.549E-6	4.775E-6	4.4E-06	U	uCi/filter	09/06/22 14:22	[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	1.025E-6	6.621E-7	7.975E-7	3.014E-7	4.4E-06	B	uCi/filter	10/07/22 9:50	[redacted]	95.3%

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	-5.798E-8	2.055E-6	3.754E-6	1.730E-6	2.4E-05	U	uCi/filter	10/03/22 10:28	[redacted]	98.6%

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ARS Sample Delivery Group: ARS1-22-01859
Client Sample ID: MSB113A-082222
Sample Collection Date: 08/25/22 15:04
Sample Matrix: Air Filter
Percent Solids: N/A

Request or PO Number: J310000900
ARS Sample ID: ARS1-22-01859-005
Date Received: 09/01/22
Report Date: 10/07/22

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	-9.837E-8	1.187E-7	2.413E-7	1.095E-7	4.8E-08	U	uCi/filter	09/27/22 3:32	[redacted]	73.9%

Analysis Method: Eichrom ACW10

Analysis Description	Analysis Results	CSU +/- 2 s	MDC	DLC	CRDL	Qual	Analysis Units	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
Th-232	3.797E-8	8.957E-8	1.660E-7	6.585E-8	4.8E-08	U	uCi/filter	09/22/22 23:14	[redacted]	52.2%

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
U-235	2.255E-8	7.661E-8	1.660E-7	5.246E-8	4.8E-08	U	uCi/filter	09/24/22 2:24	[redacted]	34.0%

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	4.702E-7	6.460E-7	1.068E-6	5.340E-7	0.00024	U	uCi/filter	09/06/22 14:24	[redacted]	N/A
Cs-137	3.409E-7	7.727E-7	8.639E-7	4.320E-7	0.00048	U	uCi/filter	09/06/22 14:24	[redacted]	N/A
Ra-226	0.000	9.041E-6	1.454E-5	7.270E-6	4.4E-06	U	uCi/filter	09/06/22 14:24	[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	5.268E-7	5.056E-7	7.420E-7	2.779E-7	4.4E-06	U	uCi/filter	10/07/22 9:50	[redacted]	99.7%

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	1.281E-6	1.185E-6	1.910E-6	8.835E-7	2.4E-05	U	uCi/filter	09/26/22 11:26	[redacted]	100%

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Analytical Reports

for

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QC Summary

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QC Sample Results

Analytical Batch: ARS1-B22-01454
Lab Sample ID: ARS1-B22-01454-01
Method: EPA 9315

Sample Type: LCS
Matrix: Air Filter
Analysis Date: 10/07/22 9:50

Analyte	Spike Added	Analysis Result	Qual	Analysis Units	% Rec	% Rec Limits
Ra-226	2.757E-5	2.395E-5		uCi/filter	86.9	75 - 125

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QC Sample Results

Analytical Batch: ARS1-B22-01454
Lab Sample ID: ARS1-B22-01454-02
Method: EPA 9315

Sample Type: LCSD
Matrix: Air Filter
Analysis Date: 10/07/22 9:50

Analyte	Spike Added	Analysis Result	Qual	Analysis Units	% Rec	% Rec Limits	RPD	RPD Limit	DER	DER Limit
Ra-226	2.754E-5	2.331E-5		uCi/filter	84.6	75 - 125	2.7	25	0.231	3

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QC Sample Results

Analytical Batch: ARS1-B22-01454
Lab Sample ID: ARS1-B22-01454-03
Method: EPA 9315

Sample Type: MBL
Matrix: Air Filter
Analysis Date: 10/07/22 9:50

Analyte	Analysis Result	CSU +/- 2 s	MDC	DLC	Qual	Analysis Units
Ra-226	1.574E-6	7.440E-7	7.095E-7	2.674E-7		uCi/filter

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QC Association Summary

ARS Sample Delivery Group: ARS1-22-01859

Analytical Batch: ARS1-B22-01454

Analysis: Radium-226 in Air Filter

Batch Sample ID	Lab Sample ID	Client Sample ID	Matrix	Method	Prep Method
ARS1-B22-01454-01		Lab Control Sample	Air Filter	EPA 9315	N/A
ARS1-B22-01454-02		Lab Control Sample Duplicate	Air Filter	EPA 9315	N/A
ARS1-B22-01454-03		Method Blank	Air Filter	EPA 9315	N/A
ARS1-B22-01454-04	ARS1-22-01859-001	FB-082222	Air Filter	EPA 9315	N/A
ARS1-B22-01454-05	ARS1-22-01859-002	MSB01-082222	Air Filter	EPA 9315	N/A
ARS1-B22-01454-06	ARS1-22-01859-004	MSB02-082222D	Air Filter	EPA 9315	N/A
ARS1-B22-01454-07	ARS1-22-01859-005	MSB113A-082222	Air Filter	EPA 9315	N/A

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QC Sample Results

Analytical Batch: ARS1-B22-01262
Lab Sample ID: ARS1-B22-01262-01
Method: EPA 901.1M

Sample Type: LCS
Matrix: Air Filter
Analysis Date: 09/06/22 14:29

Analyte	Spike Added	Analysis Result	Qual	Analysis Units	% Rec	% Rec Limits
Am-241	33.065	31.285		uCi/filter	94.6	75 - 125
Co-60	20.928	20.806		uCi/filter	99.4	75 - 125
Cs-137	12.996	13.139		uCi/filter	101.1	75 - 125

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QC Sample Results

Analytical Batch: ARS1-B22-01262
Lab Sample ID: ARS1-B22-01262-02
Method: EPA 901.1M

Sample Type: LCSD
Matrix: Air Filter
Analysis Date: 09/06/22 14:41

Analyte	Spike Added	Analysis Result	Qual	Analysis Units	% Rec	% Rec Limits	RPD	RPD Limit	DER	DER Limit
Am-241	33.065	31.908		uCi/filter	96.5	75 - 125	2.0	25	0.359	3
Co-60	20.928	21.248		uCi/filter	101.5	75 - 125	2.1	25	0.469	3
Cs-137	12.996	13.348		uCi/filter	102.7	75 - 125	1.6	25	0.335	3

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QC Sample Results

Analytical Batch: ARS1-B22-01262
Lab Sample ID: ARS1-B22-01262-03
Method: EPA 901.1M

Sample Type: MBL
Matrix: Air Filter
Analysis Date: 09/06/22 14:26

Analyte	Analysis Result	CSU +/- 2 s	MDC	DLC	Qual	Analysis Units
Co-60	-9.623E-4	0.002	0.002	8.850E-4	U	uCi/filter
Cs-137	-8.258E-4	0.002	0.002	8.950E-4	U	uCi/filter
Ra-226	-0.077	0.024	0.031	0.015	U	uCi/filter

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QC Association Summary

ARS Sample Delivery Group: ARS1-22-01859 **Analytical Batch:** ARS1-B22-01262

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

Batch Sample ID	Lab Sample ID	Client Sample ID	Matrix	Method	Prep Method
ARS1-B22-01262-01		Lab Control Sample	Air Filter	EPA 901.1M	N/A
ARS1-B22-01262-02		Lab Control Sample Duplicate	Air Filter	EPA 901.1M	N/A
ARS1-B22-01262-03		Method Blank	Air Filter	EPA 901.1M	N/A
ARS1-B22-01262-04	ARS1-22-01859-001	FB-082222	Air Filter	EPA 901.1M	N/A
ARS1-B22-01262-05	ARS1-22-01859-002	MSB01-082222	Air Filter	EPA 901.1M	N/A
ARS1-B22-01262-06	ARS1-22-01859-003	MSB02-082222	Air Filter	EPA 901.1M	N/A
ARS1-B22-01262-07	ARS1-22-01859-004	MSB02-082222D	Air Filter	EPA 901.1M	N/A
ARS1-B22-01262-08	ARS1-22-01859-005	MSB113A-082222	Air Filter	EPA 901.1M	N/A

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QC Sample Results

Analytical Batch: ARS1-B22-01370
Lab Sample ID: ARS1-B22-01370-01
Method: Eichrom ACW10

Sample Type: LCS
Matrix: Air Filter
Analysis Date: 09/22/22 23:14

Analyte	Spike Added	Analysis Result	Qual	Analysis Units	% Rec	% Rec Limits
Th-230	5.207E-6	6.385E-6		uCi/filter	122.6	75 - 125

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QC Sample Results

Analytical Batch: ARS1-B22-01370
Lab Sample ID: ARS1-B22-01370-02
Method: Eichrom ACW10

Sample Type: LCSD
Matrix: Air Filter
Analysis Date: 09/22/22 23:14

Analyte	Spike Added	Analysis Result	Qual	Analysis Units	% Rec	% Rec Limits	RPD	RPD Limit	DER	DER Limit
Th-230	5.202E-6	5.904E-6		uCi/filter	113.5	75 - 125	7.8	25	0.850	3

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QC Sample Results

Analytical Batch: ARS1-B22-01370
Lab Sample ID: ARS1-B22-01370-03
Method: Eichrom ACW10

Sample Type: MBL
Matrix: Air Filter
Analysis Date: 09/22/22 23:14

Analyte	Analysis Result	CSU +/- 2 s	MDC	DLC	Qual	Analysis Units
Th-228	-1.025E-7	1.744E-7	3.501E-7	1.577E-7	U	uCi/filter
Th-230	3.796E-8	1.190E-7	2.205E-7	9.309E-8	U	uCi/filter
Th-232	3.788E-8	5.553E-8	9.298E-8	2.938E-8	U	uCi/filter

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QC Association Summary

ARS Sample Delivery Group: ARS1-22-01859

Analytical Batch: ARS1-B22-01370

Analysis: Thorium in (Air Filters, Smears, Leak Test [AF, SM, LT])

Batch Sample ID	Lab Sample ID	Client Sample ID	Matrix	Method	Prep Method
ARS1-B22-01370-01		Lab Control Sample	Air Filter	Eichrom ACW10	N/A
ARS1-B22-01370-02		Lab Control Sample Duplicate	Air Filter	Eichrom ACW10	N/A
ARS1-B22-01370-03		Method Blank	Air Filter	Eichrom ACW10	N/A
ARS1-B22-01370-04	ARS1-22-01859-001	FB-082222	Air Filter	Eichrom ACW10	N/A
ARS1-B22-01370-05	ARS1-22-01859-002	MSB01-082222	Air Filter	Eichrom ACW10	N/A
ARS1-B22-01370-06	ARS1-22-01859-003	MSB02-082222	Air Filter	Eichrom ACW10	N/A
ARS1-B22-01370-07	ARS1-22-01859-004	MSB02-082222D	Air Filter	Eichrom ACW10	N/A
ARS1-B22-01370-08	ARS1-22-01859-005	MSB113A-082222	Air Filter	Eichrom ACW10	N/A

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QC Sample Results

Analytical Batch: ARS1-B22-01372
Lab Sample ID: ARS1-B22-01372-01
Method: Eichrom ACW03

Sample Type: LCS
Matrix: Air Filter
Analysis Date: 09/27/22 3:32

Analyte	Spike Added	Analysis Result	Qual	Analysis Units	% Rec	% Rec Limits
Pu-239/240	7.831E-6	8.247E-6		uCi/filter	105.3	75 - 125

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QC Sample Results

Analytical Batch: ARS1-B22-01372
Lab Sample ID: ARS1-B22-01372-02
Method: Eichrom ACW03

Sample Type: LCSD
Matrix: Air Filter
Analysis Date: 09/27/22 3:32

Analyte	Spike Added	Analysis Result	Qual	Analysis Units	% Rec	% Rec Limits	RPD	RPD Limit	DER	DER Limit
Pu-239/240	7.824E-6	7.815E-6		uCi/filter	99.9	75 - 125	5.4	25	0.597	3

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QC Sample Results

Analytical Batch: ARS1-B22-01372
Lab Sample ID: ARS1-B22-01372-03
Method: Eichrom ACW03

Sample Type: MBL
Matrix: Air Filter
Analysis Date: 09/27/22 3:32

Analyte	Analysis Result	CSU +/- 2 s	MDC	DLC	Qual	Analysis Units
Pu-238	0.000	8.333E-8	1.687E-7	6.994E-8	U	uCi/filter
Pu-239/240	-2.550E-7	1.287E-7	2.996E-7	1.354E-7	U	uCi/filter

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QC Association Summary

ARS Sample Delivery Group: ARS1-22-01859

Analytical Batch: ARS1-B22-01372

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-B22-01372-01		Lab Control Sample	Air Filter	Eichrom ACW03	N/A
ARS1-B22-01372-02		Lab Control Sample Duplicate	Air Filter	Eichrom ACW03	N/A
ARS1-B22-01372-03		Method Blank	Air Filter	Eichrom ACW03	N/A
ARS1-B22-01372-04	ARS1-22-01859-001	FB-082222	Air Filter	Eichrom ACW03	N/A
ARS1-B22-01372-05	ARS1-22-01859-002	MSB01-082222	Air Filter	Eichrom ACW03	N/A
ARS1-B22-01372-06	ARS1-22-01859-003	MSB02-082222	Air Filter	Eichrom ACW03	N/A
ARS1-B22-01372-07	ARS1-22-01859-004	MSB02-082222D	Air Filter	Eichrom ACW03	N/A
ARS1-B22-01372-08	ARS1-22-01859-005	MSB113A-082222	Air Filter	Eichrom ACW03	N/A

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QC Sample Results

Analytical Batch: ARS1-B22-01373
Lab Sample ID: ARS1-B22-01373-01
Method: Eichrom ACW03

Sample Type: LCS
Matrix: Air Filter
Analysis Date: 09/24/22 2:24

Analyte	Spike Added	Analysis Result	Qual	Analysis Units	% Rec	% Rec Limits
U-238	8.192E-6	8.058E-6		uCi/filter	98.4	75 - 125

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QC Sample Results

Analytical Batch: ARS1-B22-01373
Lab Sample ID: ARS1-B22-01373-02
Method: Eichrom ACW03

Sample Type: LCSD
Matrix: Air Filter
Analysis Date: 09/24/22 2:24

Analyte	Spike Added	Analysis Result	Qual	Analysis Units	% Rec	% Rec Limits	RPD	RPD Limit	DER	DER Limit
U-238	8.239E-6	8.228E-6		uCi/filter	99.9	75 - 125	2.1	25	0.234	3

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QC Sample Results

Analytical Batch: ARS1-B22-01373
Lab Sample ID: ARS1-B22-01373-03
Method: Eichrom ACW03

Sample Type: MBL
Matrix: Air Filter
Analysis Date: 09/24/22 2:24

Analyte	Analysis Result	CSU +/- 2 s	MDC	DLC	Qual	Analysis Units
U-234	-6.610E-8	1.716E-7	3.523E-7	1.538E-7	U	uCi/filter
U-235	1.915E-8	6.507E-8	1.410E-7	4.456E-8	U	uCi/filter
U-238	-1.979E-7	1.602E-7	3.702E-7	1.628E-7	U	uCi/filter

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QC Association Summary

ARS Sample Delivery Group: ARS1-22-01859

Analytical Batch: ARS1-B22-01373

Analysis: Uranium (233, 234U, 235U, 238U) in (Air Filters, Smears, Leak Test [AF, SM, LT])

Batch Sample ID	Lab Sample ID	Client Sample ID	Matrix	Method	Prep Method
ARS1-B22-01373-01		Lab Control Sample	Air Filter	Eichrom ACW03	N/A
ARS1-B22-01373-02		Lab Control Sample Duplicate	Air Filter	Eichrom ACW03	N/A
ARS1-B22-01373-03		Method Blank	Air Filter	Eichrom ACW03	N/A
ARS1-B22-01373-04	ARS1-22-01859-001	FB-082222	Air Filter	Eichrom ACW03	N/A
ARS1-B22-01373-05	ARS1-22-01859-002	MSB01-082222	Air Filter	Eichrom ACW03	N/A
ARS1-B22-01373-06	ARS1-22-01859-003	MSB02-082222	Air Filter	Eichrom ACW03	N/A
ARS1-B22-01373-07	ARS1-22-01859-004	MSB02-082222D	Air Filter	Eichrom ACW03	N/A
ARS1-B22-01373-08	ARS1-22-01859-005	MSB113A-082222	Air Filter	Eichrom ACW03	N/A

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QC Sample Results

Analytical Batch: ARS1-B22-01374
Lab Sample ID: ARS1-B22-01374-01
Method: Eichrom SRW01

Sample Type: LCS
Matrix: Air Filter
Analysis Date: 09/26/22 11:26

Analyte	Spike Added	Analysis Result	Qual	Analysis Units	% Rec	% Rec Limits
SR-90	2.001E-5	2.147E-5		uCi/filter	107.3	75 - 125

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QC Sample Results

Analytical Batch: ARS1-B22-01374
Lab Sample ID: ARS1-B22-01374-02
Method: Eichrom SRW01

Sample Type: LCSD
Matrix: Air Filter
Analysis Date: 09/26/22 11:26

Analyte	Spike Added	Analysis Result	Qual	Analysis Units	% Rec	% Rec Limits	RPD	RPD Limit	DER	DER Limit
SR-90	2.005E-5	2.314E-5		uCi/filter	115.4	75 - 125	7.5	25	0.670	3

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QC Sample Results

Analytical Batch: ARS1-B22-01374
Lab Sample ID: ARS1-B22-01374-03
Method: Eichrom SRW01

Sample Type: MBL
Matrix: Air Filter
Analysis Date: 09/26/22 11:26

Analyte	Analysis Result	CSU +/- 2 s	MDC	DLC	Qual	Analysis Units
SR-90	2.683E-6	1.331E-6	1.864E-6	8.556E-7		uCi/filter

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QC Association Summary

ARS Sample Delivery Group: ARS1-22-01859 **Analytical Batch:** ARS1-B22-01374

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

Batch Sample ID	Lab Sample ID	Client Sample ID	Matrix	Method	Prep Method
ARS1-B22-01374-01		Lab Control Sample	Air Filter	Eichrom SRW01	N/A
ARS1-B22-01374-02		Lab Control Sample Duplicate	Air Filter	Eichrom SRW01	N/A
ARS1-B22-01374-03		Method Blank	Air Filter	Eichrom SRW01	N/A
ARS1-B22-01374-05	ARS1-22-01859-002	MSB01-082222	Air Filter	Eichrom SRW01	N/A
ARS1-B22-01374-06	ARS1-22-01859-003	MSB02-082222	Air Filter	Eichrom SRW01	N/A
ARS1-B22-01374-08	ARS1-22-01859-005	MSB113A-082222	Air Filter	Eichrom SRW01	N/A

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QC Sample Results

Analytical Batch: ARS1-B22-01401
Lab Sample ID: ARS1-B22-01401-01
Method: EPA 9315

Sample Type: LCS
Matrix: Air Filter
Analysis Date: 10/03/22 10:22

Analyte	Spike Added	Analysis Result	Qual	Analysis Units	% Rec	% Rec Limits
Ra-226	2.767E-5	2.398E-5		uCi/filter	86.7	75 - 125

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QC Sample Results

Analytical Batch: ARS1-B22-01401
Lab Sample ID: ARS1-B22-01401-02
Method: EPA 9315

Sample Type: LCSD
Matrix: Air Filter
Analysis Date: 10/03/22 10:22

Analyte	Spike Added	Analysis Result	Qual	Analysis Units	% Rec	% Rec Limits	RPD	RPD Limit	DER	DER Limit
Ra-226	2.775E-5	2.622E-5		uCi/filter	94.5	75 - 125	8.9	25	0.768	3

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QC Sample Results

Analytical Batch: ARS1-B22-01401
Lab Sample ID: ARS1-B22-01401-03
Method: EPA 9315

Sample Type: MBL
Matrix: Air Filter
Analysis Date: 10/03/22 10:22

Analyte	Analysis Result	CSU +/- 2 s	MDC	DLC	Qual	Analysis Units
Ra-226	2.124E-7	2.113E-7	3.157E-7	1.190E-7	U	uCi/filter

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QC Association Summary

ARS Sample Delivery Group: ARS1-22-01859

Analytical Batch: ARS1-B22-01401

Analysis: Radium-226 in Air Filter

Batch Sample ID	Lab Sample ID	Client Sample ID	Matrix	Method	Prep Method
ARS1-B22-01401-01		Lab Control Sample	Air Filter	EPA 9315	N/A
ARS1-B22-01401-02		Lab Control Sample Duplicate	Air Filter	EPA 9315	N/A
ARS1-B22-01401-03		Method Blank	Air Filter	EPA 9315	N/A
ARS1-B22-01401-04	ARS1-22-01859-003	MSB02-082222	Air Filter	EPA 9315	N/A

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QC Sample Results

Analytical Batch: ARS1-B22-01453
Lab Sample ID: ARS1-B22-01453-01
Method: Eichrom SRW01

Sample Type: LCS
Matrix: Air Filter
Analysis Date: 10/03/22 10:28

Analyte	Spike Added	Analysis Result	Qual	Analysis Units	% Rec	% Rec Limits
SR-90	2.020E-5	2.051E-5		uCi/filter	101.5	75 - 125

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QC Sample Results

Analytical Batch: ARS1-B22-01453
Lab Sample ID: ARS1-B22-01453-02
Method: Eichrom SRW01

Sample Type: LCSD
Matrix: Air Filter
Analysis Date: 10/03/22 10:28

Analyte	Spike Added	Analysis Result	Qual	Analysis Units	% Rec	% Rec Limits	RPD	RPD Limit	DER	DER Limit
SR-90	2.008E-5	2.176E-5		uCi/filter	108.4	75 - 125	5.9	25	0.538	3

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QC Sample Results

Analytical Batch: ARS1-B22-01453
Lab Sample ID: ARS1-B22-01453-03
Method: Eichrom SRW01

Sample Type: MBL
Matrix: Air Filter
Analysis Date: 10/03/22 10:28

Analyte	Analysis Result	CSU +/- 2 s	MDC	DLC	Qual	Analysis Units
SR-90	1.179E-6	2.285E-6	3.938E-6	1.816E-6	U	uCi/filter

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QC Association Summary

ARS Sample Delivery Group: ARS1-22-01859 **Analytical Batch:** ARS1-B22-01453

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

Batch Sample ID	Lab Sample ID	Client Sample ID	Matrix	Method	Prep Method
ARS1-B22-01453-01		Lab Control Sample	Air Filter	Eichrom SRW01	N/A
ARS1-B22-01453-02		Lab Control Sample Duplicate	Air Filter	Eichrom SRW01	N/A
ARS1-B22-01453-03		Method Blank	Air Filter	Eichrom SRW01	N/A
ARS1-B22-01453-04	ARS1-22-01859-001	FB-082222	Air Filter	Eichrom SRW01	N/A
ARS1-B22-01453-05	ARS1-22-01859-004	MSB02-082222D	Air Filter	Eichrom SRW01	N/A

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Batch QC

ARS Aleut Analytical

QC Results per Analytical Batch

Analytical Batch	**ARS1-B22-01262**
SDG	**ARS1-22-01859**
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	09/06/22 14:29	Analysis Technician	[redacted]

Analysis Batch Sample ID	QC Type	Analyte	Results	CSU (2s)	Expected Value	LCS Rec (%)	MDC
ARS1-B22-01262-01	**LCS**	AM-241	31.285	2.381	33.065	94.6	0.117
ARS1-B22-01262-01	**LCS**	CO-60	20.806	1.371	20.928	99.4	0.274
ARS1-B22-01262-01	**LCS**	CS-137	13.139	0.858	12.996	101.1	0.069

Duplicate RER/DER/RPD

Analysis Date	09/06/22 14:41	Analysis Technician	[redacted]

Analyte	Results LCS	CSU LCS (2s)	Results LCSD	CSU LCSD (2s)	DER	RPD
AM-241	31.285	2.381	31.908	2.427	0.359	2.0
CO-60	20.806	1.371	21.248	1.237	0.469	2.1
CS-137	13.139	0.858	13.348	0.871	0.335	1.6

Method Blank

Analysis Date	09/06/22 14:26	Analysis Technician	[redacted]

Analysis Batch Sample ID	QC Type	Analyte	Results	CSU (2s)	MDC	Qual
ARS1-B22-01262-03	**MBL**	CO-60	-9.623E-4	0.002	0.002	U
ARS1-B22-01262-03	**MBL**	CS-137	-8.258E-4	0.002	0.002	U
ARS1-B22-01262-03	**MBL**	RA-226	-0.077	0.024	0.031	U

ARS Aleut Analytical

QC Results per Analytical Batch

Analytical Batch	**ARS1-B22-01454**
SDG	**ARS1-22-01859**
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	10/07/22 09:50	Analysis Technician	[redacted]

Analysis Batch Sample ID	QC Type	Analyte	Results	CSU (2s)	Expected Value	LCS Rec (%)	MDC
ARS1-B22-01454-01	**LCS**	RA-226	2.395E-5	3.863E-6	2.757E-5	86.9	7.025E-8

Duplicate RER/DER/RPD

Analysis Date	10/07/22 09:50	Analysis Technician	[redacted]

Analyte	Results LCS	CSU LCS (2s)	Results LCSD	CSU LCSD (2s)	DER	RPD
RA-226	2.395E-5	3.863E-6	2.331E-5	3.770E-6	0.231	2.7

Method Blank

Analysis Date	10/07/22 09:50	Analysis Technician	[redacted]

Analysis Batch Sample ID	QC Type	Analyte	Results	CSU (2s)	MDC	Qual
ARS1-B22-01454-03	**MBL**	RA-226	1.574E-6	7.440E-7	7.095E-7	

ARS Aleut Analytical

QC Results per Analytical Batch

Analytical Batch	**ARS1-B22-01370**
SDG	**ARS1-22-01859**
Analysis	**Thorium in (Air Filters, Smears, Leak Test [AF, SM, LT])**
Method	**Eichrom ACW10**
Analysis Code	**ASP-TH-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	09/22/22 23:14	Analysis Technician	[redacted]

Analysis Batch Sample ID	QC Type	Analyte	Results	CSU (2s)	Expected Value	LCS Rec (%)	MDC
ARS1-B22-01370-01	**LCS**	TH-230	6.385E-6	8.159E-7	5.207E-6	122.6	4.736E-8

Duplicate RER/DER/RPD

Analysis Date	09/22/22 23:14	Analysis Technician	[redacted]

Analyte	Results LCS	CSU LCS (2s)	Results LCSD	CSU LCSD (2s)	DER	RPD
TH-230	6.385E-6	8.159E-7	5.904E-6	7.491E-7	0.850	7.8

Method Blank

Analysis Date	09/22/22 23:14	Analysis Technician	[redacted]

Analysis Batch Sample ID	QC Type	Analyte	Results	CSU (2s)	MDC	Qual
ARS1-B22-01370-03	**MBL**	TH-228	-1.025E-7	1.744E-7	3.501E-7	U
ARS1-B22-01370-03	**MBL**	TH-230	3.796E-8	1.190E-7	2.205E-7	U
ARS1-B22-01370-03	**MBL**	TH-232	3.788E-8	5.553E-8	9.298E-8	U

ARS Aleut Analytical

QC Results per Analytical Batch

Analytical Batch	**ARS1-B22-01372**
SDG	**ARS1-22-01859**
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	09/27/22 03:32	Analysis Technician	[redacted]	
Analysis Batch Sample ID	**QC Type**	**Analyte**	**Results**	**CSU (2s)**	**Expected Value**	**LCS Rec (%)**	**MDC**
ARS1-B22-01372-01	**LCS**	PU-239/240	8.247E-6	1.028E-6	7.831E-6	105.3	3.862E-8

Duplicate RER/DER/RPD

		Analysis Date	09/27/22 03:32	Analysis Technician	[redacted]	
Analyte	**Results LCS**	**CSU LCS (2s)**	**Results LCSD**	**CSU LCSD (2s)**	**DER**	**RPD**
PU-239/240	8.247E-6	1.028E-6	7.815E-6	9.766E-7	0.597	5.4

Method Blank

			Analysis Date	09/27/22 03:32	Analysis Technician	[redacted]	
Analysis Batch Sample ID	**QC Type**	**Analyte**	**Results**	**CSU (2s)**	**MDC**	**Qual**	
ARS1-B22-01372-03	**MBL**	PU-238	0.000	8.333E-8	1.687E-7	U	
ARS1-B22-01372-03	**MBL**	PU-239/240	-2.550E-7	1.287E-7	2.996E-7	U	

ARS Aleut Analytical

QC Results per Analytical Batch

Analytical Batch	**ARS1-B22-01373**
SDG	**ARS1-22-01859**
Analysis	**Uranium (233, 234U, 235U, 238U) in (Air Filters, Smears, Leak Test [AF, SM, LT])**
Method	**Eichrom ACW03**
Analysis Code	**ASP-U-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	09/24/22 02:24	Analysis Technician	[redacted]

Analysis Batch Sample ID	QC Type	Analyte	Results	CSU (2s)	Expected Value	LCS Rec (%)	MDC
ARS1-B22-01373-01	**LCS**	U-238	8.058E-6	9.956E-7	8.192E-6	98.4	2.843E-8

Duplicate RER/DER/RPD

Analysis Date	09/24/22 02:24	Analysis Technician	[redacted]

Analyte	Results LCS	CSU LCS (2s)	Results LCSD	CSU LCSD (2s)	DER	RPD
U-238	8.058E-6	9.956E-7	8.228E-6	1.017E-6	0.234	2.1

Method Blank

Analysis Date	09/24/22 02:24	Analysis Technician	[redacted]

Analysis Batch Sample ID	QC Type	Analyte	Results	CSU (2s)	MDC	Qual
ARS1-B22-01373-03	**MBL**	U-234	-6.610E-8	1.716E-7	3.523E-7	U
ARS1-B22-01373-03	**MBL**	U-235	1.915E-8	6.507E-8	1.410E-7	U
ARS1-B22-01373-03	**MBL**	U-238	-1.979E-7	1.602E-7	3.702E-7	U

ARS Aleut Analytical

QC Results per Analytical Batch

Analytical Batch	**ARS1-B22-01374**
SDG	**ARS1-22-01859**
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	09/26/22 11:26	Analysis Technician	[redacted]

Analysis Batch Sample ID	QC Type	Analyte	Results	CSU (2s)	Expected Value	LCS Rec (%)	MDC
ARS1-B22-01374-01	**LCS**	SR-90	2.147E-5	3.377E-6	2.001E-5	107.3	5.946E-7

Duplicate RER/DER/RPD

Analysis Date	09/26/22 11:26	Analysis Technician	[redacted]

Analyte	Results LCS	CSU LCS (2s)	Results LCSD	CSU LCSD (2s)	DER	RPD
SR-90	2.147E-5	3.377E-6	2.314E-5	3.522E-6	0.670	7.5

Method Blank

Analysis Date	09/26/22 11:26	Analysis Technician	[redacted]

Analysis Batch Sample ID	QC Type	Analyte	Results	CSU (2s)	MDC	Qual
ARS1-B22-01374-03	**MBL**	SR-90	2.683E-6	1.331E-6	1.864E-6	

ARS Aleut Analytical

QC Results per Analytical Batch

Analytical Batch	**ARS1-B22-01401**
SDG	**ARS1-22-01859**
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	10/03/22 10:22	Analysis Technician	[redacted]

Analysis Batch Sample ID	QC Type	Analyte	Results	CSU (2s)	Expected Value	LCS Rec (%)	MDC
ARS1-B22-01401-01	**LCS**	RA-226	2.398E-5	3.860E-6	2.767E-5	86.7	6.207E-8

Duplicate RER/DER/RPD

Analysis Date	10/03/22 10:22	Analysis Technician	[redacted]

Analyte	Results LCS	CSU LCS (2s)	Results LCSD	CSU LCSD (2s)	DER	RPD
RA-226	2.398E-5	3.860E-6	2.622E-5	4.220E-6	0.768	8.9

Method Blank

Analysis Date	10/03/22 10:22	Analysis Technician	[redacted]

Analysis Batch Sample ID	QC Type	Analyte	Results	CSU (2s)	MDC	Qual
ARS1-B22-01401-03	**MBL**	RA-226	2.124E-7	2.113E-7	3.157E-7	U

ARS Aleut Analytical

QC Results per Analytical Batch

Analytical Batch	**ARS1-B22-01453**
SDG	**ARS1-22-01859**
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	10/03/22 10:28	Analysis Technician	[redacted]

Analysis Batch Sample ID	QC Type	Analyte	Results	CSU (2s)	Expected Value	LCS Rec (%)	MDC
ARS1-B22-01453-01	**LCS**	SR-90	2.051E-5	3.151E-6	2.020E-5	101.5	5.237E-7

Duplicate RER/DER/RPD

Analysis Date	10/03/22 10:28	Analysis Technician	[redacted]

Analyte	Results LCS	CSU LCS (2s)	Results LCSD	CSU LCSD (2s)	DER	RPD
SR-90	2.051E-5	3.151E-6	2.176E-5	3.321E-6	0.538	5.9

Method Blank

Analysis Date	10/03/22 10:28	Analysis Technician	[redacted]

Analysis Batch Sample ID	QC Type	Analyte	Results	CSU (2s)	MDC	Qual
ARS1-B22-01453-03	**MBL**	SR-90	1.179E-6	2.285E-6	3.938E-6	U

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ARS Aleut Analytical, LLC
Analytical Reports

for

Gilbane Federal

Sample Management Records

CHAIN-OF-CUSTODY RECORD

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

COC # KT083122RADB

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:
SW9315 (A) = Alpha-Emitting Radium Isotopes
1. Please analyze Pu, Th, and U isotopes [redacted] 09/01/2022

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.	Analytical Test Method: E901.1 - Gamma Spec (15)	RC0240 - Pu-239 (15)	SR02RC - Strontium-90 (5)	SW9315 (A) Ra-226 (1)	Location ID	Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom	Cooler	Comments
1	FB-082222	AQ	08/22/2022	0800	[redacted]	X	X	X	X	FIELDQC	FB1	0.00	0.00	1	
2	MSB01-082222	A	08/25/2022	1512		X	X	X	X	MSB01	N1	0.00	0.00	1	TOTAL FLOW: 299,520 (L)
3	MSB02-082222	A	08/25/2022	1454		X	X	X	X	MSB02	N1	0.00	0.00	1	TOTAL FLOW: 299,940 (L)
4	MSB02-082222D	A	08/25/2022	1454		X	X	X	X	MSB02	FD1	0.00	0.00	1	TOTAL FLOW: 299,940 (L)
5	MSB113A-082222	A	08/25/2022	1504		X	X	X	X	MSB113A	N1	0.00	0.00	1	TOTAL FLOW: 300,120 (L)
6									N/A						
7															

Turnaround Time: 28 days

[redacted] 8/31/22

Relinquished by: *(Signature)*	Date	Time	Received by: *(Signature)*	Date	Time
[redacted]	8-31-22	1600	FEDEX	8-31-22	1600
			[redacted]	9-1-22	1000

Shipping Date / Carrier / Airbill Number
Shipping Date: 8/31/2022/ FEDEX 7777 4321 1120

Received by Laboratory: *(Signature, Date, Time)* **& condition**

GES.Navy_COC_Field
August 29, 2022

SDG Report - Samples and Containers

SDG Specific Data					
SDG	ARS1-22-01859	TAT Days	28 Calendar Days	Project Type	Environmental
Sample Count	5 Rpt Level 4	Date Received	09/01/2022	COC Number	KT083122RADB
Client	Gilbane Federal	Discrepancy Resol	N/A	PO Number	
Client Code	1138	Client Deadline	09/29/2022	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-082222	Air Filter	08/22/2022 07:59	08/22/2022 08:00	H	30	10	PrePrep	
	IC_ID	**Cnt**	**Container Type**	**AF Volume (L)**	**AF Units**		**Rate**	**Mins**	**Comments**
	423184	1	HDP Container	1	LPM			1	
			Mid-Sample Date:	08/22/2022 07:59	AF Volume (CuM):		0.001		
002	MSB01-082222	Air Filter	08/25/2022 15:11	08/25/2022 15:12	H	30	10	PrePrep	
	IC_ID	**Cnt**	**Container Type**	**AF Volume (L)**	**AF Units**		**Rate**	**Mins**	**Comments**
	423185	1	HDP Container	1	LPM			1	
			Mid-Sample Date:	08/25/2022 15:11	AF Volume (CuM):		0.001		
003	MSB02-082222	Air Filter	08/25/2022 14:53	08/25/2022 14:54	H	30	10	PrePrep	
	IC_ID	**Cnt**	**Container Type**	**AF Volume (L)**	**AF Units**		**Rate**	**Mins**	**Comments**
	423186	1	HDP Container	1	LPM			1	
			Mid-Sample Date:	08/25/2022 14:53	AF Volume (CuM):		0.001		
004	MSB02-082222D	Air Filter	08/25/2022 14:53	08/25/2022 14:54	H	30	10	PrePrep	
	IC_ID	**Cnt**	**Container Type**	**AF Volume (L)**	**AF Units**		**Rate**	**Mins**	**Comments**
	423187	1	HDP Container	1	LPM			1	
			Mid-Sample Date:	08/25/2022 14:53	AF Volume (CuM):		0.001		
005	MSB113A-082222	Air Filter	08/25/2022 15:03	08/25/2022 15:04	H	30	10	PrePrep	
	IC_ID	**Cnt**	**Container Type**	**AF Volume (L)**	**AF Units**		**Rate**	**Mins**	**Comments**
	423188	1	HDP Container	1	LPM			1	
			Mid-Sample Date:	08/25/2022 15:03	AF Volume (CuM):		0.001		

SDG Report - Analysis Assignments

SDG	ARS1-22-01859	Sample Count	5
Client	Gilbane Federal	Analysis Count	6-36

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
ASP-TH-AF	Thorium in (Air Filters, Smears, Leak Test [AF, SM, LT])	I	5
ASP-U-AF	Uranium (233, 234U, 235U, 238U) 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	9
GPC-SR90-AF	Strontium-90 in (Air Filters, Smears [AF])	I	7

Analyses Assigned Per Fraction

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

004	GPC-SR90-AF	**X**
004	GPC-SR90-AF	**X**
005	ASP-PU239-AF	**X**
005	ASP-TH-AF	**X**
005	ASP-U-AF	**X**
005	GAM-A-AF	**X**
005	GPC-RA226-AF	**X**
005	GPC-RA226-AF	**X**
005	GPC-SR90-AF	**X**

DQO Report for SDG

ARS1-22-01859

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**
	Pu-239/240 (15117-48-3)			4.8E-08 uCi/filter	75/125	60/140	30/110	30/110	1	25	N/A
ASP-TH-AF	WRAD	uCi	filter	N/A	PALA-RAD-031						
	Analyte			**RDL**	**LCS LL/UL**	**MS LL/UL**	**RadY LL/UL**	**GravY LL/UL**	**RER**	**RPD**	**Surr LL/UL**
	Th-232 (7440-29-1)			4.8E-08 uCi/filter	75/125	60/140	30/110	30/110	1	25	N/A
ASP-U-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**
	U-235 (15117-96-1)			4.8E-08 uCi/filter	75/125	60/140	30/110	30/110	1	25	N/A
GAM-A-AF	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
	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
GPC-RA226-AF	WRAD	uCi	filter		PALA-RAD-008						
	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**
	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	filter	N/A	1
		Group		**Analyte**	
		Parcel B Rad Sampling		Pu-239/240	
ASP-PU239-AF	002	uCi	filter	N/A	1
		Group		**Analyte**	
		Parcel B Rad Sampling		Pu-239/240	
ASP-PU239-AF	003	uCi	filter	N/A	1
		Group		**Analyte**	
		Parcel B Rad Sampling		Pu-239/240	
ASP-PU239-AF	004	uCi	filter	N/A	1
		Group		**Analyte**	
		Parcel B Rad Sampling		Pu-239/240	
ASP-PU239-AF	005	uCi	filter	N/A	1
		Group		**Analyte**	
		Parcel B Rad Sampling		Pu-239/240	
ASP-TH-AF	001	uCi	filter	N/A	1
		Group		**Analyte**	
		Parcel B Rad Sampling		Th-232	
ASP-TH-AF	002	uCi	filter	N/A	1
		Group		**Analyte**	
		Parcel B Rad Sampling		Th-232	
ASP-TH-AF	003	uCi	filter	N/A	1
		Group		**Analyte**	
		Parcel B Rad Sampling		Th-232	
ASP-TH-AF	004	uCi	filter	N/A	1
		Group		**Analyte**	
		Parcel B Rad Sampling		Th-232	
ASP-TH-AF	005	uCi	filter	N/A	1
		Group		**Analyte**	
		Parcel B Rad Sampling		Th-232	
ASP-U-AF	001	uCi	filter	N/A	1
		Group		**Analyte**	
		Parcel B Rad Sampling		U-235	

ASP-U-AF	002	uCi	filter	N/A	1
		Group		**Analyte**	
		Parcel B Rad Sampling		U-235	
ASP-U-AF	003	uCi	filter	N/A	1
		Group		**Analyte**	
		Parcel B Rad Sampling		U-235	
ASP-U-AF	004	uCi	filter	N/A	1
		Group		**Analyte**	
		Parcel B Rad Sampling		U-235	
ASP-U-AF	005	uCi	filter	N/A	1
		Group		**Analyte**	
		Parcel B Rad Sampling		U-235	
GAM-A-AF	001	uCi	filter	N/A	3
		Group		**Analyte**	
		Parcel B Rad Sampling		Cs-137	
		Parcel B Rad Sampling		Co-60	
		Parcel B Rad Sampling		Ra-226	
GAM-A-AF	002	uCi	filter	N/A	3
		Group		**Analyte**	
		Parcel B Rad Sampling		Cs-137	
		Parcel B Rad Sampling		Co-60	
		Parcel B Rad Sampling		Ra-226	
GAM-A-AF	003	uCi	filter	N/A	3
		Group		**Analyte**	
		Parcel B Rad Sampling		Cs-137	
		Parcel B Rad Sampling		Co-60	
		Parcel B Rad Sampling		Ra-226	
GAM-A-AF	004	uCi	filter	N/A	3
		Group		**Analyte**	
		Parcel B Rad Sampling		Cs-137	
		Parcel B Rad Sampling		Co-60	
		Parcel B Rad Sampling		Ra-226	
GAM-A-AF	005	uCi	filter	N/A	3
		Group		**Analyte**	
		Parcel B Rad Sampling		Cs-137	

GAM-A-AF	005	Parcel B Rad Sampling		Co-60	
		Parcel B Rad Sampling		Ra-226	
GPC-RA226-AF	001	uCi	filter	N/A	1
		Group		**Analyte**	
		Parcel B Rad Sampling		Ra-226	
GPC-RA226-AF	002	uCi	filter	N/A	1
		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	
GPC-RA226-AF	004	uCi	filter	N/A	1
		Group		**Analyte**	
		Parcel B Rad Sampling		Ra-226	
GPC-RA226-AF	005	uCi	filter	N/A	1
		Group		**Analyte**	
		Parcel B Rad Sampling		Ra-226	
GPC-SR90-AF	001	uCi	filter	N/A	1
		Group		**Analyte**	
		Parcel B Rad Sampling		Sr-90	
GPC-SR90-AF	002	uCi	filter	N/A	1
		Group		**Analyte**	
		Parcel B Rad Sampling		Sr-90	
GPC-SR90-AF	003	uCi	filter	N/A	1
		Group		**Analyte**	
		Parcel B Rad Sampling		Sr-90	
GPC-SR90-AF	004	uCi	filter	N/A	1
		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	

ARS Aleut Analytical

PALA Sample Receipt Inspection Form

Client Name: Gilbane

SDG: ARS1-22-01859

Sample Custodian: [redacted] Survey Start Date: 9-1-22 Survey Start Time: 1200

Thermometer ID: E0064100085 Calibration Due Date: 2/28/23 pH Paper Lot#: NA

Exposure Rate Meter + Probe Unit ID: PR256427/269264 Calibration Due Date: 2-13-23 Background: 4 µR/hr

Count Rate Meter + Probe Unit ID: PR368083/331788 Calibration Due Date: 9-22-22 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)
A: 777743211120	5	20	30	NA
B:				
C:				
D:				
E:				
F:				

TRAX Matrix ID (circle all that apply): (See Section 4.3 of SOP)

AQ WD WG WO
WS WW SI UR
SO OL BI VG
WP SM (AF)

Visual Inspection: (Circle response)

External Shipping Container

Good Condition with no Leaks or Tears	(Yes)	No	
Marked Radioactive	Yes	(No)	
UN2910	Yes	(No)	
Security Seals	(Yes)	No	
If yes, intact?	(Yes)	No	N/A

Internal Shipping Container

COC's Present	(Yes)	No	
Well packaged container with no signs of leakage	(Yes)	No	

COC/Sample Inspection (Circle response)

Sample Containers in good condition	(Yes)	No	
No spills or leaks	(Yes)	No	
Marked Radioactive	Yes	(No)	
Durable labels w/indelible ink	(Yes)	No	
COC reliquished/received correctly	(Yes)	No	
Adequate volume/filled correctly	(Yes)	No	
Hold Time sufficient for analysis	(Yes)	No	
For VOC/Radon, Head space?	Yes	No	(N/A)
If yes, <6mm?	Yes	No	(N/A)
# of containers received matches # on COC	(Yes)	No	
Samples received on ice?	Yes	(No)	
Type (circle one):	Bagged Ice	Loose Ice	Blue Ice (N/A)

Comments:

ARS Aleut Analytical

PALA Sample Survey Form

Client Name: Gilbane

SDG: ARS1-22-01859

Pipette ID: NA Tip Lot#: NA

Disposible pipette lot#: NA

Sample ID from Client on COC or Sample	ESC Letter	Sample Container Type	Approx. Fill Level (%)	pH <2 is Acceptable: pH As Rec'd	pH Adjusted	Acid Lot # or Ind container temp (°C)	Vol. of Acid Used (mL)	Acceptance Limits <100 cpm/cm: cpm
FB-082222	A	2 plo	25	NA	NA	NA	NA	30
MSB01-082222	↓	↓	↓	↓	↓	↓	↓	↓
MSB02-082222								
MSB02-082222D								
MSB113A-082222								

Sample Custodian: [redacted] Survey End Date: 9-1-22 Survey/pH End Time: 1205

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 PALA-SR-001-FM-03 (Discrepant Sample Receipt Report).

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.
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 extraordinary value is $1,000, e.g. jewelry, precious metals, negotiable instruments and other items listed in our ServiceGuide. Written claims must be filed within strict time limits, see current FedEx Service Guide.

2609 North River Road
Port Allen, Louisiana 70767
(225) 228-1394 | Fax (225) 381-2996

ARS Aleut Analytical, LLC

Laboratory Analytical Report

ARS1-22-01903

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

COC Number: **KT090722RADB**
Job Number: **J310000900**
Job Location: **Hunter's 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.

		Laboratory Management, ARS Aleut Analytical
Signature	**Date**	**Title**

ARS Aleut Analytical
2609 North River Road • Port Allen, Louisiana 70767
(225) 228-1394 • FAX (225) 381-2996

Table Of Contents

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

ARS Aleut Analytical
2609 North River Road • Port Allen, Louisiana 70767
(225) 228-1394 • Fax (225) 381-2996

PROJECT SAMPLE IDENTIFICATION CROSS-REFERENCE
TO ARS SAMPLE LABORATORY IDs

Client Sample ID	ARS Aleut Analytical Sample ID
FB-082922	ARS1-22-01903-001
MSB01-082922	ARS1-22-01903-002
MSB02-082922	ARS1-22-01903-003
MSB113A-082922	ARS1-22-01903-004

Sample	Date Collected	Date Received	Analysis	Basis	Prep Date/Time	Analysis Date/Time
001	08/29/22 08:00	09/08/22	ASP-PU239-AF	As Received	09/14/22 11:22	09/27/22 03:32
001	08/29/22 08:00	09/08/22	ASP-TH-AF	As Received	09/14/22 11:22	09/22/22 23:14
001	08/29/22 08:00	09/08/22	ASP-U-AF	As Received	09/14/22 11:22	09/24/22 02:24
001	08/29/22 08:00	09/08/22	GAM-A-AF	As Received	N/A	09/13/22 14:04
001	08/29/22 08:00	09/08/22	GPC-RA226-AF	As Received	09/29/22 14:26	10/07/22 09:50
001	08/29/22 08:00	09/08/22	GPC-SR90-AF	As Received	09/20/22 11:45	09/26/22 11:26
002	09/01/22 14:18	09/08/22	ASP-PU239-AF	As Received	09/14/22 11:22	09/27/22 03:32
002	09/01/22 14:18	09/08/22	ASP-TH-AF	As Received	09/14/22 11:22	09/22/22 23:14
002	09/01/22 14:18	09/08/22	ASP-U-AF	As Received	09/14/22 11:22	09/24/22 02:24
002	09/01/22 14:18	09/08/22	GAM-A-AF	As Received	N/A	09/13/22 14:06
002	09/01/22 14:18	09/08/22	GPC-RA226-AF	As Received	09/29/22 14:26	10/07/22 09:50
002	09/01/22 14:18	09/08/22	GPC-SR90-AF	As Received	09/20/22 11:45	09/26/22 11:26
003	09/01/22 14:01	09/08/22	ASP-PU239-AF	As Received	09/14/22 11:22	09/27/22 03:32
003	09/01/22 14:01	09/08/22	ASP-TH-AF	As Received	09/14/22 11:22	09/22/22 23:14

003	09/01/22 14:01	09/08/22	ASP-U-AF	As Received	09/14/22 11:22	09/24/22 02:24
003	09/01/22 14:01	09/08/22	GAM-A-AF	As Received	N/A	09/13/22 14:10
003	09/01/22 14:01	09/08/22	GPC-RA226-AF	As Received	09/29/22 14:26	10/07/22 09:50
003	09/01/22 14:01	09/08/22	GPC-SR90-AF	As Received	09/29/22 12:30	10/03/22 10:28
004	09/01/22 14:09	09/08/22	ASP-PU239-AF	As Received	09/14/22 11:22	09/27/22 03:32
004	09/01/22 14:09	09/08/22	ASP-TH-AF	As Received	09/14/22 11:22	09/22/22 23:14
004	09/01/22 14:09	09/08/22	ASP-U-AF	As Received	09/14/22 11:22	09/24/22 02:24
004	09/01/22 14:09	09/08/22	GAM-A-AF	As Received	N/A	09/13/22 14:18
004	09/01/22 14:09	09/08/22	GPC-RA226-AF	As Received	09/29/22 14:26	10/07/22 09:50
004	09/01/22 14:09	09/08/22	GPC-SR90-AF	As Received	09/20/22 11:45	09/26/22 11:26

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)"**.

Th-232 analysis was performed using **PALA-RAD-031, "Thorium in Water, Soil and Vegetation Matrices by Eichrom Resin Separation (Eichrom ACW-08 & Eichrom ACW-10)"**.

U-235 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

Batch ARS1-B22-01373: Fraction 004 has tracer recovery of 26.9%, which is outside limits of 30%-110%. The sample results have been qualified with a "Q".

Batch ARS1-B22-01374: The Method Blank had a detect for Sr-90. All reported fractions were non-detects, therefore the activity in the Method Blank did not contribute to the concentration in client samples.

Batch ARS1-B22-01454: The Method Blank is greater than the MDC for Ra-226; all positive detects for Ra-226 in this analytical batch are qualified with a 'B'.

Fraction 001 has elevated MDC for Pu-239/240 with ACT of -8.902E-8 uCi/filter, MDC of 2.221E-7 uCi/filter and CRDL of 4.8E-08 uCi/filter.
Fraction 001 has elevated MDC for Th-232 with ACT of 7.605E-8 uCi/filter, MDC of 1.170E-7 uCi/filter and CRDL of 4.8E-08 uCi/filter.
Fraction 001 has elevated MDC for Ra-226 with ACT of 0.000 uCi/filter, MDC of 1.489E-5 uCi/filter and CRDL of 4.4E-06 uCi/filter.
Fraction 002 has elevated MDC for Pu-239/240 with ACT of -3.283E-8 uCi/filter, MDC of 1.302E-7 uCi/filter and CRDL of 4.8E-08 uCi/filter.
Fraction 002 has elevated MDC for U-235 with ACT of 1.974E-8 uCi/filter, MDC of 1.833E-7 uCi/filter and CRDL of 4.8E-08 uCi/filter.
Fraction 002 has elevated MDC for Th-232 with ACT of 6.418E-8 uCi/filter, MDC of 7.875E-8 uCi/filter and CRDL of 4.8E-08 uCi/filter.
Fraction 002 has elevated MDC for Ra-226 with ACT of -4.160E-6 uCi/filter, MDC of 1.002E-5 uCi/filter and CRDL of 4.4E-06 uCi/filter.
Fraction 003 has elevated MDC for Pu-239/240 with ACT of 1.510E-7 uCi/filter, MDC of 1.879E-7 uCi/filter and CRDL of 4.8E-08 uCi/filter.
Fraction 003 has elevated MDC for U-235 with ACT of -5.113E-8 uCi/filter, MDC of 2.235E-7 uCi/filter and CRDL of 4.8E-08 uCi/filter.
Fraction 003 has elevated MDC for Th-232 with ACT of 6.458E-8 uCi/filter, MDC of 1.200E-7 uCi/filter and CRDL of 4.8E-08 uCi/filter.
Fraction 003 has elevated MDC for Ra-226 with ACT of -1.224E-5 uCi/filter, MDC of 1.589E-5 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 1.493E-7 uCi/filter and CRDL of 4.8E-08 uCi/filter.
Fraction 004 has elevated MDC for U-235 with ACT of -1.057E-7 uCi/filter, MDC of 3.728E-7 uCi/filter and CRDL of 4.8E-08 uCi/filter.
Fraction 004 has elevated MDC for Th-232 with ACT of 4.975E-8 uCi/filter, MDC of 1.305E-7 uCi/filter and CRDL of 4.8E-08 uCi/filter.
Fraction 004 has elevated MDC for Ra-226 with ACT of -8.380E-5 uCi/filter, MDC of 3.155E-5 uCi/filter and CRDL of 4.4E-06 uCi/filter.

ARS1-B22-01370: ROI's adjusted to better fit the peaks of interest.

ARS1-B22-01370: FWHM is greater than 100 keV for Th-229 on batch sample -12.

ARS1-B22-01372: ROI's adjusted to better fit the peaks of interest.

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ARS1-B22-01373: ROI's adjusted to better fit the peaks of interest.

ARS1-B22-01374: Approximately 5mL of batch sample 2, the LCS, was lost during procedure due to cracked beaker.

ARS1-B22-01386: Batch sample 6 was lost during centrifuging; the sample was removed from the batch.

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
ǂ 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 Results

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ARS Sample Delivery Group: ARS1-22-01903
Client Sample ID: FB-082922
Sample Collection Date: 08/29/22 8:00
Sample Matrix: Air Filter
Percent Solids: N/A

Request or PO Number: J310000900
ARS Sample ID: ARS1-22-01903-001
Date Received: 09/08/22
Report Date: 10/07/22

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	-8.902E-8	1.013E-7	2.221E-7	9.763E-8	4.8E-08	U	uCi/filter	09/27/22 3:32	[redacted]	61.3%

Analysis Method: Eichrom ACW10

Analysis Description	Analysis Results	CSU +/- 2 s	MDC	DLC	CRDL	Qual	Analysis Units	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
Th-232	7.605E-8	7.733E-8	1.170E-7	4.378E-8	4.8E-08	U	uCi/filter	09/22/22 23:14	[redacted]	53.9%

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
U-235	3.388E-8	4.714E-8	4.591E-8	0.000	4.8E-08	U	uCi/filter	09/24/22 2:24	[redacted]	40.2%

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	1.450E-7	1.032E-6	1.059E-6	5.295E-7	0.00024	U	uCi/filter	09/13/22 14:04	[redacted]	N/A
Cs-137	1.186E-8	8.216E-7	9.263E-7	4.632E-7	0.00048	U	uCi/filter	09/13/22 14:04	[redacted]	N/A
Ra-226	0.000	9.289E-6	1.489E-5	7.445E-6	4.4E-06	U	uCi/filter	09/13/22 14:04	[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	1.347E-6	7.444E-7	8.308E-7	3.204E-7	4.4E-06	B	uCi/filter	10/07/22 9:50	[redacted]	98.8%

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	1.354E-6	1.166E-6	1.860E-6	8.582E-7	2.4E-05	U	uCi/filter	09/26/22 11:26	[redacted]	100%

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ARS Sample Delivery Group: ARS1-22-01903
Client Sample ID: MSB01-082922
Sample Collection Date: 09/01/22 14:18
Sample Matrix: Air Filter
Percent Solids: N/A

Request or PO Number: J310000900
ARS Sample ID: ARS1-22-01903-002
Date Received: 09/08/22
Report Date: 10/07/22

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	-3.283E-8	5.586E-8	1.302E-7	5.400E-8	4.8E-08	U	uCi/filter	09/27/22 3:32	[redacted]	72.0%

Analysis Method: Eichrom ACW10

Analysis Description	Analysis Results	CSU +/- 2 s	MDC	DLC	CRDL	Qual	Analysis Units	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
Th-232	6.418E-8	5.980E-8	7.875E-8	2.488E-8	4.8E-08	U	uCi/filter	09/22/22 23:14	[redacted]	57.6%

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
U-235	1.974E-8	8.653E-8	1.833E-7	6.493E-8	4.8E-08	U	uCi/filter	09/24/22 2:24	[redacted]	36.2%

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	-4.102E-7	9.441E-7	9.613E-7	4.807E-7	0.00024	U	uCi/filter	09/13/22 14:06	[redacted]	N/A
Cs-137	2.473E-7	6.435E-7	6.970E-7	3.485E-7	0.00048	U	uCi/filter	09/13/22 14:06	[redacted]	N/A
Ra-226	-4.160E-6	7.970E-6	1.002E-5	5.010E-6	4.4E-06	U	uCi/filter	09/13/22 14:06	[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	1.282E-6	7.432E-7	8.373E-7	3.173E-7	4.4E-06	B	uCi/filter	10/07/22 9:50	[redacted]	99.0%

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	1.362E-6	1.111E-6	1.759E-6	8.126E-7	2.4E-05	U	uCi/filter	09/26/22 11:26	[redacted]	99.4%

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ARS Sample Delivery Group: ARS1-22-01903
Client Sample ID: MSB02-082922
Sample Collection Date: 09/01/22 14:01
Sample Matrix: Air Filter
Percent Solids: N/A

Request or PO Number: J310000900
ARS Sample ID: ARS1-22-01903-003
Date Received: 09/08/22
Report Date: 10/07/22

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	1.510E-7	1.246E-7	1.879E-7	7.933E-8	4.8E-08	U	uCi/filter	09/27/22 3:32	[redacted]	54.3%

Analysis Method: Eichrom ACW10

Analysis Description	Analysis Results	CSU +/- 2 s	MDC	DLC	CRDL	Qual	Analysis Units	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
Th-232	6.458E-8	7.635E-8	1.200E-7	4.249E-8	4.8E-08	U	uCi/filter	09/22/22 23:14	[redacted]	49.7%

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
U-235	-5.113E-8	8.860E-8	2.235E-7	8.866E-8	4.8E-08	U	uCi/filter	09/24/22 2:24	[redacted]	43.8%

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	-5.057E-7	1.022E-6	1.108E-6	5.540E-7	0.00024	U	uCi/filter	09/13/22 14:10	[redacted]	N/A
Cs-137	-4.301E-7	8.299E-7	9.620E-7	4.810E-7	0.00048	U	uCi/filter	09/13/22 14:10	[redacted]	N/A
Ra-226	-1.224E-5	1.403E-5	1.589E-5	7.945E-6	4.4E-06	U	uCi/filter	09/13/22 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	1.290E-6	7.368E-7	8.152E-7	3.072E-7	4.4E-06	B	uCi/filter	10/07/22 9:50	[redacted]	99.9%

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	5.364E-7	2.057E-6	3.635E-6	1.683E-6	2.4E-05	U	uCi/filter	10/03/22 10:28	[redacted]	100%

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ARS Sample Delivery Group: ARS1-22-01903
Client Sample ID: MSB113A-082922
Sample Collection Date: 09/01/22 14:09
Sample Matrix: Air Filter
Percent Solids: N/A

Request or PO Number: J310000900
ARS Sample ID: ARS1-22-01903-004
Date Received: 09/08/22
Report Date: 10/07/22

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	7.292E-8	1.493E-7	6.120E-8	4.8E-08	U	uCi/filter	09/27/22 3:32	[redacted]	61.9%

Analysis Method: Eichrom ACW10

Analysis Description	Analysis Results	CSU +/- 2 s	MDC	DLC	CRDL	Qual	Analysis Units	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
Th-232	4.975E-8	7.577E-8	1.305E-7	5.176E-8	4.8E-08	U	uCi/filter	09/22/22 23:14	[redacted]	61.4%

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
U-235	-1.057E-7	1.470E-7	3.728E-7	1.506E-7	4.8E-08	UQ	uCi/filter	09/24/22 2:24	[redacted]	26.9%

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	-3.656E-7	1.644E-6	1.688E-6	8.440E-7	0.00024	U	uCi/filter	09/13/22 14:18	[redacted]	N/A
Cs-137	-7.699E-7	1.473E-6	1.644E-6	8.220E-7	0.00048	U	uCi/filter	09/13/22 14:18	[redacted]	N/A
Ra-226	-8.380E-5	3.287E-5	3.155E-5	1.578E-5	4.4E-06	U	uCi/filter	09/13/22 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	6.436E-6	1.690E-6	7.806E-7	2.974E-7	4.4E-06	B	uCi/filter	10/07/22 9:50	[redacted]	99.3%

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	1.636E-6	1.220E-6	1.907E-6	8.846E-7	2.4E-05	U	uCi/filter	09/26/22 11:26	[redacted]	99.4%

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QC Summary

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QC Sample Results

Analytical Batch: ARS1-B22-01327
Lab Sample ID: ARS1-B22-01327-01
Method: EPA 901.1M

Sample Type: LCS
Matrix: Air Filter
Analysis Date: 09/14/22 12:51

Analyte	Spike Added	Analysis Result	Qual	Analysis Units	% Rec	% Rec Limits
Am-241	33.065	31.343		uCi/filter	94.8	75 - 125
Co-60	20.928	20.961		uCi/filter	100.2	75 - 125
Cs-137	12.996	13.244		uCi/filter	101.9	75 - 125

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QC Sample Results

Analytical Batch: ARS1-B22-01327
Lab Sample ID: ARS1-B22-01327-02
Method: EPA 901.1M

Sample Type: LCSD
Matrix: Air Filter
Analysis Date: 09/14/22 13:02

Analyte	Spike Added	Analysis Result	Qual	Analysis Units	% Rec	% Rec Limits	RPD	RPD Limit	DER	DER Limit
Am-241	33.065	31.165		uCi/filter	94.3	75 - 125	0.6	25	0.104	3
Co-60	20.928	21.488		uCi/filter	102.7	75 - 125	2.5	25	0.590	3
Cs-137	12.996	13.291		uCi/filter	102.3	75 - 125	0.4	25	0.075	3

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QC Sample Results

Analytical Batch: ARS1-B22-01327
Lab Sample ID: ARS1-B22-01327-03
Method: EPA 901.1M

Sample Type: MBL
Matrix: Air Filter
Analysis Date: 09/14/22 14:08

Analyte	Analysis Result	CSU +/- 2 s	MDC	DLC	Qual	Analysis Units
Co-60	-4.995E-4	9.220E-4	9.360E-4	4.680E-4	U	uCi/filter
Cs-137	3.986E-5	6.842E-4	7.460E-4	3.730E-4	U	uCi/filter
Ra-226	0.003	0.007	0.009	0.005	U	uCi/filter

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QC Association Summary

ARS Sample Delivery Group: ARS1-22-01903 **Analytical Batch:** ARS1-B22-01327

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

Batch Sample ID	Lab Sample ID	Client Sample ID	Matrix	Method	Prep Method
ARS1-B22-01327-01		Lab Control Sample	Air Filter	EPA 901.1M	N/A
ARS1-B22-01327-02		Lab Control Sample Duplicate	Air Filter	EPA 901.1M	N/A
ARS1-B22-01327-03		Method Blank	Air Filter	EPA 901.1M	N/A
ARS1-B22-01327-04	ARS1-22-01903-001	FB-082922	Air Filter	EPA 901.1M	N/A
ARS1-B22-01327-05	ARS1-22-01903-002	MSB01-082922	Air Filter	EPA 901.1M	N/A
ARS1-B22-01327-06	ARS1-22-01903-003	MSB02-082922	Air Filter	EPA 901.1M	N/A
ARS1-B22-01327-07	ARS1-22-01903-004	MSB113A-082922	Air Filter	EPA 901.1M	N/A

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QC Sample Results

Analytical Batch: ARS1-B22-01370
Lab Sample ID: ARS1-B22-01370-01
Method: Eichrom ACW10

Sample Type: LCS
Matrix: Air Filter
Analysis Date: 09/22/22 23:14

Analyte	Spike Added	Analysis Result	Qual	Analysis Units	% Rec	% Rec Limits
Th-230	5.207E-6	6.385E-6		uCi/filter	122.6	75 - 125

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QC Sample Results

Analytical Batch: ARS1-B22-01370
Lab Sample ID: ARS1-B22-01370-02
Method: Eichrom ACW10

Sample Type: LCSD
Matrix: Air Filter
Analysis Date: 09/22/22 23:14

Analyte	Spike Added	Analysis Result	Qual	Analysis Units	% Rec	% Rec Limits	RPD	RPD Limit	DER	DER Limit
Th-230	5.202E-6	5.904E-6		uCi/filter	113.5	75 - 125	7.8	25	0.850	3

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QC Sample Results

Analytical Batch: ARS1-B22-01370
Lab Sample ID: ARS1-B22-01370-03
Method: Eichrom ACW10

Sample Type: MBL
Matrix: Air Filter
Analysis Date: 09/22/22 23:14

Analyte	Analysis Result	CSU +/- 2 s	MDC	DLC	Qual	Analysis Units
Th-228	-1.025E-7	1.744E-7	3.501E-7	1.577E-7	U	uCi/filter
Th-230	3.796E-8	1.190E-7	2.205E-7	9.309E-8	U	uCi/filter
Th-232	3.788E-8	5.553E-8	9.298E-8	2.938E-8	U	uCi/filter

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QC Association Summary

ARS Sample Delivery Group: ARS1-22-01903

Analytical Batch: ARS1-B22-01370

Analysis: Thorium in (Air Filters, Smears, Leak Test [AF, SM, LT])

Batch Sample ID	Lab Sample ID	Client Sample ID	Matrix	Method	Prep Method
ARS1-B22-01370-01		Lab Control Sample	Air Filter	Eichrom ACW10	N/A
ARS1-B22-01370-02		Lab Control Sample Duplicate	Air Filter	Eichrom ACW10	N/A
ARS1-B22-01370-03		Method Blank	Air Filter	Eichrom ACW10	N/A
ARS1-B22-01370-09	ARS1-22-01903-001	FB-082922	Air Filter	Eichrom ACW10	N/A
ARS1-B22-01370-10	ARS1-22-01903-002	MSB01-082922	Air Filter	Eichrom ACW10	N/A
ARS1-B22-01370-11	ARS1-22-01903-003	MSB02-082922	Air Filter	Eichrom ACW10	N/A
ARS1-B22-01370-12	ARS1-22-01903-004	MSB113A-082922	Air Filter	Eichrom ACW10	N/A

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QC Sample Results

Analytical Batch: ARS1-B22-01372
Lab Sample ID: ARS1-B22-01372-01
Method: Eichrom ACW03

Sample Type: LCS
Matrix: Air Filter
Analysis Date: 09/27/22 3:32

Analyte	Spike Added	Analysis Result	Qual	Analysis Units	% Rec	% Rec Limits
Pu-239/240	7.831E-6	8.247E-6		uCi/filter	105.3	75 - 125

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QC Sample Results

Analytical Batch: ARS1-B22-01372
Lab Sample ID: ARS1-B22-01372-02
Method: Eichrom ACW03

Sample Type: LCSD
Matrix: Air Filter
Analysis Date: 09/27/22 3:32

Analyte	Spike Added	Analysis Result	Qual	Analysis Units	% Rec	% Rec Limits	RPD	RPD Limit	DER	DER Limit
Pu-239/240	7.824E-6	7.815E-6		uCi/filter	99.9	75 - 125	5.4	25	0.597	3

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QC Sample Results

Analytical Batch: ARS1-B22-01372
Lab Sample ID: ARS1-B22-01372-03
Method: Eichrom ACW03

Sample Type: MBL
Matrix: Air Filter
Analysis Date: 09/27/22 3:32

Analyte	Analysis Result	CSU +/- 2 s	MDC	DLC	Qual	Analysis Units
Pu-238	0.000	8.333E-8	1.687E-7	6.994E-8	U	uCi/filter
Pu-239/240	-2.550E-7	1.287E-7	2.996E-7	1.354E-7	U	uCi/filter

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QC Association Summary

ARS Sample Delivery Group: ARS1-22-01903

Analytical Batch: ARS1-B22-01372

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-B22-01372-01		Lab Control Sample	Air Filter	Eichrom ACW03	N/A
ARS1-B22-01372-02		Lab Control Sample Duplicate	Air Filter	Eichrom ACW03	N/A
ARS1-B22-01372-03		Method Blank	Air Filter	Eichrom ACW03	N/A
ARS1-B22-01372-09	ARS1-22-01903-001	FB-082922	Air Filter	Eichrom ACW03	N/A
ARS1-B22-01372-10	ARS1-22-01903-002	MSB01-082922	Air Filter	Eichrom ACW03	N/A
ARS1-B22-01372-11	ARS1-22-01903-003	MSB02-082922	Air Filter	Eichrom ACW03	N/A
ARS1-B22-01372-12	ARS1-22-01903-004	MSB113A-082922	Air Filter	Eichrom ACW03	N/A

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QC Sample Results

Analytical Batch: ARS1-B22-01373
Lab Sample ID: ARS1-B22-01373-01
Method: Eichrom ACW03

Sample Type: LCS
Matrix: Air Filter
Analysis Date: 09/24/22 2:24

Analyte	Spike Added	Analysis Result	Qual	Analysis Units	% Rec	% Rec Limits
U-238	8.192E-6	8.058E-6		uCi/filter	98.4	75 - 125

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QC Sample Results

Analytical Batch: ARS1-B22-01373
Lab Sample ID: ARS1-B22-01373-02
Method: Eichrom ACW03

Sample Type: LCSD
Matrix: Air Filter
Analysis Date: 09/24/22 2:24

Analyte	Spike Added	Analysis Result	Qual	Analysis Units	% Rec	% Rec Limits	RPD	RPD Limit	DER	DER Limit
U-238	8.239E-6	8.228E-6		uCi/filter	99.9	75 - 125	2.1	25	0.234	3

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QC Sample Results

Analytical Batch: ARS1-B22-01373
Lab Sample ID: ARS1-B22-01373-03
Method: Eichrom ACW03

Sample Type: MBL
Matrix: Air Filter
Analysis Date: 09/24/22 2:24

Analyte	Analysis Result	CSU +/- 2 s	MDC	DLC	Qual	Analysis Units
U-234	-6.610E-8	1.716E-7	3.523E-7	1.538E-7	U	uCi/filter
U-235	1.915E-8	6.507E-8	1.410E-7	4.456E-8	U	uCi/filter
U-238	-1.979E-7	1.602E-7	3.702E-7	1.628E-7	U	uCi/filter

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QC Association Summary

ARS Sample Delivery Group: ARS1-22-01903

Analytical Batch: ARS1-B22-01373

Analysis: Uranium (233, 234U, 235U, 238U) in (Air Filters, Smears, Leak Test [AF, SM, LT])

Batch Sample ID	Lab Sample ID	Client Sample ID	Matrix	Method	Prep Method
ARS1-B22-01373-01		Lab Control Sample	Air Filter	Eichrom ACW03	N/A
ARS1-B22-01373-02		Lab Control Sample Duplicate	Air Filter	Eichrom ACW03	N/A
ARS1-B22-01373-03		Method Blank	Air Filter	Eichrom ACW03	N/A
ARS1-B22-01373-09	ARS1-22-01903-001	FB-082922	Air Filter	Eichrom ACW03	N/A
ARS1-B22-01373-10	ARS1-22-01903-002	MSB01-082922	Air Filter	Eichrom ACW03	N/A
ARS1-B22-01373-11	ARS1-22-01903-003	MSB02-082922	Air Filter	Eichrom ACW03	N/A
ARS1-B22-01373-12	ARS1-22-01903-004	MSB113A-082922	Air Filter	Eichrom ACW03	N/A

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QC Sample Results

Analytical Batch: ARS1-B22-01374
Lab Sample ID: ARS1-B22-01374-01
Method: Eichrom SRW01

Sample Type: LCS
Matrix: Air Filter
Analysis Date: 09/26/22 11:26

Analyte	Spike Added	Analysis Result	Qual	Analysis Units	% Rec	% Rec Limits
SR-90	2.001E-5	2.147E-5		uCi/filter	107.3	75 - 125

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QC Sample Results

Analytical Batch: ARS1-B22-01374
Lab Sample ID: ARS1-B22-01374-02
Method: Eichrom SRW01

Sample Type: LCSD
Matrix: Air Filter
Analysis Date: 09/26/22 11:26

Analyte	Spike Added	Analysis Result	Qual	Analysis Units	% Rec	% Rec Limits	RPD	RPD Limit	DER	DER Limit
SR-90	2.005E-5	2.314E-5		uCi/filter	115.4	75 - 125	7.5	25	0.670	3

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QC Sample Results

Analytical Batch: ARS1-B22-01374
Lab Sample ID: ARS1-B22-01374-03
Method: Eichrom SRW01

Sample Type: MBL
Matrix: Air Filter
Analysis Date: 09/26/22 11:26

Analyte	Analysis Result	CSU +/- 2 s	MDC	DLC	Qual	Analysis Units
SR-90	2.683E-6	1.331E-6	1.864E-6	8.556E-7		uCi/filter

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QC Association Summary

ARS Sample Delivery Group: ARS1-22-01903 **Analytical Batch:** ARS1-B22-01374

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

Batch Sample ID	Lab Sample ID	Client Sample ID	Matrix	Method	Prep Method
ARS1-B22-01374-01		Lab Control Sample	Air Filter	Eichrom SRW01	N/A
ARS1-B22-01374-02		Lab Control Sample Duplicate	Air Filter	Eichrom SRW01	N/A
ARS1-B22-01374-03		Method Blank	Air Filter	Eichrom SRW01	N/A
ARS1-B22-01374-09	ARS1-22-01903-001	FB-082922	Air Filter	Eichrom SRW01	N/A
ARS1-B22-01374-10	ARS1-22-01903-002	MSB01-082922	Air Filter	Eichrom SRW01	N/A
ARS1-B22-01374-12	ARS1-22-01903-004	MSB113A-082922	Air Filter	Eichrom SRW01	N/A

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QC Sample Results

Analytical Batch: ARS1-B22-01453
Lab Sample ID: ARS1-B22-01453-01
Method: Eichrom SRW01

Sample Type: LCS
Matrix: Air Filter
Analysis Date: 10/03/22 10:28

Analyte	Spike Added	Analysis Result	Qual	Analysis Units	% Rec	% Rec Limits
SR-90	2.020E-5	2.051E-5		uCi/filter	101.5	75 - 125

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QC Sample Results

Analytical Batch: ARS1-B22-01453
Lab Sample ID: ARS1-B22-01453-02
Method: Eichrom SRW01

Sample Type: LCSD
Matrix: Air Filter
Analysis Date: 10/03/22 10:28

Analyte	Spike Added	Analysis Result	Qual	Analysis Units	% Rec	% Rec Limits	RPD	RPD Limit	DER	DER Limit
SR-90	2.008E-5	2.176E-5		uCi/filter	108.4	75 - 125	5.9	25	0.538	3

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QC Sample Results

Analytical Batch: ARS1-B22-01453
Lab Sample ID: ARS1-B22-01453-03
Method: Eichrom SRW01

Sample Type: MBL
Matrix: Air Filter
Analysis Date: 10/03/22 10:28

Analyte	Analysis Result	CSU +/- 2 s	MDC	DLC	Qual	Analysis Units
SR-90	1.179E-6	2.285E-6	3.938E-6	1.816E-6	U	uCi/filter

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QC Association Summary

ARS Sample Delivery Group: ARS1-22-01903 **Analytical Batch:** ARS1-B22-01453

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

Batch Sample ID	Lab Sample ID	Client Sample ID	Matrix	Method	Prep Method
ARS1-B22-01453-01		Lab Control Sample	Air Filter	Eichrom SRW01	N/A
ARS1-B22-01453-02		Lab Control Sample Duplicate	Air Filter	Eichrom SRW01	N/A
ARS1-B22-01453-03		Method Blank	Air Filter	Eichrom SRW01	N/A
ARS1-B22-01453-06	ARS1-22-01903-003	MSB02-082922	Air Filter	Eichrom SRW01	N/A

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QC Sample Results

Analytical Batch: ARS1-B22-01454
Lab Sample ID: ARS1-B22-01454-01
Method: EPA 9315

Sample Type: LCS
Matrix: Air Filter
Analysis Date: 10/07/22 9:50

Analyte	Spike Added	Analysis Result	Qual	Analysis Units	% Rec	% Rec Limits
Ra-226	2.757E-5	2.395E-5		uCi/filter	86.9	75 - 125

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QC Sample Results

Analytical Batch: ARS1-B22-01454
Lab Sample ID: ARS1-B22-01454-02
Method: EPA 9315

Sample Type: LCSD
Matrix: Air Filter
Analysis Date: 10/07/22 9:50

Analyte	Spike Added	Analysis Result	Qual	Analysis Units	% Rec	% Rec Limits	RPD	RPD Limit	DER	DER Limit
Ra-226	2.754E-5	2.331E-5		uCi/filter	84.6	75 - 125	2.7	25	0.231	3

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QC Sample Results

Analytical Batch: ARS1-B22-01454
Lab Sample ID: ARS1-B22-01454-03
Method: EPA 9315

Sample Type: MBL
Matrix: Air Filter
Analysis Date: 10/07/22 9:50

Analyte	Analysis Result	CSU +/- 2 s	MDC	DLC	Qual	Analysis Units
Ra-226	1.574E-6	7.440E-7	7.095E-7	2.674E-7		uCi/filter

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QC Association Summary

ARS Sample Delivery Group: ARS1-22-01903

Analytical Batch: ARS1-B22-01454

Analysis: Radium-226 in Air Filter

Batch Sample ID	Lab Sample ID	Client Sample ID	Matrix	Method	Prep Method
ARS1-B22-01454-01		Lab Control Sample	Air Filter	EPA 9315	N/A
ARS1-B22-01454-02		Lab Control Sample Duplicate	Air Filter	EPA 9315	N/A
ARS1-B22-01454-03		Method Blank	Air Filter	EPA 9315	N/A
ARS1-B22-01454-08	ARS1-22-01903-001	FB-082922	Air Filter	EPA 9315	N/A
ARS1-B22-01454-09	ARS1-22-01903-002	MSB01-082922	Air Filter	EPA 9315	N/A
ARS1-B22-01454-10	ARS1-22-01903-003	MSB02-082922	Air Filter	EPA 9315	N/A
ARS1-B22-01454-11	ARS1-22-01903-004	MSB113A-082922	Air Filter	EPA 9315	N/A

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QC Results per Analytical Batch

Analytical Batch	**ARS1-B22-01327**
SDG	**ARS1-22-01903**
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	09/14/22 12:51	Analysis Technician	[redacted]

Analysis Batch Sample ID	QC Type	Analyte	Results	CSU (2s)	Expected Value	LCS Rec (%)	MDC
ARS1-B22-01327-01	**LCS**	AM-241	31.343	2.385	33.065	94.8	0.119
ARS1-B22-01327-01	**LCS**	CO-60	20.961	1.226	20.928	100.2	0.424
ARS1-B22-01327-01	**LCS**	CS-137	13.244	0.865	12.996	101.9	0.075

Duplicate RER/DER/RPD

Analysis Date	09/14/22 13:02	Analysis Technician	[redacted]

Analyte	Results LCS	CSU LCS (2s)	Results LCSD	CSU LCSD (2s)	DER	RPD
AM-241	31.343	2.385	31.165	2.372	0.104	0.6
CO-60	20.961	1.226	21.488	1.251	0.590	2.5
CS-137	13.244	0.865	13.291	0.867	0.075	0.4

Method Blank

Analysis Date	09/14/22 14:08	Analysis Technician	[redacted]

Analysis Batch Sample ID	QC Type	Analyte	Results	CSU (2s)	MDC	Qual
ARS1-B22-01327-03	**MBL**	CO-60	-4.995E-4	9.220E-4	9.360E-4	U
ARS1-B22-01327-03	**MBL**	CS-137	3.986E-5	6.842E-4	7.460E-4	U
ARS1-B22-01327-03	**MBL**	RA-226	0.003	0.007	0.009	U

ARS Aleut Analytical

QC Results per Analytical Batch

Analytical Batch	**ARS1-B22-01370**
SDG	**ARS1-22-01903**
Analysis	**Thorium in (Air Filters, Smears, Leak Test [AF, SM, LT])**
Method	**Eichrom ACW10**
Analysis Code	**ASP-TH-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	09/22/22 23:14	Analysis Technician	[redacted]

Analysis Batch Sample ID	QC Type	Analyte	Results	CSU (2s)	Expected Value	LCS Rec (%)	MDC
ARS1-B22-01370-01	**LCS**	TH-230	6.385E-6	8.159E-7	5.207E-6	122.6	4.736E-8

Duplicate RER/DER/RPD

Analysis Date	09/22/22 23:14	Analysis Technician	[redacted]

Analyte	Results LCS	CSU LCS (2s)	Results LCSD	CSU LCSD (2s)	DER	RPD
TH-230	6.385E-6	8.159E-7	5.904E-6	7.491E-7	0.850	7.8

Method Blank

Analysis Date	09/22/22 23:14	Analysis Technician	[redacted]

Analysis Batch Sample ID	QC Type	Analyte	Results	CSU (2s)	MDC	Qual
ARS1-B22-01370-03	**MBL**	TH-228	-1.025E-7	1.744E-7	3.501E-7	U
ARS1-B22-01370-03	**MBL**	TH-230	3.796E-8	1.190E-7	2.205E-7	U
ARS1-B22-01370-03	**MBL**	TH-232	3.788E-8	5.553E-8	9.298E-8	U

ARS Aleut Analytical

QC Results per Analytical Batch

Analytical Batch	**ARS1-B22-01372**
SDG	**ARS1-22-01903**
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	09/27/22 03:32	Analysis Technician	[redacted]

Analysis Batch Sample ID	QC Type	Analyte	Results	CSU (2s)	Expected Value	LCS Rec (%)	MDC
ARS1-B22-01372-01	**LCS**	PU-239/240	8.247E-6	1.028E-6	7.831E-6	105.3	3.862E-8

Duplicate RER/DER/RPD

Analysis Date	09/27/22 03:32	Analysis Technician	[redacted]

Analyte	Results LCS	CSU LCS (2s)	Results LCSD	CSU LCSD (2s)	DER	RPD
PU-239/240	8.247E-6	1.028E-6	7.815E-6	9.766E-7	0.597	5.4

Method Blank

Analysis Date	09/27/22 03:32	Analysis Technician	[redacted]

Analysis Batch Sample ID	QC Type	Analyte	Results	CSU (2s)	MDC	Qual
ARS1-B22-01372-03	**MBL**	PU-238	0.000	8.333E-8	1.687E-7	U
ARS1-B22-01372-03	**MBL**	PU-239/240	-2.550E-7	1.287E-7	2.996E-7	U

ARS Aleut Analytical

QC Results per Analytical Batch

Analytical Batch	**ARS1-B22-01373**
SDG	**ARS1-22-01903**
Analysis	**Uranium (233, 234U, 235U, 238U) in (Air Filters, Smears, Leak Test [AF, SM, LT])**
Method	**Eichrom ACW03**
Analysis Code	**ASP-U-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	09/24/22 02:24	Analysis Technician	[redacted]

Analysis Batch Sample ID	QC Type	Analyte	Results	CSU (2s)	Expected Value	LCS Rec (%)	MDC
ARS1-B22-01373-01	**LCS**	U-238	8.058E-6	9.956E-7	8.192E-6	98.4	2.843E-8

Duplicate RER/DER/RPD

Analysis Date	09/24/22 02:24	Analysis Technician	[redacted]

Analyte	Results LCS	CSU LCS (2s)	Results LCSD	CSU LCSD (2s)	DER	RPD
U-238	8.058E-6	9.956E-7	8.228E-6	1.017E-6	0.234	2.1

Method Blank

Analysis Date	09/24/22 02:24	Analysis Technician	[redacted]

Analysis Batch Sample ID	QC Type	Analyte	Results	CSU (2s)	MDC	Qual
ARS1-B22-01373-03	**MBL**	U-234	-6.610E-8	1.716E-7	3.523E-7	U
ARS1-B22-01373-03	**MBL**	U-235	1.915E-8	6.507E-8	1.410E-7	U
ARS1-B22-01373-03	**MBL**	U-238	-1.979E-7	1.602E-7	3.702E-7	U

ARS Aleut Analytical

QC Results per Analytical Batch

Analytical Batch	**ARS1-B22-01374**
SDG	**ARS1-22-01903**
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	09/26/22 11:26	Analysis Technician	[redacted]

Analysis Batch Sample ID	QC Type	Analyte	Results	CSU (2s)	Expected Value	LCS Rec (%)	MDC
ARS1-B22-01374-01	**LCS**	SR-90	2.147E-5	3.377E-6	2.001E-5	107.3	5.946E-7

Duplicate RER/DER/RPD

Analysis Date	09/26/22 11:26	Analysis Technician	[redacted]

Analyte	Results LCS	CSU LCS (2s)	Results LCSD	CSU LCSD (2s)	DER	RPD
SR-90	2.147E-5	3.377E-6	2.314E-5	3.522E-6	0.670	7.5

Method Blank

Analysis Date	09/26/22 11:26	Analysis Technician	[redacted]

Analysis Batch Sample ID	QC Type	Analyte	Results	CSU (2s)	MDC	Qual
ARS1-B22-01374-03	**MBL**	SR-90	2.683E-6	1.331E-6	1.864E-6	

ARS Aleut Analytical

QC Results per Analytical Batch

Analytical Batch	**ARS1-B22-01453**
SDG	**ARS1-22-01903**
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	10/03/22 10:28	Analysis Technician	[redacted]

Analysis Batch Sample ID	QC Type	Analyte	Results	CSU (2s)	Expected Value	LCS Rec (%)	MDC
ARS1-B22-01453-01	**LCS**	SR-90	2.051E-5	3.151E-6	2.020E-5	101.5	5.237E-7

Duplicate RER/DER/RPD

Analysis Date	10/03/22 10:28	Analysis Technician	[redacted]

Analyte	Results LCS	CSU LCS (2s)	Results LCSD	CSU LCSD (2s)	DER	RPD
SR-90	2.051E-5	3.151E-6	2.176E-5	3.321E-6	0.538	5.9

Method Blank

Analysis Date	10/03/22 10:28	Analysis Technician	[redacted]

Analysis Batch Sample ID	QC Type	Analyte	Results	CSU (2s)	MDC	Qual
ARS1-B22-01453-03	**MBL**	SR-90	1.179E-6	2.285E-6	3.938E-6	U

ARS Aleut Analytical

QC Results per Analytical Batch

Analytical Batch	**ARS1-B22-01454**
SDG	**ARS1-22-01903**
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	10/07/22 09:50	Analysis Technician	[redacted]

Analysis Batch Sample ID	QC Type	Analyte	Results	CSU (2s)	Expected Value	LCS Rec (%)	MDC
ARS1-B22-01454-01	**LCS**	RA-226	2.395E-5	3.863E-6	2.757E-5	86.9	7.025E-8

Duplicate RER/DER/RPD

Analysis Date	10/07/22 09:50	Analysis Technician	[redacted]

Analyte	Results LCS	CSU LCS (2s)	Results LCSD	CSU LCSD (2s)	DER	RPD
RA-226	2.395E-5	3.863E-6	2.331E-5	3.770E-6	0.231	2.7

Method Blank

Analysis Date	10/07/22 09:50	Analysis Technician	[redacted]

Analysis Batch Sample ID	QC Type	Analyte	Results	CSU (2s)	MDC	Qual
ARS1-B22-01454-03	**MBL**	RA-226	1.574E-6	7.440E-7	7.095E-7	

2609 North River Road • Port Allen, Louisiana 70767
(225) 228-1394 • FAX (225) 381-2996

ARS Aleut Analytical, LLC
Analytical Reports

for

Gilbane Federal

Sample Management Records

CHAIN-OF-CUSTODY RECORD

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

COC # KT090722RADB

GES

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

						Analytical Test Method	E901.1 - Gamma Spec	RC0240 - Pu, Th, U Isotopes	SR02RC - Sr-90	SW9315 - Ra-226 (A Emit Isotopes)									
	Event: Parcel B Air Monitoring RAD						**15**	**15**	**5**	**1**									
	Sample ID	Matrix	Date	Time	Samp Init.											Location ID	Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom	Cooler	Comments
1	FB-082922	AQ	08/29/2022	0800	[redacted]		X	X	X	X						FIELDQC	FB1	0.00	0.00	1	
2	MSB01-082922	A	09/01/2022	1418			X	X	X	X						MSB01	N1	0.00	0.00	1	TOTAL FLOW: 295,920 (L)
3	MSB02-082922	A	09/01/2022	1401			X	X	X	X						MSB02	N1	0.00	0.00	1	TOTAL FLOW: 296,640 (L)
4	MSB113A-082922	A	09/01/2022	1409			X	X	X	X						MSB113A	N1	0.00	0.00	1	TOTAL FLOW: 296,940 (L)
5										N/A	[redacted]	9-7-22									
6																					

Turnaround Time: 28 days

Relinquished by: *(Signature)*	**Date**	**Time**	**Received by: *(Signature)***	**Date**	**Time**
[redacted]	9-7-22	1600	FEDEX	9-7-22	1600
			[redacted]	9-8-22	945

Shipping Date / Carrier / Airbill Number

Shipping Date: 9/7/2022/ FEDEX 7778 3008 0892

Received by Laboratory: *(Signature, Date, Time)* **& condition**

GES.Navy_COC_Field
September 01, 2022

SDG Report - Samples and Containers

SDG Specific Data							
SDG	ARS1-22-01903			TAT Days	28 Calendar Days	Project Type	Environmental
Sample Count	4	Rpt Level	4	Date Received	09/08/2022	COC Number	KT090722RADB
Client	Gilbane Federal			Discrepancy Resol	N/A	PO Number	
Client Code	1138			Client Deadline	10/06/2022	Job Number	J310000900
Profile Number	PN-01411					Job Location	Hunter's 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-082922	Air Filter	08/29/2022 07:59	08/29/2022 08:00	H	30	10	PrePrep	
	IC_ID	**Cnt**	**Container Type**	**AF Volume (L)**	**AF Units**		**Rate**	**Mins**	**Comments**
	423408	1	HDP Container	1	LPM			1	
			Mid-Sample Date:	08/29/2022 07:59	AF Volume (CuM):		0.001		
002	MSB01-082922	Air Filter	09/01/2022 14:17	09/01/2022 14:18	H	30	10	PrePrep	
	IC_ID	**Cnt**	**Container Type**	**AF Volume (L)**	**AF Units**		**Rate**	**Mins**	**Comments**
	423409	1	HDP Container	1	LPM			1	
			Mid-Sample Date:	09/01/2022 14:17	AF Volume (CuM):		0.001		
003	MSB02-082922	Air Filter	09/01/2022 14:00	09/01/2022 14:01	H	30	10	PrePrep	
	IC_ID	**Cnt**	**Container Type**	**AF Volume (L)**	**AF Units**		**Rate**	**Mins**	**Comments**
	423410	1	HDP Container	1	LPM			1	
			Mid-Sample Date:	09/01/2022 14:00	AF Volume (CuM):		0.001		
004	MSB113A-082922	Air Filter	09/01/2022 14:08	09/01/2022 14:09	H	30	10	PrePrep	
	IC_ID	**Cnt**	**Container Type**	**AF Volume (L)**	**AF Units**		**Rate**	**Mins**	**Comments**
	423411	1	HDP Container	1	LPM			1	
			Mid-Sample Date:	09/01/2022 14:08	AF Volume (CuM):		0.001		

SDG Report - Analysis Assignments

SDG	ARS1-22-01903	Sample Count	4
Client	Gilbane Federal	Analysis Count	6-29

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
ASP-TH-AF	Thorium in (Air Filters, Smears, Leak Test [AF, SM, LT])	I	4
ASP-U-AF	Uranium (233, 234U, 235U, 238U) 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	8
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	ASP-TH-AF	X
001	ASP-U-AF	X
001	GAM-A-AF	X
001	GPC-RA226-AF	X
001	GPC-RA226-AF	X
001	GPC-SR90-AF	X
002	ASP-PU239-AF	X
002	ASP-TH-AF	X
002	ASP-U-AF	X
002	GAM-A-AF	X
002	GPC-RA226-AF	X
002	GPC-RA226-AF	X
002	GPC-SR90-AF	X
003	ASP-PU239-AF	X
003	ASP-TH-AF	X
003	ASP-U-AF	X
003	GAM-A-AF	X
003	GPC-RA226-AF	X
003	GPC-RA226-AF	X
003	GPC-SR90-AF	X
003	GPC-SR90-AF	X
004	ASP-PU239-AF	X
004	ASP-TH-AF	X
004	ASP-U-AF	X
004	GAM-A-AF	X
004	GPC-RA226-AF	X

004	GPC-RA226-AF	**X**
004	GPC-SR90-AF	**X**

DQO Report for SDG

ARS1-22-01903

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**
	Pu-239/240 (15117-48-3)			4.8E-08 uCi/filter	75/125	60/140	30/110	30/110	1	25	N/A
ASP-TH-AF	WRAD	uCi	filter	N/A	PALA-RAD-031						
	Analyte			**RDL**	**LCS LL/UL**	**MS LL/UL**	**RadY LL/UL**	**GravY LL/UL**	**RER**	**RPD**	**Surr LL/UL**
	Th-232 (7440-29-1)			4.8E-08 uCi/filter	75/125	60/140	30/110	30/110	1	25	N/A
ASP-U-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**
	U-235 (15117-96-1)			4.8E-08 uCi/filter	75/125	60/140	30/110	30/110	1	25	N/A
GAM-A-AF	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
	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
GPC-RA226-AF	WRAD	uCi	filter		PALA-RAD-008						
	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**
	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	filter	N/A	1
		Group		**Analyte**	
		Parcel B Rad Sampling		Pu-239/240	
ASP-PU239-AF	002	uCi	filter	N/A	1
		Group		**Analyte**	
		Parcel B Rad Sampling		Pu-239/240	
ASP-PU239-AF	003	uCi	filter	N/A	1
		Group		**Analyte**	
		Parcel B Rad Sampling		Pu-239/240	
ASP-PU239-AF	004	uCi	filter	N/A	1
		Group		**Analyte**	
		Parcel B Rad Sampling		Pu-239/240	
ASP-TH-AF	001	uCi	filter	N/A	1
		Group		**Analyte**	
		Parcel B Rad Sampling		Th-232	
ASP-TH-AF	002	uCi	filter	N/A	1
		Group		**Analyte**	
		Parcel B Rad Sampling		Th-232	
ASP-TH-AF	003	uCi	filter	N/A	1
		Group		**Analyte**	
		Parcel B Rad Sampling		Th-232	
ASP-TH-AF	004	uCi	filter	N/A	1
		Group		**Analyte**	
		Parcel B Rad Sampling		Th-232	
ASP-U-AF	001	uCi	filter	N/A	1
		Group		**Analyte**	
		Parcel B Rad Sampling		U-235	
ASP-U-AF	002	uCi	filter	N/A	1
		Group		**Analyte**	
		Parcel B Rad Sampling		U-235	
ASP-U-AF	003	uCi	filter	N/A	1
		Group		**Analyte**	
		Parcel B Rad Sampling		U-235	

ASP-U-AF	004	uCi	filter	N/A	1
		Group		**Analyte**	
		Parcel B Rad Sampling		U-235	
GAM-A-AF	001	uCi	filter	N/A	3
		Group		**Analyte**	
		Parcel B Rad Sampling		Cs-137	
		Parcel B Rad Sampling		Co-60	
		Parcel B Rad Sampling		Ra-226	
GAM-A-AF	002	uCi	filter	N/A	3
		Group		**Analyte**	
		Parcel B Rad Sampling		Cs-137	
		Parcel B Rad Sampling		Co-60	
		Parcel B Rad Sampling		Ra-226	
GAM-A-AF	003	uCi	filter	N/A	3
		Group		**Analyte**	
		Parcel B Rad Sampling		Cs-137	
		Parcel B Rad Sampling		Co-60	
		Parcel B Rad Sampling		Ra-226	
GAM-A-AF	004	uCi	filter	N/A	3
		Group		**Analyte**	
		Parcel B Rad Sampling		Cs-137	
		Parcel B Rad Sampling		Co-60	
		Parcel B Rad Sampling		Ra-226	
GPC-RA226-AF	001	uCi	filter	N/A	1
		Group		**Analyte**	
		Parcel B Rad Sampling		Ra-226	
GPC-RA226-AF	002	uCi	filter	N/A	1
		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	
GPC-RA226-AF	004	uCi	filter	N/A	1
		Group		**Analyte**	
		Parcel B Rad Sampling		Ra-226	

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

Sample Custodian [redacted] Survey Start Date: 9/8/22 Survey Start Time: 1035

Thermometer ID: E0006410085 Calibration Due Date: 2/28/23 pH Paper Lot# NA

Exposure Rate Meter + Probe Unit ID: PR256427/269264 Calibration Due Date: 2-13-23 Background: 4 µR/hr

Count Rate Meter + Probe Unit ID: PR368083/331788 Calibration Due Date: 9-22-22 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)
A: 777830080892	7	40	40	NA
B:				
C:				
D:				
E:				
F:				

TRAX Matrix ID (circle all that apply): (See Section 4.3 of SOP)

AQ WD WG WO
WS WW SI UR
SO OL BI VG
WP SM (AF)

Visual Inspection: (Circle response)
External Shipping Container

Good Condition with no Leaks or Tears	(Yes)	No	
Marked Radioactive	Yes	(No)	
UN2910	Yes	(No)	
Security Seals	(Yes)	No	
If yes, intact?	(Yes)	No	N/A

Internal Shipping Container

COC's Present	(Yes)	No	
Well packaged container with no signs of leakage	(Yes)	No	

COC/Sample Inspection (Circle response)

Sample Containers in good condition	(Yes)	No	
No spills or leaks	(Yes)	No	
Marked Radioactive	Yes	(No)	
Durable labels w/indelible ink	(Yes)	No	
COC reliquished/received correctly	(Yes)	No	
Adequate volume/filled correctly	(Yes)	No	
Hold Time sufficient for analysis	(Yes)	No	
For VOC/Radon, Head space?	Yes	No	(N/A)
If yes, <6mm?	Yes	No	(N/A)
# of containers received matches # on COC	(Yes)	No	
Samples received on ice?	Yes	(No)	
Type (circle one):	Bagged Ice	Loose Ice	Blue Ice (N/A)

Comments:

ARS Aleut Analytical

PALA Sample Survey Form

Client Name: Gilbane

SDG: ARS1-22-01903

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

Pipette ID: NA Tip Lot#: NA

Disposible pipette lot#: NA

Sample ID from Client on COC or Sample	ESC Letter	Sample Container Type	Approx. Fill Level (%)	pH <2 is Acceptable: pH As Rec'd	pH <2 is Acceptable: pH Adjusted	Acid Lot # or Ind container temp (°C)	Vol. of Acid Used (mL)	Acceptance Limits <100 cpm/cm: cpm
FB-082922	A	ziploc	25	NA	NA	NA	NA	40
MSB01-082922	↓	↓	↓	↓	↓	↓	↓	↓
MSB02-082922								
MSB113A-082922								

Sample Custodian [redacted] Survey End Date: 9/8/22 Survey/pH End Time: 1040

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 PALA-SR-001-FM-03 (Discrepant Sample Receipt Report).

ENVIRONMENTAL SOLUTIONS | QUALITY CONSCIOUS

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ARS Aleut Analytical, LLC

Laboratory Analytical Report

ARS1-22-01985

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

COC Number: **KT091422RADB**
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.

		Laboratory Management, ARS Aleut Analytical
Signature	**Date**	**Title**

ARS Aleut Analytical
2609 North River Road • Port Allen, Louisiana 70767
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Table Of Contents

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
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for

Gilbane Federal

Case Narrative

ARS Aleut Analytical
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PROJECT SAMPLE IDENTIFICATION CROSS-REFERENCE
TO ARS SAMPLE LABORATORY IDs

Client Sample ID	ARS Aleut Analytical Sample ID
FB-090622	ARS1-22-01985-001
MSB01-090622	ARS1-22-01985-002
MSB02-090622	ARS1-22-01985-003
MSB113A-090622	ARS1-22-01985-004

Sample	Date Collected	Date Received	Analysis	Basis	Prep Date/Time	Analysis Date/Time
001	09/06/22 08:00	09/15/22	ASP-PU239-AF	As Received	10/05/22 08:51	10/12/22 02:47
001	09/06/22 08:00	09/15/22	GAM-A-AF	As Received	N/A	09/16/22 15:36
001	09/06/22 08:00	09/15/22	GPC-RA226-AF	As Received	10/03/22 07:58	10/13/22 10:07
001	09/06/22 08:00	09/15/22	GPC-SR90-AF	As Received	10/03/22 13:59	10/05/22 10:24
002	09/08/22 14:50	09/15/22	ASP-PU239-AF	As Received	10/05/22 08:51	10/12/22 02:47
002	09/08/22 14:50	09/15/22	GAM-A-AF	As Received	N/A	09/16/22 15:38
002	09/08/22 14:50	09/15/22	GPC-RA226-AF	As Received	10/03/22 07:58	10/13/22 10:07
002	09/08/22 14:50	09/15/22	GPC-SR90-AF	As Received	10/03/22 13:59	10/05/22 10:24
003	09/08/22 14:52	09/15/22	ASP-PU239-AF	As Received	10/05/22 08:51	10/12/22 02:47
003	09/08/22 14:52	09/15/22	GAM-A-AF	As Received	N/A	09/16/22 15:40
003	09/08/22 14:52	09/15/22	GPC-RA226-AF	As Received	10/03/22 07:58	10/13/22 10:07
003	09/08/22 14:52	09/15/22	GPC-SR90-AF	As Received	10/03/22 13:59	10/05/22 10:24
004	09/08/22 14:58	09/15/22	ASP-PU239-AF	As Received	10/05/22 08:51	10/12/22 02:47
004	09/08/22 14:58	09/15/22	GAM-A-AF	As Received	N/A	09/19/22 14:15

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Sample	Date Collected	Date Received	Analysis	Basis	Prep Date/Time	Analysis Date/Time
004	09/08/22 14:58	09/15/22	GPC-RA226-AF	As Received	10/03/22 07:58	10/13/22 10:07
004	09/08/22 14:58	09/15/22	GPC-SR90-AF	As Received	10/03/22 13:59	10/05/22 10:24

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 4.351E-9 uCi/filter, MDC of 7.252E-8 uCi/filter and CRDL of 4.8E-08 uCi/filter.
Fraction 001 has elevated MDC for Ra-226 with ACT of 0.000 uCi/filter, MDC of 1.465E-5 uCi/filter and CRDL of 4.4E-06 uCi/filter.
Fraction 002 has elevated MDC for Pu-239/240 with ACT of -8.296E-9 uCi/filter, MDC of 8.082E-8 uCi/filter and CRDL of 4.8E-08 uCi/filter.
Fraction 002 has elevated MDC for Ra-226 with ACT of 3.591E-6 uCi/filter, MDC of 9.252E-6 uCi/filter and CRDL of 4.4E-06 uCi/filter.
Fraction 003 has elevated MDC for Pu-239/240 with ACT of -8.819E-8 uCi/filter, MDC of 1.103E-7 uCi/filter and CRDL of 4.8E-08 uCi/filter.
Fraction 003 has elevated MDC for Ra-226 with ACT of -1.979E-5 uCi/filter, MDC of 1.533E-5 uCi/filter and CRDL of 4.4E-06 uCi/filter.
Fraction 004 has elevated MDC for Pu-239/240 with ACT of -1.837E-8 uCi/filter, MDC of 1.255E-7 uCi/filter and CRDL of 4.8E-08 uCi/filter.
Fraction 004 has elevated MDC for Ra-226 with ACT of -2.710E-7 uCi/filter, MDC of 9.431E-6 uCi/filter and CRDL of 4.4E-06 uCi/filter.

ARS1-B22-01429: 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
ǂ 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

ARS Aleut Analytical

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ARS Sample Delivery Group: ARS1-22-01985
Client Sample ID: FB-090622
Sample Collection Date: 09/06/22 8:00
Sample Matrix: Air Filter
Percent Solids: N/A

Request or PO Number:
ARS Sample ID: ARS1-22-01985-001
Date Received: 09/15/22
Report Date: 10/13/22

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	4.351E-9	3.717E-8	7.252E-8	3.036E-8	4.8E-08	U	uCi/filter	10/12/22 2:47	[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	4.624E-7	9.132E-7	9.308E-7	4.654E-7	0.00024	U	uCi/filter	09/16/22 15:36	[redacted]	N/A
Cs-137	4.045E-7	7.475E-7	8.341E-7	4.171E-7	0.00048	U	uCi/filter	09/16/22 15:36	[redacted]	N/A
Ra-226	0.000	9.155E-6	1.465E-5	7.325E-6	4.4E-06	U	uCi/filter	09/16/22 15:36	[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	5.198E-7	3.037E-7	3.452E-7	1.312E-7	4.4E-06		uCi/filter	10/13/22 10:07	[redacted]	95.9%

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	4.884E-6	2.554E-6	3.655E-6	1.684E-6	2.4E-05		uCi/filter	10/05/22 10:24	[redacted]	98.6%

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ARS Sample Delivery Group: ARS1-22-01985
Client Sample ID: MSB01-090622
Sample Collection Date: 09/08/22 14:50
Sample Matrix: Air Filter
Percent Solids: N/A

Request or PO Number:
ARS Sample ID: ARS1-22-01985-002
Date Received: 09/15/22
Report Date: 10/13/22

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	-8.296E-9	3.984E-8	8.082E-8	3.479E-8	4.8E-08	U	uCi/filter	10/12/22 2:47	[redacted]	77.4%

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	-2.972E-7	8.503E-7	8.703E-7	4.352E-7	0.00024	U	uCi/filter	09/16/22 15:38	[redacted]	N/A
Cs-137	-3.954E-7	7.616E-7	8.197E-7	4.099E-7	0.00048	U	uCi/filter	09/16/22 15:38	[redacted]	N/A
Ra-226	3.591E-6	7.351E-6	9.252E-6	4.626E-6	4.4E-06	U	uCi/filter	09/16/22 15:38	[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	5.338E-7	3.096E-7	3.358E-7	1.236E-7	4.4E-06		uCi/filter	10/13/22 10:07	[redacted]	93.7%

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	1.369E-7	2.770E-6	4.925E-6	2.316E-6	2.4E-05	U	uCi/filter	10/05/22 10:24	[redacted]	98.6%

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ARS Sample Delivery Group: ARS1-22-01985
Client Sample ID: MSB02-090622
Sample Collection Date: 09/08/22 14:52
Sample Matrix: Air Filter
Percent Solids: N/A

Request or PO Number:
ARS Sample ID: ARS1-22-01985-003
Date Received: 09/15/22
Report Date: 10/13/22

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	-8.819E-8	4.534E-8	1.103E-7	4.919E-8	4.8E-08	U	uCi/filter	10/12/22 2:47	[redacted]	67.1%

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	-5.127E-7	9.879E-7	1.071E-6	5.355E-7	0.00024	U	uCi/filter	09/16/22 15:40	[redacted]	N/A
Cs-137	4.063E-7	7.798E-7	9.047E-7	4.524E-7	0.00048	U	uCi/filter	09/16/22 15:40	[redacted]	N/A
Ra-226	-1.979E-5	1.373E-5	1.533E-5	7.665E-6	4.4E-06	U	uCi/filter	09/16/22 15:40	[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	3.726E-7	2.705E-7	3.587E-7	1.395E-7	4.4E-06		uCi/filter	10/13/22 10:07	[redacted]	98.6%

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	4.061E-6	2.632E-6	3.988E-6	1.840E-6	2.4E-05		uCi/filter	10/05/22 10:24	[redacted]	95.3%

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ARS Sample Delivery Group: ARS1-22-01985
Client Sample ID: MSB113A-090622
Sample Collection Date: 09/08/22 14:58
Sample Matrix: Air Filter
Percent Solids: N/A

Request or PO Number:
ARS Sample ID: ARS1-22-01985-004
Date Received: 09/15/22
Report Date: 10/13/22

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	-1.837E-8	6.496E-8	1.255E-7	5.655E-8	4.8E-08	U	uCi/filter	10/12/22 2:47	[redacted]	65.9%

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	-6.390E-7	1.003E-6	1.014E-6	5.070E-7	0.00024	U	uCi/filter	09/19/22 14:15	[redacted]	N/A
Cs-137	3.510E-7	6.741E-7	7.270E-7	3.635E-7	0.00048	U	uCi/filter	09/19/22 14:15	[redacted]	N/A
Ra-226	-2.710E-7	7.430E-6	9.431E-6	4.716E-6	4.4E-06	U	uCi/filter	09/19/22 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	8.250E-7	3.731E-7	3.150E-7	1.130E-7	4.4E-06		uCi/filter	10/13/22 10:07	[redacted]	99.3%

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	3.629E-6	2.671E-6	4.147E-6	1.912E-6	2.4E-05	U	uCi/filter	10/05/22 10:24	[redacted]	92.8%

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QC Summary

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QC Sample Results

Analytical Batch: ARS1-B22-01355
Lab Sample ID: ARS1-B22-01355-01
Method: EPA 901.1M

Sample Type: LCS
Matrix: Air Filter
Analysis Date: 09/19/22 13:50

Analyte	Spike Added	Analysis Result	Qual	Analysis Units	% Rec	% Rec Limits
Am-241	33.065	32.214		uCi/filter	97.4	75 - 125
Co-60	20.928	21.774		uCi/filter	104.0	75 - 125
Cs-137	12.996	13.149		uCi/filter	101.2	75 - 125

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QC Sample Results

Analytical Batch: ARS1-B22-01355
Lab Sample ID: ARS1-B22-01355-02
Method: EPA 901.1M

Sample Type: LCSD
Matrix: Air Filter
Analysis Date: 09/19/22 14:01

Analyte	Spike Added	Analysis Result	Qual	Analysis Units	% Rec	% Rec Limits	RPD	RPD Limit	DER	DER Limit
Am-241	33.065	31.916		uCi/filter	96.5	75 - 125	0.9	25	0.166	3
Co-60	20.928	20.833		uCi/filter	99.5	75 - 125	4.4	25	1.077	3
Cs-137	12.996	13.055		uCi/filter	100.5	75 - 125	0.7	25	0.187	3

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QC Sample Results

Analytical Batch: ARS1-B22-01355
Lab Sample ID: ARS1-B22-01355-03
Method: EPA 901.1M

Sample Type: MBL
Matrix: Air Filter
Analysis Date: 09/19/22 14:14

Analyte	Analysis Result	CSU +/- 2 s	MDC	DLC	Qual	Analysis Units
Co-60	-5.477E-4	7.283E-4	0.001	6.000E-4	U	uCi/filter
Cs-137	4.199E-4	7.479E-4	8.340E-4	4.170E-4	U	uCi/filter
Ra-226	-0.003	0.012	0.013	0.006	U	uCi/filter

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QC Association Summary

ARS Sample Delivery Group: ARS1-22-01985 **Analytical Batch:** ARS1-B22-01355

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

Batch Sample ID	Lab Sample ID	Client Sample ID	Matrix	Method	Prep Method
ARS1-B22-01355-01		Lab Control Sample	Air Filter	EPA 901.1M	N/A
ARS1-B22-01355-02		Lab Control Sample Duplicate	Air Filter	EPA 901.1M	N/A
ARS1-B22-01355-03		Method Blank	Air Filter	EPA 901.1M	N/A
ARS1-B22-01355-04	ARS1-22-01985-001	FB-090622	Air Filter	EPA 901.1M	N/A
ARS1-B22-01355-05	ARS1-22-01985-002	MSB01-090622	Air Filter	EPA 901.1M	N/A
ARS1-B22-01355-06	ARS1-22-01985-003	MSB02-090622	Air Filter	EPA 901.1M	N/A
ARS1-B22-01355-07	ARS1-22-01985-004	MSB113A-090622	Air Filter	EPA 901.1M	N/A

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QC Sample Results

Analytical Batch: ARS1-B22-01429
Lab Sample ID: ARS1-B22-01429-01
Method: Eichrom ACW03

Sample Type: LCS
Matrix: Air Filter
Analysis Date: 10/12/22 2:47

Analyte	Spike Added	Analysis Result	Qual	Analysis Units	% Rec	% Rec Limits
Pu-239/240	7.838E-6	7.759E-6		uCi/filter	99.0	75 - 125

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QC Sample Results

Analytical Batch: ARS1-B22-01429
Lab Sample ID: ARS1-B22-01429-02
Method: Eichrom ACW03

Sample Type: LCSD
Matrix: Air Filter
Analysis Date: 10/12/22 2:47

Analyte	Spike Added	Analysis Result	Qual	Analysis Units	% Rec	% Rec Limits	RPD	RPD Limit	DER	DER Limit
Pu-239/240	7.817E-6	7.995E-6		uCi/filter	102.3	75 - 125	3.0	25	0.332	3

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QC Sample Results

Analytical Batch: ARS1-B22-01429
Lab Sample ID: ARS1-B22-01429-03
Method: Eichrom ACW03

Sample Type: MBL
Matrix: Air Filter
Analysis Date: 10/12/22 2:47

Analyte	Analysis Result	CSU +/- 2 s	MDC	DLC	Qual	Analysis Units
Pu-238	-1.012E-8	5.435E-8	1.079E-7	4.710E-8	U	uCi/filter
Pu-239/240	-4.049E-8	6.134E-8	1.266E-7	5.647E-8	U	uCi/filter

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QC Association Summary

ARS Sample Delivery Group: ARS1-22-01985

Analytical Batch: ARS1-B22-01429

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-B22-01429-01		Lab Control Sample	Air Filter	Eichrom ACW03	N/A
ARS1-B22-01429-02		Lab Control Sample Duplicate	Air Filter	Eichrom ACW03	N/A
ARS1-B22-01429-03		Method Blank	Air Filter	Eichrom ACW03	N/A
ARS1-B22-01429-04	ARS1-22-01985-001	FB-090622	Air Filter	Eichrom ACW03	N/A
ARS1-B22-01429-05	ARS1-22-01985-002	MSB01-090622	Air Filter	Eichrom ACW03	N/A
ARS1-B22-01429-06	ARS1-22-01985-003	MSB02-090622	Air Filter	Eichrom ACW03	N/A
ARS1-B22-01429-07	ARS1-22-01985-004	MSB113A-090622	Air Filter	Eichrom ACW03	N/A

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QC Sample Results

Analytical Batch: ARS1-B22-01430
Lab Sample ID: ARS1-B22-01430-01
Method: EPA 9315

Sample Type: LCS
Matrix: Air Filter
Analysis Date: 10/13/22 10:07

Analyte	Spike Added	Analysis Result	Qual	Analysis Units	% Rec	% Rec Limits
Ra-226	2.773E-5	2.469E-5		uCi/filter	89.0	75 - 125

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QC Sample Results

Analytical Batch: ARS1-B22-01430
Lab Sample ID: ARS1-B22-01430-02
Method: EPA 9315

Sample Type: LCSD
Matrix: Air Filter
Analysis Date: 10/13/22 10:07

Analyte	Spike Added	Analysis Result	Qual	Analysis Units	% Rec	% Rec Limits	RPD	RPD Limit	DER	DER Limit
Ra-226	2.759E-5	2.389E-5		uCi/filter	86.6	75 - 125	3.3	25	0.283	3

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QC Sample Results

Analytical Batch: ARS1-B22-01430
Lab Sample ID: ARS1-B22-01430-03
Method: EPA 9315

Sample Type: MBL
Matrix: Air Filter
Analysis Date: 10/13/22 10:07

Analyte	Analysis Result	CSU +/- 2 s	MDC	DLC	Qual	Analysis Units
Ra-226	6.619E-8	5.211E-8	7.000E-8	2.638E-8	U	uCi/filter

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QC Association Summary

ARS Sample Delivery Group: ARS1-22-01985

Analytical Batch: ARS1-B22-01430

Analysis: Radium-226 in Air Filter

Batch Sample ID	Lab Sample ID	Client Sample ID	Matrix	Method	Prep Method
ARS1-B22-01430-01		Lab Control Sample	Air Filter	EPA 9315	N/A
ARS1-B22-01430-02		Lab Control Sample Duplicate	Air Filter	EPA 9315	N/A
ARS1-B22-01430-03		Method Blank	Air Filter	EPA 9315	N/A
ARS1-B22-01430-04	ARS1-22-01985-001	FB-090622	Air Filter	EPA 9315	N/A
ARS1-B22-01430-05	ARS1-22-01985-002	MSB01-090622	Air Filter	EPA 9315	N/A
ARS1-B22-01430-06	ARS1-22-01985-003	MSB02-090622	Air Filter	EPA 9315	N/A
ARS1-B22-01430-07	ARS1-22-01985-004	MSB113A-090622	Air Filter	EPA 9315	N/A

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QC Sample Results

Analytical Batch: ARS1-B22-01431
Lab Sample ID: ARS1-B22-01431-01
Method: Eichrom SRW01

Sample Type: LCS
Matrix: Air Filter
Analysis Date: 10/05/22 10:24

Analyte	Spike Added	Analysis Result	Qual	Analysis Units	% Rec	% Rec Limits
SR-90	2.046E-5	2.019E-5		uCi/filter	98.7	75 - 125

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QC Sample Results

Analytical Batch: ARS1-B22-01431
Lab Sample ID: ARS1-B22-01431-02
Method: Eichrom SRW01

Sample Type: LCSD
Matrix: Air Filter
Analysis Date: 10/05/22 10:24

Analyte	Spike Added	Analysis Result	Qual	Analysis Units	% Rec	% Rec Limits	RPD	RPD Limit	DER	DER Limit
SR-90	2.026E-5	2.102E-5		uCi/filter	103.8	75 - 125	4.0	25	0.366	3

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QC Sample Results

Analytical Batch: ARS1-B22-01431
Lab Sample ID: ARS1-B22-01431-03
Method: Eichrom SRW01

Sample Type: MBL
Matrix: Air Filter
Analysis Date: 10/05/22 10:24

Analyte	Analysis Result	CSU +/- 2 s	MDC	DLC	Qual	Analysis Units
SR-90	2.749E-6	2.482E-6	3.980E-6	1.830E-6	U	uCi/filter

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QC Association Summary

ARS Sample Delivery Group: ARS1-22-01985 **Analytical Batch:** ARS1-B22-01431

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

Batch Sample ID	Lab Sample ID	Client Sample ID	Matrix	Method	Prep Method
ARS1-B22-01431-01		Lab Control Sample	Air Filter	Eichrom SRW01	N/A
ARS1-B22-01431-02		Lab Control Sample Duplicate	Air Filter	Eichrom SRW01	N/A
ARS1-B22-01431-03		Method Blank	Air Filter	Eichrom SRW01	N/A
ARS1-B22-01431-04	ARS1-22-01985-001	FB-090622	Air Filter	Eichrom SRW01	N/A
ARS1-B22-01431-05	ARS1-22-01985-002	MSB01-090622	Air Filter	Eichrom SRW01	N/A
ARS1-B22-01431-06	ARS1-22-01985-003	MSB02-090622	Air Filter	Eichrom SRW01	N/A
ARS1-B22-01431-07	ARS1-22-01985-004	MSB113A-090622	Air Filter	Eichrom SRW01	N/A

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ARS Aleut Analytical, LLC
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Batch QC

ARS Aleut Analytical

QC Results per Analytical Batch

Analytical Batch	**ARS1-B22-01355**
SDG	**ARS1-22-01985**
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	09/19/22 13:50	Analysis Technician	[redacted]

Analysis Batch Sample ID	QC Type	Analyte	Results	CSU (2s)	Expected Value	LCS Rec (%)	MDC
ARS1-B22-01355-01	**LCS**	AM-241	32.214	2.501	33.065	97.4	0.073
ARS1-B22-01355-01	**LCS**	CO-60	21.774	1.137	20.928	104.0	0.329
ARS1-B22-01355-01	**LCS**	CS-137	13.149	0.701	12.996	101.2	0.076

Duplicate RER/DER/RPD

Analysis Date	09/19/22 14:01	Analysis Technician	[redacted]

Analyte	Results LCS	CSU LCS (2s)	Results LCSD	CSU LCSD (2s)	DER	RPD
AM-241	32.214	2.501	31.916	2.478	0.166	0.9
CO-60	21.774	1.137	20.833	1.279	1.077	4.4
CS-137	13.149	0.701	13.055	0.696	0.187	0.7

Method Blank

Analysis Date	09/19/22 14:14	Analysis Technician	[redacted]

Analysis Batch Sample ID	QC Type	Analyte	Results	CSU (2s)	MDC	Qual
ARS1-B22-01355-03	**MBL**	CO-60	-5.477E-4	7.283E-4	0.001	U
ARS1-B22-01355-03	**MBL**	CS-137	4.199E-4	7.479E-4	8.340E-4	U
ARS1-B22-01355-03	**MBL**	RA-226	-0.003	0.012	0.013	U

ARS Aleut Analytical

QC Results per Analytical Batch

Analytical Batch	**ARS1-B22-01429**
SDG	**ARS1-22-01985**
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	10/12/22 02:47	Analysis Technician	[redacted]	
Analysis Batch Sample ID	**QC Type**	**Analyte**	**Results**	**CSU (2s)**	**Expected Value**	**LCS Rec (%)**	**MDC**
ARS1-B22-01429-01	**LCS**	PU-239/240	7.759E-6	9.662E-7	7.838E-6	99.0	3.274E-8

Duplicate RER/DER/RPD

		Analysis Date	10/12/22 02:47	Analysis Technician	[redacted]	
Analyte	**Results LCS**	**CSU LCS (2s)**	**Results LCSD**	**CSU LCSD (2s)**	**DER**	**RPD**
PU-239/240	7.759E-6	9.662E-7	7.995E-6	1.002E-6	0.332	3.0

Method Blank

			Analysis Date	10/12/22 02:47	Analysis Technician	[redacted]	
Analysis Batch Sample ID	**QC Type**	**Analyte**	**Results**	**CSU (2s)**	**MDC**	**Qual**	
ARS1-B22-01429-03	**MBL**	PU-238	-1.012E-8	5.435E-8	1.079E-7	U	
ARS1-B22-01429-03	**MBL**	PU-239/240	-4.049E-8	6.134E-8	1.266E-7	U	

ARS Aleut Analytical

QC Results per Analytical Batch

Analytical Batch	**ARS1-B22-01430**
SDG	**ARS1-22-01985**
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 10/13/22 10:07 **Analysis Technician** [redacted]

Analysis Batch Sample ID	QC Type	Analyte	Results	CSU (2s)	Expected Value	LCS Rec (%)	MDC
ARS1-B22-01430-01	**LCS**	RA-226	2.469E-5	3.982E-6	2.773E-5	89.0	8.031E-8

Duplicate RER/DER/RPD

Analysis Date 10/13/22 10:07 **Analysis Technician** [redacted]

Analyte	Results LCS	CSU LCS (2s)	Results LCSD	CSU LCSD (2s)	DER	RPD
RA-226	2.469E-5	3.982E-6	2.389E-5	3.855E-6	0.283	3.3

Method Blank

Analysis Date 10/13/22 10:07 **Analysis Technician** [redacted]

Analysis Batch Sample ID	QC Type	Analyte	Results	CSU (2s)	MDC	Qual
ARS1-B22-01430-03	**MBL**	RA-226	6.619E-8	5.211E-8	7.000E-8	U

ARS Aleut Analytical

QC Results per Analytical Batch

Analytical Batch	**ARS1-B22-01431**
SDG	**ARS1-22-01985**
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	10/05/22 10:24	Analysis Technician	[redacted]

Analysis Batch Sample ID	QC Type	Analyte	Results	CSU (2s)	Expected Value	LCS Rec (%)	MDC
ARS1-B22-01431-01	**LCS**	SR-90	2.019E-5	3.093E-6	2.046E-5	98.7	3.742E-7

Duplicate RER/DER/RPD

Analysis Date	10/05/22 10:24	Analysis Technician	[redacted]

Analyte	Results LCS	CSU LCS (2s)	Results LCSD	CSU LCSD (2s)	DER	RPD
SR-90	2.019E-5	3.093E-6	2.102E-5	3.218E-6	0.366	4.0

Method Blank

Analysis Date	10/05/22 10:24	Analysis Technician	[redacted]

Analysis Batch Sample ID	QC Type	Analyte	Results	CSU (2s)	MDC	Qual
ARS1-B22-01431-03	**MBL**	SR-90	2.749E-6	2.482E-6	3.980E-6	U

ARS Aleut Analytical

Z Values per Analytical Batch

Analytical Batch	**ARS1-B22-01355**
SDG	**ARS1-22-01985**
Analysis	**Gamma Spec (Short) in (Air Filters, Smears**
Analysis Test Method	**PALA-RAD-007/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 09/19/22 13:50 **Analysis Technician** [redacted]

QC Type	Analyte	Results	CSU (1s)	Expected Value	CSU (1s)	Z
LCS	AM-241	32.214	1.276	33.065	0.001	0.667
LCSD	AM-241	31.916	1.264	33.065	0.001	0.909
LCS	CO-60	21.774	0.580	20.928	5.860E-4	1.458
LCSD	CO-60	20.833	0.653	20.928	5.860E-4	0.146
LCS	CS-137	13.149	0.358	12.996	3.119E-4	0.428
LCSD	CS-137	13.055	0.355	12.996	3.119E-4	0.167

Method Blank

Analysis Date 09/19/22 14:14 **Analysis Technician** [redacted]

QC Type	Analyte	Results	CSU (1s)	Z
MBL	CS-137	4.199E-4	3.816E-4	1.100
MBL	CO-60	-5.477E-4	3.716E-4	1.474
MBL	RA-226	-0.003	0.006	0.536

Duplicate Sample

Analysis Date 09/19/22 14:01 **Analysis Technician** [redacted]

QC Type	Analyte	Results Dup	CSU (1s)	Results DO	CSU (1s)	Z
LCSD	AM-241	31.916	1.264	32.214	1.276	0.166
LCSD	CO-60	20.833	0.653	21.774	0.580	1.077
LCSD	CS-137	13.055	0.355	13.149	0.358	0.187

ARS Aleut Analytical

Z Values per Analytical Batch

Analytical Batch	**ARS1-B22-01429**
SDG	**ARS1-22-01985**
Analysis	**Plutonium (239, 240Pu) in (Air Filters,**
Analysis Test Method	**PALA-RAD-026/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**	10/12/22 02:47	**Analysis Technician**	[redacted]		
QC Type	**Analyte**	**Results**	**CSU (1s)**	**Expected Value**	**CSU (1s)**	**Z**
LCS	PU-239/240	7.759E-6	4.929E-7	7.838E-6	1.263E-7	0.155
LCSD	PU-239/240	7.995E-6	5.110E-7	7.817E-6	1.263E-7	0.338

Method Blank	**Analysis Date**	10/12/22 02:47	**Analysis Technician**	[redacted]
QC Type	**Analyte**	**Results**	**CSU (1s)**	**Z**
MBL	PU-238	-1.012E-8	2.773E-8	0.365
MBL	PU-239/240	-4.049E-8	3.130E-8	1.294

Duplicate Sample	**Analysis Date**	10/12/22 02:47	**Analysis Technician**	[redacted]		
QC Type	**Analyte**	**Results Dup**	**CSU (1s)**	**Results DO**	**CSU (1s)**	**Z**
LCSD	PU-239/240	7.995E-6	5.110E-7	7.759E-6	4.929E-7	0.332

ARS Aleut Analytical

Z Values per Analytical Batch

Analytical Batch	**ARS1-B22-01430**
SDG	**ARS1-22-01985**
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	10/13/22 10:07	Analysis Technician	[redacted]

QC Type	Analyte	Results	CSU (1s)	Expected Value	CSU (1s)	Z
LCS	RA-226	2.469E-5	2.032E-6	2.773E-5	3.221E-7	1.478
LCSD	RA-226	2.389E-5	1.967E-6	2.759E-5	3.221E-7	1.859

Method Blank

Analysis Date	10/13/22 10:07	Analysis Technician	[redacted]

QC Type	Analyte	Results	CSU (1s)	Z
MBL	RA-226	6.619E-8	2.659E-8	2.490

Duplicate Sample

Analysis Date	10/13/22 10:07	Analysis Technician	[redacted]

QC Type	Analyte	Results Dup	CSU (1s)	Results DO	CSU (1s)	Z
LCSD	RA-226	2.389E-5	1.967E-6	2.469E-5	2.032E-6	0.283

ARS Aleut Analytical

Z Values per Analytical Batch

Analytical Batch	**ARS1-B22-01431**
SDG	**ARS1-22-01985**
Analysis	**Strontium-90 in (Air Filters, Smears [AF])**
Analysis Test Method	**PALA-RAD-032/Eichrom SRW01,HASL 300**
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**	10/05/22 10:24	**Analysis Technician**	[redacted]		
QC Type	**Analyte**	**Results**	**CSU (1s)**	**Expected Value**	**CSU (1s)**	**Z**
LCS	SR-90	2.019E-5	1.578E-6	2.046E-5	3.414E-7	0.166
LCSD	SR-90	2.102E-5	1.642E-6	2.026E-5	3.414E-7	0.457

Method Blank	**Analysis Date**	10/05/22 10:24	**Analysis Technician**	[redacted]
QC Type	**Analyte**	**Results**	**CSU (1s)**	**Z**
MBL	SR-90	2.749E-6	1.266E-6	2.171

Duplicate Sample	**Analysis Date**	10/05/22 10:24	**Analysis Technician**	[redacted]		
QC Type	**Analyte**	**Results Dup**	**CSU (1s)**	**Results DO**	**CSU (1s)**	**Z**
LCSD	SR-90	2.102E-5	1.642E-6	2.019E-5	1.578E-6	0.366

2609 North River Road • Port Allen, Louisiana 70767
(225) 228-1394 • FAX (225) 381-2996

ARS Aleut Analytical, LLC
Analytical Reports

for

Gilbane Federal

Sample Management Records

CHAIN-OF-CUSTODY RECORD

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

COC # KT091422RADB

GES

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.	Analytical Test Method: E901.1 - Gamma Spec (15)	RC0240 - Pu Isotopes (15)	SR02RC - Sr90 (5)	SW9315 - Ra226 (1)	Location ID	Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom	Cooler	Comments
1	FB-090622	AQ	09/06/2022	0800	[redacted]	X	X	X	X	FIELDQC	FB1	0.00	0.00	1	
2	MSB01-090622	A	09/08/2022	1450		X	X	X	X	MSB01	N1	0.00	0.00	1	TOTAL FLOW: 212,100 (L)
3	MSB02-090622	A	09/08/2022	1452		X	X	X	X	MSB02	N1	0.00	0.00	1	TOTAL FLOW: 213,720 (L)
4	MSB113A-090622	A	09/08/2022	1458		X	X	X	X	MSB113A	N1	0.00	0.00	1	TOTAL FLOW: 213,480 (L)
5															
6															

[redacted] 9/8/22

Turnaround Time: 28 days

Relinquished by: *(Signature)*	Date	Time	Received by: *(Signature)*	Date	Time
[redacted]	9/14/22	1430	Fedex	9/14/22	1430
			[redacted]	9/15/22	935

Shipping Date / Carrier / Airbill Number

Shipping Date: 9/14/2022/ FEDEX 7778 7095 0692

Received by Laboratory: *(Signature, Date, Time)* **& condition**

GES.Navy_COC_Field
September 09, 2022

SDG Report - Samples and Containers

SDG Specific Data							
SDG	ARS1-22-01985			TAT Days	28 Calendar Days	Project Type	Environmental
Sample Count	4	Rpt Level	4	Date Received	09/15/2022	COC Number	KT091422RADB
Client	Gilbane Federal			Discrepancy Resol	N/A	PO Number	
Client Code	1138			Client Deadline	10/13/2022	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-090622	Air Filter	09/06/2022 07:59	09/06/2022 08:00	H	30	10	PrePrep	
	IC_ID	**Cnt**	**Container Type**	**AF Volume (L)**	**AF Units**		**Rate**	**Mins**	**Comments**
	423859	1	HDP Container	1	LPM			1	
			Mid-Sample Date:	09/06/2022 07:59	AF Volume (CuM):		0.001		
002	MSB01-090622	Air Filter	09/08/2022 14:49	09/08/2022 14:50	H	30	10	PrePrep	
	IC_ID	**Cnt**	**Container Type**	**AF Volume (L)**	**AF Units**		**Rate**	**Mins**	**Comments**
	423860	1	HDP Container	1	LPM			1	
			Mid-Sample Date:	09/08/2022 14:49	AF Volume (CuM):		0.001		
003	MSB02-090622	Air Filter	09/08/2022 14:51	09/08/2022 14:52	H	30	10	PrePrep	
	IC_ID	**Cnt**	**Container Type**	**AF Volume (L)**	**AF Units**		**Rate**	**Mins**	**Comments**
	423861	1	HDP Container	1	LPM			1	
			Mid-Sample Date:	09/08/2022 14:51	AF Volume (CuM):		0.001		
004	MSB113A-090622	Air Filter	09/08/2022 14:57	09/08/2022 14:58	H	30	10	PrePrep	
	IC_ID	**Cnt**	**Container Type**	**AF Volume (L)**	**AF Units**		**Rate**	**Mins**	**Comments**
	423862	1	HDP Container	1	LPM			1	
			Mid-Sample Date:	09/08/2022 14:57	AF Volume (CuM):		0.001		

SDG Report - Analysis Assignments

SDG	ARS1-22-01985	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**
	Pu-239/240 (15117-48-3)			4.8E-08 uCi/filter	75/125	60/140	30/110	30/110	1	25	N/A
GAM-A-AF	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
	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
GPC-RA226-AF	WRAD	uCi	filter		PALA-RAD-008						
	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**
	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	filter	N/A	1
		Group		**Analyte**	
		Parcel B Rad Sampling		Pu-239/240	
ASP-PU239-AF	002	uCi	filter	N/A	1
		Group		**Analyte**	
		Parcel B Rad Sampling		Pu-239/240	

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

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

ARS Aleut Analytical

PALA Sample Receipt Inspection Form

Client Name: Gilbane

SDG: ARS1-22-01985

Sample Custodian: [redacted] Survey Start Date: 9/15/22 Survey Start Time: 951

Thermometer ID: E0064100B5 Calibration Due Date: 2/28/23 pH Paper Lot# NA

Exposure Rate Meter + Probe Unit ID: PR256427/269264 Calibration Due Date: 2-13-23 Background: 4 µR/hr

Count Rate Meter + Probe Unit ID: PR368083/331788 Calibration Due Date: 9-22-22 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)
A: 777870950692	6	40	40	
B:				
C:				
D:				
E:				
F:				

TRAX Matrix ID (circle all that apply): (See Section 4.3 of SOP)

AQ WD WG WO
WS WW SI UR
SO OL BI VG
WP SM (AF)

Visual Inspection: (Circle response)

External Shipping Container

Good Condition with no Leaks or Tears	(Yes)	No	
Marked Radioactive	Yes	(No)	
UN2910	Yes	(No)	
Security Seals	(Yes)	No	
If yes, intact?	(Yes)	No	N/A

Internal Shipping Container

COC's Present	(Yes)	No	
Well packaged container with no signs of leakage	(Yes)	No	

COC/Sample Inspection (Circle response)

Sample Containers in good condition	(Yes)	No	
No spills or leaks	(Yes)	No	
Marked Radioactive	Yes	(No)	
Durable labels w/indelible ink	(Yes)	No	
COC reliquished/received correctly	(Yes)	No	
Adequate volume/filled correctly	(Yes)	No	
Hold Time sufficient for analysis	(Yes)	No	
For VOC/Radon, Head space?	Yes	No	(N/A)
If yes, <6mm?	Yes	No	(N/A)
# of containers received matches # on COC	(Yes)	No	
Samples received on ice?	Yes	(No)	
Type (circle one):	Bagged Ice	Loose Ice	Blue Ice (N/A)

Comments:

ARS Aleut Analytical

PALA Sample Survey Form

Client Name: Gilbane

SDG: ARS1-22-01985

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

Pipette ID: NA Tip Lot#: NA

Disposible pipette lot#: NA

Sample ID from Client on COC or Sample	ESC Letter	Sample Container Type	Approx. Fill Level (%)	pH As Rec'd (pH <2 is Acceptable)	pH Adjusted	Acid Lot # or Ind container temp (°C)	Vol. of Acid Used (mL)	cpm (Acceptance Limits <100 cpm/cm)
FB-090622	A	2ploc	25	NA	NA	NA	NA	40
MSB01-090622	↓	↓	↓	↓	↓	↓	↓	↓
MSB02-090622	↓	↓	↓	↓	↓	↓	↓	↓
MSB113A-090622	↓	↓	↓	↓	↓	↓	↓	↓

Sample Custodian [redacted] Survey End Date: 9/15/22 Survey/pH End Time: 958

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 PALA-SR-001-FM-03 (Discrepant Sample Receipt Report).

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.
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 extraordinary value is $1,000, e.g. jewelry, precious metals, negotiable instruments and other items listed in our ServiceGuide. Written claims must be filed within strict time limits, see current FedEx Service Guide.

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Port Allen, Louisiana 70767
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ARS Aleut Analytical, LLC

Laboratory Analytical Report

ARS1-22-02053

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

COC Number: **KT092122RADB**
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.

		Laboratory Management, ARS Aleut Analytical
Signature	**Date**	**Title**

ARS Aleut Analytical
2609 North River Road • Port Allen, Louisiana 70767
(225) 228-1394 • FAX (225) 381-2996

Table Of Contents

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

ARS Aleut Analytical
2609 North River Road • Port Allen, Louisiana 70767
(225) 228-1394 • Fax (225) 381-2996

PROJECT SAMPLE IDENTIFICATION CROSS-REFERENCE
TO ARS SAMPLE LABORATORY IDs

Client Sample ID	ARS Aleut Analytical Sample ID
FB-091222	ARS1-22-02053-001
MSB01-091222	ARS1-22-02053-002
MSB02-091222	ARS1-22-02053-003
MSB113A-091222	ARS1-22-02053-004

Sample	Date Collected	Date Received	Analysis	Basis	Prep Date/Time	Analysis Date/Time
001	09/12/22 08:00	09/21/22	ASP-PU239-AF	As Received	10/05/22 08:51	10/12/22 02:47
001	09/12/22 08:00	09/21/22	GAM-A-AF	As Received	N/A	09/22/22 14:43
001	09/12/22 08:00	09/21/22	GPC-RA226-AF	As Received	10/03/22 07:58	10/13/22 10:07
001	09/12/22 08:00	09/21/22	GPC-SR90-AF	As Received	10/03/22 13:59	10/05/22 10:24
002	09/15/22 14:45	09/21/22	ASP-PU239-AF	As Received	10/05/22 08:51	10/12/22 02:47
002	09/15/22 14:45	09/21/22	GAM-A-AF	As Received	N/A	09/22/22 14:45
002	09/15/22 14:45	09/21/22	GPC-RA226-AF	As Received	10/03/22 07:58	10/13/22 10:07
002	09/15/22 14:45	09/21/22	GPC-SR90-AF	As Received	10/03/22 13:59	10/05/22 10:24
003	09/15/22 15:00	09/21/22	ASP-PU239-AF	As Received	10/05/22 08:51	10/12/22 02:47
003	09/15/22 15:00	09/21/22	GAM-A-AF	As Received	N/A	09/23/22 15:25
003	09/15/22 15:00	09/21/22	GPC-RA226-AF	As Received	10/03/22 07:58	10/13/22 10:07
003	09/15/22 15:00	09/21/22	GPC-SR90-AF	As Received	10/03/22 13:59	10/05/22 10:24
004	09/15/22 14:42	09/21/22	ASP-PU239-AF	As Received	10/05/22 08:51	10/12/22 02:47
004	09/15/22 14:42	09/21/22	GAM-A-AF	As Received	N/A	09/26/22 14:41

004	09/15/22 14:42	09/21/22	GPC-RA226-AF	As Received	10/03/22 07:58	10/13/22 10:07
004	09/15/22 14:42	09/21/22	GPC-SR90-AF	As Received	10/03/22 13:59	10/05/22 10:24

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 -5.059E-8 uCi/filter, MDC of 9.229E-8 uCi/filter and CRDL of 4.8E-08 uCi/filter.
Fraction 001 has elevated MDC for Ra-226 with ACT of -9.194E-5 uCi/filter, MDC of 3.062E-5 uCi/filter and CRDL of 4.4E-06 uCi/filter.
Fraction 002 has elevated MDC for Pu-239/240 with ACT of -9.282E-9 uCi/filter, MDC of 5.576E-8 uCi/filter and CRDL of 4.8E-08 uCi/filter.
Fraction 002 has elevated MDC for Ra-226 with ACT of -3.995E-6 uCi/filter, MDC of 9.817E-6 uCi/filter and CRDL of 4.4E-06 uCi/filter.
Fraction 003 has elevated MDC for Ra-226 with ACT of -8.396E-5 uCi/filter, MDC of 3.145E-5 uCi/filter and CRDL of 4.4E-06 uCi/filter.
Fraction 004 has elevated MDC for Pu-239/240 with ACT of -2.081E-8 uCi/filter, MDC of 9.063E-8 uCi/filter and CRDL of 4.8E-08 uCi/filter.
Fraction 004 has elevated MDC for Ra-226 with ACT of -9.107E-5 uCi/filter, MDC of 3.184E-5 uCi/filter and CRDL of 4.4E-06 uCi/filter.

ARS1-B22-01429: 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
ǂ 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

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Analytical Results

ARS Aleut Analytical

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ARS Sample Delivery Group: ARS1-22-02053
Client Sample ID: FB-091222
Sample Collection Date: 09/12/22 8:00
Sample Matrix: Air Filter
Percent Solids: N/A

Request or PO Number: J310000900
ARS Sample ID: ARS1-22-02053-001
Date Received: 09/21/22
Report Date: 10/14/22

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	-5.059E-8	3.923E-8	9.229E-8	4.043E-8	4.8E-08	U	uCi/filter	10/12/22 2:47	[redacted]	71.9%

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	-6.374E-7	1.740E-6	1.777E-6	8.885E-7	0.00024	U	uCi/filter	09/22/22 14:43	[redacted]	N/A
Cs-137	4.463E-7	1.357E-6	1.524E-6	7.620E-7	0.00048	U	uCi/filter	09/22/22 14:43	[redacted]	N/A
Ra-226	-9.194E-5	3.237E-5	3.062E-5	1.531E-5	4.4E-06	U	uCi/filter	09/22/22 14:43	[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	3.767E-7	3.065E-7	4.320E-7	1.696E-7	4.4E-06	U	uCi/filter	10/13/22 10:07	[redacted]	99.3%

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	-1.632E-7	2.229E-6	4.070E-6	1.884E-6	2.4E-05	U	uCi/filter	10/05/22 10:24	[redacted]	96.1%

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ARS Sample Delivery Group: ARS1-22-02053
Client Sample ID: MSB01-091222
Sample Collection Date: 09/15/22 14:45
Sample Matrix: Air Filter
Percent Solids: N/A

Request or PO Number: J310000900
ARS Sample ID: ARS1-22-02053-002
Date Received: 09/21/22
Report Date: 10/14/22

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	-9.282E-9	2.231E-8	5.576E-8	2.159E-8	4.8E-08	U	uCi/filter	10/12/22 2:47	[redacted]	63.6%

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	-4.209E-7	9.833E-7	1.000E-6	5.000E-7	0.00024	U	uCi/filter	09/22/22 14:45	[redacted]	N/A
Cs-137	-4.322E-7	8.014E-7	8.615E-7	4.308E-7	0.00048	U	uCi/filter	09/22/22 14:45	[redacted]	N/A
Ra-226	-3.995E-6	7.808E-6	9.817E-6	4.909E-6	4.4E-06	U	uCi/filter	09/22/22 14:45	[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	5.303E-7	3.107E-7	3.596E-7	1.383E-7	4.4E-06		uCi/filter	10/13/22 10:07	[redacted]	99.0%

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	4.849E-7	2.108E-6	3.748E-6	1.727E-6	2.4E-05	U	uCi/filter	10/05/22 10:24	[redacted]	98.6%

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ARS Sample Delivery Group: ARS1-22-02053
Client Sample ID: MSB02-091222
Sample Collection Date: 09/15/22 15:00
Sample Matrix: Air Filter
Percent Solids: N/A

Request or PO Number: J310000900
ARS Sample ID: ARS1-22-02053-003
Date Received: 09/21/22
Report Date: 10/14/22

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	3.552E-9	2.309E-8	4.658E-8	1.848E-8	4.8E-08	U	uCi/filter	10/12/22 2:47	[redacted]	84.8%

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	-1.139E-6	1.874E-6	1.897E-6	9.485E-7	0.00024	U	uCi/filter	09/23/22 15:25	[redacted]	N/A
Cs-137	-8.024E-7	1.535E-6	1.711E-6	8.555E-7	0.00048	U	uCi/filter	09/23/22 15:25	[redacted]	N/A
Ra-226	-8.396E-5	3.267E-5	3.145E-5	1.573E-5	4.4E-06	U	uCi/filter	09/23/22 15:25	[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	6.677E-7	3.343E-7	3.377E-7	1.280E-7	4.4E-06		uCi/filter	10/13/22 10:07	[redacted]	95.1%

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	1.230E-6	2.124E-6	3.630E-6	1.681E-6	2.4E-05	U	uCi/filter	10/05/22 10:24	[redacted]	100%

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ARS Sample Delivery Group: ARS1-22-02053
Client Sample ID: MSB113A-091222
Sample Collection Date: 09/15/22 14:42
Sample Matrix: Air Filter
Percent Solids: N/A

Request or PO Number: J310000900
ARS Sample ID: ARS1-22-02053-004
Date Received: 09/21/22
Report Date: 10/14/22

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	-2.081E-8	4.086E-8	9.063E-8	3.827E-8	4.8E-08	U	uCi/filter	10/12/22 2:47	[redacted]	63.5%

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	8.575E-7	1.418E-6	1.444E-6	7.220E-7	0.00024	U	uCi/filter	09/26/22 14:41	[redacted]	N/A
Cs-137	-4.351E-7	1.509E-6	1.692E-6	8.460E-7	0.00048	U	uCi/filter	09/26/22 14:41	[redacted]	N/A
Ra-226	-9.107E-5	3.228E-5	3.184E-5	1.592E-5	4.4E-06	U	uCi/filter	09/26/22 14:41	[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	5.128E-7	3.115E-7	3.690E-7	1.420E-7	4.4E-06		uCi/filter	10/13/22 10:07	[redacted]	98.6%

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	2.730E-6	2.423E-6	3.887E-6	1.799E-6	2.4E-05	U	uCi/filter	10/05/22 10:24	[redacted]	100%

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QC Summary

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QC Sample Results

Analytical Batch: ARS1-B22-01404
Lab Sample ID: ARS1-B22-01404-01
Method: EPA 901.1M

Sample Type: LCS
Matrix: Air Filter
Analysis Date: 09/23/22 14:37

Analyte	Spike Added	Analysis Result	Qual	Analysis Units	% Rec	% Rec Limits
Am-241	33.065	31.308		uCi/filter	94.7	75 - 125
Co-60	20.928	21.235		uCi/filter	101.5	75 - 125
Cs-137	12.996	13.016		uCi/filter	100.2	75 - 125

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QC Sample Results

Analytical Batch: ARS1-B22-01404
Lab Sample ID: ARS1-B22-01404-02
Method: EPA 901.1M

Sample Type: LCSD
Matrix: Air Filter
Analysis Date: 09/23/22 14:49

Analyte	Spike Added	Analysis Result	Qual	Analysis Units	% Rec	% Rec Limits	RPD	RPD Limit	DER	DER Limit
Am-241	33.065	31.381		uCi/filter	94.9	75 - 125	0.2	25	0.041	3
Co-60	20.928	21.536		uCi/filter	102.9	75 - 125	1.4	25	0.330	3
Cs-137	12.996	13.267		uCi/filter	102.1	75 - 125	1.9	25	0.470	3

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QC Sample Results

Analytical Batch: ARS1-B22-01404
Lab Sample ID: ARS1-B22-01404-03
Method: EPA 901.1M

Sample Type: MBL
Matrix: Air Filter
Analysis Date: 09/26/22 14:34

Analyte	Analysis Result	CSU +/- 2 s	MDC	DLC	Qual	Analysis Units
Co-60	-6.772E-5	8.534E-4	8.800E-4	4.400E-4	U	uCi/filter
Cs-137	-3.575E-4	7.329E-4	7.900E-4	3.950E-4	U	uCi/filter
Ra-226	8.582E-4	0.007	0.009	0.005	U	uCi/filter

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QC Association Summary

ARS Sample Delivery Group: ARS1-22-02053 **Analytical Batch:** ARS1-B22-01404

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

Batch Sample ID	Lab Sample ID	Client Sample ID	Matrix	Method	Prep Method
ARS1-B22-01404-01		Lab Control Sample	Air Filter	EPA 901.1M	N/A
ARS1-B22-01404-02		Lab Control Sample Duplicate	Air Filter	EPA 901.1M	N/A
ARS1-B22-01404-03		Method Blank	Air Filter	EPA 901.1M	N/A
ARS1-B22-01404-04	ARS1-22-02053-001	FB-091222	Air Filter	EPA 901.1M	N/A
ARS1-B22-01404-05	ARS1-22-02053-002	MSB01-091222	Air Filter	EPA 901.1M	N/A
ARS1-B22-01404-06	ARS1-22-02053-003	MSB02-091222	Air Filter	EPA 901.1M	N/A
ARS1-B22-01404-07	ARS1-22-02053-004	MSB113A-091222	Air Filter	EPA 901.1M	N/A

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QC Sample Results

Analytical Batch: ARS1-B22-01429
Lab Sample ID: ARS1-B22-01429-01
Method: Eichrom ACW03

Sample Type: LCS
Matrix: Air Filter
Analysis Date: 10/12/22 2:47

Analyte	Spike Added	Analysis Result	Qual	Analysis Units	% Rec	% Rec Limits
Pu-239/240	7.838E-6	7.759E-6		uCi/filter	99.0	75 - 125

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QC Sample Results

Analytical Batch: ARS1-B22-01429
Lab Sample ID: ARS1-B22-01429-02
Method: Eichrom ACW03

Sample Type: LCSD
Matrix: Air Filter
Analysis Date: 10/12/22 2:47

Analyte	Spike Added	Analysis Result	Qual	Analysis Units	% Rec	% Rec Limits	RPD	RPD Limit	DER	DER Limit
Pu-239/240	7.817E-6	7.995E-6		uCi/filter	102.3	75 - 125	3.0	25	0.332	3

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QC Sample Results

Analytical Batch: ARS1-B22-01429
Lab Sample ID: ARS1-B22-01429-03
Method: Eichrom ACW03

Sample Type: MBL
Matrix: Air Filter
Analysis Date: 10/12/22 2:47

Analyte	Analysis Result	CSU +/- 2 s	MDC	DLC	Qual	Analysis Units
Pu-238	-1.012E-8	5.435E-8	1.079E-7	4.710E-8	U	uCi/filter
Pu-239/240	-4.049E-8	6.134E-8	1.266E-7	5.647E-8	U	uCi/filter

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QC Association Summary

ARS Sample Delivery Group: ARS1-22-02053

Analytical Batch: ARS1-B22-01429

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-B22-01429-01		Lab Control Sample	Air Filter	Eichrom ACW03	N/A
ARS1-B22-01429-02		Lab Control Sample Duplicate	Air Filter	Eichrom ACW03	N/A
ARS1-B22-01429-03		Method Blank	Air Filter	Eichrom ACW03	N/A
ARS1-B22-01429-08	ARS1-22-02053-001	FB-091222	Air Filter	Eichrom ACW03	N/A
ARS1-B22-01429-09	ARS1-22-02053-002	MSB01-091222	Air Filter	Eichrom ACW03	N/A
ARS1-B22-01429-10	ARS1-22-02053-003	MSB02-091222	Air Filter	Eichrom ACW03	N/A
ARS1-B22-01429-11	ARS1-22-02053-004	MSB113A-091222	Air Filter	Eichrom ACW03	N/A

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QC Sample Results

Analytical Batch: ARS1-B22-01430
Lab Sample ID: ARS1-B22-01430-01
Method: EPA 9315

Sample Type: LCS
Matrix: Air Filter
Analysis Date: 10/13/22 10:07

Analyte	Spike Added	Analysis Result	Qual	Analysis Units	% Rec	% Rec Limits
Ra-226	2.773E-5	2.469E-5		uCi/filter	89.0	75 - 125

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QC Sample Results

Analytical Batch: ARS1-B22-01430
Lab Sample ID: ARS1-B22-01430-02
Method: EPA 9315

Sample Type: LCSD
Matrix: Air Filter
Analysis Date: 10/13/22 10:07

Analyte	Spike Added	Analysis Result	Qual	Analysis Units	% Rec	% Rec Limits	RPD	RPD Limit	DER	DER Limit
Ra-226	2.759E-5	2.389E-5		uCi/filter	86.6	75 - 125	3.3	25	0.283	3

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QC Sample Results

Analytical Batch: ARS1-B22-01430
Lab Sample ID: ARS1-B22-01430-03
Method: EPA 9315

Sample Type: MBL
Matrix: Air Filter
Analysis Date: 10/13/22 10:07

Analyte	Analysis Result	CSU +/- 2 s	MDC	DLC	Qual	Analysis Units
Ra-226	6.619E-8	5.211E-8	7.000E-8	2.638E-8	U	uCi/filter

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QC Association Summary

ARS Sample Delivery Group: ARS1-22-02053

Analytical Batch: ARS1-B22-01430

Analysis: Radium-226 in Air Filter

Batch Sample ID	Lab Sample ID	Client Sample ID	Matrix	Method	Prep Method
ARS1-B22-01430-01		Lab Control Sample	Air Filter	EPA 9315	N/A
ARS1-B22-01430-02		Lab Control Sample Duplicate	Air Filter	EPA 9315	N/A
ARS1-B22-01430-03		Method Blank	Air Filter	EPA 9315	N/A
ARS1-B22-01430-08	ARS1-22-02053-001	FB-091222	Air Filter	EPA 9315	N/A
ARS1-B22-01430-09	ARS1-22-02053-002	MSB01-091222	Air Filter	EPA 9315	N/A
ARS1-B22-01430-10	ARS1-22-02053-003	MSB02-091222	Air Filter	EPA 9315	N/A
ARS1-B22-01430-11	ARS1-22-02053-004	MSB113A-091222	Air Filter	EPA 9315	N/A

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QC Sample Results

Analytical Batch: ARS1-B22-01431
Lab Sample ID: ARS1-B22-01431-01
Method: Eichrom SRW01

Sample Type: LCS
Matrix: Air Filter
Analysis Date: 10/05/22 10:24

Analyte	Spike Added	Analysis Result	Qual	Analysis Units	% Rec	% Rec Limits
SR-90	2.046E-5	2.019E-5		uCi/filter	98.7	75 - 125

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QC Sample Results

Analytical Batch: ARS1-B22-01431
Lab Sample ID: ARS1-B22-01431-02
Method: Eichrom SRW01

Sample Type: LCSD
Matrix: Air Filter
Analysis Date: 10/05/22 10:24

Analyte	Spike Added	Analysis Result	Qual	Analysis Units	% Rec	% Rec Limits	RPD	RPD Limit	DER	DER Limit
SR-90	2.026E-5	2.102E-5		uCi/filter	103.8	75 - 125	4.0	25	0.366	3

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QC Sample Results

Analytical Batch: ARS1-B22-01431
Lab Sample ID: ARS1-B22-01431-03
Method: Eichrom SRW01

Sample Type: MBL
Matrix: Air Filter
Analysis Date: 10/05/22 10:24

Analyte	Analysis Result	CSU +/- 2 s	MDC	DLC	Qual	Analysis Units
SR-90	2.749E-6	2.482E-6	3.980E-6	1.830E-6	U	uCi/filter

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QC Association Summary

ARS Sample Delivery Group: ARS1-22-02053 **Analytical Batch:** ARS1-B22-01431

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

Batch Sample ID	Lab Sample ID	Client Sample ID	Matrix	Method	Prep Method
ARS1-B22-01431-01		Lab Control Sample	Air Filter	Eichrom SRW01	N/A
ARS1-B22-01431-02		Lab Control Sample Duplicate	Air Filter	Eichrom SRW01	N/A
ARS1-B22-01431-03		Method Blank	Air Filter	Eichrom SRW01	N/A
ARS1-B22-01431-08	ARS1-22-02053-001	FB-091222	Air Filter	Eichrom SRW01	N/A
ARS1-B22-01431-09	ARS1-22-02053-002	MSB01-091222	Air Filter	Eichrom SRW01	N/A
ARS1-B22-01431-10	ARS1-22-02053-003	MSB02-091222	Air Filter	Eichrom SRW01	N/A
ARS1-B22-01431-11	ARS1-22-02053-004	MSB113A-091222	Air Filter	Eichrom SRW01	N/A

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ARS Aleut Analytical, LLC
Analytical Reports

for

Gilbane Federal

Batch QC

ARS Aleut Analytical

QC Results per Analytical Batch

Analytical Batch	**ARS1-B22-01404**
SDG	**ARS1-22-02053**
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	09/23/22 14:37	Analysis Technician	[redacted]

Analysis Batch Sample ID	QC Type	Analyte	Results	CSU (2s)	Expected Value	LCS Rec (%)	MDC
ARS1-B22-01404-01	**LCS**	AM-241	31.308	2.444	33.065	94.7	0.156
ARS1-B22-01404-01	**LCS**	CO-60	21.235	1.258	20.928	101.5	0.439
ARS1-B22-01404-01	**LCS**	CS-137	13.016	0.733	12.996	100.2	0.082

Duplicate RER/DER/RPD

Analysis Date	09/23/22 14:49	Analysis Technician	[redacted]

Analyte	Results LCS	CSU LCS (2s)	Results LCSD	CSU LCSD (2s)	DER	RPD
AM-241	31.308	2.444	31.381	2.449	0.041	0.2
CO-60	21.235	1.258	21.536	1.270	0.330	1.4
CS-137	13.016	0.733	13.267	0.746	0.470	1.9

Method Blank

Analysis Date	09/26/22 14:34	Analysis Technician	[redacted]

Analysis Batch Sample ID	QC Type	Analyte	Results	CSU (2s)	MDC	Qual
ARS1-B22-01404-03	**MBL**	CO-60	-6.772E-5	8.534E-4	8.800E-4	U
ARS1-B22-01404-03	**MBL**	CS-137	-3.575E-4	7.329E-4	7.900E-4	U
ARS1-B22-01404-03	**MBL**	RA-226	8.582E-4	0.007	0.009	U

ARS Aleut Analytical

QC Results per Analytical Batch

Analytical Batch	**ARS1-B22-01429**
SDG	**ARS1-22-02053**
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	10/12/22 02:47	Analysis Technician	[redacted]

Analysis Batch Sample ID	QC Type	Analyte	Results	CSU (2s)	Expected Value	LCS Rec (%)	MDC
ARS1-B22-01429-01	**LCS**	PU-239/240	7.759E-6	9.662E-7	7.838E-6	99.0	3.274E-8

Duplicate RER/DER/RPD

Analysis Date	10/12/22 02:47	Analysis Technician	[redacted]

Analyte	Results LCS	CSU LCS (2s)	Results LCSD	CSU LCSD (2s)	DER	RPD
PU-239/240	7.759E-6	9.662E-7	7.995E-6	1.002E-6	0.332	3.0

Method Blank

Analysis Date	10/12/22 02:47	Analysis Technician	[redacted]

Analysis Batch Sample ID	QC Type	Analyte	Results	CSU (2s)	MDC	Qual
ARS1-B22-01429-03	**MBL**	PU-238	-1.012E-8	5.435E-8	1.079E-7	U
ARS1-B22-01429-03	**MBL**	PU-239/240	-4.049E-8	6.134E-8	1.266E-7	U

ARS Aleut Analytical

QC Results per Analytical Batch

Analytical Batch	**ARS1-B22-01430**
SDG	**ARS1-22-02053**
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 10/13/22 10:07 **Analysis Technician** [redacted]

Analysis Batch Sample ID	QC Type	Analyte	Results	CSU (2s)	Expected Value	LCS Rec (%)	MDC
ARS1-B22-01430-01	**LCS**	RA-226	2.469E-5	3.982E-6	2.773E-5	89.0	8.031E-8

Duplicate RER/DER/RPD

Analysis Date 10/13/22 10:07 **Analysis Technician** [redacted]

Analyte	Results LCS	CSU LCS (2s)	Results LCSD	CSU LCSD (2s)	DER	RPD
RA-226	2.469E-5	3.982E-6	2.389E-5	3.855E-6	0.283	3.3

Method Blank

Analysis Date 10/13/22 10:07 **Analysis Technician** [redacted]

Analysis Batch Sample ID	QC Type	Analyte	Results	CSU (2s)	MDC	Qual
ARS1-B22-01430-03	**MBL**	RA-226	6.619E-8	5.211E-8	7.000E-8	U

ARS Aleut Analytical

QC Results per Analytical Batch

Analytical Batch	**ARS1-B22-01431**
SDG	**ARS1-22-02053**
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	10/05/22 10:24	Analysis Technician	[redacted]

Analysis Batch Sample ID	QC Type	Analyte	Results	CSU (2s)	Expected Value	LCS Rec (%)	MDC
ARS1-B22-01431-01	**LCS**	SR-90	2.019E-5	3.093E-6	2.046E-5	98.7	3.742E-7

Duplicate RER/DER/RPD

Analysis Date	10/05/22 10:24	Analysis Technician	[redacted]

Analyte	Results LCS	CSU LCS (2s)	Results LCSD	CSU LCSD (2s)	DER	RPD
SR-90	2.019E-5	3.093E-6	2.102E-5	3.218E-6	0.366	4.0

Method Blank

Analysis Date	10/05/22 10:24	Analysis Technician	[redacted]

Analysis Batch Sample ID	QC Type	Analyte	Results	CSU (2s)	MDC	Qual
ARS1-B22-01431-03	**MBL**	SR-90	2.749E-6	2.482E-6	3.980E-6	U

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ARS Aleut Analytical, LLC
Analytical Reports

for

Gilbane Federal

Sample Management Records

CHAIN-OF-CUSTODY RECORD

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

COC # KT092122RADB

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

						Analytical Test Method	E901.1 - Gamma Spec	RC0240 - Pu Isotopes	SR02RC - Sr90	SW9315 - Ra226									
	Event: Parcel B Air Monitoring RAD						**15**	**15**	**5**	**1**									
	Sample ID	Matrix	Date	Time	Samp Init.										Location ID	Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom	Cooler	Comments
1	FB-091222	AQ	09/12/2022	0800	[redacted]		X	X	X	X					FIELDQC	FB1	0.00	0.00	1	
2	MSB01-091222	A	09/15/2022	1445			X	X	X	X					MSB01	N1	0.00	0.00	1	TOTAL FLOW: 298,020 (L)
3	MSB02-091222	A	09/15/2022	1500			X	X	X	X					MSB02	N1	0.00	0.00	1	TOTAL FLOW: 299,700 (L)
4	MSB113A-091222	A	09/15/2022	1442			X	X	X	X					MSB113A	N1	0.00	0.00	1	TOTAL FLOW: 298,320 (L)
5																				
6																				

Turnaround Time: 28 days

Relinquished by: *(Signature)*	**Date**	**Time**	**Received by: *(Signature)***	**Date**	**Time**
[redacted]	9/20/22	1430	Fedex	9/20/22	1430
			[redacted]	9/21/22	930

Shipping Date / Carrier / Airbill Number
Shipping Date: 9/21/2022/ FEDEX 7779 2187 1957

Received by Laboratory: *(Signature, Date, Time)* **& condition**

GES.Navy_COC_Field
September 16, 2022

SDG Report - Samples and Containers

SDG Specific Data							
SDG	ARS1-22-02053		TAT Days	28 Calendar Days	Project Type	Environmental
Sample Count	4	Rpt Level 4	Date Received	09/21/2022	COC Number	KT092122RADB
Client	Gilbane Federal		Discrepancy Resol	N/A	PO Number	
Client Code	1138		Client Deadline	10/19/2022	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-091222	Air Filter	09/12/2022 07:59	09/12/2022 08:00	H	30	10	PrePrep	
	IC_ID	**Cnt**	**Container Type**	**AF Volume (L)**	**AF Units**		**Rate**	**Mins**	**Comments**
	424178	1	HDP Container	1	LPM			1	
			Mid-Sample Date:	09/12/2022 07:59	AF Volume (CuM):		0.001		
002	MSB01-091222	Air Filter	09/15/2022 14:44	09/15/2022 14:45	H	30	10	PrePrep	
	IC_ID	**Cnt**	**Container Type**	**AF Volume (L)**	**AF Units**		**Rate**	**Mins**	**Comments**
	424179	1	HDP Container	1	LPM			1	
			Mid-Sample Date:	09/15/2022 14:44	AF Volume (CuM):		0.001		
003	MSB02-091222	Air Filter	09/15/2022 14:59	09/15/2022 15:00	H	30	10	PrePrep	
	IC_ID	**Cnt**	**Container Type**	**AF Volume (L)**	**AF Units**		**Rate**	**Mins**	**Comments**
	424180	1	HDP Container	1	LPM			1	
			Mid-Sample Date:	09/15/2022 14:59	AF Volume (CuM):		0.001		
004	MSB113A-091222	Air Filter	09/15/2022 14:41	09/15/2022 14:42	H	30	10	PrePrep	
	IC_ID	**Cnt**	**Container Type**	**AF Volume (L)**	**AF Units**		**Rate**	**Mins**	**Comments**
	424181	1	HDP Container	1	LPM			1	
			Mid-Sample Date:	09/15/2022 14:41	AF Volume (CuM):		0.001		

SDG Report - Analysis Assignments

SDG	ARS1-22-02053	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**
	Pu-239/240 (15117-48-3)			4.8E-08 uCi/filter	75/125	60/140	30/110	30/110	1	25	N/A
GAM-A-AF	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
	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
GPC-RA226-AF	WRAD	uCi	filter		PALA-RAD-008						
	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**
	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	filter	N/A	1
		Group		**Analyte**	
		Parcel B Rad Sampling		Pu-239/240	
ASP-PU239-AF	002	uCi	filter	N/A	1
		Group		**Analyte**	
		Parcel B Rad Sampling		Pu-239/240	

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

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

ARS Aleut Analytical

PALA Sample Receipt Inspection Form
Client Name: Gilbane
SDG: ARS1-22-02053

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

Sample Custodian: [redacted] Survey Start Date: 9/21/22 Survey Start Time: 932

Thermometer ID: E00641 0085 Calibration Due Date: 2/28/23 pH Paper Lot#: NA

Exposure Rate Meter + Probe Unit ID: PR256427/269264 Calibration Due Date: 2/13/23 Background: 4 µR/hr

Count Rate Meter + Probe Unit ID: PR368083/331788 Calibration Due Date: 9/22/22 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)
A: 777921871957	6	40	40	NA
B:				
C:				
D:				
E:				
F:				

TRAX Matrix ID (circle all that apply): (See Section 4.3 of SOP)

AQ WD WG WO
WS WW SI UR
SO OL BI VG
WP SM (AF)

Visual Inspection: (Circle response)

External Shipping Container

Good Condition with no Leaks or Tears	(Yes)	No	
Marked Radioactive	Yes	(No)	
UN2910	Yes	(No)	
Security Seals	(Yes)	No	
If yes, intact?	(Yes)	No	N/A

Internal Shipping Container

COC's Present	(Yes)	No	
Well packaged container with no signs of leakage	(Yes)	No	

COC/Sample Inspection (Circle response)

Sample Containers in good condition	(Yes)	No	
No spills or leaks	(Yes)	No	
Marked Radioactive	Yes	(No)	
Durable labels w/indelible ink	(Yes)	No	
COC reliquished/received correctly	(Yes)	No	
Adequate volume/filled correctly	(Yes)	No	
Hold Time sufficient for analysis	(Yes)	No	
For VOC/Radon, Head space?	Yes	No	(N/A)
If yes, <6mm?	Yes	No	(N/A)
# of containers received matches # on COC	(Yes)	No	
Samples received on ice?	Yes	(No)	
Type (circle one):	Bagged Ice	Loose Ice	Blue Ice (N/A)

Comments:

ARS Aleut Analytical

PALA Sample Survey Form

Client Name: Gilbane

SDG: ARS1-22-02053

Pipette ID: NA Tip Lot#: NA

Disposible pipette lot#: NA

Sample ID from Client on COC or Sample	ESC Letter	Sample Container Type	Approx. Fill Level (%)	pH (pH <2 is Acceptable) As Rec'd	pH (pH <2 is Acceptable) Adjusted	Acid Lot # or Ind container temp (°C)	Vol. of Acid Used (mL)	cpm (Acceptance Limits <100 cpm/cm)
FB-091222	A	ziploc	25	NA	NA	NA	NA	40
MSB01-091222	↓	↓	↓	↓	↓	↓	↓	↓
MSB02-091222								
MSB13A-091222								

Sample Custodian [redacted] Survey End Date: 9/21/22 Survey/pH End Time: 941

pH re-check required? YES or NO *NOTE: Any metals sample acidified at sample receiving must be re-checked after a 24 hour hold.*

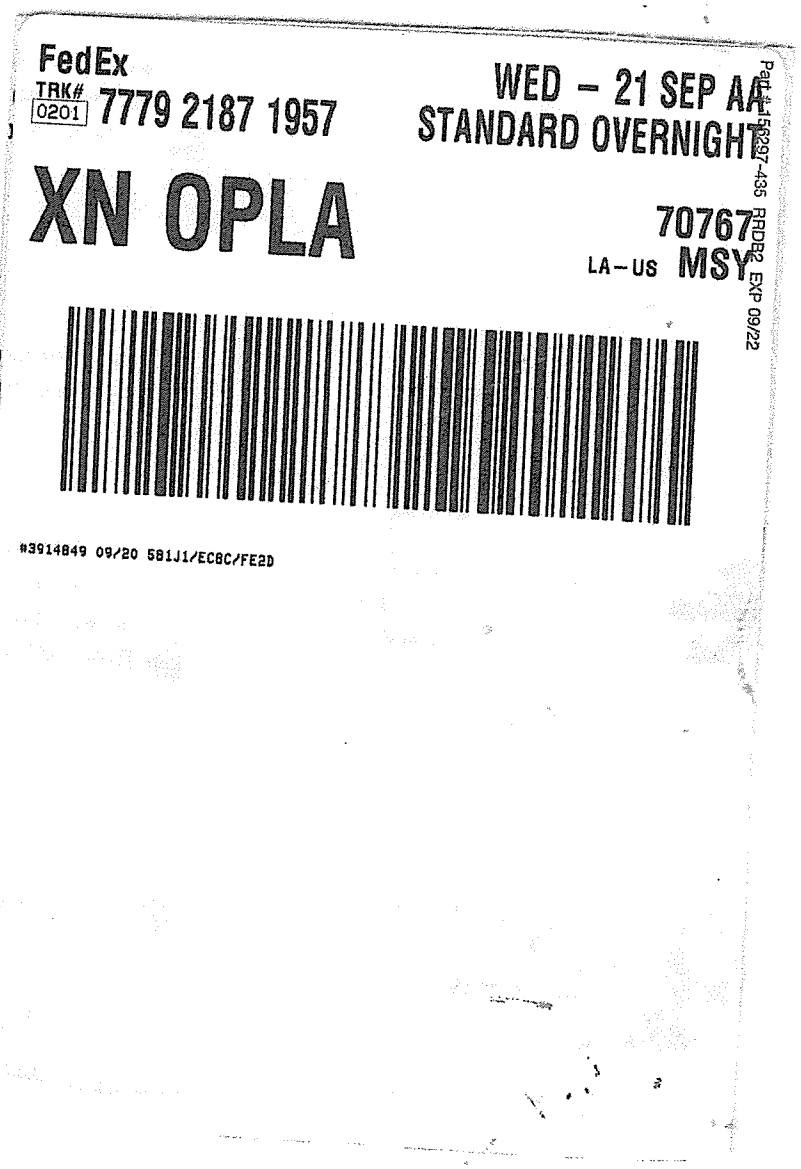
If YES: pH re-check date/time: _____/_____ Analyst: _____ pH strip lot #: _____

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 PALA-SR-001-FM-03 (Discrepant Sample Receipt Report).

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.
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 extraordinary value is $1,000, e.g. jewelry, precious metals, negotiable instruments and other items listed in our ServiceGuide. Written claims must be filed within strict time limits, see current FedEx Service Guide.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Port Allen, Louisiana 70767
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ARS Aleut Analytical, LLC

Laboratory Analytical Report

ARS1-22-02125

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

COC Number: **KT092822RADB**
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.

		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.

LELAP Cert # 01949

ARS Aleut Analytical
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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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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-091922	**ARS1-22-02125-001**
MSB01-091922	**ARS1-22-02125-002**
MSB02-091922	**ARS1-22-02125-003**
MSB113A-091922	**ARS1-22-02125-004**
MSB113A-091922D	**ARS1-22-02125-005**

Sample	Date Collected	Date Received	Analysis	Basis	Prep Date/Time	Analysis Date/Time
001	09/19/22 08:00	09/29/22	ASP-PU239-AF	As Received	10/07/22 08:39	10/15/22 02:22
001	09/19/22 08:00	09/29/22	GAM-A-AF	As Received	N/A	10/03/22 14:04
001	09/19/22 08:00	09/29/22	GPC-RA226-AF	As Received	10/11/22 09:23	10/19/22 10:26
001	09/19/22 08:00	09/29/22	GPC-SR90-AF	As Received	10/07/22 08:41	10/12/22 11:40
002	09/22/22 14:31	09/29/22	ASP-PU239-AF	As Received	10/07/22 08:39	10/15/22 02:22
002	09/22/22 14:31	09/29/22	GAM-A-AF	As Received	N/A	10/03/22 14:06
002	09/22/22 14:31	09/29/22	GPC-RA226-AF	As Received	10/11/22 09:23	10/19/22 10:26
002	09/22/22 14:31	09/29/22	GPC-SR90-AF	As Received	10/07/22 08:41	10/12/22 11:40
003	09/22/22 14:30	09/29/22	ASP-PU239-AF	As Received	10/07/22 08:39	10/15/22 02:22
003	09/22/22 14:30	09/29/22	GAM-A-AF	As Received	N/A	10/05/22 14:13
003	09/22/22 14:30	09/29/22	GPC-RA226-AF	As Received	10/11/22 09:23	10/19/22 10:26
003	09/22/22 14:30	09/29/22	GPC-SR90-AF	As Received	10/07/22 08:41	10/12/22 11:40
004	09/22/22 14:28	09/29/22	ASP-PU239-AF	As Received	10/07/22 08:39	10/15/22 02:22
004	09/22/22 14:28	09/29/22	GAM-A-AF	As Received	N/A	10/05/22 14:06

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Sample	Date Collected	Date Received	Analysis	Basis	Prep Date/Time	Analysis Date/Time
004	09/22/22 14:28	09/29/22	GPC-RA226-AF	As Received	10/11/22 09:23	10/19/22 10:26
004	09/22/22 14:28	09/29/22	GPC-SR90-AF	As Received	10/07/22 08:41	10/12/22 11:40
005	09/22/22 14:27	09/29/22	ASP-PU239-AF	As Received	10/07/22 08:39	10/15/22 02:22
005	09/22/22 14:27	09/29/22	GAM-A-AF	As Received	N/A	10/04/22 14:35
005	09/22/22 14:27	09/29/22	GPC-RA226-AF	As Received	10/11/22 09:23	10/19/22 10:26
005	09/22/22 14:27	09/29/22	GPC-SR90-AF	As Received	10/07/22 08:41	10/12/22 11:40

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 -6.287E-9 uCi/filter, MDC of 1.095E-7 uCi/filter and CRDL of 4.8E-08 uCi/filter.
Fraction 001 has elevated MDC for Ra-226 with ACT of 1.889E-6 uCi/filter, MDC of 1.553E-5 uCi/filter and CRDL of 4.4E-06 uCi/filter.

Fraction 002 has elevated MDC for Pu-239/240 with ACT of -5.100E-8 uCi/filter, MDC of 1.175E-7 uCi/filter and CRDL of 4.8E-08 uCi/filter.
Fraction 002 has elevated MDC for Ra-226 with ACT of 2.349E-6 uCi/filter, MDC of 9.292E-6 uCi/filter and CRDL of 4.4E-06 uCi/filter.
Fraction 003 has elevated MDC for Pu-239/240 with ACT of -3.184E-8 uCi/filter, MDC of 9.628E-8 uCi/filter and CRDL of 4.8E-08 uCi/filter.
Fraction 003 has elevated MDC for Ra-226 with ACT of -9.669E-5 uCi/filter, MDC of 3.242E-5 uCi/filter and CRDL of 4.4E-06 uCi/filter.
Fraction 004 has elevated MDC for Pu-239/240 with ACT of -1.988E-8 uCi/filter, MDC of 1.031E-7 uCi/filter and CRDL of 4.8E-08 uCi/filter.
Fraction 004 has elevated MDC for Ra-226 with ACT of -1.965E-6 uCi/filter, MDC of 9.838E-6 uCi/filter and CRDL of 4.4E-06 uCi/filter.
Fraction 005 has elevated MDC for Pu-239/240 with ACT of 9.150E-9 uCi/filter, MDC of 1.027E-7 uCi/filter and CRDL of 4.8E-08 uCi/filter.
Fraction 005 has elevated MDC for Ra-226 with ACT of -3.004E-6 uCi/filter, MDC of 9.762E-6 uCi/filter and CRDL of 4.4E-06 uCi/filter.

ARS1-B22-01515: 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
ǂ 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
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for

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Analytical Results

ARS Aleut Analytical

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ARS Sample Delivery Group: ARS1-22-02125
Client Sample ID: FB-091922
Sample Collection Date: 09/19/22 8:00
Sample Matrix: Air Filter
Percent Solids: N/A

Request or PO Number: J310000900
ARS Sample ID: ARS1-22-02125-001
Date Received: 09/29/22
Report Date: 10/21/22

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	-6.287E-9	5.372E-8	1.095E-7	4.625E-8	4.8E-08	U	uCi/filter	10/15/22 2:22	[redacted]	52.5%

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	7.669E-7	7.855E-7	8.406E-7	4.203E-7	0.00024	U	uCi/filter	10/03/22 14:04	[redacted]	N/A
Cs-137	4.264E-7	7.619E-7	8.834E-7	4.417E-7	0.00048	U	uCi/filter	10/03/22 14:04	[redacted]	N/A
Ra-226	1.889E-6	1.565E-5	1.553E-5	7.765E-6	4.4E-06	U	uCi/filter	10/03/22 14:04	[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	6.256E-7	5.124E-7	6.989E-7	2.617E-7	4.4E-06	U	uCi/filter	10/19/22 10:26	[redacted]	97.7%

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	6.832E-7	2.121E-6	3.728E-6	1.724E-6	2.4E-05	U	uCi/filter	10/12/22 11:40	[redacted]	103%

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ARS Sample Delivery Group: ARS1-22-02125
Client Sample ID: MSB01-091922
Sample Collection Date: 09/22/22 14:31
Sample Matrix: Air Filter
Percent Solids: N/A

Request or PO Number: J310000900
ARS Sample ID: ARS1-22-02125-002
Date Received: 09/29/22
Report Date: 10/21/22

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	-5.100E-8	5.127E-8	1.175E-7	5.105E-8	4.8E-08	U	uCi/filter	10/15/22 2:22	[redacted]	51.7%

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	1.147E-7	6.466E-7	1.092E-6	5.460E-7	0.00024	U	uCi/filter	10/03/22 14:06	[redacted]	N/A
Cs-137	1.755E-7	6.652E-7	7.221E-7	3.611E-7	0.00048	U	uCi/filter	10/03/22 14:06	[redacted]	N/A
Ra-226	2.349E-6	7.358E-6	9.292E-6	4.646E-6	4.4E-06	U	uCi/filter	10/03/22 14:06	[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	1.131E-6	6.658E-7	7.023E-7	2.508E-7	4.4E-06		uCi/filter	10/19/22 10:26	[redacted]	89.1%

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	-6.356E-8	2.735E-6	4.886E-6	2.299E-6	2.4E-05	U	uCi/filter	10/12/22 11:40	[redacted]	99.4%

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ARS Sample Delivery Group: ARS1-22-02125
Client Sample ID: MSB02-091922
Sample Collection Date: 09/22/22 14:30
Sample Matrix: Air Filter
Percent Solids: N/A

Request or PO Number: J310000900
ARS Sample ID: ARS1-22-02125-003
Date Received: 09/29/22
Report Date: 10/21/22

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	-3.184E-8	4.179E-8	9.628E-8	4.095E-8	4.8E-08	U	uCi/filter	10/15/22 2:22	[redacted]	58.0%

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	-2.438E-7	1.707E-6	1.755E-6	8.775E-7	0.00024	U	uCi/filter	10/05/22 14:13	[redacted]	N/A
Cs-137	-6.751E-7	1.468E-6	1.641E-6	8.205E-7	0.00048	U	uCi/filter	10/05/22 14:13	[redacted]	N/A
Ra-226	-9.669E-5	3.537E-5	3.242E-5	1.621E-5	4.4E-06	U	uCi/filter	10/05/22 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	8.313E-7	5.913E-7	7.727E-7	2.992E-7	4.4E-06		uCi/filter	10/19/22 10:26	[redacted]	97.3%

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	-1.776E-7	2.259E-6	4.108E-6	1.910E-6	2.4E-05	U	uCi/filter	10/12/22 11:40	[redacted]	100%

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ARS Sample Delivery Group: ARS1-22-02125
Client Sample ID: MSB113A-091922
Sample Collection Date: 09/22/22 14:28
Sample Matrix: Air Filter
Percent Solids: N/A

Request or PO Number: J310000900
ARS Sample ID: ARS1-22-02125-004
Date Received: 09/29/22
Report Date: 10/21/22

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	-1.988E-8	4.974E-8	1.031E-7	4.479E-8	4.8E-08	U	uCi/filter	10/15/22 2:22	[redacted]	64.6%

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	-3.870E-7	9.230E-7	9.407E-7	4.704E-7	0.00024	U	uCi/filter	10/05/22 14:06	[redacted]	N/A
Cs-137	-4.323E-7	7.619E-7	8.190E-7	4.095E-7	0.00048	U	uCi/filter	10/05/22 14:06	[redacted]	N/A
Ra-226	-1.965E-6	7.787E-6	9.838E-6	4.919E-6	4.4E-06	U	uCi/filter	10/05/22 14:06	[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	7.512E-7	8.823E-7	3.361E-7	4.4E-06		uCi/filter	10/19/22 10:26	[redacted]	90.8%

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	1.605E-7	2.115E-6	3.820E-6	1.762E-6	2.4E-05	U	uCi/filter	10/12/22 11:40	[redacted]	102%

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ARS Sample Delivery Group: ARS1-22-02125
Client Sample ID: MSB113A-091922D
Sample Collection Date: 09/22/22 14:27
Sample Matrix: Air Filter
Percent Solids: N/A

Request or PO Number: J310000900
ARS Sample ID: ARS1-22-02125-005
Date Received: 09/29/22
Report Date: 10/21/22

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	9.150E-9	5.529E-8	1.027E-7	4.515E-8	4.8E-08	U	uCi/filter	10/15/22 2:22	[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	-2.041E-7	8.951E-7	9.180E-7	4.590E-7	0.00024	U	uCi/filter	10/04/22 14:35	[redacted]	N/A
Cs-137	-4.031E-7	7.582E-7	8.158E-7	4.079E-7	0.00048	U	uCi/filter	10/04/22 14:35	[redacted]	N/A
Ra-226	-3.004E-6	7.745E-6	9.762E-6	4.881E-6	4.4E-06	U	uCi/filter	10/04/22 14:35	[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	1.963E-6	9.433E-7	9.862E-7	3.892E-7	4.4E-06		uCi/filter	10/19/22 10:26	[redacted]	95.7%

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	1.480E-6	2.285E-6	3.877E-6	1.795E-6	2.4E-05	U	uCi/filter	10/12/22 11:40	[redacted]	101%

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QC Summary

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QC Sample Results

Analytical Batch: ARS1-B22-01476
Lab Sample ID: ARS1-B22-01476-01
Method: EPA 901.1M

Sample Type: LCS
Matrix: Air Filter
Analysis Date: 10/03/22 13:38

Analyte	Spike Added	Analysis Result	Qual	Analysis Units	% Rec	% Rec Limits
Am-241	33.065	31.198		uCi/filter	94.4	75 - 125
Co-60	20.928	20.785		uCi/filter	99.3	75 - 125
Cs-137	12.996	13.305		uCi/filter	102.4	75 - 125

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QC Sample Results

Analytical Batch: ARS1-B22-01476
Lab Sample ID: ARS1-B22-01476-02
Method: EPA 901.1M

Sample Type: LCSD
Matrix: Air Filter
Analysis Date: 10/03/22 13:49

Analyte	Spike Added	Analysis Result	Qual	Analysis Units	% Rec	% Rec Limits	RPD	RPD Limit	DER	DER Limit
Am-241	33.065	31.253		uCi/filter	94.5	75 - 125	0.2	25	0.032	3
Co-60	20.928	20.206		uCi/filter	96.6	75 - 125	2.8	25	0.621	3
Cs-137	12.996	13.348		uCi/filter	102.7	75 - 125	0.3	25	0.068	3

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QC Sample Results

Analytical Batch: ARS1-B22-01476
Lab Sample ID: ARS1-B22-01476-03
Method: EPA 901.1M

Sample Type: MBL
Matrix: Air Filter
Analysis Date: 10/03/22 14:03

Analyte	Analysis Result	CSU +/- 2 s	MDC	DLC	Qual	Analysis Units
Co-60	5.420E-4	0.002	0.002	7.800E-4	U	uCi/filter
Cs-137	6.467E-4	0.001	0.001	7.000E-4	U	uCi/filter
Ra-226	-0.090	0.035	0.033	0.016	U	uCi/filter

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QC Association Summary

ARS Sample Delivery Group: ARS1-22-02125 **Analytical Batch:** ARS1-B22-01476

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

Batch Sample ID	Lab Sample ID	Client Sample ID	Matrix	Method	Prep Method
ARS1-B22-01476-01		Lab Control Sample	Air Filter	EPA 901.1M	N/A
ARS1-B22-01476-02		Lab Control Sample Duplicate	Air Filter	EPA 901.1M	N/A
ARS1-B22-01476-03		Method Blank	Air Filter	EPA 901.1M	N/A
ARS1-B22-01476-04	ARS1-22-02125-001	FB-091922	Air Filter	EPA 901.1M	N/A
ARS1-B22-01476-05	ARS1-22-02125-002	MSB01-091922	Air Filter	EPA 901.1M	N/A
ARS1-B22-01476-06	ARS1-22-02125-003	MSB02-091922	Air Filter	EPA 901.1M	N/A
ARS1-B22-01476-07	ARS1-22-02125-004	MSB113A-091922	Air Filter	EPA 901.1M	N/A
ARS1-B22-01476-08	ARS1-22-02125-005	MSB113A-091922D	Air Filter	EPA 901.1M	N/A

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QC Sample Results

Analytical Batch: ARS1-B22-01515
Lab Sample ID: ARS1-B22-01515-01
Method: Eichrom ACW03

Sample Type: LCS
Matrix: Air Filter
Analysis Date: 10/15/22 2:22

Analyte	Spike Added	Analysis Result	Qual	Analysis Units	% Rec	% Rec Limits
Pu-239/240	7.670E-6	8.157E-6		uCi/filter	106.4	75 - 125

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QC Sample Results

Analytical Batch: ARS1-B22-01515
Lab Sample ID: ARS1-B22-01515-02
Method: Eichrom ACW03

Sample Type: LCSD
Matrix: Air Filter
Analysis Date: 10/15/22 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	8.400E-6		uCi/filter	109.8	75 - 125	2.9	25	0.322	3

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QC Sample Results

Analytical Batch: ARS1-B22-01515
Lab Sample ID: ARS1-B22-01515-03
Method: Eichrom ACW03

Sample Type: MBL
Matrix: Air Filter
Analysis Date: 10/15/22 2:22

Analyte	Analysis Result	CSU +/- 2 s	MDC	DLC	Qual	Analysis Units
Pu-238	9.156E-9	9.992E-8	1.898E-7	8.249E-8	U	uCi/filter
Pu-239/240	3.662E-8	7.191E-8	1.291E-7	5.217E-8	U	uCi/filter

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QC Association Summary

ARS Sample Delivery Group: ARS1-22-02125

Analytical Batch: ARS1-B22-01515

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-B22-01515-01		Lab Control Sample	Air Filter	Eichrom ACW03	N/A
ARS1-B22-01515-02		Lab Control Sample Duplicate	Air Filter	Eichrom ACW03	N/A
ARS1-B22-01515-03		Method Blank	Air Filter	Eichrom ACW03	N/A
ARS1-B22-01515-04	ARS1-22-02125-001	FB-091922	Air Filter	Eichrom ACW03	N/A
ARS1-B22-01515-05	ARS1-22-02125-002	MSB01-091922	Air Filter	Eichrom ACW03	N/A
ARS1-B22-01515-06	ARS1-22-02125-003	MSB02-091922	Air Filter	Eichrom ACW03	N/A
ARS1-B22-01515-07	ARS1-22-02125-004	MSB113A-091922	Air Filter	Eichrom ACW03	N/A
ARS1-B22-01515-08	ARS1-22-02125-005	MSB113A-091922D	Air Filter	Eichrom ACW03	N/A

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QC Sample Results

Analytical Batch: ARS1-B22-01516
Lab Sample ID: ARS1-B22-01516-01
Method: EPA 9315

Sample Type: LCS
Matrix: Air Filter
Analysis Date: 10/19/22 10:26

Analyte	Spike Added	Analysis Result	Qual	Analysis Units	% Rec	% Rec Limits
Ra-226	2.681E-5	2.212E-5		uCi/filter	82.5	75 - 125

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QC Sample Results

Analytical Batch: ARS1-B22-01516
Lab Sample ID: ARS1-B22-01516-02
Method: EPA 9315

Sample Type: LCSD
Matrix: Air Filter
Analysis Date: 10/19/22 10:26

Analyte	Spike Added	Analysis Result	Qual	Analysis Units	% Rec	% Rec Limits	RPD	RPD Limit	DER	DER Limit
Ra-226	2.681E-5	2.414E-5		uCi/filter	90.0	75 - 125	8.7	25	0.746	3

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QC Sample Results

Analytical Batch: ARS1-B22-01516
Lab Sample ID: ARS1-B22-01516-03
Method: EPA 9315

Sample Type: MBL
Matrix: Air Filter
Analysis Date: 10/19/22 10:26

Analyte	Analysis Result	CSU +/- 2 s	MDC	DLC	Qual	Analysis Units
Ra-226	4.739E-8	5.700E-8	9.235E-8	3.645E-8	U	uCi/filter

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QC Association Summary

ARS Sample Delivery Group: ARS1-22-02125

Analytical Batch: ARS1-B22-01516

Analysis: Radium-226 in Air Filter

Batch Sample ID	Lab Sample ID	Client Sample ID	Matrix	Method	Prep Method
ARS1-B22-01516-01		Lab Control Sample	Air Filter	EPA 9315	N/A
ARS1-B22-01516-02		Lab Control Sample Duplicate	Air Filter	EPA 9315	N/A
ARS1-B22-01516-03		Method Blank	Air Filter	EPA 9315	N/A
ARS1-B22-01516-04	ARS1-22-02125-001	FB-091922	Air Filter	EPA 9315	N/A
ARS1-B22-01516-05	ARS1-22-02125-002	MSB01-091922	Air Filter	EPA 9315	N/A
ARS1-B22-01516-06	ARS1-22-02125-003	MSB02-091922	Air Filter	EPA 9315	N/A
ARS1-B22-01516-07	ARS1-22-02125-004	MSB113A-091922	Air Filter	EPA 9315	N/A
ARS1-B22-01516-08	ARS1-22-02125-005	MSB113A-091922D	Air Filter	EPA 9315	N/A

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QC Sample Results

Analytical Batch: ARS1-B22-01517
Lab Sample ID: ARS1-B22-01517-01
Method: Eichrom SRW01

Sample Type: LCS
Matrix: Air Filter
Analysis Date: 10/12/22 11:40

Analyte	Spike Added	Analysis Result	Qual	Analysis Units	% Rec	% Rec Limits
SR-90	2.027E-5	2.242E-5		uCi/filter	110.6	75 - 125

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QC Sample Results

Analytical Batch: ARS1-B22-01517
Lab Sample ID: ARS1-B22-01517-02
Method: Eichrom SRW01

Sample Type: LCSD
Matrix: Air Filter
Analysis Date: 10/12/22 11:40

Analyte	Spike Added	Analysis Result	Qual	Analysis Units	% Rec	% Rec Limits	RPD	RPD Limit	DER	DER Limit
SR-90	2.009E-5	2.155E-5		uCi/filter	107.3	75 - 125	4.0	25	0.361	3

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QC Sample Results

Analytical Batch: ARS1-B22-01517
Lab Sample ID: ARS1-B22-01517-03
Method: Eichrom SRW01

Sample Type: MBL
Matrix: Air Filter
Analysis Date: 10/12/22 11:40

Analyte	Analysis Result	CSU +/- 2 s	MDC	DLC	Qual	Analysis Units
SR-90	2.682E-6	2.405E-6	3.859E-6	1.781E-6	U	uCi/filter

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QC Association Summary

ARS Sample Delivery Group: ARS1-22-02125 **Analytical Batch:** ARS1-B22-01517

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

Batch Sample ID	Lab Sample ID	Client Sample ID	Matrix	Method	Prep Method
ARS1-B22-01517-01		Lab Control Sample	Air Filter	Eichrom SRW01	N/A
ARS1-B22-01517-02		Lab Control Sample Duplicate	Air Filter	Eichrom SRW01	N/A
ARS1-B22-01517-03		Method Blank	Air Filter	Eichrom SRW01	N/A
ARS1-B22-01517-04	ARS1-22-02125-001	FB-091922	Air Filter	Eichrom SRW01	N/A
ARS1-B22-01517-05	ARS1-22-02125-002	MSB01-091922	Air Filter	Eichrom SRW01	N/A
ARS1-B22-01517-06	ARS1-22-02125-003	MSB02-091922	Air Filter	Eichrom SRW01	N/A
ARS1-B22-01517-07	ARS1-22-02125-004	MSB113A-091922	Air Filter	Eichrom SRW01	N/A
ARS1-B22-01517-08	ARS1-22-02125-005	MSB113A-091922D	Air Filter	Eichrom SRW01	N/A

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Batch QC

ARS Aleut Analytical

QC Results per Analytical Batch

Analytical Batch	**ARS1-B22-01476**
SDG	**ARS1-22-02125**
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	10/03/22 13:38	Analysis Technician	[redacted]

Analysis Batch Sample ID	QC Type	Analyte	Results	CSU (2s)	Expected Value	LCS Rec (%)	MDC
ARS1-B22-01476-01	**LCS**	AM-241	31.198	2.374	33.065	94.4	0.119
ARS1-B22-01476-01	**LCS**	CO-60	20.785	1.220	20.928	99.3	0.377
ARS1-B22-01476-01	**LCS**	CS-137	13.305	0.869	12.996	102.4	0.077

Duplicate RER/DER/RPD

Analysis Date	10/03/22 13:49	Analysis Technician	[redacted]

Analyte	Results LCS	CSU LCS (2s)	Results LCSD	CSU LCSD (2s)	DER	RPD
AM-241	31.198	2.374	31.253	2.378	0.032	0.2
CO-60	20.785	1.220	20.206	1.359	0.621	2.8
CS-137	13.305	0.869	13.348	0.872	0.068	0.3

Method Blank

Analysis Date	10/03/22 14:03	Analysis Technician	[redacted]

Analysis Batch Sample ID	QC Type	Analyte	Results	CSU (2s)	MDC	Qual
ARS1-B22-01476-03	**MBL**	CO-60	5.420E-4	0.002	0.002	U
ARS1-B22-01476-03	**MBL**	CS-137	6.467E-4	0.001	0.001	U
ARS1-B22-01476-03	**MBL**	RA-226	-0.090	0.035	0.033	U

ARS Aleut Analytical

QC Results per Analytical Batch

Analytical Batch	**ARS1-B22-01515**
SDG	**ARS1-22-02125**
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	10/15/22 02:22	**Analysis Technician**	[redacted]	
Analysis Batch Sample ID	**QC Type**	**Analyte**	**Results**	**CSU (2s)**	**Expected Value**	**LCS Rec (%)**	**MDC**
ARS1-B22-01515-01	**LCS**	PU-239/240	8.157E-6	1.036E-6	7.670E-6	106.4	7.660E-8

Duplicate RER/DER/RPD

		Analysis Date	10/15/22 02:22	**Analysis Technician**	[redacted]	
Analyte	**Results LCS**	**CSU LCS (2s)**	**Results LCSD**	**CSU LCSD (2s)**	**DER**	**RPD**
PU-239/240	8.157E-6	1.036E-6	8.400E-6	1.054E-6	0.322	2.9

Method Blank

		Analysis Date	10/15/22 02:22	**Analysis Technician**	[redacted]	
Analysis Batch Sample ID	**QC Type**	**Analyte**	**Results**	**CSU (2s)**	**MDC**	**Qual**
ARS1-B22-01515-03	**MBL**	PU-238	9.156E-9	9.992E-8	1.898E-7	U
ARS1-B22-01515-03	**MBL**	PU-239/240	3.662E-8	7.191E-8	1.291E-7	U

ARS Aleut Analytical

QC Results per Analytical Batch

Analytical Batch	**ARS1-B22-01516**
SDG	**ARS1-22-02125**
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	10/19/22 10:26	Analysis Technician	[redacted]

Analysis Batch Sample ID	QC Type	Analyte	Results	CSU (2s)	Expected Value	LCS Rec (%)	MDC
ARS1-B22-01516-01	**LCS**	RA-226	2.212E-5	3.584E-6	2.681E-5	82.5	9.467E-8

Duplicate RER/DER/RPD

Analysis Date	10/19/22 10:26	Analysis Technician	[redacted]

Analyte	Results LCS	CSU LCS (2s)	Results LCSD	CSU LCSD (2s)	DER	RPD
RA-226	2.212E-5	3.584E-6	2.414E-5	3.903E-6	0.746	8.7

Method Blank

Analysis Date	10/19/22 10:26	Analysis Technician	[redacted]

Analysis Batch Sample ID	QC Type	Analyte	Results	CSU (2s)	MDC	Qual
ARS1-B22-01516-03	**MBL**	RA-226	4.739E-8	5.700E-8	9.235E-8	U

ARS Aleut Analytical

QC Results per Analytical Batch

Analytical Batch	**ARS1-B22-01517**
SDG	**ARS1-22-02125**
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	10/12/22 11:40	Analysis Technician	[redacted]

Analysis Batch Sample ID	QC Type	Analyte	Results	CSU (2s)	Expected Value	LCS Rec (%)	MDC
ARS1-B22-01517-01	**LCS**	SR-90	2.242E-5	3.408E-6	2.027E-5	110.6	3.589E-7

Duplicate RER/DER/RPD

Analysis Date	10/12/22 11:40	Analysis Technician	[redacted]

Analyte	Results LCS	CSU LCS (2s)	Results LCSD	CSU LCSD (2s)	DER	RPD
SR-90	2.242E-5	3.408E-6	2.155E-5	3.292E-6	0.361	4.0

Method Blank

Analysis Date	10/12/22 11:40	Analysis Technician	[redacted]

Analysis Batch Sample ID	QC Type	Analyte	Results	CSU (2s)	MDC	Qual
ARS1-B22-01517-03	**MBL**	SR-90	2.682E-6	2.405E-6	3.859E-6	U

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Analytical Reports

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Sample Management Records

CHAIN-OF-CUSTODY RECORD

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

COC # KT092822RADB

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

						Analytical Test Method	E901.1 - Gamma Spec Air	RC0240 - Pu Isotopes	SR02RC - Sr90	SW9315 - Ra226									
	Event: Parcel B Air Monitoring RAD						**15**	**15**	**5**	**1**									
	Sample ID	Matrix	Date	Time	Samp Init.											Location ID	Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom	Cooler	Comments
1	FB-091922	AQ	09/19/2022	0800	KT		X	X	X	X						FIELDQC	FB1	0.00	0.00	1	
2	MSB01-091922	A	09/22/2022	1431	KT		X	X	X	X						MSB01	N1	0.00	0.00	1	TOTAL FLOW: 296,580 (L)
3	MSB02-091922	A	09/22/2022	1430	KT		X	X	X	X						MSB02	N1	0.00	0.00	1	TOTAL FLOW: 297,900 (L)
4	MSB113A-091922	A	09/22/2022	1428	KT		X	X	X	X						MSB113A	N1	0.00	0.00	1	TOTAL FLOW: 297,360 (L)
5	MSB113A-091922D	A	09/22/2022	1427	KT		X	X	X	X						MSB113A	FD1	0.00	0.00	1	TOTAL FLOW: 297,300 (L)
6											N/A										
7											[redacted]	9-28-22									

Turnaround Time: 28 days

Relinquished by: *(Signature)*	**Date**	**Time**	**Received by: *(Signature)***	**Date**	**Time**
[redacted]	9-28-22	1600	FEDEX	9-28-22	1600
			[redacted]	9-29-22	930

Shipping Date / Carrier / Airbill Number

Shipping Date: 9/28/2022/FEDEX 7779 8663 7195

Received by Laboratory: *(Signature, Date, Time)* **& condition**

GES.Navy_COC_Field
September 23, 2022

SDG Report - Samples and Containers

SDG Specific Data							
SDG	ARS1-22-02125		TAT Days	28 Calendar Days	Project Type	Environmental
Sample Count	5	Rpt Level 4	Date Received	09/29/2022	COC Number	KT092822RADB
Client	Gilbane Federal		Discrepancy Resol	N/A	PO Number	
Client Code	1138		Client Deadline	10/27/2022	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-091922	Air Filter	09/19/2022 07:59	09/19/2022 08:00	H	30	10	PrePrep	
	IC_ID	**Cnt**	**Container Type**	**AF Volume (L)**	**AF Units**		**Rate**	**Mins**	**Comments**
	424618	1	HDP Container	1	LPM			1	
			Mid-Sample Date:	09/19/2022 07:59	AF Volume (CuM):		0.001		
002	MSB01-091922	Air Filter	09/22/2022 14:30	09/22/2022 14:31	H	30	10	PrePrep	
	IC_ID	**Cnt**	**Container Type**	**AF Volume (L)**	**AF Units**		**Rate**	**Mins**	**Comments**
	424619	1	HDP Container	1	LPM			1	
			Mid-Sample Date:	09/22/2022 14:30	AF Volume (CuM):		0.001		
003	MSB02-091922	Air Filter	09/22/2022 14:29	09/22/2022 14:30	H	30	10	PrePrep	
	IC_ID	**Cnt**	**Container Type**	**AF Volume (L)**	**AF Units**		**Rate**	**Mins**	**Comments**
	424620	1	HDP Container	1	LPM			1	
			Mid-Sample Date:	09/22/2022 14:29	AF Volume (CuM):		0.001		
004	MSB113A-091922	Air Filter	09/22/2022 14:27	09/22/2022 14:28	H	30	10	PrePrep	
	IC_ID	**Cnt**	**Container Type**	**AF Volume (L)**	**AF Units**		**Rate**	**Mins**	**Comments**
	424621	1	HDP Container	1	LPM			1	
			Mid-Sample Date:	09/22/2022 14:27	AF Volume (CuM):		0.001		
005	MSB113A-091922D	Air Filter	09/22/2022 14:26	09/22/2022 14:27	H	30	10	PrePrep	
	IC_ID	**Cnt**	**Container Type**	**AF Volume (L)**	**AF Units**		**Rate**	**Mins**	**Comments**
	424622	1	HDP Container	1	LPM			1	
			Mid-Sample Date:	09/22/2022 14:26	AF Volume (CuM):		0.001		

SDG Report - Analysis Assignments

SDG	ARS1-22-02125	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**
	Pu-239/240 (15117-48-3)			4.8E-08 uCi/filter	75/125	60/140	30/110	30/110	1	25	N/A
GAM-A-AF	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
	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
GPC-RA226-AF	WRAD	uCi	filter		PALA-RAD-008						
	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**
	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	filter	N/A	1
		Group		**Analyte**	
		Parcel B Rad Sampling		Pu-239/240	
ASP-PU239-AF	002	uCi	filter	N/A	1
		Group		**Analyte**	
		Parcel B Rad Sampling		Pu-239/240	

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

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

ARS Aleut Analytical

PALA Sample Receipt Inspection Form

Client Name: Gilbane

SDG: ARS1-22-02125

Sample Custodian: [redacted] Survey Start Date: 9/29/22 Survey Start Time: 942

Thermometer ID: E0064100085 Calibration Due Date: 2/28/23 pH Paper Lot# NA

Exposure Rate Meter + Probe Unit ID: PR256427/269264 Calibration Due Date: 2/13/23 Background: 4 µR/hr

Count Rate Meter + Probe Unit ID: PR368083/331788 Calibration Due Date: 9/22/22 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)
A: 777986637195	6	30	40	NA
B:				
C:				
D:				
E:				
F:				

TRAX Matrix ID (circle all that apply): (See Section 4.3 of SOP)

AQ WD WG WO
WS WW SI UR
SO OL BI VG
WP SM (AF)

Visual Inspection: (Circle response)

External Shipping Container

Good Condition with no Leaks or Tears	(Yes)	No	
Marked Radioactive	Yes	(No)	
UN2910	Yes	(No)	
Security Seals	(Yes)	No	
If yes, intact?	(Yes)	No	N/A

Internal Shipping Container

COC's Present	(Yes)	No	
Well packaged container with no signs of leakage	(Yes)	No	

COC/Sample Inspection (Circle response)

Sample Containers in good condition	(Yes)	No	
No spills or leaks	(Yes)	No	
Marked Radioactive	Yes	(No)	
Durable labels w/indelible ink	(Yes)	No	
COC reliquished/received correctly	(Yes)	No	
Adequate volume/filled correctly	(Yes)	No	
Hold Time sufficient for analysis	(Yes)	No	
For VOC/Radon, Head space?	Yes	No	(N/A)
If yes, <6mm?	Yes	No	(N/A)
# of containers received matches # on COC	(Yes)	No	
Samples received on ice?	Yes	(No)	
Type (circle one):	Bagged Ice	Loose Ice	Blue Ice (N/A)

Comments:

ARS Aleut Analytical

PALA Sample Survey Form

Client Name: Gilbane

SDG: ARS1-22-02125

Pipette ID: NA Tip Lot#: NA

Disposible pipette lot#: NA

Sample ID from Client on COC or Sample	ESC Letter	Sample Container Type	Approx. Fill Level (%)	pH (pH <2 is Acceptable) As Rec'd	pH Adjusted	Acid Lot # or Ind container temp (°C)	Vol. of Acid Used (mL)	cpm (Acceptance Limits <100 cpm/cm)
FB-091922	A	ziploc	25	NA	NA	NA	NA	40
MSB01-091922	↓	↓	↓	↓	↓	↓	↓	↓
MSB02-091922								
MSB113A-091922								
MSB113A-091922D								

Sample Custodian: [redacted] Survey End Date: 9/29/22 Survey/pH End Time: 947

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 PALA-SR-001-FM-03 (Discrepant Sample Receipt Report).

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.
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 extraordinary value is $1,000, e.g. jewelry, precious metals, negotiable instruments and other items listed in our ServiceGuide. Written claims must be filed within strict time limits, see current FedEx Service Guide.

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

ARS Aleut Analytical, LLC

Laboratory Analytical Report

ARS1-22-02191

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

COC Number: **KT100522RADB**
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.

		Laboratory Management, ARS Aleut Analytical
Signature	**Date**	**Title**

Table Of Contents

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.

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

ARS Aleut Analytical, LLC
Analytical Reports

for

Gilbane Federal

Case Narrative

ARS Aleut Analytical
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-092622	ARS1-22-02191-001
MSB01-092622	ARS1-22-02191-002
MSB02-092622	ARS1-22-02191-003
MSB113A-092622	ARS1-22-02191-004

Sample	Date Collected	Date Received	Analysis	Basis	Prep Date/Time	Analysis Date/Time
001	09/26/22 08:00	10/06/22	ASP-PU239-AF	As Received	10/18/22 11:36	10/22/22 02:17
001	09/26/22 08:00	10/06/22	GAM-A-AF	As Received	N/A	10/13/22 14:11
001	09/26/22 08:00	10/06/22	GPC-RA226-AF	As Received	10/18/22 08:29	10/26/22 09:50
001	09/26/22 08:00	10/06/22	GPC-SR90-AF	As Received	10/18/22 11:32	10/21/22 10:19
002	09/29/22 15:05	10/06/22	ASP-PU239-AF	As Received	10/18/22 11:36	10/22/22 02:17
002	09/29/22 15:05	10/06/22	GAM-A-AF	As Received	N/A	10/12/22 14:10
002	09/29/22 15:05	10/06/22	GPC-RA226-AF	As Received	10/18/22 08:29	10/26/22 09:50
002	09/29/22 15:05	10/06/22	GPC-SR90-AF	As Received	10/18/22 11:32	10/21/22 10:19
003	09/29/22 15:05	10/06/22	ASP-PU239-AF	As Received	10/18/22 11:36	10/22/22 02:17
003	09/29/22 15:05	10/06/22	GAM-A-AF	As Received	N/A	10/13/22 14:13
003	09/29/22 15:05	10/06/22	GPC-RA226-AF	As Received	10/18/22 08:29	10/26/22 09:50
003	09/29/22 15:05	10/06/22	GPC-SR90-AF	As Received	10/18/22 11:32	10/21/22 10:19
004	09/29/22 15:03	10/06/22	ASP-PU239-AF	As Received	10/18/22 11:36	10/22/22 02:17
004	09/29/22 15:03	10/06/22	GAM-A-AF	As Received	N/A	10/13/22 14:15

004	09/29/22 15:03	10/06/22	GPC-RA226-AF	As Received	10/18/22 08:29	10/26/22 09:50
004	09/29/22 15:03	10/06/22	GPC-SR90-AF	As Received	10/18/22 11:32	10/21/22 10:19

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 -1.713E-8 uCi/filter, MDC of 7.461E-8 uCi/filter and CRDL of 4.8E-08 uCi/filter.
Fraction 001 has elevated MDC for Ra-226 with ACT of 0.000 uCi/filter, MDC of 1.544E-5 uCi/filter and CRDL of 4.4E-06 uCi/filter.
Fraction 002 has elevated MDC for Pu-239/240 with ACT of -4.019E-8 uCi/filter, MDC of 9.256E-8 uCi/filter and CRDL of 4.8E-08 uCi/filter.
Fraction 002 has elevated MDC for Ra-226 with ACT of -5.646E-7 uCi/filter, MDC of 9.588E-6 uCi/filter and CRDL of 4.4E-06 uCi/filter.
Fraction 003 has elevated MDC for Pu-239/240 with ACT of -3.918E-8 uCi/filter, MDC of 1.090E-7 uCi/filter and CRDL of 4.8E-08 uCi/filter.
Fraction 003 has elevated MDC for Ra-226 with ACT of 6.323E-7 uCi/filter, MDC of 9.569E-6 uCi/filter and CRDL of 4.4E-06 uCi/filter.
Fraction 004 has elevated MDC for Pu-239/240 with ACT of -1.636E-8 uCi/filter, MDC of 1.171E-7 uCi/filter and CRDL of 4.8E-08 uCi/filter.
Fraction 004 has elevated MDC for Ra-226 with ACT of -1.846E-5 uCi/filter, MDC of 2.632E-5 uCi/filter and CRDL of 4.4E-06 uCi/filter.

ARS1-B22-01597: ROI's adjusted to better fit the peaks of interest.

ARS1-B22-01599: The Method Blank for Batch ARS1-B22-01599 had a detect for Sr-90. All fractions were non-detects, therefore the activity in the Method Blank did not contribute to the concentration in client samples.

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
ǂ 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

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Analytical Results

ARS Aleut Analytical
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ARS Sample Delivery Group: ARS1-22-02191
Client Sample ID: FB-092622
Sample Collection Date: 09/26/22 8:00
Sample Matrix: Air Filter
Percent Solids: N/A

Request or PO Number:
ARS Sample ID: ARS1-22-02191-001
Date Received: 10/06/22
Report Date: 10/28/22

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	-1.713E-8	3.364E-8	7.461E-8	3.150E-8	4.8E-08	U	uCi/filter	10/22/22 2:17	[redacted]	73.2%

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	-8.428E-8	9.818E-7	1.011E-6	5.055E-7	0.00024	U	uCi/filter	10/13/22 14:11	[redacted]	N/A
Cs-137	-9.134E-8	8.047E-7	9.058E-7	4.529E-7	0.00048	U	uCi/filter	10/13/22 14:11	[redacted]	N/A
Ra-226	0.000	9.600E-6	1.544E-5	7.720E-6	4.4E-06	U	uCi/filter	10/13/22 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	5.327E-7	4.700E-7	6.569E-7	2.418E-7	4.4E-06	U	uCi/filter	10/26/22 9:50	[redacted]	99.0%

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	2.190E-6	2.494E-6	4.121E-6	1.902E-6	2.4E-05	U	uCi/filter	10/21/22 10:19	[redacted]	89.5%

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ARS Sample Delivery Group: ARS1-22-02191
Client Sample ID: MSB01-092622
Sample Collection Date: 09/29/22 15:05
Sample Matrix: Air Filter
Percent Solids: N/A

Request or PO Number:
ARS Sample ID: ARS1-22-02191-002
Date Received: 10/06/22
Report Date: 10/28/22

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	-4.019E-8	4.040E-8	9.256E-8	4.023E-8	4.8E-08	U	uCi/filter	10/22/22 2:17	[redacted]	71.9%

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	-2.807E-7	8.631E-7	8.837E-7	4.419E-7	0.00024	U	uCi/filter	10/12/22 14:10	[redacted]	N/A
Cs-137	3.578E-7	6.320E-7	6.815E-7	3.408E-7	0.00048	U	uCi/filter	10/12/22 14:10	[redacted]	N/A
Ra-226	-5.646E-7	7.562E-6	9.588E-6	4.794E-6	4.4E-06	U	uCi/filter	10/12/22 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	1.098E-6	6.137E-7	6.129E-7	2.165E-7	4.4E-06		uCi/filter	10/26/22 9:50	[redacted]	99.5%

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	2.235E-6	3.155E-6	5.309E-6	2.499E-6	2.4E-05	U	uCi/filter	10/21/22 10:19	[redacted]	92.8%

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ARS Sample Delivery Group: ARS1-22-02191
Client Sample ID: MSB02-092622
Sample Collection Date: 09/29/22 15:05
Sample Matrix: Air Filter
Percent Solids: N/A

Request or PO Number:
ARS Sample ID: ARS1-22-02191-003
Date Received: 10/06/22
Report Date: 10/28/22

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	-3.918E-8	5.212E-8	1.090E-7	4.858E-8	4.8E-08	U	uCi/filter	10/22/22 2:17	[redacted]	68.0%

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	-8.934E-8	8.925E-7	9.187E-7	4.594E-7	0.00024	U	uCi/filter	10/13/22 14:13	[redacted]	N/A
Cs-137	3.433E-7	6.068E-7	6.548E-7	3.274E-7	0.00048	U	uCi/filter	10/13/22 14:13	[redacted]	N/A
Ra-226	6.323E-7	7.547E-6	9.569E-6	4.785E-6	4.4E-06	U	uCi/filter	10/13/22 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	1.223E-6	6.773E-7	7.687E-7	2.995E-7	4.4E-06		uCi/filter	10/26/22 9:50	[redacted]	101%

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	3.479E-6	2.697E-6	4.240E-6	1.964E-6	2.4E-05	U	uCi/filter	10/21/22 10:19	[redacted]	93.6%

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ARS Sample Delivery Group: ARS1-22-02191
Client Sample ID: MSB113A-092622
Sample Collection Date: 09/29/22 15:03
Sample Matrix: Air Filter
Percent Solids: N/A

Request or PO Number:
ARS Sample ID: ARS1-22-02191-004
Date Received: 10/06/22
Report Date: 10/28/22

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	-1.636E-8	6.110E-8	1.171E-7	5.299E-8	4.8E-08	U	uCi/filter	10/22/22 2:17	[redacted]	74.0%

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	-1.024E-6	1.907E-6	1.934E-6	9.670E-7	0.00024	U	uCi/filter	10/13/22 14:15	[redacted]	N/A
Cs-137	7.476E-7	1.321E-6	1.475E-6	7.375E-7	0.00048	U	uCi/filter	10/13/22 14:15	[redacted]	N/A
Ra-226	-1.846E-5	2.672E-5	2.632E-5	1.316E-5	4.4E-06	U	uCi/filter	10/13/22 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	1.656E-6	7.963E-7	7.670E-7	2.881E-7	4.4E-06		uCi/filter	10/26/22 9:50	[redacted]	106%

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	1.843E-6	2.488E-6	4.178E-6	1.931E-6	2.4E-05	U	uCi/filter	10/21/22 10:19	[redacted]	95.3%

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QC Summary

ARS Aleut Analytical
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QC Sample Results

Analytical Batch: ARS1-B22-01541
Lab Sample ID: ARS1-B22-01541-01
Method: EPA 901.1M

Sample Type: LCS
Matrix: Air Filter
Analysis Date: 10/14/22 12:59

Analyte	Spike Added	Analysis Result	Qual	Analysis Units	% Rec	% Rec Limits
Am-241	33.065	31.413		uCi/filter	95.0	75 - 125
Co-60	20.928	21.261		uCi/filter	101.6	75 - 125
Cs-137	12.996	13.378		uCi/filter	102.9	75 - 125

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QC Sample Results

Analytical Batch: ARS1-B22-01541
Lab Sample ID: ARS1-B22-01541-02
Method: EPA 901.1M

Sample Type: LCSD
Matrix: Air Filter
Analysis Date: 10/14/22 13:14

Analyte	Spike Added	Analysis Result	Qual	Analysis Units	% Rec	% Rec Limits	RPD	RPD Limit	DER	DER Limit
Am-241	33.065	31.902		uCi/filter	96.5	75 - 125	1.5	25	0.274	3
Co-60	20.928	20.892		uCi/filter	99.8	75 - 125	1.8	25	0.407	3
Cs-137	12.996	13.257		uCi/filter	102.0	75 - 125	0.9	25	0.223	3

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QC Sample Results

Analytical Batch: ARS1-B22-01541
Lab Sample ID: ARS1-B22-01541-03
Method: EPA 901.1M

Sample Type: MBL
Matrix: Air Filter
Analysis Date: 10/15/22 12:32

Analyte	Analysis Result	CSU +/- 2 s	MDC	DLC	Qual	Analysis Units
Co-60	-5.278E-4	8.170E-4	0.001	6.750E-4	U	uCi/filter
Cs-137	3.189E-5	6.974E-4	7.600E-4	3.800E-4	U	uCi/filter
Ra-226	0.004	0.007	0.009	0.005	U	uCi/filter

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QC Association Summary

ARS Sample Delivery Group: ARS1-22-02191 **Analytical Batch:** ARS1-B22-01541

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

Batch Sample ID	Lab Sample ID	Client Sample ID	Matrix	Method	Prep Method
ARS1-B22-01541-01		Lab Control Sample	Air Filter	EPA 901.1M	N/A
ARS1-B22-01541-02		Lab Control Sample Duplicate	Air Filter	EPA 901.1M	N/A
ARS1-B22-01541-03		Method Blank	Air Filter	EPA 901.1M	N/A
ARS1-B22-01541-04	ARS1-22-02191-001	FB-092622	Air Filter	EPA 901.1M	N/A
ARS1-B22-01541-05	ARS1-22-02191-002	MSB01-092622	Air Filter	EPA 901.1M	N/A
ARS1-B22-01541-06	ARS1-22-02191-003	MSB02-092622	Air Filter	EPA 901.1M	N/A
ARS1-B22-01541-07	ARS1-22-02191-004	MSB113A-092622	Air Filter	EPA 901.1M	N/A

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QC Sample Results

Analytical Batch: ARS1-B22-01597
Lab Sample ID: ARS1-B22-01597-01
Method: Eichrom ACW03

Sample Type: LCS
Matrix: Air Filter
Analysis Date: 10/22/22 2:17

Analyte	Spike Added	Analysis Result	Qual	Analysis Units	% Rec	% Rec Limits
Pu-239/240	7.733E-6	7.845E-6		uCi/filter	101.5	75 - 125

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QC Sample Results

Analytical Batch: ARS1-B22-01597
Lab Sample ID: ARS1-B22-01597-02
Method: Eichrom ACW03

Sample Type: LCSD
Matrix: Air Filter
Analysis Date: 10/22/22 2:17

Analyte	Spike Added	Analysis Result	Qual	Analysis Units	% Rec	% Rec Limits	RPD	RPD Limit	DER	DER Limit
Pu-239/240	7.817E-6	8.049E-6		uCi/filter	103.0	75 - 125	2.6	25	0.285	3

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QC Sample Results

Analytical Batch: ARS1-B22-01597
Lab Sample ID: ARS1-B22-01597-03
Method: Eichrom ACW03

Sample Type: MBL
Matrix: Air Filter
Analysis Date: 10/22/22 2:17

Analyte	Analysis Result	CSU +/- 2 s	MDC	DLC	Qual	Analysis Units
Pu-238	2.563E-8	5.561E-8	9.819E-8	4.331E-8	U	uCi/filter
Pu-239/240	-3.416E-8	5.814E-8	1.167E-7	5.257E-8	U	uCi/filter

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QC Association Summary

ARS Sample Delivery Group: ARS1-22-02191

Analytical Batch: ARS1-B22-01597

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-B22-01597-01		Lab Control Sample	Air Filter	Eichrom ACW03	N/A
ARS1-B22-01597-02		Lab Control Sample Duplicate	Air Filter	Eichrom ACW03	N/A
ARS1-B22-01597-03		Method Blank	Air Filter	Eichrom ACW03	N/A
ARS1-B22-01597-04	ARS1-22-02191-001	FB-092622	Air Filter	Eichrom ACW03	N/A
ARS1-B22-01597-05	ARS1-22-02191-002	MSB01-092622	Air Filter	Eichrom ACW03	N/A
ARS1-B22-01597-06	ARS1-22-02191-003	MSB02-092622	Air Filter	Eichrom ACW03	N/A
ARS1-B22-01597-07	ARS1-22-02191-004	MSB113A-092622	Air Filter	Eichrom ACW03	N/A

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QC Sample Results

Analytical Batch: ARS1-B22-01598
Lab Sample ID: ARS1-B22-01598-01
Method: EPA 9315

Sample Type: LCS
Matrix: Air Filter
Analysis Date: 10/26/22 9:50

Analyte	Spike Added	Analysis Result	Qual	Analysis Units	% Rec	% Rec Limits
Ra-226	2.697E-5	2.381E-5		uCi/filter	88.3	75 - 125

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QC Sample Results

Analytical Batch: ARS1-B22-01598
Lab Sample ID: ARS1-B22-01598-02
Method: EPA 9315

Sample Type: LCSD
Matrix: Air Filter
Analysis Date: 10/26/22 9:50

Analyte	Spike Added	Analysis Result	Qual	Analysis Units	% Rec	% Rec Limits	RPD	RPD Limit	DER	DER Limit
Ra-226	2.671E-5	2.332E-5		uCi/filter	87.3	75 - 125	2.1	25	0.178	3

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QC Sample Results

Analytical Batch: ARS1-B22-01598
Lab Sample ID: ARS1-B22-01598-03
Method: EPA 9315

Sample Type: MBL
Matrix: Air Filter
Analysis Date: 10/26/22 9:50

Analyte	Analysis Result	CSU +/- 2 s	MDC	DLC	Qual	Analysis Units
Ra-226	7.157E-8	5.783E-8	7.906E-8	2.996E-8	U	uCi/filter

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QC Association Summary

ARS Sample Delivery Group: ARS1-22-02191

Analytical Batch: ARS1-B22-01598

Analysis: Radium-226 in Air Filter

Batch Sample ID	Lab Sample ID	Client Sample ID	Matrix	Method	Prep Method
ARS1-B22-01598-01		Lab Control Sample	Air Filter	EPA 9315	N/A
ARS1-B22-01598-02		Lab Control Sample Duplicate	Air Filter	EPA 9315	N/A
ARS1-B22-01598-03		Method Blank	Air Filter	EPA 9315	N/A
ARS1-B22-01598-04	ARS1-22-02191-001	FB-092622	Air Filter	EPA 9315	N/A
ARS1-B22-01598-05	ARS1-22-02191-002	MSB01-092622	Air Filter	EPA 9315	N/A
ARS1-B22-01598-06	ARS1-22-02191-003	MSB02-092622	Air Filter	EPA 9315	N/A
ARS1-B22-01598-07	ARS1-22-02191-004	MSB113A-092622	Air Filter	EPA 9315	N/A

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QC Sample Results

Analytical Batch: ARS1-B22-01599
Lab Sample ID: ARS1-B22-01599-01
Method: Eichrom SRW01

Sample Type: LCS
Matrix: Air Filter
Analysis Date: 10/21/22 10:19

Analyte	Spike Added	Analysis Result	Qual	Analysis Units	% Rec	% Rec Limits
SR-90	2.017E-5	2.033E-5		uCi/filter	100.8	75 - 125

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QC Sample Results

Analytical Batch: ARS1-B22-01599
Lab Sample ID: ARS1-B22-01599-02
Method: Eichrom SRW01

Sample Type: LCSD
Matrix: Air Filter
Analysis Date: 10/21/22 10:19

Analyte	Spike Added	Analysis Result	Qual	Analysis Units	% Rec	% Rec Limits	RPD	RPD Limit	DER	DER Limit
SR-90	2.025E-5	2.015E-5		uCi/filter	99.5	75 - 125	0.9	25	0.080	3

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QC Sample Results

Analytical Batch: ARS1-B22-01599
Lab Sample ID: ARS1-B22-01599-03
Method: Eichrom SRW01

Sample Type: MBL
Matrix: Air Filter
Analysis Date: 10/21/22 10:19

Analyte	Analysis Result	CSU +/- 2 s	MDC	DLC	Qual	Analysis Units
SR-90	4.891E-6	3.021E-6	4.523E-6	2.085E-6		uCi/filter

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QC Association Summary

ARS Sample Delivery Group: ARS1-22-02191 **Analytical Batch:** ARS1-B22-01599

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

Batch Sample ID	Lab Sample ID	Client Sample ID	Matrix	Method	Prep Method
ARS1-B22-01599-01		Lab Control Sample	Air Filter	Eichrom SRW01	N/A
ARS1-B22-01599-02		Lab Control Sample Duplicate	Air Filter	Eichrom SRW01	N/A
ARS1-B22-01599-03		Method Blank	Air Filter	Eichrom SRW01	N/A
ARS1-B22-01599-04	ARS1-22-02191-001	FB-092622	Air Filter	Eichrom SRW01	N/A
ARS1-B22-01599-05	ARS1-22-02191-002	MSB01-092622	Air Filter	Eichrom SRW01	N/A
ARS1-B22-01599-06	ARS1-22-02191-003	MSB02-092622	Air Filter	Eichrom SRW01	N/A
ARS1-B22-01599-07	ARS1-22-02191-004	MSB113A-092622	Air Filter	Eichrom SRW01	N/A

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Batch QC

ARS Aleut Analytical

QC Results per Analytical Batch

Analytical Batch	**ARS1-B22-01541**
SDG	**ARS1-22-02191**
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	10/14/22 12:59	Analysis Technician	[redacted]

Analysis Batch Sample ID	QC Type	Analyte	Results	CSU (2s)	Expected Value	LCS Rec (%)	MDC
ARS1-B22-01541-01	**LCS**	AM-241	31.413	2.452	33.065	95.0	0.158
ARS1-B22-01541-01	**LCS**	CO-60	21.261	1.262	20.928	101.6	0.398
ARS1-B22-01541-01	**LCS**	CS-137	13.378	0.754	12.996	102.9	0.109

Duplicate RER/DER/RPD

Analysis Date	10/14/22 13:14	Analysis Technician	[redacted]

Analyte	Results LCS	CSU LCS (2s)	Results LCSD	CSU LCSD (2s)	DER	RPD
AM-241	31.413	2.452	31.902	2.490	0.274	1.5
CO-60	21.261	1.262	20.892	1.251	0.407	1.8
CS-137	13.378	0.754	13.257	0.747	0.223	0.9

Method Blank

Analysis Date	10/15/22 12:32	Analysis Technician	[redacted]

Analysis Batch Sample ID	QC Type	Analyte	Results	CSU (2s)	MDC	Qual
ARS1-B22-01541-03	**MBL**	CO-60	-5.278E-4	8.170E-4	0.001	U
ARS1-B22-01541-03	**MBL**	CS-137	3.189E-5	6.974E-4	7.600E-4	U
ARS1-B22-01541-03	**MBL**	RA-226	0.004	0.007	0.009	U

ARS Aleut Analytical

QC Results per Analytical Batch

Analytical Batch	**ARS1-B22-01597**
SDG	**ARS1-22-02191**
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	10/22/22 02:17	Analysis Technician	[redacted]

Analysis Batch Sample ID	QC Type	Analyte	Results	CSU (2s)	Expected Value	LCS Rec (%)	MDC
ARS1-B22-01597-01	**LCS**	PU-239/240	7.845E-6	9.788E-7	7.733E-6	101.5	3.393E-8

Duplicate RER/DER/RPD

Analysis Date	10/22/22 02:17	Analysis Technician	[redacted]

Analyte	Results LCS	CSU LCS (2s)	Results LCSD	CSU LCSD (2s)	DER	RPD
PU-239/240	7.845E-6	9.788E-7	8.049E-6	1.004E-6	0.285	2.6

Method Blank

Analysis Date	10/22/22 02:17	Analysis Technician	[redacted]

Analysis Batch Sample ID	QC Type	Analyte	Results	CSU (2s)	MDC	Qual
ARS1-B22-01597-03	**MBL**	PU-238	2.563E-8	5.561E-8	9.819E-8	U
ARS1-B22-01597-03	**MBL**	PU-239/240	-3.416E-8	5.814E-8	1.167E-7	U

ARS Aleut Analytical

QC Results per Analytical Batch

Analytical Batch	**ARS1-B22-01598**
SDG	**ARS1-22-02191**
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	10/26/22 09:50	Analysis Technician	[redacted]

Analysis Batch Sample ID	QC Type	Analyte	Results	CSU (2s)	Expected Value	LCS Rec (%)	MDC
ARS1-B22-01598-01	**LCS**	RA-226	2.381E-5	3.849E-6	2.697E-5	88.3	7.739E-8

Duplicate RER/DER/RPD

Analysis Date	10/26/22 09:50	Analysis Technician	[redacted]

Analyte	Results LCS	CSU LCS (2s)	Results LCSD	CSU LCSD (2s)	DER	RPD
RA-226	2.381E-5	3.849E-6	2.332E-5	3.771E-6	0.178	2.1

Method Blank

Analysis Date	10/26/22 09:50	Analysis Technician	[redacted]

Analysis Batch Sample ID	QC Type	Analyte	Results	CSU (2s)	MDC	Qual
ARS1-B22-01598-03	**MBL**	RA-226	7.157E-8	5.783E-8	7.906E-8	U

ARS Aleut Analytical

QC Results per Analytical Batch

Analytical Batch	**ARS1-B22-01599**
SDG	**ARS1-22-02191**
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 10/21/22 10:19 **Analysis Technician** [redacted]

Analysis Batch Sample ID	QC Type	Analyte	Results	CSU (2s)	Expected Value	LCS Rec (%)	MDC
ARS1-B22-01599-01	**LCS**	SR-90	2.033E-5	3.113E-6	2.017E-5	100.8	3.665E-7

Duplicate RER/DER/RPD

Analysis Date 10/21/22 10:19 **Analysis Technician** [redacted]

Analyte	Results LCS	CSU LCS (2s)	Results LCSD	CSU LCSD (2s)	DER	RPD
SR-90	2.033E-5	3.113E-6	2.015E-5	3.096E-6	0.080	0.9

Method Blank

Analysis Date 10/21/22 10:19 **Analysis Technician** [redacted]

Analysis Batch Sample ID	QC Type	Analyte	Results	CSU (2s)	MDC	Qual
ARS1-B22-01599-03	**MBL**	SR-90	4.891E-6	3.021E-6	4.523E-6	

ARS Aleut Analytical

Z Values per Analytical Batch

Analytical Batch	**ARS1-B22-01541**
SDG	**ARS1-22-02191**
Analysis	**Gamma Spec (Short) in (Air Filters, Smears**
Analysis Test Method	**PALA-RAD-007/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 10/14/22 12:59 **Analysis Technician** [redacted]

QC Type	Analyte	Results	CSU (1s)	Expected Value	CSU (1s)	Z
LCS	AM-241	31.413	1.251	33.065	0.001	1.321
LCSD	AM-241	31.902	1.270	33.065	0.001	0.915
LCS	CO-60	21.261	0.644	20.928	5.860E-4	0.517
LCSD	CO-60	20.892	0.638	20.928	5.860E-4	0.056
LCS	CS-137	13.378	0.385	12.996	3.119E-4	0.993
LCSD	CS-137	13.257	0.381	12.996	3.119E-4	0.685

Method Blank

Analysis Date 10/15/22 12:32 **Analysis Technician** [redacted]

QC Type	Analyte	Results	CSU (1s)	Z
MBL	CS-137	3.189E-5	3.558E-4	0.090
MBL	CO-60	-5.278E-4	4.169E-4	1.266
MBL	RA-226	0.004	0.004	1.035

Duplicate Sample

Analysis Date 10/14/22 13:14 **Analysis Technician** [redacted]

QC Type	Analyte	Results Dup	CSU (1s)	Results DO	CSU (1s)	Z
LCSD	AM-241	31.902	1.270	31.413	1.251	0.274
LCSD	CO-60	20.892	0.638	21.261	0.644	0.407
LCSD	CS-137	13.257	0.381	13.378	0.385	0.223

ARS Aleut Analytical

Z Values per Analytical Batch

Analytical Batch	**ARS1-B22-01597**
SDG	**ARS1-22-02191**
Analysis	**Plutonium (239, 240Pu) in (Air Filters,**
Analysis Test Method	**PALA-RAD-026/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	10/22/22 02:17	Analysis Technician	[redacted]

QC Type	Analyte	Results	CSU (1s)	Expected Value	CSU (1s)	Z
LCS	PU-239/240	7.845E-6	4.994E-7	7.733E-6	1.263E-7	0.218
LCSD	PU-239/240	8.049E-6	5.120E-7	7.817E-6	1.263E-7	0.440

Method Blank

Analysis Date	10/22/22 02:17	Analysis Technician	[redacted]

QC Type	Analyte	Results	CSU (1s)	Z
MBL	PU-238	2.563E-8	2.837E-8	0.903
MBL	PU-239/240	-3.416E-8	2.966E-8	1.152

Duplicate Sample

Analysis Date	10/22/22 02:17	Analysis Technician	[redacted]

QC Type	Analyte	Results Dup	CSU (1s)	Results DO	CSU (1s)	Z
LCSD	PU-239/240	8.049E-6	5.120E-7	7.845E-6	4.994E-7	0.285

ARS Aleut Analytical

Z Values per Analytical Batch

Analytical Batch	**ARS1-B22-01598**
SDG	**ARS1-22-02191**
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	10/26/22 09:50	Analysis Technician	[redacted]		

QC Type	Analyte	Results	CSU (1s)	Expected Value	CSU (1s)	Z
LCS	RA-226	2.381E-5	1.964E-6	2.697E-5	3.148E-7	1.587
LCSD	RA-226	2.332E-5	1.924E-6	2.671E-5	3.148E-7	1.736

Method Blank

Analysis Date	10/26/22 09:50	Analysis Technician	[redacted]

QC Type	Analyte	Results	CSU (1s)	Z
MBL	RA-226	7.157E-8	2.950E-8	2.426

Duplicate Sample

Analysis Date	10/26/22 09:50	Analysis Technician	[redacted]

QC Type	Analyte	Results Dup	CSU (1s)	Results DO	CSU (1s)	Z
LCSD	RA-226	2.332E-5	1.924E-6	2.381E-5	1.964E-6	0.178

ARS Aleut Analytical

Z Values per Analytical Batch

Analytical Batch	**ARS1-B22-01599**
SDG	**ARS1-22-02191**
Analysis	**Strontium-90 in (Air Filters, Smears [AF])**
Analysis Test Method	**PALA-RAD-032/Eichrom SRW01,HASL 300**
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**	10/21/22 10:19	**Analysis Technician**	[redacted]		
QC Type	**Analyte**	**Results**	**CSU (1s)**	**Expected Value**	**CSU (1s)**	**Z**
LCS	SR-90	2.033E-5	1.588E-6	2.017E-5	3.410E-7	0.098
LCSD	SR-90	2.015E-5	1.580E-6	2.025E-5	3.410E-7	0.062

Method Blank	**Analysis Date**	10/21/22 10:19	**Analysis Technician**	[redacted]
QC Type	**Analyte**	**Results**	**CSU (1s)**	**Z**
MBL	SR-90	4.891E-6	1.541E-6	3.173

Duplicate Sample	**Analysis Date**	10/21/22 10:19	**Analysis Technician**	[redacted]		
QC Type	**Analyte**	**Results Dup**	**CSU (1s)**	**Results DO**	**CSU (1s)**	**Z**
LCSD	SR-90	2.015E-5	1.580E-6	2.033E-5	1.588E-6	0.080

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

COC # KT100522RADB

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

						Analytical Test Method	E901.1 - Gamma Spec Air	RC0240 - Pu Isotopes	SR02RC - Sr90	SW9315 - Ra226									
	Event: Parcel B Air Monitoring RAD						15	15	5	1									
	Sample ID	Matrix	Date	Time	Samp Init.										Location ID	Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom	Cooler	Comments
1	FB-092622	AQ	09/26/2022	0800	[redacted]		X	X	X	X					FIELDQC	FB1	0.00	0.00	1	
2	MSB01-092622	A	09/29/2022	1505			X	X	X	X					MSB01	N1	0.00	0.00	1	TOTAL FLOW: 298,800 (L)
3	MSB02-092622	A	09/29/2022	1505			X	X	X	X					MSB02	N1	0.00	0.00	1	TOTAL FLOW: 299,880 (L)
4	MSB113A-092622	A	09/29/2022	1503			X	X	X	X					MSB113A	N1	0.00	0.00	1	TOTAL FLOW: 299,100 (L)
5					[redacted]															
6																				

Turnaround Time: 28 days

Relinquished by: *(Signature)*	Date	Time	Received by: *(Signature)*	Date	Time
[redacted]	10/5/22	1400	FedEx	10/5/22	1400
			[redacted]	10/6/22	1000

Shipping Date / Carrier / Airbill Number

Shipping Date: 10/5/2022/ FEDEX 7700 6469 8470

Received by Laboratory: *(Signature, Date, Time)* **& condition**

GES.Navy_COC_Field
September 30, 2022

SDG Report - Samples and Containers

SDG Specific Data							
SDG	ARS1-22-02191		TAT Days	28 Calendar Days	Project Type	Environmental
Sample Count	4	Rpt Level 4	Date Received	10/06/2022	COC Number	KT100522RADB
Client	Gilbane Federal		Discrepancy Resol	N/A	PO Number	
Client Code	1138		Client Deadline	11/03/2022	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-092622	Air Filter	09/26/2022 07:59	09/26/2022 08:00	H	30	10	PrePrep	
	IC_ID	**Cnt**	**Container Type**	**AF Volume (L)**	**AF Units**		**Rate**	**Mins**	**Comments**
	425054	1	HDP Container	1	LPM			1	
			Mid-Sample Date:	09/26/2022 07:59	AF Volume (CuM):		0.001		
002	MSB01-092622	Air Filter	09/29/2022 15:04	09/29/2022 15:05	H	30	10	PrePrep	
	IC_ID	**Cnt**	**Container Type**	**AF Volume (L)**	**AF Units**		**Rate**	**Mins**	**Comments**
	425055	1	HDP Container	1	LPM			1	
			Mid-Sample Date:	09/29/2022 15:04	AF Volume (CuM):		0.001		
003	MSB02-092622	Air Filter	09/29/2022 15:04	09/29/2022 15:05	H	30	10	PrePrep	
	IC_ID	**Cnt**	**Container Type**	**AF Volume (L)**	**AF Units**		**Rate**	**Mins**	**Comments**
	425056	1	HDP Container	1	LPM			1	
			Mid-Sample Date:	09/29/2022 15:04	AF Volume (CuM):		0.001		
004	MSB113A-092622	Air Filter	09/29/2022 15:02	09/29/2022 15:03	H	30	10	PrePrep	
	IC_ID	**Cnt**	**Container Type**	**AF Volume (L)**	**AF Units**		**Rate**	**Mins**	**Comments**
	425057	1	HDP Container	1	LPM			1	
			Mid-Sample Date:	09/29/2022 15:02	AF Volume (CuM):		0.001		

SDG Report - Analysis Assignments

SDG	ARS1-22-02191	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

DQO Report for SDG

ARS1-22-02191

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**
	Pu-239/240 (15117-48-3)			4.8E-08 uCi/filter	75/125	60/140	30/110	30/110	1	25	N/A
GAM-A-AF	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
	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
GPC-RA226-AF	WRAD	uCi	filter		PALA-RAD-008						
	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**
	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	filter	N/A	1
		Group		**Analyte**	
		Parcel B Rad Sampling		Pu-239/240	
ASP-PU239-AF	002	uCi	filter	N/A	1
		Group		**Analyte**	
		Parcel B Rad Sampling		Pu-239/240	

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

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

ARS Aleut Analytical

PALA Sample Receipt Inspection Form

Client Name: Gilbane

SDG: ARS1-22-02191

Sample Custodian: [redacted] Survey Start Date: 10/6/22 Survey Start Time: 1335

Thermometer ID: E00640100085 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)
A: 770064698470	5	30	40	NA
B:				
C:				
D:				
E:				
F:				

TRAX Matrix ID (circle all that apply): (See Section 4.3 of SOP)

AQ WD WG WO
WS WW SI UR
SO OL BI VG
WP SM (AF)

Visual Inspection: (Circle response)

External Shipping Container

Good Condition with no Leaks or Tears	(Yes)	No
Marked Radioactive	Yes	(No)
UN2910	Yes	(No)
Security Seals	(Yes)	No
If yes, intact?	(Yes)	No N/A

Internal Shipping Container

COC's Present	(Yes)	No
Well packaged container with no signs of leakage	(Yes)	No

COC/Sample Inspection (Circle response)

Sample Containers in good condition	(Yes)	No	
No spills or leaks	(Yes)	No	
Marked Radioactive	Yes	(No)	
Durable labels w/indelible ink	(Yes)	No	
COC reliquished/received correctly	(Yes)	No	
Adequate volume/filled correctly	(Yes)	No	
Hold Time sufficient for analysis	(Yes)	No	
For VOC/Radon, Head space?	Yes	No	(N/A)
If yes, <6mm?	Yes	No	(N/A)
# of containers received matches # on COC	(Yes)	No	
Samples received on ice?	Yes	(No)	
Type (circle one):	Bagged Ice	Loose Ice	Blue Ice (N/A)

Comments:

ARS Aleut Analytical

PALA Sample Survey Form

Client Name: Gilbane

SDG: ARS1-22-02191

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

Pipette ID: NA Tip Lot#: NA

Disposible pipette lot#: NA

Sample ID from Client on COC or Sample	ESC Letter	Sample Container Type	Approx. Fill Level (%)	pH <2 is Acceptable: pH As Rec'd	pH Adjusted	Acid Lot # or Ind container temp (°C)	Vol. of Acid Used (mL)	cpm (Acceptance Limits <100 cpm/cm)
FB-092622	A	ziploc	25	NA	NA	NA	NA	40
MSB01-	↓	↓	↓	↓	↓	↓	↓	↓
MSB02-	↓	↓	↓	↓	↓	↓	↓	↓
MSB113A-	↓	↓	↓	↓	↓	↓	↓	↓

Sample Custodian: [redacted] Survey End Date: 10/6/22 Survey/pH End Time: 1340

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 PALA-SR-001-FM-03 (Discrepant Sample Receipt Report).

ENVIRONMENTAL SOLUTIONS | QUALITY CONSCIOUS

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.
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 extraordinary value is $1,000, e.g. jewelry, precious metals, negotiable instruments and other items listed in our ServiceGuide. Written claims must be filed within strict time limits, see current FedEx Service Guide.

eurofins | Environment Testing America

ANALYTICAL REPORT

Eurofins Sacramento
880 Riverside Parkway
West Sacramento, CA 95605
Tel: (916)373-5600

Laboratory Job ID: 320-92578-1
Client Project/Site: Hunters Point, Parcel B, Phase 2

For:
GES-AIS, LLC
1501 W Fountainhead Parkway
Ste 550
Tempe, Arizona 85282

[redacted]

[redacted]

Authorized for release by:
10/10/2022 2:13:46 PM

[redacted], Project Manager I
[redacted]
[redacted]

Table of Contents

Definitions/Glossary

Client: GES-AIS, LLC
Job ID: 320-92578-1
Project/Site: Hunters Point, Parcel B, Phase 2

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.
¤	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

Job ID: 320-92578-1

Laboratory: Eurofins Sacramento

Narrative

Job Narrative
320-92578-1

Comments
No additional comments.

Receipt
The samples were received on 9/29/2022 9:20 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 20.3º C.

Metals
Method PM10: The following samples were recorded with a negative net weight: GESPM090622-242 (320-92578-7), GESPM090622-249 (320-92578-21) and GESPM090622-250 (320-92578-23). No particulate loading or damage to the filter could be observed.

Method 40CFR50 App B: The following sample was recorded with a negative net weight: GESTSP090622-242 (320-92578-8). No particulate loading 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: 320-92578-1
Project/Site: Hunters Point, Parcel B, Phase 2

Client Sample ID: GESPM090622-239 — Lab Sample ID: 320-92578-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lead	0.0011	B	0.00073	0.00011	ug/m3 (Air)	1		6020	Total/NA
Manganese	0.0023		0.00073	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: GESTSP090622-239 — Lab Sample ID: 320-92578-2

Analyte	Result	Qualifier	RL	RL	Unit	Dil Fac	D	Method	Prep Type
Total Suspended Particulates	22.2462		0.2889	0.2889	ug/m3 (Air)	1		40CFR50 App B	Total/NA

Client Sample ID: GESPM090622-240 — Lab Sample ID: 320-92578-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lead	0.00058	J B	0.00073	0.00011	ug/m3 (Air)	1		6020	Total/NA
Manganese	0.0012		0.00073	0.00010	ug/m3 (Air)	1		6020	Total/NA
Particulate Matter as PM 10	14		0.31	0.31	ug/m3	1		PM10	Total/NA

Client Sample ID: GESTSP090622-240 — Lab Sample ID: 320-92578-4

Analyte	Result	Qualifier	RL	RL	Unit	Dil Fac	D	Method	Prep Type
Total Suspended Particulates	16.9659		0.2856	0.2856	ug/m3 (Air)	1		40CFR50 App B	Total/NA

Client Sample ID: GESPM090622-241 — Lab Sample ID: 320-92578-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lead	0.0012	B	0.00075	0.00011	ug/m3 (Air)	1		6020	Total/NA
Manganese	0.0022		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: GESTSP090622-241 — Lab Sample ID: 320-92578-6

Analyte	Result	Qualifier	RL	RL	Unit	Dil Fac	D	Method	Prep Type
Total Suspended Particulates	23.0584		0.3220	0.3220	ug/m3 (Air)	1		40CFR50 App B	Total/NA

Client Sample ID: GESPM090622-242 — Lab Sample ID: 320-92578-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Manganese	0.00026	J	0.0012	0.00017	ug/m3 (Air)	1		6020	Total/NA

Client Sample ID: GESTSP090622-242 — Lab Sample ID: 320-92578-8

No Detections.

Client Sample ID: GESPM090622-243 — Lab Sample ID: 320-92578-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lead	0.00075	B	0.00071	0.00011	ug/m3 (Air)	1		6020	Total/NA
Manganese	0.0029		0.00071	0.000099	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: GESTSP090622-243 — Lab Sample ID: 320-92578-10

Analyte	Result	Qualifier	RL	RL	Unit	Dil Fac	D	Method	Prep Type
Total Suspended Particulates	11.7706		0.2712	0.2712	ug/m3 (Air)	1		40CFR50 App B	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: GES-AIS, LLC
Project/Site: Hunters Point, Parcel B, Phase 2

Job ID: 320-92578-1

Client Sample ID: GESPM090622-244 — Lab Sample ID: 320-92578-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lead	0.00047	J B	0.00072	0.00011	ug/m3 (Air)	1		6020	Total/NA
Manganese	0.0015		0.00072	0.00010	ug/m3 (Air)	1		6020	Total/NA
Particulate Matter as PM 10	12		0.30	0.30	ug/m3	1		PM10	Total/NA

Client Sample ID: GESTSP090622-244 — Lab Sample ID: 320-92578-12

Analyte	Result	Qualifier	RL	RL	Unit	Dil Fac	D	Method	Prep Type
Total Suspended Particulates	14.1906		0.2782	0.2782	ug/m3 (Air)	1		40CFR50 App B	Total/NA

Client Sample ID: GESPM090622-245 — Lab Sample ID: 320-92578-13

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lead	0.00069	J B	0.00074	0.00011	ug/m3 (Air)	1		6020	Total/NA
Manganese	0.0024		0.00074	0.00010	ug/m3 (Air)	1		6020	Total/NA
Particulate Matter as PM 10	14		0.31	0.31	ug/m3	1		PM10	Total/NA

Client Sample ID: GESTSP090622-245 — Lab Sample ID: 320-92578-14

Analyte	Result	Qualifier	RL	RL	Unit	Dil Fac	D	Method	Prep Type
Total Suspended Particulates	18.2517		0.3115	0.3115	ug/m3 (Air)	1		40CFR50 App B	Total/NA

Client Sample ID: GESPM090622-246 — Lab Sample ID: 320-92578-15

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lead	0.00067	J B	0.00071	0.00011	ug/m3 (Air)	1		6020	Total/NA
Manganese	0.0026		0.00071	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: GESTSP090622-246 — Lab Sample ID: 320-92578-16

Analyte	Result	Qualifier	RL	RL	Unit	Dil Fac	D	Method	Prep Type
Total Suspended Particulates	17.4478		0.2778	0.2778	ug/m3 (Air)	1		40CFR50 App B	Total/NA

Client Sample ID: GESPM090622-247 — Lab Sample ID: 320-92578-17

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lead	0.00036	J B	0.00073	0.00011	ug/m3 (Air)	1		6020	Total/NA
Manganese	0.0016		0.00073	0.00010	ug/m3 (Air)	1		6020	Total/NA
Particulate Matter as PM 10	12		0.31	0.31	ug/m3	1		PM10	Total/NA

Client Sample ID: GESTSP090622-247 — Lab Sample ID: 320-92578-18

Analyte	Result	Qualifier	RL	RL	Unit	Dil Fac	D	Method	Prep Type
Total Suspended Particulates	14.2225		0.2822	0.2822	ug/m3 (Air)	1		40CFR50 App B	Total/NA

Client Sample ID: GESPM090622-248 — Lab Sample ID: 320-92578-19

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lead	0.00073	J B	0.00076	0.00011	ug/m3 (Air)	1		6020	Total/NA
Manganese	0.0023		0.00076	0.00011	ug/m3 (Air)	1		6020	Total/NA
Particulate Matter as PM 10	9.5		0.31	0.31	ug/m3	1		PM10	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: GES-AIS, LLC
Job ID: 320-92578-1
Project/Site: Hunters Point, Parcel B, Phase 2

Client Sample ID: GESTSP090622-248 — Lab Sample ID: 320-92578-20

Analyte	Result	Qualifier	RL	RL	Unit	Dil Fac	D	Method	Prep Type
Total Suspended Particulates	19.1376		0.3200	0.3200	ug/m3 (Air)	1		40CFR50 App B	Total/NA

Client Sample ID: GESPM090622-249 — Lab Sample ID: 320-92578-21

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lead	0.0012	J B	0.0032	0.00048	ug/m3 (Air)	1		6020	Total/NA
Manganese	0.0034		0.0032	0.00045	ug/m3 (Air)	1		6020	Total/NA

Client Sample ID: GESTSP090622-249 — Lab Sample ID: 320-92578-22

Analyte	Result	Qualifier	RL	RL	Unit	Dil Fac	D	Method	Prep Type
Total Suspended Particulates	17.8446		1.2567	1.2567	ug/m3 (Air)	1		40CFR50 App B	Total/NA

Client Sample ID: GESPM090622-250 — Lab Sample ID: 320-92578-23

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lead	0.0028	B	0.0025	0.00038	ug/m3 (Air)	1		6020	Total/NA
Manganese	0.0036		0.0025	0.00035	ug/m3 (Air)	1		6020	Total/NA

Client Sample ID: GESTSP090622-250 — Lab Sample ID: 320-92578-24

Analyte	Result	Qualifier	RL	RL	Unit	Dil Fac	D	Method	Prep Type
Total Suspended Particulates	18.9365		0.9661	0.9661	ug/m3 (Air)	1		40CFR50 App B	Total/NA

Client Sample ID: GESPM090622-251 — Lab Sample ID: 320-92578-25

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lead	0.0027	B	0.0027	0.00040	ug/m3 (Air)	1		6020	Total/NA
Manganese	0.0037		0.0027	0.00037	ug/m3 (Air)	1		6020	Total/NA
Particulate Matter as PM 10	1.3		1.1	1.1	ug/m3	1		PM10	Total/NA

Client Sample ID: GESTSP090622-251 — Lab Sample ID: 320-92578-26

Analyte	Result	Qualifier	RL	RL	Unit	Dil Fac	D	Method	Prep Type
Total Suspended Particulates	13.4397		1.1200	1.1200	ug/m3 (Air)	1		40CFR50 App B	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: GESPM090622-239
Lab Sample ID: 320-92578-1
Date Collected: 09/20/22 07:30
Matrix: Air
Date Received: 09/29/22 09:20
Sample Container: Folder/Filter

Method: SW846 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	0.0011	B	0.00073	0.00011	ug/m3 (Air)		10/04/22 08:30	10/05/22 13:07	1
Manganese	0.0023		0.00073	0.00010	ug/m3 (Air)		10/04/22 08:30	10/05/22 13:07	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			09/30/22 13:00	1

Client Sample ID: GESTSP090622-239
Lab Sample ID: 320-92578-2
Date Collected: 09/20/22 07:30
Matrix: Air
Date Received: 09/29/22 09:20
Sample Container: Folder/Filter

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Particulates (EPA 40CFR50 App B)	22.2462		0.2889	0.2889	ug/m3 (Air)			09/30/22 13:00	1

Client Sample ID: GESPM090622-240
Lab Sample ID: 320-92578-3
Date Collected: 09/20/22 07:03
Matrix: Air
Date Received: 09/29/22 09:20
Sample Container: Folder/Filter

Method: SW846 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	0.00058	J B	0.00073	0.00011	ug/m3 (Air)		10/04/22 08:30	10/05/22 13:17	1
Manganese	0.0012		0.00073	0.00010	ug/m3 (Air)		10/04/22 08:30	10/05/22 13:17	1

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Particulate Matter as PM 10 (40CFR50J PM10)	14		0.31	0.31	ug/m3			09/30/22 13:00	1

Client Sample ID: GESTSP090622-240
Lab Sample ID: 320-92578-4
Date Collected: 09/20/22 07:03
Matrix: Air
Date Received: 09/29/22 09:20
Sample Container: Folder/Filter

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Particulates (EPA 40CFR50 App B)	16.9659		0.2856	0.2856	ug/m3 (Air)			09/30/22 13:00	1

Client Sample ID: GESPM090622-241
Lab Sample ID: 320-92578-5
Date Collected: 09/20/22 07:18
Matrix: Air
Date Received: 09/29/22 09:20
Sample Container: Folder/Filter

Method: SW846 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	0.0012	B	0.00075	0.00011	ug/m3 (Air)		10/04/22 08:30	10/05/22 13:20	1
Manganese	0.0022		0.00075	0.00011	ug/m3 (Air)		10/04/22 08:30	10/05/22 13:20	1

Client Sample ID: GESPM090622-241
Lab Sample ID: 320-92578-5
Date Collected: 09/20/22 07:18
Matrix: Air
Date Received: 09/29/22 09:20
Sample Container: Folder/Filter

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			09/30/22 13:00	1

Client Sample ID: GESTSP090622-241
Lab Sample ID: 320-92578-6
Date Collected: 09/20/22 07:18
Matrix: Air
Date Received: 09/29/22 09:20
Sample Container: Folder/Filter

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Particulates (EPA 40CFR50 App B)	23.0584		0.3220	0.3220	ug/m3 (Air)			09/30/22 13:00	1

Client Sample ID: GESPM090622-242
Lab Sample ID: 320-92578-7
Date Collected: 09/19/22 08:00
Matrix: Air
Date Received: 09/29/22 09:20
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)		10/04/22 08:30	10/05/22 13:24	1
Manganese	0.00026	J	0.0012	0.00017	ug/m3 (Air)		10/04/22 08:30	10/05/22 13:24	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			09/30/22 13:00	1

Client Sample ID: GESTSP090622-242
Lab Sample ID: 320-92578-8
Date Collected: 09/19/22 08:00
Matrix: Air
Date Received: 09/29/22 09:20
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)			09/30/22 13:00	1

Client Sample ID: GESPM090622-243
Lab Sample ID: 320-92578-9
Date Collected: 09/21/22 07:59
Matrix: Air
Date Received: 09/29/22 09:20
Sample Container: Folder/Filter

Method: SW846 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	0.00075	B	0.00071	0.00011	ug/m3 (Air)		10/04/22 08:30	10/05/22 13:33	1
Manganese	0.0029		0.00071	0.000099	ug/m3 (Air)		10/04/22 08:30	10/05/22 13:33	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			09/30/22 13:00	1

Client Sample ID: GESTSP090622-243
Lab Sample ID: 320-92578-10
Date Collected: 09/21/22 07:59
Matrix: Air
Date Received: 09/29/22 09:20
Sample Container: Folder/Filter

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Particulates (EPA 40CFR50 App B)	11.7706		0.2712	0.2712	ug/m3 (Air)			09/30/22 13:00	1

Client Sample ID: GESPM090622-244
Lab Sample ID: 320-92578-11
Date Collected: 09/21/22 07:21
Matrix: Air
Date Received: 09/29/22 09:20
Sample Container: Folder/Filter

Method: SW846 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	0.00047	J B	0.00072	0.00011	ug/m3 (Air)		10/04/22 08:30	10/05/22 13:37	1
Manganese	0.0015		0.00072	0.00010	ug/m3 (Air)		10/04/22 08:30	10/05/22 13:37	1

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Particulate Matter as PM 10 (40CFR50J PM10)	12		0.30	0.30	ug/m3			09/30/22 13:00	1

Client Sample ID: GESTSP090622-244
Lab Sample ID: 320-92578-12
Date Collected: 09/21/22 07:21
Matrix: Air
Date Received: 09/29/22 09:20
Sample Container: Folder/Filter

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Particulates (EPA 40CFR50 App B)	14.1906		0.2782	0.2782	ug/m3 (Air)			09/30/22 13:00	1

Client Sample ID: GESPM090622-245
Lab Sample ID: 320-92578-13
Date Collected: 09/21/22 07:50
Matrix: Air
Date Received: 09/29/22 09:20
Sample Container: Folder/Filter

Method: SW846 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	0.00069	J B	0.00074	0.00011	ug/m3 (Air)		10/04/22 08:30	10/05/22 13:40	1
Manganese	0.0024		0.00074	0.00010	ug/m3 (Air)		10/04/22 08:30	10/05/22 13:40	1

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Particulate Matter as PM 10 (40CFR50J PM10)	14		0.31	0.31	ug/m3			09/30/22 13:00	1

Client Sample ID: GESTSP090622-245
Lab Sample ID: 320-92578-14
Date Collected: 09/21/22 07:50
Matrix: Air
Date Received: 09/29/22 09:20
Sample Container: Folder/Filter

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Particulates (EPA 40CFR50 App B)	18.2517		0.3115	0.3115	ug/m3 (Air)			09/30/22 13:00	1

Client Sample ID: GESPM090622-246
Lab Sample ID: 320-92578-15
Date Collected: 09/22/22 08:51
Matrix: Air
Date Received: 09/29/22 09:20
Sample Container: Folder/Filter

Method: SW846 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	0.00067	J B	0.00071	0.00011	ug/m3 (Air)		10/04/22 08:30	10/05/22 13:43	1
Manganese	0.0026		0.00071	0.00010	ug/m3 (Air)		10/04/22 08:30	10/05/22 13:43	1

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			09/30/22 13:00	1

Client Sample ID: GESTSP090622-246
Lab Sample ID: 320-92578-16
Date Collected: 09/22/22 08:51
Matrix: Air
Date Received: 09/29/22 09:20
Sample Container: Folder/Filter

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Particulates (EPA 40CFR50 App B)	17.4478		0.2778	0.2778	ug/m3 (Air)			09/30/22 13:00	1

Client Sample ID: GESPM090622-247
Lab Sample ID: 320-92578-17
Date Collected: 09/22/22 07:22
Matrix: Air
Date Received: 09/29/22 09:20
Sample Container: Folder/Filter

Method: SW846 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	0.00036	J B	0.00073	0.00011	ug/m3 (Air)		10/04/22 08:30	10/05/22 13:47	1
Manganese	0.0016		0.00073	0.00010	ug/m3 (Air)		10/04/22 08:30	10/05/22 13:47	1

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Particulate Matter as PM 10 (40CFR50J PM10)	12		0.31	0.31	ug/m3			09/30/22 13:00	1

Client Sample ID: GESTSP090622-247
Lab Sample ID: 320-92578-18
Date Collected: 09/22/22 07:22
Matrix: Air
Date Received: 09/29/22 09:20
Sample Container: Folder/Filter

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Particulates (EPA 40CFR50 App B)	14.2225		0.2822	0.2822	ug/m3 (Air)			09/30/22 13:00	1

Client Sample ID: GESPM090622-248
Lab Sample ID: 320-92578-19
Date Collected: 09/22/22 07:35
Matrix: Air
Date Received: 09/29/22 09:20
Sample Container: Folder/Filter

Method: SW846 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	0.00073	J B	0.00076	0.00011	ug/m3 (Air)		10/04/22 08:30	10/05/22 13:50	1
Manganese	0.0023		0.00076	0.00011	ug/m3 (Air)		10/04/22 08:30	10/05/22 13:50	1

Client Sample ID: GESPM090622-248
Lab Sample ID: 320-92578-19
Date Collected: 09/22/22 07:35
Matrix: Air
Date Received: 09/29/22 09:20
Sample Container: Folder/Filter

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Particulate Matter as PM 10 (40CFR50J PM10)	9.5		0.31	0.31	ug/m3			09/30/22 13:00	1

Client Sample ID: GESTSP090622-248
Lab Sample ID: 320-92578-20
Date Collected: 09/22/22 07:35
Matrix: Air
Date Received: 09/29/22 09:20
Sample Container: Folder/Filter

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Particulates (EPA 40CFR50 App B)	19.1376		0.3200	0.3200	ug/m3 (Air)			09/30/22 13:00	1

Client Sample ID: GESPM090622-249
Lab Sample ID: 320-92578-21
Date Collected: 09/22/22 14:25
Matrix: Air
Date Received: 09/29/22 09:20
Sample Container: Folder/Filter

Method: SW846 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	0.0012	J B	0.0032	0.00048	ug/m3 (Air)		10/04/22 08:30	10/05/22 13:53	1
Manganese	0.0034		0.0032	0.00045	ug/m3 (Air)		10/04/22 08:30	10/05/22 13:53	1

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Particulate Matter as PM 10 (40CFR50J PM10)	ND		1.3	1.3	ug/m3			09/30/22 13:00	1

Client Sample ID: GESTSP090622-249
Lab Sample ID: 320-92578-22
Date Collected: 09/22/22 14:25
Matrix: Air
Date Received: 09/29/22 09:20
Sample Container: Folder/Filter

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Particulates (EPA 40CFR50 App B)	17.8446		1.2567	1.2567	ug/m3 (Air)			09/30/22 13:00	1

Client Sample ID: GESPM090622-250
Lab Sample ID: 320-92578-23
Date Collected: 09/22/22 14:25
Matrix: Air
Date Received: 09/29/22 09:20
Sample Container: Folder/Filter

Method: SW846 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	0.0028	B	0.0025	0.00038	ug/m3 (Air)		10/04/22 08:30	10/05/22 13:57	1
Manganese	0.0036		0.0025	0.00035	ug/m3 (Air)		10/04/22 08:30	10/05/22 13:57	1

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Particulate Matter as PM 10 (40CFR50J PM10)	ND		1.0	1.0	ug/m3			09/30/22 13:00	1

Client: GES-AIS, LLC
Job ID: 320-92578-1
Project/Site: Hunters Point, Parcel B, Phase 2

Client Sample ID: GESTSP090622-250
Lab Sample ID: 320-92578-24
Date Collected: 09/22/22 14:25
Matrix: Air
Date Received: 09/29/22 09:20
Sample Container: Folder/Filter

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Particulates (EPA 40CFR50 App B)	18.9365		0.9661	0.9661	ug/m3 (Air)			09/30/22 13:00	1

Client Sample ID: GESPM090622-251
Lab Sample ID: 320-92578-25
Date Collected: 09/22/22 14:27
Matrix: Air
Date Received: 09/29/22 09:20
Sample Container: Folder/Filter

Method: SW846 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	0.0027	B	0.0027	0.00040	ug/m3 (Air)		10/04/22 08:30	10/05/22 14:00	1
Manganese	0.0037		0.0027	0.00037	ug/m3 (Air)		10/04/22 08:30	10/05/22 14:00	1

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Particulate Matter as PM 10 (40CFR50J PM10)	1.3		1.1	1.1	ug/m3			09/30/22 13:00	1

Client Sample ID: GESTSP090622-251
Lab Sample ID: 320-92578-26
Date Collected: 09/22/22 14:27
Matrix: Air
Date Received: 09/29/22 09:20
Sample Container: Folder/Filter

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Particulates (EPA 40CFR50 App B)	13.4397		1.1200	1.1200	ug/m3 (Air)			09/30/22 13:00	1

QC Sample Results

Client: GES-AIS, LLC
Project/Site: Hunters Point, Parcel B, Phase 2

Job ID: 320-92578-1

Method: 6020 - Metals (ICP/MS)

Lab Sample ID: MB 320-622090/1-B
Matrix: Air
Analysis Batch: 622595

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 622097

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	0.000408	J	0.0012	0.00018	ug/m3 (Air)		10/04/22 08:30	10/05/22 12:58	1
Manganese	ND		0.0012	0.00017	ug/m3 (Air)		10/04/22 08:30	10/05/22 12:58	1

Lab Sample ID: LCS 320-622090/2-B
Matrix: Air
Analysis Batch: 622595

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 622097

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Lead	0.240	0.258		ug/m3 (Air)		108	86 - 111
Manganese	0.240	0.248		ug/m3 (Air)		103	88 - 110

Lab Sample ID: LCSD 320-622090/3-B
Matrix: Air
Analysis Batch: 622595

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 622097

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Lead	0.240	0.255		ug/m3 (Air)		106	86 - 111	1	15
Manganese	0.240	0.239		ug/m3 (Air)		99	88 - 110	4	15

Metals

Pre Prep Batch: 622090

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-92578-1	GESPM090622-239	Total/NA	Air	Filter to Air	
320-92578-3	GESPM090622-240	Total/NA	Air	Filter to Air	
320-92578-5	GESPM090622-241	Total/NA	Air	Filter to Air	
320-92578-7	GESPM090622-242	Total/NA	Air	Filter to Air	
320-92578-9	GESPM090622-243	Total/NA	Air	Filter to Air	
320-92578-11	GESPM090622-244	Total/NA	Air	Filter to Air	
320-92578-13	GESPM090622-245	Total/NA	Air	Filter to Air	
320-92578-15	GESPM090622-246	Total/NA	Air	Filter to Air	
320-92578-17	GESPM090622-247	Total/NA	Air	Filter to Air	
320-92578-19	GESPM090622-248	Total/NA	Air	Filter to Air	
320-92578-21	GESPM090622-249	Total/NA	Air	Filter to Air	
320-92578-23	GESPM090622-250	Total/NA	Air	Filter to Air	
320-92578-25	GESPM090622-251	Total/NA	Air	Filter to Air	
MB 320-622090/1-B	Method Blank	Total/NA	Air	Filter to Air	
LCS 320-622090/2-B	Lab Control Sample	Total/NA	Air	Filter to Air	
LCSD 320-622090/3-B	Lab Control Sample Dup	Total/NA	Air	Filter to Air	

Prep Batch: 622097

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-92578-1	GESPM090622-239	Total/NA	Air	3050B	622090
320-92578-3	GESPM090622-240	Total/NA	Air	3050B	622090
320-92578-5	GESPM090622-241	Total/NA	Air	3050B	622090
320-92578-7	GESPM090622-242	Total/NA	Air	3050B	622090
320-92578-9	GESPM090622-243	Total/NA	Air	3050B	622090
320-92578-11	GESPM090622-244	Total/NA	Air	3050B	622090
320-92578-13	GESPM090622-245	Total/NA	Air	3050B	622090
320-92578-15	GESPM090622-246	Total/NA	Air	3050B	622090
320-92578-17	GESPM090622-247	Total/NA	Air	3050B	622090
320-92578-19	GESPM090622-248	Total/NA	Air	3050B	622090
320-92578-21	GESPM090622-249	Total/NA	Air	3050B	622090
320-92578-23	GESPM090622-250	Total/NA	Air	3050B	622090
320-92578-25	GESPM090622-251	Total/NA	Air	3050B	622090
MB 320-622090/1-B	Method Blank	Total/NA	Air	3050B	622090
LCS 320-622090/2-B	Lab Control Sample	Total/NA	Air	3050B	622090
LCSD 320-622090/3-B	Lab Control Sample Dup	Total/NA	Air	3050B	622090

Analysis Batch: 622595

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-92578-1	GESPM090622-239	Total/NA	Air	6020	622097
320-92578-3	GESPM090622-240	Total/NA	Air	6020	622097
320-92578-5	GESPM090622-241	Total/NA	Air	6020	622097
320-92578-7	GESPM090622-242	Total/NA	Air	6020	622097
320-92578-9	GESPM090622-243	Total/NA	Air	6020	622097
320-92578-11	GESPM090622-244	Total/NA	Air	6020	622097
320-92578-13	GESPM090622-245	Total/NA	Air	6020	622097
320-92578-15	GESPM090622-246	Total/NA	Air	6020	622097
320-92578-17	GESPM090622-247	Total/NA	Air	6020	622097
320-92578-19	GESPM090622-248	Total/NA	Air	6020	622097
320-92578-21	GESPM090622-249	Total/NA	Air	6020	622097
320-92578-23	GESPM090622-250	Total/NA	Air	6020	622097
320-92578-25	GESPM090622-251	Total/NA	Air	6020	622097

Metals (Continued)

Analysis Batch: 622595 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 320-622090/1-B	Method Blank	Total/NA	Air	6020	622097
LCS 320-622090/2-B	Lab Control Sample	Total/NA	Air	6020	622097
LCSD 320-622090/3-B	Lab Control Sample Dup	Total/NA	Air	6020	622097

General Chemistry

Pre Prep Batch: 621997

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-92578-2	GESTSP090622-239	Total/NA	Air	Filter to Air	
320-92578-4	GESTSP090622-240	Total/NA	Air	Filter to Air	
320-92578-6	GESTSP090622-241	Total/NA	Air	Filter to Air	
320-92578-8	GESTSP090622-242	Total/NA	Air	Filter to Air	
320-92578-10	GESTSP090622-243	Total/NA	Air	Filter to Air	
320-92578-12	GESTSP090622-244	Total/NA	Air	Filter to Air	
320-92578-14	GESTSP090622-245	Total/NA	Air	Filter to Air	
320-92578-16	GESTSP090622-246	Total/NA	Air	Filter to Air	
320-92578-18	GESTSP090622-247	Total/NA	Air	Filter to Air	
320-92578-20	GESTSP090622-248	Total/NA	Air	Filter to Air	
320-92578-22	GESTSP090622-249	Total/NA	Air	Filter to Air	
320-92578-24	GESTSP090622-250	Total/NA	Air	Filter to Air	
320-92578-26	GESTSP090622-251	Total/NA	Air	Filter to Air	

Analysis Batch: 623417

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-92578-1	GESPM090622-239	Total/NA	Air	PM10	
320-92578-3	GESPM090622-240	Total/NA	Air	PM10	
320-92578-5	GESPM090622-241	Total/NA	Air	PM10	
320-92578-7	GESPM090622-242	Total/NA	Air	PM10	
320-92578-9	GESPM090622-243	Total/NA	Air	PM10	
320-92578-11	GESPM090622-244	Total/NA	Air	PM10	
320-92578-13	GESPM090622-245	Total/NA	Air	PM10	
320-92578-15	GESPM090622-246	Total/NA	Air	PM10	
320-92578-17	GESPM090622-247	Total/NA	Air	PM10	
320-92578-19	GESPM090622-248	Total/NA	Air	PM10	
320-92578-21	GESPM090622-249	Total/NA	Air	PM10	
320-92578-23	GESPM090622-250	Total/NA	Air	PM10	
320-92578-25	GESPM090622-251	Total/NA	Air	PM10	

Analysis Batch: 623418

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-92578-2	GESTSP090622-239	Total/NA	Air	40CFR50 App B	621997
320-92578-4	GESTSP090622-240	Total/NA	Air	40CFR50 App B	621997
320-92578-6	GESTSP090622-241	Total/NA	Air	40CFR50 App B	621997
320-92578-8	GESTSP090622-242	Total/NA	Air	40CFR50 App B	621997
320-92578-10	GESTSP090622-243	Total/NA	Air	40CFR50 App B	621997
320-92578-12	GESTSP090622-244	Total/NA	Air	40CFR50 App B	621997
320-92578-14	GESTSP090622-245	Total/NA	Air	40CFR50 App B	621997
320-92578-16	GESTSP090622-246	Total/NA	Air	40CFR50 App B	621997
320-92578-18	GESTSP090622-247	Total/NA	Air	40CFR50 App B	621997
320-92578-20	GESTSP090622-248	Total/NA	Air	40CFR50 App B	621997
320-92578-22	GESTSP090622-249	Total/NA	Air	40CFR50 App B	621997

General Chemistry (Continued)

Analysis Batch: 623418 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-92578-24	GESTSP090622-250	Total/NA	Air	40CFR50 App B	621997
320-92578-26	GESTSP090622-251	Total/NA	Air	40CFR50 App B	621997

Lab Chronicle

Client: GES-AIS, LLC
Project/Site: Hunters Point, Parcel B, Phase 2

Job ID: 320-92578-1

Client Sample ID: GESPM090622-239
Lab Sample ID: 320-92578-1
Date Collected: 09/20/22 07:30
Matrix: Air
Date Received: 09/29/22 09:20

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					622090	10/04/22 07:45	[redacted]	EET SAC
Total/NA	Prep	3050B			0.083333 Sample	100 mL	622097	10/04/22 08:30	[redacted]	EET SAC
Total/NA	Analysis	6020		1			622595	10/05/22 13:07	[redacted]	EET SAC
Total/NA	Analysis	PM10		1	0 g	0.0284 g	623417	09/30/22 13:00	[redacted]	EET SAC

Client Sample ID: GESTSP090622-239
Lab Sample ID: 320-92578-2
Date Collected: 09/20/22 07:30
Matrix: Air
Date Received: 09/29/22 09:20

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			623418	09/30/22 13:00	[redacted]	EET SAC
Total/NA	Pre Prep	Filter to Air					621997	10/03/22 15:50	[redacted]	EET SAC

Client Sample ID: GESPM090622-240
Lab Sample ID: 320-92578-3
Date Collected: 09/20/22 07:03
Matrix: Air
Date Received: 09/29/22 09:20

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					622090	10/04/22 07:45	[redacted]	EET SAC
Total/NA	Prep	3050B			0.083333 Sample	100 mL	622097	10/04/22 08:30	[redacted]	EET SAC
Total/NA	Analysis	6020		1			622595	10/05/22 13:17	[redacted]	EET SAC
Total/NA	Analysis	PM10		1	0 g	0.0234 g	623417	09/30/22 13:00	[redacted]	EET SAC

Client Sample ID: GESTSP090622-240
Lab Sample ID: 320-92578-4
Date Collected: 09/20/22 07:03
Matrix: Air
Date Received: 09/29/22 09:20

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			623418	09/30/22 13:00	[redacted]	EET SAC
Total/NA	Pre Prep	Filter to Air					621997	10/03/22 15:50	[redacted]	EET SAC

Client Sample ID: GESPM090622-241
Lab Sample ID: 320-92578-5
Date Collected: 09/20/22 07:18
Matrix: Air
Date Received: 09/29/22 09:20

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					622090	10/04/22 07:45	[redacted]	EET SAC
Total/NA	Prep	3050B			0.083333 Sample	100 mL	622097	10/04/22 08:30	[redacted]	EET SAC
Total/NA	Analysis	6020		1			622595	10/05/22 13:20	[redacted]	EET SAC
Total/NA	Analysis	PM10		1	0 g	0.0283 g	623417	09/30/22 13:00	[redacted]	EET SAC

Lab Chronicle

Client: GES-AIS, LLC
Project/Site: Hunters Point, Parcel B, Phase 2

Job ID: 320-92578-1

Client Sample ID: GESTSP090622-241
Lab Sample ID: 320-92578-6
Date Collected: 09/20/22 07:18
Matrix: Air
Date Received: 09/29/22 09:20

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			623418	09/30/22 13:00	[redacted]	EET SAC
Total/NA	Pre Prep	Filter to Air					621997	10/03/22 15:50	[redacted]	EET SAC

Client Sample ID: GESPM090622-242
Lab Sample ID: 320-92578-7
Date Collected: 09/19/22 08:00
Matrix: Air
Date Received: 09/29/22 09:20

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					622090	10/04/22 07:45	[redacted]	EET SAC
Total/NA	Prep	3050B			0.083333 Sample	100 mL	622097	10/04/22 08:30	[redacted]	EET SAC
Total/NA	Analysis	6020		1			622595	10/05/22 13:24	[redacted]	EET SAC
Total/NA	Analysis	PM10		1	0 g	-0.0001 g	623417	09/30/22 13:00	[redacted]	EET SAC

Client Sample ID: GESTSP090622-242
Lab Sample ID: 320-92578-8
Date Collected: 09/19/22 08:00
Matrix: Air
Date Received: 09/29/22 09:20

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			623418	09/30/22 13:00	[redacted]	EET SAC
Total/NA	Pre Prep	Filter to Air					621997	10/03/22 15:50	[redacted]	EET SAC

Client Sample ID: GESPM090622-243
Lab Sample ID: 320-92578-9
Date Collected: 09/21/22 07:59
Matrix: Air
Date Received: 09/29/22 09:20

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					622090	10/04/22 07:45	[redacted]	EET SAC
Total/NA	Prep	3050B			0.083333 Sample	100 mL	622097	10/04/22 08:30	[redacted]	EET SAC
Total/NA	Analysis	6020		1			622595	10/05/22 13:33	[redacted]	EET SAC
Total/NA	Analysis	PM10		1	0 g	0.0242 g	623417	09/30/22 13:00	[redacted]	EET SAC

Client Sample ID: GESTSP090622-243
Lab Sample ID: 320-92578-10
Date Collected: 09/21/22 07:59
Matrix: Air
Date Received: 09/29/22 09:20

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			623418	09/30/22 13:00	[redacted]	EET SAC
Total/NA	Pre Prep	Filter to Air					621997	10/03/22 15:50	[redacted]	EET SAC

Lab Chronicle

Client: GES-AIS, LLC
Project/Site: Hunters Point, Parcel B, Phase 2

Job ID: 320-92578-1

Client Sample ID: GESPM090622-244
Lab Sample ID: 320-92578-11
Date Collected: 09/21/22 07:21
Matrix: Air
Date Received: 09/29/22 09:20

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					622090	10/04/22 07:45	[redacted]	EET SAC
Total/NA	Prep	3050B			0.083333 Sample	100 mL	622097	10/04/22 08:30	[redacted]	EET SAC
Total/NA	Analysis	6020		1			622595	10/05/22 13:37	[redacted]	EET SAC
Total/NA	Analysis	PM10		1	0 g	0.0200 g	623417	09/30/22 13:00	[redacted]	EET SAC

Client Sample ID: GESTSP090622-244
Lab Sample ID: 320-92578-12
Date Collected: 09/21/22 07:21
Matrix: Air
Date Received: 09/29/22 09:20

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			623418	09/30/22 13:00	[redacted]	EET SAC
Total/NA	Pre Prep	Filter to Air					621997	10/03/22 15:50	[redacted]	EET SAC

Client Sample ID: GESPM090622-245
Lab Sample ID: 320-92578-13
Date Collected: 09/21/22 07:50
Matrix: Air
Date Received: 09/29/22 09:20

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					622090	10/04/22 07:45	[redacted]	EET SAC
Total/NA	Prep	3050B			0.083333 Sample	100 mL	622097	10/04/22 08:30	[redacted]	EET SAC
Total/NA	Analysis	6020		1			622595	10/05/22 13:40	[redacted]	EET SAC
Total/NA	Analysis	PM10		1	0 g	0.0228 g	623417	09/30/22 13:00	[redacted]	EET SAC

Client Sample ID: GESTSP090622-245
Lab Sample ID: 320-92578-14
Date Collected: 09/21/22 07:50
Matrix: Air
Date Received: 09/29/22 09:20

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			623418	09/30/22 13:00	[redacted]	EET SAC
Total/NA	Pre Prep	Filter to Air					621997	10/03/22 15:50	[redacted]	EET SAC

Client Sample ID: GESPM090622-246
Lab Sample ID: 320-92578-15
Date Collected: 09/22/22 08:51
Matrix: Air
Date Received: 09/29/22 09:20

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					622090	10/04/22 07:45	[redacted]	EET SAC
Total/NA	Prep	3050B			0.083333 Sample	100 mL	622097	10/04/22 08:30	[redacted]	EET SAC
Total/NA	Analysis	6020		1			622595	10/05/22 13:43	[redacted]	EET SAC
Total/NA	Analysis	PM10		1	0 g	0.0229 g	623417	09/30/22 13:00	[redacted]	EET SAC

Lab Chronicle

Client: GES-AIS, LLC
Project/Site: Hunters Point, Parcel B, Phase 2

Job ID: 320-92578-1

Client Sample ID: GESTSP090622-246
Lab Sample ID: 320-92578-16
Date Collected: 09/22/22 08:51
Matrix: Air
Date Received: 09/29/22 09:20

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			623418	09/30/22 13:00	[redacted]	EET SAC
Total/NA	Pre Prep	Filter to Air					621997	10/03/22 15:50	[redacted]	EET SAC

Client Sample ID: GESPM090622-247
Lab Sample ID: 320-92578-17
Date Collected: 09/22/22 07:22
Matrix: Air
Date Received: 09/29/22 09:20

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					622090	10/04/22 07:45	[redacted]	EET SAC
Total/NA	Prep	3050B			0.083333 Sample	100 mL	622097	10/04/22 08:30	[redacted]	EET SAC
Total/NA	Analysis	6020		1			622595	10/05/22 13:47	[redacted]	EET SAC
Total/NA	Analysis	PM10		1	0 g	0.0204 g	623417	09/30/22 13:00	[redacted]	EET SAC

Client Sample ID: GESTSP090622-247
Lab Sample ID: 320-92578-18
Date Collected: 09/22/22 07:22
Matrix: Air
Date Received: 09/29/22 09:20

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			623418	09/30/22 13:00	[redacted]	EET SAC
Total/NA	Pre Prep	Filter to Air					621997	10/03/22 15:50	[redacted]	EET SAC

Client Sample ID: GESPM090622-248
Lab Sample ID: 320-92578-19
Date Collected: 09/22/22 07:35
Matrix: Air
Date Received: 09/29/22 09:20

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					622090	10/04/22 07:45	[redacted]	EET SAC
Total/NA	Prep	3050B			0.083333 Sample	100 mL	622097	10/04/22 08:30	[redacted]	EET SAC
Total/NA	Analysis	6020		1			622595	10/05/22 13:50	[redacted]	EET SAC
Total/NA	Analysis	PM10		1	0 g	0.0151 g	623417	09/30/22 13:00	[redacted]	EET SAC

Client Sample ID: GESTSP090622-248
Lab Sample ID: 320-92578-20
Date Collected: 09/22/22 07:35
Matrix: Air
Date Received: 09/29/22 09:20

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			623418	09/30/22 13:00	[redacted]	EET SAC
Total/NA	Pre Prep	Filter to Air					621997	10/03/22 15:50	[redacted]	EET SAC

Lab Chronicle

Client: GES-AIS, LLC
Project/Site: Hunters Point, Parcel B, Phase 2

Job ID: 320-92578-1

Client Sample ID: GESPM090622-249
Lab Sample ID: 320-92578-21
Date Collected: 09/22/22 14:25
Matrix: Air
Date Received: 09/29/22 09:20

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					622090	10/04/22 07:45	[redacted]	EET SAC
Total/NA	Prep	3050B			0.083333 Sample	100 mL	622097	10/04/22 08:30	[redacted]	EET SAC
Total/NA	Analysis	6020		1			622595	10/05/22 13:53	[redacted]	EET SAC
Total/NA	Analysis	PM10		1	0 g	-0.0003 g	623417	09/30/22 13:00	[redacted]	EET SAC

Client Sample ID: GESTSP090622-249
Lab Sample ID: 320-92578-22
Date Collected: 09/22/22 14:25
Matrix: Air
Date Received: 09/29/22 09:20

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			623418	09/30/22 13:00	[redacted]	EET SAC
Total/NA	Pre Prep	Filter to Air					621997	10/03/22 15:50	[redacted]	EET SAC

Client Sample ID: GESPM090622-250
Lab Sample ID: 320-92578-23
Date Collected: 09/22/22 14:25
Matrix: Air
Date Received: 09/29/22 09:20

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					622090	10/04/22 07:45	[redacted]	EET SAC
Total/NA	Prep	3050B			0.083333 Sample	100 mL	622097	10/04/22 08:30	[redacted]	EET SAC
Total/NA	Analysis	6020		1			622595	10/05/22 13:57	[redacted]	EET SAC
Total/NA	Analysis	PM10		1	0 g	-0.0066 g	623417	09/30/22 13:00	[redacted]	EET SAC

Client Sample ID: GESTSP090622-250
Lab Sample ID: 320-92578-24
Date Collected: 09/22/22 14:25
Matrix: Air
Date Received: 09/29/22 09:20

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			623418	09/30/22 13:00	[redacted]	EET SAC
Total/NA	Pre Prep	Filter to Air					621997	10/03/22 15:50	[redacted]	EET SAC

Client Sample ID: GESPM090622-251
Lab Sample ID: 320-92578-25
Date Collected: 09/22/22 14:27
Matrix: Air
Date Received: 09/29/22 09:20

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					622090	10/04/22 07:45	[redacted]	EET SAC
Total/NA	Prep	3050B			0.083333 Sample	100 mL	622097	10/04/22 08:30	[redacted]	EET SAC
Total/NA	Analysis	6020		1			622595	10/05/22 14:00	[redacted]	EET SAC
Total/NA	Analysis	PM10		1	0 g	0.0006 g	623417	09/30/22 13:00	[redacted]	EET SAC

Lab Chronicle

Client: GES-AIS, LLC
Project/Site: Hunters Point, Parcel B, Phase 2

Job ID: 320-92578-1

Client Sample ID: GESTSP090622-251
Date Collected: 09/22/22 14:27
Date Received: 09/29/22 09:20

Lab Sample ID: 320-92578-26
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			623418	09/30/22 13:00	[redacted]	EET SAC
Total/NA	Pre Prep	Filter to Air					621997	10/03/22 15:50	[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
Job ID: 320-92578-1
Project/Site: Hunters Point, Parcel B, Phase 2

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

Method Summary

Client: GES-AIS, LLC
Job ID: 320-92578-1
Project/Site: Hunters Point, Parcel B, Phase 2

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: 320-92578-1
Project/Site: Hunters Point, Parcel B, Phase 2

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
320-92578-1	GESPM090622-239	Air	09/20/22 07:30	09/29/22 09:20
320-92578-2	GESTSP090622-239	Air	09/20/22 07:30	09/29/22 09:20
320-92578-3	GESPM090622-240	Air	09/20/22 07:03	09/29/22 09:20
320-92578-4	GESTSP090622-240	Air	09/20/22 07:03	09/29/22 09:20
320-92578-5	GESPM090622-241	Air	09/20/22 07:18	09/29/22 09:20
320-92578-6	GESTSP090622-241	Air	09/20/22 07:18	09/29/22 09:20
320-92578-7	GESPM090622-242	Air	09/19/22 08:00	09/29/22 09:20
320-92578-8	GESTSP090622-242	Air	09/19/22 08:00	09/29/22 09:20
320-92578-9	GESPM090622-243	Air	09/21/22 07:59	09/29/22 09:20
320-92578-10	GESTSP090622-243	Air	09/21/22 07:59	09/29/22 09:20
320-92578-11	GESPM090622-244	Air	09/21/22 07:21	09/29/22 09:20
320-92578-12	GESTSP090622-244	Air	09/21/22 07:21	09/29/22 09:20
320-92578-13	GESPM090622-245	Air	09/21/22 07:50	09/29/22 09:20
320-92578-14	GESTSP090622-245	Air	09/21/22 07:50	09/29/22 09:20
320-92578-15	GESPM090622-246	Air	09/22/22 08:51	09/29/22 09:20
320-92578-16	GESTSP090622-246	Air	09/22/22 08:51	09/29/22 09:20
320-92578-17	GESPM090622-247	Air	09/22/22 07:22	09/29/22 09:20
320-92578-18	GESTSP090622-247	Air	09/22/22 07:22	09/29/22 09:20
320-92578-19	GESPM090622-248	Air	09/22/22 07:35	09/29/22 09:20
320-92578-20	GESTSP090622-248	Air	09/22/22 07:35	09/29/22 09:20
320-92578-21	GESPM090622-249	Air	09/22/22 14:25	09/29/22 09:20
320-92578-22	GESTSP090622-249	Air	09/22/22 14:25	09/29/22 09:20
320-92578-23	GESPM090622-250	Air	09/22/22 14:25	09/29/22 09:20
320-92578-24	GESTSP090622-250	Air	09/22/22 14:25	09/29/22 09:20
320-92578-25	GESPM090622-251	Air	09/22/22 14:27	09/29/22 09:20
320-92578-26	GESTSP090622-251	Air	09/22/22 14:27	09/29/22 09:20

CHAIN-OF-CUSTODY RECORD

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

COC # KT092822AIRB

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:

Code	Matrix
A	Air
AQ	Air Quality Control Matrix

Code	Container/Preservative
1	1x 250-mL Plastic, 4 Degrees C
1	1x Envelope, None

320-92578 Chain of Custody

Event: Parcel B Air Monitoring

	Sample ID	Matrix	Date	Time	Samp Init.	CAAIR - Air PM10 (1)	N0500 - Air TSP (1)	SW6020 - Air Pb Mn (1)	Location ID	Sample Type	Depth (ft bgs) Top	Bottom	Cooler	Comments
1	GESPM090622-239	A	09/20/2022	0730	MC	X		X	MSB01	N1	0.00	0.00	1	VOLUME: 1635.64 (M3)
2	GESTSP090622-239	A	09/20/2022	0730	MC		X		MSB01	N1	0.00	0.00	1	VOLUME: 1730.63 (M3)
3	GESPM090622-240	A	09/20/2022	0703	MC	X		X	MSB02	N1	0.00	0.00	1	VOLUME: 1637.45 (M3)
4	GESTSP090622-240	A	09/20/2022	0703	MC		X		MSB02	N1	0.00	0.00	1	VOLUME: 1750.57 (M3)
5	GESPM090622-241	A	09/20/2022	0718	MC	X		X	MSB113A	N1	0.00	0.00	1	VOLUME: 1593.05 (M3)
6	GESTSP090622-241	A	09/20/2022	0718	MC		X		MSB113A	N1	0.00	0.00	1	VOLUME: 1552.58 (M3)
7	GESPM090622-242	AQ	09/19/2022	0800	MC	X		X	FIELDQC	FB1	0.00	0.00	1	
8	GESTSP090622-242	AQ	09/19/2022	0800	MC		X		FIELDQC	FB1	0.00	0.00	1	
9	GESPM090622-243	A	09/21/2022	0759	MC	X		X	MSB01	N1	0.00	0.00	1	VOLUME: 1692.11 (M3)
10	GESTSP090622-243	A	09/21/2022	0759	MC		X		MSB01	N1	0.00	0.00	1	VOLUME: 1843.57 (M3)
11	GESPM090622-244	A	09/21/2022	0721	MC	X		X	MSB02	N1	0.00	0.00	1	VOLUME: 1669.66 (M3)

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
[redacted]	9-28-22	1600	FEDEX	9-28-22	1600
			[redacted]	9/29/22	920

Shipping Date / Carrier / Airbill Number
Shipping Date: 9/28/2022/FEDEX 7779 8661 6716

Received by Laboratory: *(Signature, Date, Time)* **& condition**

20.3c

CHAIN-OF-CUSTODY RECORD

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

COC # KT092822AIRB

GES

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:

Code	Matrix
A	Air
AQ	Air Quality Control Matrix

Code	Container/Preservative
1	1x 250-mL Plastic, 4 Degrees C
1	1x Envelope, None

						Analytical Test Method															
						CAAIR - Air PM10	N0500 - Air TSP	SW6020 - Air Pb Mn													
	Event: Parcel B Air Monitoring					1	1	1													
	Sample ID	Matrix	Date	Time	Samp Init.											Location ID	Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom	Cooler	Comments
12	GESTSP090622-244	A	09/21/2022	0721	MC		X									MSB02	N1	0.00	0.00	1	VOLUME: 1796.97 (M3)
13	GESPM090622-245	A	09/21/2022	0750	MC	X		X								MSB113A	N1	0.00	0.00	1	VOLUME: 1630.46 (M3)
14	GESTSP090622-245	A	09/21/2022	0750	MC		X									MSB113A	N1	0.00	0.00	1	VOLUME: 1605.33 (M3)
15	GESPM090622-246	A	09/22/2022	0851	MC	X		X								MSB01	N1	0.00	0.00	1	VOLUME: 1680.46 (M3)
16	GESTSP090622-246	A	09/22/2022	0851	MC		X									MSB01	N1	0.00	0.00	1	VOLUME: 1799.65 (M3)
17	GESPM090622-247	A	09/22/2022	0722	MC	X		X								MSB02	N1	0.00	0.00	1	VOLUME: 1637.21 (M3)
18	GESTSP090622-247	A	09/22/2022	0722	MC		X									MSB02	N1	0.00	0.00	1	VOLUME: 1771.84 (M3)
19	GESPM090622-248	A	09/22/2022	0735	MC	X		X								MSB113A	N1	0.00	0.00	1	VOLUME: 1588.35 (M3)
20	GESTSP090622-248	A	09/22/2022	0735	MC		X									MSB113A	N1	0.00	0.00	1	VOLUME: 1562.37 (M3)
21	GESPM090622-249	A	09/22/2022	1425	MC	X		X								MSB01	N1	0.00	0.00	1	VOLUME: 373.53 (M3)
22	GESTSP090622-249	A	09/22/2022	1425	MC		X									MSB01	N1	0.00	0.00	1	VOLUME: 397.88 (M3)

Relinquished by: *(Signature)*	**Date**	**Time**	**Received by: *(Signature)***	**Date**	**Time**
[redacted]	9-28-22	1600	FEDEX	9-28-22	1600
			[redacted]	9/29/22	900

Shipping Date / Carrier / Airbill Number

Shipping Date: 9/28/2022/FEDEX 7779 8661 6716

Received by Laboratory: *(Signature, Date, Time)* **& condition**

20.3c

GES.Navy_COC_Field
September 27, 2022

CHAIN-OF-CUSTODY RECORD

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

COC # KT092822AIRB

GES

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:

Code	Matrix
A	Air
AQ	Air Quality Control Matrix

Code	Container/Preservative
1	1x 250-mL Plastic, 4 Degrees C
1	1x Envelope, None

Analytical Test Method

Event: Parcel B Air Monitoring

	Sample ID	Matrix	Date	Time	Samp Init.	CAAIR - Air PM10 (1)	N0500 - Air TSP (1)	SW6020 - Air Pb Mn (1)	Location ID	Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom	Cooler	Comments
23	GESPM090622-250	A	09/22/2022	1425	MC	X		X	MSB02	N1	0.00	0.00	1	VOLUME: 479.58 (M3)
24	GESTSP090622-250	A	09/22/2022	1425	MC		X		MSB02	N1	0.00	0.00	1	VOLUME: 517.52 (M3)
25	GESPM090622-251	A	09/22/2022	1427	MC	X		X	MSB113A	N1	0.00	0.00	1	VOLUME: 451.80 (M3)
26	GESTSP090622-251	A	09/22/2022	1427	MC		X		MSB113A	N1	0.00	0.00	1	VOLUME: 446.44 (M3)
27														
28														

N/A [redacted] 9-28-22

Turnaround Time: 5 days

Relinquished by: *(Signature)*	Date	Time	Received by: *(Signature)*	Date	Time
[redacted]	9-28-22	1600	FEDEX	9-28-22	1600
			[redacted]	9/29/2	920

Shipping Date / Carrier / Airbill Number

Shipping Date: 9/28/2022/FEDEX 7779 8661 6716

Received by Laboratory: *(Signature, Date, Time)* **& condition**

20.3c

Login Sample Receipt Checklist

Client: GES-AIS, LLC

Job Number: 320-92578-1

Login Number: 92578
List Number: 1
Creator: [redacted]

List Source: Eurofins Sacramento

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	

eurofins | Environment Testing America

ANALYTICAL REPORT

Eurofins Sacramento
880 Riverside Parkway
West Sacramento, CA 95605
Tel: (916)373-5600

Laboratory Job ID: 320-92865-1
Client Project/Site: Hunters Point, Parcel B, Phase 2

For:
GES-AIS, LLC
1501 W Fountainhead Parkway
Ste 550
Tempe, Arizona 85282

Attn: [redacted]

Authorized for release by:
10/20/2022 3:58:27 PM
[redacted], Project Manager I
([redacted])
[redacted]

Designee for

[redacted]Project Manager I
([redacted])
[redacted]

Table of Contents

Definitions/Glossary

Client: GES-AIS, LLC
Job ID: 320-92865-1
Project/Site: Hunters Point, Parcel B, Phase 2

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

Job ID: 320-92865-1

Laboratory: Eurofins Sacramento

Narrative

Job Narrative
320-92865-1

Receipt
The samples were received on 10/6/2022 9:40 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 20.1° C.

A revised CoC was provided via email to correct the collection data for sample GESTSP091922-295 (320-92865-16). Copies of both COCs are included in the report.

Metals
Method 40CFR50 App B: Sample was recorded with a negative net weight. No particulate loading on the filter or damage to the filter could be observed. GESTSP090622-252 (320-92865-2)

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: 320-92865-1
Project/Site: Hunters Point, Parcel B, Phase 2

Client Sample ID: GESPM090622-252 — Lab Sample ID: 320-92865-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Manganese	0.00030	J	0.0012	0.00017	ug/m3 (Air)	1		6020	Total/NA

Client Sample ID: GESTSP090622-252 — Lab Sample ID: 320-92865-2

No Detections.

Client Sample ID: GESPM091922-289 — Lab Sample ID: 320-92865-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lead	0.00061	J	0.00073	0.00011	ug/m3 (Air)	1		6020	Total/NA
Manganese	0.0027		0.00073	0.00010	ug/m3 (Air)	1		6020	Total/NA
Particulate Matter as PM 10	11		0.30	0.30	ug/m3	1		PM10	Total/NA

Client Sample ID: GESTSP091922-289 — Lab Sample ID: 320-92865-4

Analyte	Result	Qualifier	RL	RL	Unit	Dil Fac	D	Method	Prep Type
Total Suspended Particulates	14.7264		0.2810	0.2810	ug/m3 (Air)	1		40CFR50 App B	Total/NA

Client Sample ID: GESPM091922-290 — Lab Sample ID: 320-92865-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lead	0.00044	J	0.00074	0.00011	ug/m3 (Air)	1		6020	Total/NA
Manganese	0.0020		0.00074	0.00010	ug/m3 (Air)	1		6020	Total/NA
Particulate Matter as PM 10	10		0.31	0.31	ug/m3	1		PM10	Total/NA

Client Sample ID: GESTSP091922-290 — Lab Sample ID: 320-92865-6

Analyte	Result	Qualifier	RL	RL	Unit	Dil Fac	D	Method	Prep Type
Total Suspended Particulates	14.8105		0.2826	0.2826	ug/m3 (Air)	1		40CFR50 App B	Total/NA

Client Sample ID: GESPM091922-291 — Lab Sample ID: 320-92865-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lead	0.00067	J	0.00075	0.00011	ug/m3 (Air)	1		6020	Total/NA
Manganese	0.0024		0.00075	0.00010	ug/m3 (Air)	1		6020	Total/NA
Particulate Matter as PM 10	12		0.31	0.31	ug/m3	1		PM10	Total/NA

Client Sample ID: GESTSP091922-291 — Lab Sample ID: 320-92865-8

Analyte	Result	Qualifier	RL	RL	Unit	Dil Fac	D	Method	Prep Type
Total Suspended Particulates	16.8581		0.3099	0.3099	ug/m3 (Air)	1		40CFR50 App B	Total/NA

Client Sample ID: GESPM091922-292 — Lab Sample ID: 320-92865-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lead	0.00074		0.00074	0.00011	ug/m3 (Air)	1		6020	Total/NA
Manganese	0.0024		0.00074	0.00010	ug/m3 (Air)	1		6020	Total/NA
Particulate Matter as PM 10	12		0.31	0.31	ug/m3	1		PM10	Total/NA

Client Sample ID: GESTSP091922-292 — Lab Sample ID: 320-92865-10

Analyte	Result	Qualifier	RL	RL	Unit	Dil Fac	D	Method	Prep Type
Total Suspended Particulates	17.9577		0.2878	0.2878	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: 320-92865-1
Project/Site: Hunters Point, Parcel B, Phase 2

Client Sample ID: GESPM091922-293 — Lab Sample ID: 320-92865-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lead	0.00053	J	0.00073	0.00011	ug/m3 (Air)	1		6020	Total/NA
Manganese	0.0019		0.00073	0.00010	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: GESTSP091922-293 — Lab Sample ID: 320-92865-12

Analyte	Result	Qualifier	RL	RL	Unit	Dil Fac	D	Method	Prep Type
Total Suspended Particulates	20.1981		0.2845	0.2845	ug/m3 (Air)	1		40CFR50 App B	Total/NA

Client Sample ID: GESPM091922-294 — Lab Sample ID: 320-92865-13

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lead	0.0010		0.00075	0.00011	ug/m3 (Air)	1		6020	Total/NA
Manganese	0.0030		0.00075	0.00011	ug/m3 (Air)	1		6020	Total/NA
Particulate Matter as PM 10	14		0.31	0.31	ug/m3	1		PM10	Total/NA

Client Sample ID: GESTSP091922-294 — Lab Sample ID: 320-92865-14

Analyte	Result	Qualifier	RL	RL	Unit	Dil Fac	D	Method	Prep Type
Total Suspended Particulates	21.9283		0.3151	0.3151	ug/m3 (Air)	1		40CFR50 App B	Total/NA

Client Sample ID: GESPM091922-295 — Lab Sample ID: 320-92865-15

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lead	0.00040	J	0.00074	0.00011	ug/m3 (Air)	1		6020	Total/NA
Manganese	0.0014		0.00074	0.00010	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: GESTSP091922-295 — Lab Sample ID: 320-92865-16

Analyte	Result	Qualifier	RL	RL	Unit	Dil Fac	D	Method	Prep Type
Total Suspended Particulates	19.2112		0.2867	0.2867	ug/m3 (Air)	1		40CFR50 App B	Total/NA

Client Sample ID: GESPM091922-296 — Lab Sample ID: 320-92865-17

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lead	0.00055	J	0.00074	0.00011	ug/m3 (Air)	1		6020	Total/NA
Manganese	0.0015		0.00074	0.00010	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: GESTSP091922-296 — Lab Sample ID: 320-92865-18

Analyte	Result	Qualifier	RL	RL	Unit	Dil Fac	D	Method	Prep Type
Total Suspended Particulates	19.1746		0.2845	0.2845	ug/m3 (Air)	1		40CFR50 App B	Total/NA

Client Sample ID: GESPM091922-297 — Lab Sample ID: 320-92865-19

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lead	0.00059	J	0.00076	0.00011	ug/m3 (Air)	1		6020	Total/NA
Manganese	0.0018		0.00076	0.00011	ug/m3 (Air)	1		6020	Total/NA
Particulate Matter as PM 10	13		0.31	0.31	ug/m3	1		PM10	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: GES-AIS, LLC
Job ID: 320-92865-1
Project/Site: Hunters Point, Parcel B, Phase 2

Client Sample ID: GESTSP091922-297 — Lab Sample ID: 320-92865-20

Analyte	Result	Qualifier	RL	RL	Unit	Dil Fac	D	Method	Prep Type
Total Suspended Particulates	22.0522		0.3159	0.3159	ug/m3 (Air)	1		40CFR50 App B	Total/NA

Client Sample ID: GESPM091922-298 — Lab Sample ID: 320-92865-21

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lead	0.0013	J	0.0023	0.00035	ug/m3 (Air)	1		6020	Total/NA
Manganese	0.015		0.0023	0.00033	ug/m3 (Air)	1		6020	Total/NA
Particulate Matter as PM 10	31		0.97	0.97	ug/m3	1		PM10	Total/NA

Client Sample ID: GESTSP091922-298 — Lab Sample ID: 320-92865-22

Analyte	Result	Qualifier	RL	RL	Unit	Dil Fac	D	Method	Prep Type
Total Suspended Particulates	56.3100		0.9053	0.9053	ug/m3 (Air)	1		40CFR50 App B	Total/NA

Client Sample ID: GESPM091922-299 — Lab Sample ID: 320-92865-23

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lead	0.0012	J	0.0022	0.00033	ug/m3 (Air)	1		6020	Total/NA
Manganese	0.0034		0.0022	0.00031	ug/m3 (Air)	1		6020	Total/NA
Particulate Matter as PM 10	16		0.91	0.91	ug/m3	1		PM10	Total/NA

Client Sample ID: GESTSP091922-299 — Lab Sample ID: 320-92865-24

Analyte	Result	Qualifier	RL	RL	Unit	Dil Fac	D	Method	Prep Type
Total Suspended Particulates	22.4879		0.8454	0.8454	ug/m3 (Air)	1		40CFR50 App B	Total/NA

Client Sample ID: GESPM091922-300 — Lab Sample ID: 320-92865-25

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lead	0.0013	J	0.0023	0.00035	ug/m3 (Air)	1		6020	Total/NA
Manganese	0.0046		0.0023	0.00033	ug/m3 (Air)	1		6020	Total/NA
Particulate Matter as PM 10	24		0.97	0.97	ug/m3	1		PM10	Total/NA

Client Sample ID: GESTSP091922-300 — Lab Sample ID: 320-92865-26

Analyte	Result	Qualifier	RL	RL	Unit	Dil Fac	D	Method	Prep Type
Total Suspended Particulates	26.6411		0.9795	0.9795	ug/m3 (Air)	1		40CFR50 App B	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: GESPM090622-252
Lab Sample ID: 320-92865-1
Date Collected: 09/26/22 08:00
Matrix: Air
Date Received: 10/06/22 09:40
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)		10/12/22 05:30	10/13/22 11:06	1
Manganese	**0.00030**	**J**	0.0012	0.00017	ug/m3 (Air)		10/12/22 05:30	10/13/22 11:06	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			10/07/22 14:30	1

Client Sample ID: GESTSP090622-252
Lab Sample ID: 320-92865-2
Date Collected: 09/26/22 08:00
Matrix: Air
Date Received: 10/06/22 09:40
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)			10/07/22 14:30	1

Client Sample ID: GESPM091922-289
Lab Sample ID: 320-92865-3
Date Collected: 09/27/22 07:50
Matrix: Air
Date Received: 10/06/22 09:40
Sample Container: Folder/Filter

Method: SW846 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	**0.00061**	**J**	0.00073	0.00011	ug/m3 (Air)		10/12/22 05:30	10/13/22 11:22	1
Manganese	**0.0027**		0.00073	0.00010	ug/m3 (Air)		10/12/22 05:30	10/13/22 11:22	1

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Particulate Matter as PM 10 (40CFR50J PM10)	**11**		0.30	0.30	ug/m3			10/07/22 14:30	1

Client Sample ID: GESTSP091922-289
Lab Sample ID: 320-92865-4
Date Collected: 09/27/22 07:50
Matrix: Air
Date Received: 10/06/22 09:40
Sample Container: Folder/Filter

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Particulates (EPA 40CFR50 App B)	**14.7264**		0.2810	0.2810	ug/m3 (Air)			10/07/22 14:30	1

Client Sample ID: GESPM091922-290
Lab Sample ID: 320-92865-5
Date Collected: 09/27/22 07:06
Matrix: Air
Date Received: 10/06/22 09:40
Sample Container: Folder/Filter

Method: SW846 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	**0.00044**	**J**	0.00074	0.00011	ug/m3 (Air)		10/12/22 05:30	10/13/22 11:25	1
Manganese	**0.0020**		0.00074	0.00010	ug/m3 (Air)		10/12/22 05:30	10/13/22 11:25	1

Client Sample ID: GESPM091922-290
Lab Sample ID: 320-92865-5
Date Collected: 09/27/22 07:06
Matrix: Air
Date Received: 10/06/22 09:40
Sample Container: Folder/Filter

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Particulate Matter as PM 10 (40CFR50J PM10)	10		0.31	0.31	ug/m3			10/07/22 14:30	1

Client Sample ID: GESTSP091922-290
Lab Sample ID: 320-92865-6
Date Collected: 09/27/22 07:06
Matrix: Air
Date Received: 10/06/22 09:40
Sample Container: Folder/Filter

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Particulates (EPA 40CFR50 App B)	14.8105		0.2826	0.2826	ug/m3 (Air)			10/07/22 14:30	1

Client Sample ID: GESPM091922-291
Lab Sample ID: 320-92865-7
Date Collected: 09/27/22 07:31
Matrix: Air
Date Received: 10/06/22 09:40
Sample Container: Folder/Filter

Method: SW846 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	0.00067	J	0.00075	0.00011	ug/m3 (Air)		10/12/22 05:30	10/13/22 11:29	1
Manganese	0.0024		0.00075	0.00010	ug/m3 (Air)		10/12/22 05:30	10/13/22 11:29	1

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Particulate Matter as PM 10 (40CFR50J PM10)	12		0.31	0.31	ug/m3			10/07/22 14:30	1

Client Sample ID: GESTSP091922-291
Lab Sample ID: 320-92865-8
Date Collected: 09/27/22 07:31
Matrix: Air
Date Received: 10/06/22 09:40
Sample Container: Folder/Filter

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Particulates (EPA 40CFR50 App B)	16.8581		0.3099	0.3099	ug/m3 (Air)			10/07/22 14:30	1

Client Sample ID: GESPM091922-292
Lab Sample ID: 320-92865-9
Date Collected: 09/28/22 07:41
Matrix: Air
Date Received: 10/06/22 09:40
Sample Container: Folder/Filter

Method: SW846 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	0.00074		0.00074	0.00011	ug/m3 (Air)		10/12/22 05:30	10/13/22 11:32	1
Manganese	0.0024		0.00074	0.00010	ug/m3 (Air)		10/12/22 05:30	10/13/22 11:32	1

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Particulate Matter as PM 10 (40CFR50J PM10)	12		0.31	0.31	ug/m3			10/07/22 14:30	1

Client Sample ID: GESTSP091922-292
Lab Sample ID: 320-92865-10
Date Collected: 09/28/22 07:41
Matrix: Air
Date Received: 10/06/22 09:40
Sample Container: Folder/Filter

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Particulates (EPA 40CFR50 App B)	17.9577		0.2878	0.2878	ug/m3 (Air)			10/07/22 14:30	1

Client Sample ID: GESPM091922-293
Lab Sample ID: 320-92865-11
Date Collected: 09/28/22 07:15
Matrix: Air
Date Received: 10/06/22 09:40
Sample Container: Folder/Filter

Method: SW846 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	0.00053	J	0.00073	0.00011	ug/m3 (Air)		10/12/22 05:30	10/13/22 11:35	1
Manganese	0.0019		0.00073	0.00010	ug/m3 (Air)		10/12/22 05:30	10/13/22 11:35	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			10/07/22 14:30	1

Client Sample ID: GESTSP091922-293
Lab Sample ID: 320-92865-12
Date Collected: 09/28/22 07:15
Matrix: Air
Date Received: 10/06/22 09:40
Sample Container: Folder/Filter

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Particulates (EPA 40CFR50 App B)	20.1981		0.2845	0.2845	ug/m3 (Air)			10/07/22 14:30	1

Client Sample ID: GESPM091922-294
Lab Sample ID: 320-92865-13
Date Collected: 09/28/22 07:29
Matrix: Air
Date Received: 10/06/22 09:40
Sample Container: Folder/Filter

Method: SW846 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	0.0010		0.00075	0.00011	ug/m3 (Air)		10/12/22 05:30	10/13/22 11:38	1
Manganese	0.0030		0.00075	0.00011	ug/m3 (Air)		10/12/22 05:30	10/13/22 11:38	1

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Particulate Matter as PM 10 (40CFR50J PM10)	14		0.31	0.31	ug/m3			10/07/22 14:30	1

Client Sample ID: GESTSP091922-294
Lab Sample ID: 320-92865-14
Date Collected: 09/28/22 07:29
Matrix: Air
Date Received: 10/06/22 09:40
Sample Container: Folder/Filter

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Particulates (EPA 40CFR50 App B)	21.9283		0.3151	0.3151	ug/m3 (Air)			10/07/22 14:30	1

Client Sample ID: GESPM091922-295
Lab Sample ID: 320-92865-15
Date Collected: 09/29/22 07:29
Matrix: Air
Date Received: 10/06/22 09:40
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	0.00074	0.00011	ug/m3 (Air)		10/12/22 05:30	10/13/22 11:48	1
Manganese	0.0014		0.00074	0.00010	ug/m3 (Air)		10/12/22 05:30	10/13/22 11:48	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			10/07/22 14:30	1

Client Sample ID: GESTSP091922-295
Lab Sample ID: 320-92865-16
Date Collected: 09/29/22 07:29
Matrix: Air
Date Received: 10/06/22 09:40
Sample Container: Folder/Filter

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Particulates (EPA 40CFR50 App B)	19.2112		0.2867	0.2867	ug/m3 (Air)			10/07/22 14:30	1

Client Sample ID: GESPM091922-296
Lab Sample ID: 320-92865-17
Date Collected: 09/29/22 07:00
Matrix: Air
Date Received: 10/06/22 09:40
Sample Container: Folder/Filter

Method: SW846 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	0.00055	J	0.00074	0.00011	ug/m3 (Air)		10/12/22 05:30	10/13/22 11:52	1
Manganese	0.0015		0.00074	0.00010	ug/m3 (Air)		10/12/22 05:30	10/13/22 11:52	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			10/07/22 14:30	1

Client Sample ID: GESTSP091922-296
Lab Sample ID: 320-92865-18
Date Collected: 09/29/22 07:00
Matrix: Air
Date Received: 10/06/22 09:40
Sample Container: Folder/Filter

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Particulates (EPA 40CFR50 App B)	19.1746		0.2845	0.2845	ug/m3 (Air)			10/07/22 14:30	1

Client Sample ID: GESPM091922-297
Lab Sample ID: 320-92865-19
Date Collected: 09/29/22 07:16
Matrix: Air
Date Received: 10/06/22 09:40
Sample Container: Folder/Filter

Method: SW846 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	0.00059	J	0.00076	0.00011	ug/m3 (Air)		10/12/22 05:30	10/13/22 11:55	1
Manganese	0.0018		0.00076	0.00011	ug/m3 (Air)		10/12/22 05:30	10/13/22 11:55	1

Client Sample ID: GESPM091922-297
Lab Sample ID: 320-92865-19
Date Collected: 09/29/22 07:16
Matrix: Air
Date Received: 10/06/22 09:40
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			10/07/22 14:30	1

Client Sample ID: GESTSP091922-297
Lab Sample ID: 320-92865-20
Date Collected: 09/29/22 07:16
Matrix: Air
Date Received: 10/06/22 09:40
Sample Container: Folder/Filter

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Particulates (EPA 40CFR50 App B)	22.0522		0.3159	0.3159	ug/m3 (Air)			10/07/22 14:30	1

Client Sample ID: GESPM091922-298
Lab Sample ID: 320-92865-21
Date Collected: 09/29/22 15:02
Matrix: Air
Date Received: 10/06/22 09:40
Sample Container: Folder/Filter

Method: SW846 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	0.0013	J	0.0023	0.00035	ug/m3 (Air)		10/12/22 05:30	10/13/22 11:58	1
Manganese	0.015		0.0023	0.00033	ug/m3 (Air)		10/12/22 05:30	10/13/22 11:58	1

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Particulate Matter as PM 10 (40CFR50J PM10)	31		0.97	0.97	ug/m3			10/07/22 14:30	1

Client Sample ID: GESTSP091922-298
Lab Sample ID: 320-92865-22
Date Collected: 09/29/22 15:02
Matrix: Air
Date Received: 10/06/22 09:40
Sample Container: Folder/Filter

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Particulates (EPA 40CFR50 App B)	56.3100		0.9053	0.9053	ug/m3 (Air)			10/07/22 14:30	1

Client Sample ID: GESPM091922-299
Lab Sample ID: 320-92865-23
Date Collected: 09/29/22 15:10
Matrix: Air
Date Received: 10/06/22 09:40
Sample Container: Folder/Filter

Method: SW846 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	0.0012	J	0.0022	0.00033	ug/m3 (Air)		10/12/22 05:30	10/13/22 12:01	1
Manganese	0.0034		0.0022	0.00031	ug/m3 (Air)		10/12/22 05:30	10/13/22 12:01	1

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Particulate Matter as PM 10 (40CFR50J PM10)	16		0.91	0.91	ug/m3			10/07/22 14:30	1

Client: GES-AIS, LLC
Job ID: 320-92865-1
Project/Site: Hunters Point, Parcel B, Phase 2

Client Sample ID: GESTSP091922-299
Lab Sample ID: 320-92865-24
Date Collected: 09/29/22 15:10
Matrix: Air
Date Received: 10/06/22 09:40
Sample Container: Folder/Filter

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Particulates (EPA 40CFR50 App B)	22.4879		0.8454	0.8454	ug/m3 (Air)			10/07/22 14:30	1

Client Sample ID: GESPM091922-300
Lab Sample ID: 320-92865-25
Date Collected: 09/29/22 15:05
Matrix: Air
Date Received: 10/06/22 09:40
Sample Container: Folder/Filter

Method: SW846 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	0.0013	J	0.0023	0.00035	ug/m3 (Air)		10/12/22 05:30	10/13/22 12:05	1
Manganese	0.0046		0.0023	0.00033	ug/m3 (Air)		10/12/22 05:30	10/13/22 12:05	1

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Particulate Matter as PM 10 (40CFR50J PM10)	24		0.97	0.97	ug/m3			10/07/22 14:30	1

Client Sample ID: GESTSP091922-300
Lab Sample ID: 320-92865-26
Date Collected: 09/29/22 15:05
Matrix: Air
Date Received: 10/06/22 09:40
Sample Container: Folder/Filter

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Particulates (EPA 40CFR50 App B)	26.6411		0.9795	0.9795	ug/m3 (Air)			10/07/22 14:30	1

QC Sample Results

Client: GES-AIS, LLC
Project/Site: Hunters Point, Parcel B, Phase 2

Job ID: 320-92865-1

Method: 6020 - Metals (ICP/MS)

Lab Sample ID: MB 320-624191/1-B
Matrix: Air
Analysis Batch: 624560

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 624196

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	ND		0.0012	0.00018	ug/m3 (Air)		10/12/22 05:30	10/13/22 10:56	1
Manganese	ND		0.0012	0.00017	ug/m3 (Air)		10/12/22 05:30	10/13/22 10:56	1

Lab Sample ID: LCS 320-624191/2-B
Matrix: Air
Analysis Batch: 624560

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 624196

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Lead			0.240	0.255		ug/m3 (Air)		106	86 - 111		
Manganese			0.240	0.253		ug/m3 (Air)		105	88 - 110		

Lab Sample ID: LCSD 320-624191/3-B
Matrix: Air
Analysis Batch: 624560

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 624196

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Lead			0.240	0.260		ug/m3 (Air)		108	86 - 111	2	15
Manganese			0.240	0.255		ug/m3 (Air)		106	88 - 110	1	15

Metals

Pre Prep Batch: 624191

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-92865-1	GESPM090622-252	Total/NA	Air	Filter to Air	
320-92865-3	GESPM091922-289	Total/NA	Air	Filter to Air	
320-92865-5	GESPM091922-290	Total/NA	Air	Filter to Air	
320-92865-7	GESPM091922-291	Total/NA	Air	Filter to Air	
320-92865-9	GESPM091922-292	Total/NA	Air	Filter to Air	
320-92865-11	GESPM091922-293	Total/NA	Air	Filter to Air	
320-92865-13	GESPM091922-294	Total/NA	Air	Filter to Air	
320-92865-15	GESPM091922-295	Total/NA	Air	Filter to Air	
320-92865-17	GESPM091922-296	Total/NA	Air	Filter to Air	
320-92865-19	GESPM091922-297	Total/NA	Air	Filter to Air	
320-92865-21	GESPM091922-298	Total/NA	Air	Filter to Air	
320-92865-23	GESPM091922-299	Total/NA	Air	Filter to Air	
320-92865-25	GESPM091922-300	Total/NA	Air	Filter to Air	
MB 320-624191/1-B	Method Blank	Total/NA	Air	Filter to Air	
LCS 320-624191/2-B	Lab Control Sample	Total/NA	Air	Filter to Air	
LCSD 320-624191/3-B	Lab Control Sample Dup	Total/NA	Air	Filter to Air	

Prep Batch: 624196

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-92865-1	GESPM090622-252	Total/NA	Air	3050B	624191
320-92865-3	GESPM091922-289	Total/NA	Air	3050B	624191
320-92865-5	GESPM091922-290	Total/NA	Air	3050B	624191
320-92865-7	GESPM091922-291	Total/NA	Air	3050B	624191
320-92865-9	GESPM091922-292	Total/NA	Air	3050B	624191
320-92865-11	GESPM091922-293	Total/NA	Air	3050B	624191
320-92865-13	GESPM091922-294	Total/NA	Air	3050B	624191
320-92865-15	GESPM091922-295	Total/NA	Air	3050B	624191
320-92865-17	GESPM091922-296	Total/NA	Air	3050B	624191
320-92865-19	GESPM091922-297	Total/NA	Air	3050B	624191
320-92865-21	GESPM091922-298	Total/NA	Air	3050B	624191
320-92865-23	GESPM091922-299	Total/NA	Air	3050B	624191
320-92865-25	GESPM091922-300	Total/NA	Air	3050B	624191
MB 320-624191/1-B	Method Blank	Total/NA	Air	3050B	624191
LCS 320-624191/2-B	Lab Control Sample	Total/NA	Air	3050B	624191
LCSD 320-624191/3-B	Lab Control Sample Dup	Total/NA	Air	3050B	624191

Analysis Batch: 624560

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-92865-1	GESPM090622-252	Total/NA	Air	6020	624196
320-92865-3	GESPM091922-289	Total/NA	Air	6020	624196
320-92865-5	GESPM091922-290	Total/NA	Air	6020	624196
320-92865-7	GESPM091922-291	Total/NA	Air	6020	624196
320-92865-9	GESPM091922-292	Total/NA	Air	6020	624196
320-92865-11	GESPM091922-293	Total/NA	Air	6020	624196
320-92865-13	GESPM091922-294	Total/NA	Air	6020	624196
320-92865-15	GESPM091922-295	Total/NA	Air	6020	624196
320-92865-17	GESPM091922-296	Total/NA	Air	6020	624196
320-92865-19	GESPM091922-297	Total/NA	Air	6020	624196
320-92865-21	GESPM091922-298	Total/NA	Air	6020	624196
320-92865-23	GESPM091922-299	Total/NA	Air	6020	624196
320-92865-25	GESPM091922-300	Total/NA	Air	6020	624196

Metals (Continued)

Analysis Batch: 624560 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 320-624191/1-B	Method Blank	Total/NA	Air	6020	624196
LCS 320-624191/2-B	Lab Control Sample	Total/NA	Air	6020	624196
LCSD 320-624191/3-B	Lab Control Sample Dup	Total/NA	Air	6020	624196

General Chemistry

Pre Prep Batch: 625527

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-92865-2	GESTSP090622-252	Total/NA	Air	Filter to Air	
320-92865-4	GESTSP091922-289	Total/NA	Air	Filter to Air	
320-92865-6	GESTSP091922-290	Total/NA	Air	Filter to Air	
320-92865-8	GESTSP091922-291	Total/NA	Air	Filter to Air	
320-92865-10	GESTSP091922-292	Total/NA	Air	Filter to Air	
320-92865-12	GESTSP091922-293	Total/NA	Air	Filter to Air	
320-92865-14	GESTSP091922-294	Total/NA	Air	Filter to Air	
320-92865-16	GESTSP091922-295	Total/NA	Air	Filter to Air	
320-92865-18	GESTSP091922-296	Total/NA	Air	Filter to Air	
320-92865-20	GESTSP091922-297	Total/NA	Air	Filter to Air	
320-92865-22	GESTSP091922-298	Total/NA	Air	Filter to Air	
320-92865-24	GESTSP091922-299	Total/NA	Air	Filter to Air	
320-92865-26	GESTSP091922-300	Total/NA	Air	Filter to Air	

Analysis Batch: 625877

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-92865-1	GESPM090622-252	Total/NA	Air	PM10	
320-92865-3	GESPM091922-289	Total/NA	Air	PM10	
320-92865-5	GESPM091922-290	Total/NA	Air	PM10	
320-92865-7	GESPM091922-291	Total/NA	Air	PM10	
320-92865-9	GESPM091922-292	Total/NA	Air	PM10	
320-92865-11	GESPM091922-293	Total/NA	Air	PM10	
320-92865-13	GESPM091922-294	Total/NA	Air	PM10	
320-92865-15	GESPM091922-295	Total/NA	Air	PM10	
320-92865-17	GESPM091922-296	Total/NA	Air	PM10	
320-92865-19	GESPM091922-297	Total/NA	Air	PM10	
320-92865-21	GESPM091922-298	Total/NA	Air	PM10	
320-92865-23	GESPM091922-299	Total/NA	Air	PM10	
320-92865-25	GESPM091922-300	Total/NA	Air	PM10	

Analysis Batch: 625878

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-92865-2	GESTSP090622-252	Total/NA	Air	40CFR50 App B	625527
320-92865-4	GESTSP091922-289	Total/NA	Air	40CFR50 App B	625527
320-92865-6	GESTSP091922-290	Total/NA	Air	40CFR50 App B	625527
320-92865-8	GESTSP091922-291	Total/NA	Air	40CFR50 App B	625527
320-92865-10	GESTSP091922-292	Total/NA	Air	40CFR50 App B	625527
320-92865-12	GESTSP091922-293	Total/NA	Air	40CFR50 App B	625527
320-92865-14	GESTSP091922-294	Total/NA	Air	40CFR50 App B	625527
320-92865-16	GESTSP091922-295	Total/NA	Air	40CFR50 App B	625527
320-92865-18	GESTSP091922-296	Total/NA	Air	40CFR50 App B	625527
320-92865-20	GESTSP091922-297	Total/NA	Air	40CFR50 App B	625527
320-92865-22	GESTSP091922-298	Total/NA	Air	40CFR50 App B	625527

General Chemistry (Continued)

Analysis Batch: 625878 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-92865-24	GESTSP091922-299	Total/NA	Air	40CFR50 App B	625527
320-92865-26	GESTSP091922-300	Total/NA	Air	40CFR50 App B	625527

Lab Chronicle

Client: GES-AIS, LLC
Project/Site: Hunters Point, Parcel B, Phase 2

Job ID: 320-92865-1

Client Sample ID: GESPM090622-252
Lab Sample ID: 320-92865-1
Date Collected: 09/26/22 08:00
Matrix: Air
Date Received: 10/06/22 09:40

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					624191	10/12/22 04:30	[redacted]	EET SAC
Total/NA	Prep	3050B			0.08333 Sample	100 mL	624196	10/12/22 05:30	[redacted]	EET SAC
Total/NA	Analysis	6020		1			624560	10/13/22 11:06	[redacted]	EET SAC
Total/NA	Analysis	PM10		1	0 g	0.0004 g	625877	10/07/22 14:30	[redacted]	EET SAC

Client Sample ID: GESTSP090622-252
Lab Sample ID: 320-92865-2
Date Collected: 09/26/22 08:00
Matrix: Air
Date Received: 10/06/22 09:40

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			625878	10/07/22 14:30	[redacted]	EET SAC
Total/NA	Pre Prep	Filter to Air					625527	10/17/22 16:15	[redacted]	EET SAC

Client Sample ID: GESPM091922-289
Lab Sample ID: 320-92865-3
Date Collected: 09/27/22 07:50
Matrix: Air
Date Received: 10/06/22 09:40

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					624191	10/12/22 04:30	[redacted]	EET SAC
Total/NA	Prep	3050B			0.08333 Sample	100 mL	624196	10/12/22 05:30	[redacted]	EET SAC
Total/NA	Analysis	6020		1			624560	10/13/22 11:22	[redacted]	EET SAC
Total/NA	Analysis	PM10		1	0 g	0.0186 g	625877	10/07/22 14:30	[redacted]	EET SAC

Client Sample ID: GESTSP091922-289
Lab Sample ID: 320-92865-4
Date Collected: 09/27/22 07:50
Matrix: Air
Date Received: 10/06/22 09:40

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			625878	10/07/22 14:30	[redacted]	EET SAC
Total/NA	Pre Prep	Filter to Air					625527	10/17/22 16:15	[redacted]	EET SAC

Client Sample ID: GESPM091922-290
Lab Sample ID: 320-92865-5
Date Collected: 09/27/22 07:06
Matrix: Air
Date Received: 10/06/22 09:40

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					624191	10/12/22 04:30	[redacted]	EET SAC
Total/NA	Prep	3050B			0.08333 Sample	100 mL	624196	10/12/22 05:30	[redacted]	EET SAC
Total/NA	Analysis	6020		1			624560	10/13/22 11:25	[redacted]	EET SAC
Total/NA	Analysis	PM10		1	0 g	0.0163 g	625877	10/07/22 14:30	[redacted]	EET SAC

Lab Chronicle

Client: GES-AIS, LLC
Project/Site: Hunters Point, Parcel B, Phase 2

Job ID: 320-92865-1

Client Sample ID: GESTSP091922-290

Lab Sample ID: 320-92865-6

Date Collected: 09/27/22 07:06

Matrix: Air

Date Received: 10/06/22 09:40

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			625878	10/07/22 14:30	[redacted]	EET SAC
Total/NA	Pre Prep	Filter to Air					625527	10/17/22 16:15	[redacted]	EET SAC

Client Sample ID: GESPM091922-291

Lab Sample ID: 320-92865-7

Date Collected: 09/27/22 07:31

Matrix: Air

Date Received: 10/06/22 09:40

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					624191	10/12/22 04:30	[redacted]	EET SAC
Total/NA	Prep	3050B			0.08333 Sample	100 mL	624196	10/12/22 05:30	[redacted]	EET SAC
Total/NA	Analysis	6020		1			624560	10/13/22 11:29	[redacted]	EET SAC
Total/NA	Analysis	PM10		1	0 g	0.0196 g	625877	10/07/22 14:30	[redacted]	EET SAC

Client Sample ID: GESTSP091922-291

Lab Sample ID: 320-92865-8

Date Collected: 09/27/22 07:31

Matrix: Air

Date Received: 10/06/22 09:40

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			625878	10/07/22 14:30	[redacted]	EET SAC
Total/NA	Pre Prep	Filter to Air					625527	10/17/22 16:15	[redacted]	EET SAC

Client Sample ID: GESPM091922-292

Lab Sample ID: 320-92865-9

Date Collected: 09/28/22 07:41

Matrix: Air

Date Received: 10/06/22 09:40

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					624191	10/12/22 04:30	[redacted]	EET SAC
Total/NA	Prep	3050B			0.08333 Sample	100 mL	624196	10/12/22 05:30	[redacted]	EET SAC
Total/NA	Analysis	6020		1			624560	10/13/22 11:32	[redacted]	EET SAC
Total/NA	Analysis	PM10		1	0 g	0.0195 g	625877	10/07/22 14:30	[redacted]	EET SAC

Client Sample ID: GESTSP091922-292

Lab Sample ID: 320-92865-10

Date Collected: 09/28/22 07:41

Matrix: Air

Date Received: 10/06/22 09:40

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			625878	10/07/22 14:30	[redacted]	EET SAC
Total/NA	Pre Prep	Filter to Air					625527	10/17/22 16:15	[redacted]	EET SAC

Lab Chronicle

Client: GES-AIS, LLC
Project/Site: Hunters Point, Parcel B, Phase 2

Job ID: 320-92865-1

Client Sample ID: GESPM091922-293
Lab Sample ID: 320-92865-11
Date Collected: 09/28/22 07:15
Matrix: Air
Date Received: 10/06/22 09:40

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					624191	10/12/22 04:30	[redacted]	EET SAC
Total/NA	Prep	3050B			0.08333 Sample	100 mL	624196	10/12/22 05:30	[redacted]	EET SAC
Total/NA	Analysis	6020		1			624560	10/13/22 11:35	[redacted]	EET SAC
Total/NA	Analysis	PM10		1	0 g	0.0187 g	625877	10/07/22 14:30	[redacted]	EET SAC

Client Sample ID: GESTSP091922-293
Lab Sample ID: 320-92865-12
Date Collected: 09/28/22 07:15
Matrix: Air
Date Received: 10/06/22 09:40

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			625878	10/07/22 14:30	[redacted]	EET SAC
Total/NA	Pre Prep	Filter to Air					625527	10/17/22 16:15	[redacted]	EET SAC

Client Sample ID: GESPM091922-294
Lab Sample ID: 320-92865-13
Date Collected: 09/28/22 07:29
Matrix: Air
Date Received: 10/06/22 09:40

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					624191	10/12/22 04:30	[redacted]	EET SAC
Total/NA	Prep	3050B			0.08333 Sample	100 mL	624196	10/12/22 05:30	[redacted]	EET SAC
Total/NA	Analysis	6020		1			624560	10/13/22 11:38	[redacted]	EET SAC
Total/NA	Analysis	PM10		1	0 g	0.0224 g	625877	10/07/22 14:30	[redacted]	EET SAC

Client Sample ID: GESTSP091922-294
Lab Sample ID: 320-92865-14
Date Collected: 09/28/22 07:29
Matrix: Air
Date Received: 10/06/22 09:40

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			625878	10/07/22 14:30	[redacted]	EET SAC
Total/NA	Pre Prep	Filter to Air					625527	10/17/22 16:15	[redacted]	EET SAC

Client Sample ID: GESPM091922-295
Lab Sample ID: 320-92865-15
Date Collected: 09/29/22 07:29
Matrix: Air
Date Received: 10/06/22 09:40

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					624191	10/12/22 04:30	[redacted]	EET SAC
Total/NA	Prep	3050B			0.08333 Sample	100 mL	624196	10/12/22 05:30	[redacted]	EET SAC
Total/NA	Analysis	6020		1			624560	10/13/22 11:48	[redacted]	EET SAC
Total/NA	Analysis	PM10		1	0 g	0.0171 g	625877	10/07/22 14:30	[redacted]	EET SAC

Lab Chronicle

Client: GES-AIS, LLC
Project/Site: Hunters Point, Parcel B, Phase 2

Job ID: 320-92865-1

Client Sample ID: GESTSP091922-295
Lab Sample ID: 320-92865-16
Date Collected: 09/29/22 07:29
Matrix: Air
Date Received: 10/06/22 09:40

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			625878	10/07/22 14:30	[redacted]	EET SAC
Total/NA	Pre Prep	Filter to Air					625527	10/17/22 16:15	[redacted]	EET SAC

Client Sample ID: GESPM091922-296
Lab Sample ID: 320-92865-17
Date Collected: 09/29/22 07:00
Matrix: Air
Date Received: 10/06/22 09:40

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					624191	10/12/22 04:30	[redacted]	EET SAC
Total/NA	Prep	3050B			0.08333 Sample	100 mL	624196	10/12/22 05:30	[redacted]	EET SAC
Total/NA	Analysis	6020		1			624560	10/13/22 11:52	[redacted]	EET SAC
Total/NA	Analysis	PM10		1	0 g	0.0180 g	625877	10/07/22 14:30	[redacted]	EET SAC

Client Sample ID: GESTSP091922-296
Lab Sample ID: 320-92865-18
Date Collected: 09/29/22 07:00
Matrix: Air
Date Received: 10/06/22 09:40

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			625878	10/07/22 14:30	[redacted]	EET SAC
Total/NA	Pre Prep	Filter to Air					625527	10/17/22 16:15	[redacted]	EET SAC

Client Sample ID: GESPM091922-297
Lab Sample ID: 320-92865-19
Date Collected: 09/29/22 07:16
Matrix: Air
Date Received: 10/06/22 09:40

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					624191	10/12/22 04:30	[redacted]	EET SAC
Total/NA	Prep	3050B			0.08333 Sample	100 mL	624196	10/12/22 05:30	[redacted]	EET SAC
Total/NA	Analysis	6020		1			624560	10/13/22 11:55	[redacted]	EET SAC
Total/NA	Analysis	PM10		1	0 g	0.0205 g	625877	10/07/22 14:30	[redacted]	EET SAC

Client Sample ID: GESTSP091922-297
Lab Sample ID: 320-92865-20
Date Collected: 09/29/22 07:16
Matrix: Air
Date Received: 10/06/22 09:40

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			625878	10/07/22 14:30	[redacted]	EET SAC
Total/NA	Pre Prep	Filter to Air					625527	10/17/22 16:15	[redacted]	EET SAC

Lab Chronicle

Client: GES-AIS, LLC
Project/Site: Hunters Point, Parcel B, Phase 2

Job ID: 320-92865-1

Client Sample ID: GESPM091922-298
Lab Sample ID: 320-92865-21
Date Collected: 09/29/22 15:02
Matrix: Air
Date Received: 10/06/22 09:40

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					624191	10/12/22 04:30	[redacted]	EET SAC
Total/NA	Prep	3050B			0.08333 Sample	100 mL	624196	10/12/22 05:30	[redacted]	EET SAC
Total/NA	Analysis	6020		1			624560	10/13/22 11:58	[redacted]	EET SAC
Total/NA	Analysis	PM10		1	0 g	0.0159 g	625877	10/07/22 14:30	[redacted]	EET SAC

Client Sample ID: GESTSP091922-298
Lab Sample ID: 320-92865-22
Date Collected: 09/29/22 15:02
Matrix: Air
Date Received: 10/06/22 09:40

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			625878	10/07/22 14:30	[redacted]	EET SAC
Total/NA	Pre Prep	Filter to Air					625527	10/17/22 16:15	[redacted]	EET SAC

Client Sample ID: GESPM091922-299
Lab Sample ID: 320-92865-23
Date Collected: 09/29/22 15:10
Matrix: Air
Date Received: 10/06/22 09:40

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					624191	10/12/22 04:30	[redacted]	EET SAC
Total/NA	Prep	3050B			0.08333 Sample	100 mL	624196	10/12/22 05:30	[redacted]	EET SAC
Total/NA	Analysis	6020		1			624560	10/13/22 12:01	[redacted]	EET SAC
Total/NA	Analysis	PM10		1	0 g	0.0090 g	625877	10/07/22 14:30	[redacted]	EET SAC

Client Sample ID: GESTSP091922-299
Lab Sample ID: 320-92865-24
Date Collected: 09/29/22 15:10
Matrix: Air
Date Received: 10/06/22 09:40

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			625878	10/07/22 14:30	[redacted]	EET SAC
Total/NA	Pre Prep	Filter to Air					625527	10/17/22 16:15	[redacted]	EET SAC

Client Sample ID: GESPM091922-300
Lab Sample ID: 320-92865-25
Date Collected: 09/29/22 15:05
Matrix: Air
Date Received: 10/06/22 09:40

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					624191	10/12/22 04:30	[redacted]	EET SAC
Total/NA	Prep	3050B			0.08333 Sample	100 mL	624196	10/12/22 05:30	[redacted]	EET SAC
Total/NA	Analysis	6020		1			624560	10/13/22 12:05	[redacted]	EET SAC
Total/NA	Analysis	PM10		1	0 g	0.0125 g	625877	10/07/22 14:30	[redacted]	EET SAC

Lab Chronicle

Client: GES-AIS, LLC
Project/Site: Hunters Point, Parcel B, Phase 2

Job ID: 320-92865-1

Client Sample ID: GESTSP091922-300

Date Collected: 09/29/22 15:05
Date Received: 10/06/22 09:40

Lab Sample ID: 320-92865-26

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			625878	10/07/22 14:30	[redacted]	EET SAC
Total/NA	Pre Prep	Filter to Air					625527	10/17/22 16:15	[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
Job ID: 320-92865-1
Project/Site: Hunters Point, Parcel B, Phase 2

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

Method Summary

Client: GES-AIS, LLC
Job ID: 320-92865-1
Project/Site: Hunters Point, Parcel B, Phase 2

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: 320-92865-1
Project/Site: Hunters Point, Parcel B, Phase 2

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
320-92865-1	GESPM090622-252	Air	09/26/22 08:00	10/06/22 09:40
320-92865-2	GESTSP090622-252	Air	09/26/22 08:00	10/06/22 09:40
320-92865-3	GESPM091922-289	Air	09/27/22 07:50	10/06/22 09:40
320-92865-4	GESTSP091922-289	Air	09/27/22 07:50	10/06/22 09:40
320-92865-5	GESPM091922-290	Air	09/27/22 07:06	10/06/22 09:40
320-92865-6	GESTSP091922-290	Air	09/27/22 07:06	10/06/22 09:40
320-92865-7	GESPM091922-291	Air	09/27/22 07:31	10/06/22 09:40
320-92865-8	GESTSP091922-291	Air	09/27/22 07:31	10/06/22 09:40
320-92865-9	GESPM091922-292	Air	09/28/22 07:41	10/06/22 09:40
320-92865-10	GESTSP091922-292	Air	09/28/22 07:41	10/06/22 09:40
320-92865-11	GESPM091922-293	Air	09/28/22 07:15	10/06/22 09:40
320-92865-12	GESTSP091922-293	Air	09/28/22 07:15	10/06/22 09:40
320-92865-13	GESPM091922-294	Air	09/28/22 07:29	10/06/22 09:40
320-92865-14	GESTSP091922-294	Air	09/28/22 07:29	10/06/22 09:40
320-92865-15	GESPM091922-295	Air	09/29/22 07:29	10/06/22 09:40
320-92865-16	GESTSP091922-295	Air	09/29/22 07:29	10/06/22 09:40
320-92865-17	GESPM091922-296	Air	09/29/22 07:00	10/06/22 09:40
320-92865-18	GESTSP091922-296	Air	09/29/22 07:00	10/06/22 09:40
320-92865-19	GESPM091922-297	Air	09/29/22 07:16	10/06/22 09:40
320-92865-20	GESTSP091922-297	Air	09/29/22 07:16	10/06/22 09:40
320-92865-21	GESPM091922-298	Air	09/29/22 15:02	10/06/22 09:40
320-92865-22	GESTSP091922-298	Air	09/29/22 15:02	10/06/22 09:40
320-92865-23	GESPM091922-299	Air	09/29/22 15:10	10/06/22 09:40
320-92865-24	GESTSP091922-299	Air	09/29/22 15:10	10/06/22 09:40
320-92865-25	GESPM091922-300	Air	09/29/22 15:05	10/06/22 09:40
320-92865-26	GESTSP091922-300	Air	09/29/22 15:05	10/06/22 09:40

CHAIN-OF-CUSTODY RECORD

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

COC # KT100522AIRB

GES

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:

Code	Matrix
A	Air
AQ	Air Quality Control Matrix

Code	Container/Preservative
1	1x 250-mL Plastic, 4 Degrees C
1	1x Envelope, None

320-92865 Chain of Custody

					Analytical Test Method	CAAIR - Air PM10	N0500 - Air TSP	SW6020 - Air Pb Mn							
	Event: Parcel B Air Monitoring					1	1	1							
	Sample ID	Matrix	Date	Time	Samp Init.				Location ID	Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom	Cooler	Comments
1	GESPM090622-252	AQ	09/26/2022	0800	[redacted]	X		X	FIELDQC	FB1	0.00	0.00	1	
2	GESTSP090622-252	AQ	09/26/2022	0800			X		FIELDQC	FB1	0.00	0.00	1	
3	GESPM091922-289	A	09/27/2022	0750		X		X	MSB01	N1	0.00	0.00	1	VOLUME: 1640.65 (M3)
4	GESTSP091922-289	A	09/27/2022	0750			X		MSB01	N1	0.00	0.00	1	VOLUME: 1779.12 (M3)
5	GESPM091922-290	A	09/27/2022	0706		X		X	MSB02	N1	0.00	0.00	1	VOLUME: 1624.03 (M3)
6	GESTSP091922-290	A	09/27/2022	0706			X		MSB02	N1	0.00	0.00	1	VOLUME: 1769.02 (M3)
7	GESPM091922-291	A	09/27/2022	0731		X		X	MSB113A	N1	0.00	0.00	1	VOLUME: 1603.22 (M3)
8	GESTSP091922-291	A	09/27/2022	0731			X		MSB113A	N1	0.00	0.00	1	VOLUME: 1613.47 (M3)
9	GESPM091922-292	A	09/28/2022	0741		X		X	MSB01	N1	0.00	0.00	1	VOLUME: 1621.57 (M3)
10	GESTSP091922-292	A	09/28/2022	0741			X		MSB01	N1	0.00	0.00	1	VOLUME: 1737.44 (M3)
11	GESPM091922-293	A	09/28/2022	0715		X		X	MSB02	N1	0.00	0.00	1	VOLUME: 1636.33 (M3)

Relinquished by: *(Signature)*	Date	Time	Received by: *(Signature)*	Date	Time
[redacted]	10/5/22	1400	FedEx	10/5/22	1400
			[redacted]	10-6-22	0940

Shipping Date / Carrier / Airbill Number
Shipping Date: 10/5/2022/ FEDEX 7700 6459 1851

Received by Laboratory: *(Signature, Date, Time)* **& condition**

GES.Navy COC Field
October 04, 2022

20.1°C

CHAIN-OF-CUSTODY RECORD

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

COC # KT100522AIRB

GES

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:

1. Line 16 (GESTSP091922-295) date should be 09/29/2022, [redacted] 10/10/2022 [redacted]

Equipment:

Code	Matrix
A	Air
AQ	Air Quality Control Matrix

Code	Container/Preservative
1	1x 250-mL Plastic, 4 Degrees C
1	1x Envelope, None

						Analytical Test Method											
						CAAIR - Air PM10	N0500 - Air TSP	SW6020 - Air Pb Mn									
	Event: Parcel B Air Monitoring					1	1	1									
	Sample ID	Matrix	Date	Time	Samp Init.									Location ID	Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom	Cooler	Comments
12	GESTSP091922-293	A	09/28/2022	0715	[redacted]		X							MSB02	N1	0.00	0.00	1	VOLUME: 1757.61 (M3)
13	GESPM091922-294	A	09/28/2022	0729		X		X						MSB113A	N1	0.00	0.00	1	VOLUME: 1592.50 (M3)
14	GESTSP091922-294	A	09/28/2022	0729			X							MSB113A	N1	0.00	0.00	1	VOLUME: 1586.00 (M3)
15	GESPM091922-295	A	09/29/2022	0729		X		X						MSB01	N1	0.00	0.00	1	VOLUME: 1623.64 (M3)
16	GESTSP091922-295	A	09/28/2022	0729			X							MSB01	N1	0.00	0.00	1	VOLUME: 1743.77 (M3)
17	GESPM091922-296	A	09/29/2022	0700		X		X						MSB02	N1	0.00	0.00	1	VOLUME: 1618.33 (M3)
18	GESTSP091922-296	A	09/29/2022	0700			X							MSB02	N1	0.00	0.00	1	VOLUME: 1757.53 (M3)
19	GESPM091922 297	A	09/29/2022	0716		X		X						MSB113A	N1	0.00	0.00	1	VOLUME: 1589.08 (M3)
20	GESTSP091922 297	A	09/29/2022	0716			X							MSB113A	N1	0.00	0.00	1	VOLUME: 1582.61 (M3)
21	GESPM091922-298	A	09/29/2022	1502		X		X						MSB01	N1	0.00	0.00	1	VOLUME: 514.58 (M3)
22	GESTSP091922 298	A	09/29/2022	1502			X							MSB01	N1	0.00	0.00	1	VOLUME: 552.30 (M3)

1.

Relinquished by: *(Signature)*	Date	Time	Received by: *(Signature)*	Date	Time
[redacted]	10/5/22	1400	Fedex	10/5/22	1400
			[redacted]	10-6-22	0940

Shipping Date / Carrier / Airbill Number

Shipping Date: 10/5/2022/ FEDEX 7700 6459 1851

Received by Laboratory: *(Signature, Date, Time)* **& condition**

GES.Navy COC Field
October 04, 2022

Page 2 of 3

CHAIN-OF-CUSTODY RECORD

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

COC # KT100522AIRB

GES

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:

Code	Matrix
A	Air
AQ	Air Quality Control Matrix

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.	Analytical Test Method: CAAIR - Air PM10 (1)	N0500 - Air TSP (1)	SW6020 - Air Pb Mn (1)	Location ID	Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom	Cooler	Comments
23	GESPM091922-299	A	09/29/2022	1510	[redacted]	X		X	MSB02	N1	0.00	0.00	1	VOLUME: 547.95 (M3)
24	GESTSP091922-299	A	09/29/2022	1510			X		MSB02	N1	0.00	0.00	1	VOLUME: 591.43 (M3)
25	GESPM091922-300	A	09/29/2022	1505		X		X	MSB113A	N1	0.00	0.00	1	VOLUME: 516.71 (M3)
26	GESTSP091922-300	A	09/29/2022	1505			X		MSB113A	N1	0.00	0.00	1	VOLUME: 510.49 (M3)
27														
28														

Turnaround Time: 5 days

Relinquished by: *(Signature)*	**Date**	**Time**	**Received by: *(Signature)***	**Date**	**Time**
[redacted]	10/5/22	1400	FedEx	10/5/22	1400
			[redacted]	10.6.22	0940

Shipping Date / Carrier / Airbill Number

Shipping Date: 10/5/2022/ FEDEX 7700 6459 1851

Received by Laboratory: *(Signature, Date, Time)* **& condition**

GES.Navy COC Field
October 04, 2022

W.10

CHAIN-OF-CUSTODY RECORD

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

COC # KT100522AIRB

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:

Code	Matrix
A	Air
AQ	Air Quality Control Matrix

Code	Container/Preservative
1	1x 250-mL Plastic, 4 Degrees C
1	1x Envelope, None

320-92865 Chain of Custody

Event: Parcel B Air Monitoring

	Sample ID	Matrix	Date	Time	Samp Init.	Analytical Test Method: CAAIR - Air PM10	N0500 - Air TSP	SW6020 - Air Pb Mn	Location ID	Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom	Cooler	Comments
						1	1	1						
1	GESPM090622-252	AQ	09/26/2022	0800	[redacted]	X		X	FIELDQC	FB1	0.00	0.00	1	
2	GESTSP090622-252	AQ	09/26/2022	0800			X		FIELDQC	FB1	0.00	0.00	1	
3	GESPM091922-289	A	09/27/2022	0750		X		X	MSB01	N1	0.00	0.00	1	VOLUME: 1640.65 (M3)
4	GESTSP091922-289	A	09/27/2022	0750			X		MSB01	N1	0.00	0.00	1	VOLUME: 1779.12 (M3)
5	GESPM091922-290	A	09/27/2022	0706		X		X	MSB02	N1	0.00	0.00	1	VOLUME: 1624.03 (M3)
6	GESTSP091922-290	A	09/27/2022	0706			X		MSB02	N1	0.00	0.00	1	VOLUME: 1769.02 (M3)
7	GESPM091922-291	A	09/27/2022	0731		X		X	MSB113A	N1	0.00	0.00	1	VOLUME: 1603.22 (M3)
8	GESTSP091922-291	A	09/27/2022	0731			X		MSB113A	N1	0.00	0.00	1	VOLUME: 1613.47 (M3)
9	GESPM091922-292	A	09/28/2022	0741		X		X	MSB01	N1	0.00	0.00	1	VOLUME: 1621.57 (M3)
10	GESTSP091922-292	A	09/28/2022	0741			X		MSB01	N1	0.00	0.00	1	VOLUME: 1737.44 (M3)
11	GESPM091922-293	A	09/28/2022	0715		X		X	MSB02	N1	0.00	0.00	1	VOLUME: 1636.33 (M3)

Relinquished by: *(Signature)*	Date	Time	Received by: *(Signature)*	Date	Time
[redacted]	10/5/22	1400	FedEx	10/5/22	1400
			[redacted]	10-6-22	0940

Shipping Date / Carrier / Airbill Number

Shipping Date: 10/5/2022/ FEDEX 7700 6459 1851

Received by Laboratory: *(Signature, Date, Time)* **& condition**

GES.Navy_COC_Field
October 04, 2022

20.1°C

CHAIN-OF-CUSTODY RECORD

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

COC # KT100522AIRB

GES

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:

Code	Matrix
A	Air
AQ	Air Quality Control Matrix

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.	Analytical Test Method: CAAIR - Air PM10	N0500 - Air TSP	SW6020 - Air Pb Mn	Location ID	Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom	Cooler	Comments
						1	1	1						
12	GESTSP091922-293	A	09/28/2022	0715	[redacted]		X		MSB02	N1	0.00	0.00	1	VOLUME: 1757.61 (M3)
13	GESPM091922-294	A	09/28/2022	0729		X		X	MSB113A	N1	0.00	0.00	1	VOLUME: 1592.50 (M3)
14	GESTSP091922-294	A	09/28/2022	0729			X		MSB113A	N1	0.00	0.00	1	VOLUME: 1586.00 (M3)
15	GESPM091922-295	A	09/29/2022	0729		X		X	MSB01	N1	0.00	0.00	1	VOLUME: 1623.64 (M3)
16	GESTSP091922-295	A	09/28/2022	0729			X		MSB01	N1	0.00	0.00	1	VOLUME: 1743.77 (M3)
17	GESPM091922-296	A	09/29/2022	0700		X		X	MSB02	N1	0.00	0.00	1	VOLUME: 1618.33 (M3)
18	GESTSP091922-296	A	09/29/2022	0700			X		MSB02	N1	0.00	0.00	1	VOLUME: 1757.53 (M3)
19	GESPM091922-297	A	09/29/2022	0716		X		X	MSB113A	N1	0.00	0.00	1	VOLUME: 1589.08 (M3)
20	GESTSP091922-297	A	09/29/2022	0716			X		MSB113A	N1	0.00	0.00	1	VOLUME: 1582.61 (M3)
21	GESPM091922-298	A	09/29/2022	1502		X		X	MSB01	N1	0.00	0.00	1	VOLUME: 514.58 (M3)
22	GESTSP091922-298	A	09/29/2022	1502			X		MSB01	N1	0.00	0.00	1	VOLUME: 552.30 (M3)

Relinquished by: *(Signature)*	Date	Time	Received by: *(Signature)*	Date	Time
[redacted]	10/5/22	1400	Fedex	10/5/22	1400
			[redacted]	10-6-22	0940

Shipping Date / Carrier / Airbill Number
Shipping Date: 10/5/2022/ FEDEX 7700 6459 1851

Received by Laboratory: *(Signature, Date, Time)* **& condition**

GES Navy COC Field
October 04, 2022

Page 2 of 3

CHAIN-OF-CUSTODY RECORD

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

COC # KT100522AIRB

GES

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:

Code	Matrix
A	Air
AQ	Air Quality Control Matrix

Code	Container/Preservative
1	1x 250-mL Plastic, 4 Degrees C
1	1x Envelope, None

						Analytical Test Method	CAAIR - Air PM10	N0500 - Air TSP	SW6020 - Air Pb Mn			Location ID	Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom	Cooler	Comments
	Event: Parcel B Air Monitoring						1	1	1								
	Sample ID	Matrix	Date	Time	Samp Init.												
23	GESPM091922-299	A	09/29/2022	1510	[redacted]		X		X			MSB02	N1	0.00	0.00	1	VOLUME: 547.95 (M3)
24	GESTSP091922-299	A	09/29/2022	1510				X				MSB02	N1	0.00	0.00	1	VOLUME: 591.43 (M3)
25	GESPM091922-300	A	09/29/2022	1505			X		X			MSB113A	N1	0.00	0.00	1	VOLUME: 516.71 (M3)
26	GESTSP091922-300	A	09/29/2022	1505				X				MSB113A	N1	0.00	0.00	1	VOLUME: 510.49 (M3)
27																	
28																	

Turnaround Time: 5 days

Relinquished by: *(Signature)*	Date	Time	Received by: *(Signature)*	Date	Time
[redacted]	10/5/22	1400	FedEx	10/5/22	1400
			[redacted]	10.6.22	0940

Shipping Date / Carrier / Airbill Number

Shipping Date: 10/5/2022/ FEDEX 7700 6459 1851

Received by Laboratory: *(Signature, Date, Time)* **& condition**

GES.Navy_COC_Field
October 04, 2022

20.1c

Login Sample Receipt Checklist

Client: GES-AIS, LLC

Job Number: 320-92865-1

Login Number: 92865
List Number: 1
Creator: [redacted]

List Source: Eurofins Sacramento

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	

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ANALYTICAL REPORT

Eurofins Sacramento
880 Riverside Parkway
West Sacramento, CA 95605
Tel: (916)373-5600

Laboratory Job ID: 320-93174-1
Client Project/Site: Hunters Point, Parcel B, Phase 2

For:
GES-AIS, LLC
1501 W Fountainhead Parkway
Ste 550
Tempe, Arizona 85282

Attn: [redacted]

[redacted]

Authorized for release by:
10/26/2022 10:13:39 AM

[redacted], Project Manager I
[redacted]
[redacted]

Table of Contents

Definitions/Glossary

Client: GES-AIS, LLC
Job ID: 320-93174-1
Project/Site: Hunters Point, Parcel B, Phase 2

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.
¤	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, Phase 2

Job ID: 320-93174-1

Job ID: 320-93174-1

Laboratory: Eurofins Sacramento

Narrative

Job Narrative
320-93174-1

Comments
No additional comments.

Receipt
The samples were received on 10/13/2022 9:25 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 20.0º C.

Metals
Method PM10: Sample GESPM091922-304 (320-93174-7) was recorded with a negative net weight. No particulate loading on the filter or damage to the filter could be observed.

Method 40CFR50 App B: Sample GESTSP091922-304 (320-93174-8) was recorded with a negative net weight. 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
Project/Site: Hunters Point, Parcel B, Phase 2

Job ID: 320-93174-1

Client Sample ID: GESPM091922-301 — Lab Sample ID: 320-93174-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lead	0.00073		0.00072	0.00011	ug/m3 (Air)	1		6020	Total/NA
Manganese	0.0028	B	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: GESTSP091922-301 — Lab Sample ID: 320-93174-2

Analyte	Result	Qualifier	RL	RL	Unit	Dil Fac	D	Method	Prep Type
Total Suspended Particulates	24.5585		0.2797	0.2797	ug/m3 (Air)	1		40CFR50 App B	Total/NA

Client Sample ID: GESPM091922-302 — Lab Sample ID: 320-93174-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lead	0.00064	J	0.00072	0.00011	ug/m3 (Air)	1		6020	Total/NA
Manganese	0.0026	B	0.00072	0.00010	ug/m3 (Air)	1		6020	Total/NA
Particulate Matter as PM 10	18		0.30	0.30	ug/m3	1		PM10	Total/NA

Client Sample ID: GESTSP091922-302 — Lab Sample ID: 320-93174-4

Analyte	Result	Qualifier	RL	RL	Unit	Dil Fac	D	Method	Prep Type
Total Suspended Particulates	24.8191		0.2808	0.2808	ug/m3 (Air)	1		40CFR50 App B	Total/NA

Client Sample ID: GESPM091922-303 — Lab Sample ID: 320-93174-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lead	0.00087		0.00074	0.00011	ug/m3 (Air)	1		6020	Total/NA
Manganese	0.0033	B	0.00074	0.00010	ug/m3 (Air)	1		6020	Total/NA
Particulate Matter as PM 10	21		0.31	0.31	ug/m3	1		PM10	Total/NA

Client Sample ID: GESTSP091922-303 — Lab Sample ID: 320-93174-6

Analyte	Result	Qualifier	RL	RL	Unit	Dil Fac	D	Method	Prep Type
Total Suspended Particulates	29.0448		0.3090	0.3090	ug/m3 (Air)	1		40CFR50 App B	Total/NA

Client Sample ID: GESPM091922-304 — Lab Sample ID: 320-93174-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Manganese	0.00028	J B	0.0012	0.00017	ug/m3 (Air)	1		6020	Total/NA

Client Sample ID: GESTSP091922-304 — Lab Sample ID: 320-93174-8

No Detections.

Client Sample ID: GESPM091922-305 — Lab Sample ID: 320-93174-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lead	0.00072	J	0.00073	0.00011	ug/m3 (Air)	1		6020	Total/NA
Manganese	0.0042	B	0.00073	0.00010	ug/m3 (Air)	1		6020	Total/NA
Particulate Matter as PM 10	20		0.31	0.31	ug/m3	1		PM10	Total/NA

Client Sample ID: GESTSP091922-305 — Lab Sample ID: 320-93174-10

Analyte	Result	Qualifier	RL	RL	Unit	Dil Fac	D	Method	Prep Type
Total Suspended Particulates	31.0743		0.2846	0.2846	ug/m3 (Air)	1		40CFR50 App B	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: GES-AIS, LLC
Job ID: 320-93174-1
Project/Site: Hunters Point, Parcel B, Phase 2

Client Sample ID: GESPM091922-306 — Lab Sample ID: 320-93174-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lead	0.00054	J	0.00074	0.00011	ug/m3 (Air)	1		6020	Total/NA
Manganese	0.0024	B	0.00074	0.00010	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: GESTSP091922-306 — Lab Sample ID: 320-93174-12

Analyte	Result	Qualifier	RL	RL	Unit	Dil Fac	D	Method	Prep Type
Total Suspended Particulates	23.4888		0.2830	0.2830	ug/m3 (Air)	1		40CFR50 App B	Total/NA

Client Sample ID: GESPM092122-307 — Lab Sample ID: 320-93174-13

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lead	0.00095		0.00075	0.00011	ug/m3 (Air)	1		6020	Total/NA
Manganese	0.0037	B	0.00075	0.00011	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: GESTSP092122-307 — Lab Sample ID: 320-93174-14

Analyte	Result	Qualifier	RL	RL	Unit	Dil Fac	D	Method	Prep Type
Total Suspended Particulates	24.0575		0.3149	0.3149	ug/m3 (Air)	1		40CFR50 App B	Total/NA

Client Sample ID: GESPM092122-308 — Lab Sample ID: 320-93174-15

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lead	0.00075		0.00073	0.00011	ug/m3 (Air)	1		6020	Total/NA
Manganese	0.0028	B	0.00073	0.00010	ug/m3 (Air)	1		6020	Total/NA
Particulate Matter as PM 10	7.6		0.31	0.31	ug/m3	1		PM10	Total/NA

Client Sample ID: GESTSP092122-308 — Lab Sample ID: 320-93174-16

Analyte	Result	Qualifier	RL	RL	Unit	Dil Fac	D	Method	Prep Type
Total Suspended Particulates	22.5502		0.2854	0.2854	ug/m3 (Air)	1		40CFR50 App B	Total/NA

Client Sample ID: GESPM092122-309 — Lab Sample ID: 320-93174-17

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lead	0.00056	J	0.00074	0.00011	ug/m3 (Air)	1		6020	Total/NA
Manganese	0.0022	B	0.00074	0.00010	ug/m3 (Air)	1		6020	Total/NA
Particulate Matter as PM 10	6.2		0.31	0.31	ug/m3	1		PM10	Total/NA

Client Sample ID: GESTSP092122-309 — Lab Sample ID: 320-93174-18

Analyte	Result	Qualifier	RL	RL	Unit	Dil Fac	D	Method	Prep Type
Total Suspended Particulates	15.1143		0.2841	0.2841	ug/m3 (Air)	1		40CFR50 App B	Total/NA

Client Sample ID: GESPM092122-310 — Lab Sample ID: 320-93174-19

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lead	0.00098		0.00075	0.00011	ug/m3 (Air)	1		6020	Total/NA
Manganese	0.0031	B	0.00075	0.00011	ug/m3 (Air)	1		6020	Total/NA
Particulate Matter as PM 10	7.1		0.31	0.31	ug/m3	1		PM10	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: GES-AIS, LLC
Project/Site: Hunters Point, Parcel B, Phase 2

Job ID: 320-93174-1

Client Sample ID: GESTSP092122-310 — Lab Sample ID: 320-93174-20

Analyte	Result	Qualifier	RL	RL	Unit	Dil Fac	D	Method	Prep Type
Total Suspended Particulates	15.3974		0.3155	0.3155	ug/m3 (Air)	1		40CFR50 App B	Total/NA

Client Sample ID: GESPM092122-311 — Lab Sample ID: 320-93174-21

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lead	0.0013	J	0.0023	0.00035	ug/m3 (Air)	1		6020	Total/NA
Manganese	0.0039	B	0.0023	0.00033	ug/m3 (Air)	1		6020	Total/NA
Particulate Matter as PM 10	4.3		1.0	1.0	ug/m3	1		PM10	Total/NA

Client Sample ID: GESTSP092122-311 — Lab Sample ID: 320-93174-22

Analyte	Result	Qualifier	RL	RL	Unit	Dil Fac	D	Method	Prep Type
Total Suspended Particulates	16.5482		0.9734	0.9734	ug/m3 (Air)	1		40CFR50 App B	Total/NA

Client Sample ID: GESPM092122-312 — Lab Sample ID: 320-93174-23

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lead	0.0013	J	0.0023	0.00035	ug/m3 (Air)	1		6020	Total/NA
Manganese	0.0038	B	0.0023	0.00033	ug/m3 (Air)	1		6020	Total/NA
Particulate Matter as PM 10	3.9		0.97	0.97	ug/m3	1		PM10	Total/NA

Client Sample ID: GESTSP092122-312 — Lab Sample ID: 320-93174-24

Analyte	Result	Qualifier	RL	RL	Unit	Dil Fac	D	Method	Prep Type
Total Suspended Particulates	2.7016		0.9005	0.9005	ug/m3 (Air)	1		40CFR50 App B	Total/NA

Client Sample ID: GESPM092122-313 — Lab Sample ID: 320-93174-25

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lead	0.0014	J	0.0025	0.00037	ug/m3 (Air)	1		6020	Total/NA
Manganese	0.0042	B	0.0025	0.00035	ug/m3 (Air)	1		6020	Total/NA
Particulate Matter as PM 10	2.9		1.0	1.0	ug/m3	1		PM10	Total/NA

Client Sample ID: GESTSP092122-313 — Lab Sample ID: 320-93174-26

Analyte	Result	Qualifier	RL	RL	Unit	Dil Fac	D	Method	Prep Type
Total Suspended Particulates	3.7406		1.0390	1.0390	ug/m3 (Air)	1		40CFR50 App B	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: GESPM091922-301
Lab Sample ID: 320-93174-1
Date Collected: 10/04/22 07:56
Matrix: Air
Date Received: 10/13/22 09:25
Sample Container: Folder/Filter

Method: SW846 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	0.00073		0.00072	0.00011	ug/m3 (Air)		10/18/22 06:10	10/18/22 11:36	1
Manganese	0.0028	B	0.00072	0.00010	ug/m3 (Air)		10/18/22 06:10	10/18/22 11:36	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			10/14/22 13:00	1

Client Sample ID: GESTSP091922-301
Lab Sample ID: 320-93174-2
Date Collected: 10/04/22 07:56
Matrix: Air
Date Received: 10/13/22 09:25
Sample Container: Folder/Filter

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Particulates (EPA 40CFR50 App B)	24.5585		0.2797	0.2797	ug/m3 (Air)			10/14/22 13:00	1

Client Sample ID: GESPM091922-302
Lab Sample ID: 320-93174-3
Date Collected: 10/04/22 07:25
Matrix: Air
Date Received: 10/13/22 09:25
Sample Container: Folder/Filter

Method: SW846 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	0.00064	J	0.00072	0.00011	ug/m3 (Air)		10/18/22 06:10	10/18/22 11:45	1
Manganese	0.0026	B	0.00072	0.00010	ug/m3 (Air)		10/18/22 06:10	10/18/22 11:45	1

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Particulate Matter as PM 10 (40CFR50J PM10)	18		0.30	0.30	ug/m3			10/14/22 13:00	1

Client Sample ID: GESTSP091922-302
Lab Sample ID: 320-93174-4
Date Collected: 10/04/22 07:25
Matrix: Air
Date Received: 10/13/22 09:25
Sample Container: Folder/Filter

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Particulates (EPA 40CFR50 App B)	24.8191		0.2808	0.2808	ug/m3 (Air)			10/14/22 13:00	1

Client Sample ID: GESPM091922-303
Lab Sample ID: 320-93174-5
Date Collected: 10/04/22 07:43
Matrix: Air
Date Received: 10/13/22 09:25
Sample Container: Folder/Filter

Method: SW846 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	0.00087		0.00074	0.00011	ug/m3 (Air)		10/18/22 06:10	10/18/22 11:49	1
Manganese	0.0033	B	0.00074	0.00010	ug/m3 (Air)		10/18/22 06:10	10/18/22 11:49	1

Client Sample ID: GESPM091922-303
Lab Sample ID: 320-93174-5
Date Collected: 10/04/22 07:43
Matrix: Air
Date Received: 10/13/22 09:25
Sample Container: Folder/Filter

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Particulate Matter as PM 10 (40CFR50J PM10)	21		0.31	0.31	ug/m3			10/14/22 13:00	1

Client Sample ID: GESTSP091922-303
Lab Sample ID: 320-93174-6
Date Collected: 10/04/22 07:43
Matrix: Air
Date Received: 10/13/22 09:25
Sample Container: Folder/Filter

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Particulates (EPA 40CFR50 App B)	29.0448		0.3090	0.3090	ug/m3 (Air)			10/14/22 13:00	1

Client Sample ID: GESPM091922-304
Lab Sample ID: 320-93174-7
Date Collected: 10/03/22 08:00
Matrix: Air
Date Received: 10/13/22 09:25
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)		10/18/22 06:10	10/18/22 11:52	1
Manganese	0.00028	J B	0.0012	0.00017	ug/m3 (Air)		10/18/22 06:10	10/18/22 11:52	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			10/14/22 13:00	1

Client Sample ID: GESTSP091922-304
Lab Sample ID: 320-93174-8
Date Collected: 10/03/22 08:00
Matrix: Air
Date Received: 10/13/22 09:25
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)			10/14/22 13:00	1

Client Sample ID: GESPM091922-305
Lab Sample ID: 320-93174-9
Date Collected: 10/05/22 07:54
Matrix: Air
Date Received: 10/13/22 09:25
Sample Container: Folder/Filter

Method: SW846 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	0.00072	J	0.00073	0.00011	ug/m3 (Air)		10/18/22 06:10	10/18/22 11:55	1
Manganese	0.0042	B	0.00073	0.00010	ug/m3 (Air)		10/18/22 06:10	10/18/22 11:55	1

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Particulate Matter as PM 10 (40CFR50J PM10)	20		0.31	0.31	ug/m3			10/14/22 13:00	1

Client Sample ID: GESTSP091922-305
Lab Sample ID: 320-93174-10
Date Collected: 10/05/22 07:54
Matrix: Air
Date Received: 10/13/22 09:25
Sample Container: Folder/Filter

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Particulates (EPA 40CFR50 App B)	31.0743		0.2846	0.2846	ug/m3 (Air)			10/14/22 13:00	1

Client Sample ID: GESPM091922-306
Lab Sample ID: 320-93174-11
Date Collected: 10/05/22 07:27
Matrix: Air
Date Received: 10/13/22 09:25
Sample Container: Folder/Filter

Method: SW846 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	0.00054	J	0.00074	0.00011	ug/m3 (Air)		10/18/22 06:10	10/18/22 12:05	1
Manganese	0.0024	B	0.00074	0.00010	ug/m3 (Air)		10/18/22 06:10	10/18/22 12:05	1

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			10/14/22 13:00	1

Client Sample ID: GESTSP091922-306
Lab Sample ID: 320-93174-12
Date Collected: 10/05/22 07:27
Matrix: Air
Date Received: 10/13/22 09:25
Sample Container: Folder/Filter

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Particulates (EPA 40CFR50 App B)	23.4888		0.2830	0.2830	ug/m3 (Air)			10/14/22 13:00	1

Client Sample ID: GESPM092122-307
Lab Sample ID: 320-93174-13
Date Collected: 10/05/22 07:44
Matrix: Air
Date Received: 10/13/22 09:25
Sample Container: Folder/Filter

Method: SW846 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	0.00095		0.00075	0.00011	ug/m3 (Air)		10/18/22 06:10	10/18/22 12:08	1
Manganese	0.0037	B	0.00075	0.00011	ug/m3 (Air)		10/18/22 06:10	10/18/22 12:08	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			10/14/22 13:00	1

Client Sample ID: GESTSP092122-307
Lab Sample ID: 320-93174-14
Date Collected: 10/05/22 07:44
Matrix: Air
Date Received: 10/13/22 09:25
Sample Container: Folder/Filter

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Particulates (EPA 40CFR50 App B)	24.0575		0.3149	0.3149	ug/m3 (Air)			10/14/22 13:00	1

Client Sample ID: GESPM092122-308
Lab Sample ID: 320-93174-15
Date Collected: 10/06/22 07:49
Matrix: Air
Date Received: 10/13/22 09:25
Sample Container: Folder/Filter

Method: SW846 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	0.00075		0.00073	0.00011	ug/m3 (Air)		10/18/22 06:10	10/18/22 12:11	1
Manganese	0.0028	B	0.00073	0.00010	ug/m3 (Air)		10/18/22 06:10	10/18/22 12:11	1

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Particulate Matter as PM 10 (40CFR50J PM10)	7.6		0.31	0.31	ug/m3			10/14/22 13:00	1

Client Sample ID: GESTSP092122-308
Lab Sample ID: 320-93174-16
Date Collected: 10/06/22 07:49
Matrix: Air
Date Received: 10/13/22 09:25
Sample Container: Folder/Filter

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Particulates (EPA 40CFR50 App B)	22.5502		0.2854	0.2854	ug/m3 (Air)			10/14/22 13:00	1

Client Sample ID: GESPM092122-309
Lab Sample ID: 320-93174-17
Date Collected: 10/06/22 07:22
Matrix: Air
Date Received: 10/13/22 09:25
Sample Container: Folder/Filter

Method: SW846 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	0.00056	J	0.00074	0.00011	ug/m3 (Air)		10/18/22 06:10	10/18/22 12:15	1
Manganese	0.0022	B	0.00074	0.00010	ug/m3 (Air)		10/18/22 06:10	10/18/22 12:15	1

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Particulate Matter as PM 10 (40CFR50J PM10)	6.2		0.31	0.31	ug/m3			10/14/22 13:00	1

Client Sample ID: GESTSP092122-309
Lab Sample ID: 320-93174-18
Date Collected: 10/06/22 07:22
Matrix: Air
Date Received: 10/13/22 09:25
Sample Container: Folder/Filter

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Particulates (EPA 40CFR50 App B)	15.1143		0.2841	0.2841	ug/m3 (Air)			10/14/22 13:00	1

Client Sample ID: GESPM092122-310
Lab Sample ID: 320-93174-19
Date Collected: 10/06/22 07:37
Matrix: Air
Date Received: 10/13/22 09:25
Sample Container: Folder/Filter

Method: SW846 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	0.00098		0.00075	0.00011	ug/m3 (Air)		10/18/22 06:10	10/18/22 12:18	1
Manganese	0.0031	B	0.00075	0.00011	ug/m3 (Air)		10/18/22 06:10	10/18/22 12:18	1

Client Sample ID: GESPM092122-310
Lab Sample ID: 320-93174-19
Date Collected: 10/06/22 07:37
Matrix: Air
Date Received: 10/13/22 09:25
Sample Container: Folder/Filter

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Particulate Matter as PM 10 (40CFR50J PM10)	7.1		0.31	0.31	ug/m3			10/14/22 13:00	1

Client Sample ID: GESTSP092122-310
Lab Sample ID: 320-93174-20
Date Collected: 10/06/22 07:37
Matrix: Air
Date Received: 10/13/22 09:25
Sample Container: Folder/Filter

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Particulates (EPA 40CFR50 App B)	15.3974		0.3155	0.3155	ug/m3 (Air)			10/14/22 13:00	1

Client Sample ID: GESPM092122-311
Lab Sample ID: 320-93174-21
Date Collected: 10/06/22 15:02
Matrix: Air
Date Received: 10/13/22 09:25
Sample Container: Folder/Filter

Method: SW846 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	0.0013	J	0.0023	0.00035	ug/m3 (Air)		10/18/22 06:10	10/18/22 12:21	1
Manganese	0.0039	B	0.0023	0.00033	ug/m3 (Air)		10/18/22 06:10	10/18/22 12:21	1

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Particulate Matter as PM 10 (40CFR50J PM10)	4.3		1.0	1.0	ug/m3			10/14/22 13:00	1

Client Sample ID: GESTSP092122-311
Lab Sample ID: 320-93174-22
Date Collected: 10/06/22 15:02
Matrix: Air
Date Received: 10/13/22 09:25
Sample Container: Folder/Filter

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Particulates (EPA 40CFR50 App B)	16.5482		0.9734	0.9734	ug/m3 (Air)			10/14/22 13:00	1

Client Sample ID: GESPM092122-312
Lab Sample ID: 320-93174-23
Date Collected: 10/06/22 15:00
Matrix: Air
Date Received: 10/13/22 09:25
Sample Container: Folder/Filter

Method: SW846 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	0.0013	J	0.0023	0.00035	ug/m3 (Air)		10/18/22 06:10	10/18/22 12:25	1
Manganese	0.0038	B	0.0023	0.00033	ug/m3 (Air)		10/18/22 06:10	10/18/22 12:25	1

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Particulate Matter as PM 10 (40CFR50J PM10)	3.9		0.97	0.97	ug/m3			10/14/22 13:00	1

Client: GES-AIS, LLC
Job ID: 320-93174-1
Project/Site: Hunters Point, Parcel B, Phase 2

Client Sample ID: GESTSP092122-312
Lab Sample ID: 320-93174-24
Date Collected: 10/06/22 15:00
Matrix: Air
Date Received: 10/13/22 09:25
Sample Container: Folder/Filter

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Particulates (EPA 40CFR50 App B)	2.7016		0.9005	0.9005	ug/m3 (Air)			10/14/22 13:00	1

Client Sample ID: GESPM092122-313
Lab Sample ID: 320-93174-25
Date Collected: 10/06/22 15:00
Matrix: Air
Date Received: 10/13/22 09:25
Sample Container: Folder/Filter

Method: SW846 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	0.0014	J	0.0025	0.00037	ug/m3 (Air)		10/18/22 06:10	10/18/22 12:28	1
Manganese	0.0042	B	0.0025	0.00035	ug/m3 (Air)		10/18/22 06:10	10/18/22 12:28	1

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Particulate Matter as PM 10 (40CFR50J PM10)	2.9		1.0	1.0	ug/m3			10/14/22 13:00	1

Client Sample ID: GESTSP092122-313
Lab Sample ID: 320-93174-26
Date Collected: 10/06/22 15:00
Matrix: Air
Date Received: 10/13/22 09:25
Sample Container: Folder/Filter

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Particulates (EPA 40CFR50 App B)	3.7406		1.0390	1.0390	ug/m3 (Air)			10/14/22 13:00	1

Method: 6020 - Metals (ICP/MS)

Lab Sample ID: MB 320-625574/1-B
Matrix: Air
Analysis Batch: 625790

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 625575

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	ND		0.0012	0.00018	ug/m3 (Air)		10/18/22 06:10	10/18/22 11:17	1
Manganese	0.00119	J	0.0012	0.00017	ug/m3 (Air)		10/18/22 06:10	10/18/22 11:17	1

Lab Sample ID: LCS 320-625574/2-B
Matrix: Air
Analysis Batch: 625790

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 625575

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Lead	0.240	0.250		ug/m3 (Air)		104	86 - 111
Manganese	0.240	0.249		ug/m3 (Air)		104	88 - 110

Lab Sample ID: LCSD 320-625574/3-B
Matrix: Air
Analysis Batch: 625790

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 625575

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Lead	0.240	0.239		ug/m3 (Air)		100	86 - 111	4	15
Manganese	0.240	0.255		ug/m3 (Air)		106	88 - 110	2	15

Metals

Pre Prep Batch: 625574

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-93174-1	GESPM091922-301	Total/NA	Air	Filter to Air	
320-93174-3	GESPM091922-302	Total/NA	Air	Filter to Air	
320-93174-5	GESPM091922-303	Total/NA	Air	Filter to Air	
320-93174-7	GESPM091922-304	Total/NA	Air	Filter to Air	
320-93174-9	GESPM091922-305	Total/NA	Air	Filter to Air	
320-93174-11	GESPM091922-306	Total/NA	Air	Filter to Air	
320-93174-13	GESPM092122-307	Total/NA	Air	Filter to Air	
320-93174-15	GESPM092122-308	Total/NA	Air	Filter to Air	
320-93174-17	GESPM092122-309	Total/NA	Air	Filter to Air	
320-93174-19	GESPM092122-310	Total/NA	Air	Filter to Air	
320-93174-21	GESPM092122-311	Total/NA	Air	Filter to Air	
320-93174-23	GESPM092122-312	Total/NA	Air	Filter to Air	
320-93174-25	GESPM092122-313	Total/NA	Air	Filter to Air	
MB 320-625574/1-B	Method Blank	Total/NA	Air	Filter to Air	
LCS 320-625574/2-B	Lab Control Sample	Total/NA	Air	Filter to Air	
LCSD 320-625574/3-B	Lab Control Sample Dup	Total/NA	Air	Filter to Air	

Prep Batch: 625575

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-93174-1	GESPM091922-301	Total/NA	Air	3050B	625574
320-93174-3	GESPM091922-302	Total/NA	Air	3050B	625574
320-93174-5	GESPM091922-303	Total/NA	Air	3050B	625574
320-93174-7	GESPM091922-304	Total/NA	Air	3050B	625574
320-93174-9	GESPM091922-305	Total/NA	Air	3050B	625574
320-93174-11	GESPM091922-306	Total/NA	Air	3050B	625574
320-93174-13	GESPM092122-307	Total/NA	Air	3050B	625574
320-93174-15	GESPM092122-308	Total/NA	Air	3050B	625574
320-93174-17	GESPM092122-309	Total/NA	Air	3050B	625574
320-93174-19	GESPM092122-310	Total/NA	Air	3050B	625574
320-93174-21	GESPM092122-311	Total/NA	Air	3050B	625574
320-93174-23	GESPM092122-312	Total/NA	Air	3050B	625574
320-93174-25	GESPM092122-313	Total/NA	Air	3050B	625574
MB 320-625574/1-B	Method Blank	Total/NA	Air	3050B	625574
LCS 320-625574/2-B	Lab Control Sample	Total/NA	Air	3050B	625574
LCSD 320-625574/3-B	Lab Control Sample Dup	Total/NA	Air	3050B	625574

Analysis Batch: 625790

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-93174-1	GESPM091922-301	Total/NA	Air	6020	625575
320-93174-3	GESPM091922-302	Total/NA	Air	6020	625575
320-93174-5	GESPM091922-303	Total/NA	Air	6020	625575
320-93174-7	GESPM091922-304	Total/NA	Air	6020	625575
320-93174-9	GESPM091922-305	Total/NA	Air	6020	625575
320-93174-11	GESPM091922-306	Total/NA	Air	6020	625575
320-93174-13	GESPM092122-307	Total/NA	Air	6020	625575
320-93174-15	GESPM092122-308	Total/NA	Air	6020	625575
320-93174-17	GESPM092122-309	Total/NA	Air	6020	625575
320-93174-19	GESPM092122-310	Total/NA	Air	6020	625575
320-93174-21	GESPM092122-311	Total/NA	Air	6020	625575
320-93174-23	GESPM092122-312	Total/NA	Air	6020	625575
320-93174-25	GESPM092122-313	Total/NA	Air	6020	625575

Metals (Continued)

Analysis Batch: 625790 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 320-625574/1-B	Method Blank	Total/NA	Air	6020	625575
LCS 320-625574/2-B	Lab Control Sample	Total/NA	Air	6020	625575
LCSD 320-625574/3-B	Lab Control Sample Dup	Total/NA	Air	6020	625575

General Chemistry

Pre Prep Batch: 625595

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-93174-2	GESTSP091922-301	Total/NA	Air	Filter to Air	
320-93174-4	GESTSP091922-302	Total/NA	Air	Filter to Air	
320-93174-6	GESTSP091922-303	Total/NA	Air	Filter to Air	
320-93174-8	GESTSP091922-304	Total/NA	Air	Filter to Air	
320-93174-10	GESTSP091922-305	Total/NA	Air	Filter to Air	
320-93174-12	GESTSP091922-306	Total/NA	Air	Filter to Air	
320-93174-14	GESTSP092122-307	Total/NA	Air	Filter to Air	
320-93174-16	GESTSP092122-308	Total/NA	Air	Filter to Air	
320-93174-18	GESTSP092122-309	Total/NA	Air	Filter to Air	
320-93174-20	GESTSP092122-310	Total/NA	Air	Filter to Air	
320-93174-22	GESTSP092122-311	Total/NA	Air	Filter to Air	
320-93174-24	GESTSP092122-312	Total/NA	Air	Filter to Air	
320-93174-26	GESTSP092122-313	Total/NA	Air	Filter to Air	

Analysis Batch: 625975

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-93174-1	GESPM091922-301	Total/NA	Air	PM10	
320-93174-3	GESPM091922-302	Total/NA	Air	PM10	
320-93174-5	GESPM091922-303	Total/NA	Air	PM10	
320-93174-7	GESPM091922-304	Total/NA	Air	PM10	
320-93174-9	GESPM091922-305	Total/NA	Air	PM10	
320-93174-11	GESPM091922-306	Total/NA	Air	PM10	
320-93174-13	GESPM092122-307	Total/NA	Air	PM10	
320-93174-15	GESPM092122-308	Total/NA	Air	PM10	
320-93174-17	GESPM092122-309	Total/NA	Air	PM10	
320-93174-19	GESPM092122-310	Total/NA	Air	PM10	
320-93174-21	GESPM092122-311	Total/NA	Air	PM10	
320-93174-23	GESPM092122-312	Total/NA	Air	PM10	
320-93174-25	GESPM092122-313	Total/NA	Air	PM10	

Analysis Batch: 625977

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-93174-2	GESTSP091922-301	Total/NA	Air	40CFR50 App B	625595
320-93174-4	GESTSP091922-302	Total/NA	Air	40CFR50 App B	625595
320-93174-6	GESTSP091922-303	Total/NA	Air	40CFR50 App B	625595
320-93174-8	GESTSP091922-304	Total/NA	Air	40CFR50 App B	625595
320-93174-10	GESTSP091922-305	Total/NA	Air	40CFR50 App B	625595
320-93174-12	GESTSP091922-306	Total/NA	Air	40CFR50 App B	625595
320-93174-14	GESTSP092122-307	Total/NA	Air	40CFR50 App B	625595
320-93174-16	GESTSP092122-308	Total/NA	Air	40CFR50 App B	625595
320-93174-18	GESTSP092122-309	Total/NA	Air	40CFR50 App B	625595
320-93174-20	GESTSP092122-310	Total/NA	Air	40CFR50 App B	625595
320-93174-22	GESTSP092122-311	Total/NA	Air	40CFR50 App B	625595

General Chemistry (Continued)

Analysis Batch: 625977 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-93174-24	GESTSP092122-312	Total/NA	Air	40CFR50 App B	625595
320-93174-26	GESTSP092122-313	Total/NA	Air	40CFR50 App B	625595

Lab Chronicle

Client: GES-AIS, LLC
Project/Site: Hunters Point, Parcel B, Phase 2

Job ID: 320-93174-1

Client Sample ID: GESPM091922-301
Lab Sample ID: 320-93174-1
Date Collected: 10/04/22 07:56
Matrix: Air
Date Received: 10/13/22 09:25

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					625574	10/18/22 05:40	[redacted]	EET SAC
Total/NA	Prep	3050B			0.08333 Sample	100 mL	625575	10/18/22 06:10	[redacted]	EET SAC
Total/NA	Analysis	6020		1			625790	10/18/22 11:36	[redacted]	EET SAC
Total/NA	Analysis	PM10		1	0 g	0.0310 g	625975	10/14/22 13:00	[redacted]	EET SAC

Client Sample ID: GESTSP091922-301
Lab Sample ID: 320-93174-2
Date Collected: 10/04/22 07:56
Matrix: Air
Date Received: 10/13/22 09:25

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			625977	10/14/22 13:00	[redacted]	EET SAC
Total/NA	Pre Prep	Filter to Air					625595	10/18/22 09:35	[redacted]	EET SAC

Client Sample ID: GESPM091922-302
Lab Sample ID: 320-93174-3
Date Collected: 10/04/22 07:25
Matrix: Air
Date Received: 10/13/22 09:25

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					625574	10/18/22 05:40	[redacted]	EET SAC
Total/NA	Prep	3050B			0.08333 Sample	100 mL	625575	10/18/22 06:10	[redacted]	EET SAC
Total/NA	Analysis	6020		1			625790	10/18/22 11:45	[redacted]	EET SAC
Total/NA	Analysis	PM10		1	0 g	0.0300 g	625975	10/14/22 13:00	[redacted]	EET SAC

Client Sample ID: GESTSP091922-302
Lab Sample ID: 320-93174-4
Date Collected: 10/04/22 07:25
Matrix: Air
Date Received: 10/13/22 09:25

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			625977	10/14/22 13:00	[redacted]	EET SAC
Total/NA	Pre Prep	Filter to Air					625595	10/18/22 09:35	[redacted]	EET SAC

Client Sample ID: GESPM091922-303
Lab Sample ID: 320-93174-5
Date Collected: 10/04/22 07:43
Matrix: Air
Date Received: 10/13/22 09:25

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					625574	10/18/22 05:40	[redacted]	EET SAC
Total/NA	Prep	3050B			0.08333 Sample	100 mL	625575	10/18/22 06:10	[redacted]	EET SAC
Total/NA	Analysis	6020		1			625790	10/18/22 11:49	[redacted]	EET SAC
Total/NA	Analysis	PM10		1	0 g	0.0340 g	625975	10/14/22 13:00	[redacted]	EET SAC

Lab Chronicle

Client: GES-AIS, LLC
Project/Site: Hunters Point, Parcel B, Phase 2

Job ID: 320-93174-1

Client Sample ID: GESTSP091922-303
Lab Sample ID: 320-93174-6
Date Collected: 10/04/22 07:43
Matrix: Air
Date Received: 10/13/22 09:25

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			625977	10/14/22 13:00	[redacted]	EET SAC
Total/NA	Pre Prep	Filter to Air					625595	10/18/22 09:35	[redacted]	EET SAC

Client Sample ID: GESPM091922-304
Lab Sample ID: 320-93174-7
Date Collected: 10/03/22 08:00
Matrix: Air
Date Received: 10/13/22 09:25

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					625574	10/18/22 05:40	[redacted]	EET SAC
Total/NA	Prep	3050B			0.08333 Sample	100 mL	625575	10/18/22 06:10	[redacted]	EET SAC
Total/NA	Analysis	6020		1			625790	10/18/22 11:52	[redacted]	EET SAC
Total/NA	Analysis	PM10		1	0 g	-0.0002 g	625975	10/14/22 13:00	[redacted]	EET SAC

Client Sample ID: GESTSP091922-304
Lab Sample ID: 320-93174-8
Date Collected: 10/03/22 08:00
Matrix: Air
Date Received: 10/13/22 09:25

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			625977	10/14/22 13:00	[redacted]	EET SAC
Total/NA	Pre Prep	Filter to Air					625595	10/18/22 09:35	[redacted]	EET SAC

Client Sample ID: GESPM091922-305
Lab Sample ID: 320-93174-9
Date Collected: 10/05/22 07:54
Matrix: Air
Date Received: 10/13/22 09:25

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					625574	10/18/22 05:40	[redacted]	EET SAC
Total/NA	Prep	3050B			0.08333 Sample	100 mL	625575	10/18/22 06:10	[redacted]	EET SAC
Total/NA	Analysis	6020		1			625790	10/18/22 11:55	[redacted]	EET SAC
Total/NA	Analysis	PM10		1	0 g	0.0330 g	625975	10/14/22 13:00	[redacted]	EET SAC

Client Sample ID: GESTSP091922-305
Lab Sample ID: 320-93174-10
Date Collected: 10/05/22 07:54
Matrix: Air
Date Received: 10/13/22 09:25

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			625977	10/14/22 13:00	[redacted]	EET SAC
Total/NA	Pre Prep	Filter to Air					625595	10/18/22 09:35	[redacted]	EET SAC

Lab Chronicle

Client: GES-AIS, LLC
Project/Site: Hunters Point, Parcel B, Phase 2

Job ID: 320-93174-1

Client Sample ID: GESPM091922-306
Lab Sample ID: 320-93174-11
Date Collected: 10/05/22 07:27
Matrix: Air
Date Received: 10/13/22 09:25

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					625574	10/18/22 05:40	[redacted]	EET SAC
Total/NA	Prep	3050B			0.08333 Sample	100 mL	625575	10/18/22 06:10	[redacted]	EET SAC
Total/NA	Analysis	6020		1			625790	10/18/22 12:05	[redacted]	EET SAC
Total/NA	Analysis	PM10		1	0 g	0.0296 g	625975	10/14/22 13:00	[redacted]	EET SAC

Client Sample ID: GESTSP091922-306
Lab Sample ID: 320-93174-12
Date Collected: 10/05/22 07:27
Matrix: Air
Date Received: 10/13/22 09:25

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			625977	10/14/22 13:00	[redacted]	EET SAC
Total/NA	Pre Prep	Filter to Air					625595	10/18/22 09:35	[redacted]	EET SAC

Client Sample ID: GESPM092122-307
Lab Sample ID: 320-93174-13
Date Collected: 10/05/22 07:44
Matrix: Air
Date Received: 10/13/22 09:25

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					625574	10/18/22 05:40	[redacted]	EET SAC
Total/NA	Prep	3050B			0.08333 Sample	100 mL	625575	10/18/22 06:10	[redacted]	EET SAC
Total/NA	Analysis	6020		1			625790	10/18/22 12:08	[redacted]	EET SAC
Total/NA	Analysis	PM10		1	0 g	0.0260 g	625975	10/14/22 13:00	[redacted]	EET SAC

Client Sample ID: GESTSP092122-307
Lab Sample ID: 320-93174-14
Date Collected: 10/05/22 07:44
Matrix: Air
Date Received: 10/13/22 09:25

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			625977	10/14/22 13:00	[redacted]	EET SAC
Total/NA	Pre Prep	Filter to Air					625595	10/18/22 09:35	[redacted]	EET SAC

Client Sample ID: GESPM092122-308
Lab Sample ID: 320-93174-15
Date Collected: 10/06/22 07:49
Matrix: Air
Date Received: 10/13/22 09:25

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					625574	10/18/22 05:40	[redacted]	EET SAC
Total/NA	Prep	3050B			0.08333 Sample	100 mL	625575	10/18/22 06:10	[redacted]	EET SAC
Total/NA	Analysis	6020		1			625790	10/18/22 12:11	[redacted]	EET SAC
Total/NA	Analysis	PM10		1	0 g	0.0125 g	625975	10/14/22 13:00	[redacted]	EET SAC

Lab Chronicle

Client: GES-AIS, LLC
Project/Site: Hunters Point, Parcel B, Phase 2

Job ID: 320-93174-1

Client Sample ID: GESTSP092122-308
Lab Sample ID: 320-93174-16
Date Collected: 10/06/22 07:49
Matrix: Air
Date Received: 10/13/22 09:25

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			625977	10/14/22 13:00	[redacted]	EET SAC
Total/NA	Pre Prep	Filter to Air					625595	10/18/22 09:35	[redacted]	EET SAC

Client Sample ID: GESPM092122-309
Lab Sample ID: 320-93174-17
Date Collected: 10/06/22 07:22
Matrix: Air
Date Received: 10/13/22 09:25

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					625574	10/18/22 05:40	[redacted]	EET SAC
Total/NA	Prep	3050B			0.08333 Sample	100 mL	625575	10/18/22 06:10	[redacted]	EET SAC
Total/NA	Analysis	6020		1			625790	10/18/22 12:15	[redacted]	EET SAC
Total/NA	Analysis	PM10		1	0 g	0.0100 g	625975	10/14/22 13:00	[redacted]	EET SAC

Client Sample ID: GESTSP092122-309
Lab Sample ID: 320-93174-18
Date Collected: 10/06/22 07:22
Matrix: Air
Date Received: 10/13/22 09:25

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			625977	10/14/22 13:00	[redacted]	EET SAC
Total/NA	Pre Prep	Filter to Air					625595	10/18/22 09:35	[redacted]	EET SAC

Client Sample ID: GESPM092122-310
Lab Sample ID: 320-93174-19
Date Collected: 10/06/22 07:37
Matrix: Air
Date Received: 10/13/22 09:25

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					625574	10/18/22 05:40	[redacted]	EET SAC
Total/NA	Prep	3050B			0.08333 Sample	100 mL	625575	10/18/22 06:10	[redacted]	EET SAC
Total/NA	Analysis	6020		1			625790	10/18/22 12:18	[redacted]	EET SAC
Total/NA	Analysis	PM10		1	0 g	0.0113 g	625975	10/14/22 13:00	[redacted]	EET SAC

Client Sample ID: GESTSP092122-310
Lab Sample ID: 320-93174-20
Date Collected: 10/06/22 07:37
Matrix: Air
Date Received: 10/13/22 09:25

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			625977	10/14/22 13:00	[redacted]	EET SAC
Total/NA	Pre Prep	Filter to Air					625595	10/18/22 09:35	[redacted]	EET SAC

Lab Chronicle

Client: GES-AIS, LLC
Project/Site: Hunters Point, Parcel B, Phase 2

Job ID: 320-93174-1

Client Sample ID: GESPM092122-311
Lab Sample ID: 320-93174-21
Date Collected: 10/06/22 15:02
Matrix: Air
Date Received: 10/13/22 09:25

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					625574	10/18/22 05:40	[redacted]	EET SAC
Total/NA	Prep	3050B			0.08333 Sample	100 mL	625575	10/18/22 06:10	[redacted]	EET SAC
Total/NA	Analysis	6020		1			625790	10/18/22 12:21	[redacted]	EET SAC
Total/NA	Analysis	PM10		1	0 g	0.0021 g	625975	10/14/22 13:00	[redacted]	EET SAC

Client Sample ID: GESTSP092122-311
Lab Sample ID: 320-93174-22
Date Collected: 10/06/22 15:02
Matrix: Air
Date Received: 10/13/22 09:25

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			625977	10/14/22 13:00	[redacted]	EET SAC
Total/NA	Pre Prep	Filter to Air					625595	10/18/22 09:35	[redacted]	EET SAC

Client Sample ID: GESPM092122-312
Lab Sample ID: 320-93174-23
Date Collected: 10/06/22 15:00
Matrix: Air
Date Received: 10/13/22 09:25

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					625574	10/18/22 05:40	[redacted]	EET SAC
Total/NA	Prep	3050B			0.08333 Sample	100 mL	625575	10/18/22 06:10	[redacted]	EET SAC
Total/NA	Analysis	6020		1			625790	10/18/22 12:25	[redacted]	EET SAC
Total/NA	Analysis	PM10		1	0 g	0.0020 g	625975	10/14/22 13:00	[redacted]	EET SAC

Client Sample ID: GESTSP092122-312
Lab Sample ID: 320-93174-24
Date Collected: 10/06/22 15:00
Matrix: Air
Date Received: 10/13/22 09:25

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			625977	10/14/22 13:00	[redacted]	EET SAC
Total/NA	Pre Prep	Filter to Air					625595	10/18/22 09:35	[redacted]	EET SAC

Client Sample ID: GESPM092122-313
Lab Sample ID: 320-93174-25
Date Collected: 10/06/22 15:00
Matrix: Air
Date Received: 10/13/22 09:25

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					625574	10/18/22 05:40	[redacted]	EET SAC
Total/NA	Prep	3050B			0.08333 Sample	100 mL	625575	10/18/22 06:10	[redacted]	EET SAC
Total/NA	Analysis	6020		1			625790	10/18/22 12:28	[redacted]	EET SAC
Total/NA	Analysis	PM10		1	0 g	0.0014 g	625975	10/14/22 13:00	[redacted]	EET SAC

Lab Chronicle

Client: GES-AIS, LLC
Project/Site: Hunters Point, Parcel B, Phase 2

Job ID: 320-93174-1

Client Sample ID: GESTSP092122-313
Date Collected: 10/06/22 15:00
Date Received: 10/13/22 09:25

Lab Sample ID: 320-93174-26
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			625977	10/14/22 13:00	[redacted]	EET SAC
Total/NA	Pre Prep	Filter to Air					625595	10/18/22 09:35	[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
Job ID: 320-93174-1
Project/Site: Hunters Point, Parcel B, Phase 2

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

Method Summary

Client: GES-AIS, LLC
Job ID: 320-93174-1
Project/Site: Hunters Point, Parcel B, Phase 2

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: 320-93174-1
Project/Site: Hunters Point, Parcel B, Phase 2

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
320-93174-1	GESPM091922-301	Air	10/04/22 07:56	10/13/22 09:25
320-93174-2	GESTSP091922-301	Air	10/04/22 07:56	10/13/22 09:25
320-93174-3	GESPM091922-302	Air	10/04/22 07:25	10/13/22 09:25
320-93174-4	GESTSP091922-302	Air	10/04/22 07:25	10/13/22 09:25
320-93174-5	GESPM091922-303	Air	10/04/22 07:43	10/13/22 09:25
320-93174-6	GESTSP091922-303	Air	10/04/22 07:43	10/13/22 09:25
320-93174-7	GESPM091922-304	Air	10/03/22 08:00	10/13/22 09:25
320-93174-8	GESTSP091922-304	Air	10/03/22 08:00	10/13/22 09:25
320-93174-9	GESPM091922-305	Air	10/05/22 07:54	10/13/22 09:25
320-93174-10	GESTSP091922-305	Air	10/05/22 07:54	10/13/22 09:25
320-93174-11	GESPM091922-306	Air	10/05/22 07:27	10/13/22 09:25
320-93174-12	GESTSP091922-306	Air	10/05/22 07:27	10/13/22 09:25
320-93174-13	GESPM092122-307	Air	10/05/22 07:44	10/13/22 09:25
320-93174-14	GESTSP092122-307	Air	10/05/22 07:44	10/13/22 09:25
320-93174-15	GESPM092122-308	Air	10/06/22 07:49	10/13/22 09:25
320-93174-16	GESTSP092122-308	Air	10/06/22 07:49	10/13/22 09:25
320-93174-17	GESPM092122-309	Air	10/06/22 07:22	10/13/22 09:25
320-93174-18	GESTSP092122-309	Air	10/06/22 07:22	10/13/22 09:25
320-93174-19	GESPM092122-310	Air	10/06/22 07:37	10/13/22 09:25
320-93174-20	GESTSP092122-310	Air	10/06/22 07:37	10/13/22 09:25
320-93174-21	GESPM092122-311	Air	10/06/22 15:02	10/13/22 09:25
320-93174-22	GESTSP092122-311	Air	10/06/22 15:02	10/13/22 09:25
320-93174-23	GESPM092122-312	Air	10/06/22 15:00	10/13/22 09:25
320-93174-24	GESTSP092122-312	Air	10/06/22 15:00	10/13/22 09:25
320-93174-25	GESPM092122-313	Air	10/06/22 15:00	10/13/22 09:25
320-93174-26	GESTSP092122-313	Air	10/06/22 15:00	10/13/22 09:25

CHAIN-OF-CUSTODY RECORD

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

COC # KT101222AIRB

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:

320-93174 Chain of Custody

Equipment:

Code	Matrix
A	Air
AQ	Air Quality Control Matrix

Code	Container/Preservative
1	1x 250-mL Plastic, 4 Degrees C
1	1x Envelope, None

Analytical Test Method

Event: Parcel B Air Monitoring

	Sample ID	Matrix	Date	Time	Samp Init.	CAAIR - Air PM10	N0500 - Air TSP	SW6020 - Air Pb Mn	Location ID	Sample Type	Depth (ft bgs) Top	Bottom	Cooler	Comments
						1	1	1						
1	GESPM091922-301	A	10/04/2022	0756	[redacted]	X		X	MSB01	N1	0.00	0.00	1	VOLUME: 1672.44 (M3)
2	GESTSP091922-301	A	10/04/2022	0756	[redacted]		X		MSB01	N1	0.00	0.00	1	VOLUME: 1787.57 (M3)
3	GESPM091922-302	A	10/04/2022	0725	[redacted]	X		X	MSB02	N1	0.00	0.00	1	VOLUME: 1656.00 (M3)
4	GESTSP091922-302	A	10/04/2022	0725	[redacted]		X		MSB02	N1	0.00	0.00	1	VOLUME: 1780.89 (M3)
5	GESPM091922-303	A	10/04/2022	0743	[redacted]	X		X	MSB113A	N1	0.00	0.00	1	VOLUME: 1631.28 (M3)
6	GESTSP091922-303	A	10/04/2022	0743	[redacted]		X		MSB113A	N1	0.00	0.00	1	VOLUME: 1618.19 (M3)
7	GESPM091922-304	AQ	10/03/2022	0800	[redacted]	X		X	FIELDQC	FB1	0.00	0.00	1	
8	GESTSP091922-304	AQ	10/03/2022	0800	[redacted]		X		FIELDQC	FB1	0.00	0.00	1	
9	GESPM091922-305	A	10/05/2022	0754	[redacted]	X		X	MSB01	N1	0.00	0.00	1	VOLUME: 1635.08 (M3)
10	GESTSP091922-305	A	10/05/2022	0754	[redacted]		X		MSB01	N1	0.00	0.00	1	VOLUME: 1757.08 (M3)
11	GESPM091922-306	A	10/05/2022	0727	[redacted]	X		X	MSB02	N1	0.00	0.00	1	VOLUME: 1627.94 (M3)

Relinquished by: *(Signature)*	Date	Time	Received by: *(Signature)*	Date	Time
[redacted]	10-12-22	1600	FEDEX	10-12-22	1600
			[redacted]	10-13-22	0955

Shipping Date / Carrier / Airbill Number

Shipping Date: 10/12/2022 / FEDEX 7701 1461 2851

Received by Laboratory: *(Signature, Date, Time)* **& condition**

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GES.Navy_COC_Field
October 11, 2022

CHAIN-OF-CUSTODY RECORD

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

COC # KT101222AIRB

GES

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:

Code	Matrix
A	Air
AQ	Air Quality Control Matrix

Code	Container/Preservative
1	1x 250-mL Plastic, 4 Degrees C
1	1x Envelope, None

						Analytical Test Method	CAAIR - Air PM10	N0500 - Air TSP	SW6020 - Air Pb Mn											
	Event: Parcel B Air Monitoring						1	1	1											
	Sample ID	Matrix	Date	Time	Samp Init.											Location ID	Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom	Cooler	Comments
12	GESTSP091922-306	A	10/05/2022	0727	[redacted]			X								MSB02	N1	0.00	0.00	1	VOLUME: 1766.80 (M3)
13	GESPM092122-307	A	10/05/2022	0744			X		X							MSB113A	N1	0.00	0.00	1	VOLUME: 1597.77 (M3)
14	GESTSP092122-307	A	10/05/2022	0744				X								MSB113A	N1	0.00	0.00	1	VOLUME: 1587.86 (M3)
15	GESPM092122-308	A	10/06/2022	0749			X		X							MSB01	N1	0.00	0.00	1	VOLUME: 1636.07 (M3)
16	GESTSP092122-308	A	10/06/2022	0749				X								MSB01	N1	0.00	0.00	1	VOLUME: 1751.65 (M3)
17	GESPM092122-309	A	10/06/2022	0722			X		X							MSB02	N1	0.00	0.00	1	VOLUME: 1618.34 (M3)
18	GESTSP092122-309	A	10/06/2022	0722				X								MSB02	N1	0.00	0.00	1	VOLUME: 1759.92 (M3)
19	GESPM092122-310	A	10/06/2022	0737			X		X							MSB113A	N1	0.00	0.00	1	VOLUME: 1593.63 (M3)
20	GESTSP092122-310	A	10/06/2022	0737				X								MSB113A	N1	0.00	0.00	1	VOLUME: 1584.68 (M3)
21	GESPM092122-311	A	10/06/2022	1502			X		X							MSB01	N1	0.00	0.00	1	VOLUME: 486.80 (M3)
22	GESTSP092122-311	A	10/06/2022	1502				X								MSB01	N1	0.00	0.00	1	VOLUME: 513.65 (M3)

Relinquished by: *(Signature)*	Date	Time	Received by: *(Signature)*	Date	Time
[redacted]	10-12-22	1600	FEDEX	10-12-22	1600
			[redacted]	10-13-22	0915

Shipping Date / Carrier / Airbill Number

Shipping Date: 10/12/2022 / FEDEX 7701 1461 2851

Received by Laboratory: *(Signature, Date, Time)* **& condition**

20.0

GES.Navy_COC_Field
October 11, 2022

CHAIN-OF-CUSTODY RECORD

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

COC # KT101222AIRB

GES

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:

Code	Matrix
A	Air
AQ	Air Quality Control Matrix

Code	Container/Preservative
1	1x 250-mL Plastic, 4 Degrees C
1	1x Envelope, None

						Analytical Test Method	CAAIR - Air PM10	N0500 - Air TSP	SW6020 - Air Pb Mn												
	Event: Parcel B Air Monitoring						1	1	1												
	Sample ID	Matrix	Date	Time	Samp Init.											Location ID	Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom	Cooler	Comments
23	GESPM092122-312	A	10/06/2022	1500	[redacted]		X		X							MSB02	N1	0.00	0.00	1	VOLUME: 513.71 (M3)
24	GESTSP092122-312	A	10/06/2022	1500				X								MSB02	N1	0.00	0.00	1	VOLUME: 555.23 (M3)
25	GESPM092122-313	A	10/06/2022	1500			X		X							MSB113A	N1	0.00	0.00	1	VOLUME: 485.14 (M3)
26	GESTSP092122-313	A	10/06/2022	1500				X								MSB113A	N1	0.00	0.00	1	VOLUME: 481.21 (M3)
27									N/A												
28									[redacted]	10-12-22											

Turnaround Time: 5 days

Relinquished by: *(Signature)*	**Date**	**Time**	**Received by: *(Signature)***	**Date**	**Time**
[redacted]	10-12-22	1600	FEDEX	10-12-22	1600
			[redacted]	10-13-22	0520

Shipping Date / Carrier / Airbill Number

Shipping Date: 10/12/2022 / FEDEX 7701 1461 2851

Received by Laboratory: *(Signature, Date, Time)* **& condition**

ZAO

GES.Navy_COC_Field
October 11, 2022

Login Sample Receipt Checklist

Client: GES-AIS, LLC

Job Number: 320-93174-1

Login Number: 93174
List Number: 1
Creator: Her, David A

List Source: Eurofins Sacramento

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	

eurofins | Environment Testing

ANALYTICAL REPORT

Eurofins Sacramento
880 Riverside Parkway
West Sacramento, CA 95605
Tel: (916)373-5600

Laboratory Job ID: 320-93431-1
Client Project/Site: Hunters Point, Parcel B, Phase 2

For:
GES-AIS LLC
1501 W Fountainhead Parkway
Ste 550
Tempe, Arizona 85282

Attn: [redacted]

[redacted]

Authorized for release by:
10/28/2022 11:09:50 AM

[redacted], Project Manager I
[redacted]
[redacted]

Table of Contents

Definitions/Glossary

Client: GES-AIS LLC
Job ID: 320-93431-1
Project/Site: Hunters Point, Parcel B, Phase 2

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.
¤	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

Job ID: 320-93431-1

Laboratory: Eurofins Sacramento

Narrative

Job Narrative
320-93431-1

Comments
No additional comments.

Receipt
The samples were received on 10/20/2022 9:20 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 19.9º C.

Metals
Method PM10: The following samples in analytical batch 320-628117 were recorded with a negative net weight. No particulate loading on the filter or damage to the filter could be observed.
GESPM092122-317 (320-93431-7) and GESPM092122-324 (320-93431-21)

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
Project/Site: Hunters Point, Parcel B, Phase 2

Job ID: 320-93431-1

Client Sample ID: GESPM092122-314 — Lab Sample ID: 320-93431-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lead	0.00076	B	0.00072	0.00011	ug/m3 (Air)	1		6020	Total/NA
Manganese	0.0025		0.00072	0.00010	ug/m3 (Air)	1		6020	Total/NA
Particulate Matter as PM 10	8.4		0.30	0.30	ug/m3	1		PM10	Total/NA

Client Sample ID: GESTSP092122-314 — Lab Sample ID: 320-93431-2

Analyte	Result	Qualifier	RL	RL	Unit	Dil Fac	D	Method	Prep Type
Total Suspended Particulates	16.1443		0.2774	0.2774	ug/m3 (Air)	1		40CFR50 App B	Total/NA

Client Sample ID: GESPM092122-315 — Lab Sample ID: 320-93431-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lead	0.0011	B	0.00073	0.00011	ug/m3 (Air)	1		6020	Total/NA
Manganese	0.0019		0.00073	0.00010	ug/m3 (Air)	1		6020	Total/NA
Particulate Matter as PM 10	8.1		0.31	0.31	ug/m3	1		PM10	Total/NA

Client Sample ID: GESTSP092122-315 — Lab Sample ID: 320-93431-4

Analyte	Result	Qualifier	RL	RL	Unit	Dil Fac	D	Method	Prep Type
Total Suspended Particulates	12.4396		0.2853	0.2853	ug/m3 (Air)	1		40CFR50 App B	Total/NA

Client Sample ID: GESPM092122-316 — Lab Sample ID: 320-93431-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lead	0.00069	J B	0.00074	0.00011	ug/m3 (Air)	1		6020	Total/NA
Manganese	0.0022		0.00074	0.00010	ug/m3 (Air)	1		6020	Total/NA
Particulate Matter as PM 10	8.1		0.31	0.31	ug/m3	1		PM10	Total/NA

Client Sample ID: GESTSP092122-316 — Lab Sample ID: 320-93431-6

Analyte	Result	Qualifier	RL	RL	Unit	Dil Fac	D	Method	Prep Type
Total Suspended Particulates	14.7557		0.3100	0.3100	ug/m3 (Air)	1		40CFR50 App B	Total/NA

Client Sample ID: GESPM092122-317 — Lab Sample ID: 320-93431-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Manganese	0.00037	J	0.0012	0.00017	ug/m3 (Air)	1		6020	Total/NA

Client Sample ID: GESTSP092122-317 — Lab Sample ID: 320-93431-8

No Detections.

Client Sample ID: GESPM092122-318 — Lab Sample ID: 320-93431-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lead	0.00093	B	0.00074	0.00011	ug/m3 (Air)	1		6020	Total/NA
Manganese	0.0031		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: GESTSP092122-318 — Lab Sample ID: 320-93431-10

Analyte	Result	Qualifier	RL	RL	Unit	Dil Fac	D	Method	Prep Type
Total Suspended Particulates	28.1900		0.2888	0.2888	ug/m3 (Air)	1		40CFR50 App B	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: GES-AIS LLC
Job ID: 320-93431-1
Project/Site: Hunters Point, Parcel B, Phase 2

Client Sample ID: GESPM092122-319 — Lab Sample ID: 320-93431-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lead	0.00071	J B	0.00074	0.00011	ug/m3 (Air)	1		6020	Total/NA
Manganese	0.0024		0.00074	0.00010	ug/m3 (Air)	1		6020	Total/NA
Particulate Matter as PM 10	14		0.31	0.31	ug/m3	1		PM10	Total/NA

Client Sample ID: GESTSP092122-319 — Lab Sample ID: 320-93431-12

Analyte	Result	Qualifier	RL	RL	Unit	Dil Fac	D	Method	Prep Type
Total Suspended Particulates	21.3435		0.2808	0.2808	ug/m3 (Air)	1		40CFR50 App B	Total/NA

Client Sample ID: GESPM092122-320 — Lab Sample ID: 320-93431-13

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lead	0.0010	B	0.00076	0.00011	ug/m3 (Air)	1		6020	Total/NA
Manganese	0.0040		0.00076	0.00011	ug/m3 (Air)	1		6020	Total/NA
Particulate Matter as PM 10	19		0.32	0.32	ug/m3	1		PM10	Total/NA

Client Sample ID: GESTSP092122-320 — Lab Sample ID: 320-93431-14

Analyte	Result	Qualifier	RL	RL	Unit	Dil Fac	D	Method	Prep Type
Total Suspended Particulates	26.2487		0.3155	0.3155	ug/m3 (Air)	1		40CFR50 App B	Total/NA

Client Sample ID: GESPM092122-321 — Lab Sample ID: 320-93431-15

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lead	0.00084	B	0.00075	0.00011	ug/m3 (Air)	1		6020	Total/NA
Manganese	0.0023		0.00075	0.00010	ug/m3 (Air)	1		6020	Total/NA
Particulate Matter as PM 10	9.7		0.31	0.31	ug/m3	1		PM10	Total/NA

Client Sample ID: GESTSP092122-321 — Lab Sample ID: 320-93431-16

Analyte	Result	Qualifier	RL	RL	Unit	Dil Fac	D	Method	Prep Type
Total Suspended Particulates	11.2526		0.2856	0.2856	ug/m3 (Air)	1		40CFR50 App B	Total/NA

Client Sample ID: GESPM092122-322 — Lab Sample ID: 320-93431-17

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lead	0.00055	J B	0.00075	0.00011	ug/m3 (Air)	1		6020	Total/NA
Manganese	0.0018		0.00075	0.00010	ug/m3 (Air)	1		6020	Total/NA
Particulate Matter as PM 10	7.7		0.31	0.31	ug/m3	1		PM10	Total/NA

Client Sample ID: GESTSP092122-322 — Lab Sample ID: 320-93431-18

Analyte	Result	Qualifier	RL	RL	Unit	Dil Fac	D	Method	Prep Type
Total Suspended Particulates	13.9366		0.2879	0.2879	ug/m3 (Air)	1		40CFR50 App B	Total/NA

Client Sample ID: GESPM092122-323 — Lab Sample ID: 320-93431-19

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lead	0.00068	J B	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	10		0.32	0.32	ug/m3	1		PM10	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: GES-AIS LLC
Job ID: 320-93431-1
Project/Site: Hunters Point, Parcel B, Phase 2

Client Sample ID: GESTSP092122-323 — Lab Sample ID: 320-93431-20

Analyte	Result	Qualifier	RL	RL	Unit	Dil Fac	D	Method	Prep Type
Total Suspended Particulates	19.8886		0.3187	0.3187	ug/m3 (Air)	1		40CFR50 App B	Total/NA

Client Sample ID: GESPM092122-324 — Lab Sample ID: 320-93431-21

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lead	0.0022	J B	0.0025	0.00038	ug/m3 (Air)	1		6020	Total/NA
Manganese	0.0048		0.0025	0.00035	ug/m3 (Air)	1		6020	Total/NA

Client Sample ID: GESTSP092122-324 — Lab Sample ID: 320-93431-22

Analyte	Result	Qualifier	RL	RL	Unit	Dil Fac	D	Method	Prep Type
Total Suspended Particulates	6.0876		0.9819	0.9819	ug/m3 (Air)	1		40CFR50 App B	Total/NA

Client Sample ID: GESPM092122-325 — Lab Sample ID: 320-93431-23

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lead	0.0014	J B	0.0024	0.00036	ug/m3 (Air)	1		6020	Total/NA
Manganese	0.0038		0.0024	0.00034	ug/m3 (Air)	1		6020	Total/NA
Particulate Matter as PM 10	1.4		1.0	1.0	ug/m3	1		PM10	Total/NA

Client Sample ID: GESTSP092122-325 — Lab Sample ID: 320-93431-24

Analyte	Result	Qualifier	RL	RL	Unit	Dil Fac	D	Method	Prep Type
Total Suspended Particulates	6.4746		0.9249	0.9249	ug/m3 (Air)	1		40CFR50 App B	Total/NA

Client Sample ID: GESPM092122-326 — Lab Sample ID: 320-93431-25

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lead	0.0028	B	0.0024	0.00037	ug/m3 (Air)	1		6020	Total/NA
Manganese	0.0057		0.0024	0.00034	ug/m3 (Air)	1		6020	Total/NA
Particulate Matter as PM 10	2.4		1.0	1.0	ug/m3	1		PM10	Total/NA

Client Sample ID: GESTSP092122-326 — Lab Sample ID: 320-93431-26

Analyte	Result	Qualifier	RL	RL	Unit	Dil Fac	D	Method	Prep Type
Total Suspended Particulates	6.7737		1.0263	1.0263	ug/m3 (Air)	1		40CFR50 App B	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: GESPM092122-314
Lab Sample ID: 320-93431-1
Date Collected: 10/11/22 08:22
Matrix: Air
Date Received: 10/20/22 09:20
Sample Container: Folder/Filter

Method: SW846 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	0.00076	B	0.00072	0.00011	ug/m3 (Air)		10/27/22 05:45	10/27/22 14:40	1
Manganese	0.0025		0.00072	0.00010	ug/m3 (Air)		10/27/22 05:45	10/27/22 14:40	1

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Particulate Matter as PM 10 (40CFR50J PM10)	8.4		0.30	0.30	ug/m3			10/24/22 16:15	1

Client Sample ID: GESTSP092122-314
Lab Sample ID: 320-93431-2
Date Collected: 10/11/22 08:22
Matrix: Air
Date Received: 10/20/22 09:20
Sample Container: Folder/Filter

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Particulates (EPA 40CFR50 App B)	16.1443		0.2774	0.2774	ug/m3 (Air)			10/24/22 16:15	1

Client Sample ID: GESPM092122-315
Lab Sample ID: 320-93431-3
Date Collected: 10/11/22 07:14
Matrix: Air
Date Received: 10/20/22 09:20
Sample Container: Folder/Filter

Method: SW846 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	0.0011	B	0.00073	0.00011	ug/m3 (Air)		10/27/22 05:45	10/27/22 14:49	1
Manganese	0.0019		0.00073	0.00010	ug/m3 (Air)		10/27/22 05:45	10/27/22 14:49	1

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Particulate Matter as PM 10 (40CFR50J PM10)	8.1		0.31	0.31	ug/m3			10/24/22 16:15	1

Client Sample ID: GESTSP092122-315
Lab Sample ID: 320-93431-4
Date Collected: 10/11/22 07:14
Matrix: Air
Date Received: 10/20/22 09:20
Sample Container: Folder/Filter

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Particulates (EPA 40CFR50 App B)	12.4396		0.2853	0.2853	ug/m3 (Air)			10/24/22 16:15	1

Client Sample ID: GESPM092122-316
Lab Sample ID: 320-93431-5
Date Collected: 10/11/22 08:00
Matrix: Air
Date Received: 10/20/22 09:20
Sample Container: Folder/Filter

Method: SW846 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	0.00069	J B	0.00074	0.00011	ug/m3 (Air)		10/27/22 05:45	10/27/22 14:53	1
Manganese	0.0022		0.00074	0.00010	ug/m3 (Air)		10/27/22 05:45	10/27/22 14:53	1

Client Sample ID: GESPM092122-316
Lab Sample ID: 320-93431-5
Date Collected: 10/11/22 08:00
Matrix: Air
Date Received: 10/20/22 09:20
Sample Container: Folder/Filter

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Particulate Matter as PM 10 (40CFR50J PM10)	8.1		0.31	0.31	ug/m3			10/24/22 16:15	1

Client Sample ID: GESTSP092122-316
Lab Sample ID: 320-93431-6
Date Collected: 10/11/22 08:00
Matrix: Air
Date Received: 10/20/22 09:20
Sample Container: Folder/Filter

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Particulates (EPA 40CFR50 App B)	14.7557		0.3100	0.3100	ug/m3 (Air)			10/24/22 16:15	1

Client Sample ID: GESPM092122-317
Lab Sample ID: 320-93431-7
Date Collected: 10/10/22 08:00
Matrix: Air
Date Received: 10/20/22 09:20
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)		10/27/22 05:45	10/27/22 15:02	1
Manganese	0.00037	J	0.0012	0.00017	ug/m3 (Air)		10/27/22 05:45	10/27/22 15:02	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			10/24/22 16:15	1

Client Sample ID: GESTSP092122-317
Lab Sample ID: 320-93431-8
Date Collected: 10/10/22 08:00
Matrix: Air
Date Received: 10/20/22 09:20
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)			10/24/22 16:15	1

Client Sample ID: GESPM092122-318
Lab Sample ID: 320-93431-9
Date Collected: 10/12/22 08:08
Matrix: Air
Date Received: 10/20/22 09:20
Sample Container: Folder/Filter

Method: SW846 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	0.00093	B	0.00074	0.00011	ug/m3 (Air)		10/27/22 05:45	10/27/22 15:06	1
Manganese	0.0031		0.00074	0.00010	ug/m3 (Air)		10/27/22 05:45	10/27/22 15:06	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			10/24/22 16:15	1

Client Sample ID: GESTSP092122-318
Lab Sample ID: 320-93431-10
Date Collected: 10/12/22 08:08
Matrix: Air
Date Received: 10/20/22 09:20
Sample Container: Folder/Filter

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Particulates (EPA 40CFR50 App B)	28.1900		0.2888	0.2888	ug/m3 (Air)			10/24/22 16:15	1

Client Sample ID: GESPM092122-319
Lab Sample ID: 320-93431-11
Date Collected: 10/12/22 07:35
Matrix: Air
Date Received: 10/20/22 09:20
Sample Container: Folder/Filter

Method: SW846 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	0.00071	J B	0.00074	0.00011	ug/m3 (Air)		10/27/22 05:45	10/27/22 15:09	1
Manganese	0.0024		0.00074	0.00010	ug/m3 (Air)		10/27/22 05:45	10/27/22 15:09	1

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Particulate Matter as PM 10 (40CFR50J PM10)	14		0.31	0.31	ug/m3			10/24/22 16:15	1

Client Sample ID: GESTSP092122-319
Lab Sample ID: 320-93431-12
Date Collected: 10/12/22 07:35
Matrix: Air
Date Received: 10/20/22 09:20
Sample Container: Folder/Filter

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Particulates (EPA 40CFR50 App B)	21.3435		0.2808	0.2808	ug/m3 (Air)			10/24/22 16:15	1

Client Sample ID: GESPM092122-320
Lab Sample ID: 320-93431-13
Date Collected: 10/12/22 07:50
Matrix: Air
Date Received: 10/20/22 09:20
Sample Container: Folder/Filter

Method: SW846 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	0.0010	B	0.00076	0.00011	ug/m3 (Air)		10/27/22 05:45	10/27/22 15:12	1
Manganese	0.0040		0.00076	0.00011	ug/m3 (Air)		10/27/22 05:45	10/27/22 15:12	1

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Particulate Matter as PM 10 (40CFR50J PM10)	19		0.32	0.32	ug/m3			10/24/22 16:15	1

Client Sample ID: GESTSP092122-320
Lab Sample ID: 320-93431-14
Date Collected: 10/12/22 07:50
Matrix: Air
Date Received: 10/20/22 09:20
Sample Container: Folder/Filter

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Particulates (EPA 40CFR50 App B)	26.2487		0.3155	0.3155	ug/m3 (Air)			10/24/22 16:15	1

Client Sample ID: GESPM092122-321
Lab Sample ID: 320-93431-15
Date Collected: 10/13/22 07:45
Matrix: Air
Date Received: 10/20/22 09:20
Sample Container: Folder/Filter

Method: SW846 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	0.00084	B	0.00075	0.00011	ug/m3 (Air)		10/27/22 05:45	10/27/22 15:15	1
Manganese	0.0023		0.00075	0.00010	ug/m3 (Air)		10/27/22 05:45	10/27/22 15:15	1

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Particulate Matter as PM 10 (40CFR50J PM10)	9.7		0.31	0.31	ug/m3			10/24/22 16:15	1

Client Sample ID: GESTSP092122-321
Lab Sample ID: 320-93431-16
Date Collected: 10/13/22 07:45
Matrix: Air
Date Received: 10/20/22 09:20
Sample Container: Folder/Filter

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Particulates (EPA 40CFR50 App B)	11.2526		0.2856	0.2856	ug/m3 (Air)			10/24/22 16:15	1

Client Sample ID: GESPM092122-322
Lab Sample ID: 320-93431-17
Date Collected: 10/13/22 07:18
Matrix: Air
Date Received: 10/20/22 09:20
Sample Container: Folder/Filter

Method: SW846 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	0.00055	J B	0.00075	0.00011	ug/m3 (Air)		10/27/22 05:45	10/27/22 15:19	1
Manganese	0.0018		0.00075	0.00010	ug/m3 (Air)		10/27/22 05:45	10/27/22 15:19	1

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Particulate Matter as PM 10 (40CFR50J PM10)	7.7		0.31	0.31	ug/m3			10/24/22 16:15	1

Client Sample ID: GESTSP092122-322
Lab Sample ID: 320-93431-18
Date Collected: 10/13/22 07:18
Matrix: Air
Date Received: 10/20/22 09:20
Sample Container: Folder/Filter

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Particulates (EPA 40CFR50 App B)	13.9366		0.2879	0.2879	ug/m3 (Air)			10/24/22 16:15	1

Client Sample ID: GESPM092122-323
Lab Sample ID: 320-93431-19
Date Collected: 10/13/22 07:31
Matrix: Air
Date Received: 10/20/22 09:20
Sample Container: Folder/Filter

Method: SW846 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	0.00068	J B	0.00076	0.00011	ug/m3 (Air)		10/27/22 05:45	10/27/22 15:22	1
Manganese	0.0038		0.00076	0.00011	ug/m3 (Air)		10/27/22 05:45	10/27/22 15:22	1

Client Sample ID: GESPM092122-323
Lab Sample ID: 320-93431-19
Date Collected: 10/13/22 07:31
Matrix: Air
Date Received: 10/20/22 09:20
Sample Container: Folder/Filter

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Particulate Matter as PM 10 (40CFR50J PM10)	10		0.32	0.32	ug/m3			10/24/22 16:15	1

Client Sample ID: GESTSP092122-323
Lab Sample ID: 320-93431-20
Date Collected: 10/13/22 07:31
Matrix: Air
Date Received: 10/20/22 09:20
Sample Container: Folder/Filter

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Particulates (EPA 40CFR50 App B)	19.8886		0.3187	0.3187	ug/m3 (Air)			10/24/22 16:15	1

Client Sample ID: GESPM092122-324
Lab Sample ID: 320-93431-21
Date Collected: 10/13/22 14:46
Matrix: Air
Date Received: 10/20/22 09:20
Sample Container: Folder/Filter

Method: SW846 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	0.0022	J B	0.0025	0.00038	ug/m3 (Air)		10/27/22 05:45	10/27/22 15:25	1
Manganese	0.0048		0.0025	0.00035	ug/m3 (Air)		10/27/22 05:45	10/27/22 15:25	1

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Particulate Matter as PM 10 (40CFR50J PM10)	ND		1.0	1.0	ug/m3			10/24/22 16:15	1

Client Sample ID: GESTSP092122-324
Lab Sample ID: 320-93431-22
Date Collected: 10/13/22 14:46
Matrix: Air
Date Received: 10/20/22 09:20
Sample Container: Folder/Filter

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Particulates (EPA 40CFR50 App B)	6.0876		0.9819	0.9819	ug/m3 (Air)			10/24/22 16:15	1

Client Sample ID: GESPM092122-325
Lab Sample ID: 320-93431-23
Date Collected: 10/13/22 14:42
Matrix: Air
Date Received: 10/20/22 09:20
Sample Container: Folder/Filter

Method: SW846 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	0.0014	J B	0.0024	0.00036	ug/m3 (Air)		10/27/22 05:45	10/27/22 15:35	1
Manganese	0.0038		0.0024	0.00034	ug/m3 (Air)		10/27/22 05:45	10/27/22 15:35	1

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Particulate Matter as PM 10 (40CFR50J PM10)	1.4		1.0	1.0	ug/m3			10/24/22 16:15	1

Client Sample ID: GESTSP092122-325
Lab Sample ID: 320-93431-24

Date Collected: 10/13/22 14:42
Matrix: Air
Date Received: 10/20/22 09:20
Sample Container: Folder/Filter

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Particulates (EPA 40CFR50 App B)	6.4746		0.9249	0.9249	ug/m3 (Air)			10/24/22 16:15	1

Client Sample ID: GESPM092122-326
Lab Sample ID: 320-93431-25

Date Collected: 10/13/22 14:57
Matrix: Air
Date Received: 10/20/22 09:20
Sample Container: Folder/Filter

Method: SW846 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	0.0028	B	0.0024	0.00037	ug/m3 (Air)		10/27/22 05:45	10/27/22 15:38	1
Manganese	0.0057		0.0024	0.00034	ug/m3 (Air)		10/27/22 05:45	10/27/22 15:38	1

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Particulate Matter as PM 10 (40CFR50J PM10)	2.4		1.0	1.0	ug/m3			10/24/22 16:15	1

Client Sample ID: GESTSP092122-326
Lab Sample ID: 320-93431-26

Date Collected: 10/13/22 14:57
Matrix: Air
Date Received: 10/20/22 09:20
Sample Container: Folder/Filter

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Particulates (EPA 40CFR50 App B)	6.7737		1.0263	1.0263	ug/m3 (Air)			10/24/22 16:15	1

QC Sample Results

Client: GES-AIS LLC
Project/Site: Hunters Point, Parcel B, Phase 2

Job ID: 320-93431-1

Method: 6020 - Metals (ICP/MS)

Lab Sample ID: MB 320-627785/1-B
Matrix: Air
Analysis Batch: 628221

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 627856

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	0.000206	J	0.0012	0.00018	ug/m3 (Air)		10/27/22 05:45	10/27/22 14:30	1
Manganese	ND		0.0012	0.00017	ug/m3 (Air)		10/27/22 05:45	10/27/22 14:30	1

Lab Sample ID: LCS 320-627785/2-B
Matrix: Air
Analysis Batch: 628221

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 627856

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Lead	0.240	0.252		ug/m3 (Air)		105	86 - 111
Manganese	0.240	0.254		ug/m3 (Air)		106	88 - 110

Lab Sample ID: LCSD 320-627785/3-B
Matrix: Air
Analysis Batch: 628221

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 627856

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Lead	0.240	0.252		ug/m3 (Air)		105	86 - 111	0	15
Manganese	0.240	0.252		ug/m3 (Air)		105	88 - 110	1	15

QC Association Summary

Client: GES-AIS LLC
Job ID: 320-93431-1
Project/Site: Hunters Point, Parcel B, Phase 2

Metals

Pre Prep Batch: 627785

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-93431-1	GESPM092122-314	Total/NA	Air	Filter to Air	
320-93431-3	GESPM092122-315	Total/NA	Air	Filter to Air	
320-93431-5	GESPM092122-316	Total/NA	Air	Filter to Air	
320-93431-7	GESPM092122-317	Total/NA	Air	Filter to Air	
320-93431-9	GESPM092122-318	Total/NA	Air	Filter to Air	
320-93431-11	GESPM092122-319	Total/NA	Air	Filter to Air	
320-93431-13	GESPM092122-320	Total/NA	Air	Filter to Air	
320-93431-15	GESPM092122-321	Total/NA	Air	Filter to Air	
320-93431-17	GESPM092122-322	Total/NA	Air	Filter to Air	
320-93431-19	GESPM092122-323	Total/NA	Air	Filter to Air	
320-93431-21	GESPM092122-324	Total/NA	Air	Filter to Air	
320-93431-23	GESPM092122-325	Total/NA	Air	Filter to Air	
320-93431-25	GESPM092122-326	Total/NA	Air	Filter to Air	
MB 320-627785/1-B	Method Blank	Total/NA	Air	Filter to Air	
LCS 320-627785/2-B	Lab Control Sample	Total/NA	Air	Filter to Air	
LCSD 320-627785/3-B	Lab Control Sample Dup	Total/NA	Air	Filter to Air	

Prep Batch: 627856

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-93431-1	GESPM092122-314	Total/NA	Air	3050B	627785
320-93431-3	GESPM092122-315	Total/NA	Air	3050B	627785
320-93431-5	GESPM092122-316	Total/NA	Air	3050B	627785
320-93431-7	GESPM092122-317	Total/NA	Air	3050B	627785
320-93431-9	GESPM092122-318	Total/NA	Air	3050B	627785
320-93431-11	GESPM092122-319	Total/NA	Air	3050B	627785
320-93431-13	GESPM092122-320	Total/NA	Air	3050B	627785
320-93431-15	GESPM092122-321	Total/NA	Air	3050B	627785
320-93431-17	GESPM092122-322	Total/NA	Air	3050B	627785
320-93431-19	GESPM092122-323	Total/NA	Air	3050B	627785
320-93431-21	GESPM092122-324	Total/NA	Air	3050B	627785
320-93431-23	GESPM092122-325	Total/NA	Air	3050B	627785
320-93431-25	GESPM092122-326	Total/NA	Air	3050B	627785
MB 320-627785/1-B	Method Blank	Total/NA	Air	3050B	627785
LCS 320-627785/2-B	Lab Control Sample	Total/NA	Air	3050B	627785
LCSD 320-627785/3-B	Lab Control Sample Dup	Total/NA	Air	3050B	627785

Analysis Batch: 628221

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-93431-1	GESPM092122-314	Total/NA	Air	6020	627856
320-93431-3	GESPM092122-315	Total/NA	Air	6020	627856
320-93431-5	GESPM092122-316	Total/NA	Air	6020	627856
320-93431-7	GESPM092122-317	Total/NA	Air	6020	627856
320-93431-9	GESPM092122-318	Total/NA	Air	6020	627856
320-93431-11	GESPM092122-319	Total/NA	Air	6020	627856
320-93431-13	GESPM092122-320	Total/NA	Air	6020	627856
320-93431-15	GESPM092122-321	Total/NA	Air	6020	627856
320-93431-17	GESPM092122-322	Total/NA	Air	6020	627856
320-93431-19	GESPM092122-323	Total/NA	Air	6020	627856
320-93431-21	GESPM092122-324	Total/NA	Air	6020	627856
320-93431-23	GESPM092122-325	Total/NA	Air	6020	627856
320-93431-25	GESPM092122-326	Total/NA	Air	6020	627856

Metals (Continued)

Analysis Batch: 628221 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 320-627785/1-B	Method Blank	Total/NA	Air	6020	627856
LCS 320-627785/2-B	Lab Control Sample	Total/NA	Air	6020	627856
LCSD 320-627785/3-B	Lab Control Sample Dup	Total/NA	Air	6020	627856

General Chemistry

Pre Prep Batch: 628052

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-93431-2	GESTSP092122-314	Total/NA	Air	Filter to Air	
320-93431-4	GESTSP092122-315	Total/NA	Air	Filter to Air	
320-93431-6	GESTSP092122-316	Total/NA	Air	Filter to Air	
320-93431-8	GESTSP092122-317	Total/NA	Air	Filter to Air	
320-93431-10	GESTSP092122-318	Total/NA	Air	Filter to Air	
320-93431-12	GESTSP092122-319	Total/NA	Air	Filter to Air	
320-93431-14	GESTSP092122-320	Total/NA	Air	Filter to Air	
320-93431-16	GESTSP092122-321	Total/NA	Air	Filter to Air	
320-93431-18	GESTSP092122-322	Total/NA	Air	Filter to Air	
320-93431-20	GESTSP092122-323	Total/NA	Air	Filter to Air	
320-93431-22	GESTSP092122-324	Total/NA	Air	Filter to Air	
320-93431-24	GESTSP092122-325	Total/NA	Air	Filter to Air	
320-93431-26	GESTSP092122-326	Total/NA	Air	Filter to Air	

Analysis Batch: 628108

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-93431-2	GESTSP092122-314	Total/NA	Air	40CFR50 App B	628052
320-93431-4	GESTSP092122-315	Total/NA	Air	40CFR50 App B	628052
320-93431-6	GESTSP092122-316	Total/NA	Air	40CFR50 App B	628052
320-93431-8	GESTSP092122-317	Total/NA	Air	40CFR50 App B	628052
320-93431-10	GESTSP092122-318	Total/NA	Air	40CFR50 App B	628052
320-93431-12	GESTSP092122-319	Total/NA	Air	40CFR50 App B	628052
320-93431-14	GESTSP092122-320	Total/NA	Air	40CFR50 App B	628052
320-93431-16	GESTSP092122-321	Total/NA	Air	40CFR50 App B	628052
320-93431-18	GESTSP092122-322	Total/NA	Air	40CFR50 App B	628052
320-93431-20	GESTSP092122-323	Total/NA	Air	40CFR50 App B	628052
320-93431-22	GESTSP092122-324	Total/NA	Air	40CFR50 App B	628052
320-93431-24	GESTSP092122-325	Total/NA	Air	40CFR50 App B	628052
320-93431-26	GESTSP092122-326	Total/NA	Air	40CFR50 App B	628052

Analysis Batch: 628117

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-93431-1	GESPM092122-314	Total/NA	Air	PM10	
320-93431-3	GESPM092122-315	Total/NA	Air	PM10	
320-93431-5	GESPM092122-316	Total/NA	Air	PM10	
320-93431-7	GESPM092122-317	Total/NA	Air	PM10	
320-93431-9	GESPM092122-318	Total/NA	Air	PM10	
320-93431-11	GESPM092122-319	Total/NA	Air	PM10	
320-93431-13	GESPM092122-320	Total/NA	Air	PM10	
320-93431-15	GESPM092122-321	Total/NA	Air	PM10	
320-93431-17	GESPM092122-322	Total/NA	Air	PM10	
320-93431-19	GESPM092122-323	Total/NA	Air	PM10	
320-93431-21	GESPM092122-324	Total/NA	Air	PM10	

General Chemistry (Continued)

Analysis Batch: 628117 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-93431-23	GESPM092122-325	Total/NA	Air	PM10	
320-93431-25	GESPM092122-326	Total/NA	Air	PM10	

Lab Chronicle

Client: GES-AIS LLC
Project/Site: Hunters Point, Parcel B, Phase 2

Job ID: 320-93431-1

Client Sample ID: GESPM092122-314
Lab Sample ID: 320-93431-1
Date Collected: 10/11/22 08:22
Matrix: Air
Date Received: 10/20/22 09:20

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					627785	10/27/22 04:13	[redacted]	EET SAC
Total/NA	Prep	3050B			0.08333 Sample	100 mL	627856	10/27/22 05:45	[redacted]	EET SAC
Total/NA	Analysis	6020		1			628221	10/27/22 14:40	[redacted]	EET SAC
Total/NA	Analysis	PM10		1	0 g	0.0140 g	628117	10/24/22 16:15	[redacted]	EET SAC

Client Sample ID: GESTSP092122-314
Lab Sample ID: 320-93431-2
Date Collected: 10/11/22 08:22
Matrix: Air
Date Received: 10/20/22 09:20

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			628108	10/24/22 16:15	[redacted]	EET SAC
Total/NA	Pre Prep	Filter to Air					628052	10/27/22 14:05	[redacted]	EET SAC

Client Sample ID: GESPM092122-315
Lab Sample ID: 320-93431-3
Date Collected: 10/11/22 07:14
Matrix: Air
Date Received: 10/20/22 09:20

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					627785	10/27/22 04:13	[redacted]	EET SAC
Total/NA	Prep	3050B			0.08333 Sample	100 mL	627856	10/27/22 05:45	[redacted]	EET SAC
Total/NA	Analysis	6020		1			628221	10/27/22 14:49	[redacted]	EET SAC
Total/NA	Analysis	PM10		1	0 g	0.0132 g	628117	10/24/22 16:15	[redacted]	EET SAC

Client Sample ID: GESTSP092122-315
Lab Sample ID: 320-93431-4
Date Collected: 10/11/22 07:14
Matrix: Air
Date Received: 10/20/22 09:20

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			628108	10/24/22 16:15	[redacted]	EET SAC
Total/NA	Pre Prep	Filter to Air					628052	10/27/22 14:05	[redacted]	EET SAC

Client Sample ID: GESPM092122-316
Lab Sample ID: 320-93431-5
Date Collected: 10/11/22 08:00
Matrix: Air
Date Received: 10/20/22 09:20

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					627785	10/27/22 04:13	[redacted]	EET SAC
Total/NA	Prep	3050B			0.08333 Sample	100 mL	627856	10/27/22 05:45	[redacted]	EET SAC
Total/NA	Analysis	6020		1			628221	10/27/22 14:53	[redacted]	EET SAC
Total/NA	Analysis	PM10		1	0 g	0.0131 g	628117	10/24/22 16:15	[redacted]	EET SAC

Lab Chronicle

Client: GES-AIS LLC
Project/Site: Hunters Point, Parcel B, Phase 2

Job ID: 320-93431-1

Client Sample ID: GESTSP092122-316

Lab Sample ID: 320-93431-6

Date Collected: 10/11/22 08:00
Matrix: Air
Date Received: 10/20/22 09:20

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			628108	10/24/22 16:15	[redacted]	EET SAC
Total/NA	Pre Prep	Filter to Air					628052	10/27/22 14:05	[redacted]	EET SAC

Client Sample ID: GESPM092122-317

Lab Sample ID: 320-93431-7

Date Collected: 10/10/22 08:00
Matrix: Air
Date Received: 10/20/22 09:20

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					627785	10/27/22 04:13	[redacted]	EET SAC
Total/NA	Prep	3050B			0.08333 Sample	100 mL	627856	10/27/22 05:45	[redacted]	EET SAC
Total/NA	Analysis	6020		1			628221	10/27/22 15:02	[redacted]	EET SAC
Total/NA	Analysis	PM10		1	0 g	-0.0001 g	628117	10/24/22 16:15	[redacted]	EET SAC

Client Sample ID: GESTSP092122-317

Lab Sample ID: 320-93431-8

Date Collected: 10/10/22 08:00
Matrix: Air
Date Received: 10/20/22 09:20

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			628108	10/24/22 16:15	[redacted]	EET SAC
Total/NA	Pre Prep	Filter to Air					628052	10/27/22 14:05	[redacted]	EET SAC

Client Sample ID: GESPM092122-318

Lab Sample ID: 320-93431-9

Date Collected: 10/12/22 08:08
Matrix: Air
Date Received: 10/20/22 09:20

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					627785	10/27/22 04:13	[redacted]	EET SAC
Total/NA	Prep	3050B			0.08333 Sample	100 mL	627856	10/27/22 05:45	[redacted]	EET SAC
Total/NA	Analysis	6020		1			628221	10/27/22 15:06	[redacted]	EET SAC
Total/NA	Analysis	PM10		1	0 g	0.0244 g	628117	10/24/22 16:15	[redacted]	EET SAC

Client Sample ID: GESTSP092122-318

Lab Sample ID: 320-93431-10

Date Collected: 10/12/22 08:08
Matrix: Air
Date Received: 10/20/22 09:20

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			628108	10/24/22 16:15	[redacted]	EET SAC
Total/NA	Pre Prep	Filter to Air					628052	10/27/22 14:05	[redacted]	EET SAC

Lab Chronicle

Client: GES-AIS LLC
Project/Site: Hunters Point, Parcel B, Phase 2

Job ID: 320-93431-1

Client Sample ID: GESPM092122-319
Lab Sample ID: 320-93431-11
Date Collected: 10/12/22 07:35
Matrix: Air
Date Received: 10/20/22 09:20

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					627785	10/27/22 04:13	[redacted]	EET SAC
Total/NA	Prep	3050B			0.08333 Sample	100 mL	627856	10/27/22 05:45	[redacted]	EET SAC
Total/NA	Analysis	6020		1			628221	10/27/22 15:09	[redacted]	EET SAC
Total/NA	Analysis	PM10		1	0 g	0.0233 g	628117	10/24/22 16:15	[redacted]	EET SAC

Client Sample ID: GESTSP092122-319
Lab Sample ID: 320-93431-12
Date Collected: 10/12/22 07:35
Matrix: Air
Date Received: 10/20/22 09:20

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			628108	10/24/22 16:15	[redacted]	EET SAC
Total/NA	Pre Prep	Filter to Air					628052	10/27/22 14:05	[redacted]	EET SAC

Client Sample ID: GESPM092122-320
Lab Sample ID: 320-93431-13
Date Collected: 10/12/22 07:50
Matrix: Air
Date Received: 10/20/22 09:20

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					627785	10/27/22 04:13	[redacted]	EET SAC
Total/NA	Prep	3050B			0.08333 Sample	100 mL	627856	10/27/22 05:45	[redacted]	EET SAC
Total/NA	Analysis	6020		1			628221	10/27/22 15:12	[redacted]	EET SAC
Total/NA	Analysis	PM10		1	0 g	0.0297 g	628117	10/24/22 16:15	[redacted]	EET SAC

Client Sample ID: GESTSP092122-320
Lab Sample ID: 320-93431-14
Date Collected: 10/12/22 07:50
Matrix: Air
Date Received: 10/20/22 09:20

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			628108	10/24/22 16:15	[redacted]	EET SAC
Total/NA	Pre Prep	Filter to Air					628052	10/27/22 14:05	[redacted]	EET SAC

Client Sample ID: GESPM092122-321
Lab Sample ID: 320-93431-15
Date Collected: 10/13/22 07:45
Matrix: Air
Date Received: 10/20/22 09:20

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					627785	10/27/22 04:13	[redacted]	EET SAC
Total/NA	Prep	3050B			0.08333 Sample	100 mL	627856	10/27/22 05:45	[redacted]	EET SAC
Total/NA	Analysis	6020		1			628221	10/27/22 15:15	[redacted]	EET SAC
Total/NA	Analysis	PM10		1	0 g	0.0156 g	628117	10/24/22 16:15	[redacted]	EET SAC

Lab Chronicle

Client: GES-AIS LLC
Project/Site: Hunters Point, Parcel B, Phase 2

Job ID: 320-93431-1

Client Sample ID: GESTSP092122-321
Lab Sample ID: 320-93431-16
Date Collected: 10/13/22 07:45
Matrix: Air
Date Received: 10/20/22 09:20

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			628108	10/24/22 16:15	[redacted]	EET SAC
Total/NA	Pre Prep	Filter to Air					628052	10/27/22 14:05	[redacted]	EET SAC

Client Sample ID: GESPM092122-322
Lab Sample ID: 320-93431-17
Date Collected: 10/13/22 07:18
Matrix: Air
Date Received: 10/20/22 09:20

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					627785	10/27/22 04:13	[redacted]	EET SAC
Total/NA	Prep	3050B			0.08333 Sample	100 mL	627856	10/27/22 05:45	[redacted]	EET SAC
Total/NA	Analysis	6020		1			628221	10/27/22 15:19	[redacted]	EET SAC
Total/NA	Analysis	PM10		1	0 g	0.0123 g	628117	10/24/22 16:15	[redacted]	EET SAC

Client Sample ID: GESTSP092122-322
Lab Sample ID: 320-93431-18
Date Collected: 10/13/22 07:18
Matrix: Air
Date Received: 10/20/22 09:20

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			628108	10/24/22 16:15	[redacted]	EET SAC
Total/NA	Pre Prep	Filter to Air					628052	10/27/22 14:05	[redacted]	EET SAC

Client Sample ID: GESPM092122-323
Lab Sample ID: 320-93431-19
Date Collected: 10/13/22 07:31
Matrix: Air
Date Received: 10/20/22 09:20

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					627785	10/27/22 04:13	[redacted]	EET SAC
Total/NA	Prep	3050B			0.08333 Sample	100 mL	627856	10/27/22 05:45	[redacted]	EET SAC
Total/NA	Analysis	6020		1			628221	10/27/22 15:22	[redacted]	EET SAC
Total/NA	Analysis	PM10		1	0 g	0.0162 g	628117	10/24/22 16:15	[redacted]	EET SAC

Client Sample ID: GESTSP092122-323
Lab Sample ID: 320-93431-20
Date Collected: 10/13/22 07:31
Matrix: Air
Date Received: 10/20/22 09:20

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			628108	10/24/22 16:15	[redacted]	EET SAC
Total/NA	Pre Prep	Filter to Air					628052	10/27/22 14:05	[redacted]	EET SAC

Lab Chronicle

Client: GES-AIS LLC
Project/Site: Hunters Point, Parcel B, Phase 2

Job ID: 320-93431-1

Client Sample ID: GESPM092122-324
Lab Sample ID: 320-93431-21
Date Collected: 10/13/22 14:46
Matrix: Air
Date Received: 10/20/22 09:20

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					627785	10/27/22 04:13	[redacted]	EET SAC
Total/NA	Prep	3050B			0.08333 Sample	100 mL	627856	10/27/22 05:45	[redacted]	EET SAC
Total/NA	Analysis	6020		1			628221	10/27/22 15:25	[redacted]	EET SAC
Total/NA	Analysis	PM10		1	0 g	-0.0001 g	628117	10/24/22 16:15	[redacted]	EET SAC

Client Sample ID: GESTSP092122-324
Lab Sample ID: 320-93431-22
Date Collected: 10/13/22 14:46
Matrix: Air
Date Received: 10/20/22 09:20

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			628108	10/24/22 16:15	[redacted]	EET SAC
Total/NA	Pre Prep	Filter to Air					628052	10/27/22 14:05	[redacted]	EET SAC

Client Sample ID: GESPM092122-325
Lab Sample ID: 320-93431-23
Date Collected: 10/13/22 14:42
Matrix: Air
Date Received: 10/20/22 09:20

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					627785	10/27/22 04:13	[redacted]	EET SAC
Total/NA	Prep	3050B			0.08333 Sample	100 mL	627856	10/27/22 05:45	[redacted]	EET SAC
Total/NA	Analysis	6020		1			628221	10/27/22 15:35	[redacted]	EET SAC
Total/NA	Analysis	PM10		1	0 g	0.0007 g	628117	10/24/22 16:15	[redacted]	EET SAC

Client Sample ID: GESTSP092122-325
Lab Sample ID: 320-93431-24
Date Collected: 10/13/22 14:42
Matrix: Air
Date Received: 10/20/22 09:20

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			628108	10/24/22 16:15	[redacted]	EET SAC
Total/NA	Pre Prep	Filter to Air					628052	10/27/22 14:05	[redacted]	EET SAC

Client Sample ID: GESPM092122-326
Lab Sample ID: 320-93431-25
Date Collected: 10/13/22 14:57
Matrix: Air
Date Received: 10/20/22 09:20

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					627785	10/27/22 04:13	[redacted]	EET SAC
Total/NA	Prep	3050B			0.08333 Sample	100 mL	627856	10/27/22 05:45	[redacted]	EET SAC
Total/NA	Analysis	6020		1			628221	10/27/22 15:38	[redacted]	EET SAC
Total/NA	Analysis	PM10		1	0 g	0.0012 g	628117	10/24/22 16:15	[redacted]	EET SAC

Lab Chronicle

Client: GES-AIS LLC
Project/Site: Hunters Point, Parcel B, Phase 2

Job ID: 320-93431-1

Client Sample ID: GESTSP092122-326
Date Collected: 10/13/22 14:57
Date Received: 10/20/22 09:20

Lab Sample ID: 320-93431-26
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			628108	10/24/22 16:15	[redacted]	EET SAC
Total/NA	Pre Prep	Filter to Air					628052	10/27/22 14:05	[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
Job ID: 320-93431-1
Project/Site: Hunters Point, Parcel B, Phase 2

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

Method Summary

Client: GES-AIS LLC
Job ID: 320-93431-1
Project/Site: Hunters Point, Parcel B, Phase 2

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, Phase 2

Job ID: 320-93431-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
320-93431-1	GESPM092122-314	Air	10/11/22 08:22	10/20/22 09:20
320-93431-2	GESTSP092122-314	Air	10/11/22 08:22	10/20/22 09:20
320-93431-3	GESPM092122-315	Air	10/11/22 07:14	10/20/22 09:20
320-93431-4	GESTSP092122-315	Air	10/11/22 07:14	10/20/22 09:20
320-93431-5	GESPM092122-316	Air	10/11/22 08:00	10/20/22 09:20
320-93431-6	GESTSP092122-316	Air	10/11/22 08:00	10/20/22 09:20
320-93431-7	GESPM092122-317	Air	10/10/22 08:00	10/20/22 09:20
320-93431-8	GESTSP092122-317	Air	10/10/22 08:00	10/20/22 09:20
320-93431-9	GESPM092122-318	Air	10/12/22 08:08	10/20/22 09:20
320-93431-10	GESTSP092122-318	Air	10/12/22 08:08	10/20/22 09:20
320-93431-11	GESPM092122-319	Air	10/12/22 07:35	10/20/22 09:20
320-93431-12	GESTSP092122-319	Air	10/12/22 07:35	10/20/22 09:20
320-93431-13	GESPM092122-320	Air	10/12/22 07:50	10/20/22 09:20
320-93431-14	GESTSP092122-320	Air	10/12/22 07:50	10/20/22 09:20
320-93431-15	GESPM092122-321	Air	10/13/22 07:45	10/20/22 09:20
320-93431-16	GESTSP092122-321	Air	10/13/22 07:45	10/20/22 09:20
320-93431-17	GESPM092122-322	Air	10/13/22 07:18	10/20/22 09:20
320-93431-18	GESTSP092122-322	Air	10/13/22 07:18	10/20/22 09:20
320-93431-19	GESPM092122-323	Air	10/13/22 07:31	10/20/22 09:20
320-93431-20	GESTSP092122-323	Air	10/13/22 07:31	10/20/22 09:20
320-93431-21	GESPM092122-324	Air	10/13/22 14:46	10/20/22 09:20
320-93431-22	GESTSP092122-324	Air	10/13/22 14:46	10/20/22 09:20
320-93431-23	GESPM092122-325	Air	10/13/22 14:42	10/20/22 09:20
320-93431-24	GESTSP092122-325	Air	10/13/22 14:42	10/20/22 09:20
320-93431-25	GESPM092122-326	Air	10/13/22 14:57	10/20/22 09:20
320-93431-26	GESTSP092122-326	Air	10/13/22 14:57	10/20/22 09:20

CHAIN-OF-CUSTODY RECORD

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

COC # KT101922AIRB

GES

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:

Code	Matrix
A	Air
AQ	Air Quality Control Matrix

Code	Container/Preservative
1	1x 250-mL Plastic, 4 Degrees C
1	1x Envelope, None

320-93431 Chain of Custody

Analytical Test Method

Event: Parcel B Air Monitoring

	Sample ID	Matrix	Date	Time	Samp Init.	CAAIR - Air PM10 (1)	N0500 - Air TSP (1)	SW6020 - Air Pb Mn (1)	Location ID	Sample Type	Depth (ft bgs) Top	Bottom	Cooler	Comments
1	GESPM092122-314	A	10/11/2022	0822	[redacted]	X		X	MSB01	N1	0.00	0.00	1	VOLUME: 1673.47 (M3)
2	GESTSP092122-314	A	10/11/2022	0822			X		MSB01	N1	0.00	0.00	1	VOLUME: 1802.49 (M3)
3	GESPM092122-315	A	10/11/2022	0714		X		X	MSB02	N1	0.00	0.00	1	VOLUME: 1632.85 (M3)
4	GESTSP092122-315	A	10/11/2022	0714			X		MSB02	N1	0.00	0.00	1	VOLUME: 1752.47 (M3)
5	GESPM092122-316	A	10/11/2022	0800		X		X	MSB113A	N1	0.00	0.00	1	VOLUME: 1625.79 (M3)
6	GESTSP092122-316	A	10/11/2022	0800			X		MSB113A	N1	0.00	0.00	1	VOLUME: 1612.94 (M3)
7	GESPM092122-317	AQ	10/10/2022	0800		X		X	FIELDQC	FB1	0.00	0.00	1	
8	GESTSP092122-317	AQ	10/10/2022	0800			X		FIELDQC	FB1	0.00	0.00	1	
9	GESPM092122-318	A	10/12/2022	0808		X		X	MSB01	N1	0.00	0.00	1	VOLUME: 1616.62 (M3)
10	GESTSP092122-318	A	10/12/2022	0808			X		MSB01	N1	0.00	0.00	1	VOLUME: 1731.11 (M3)
11	GESPM092122-319	A	10/12/2022	0735		X		X	MSB02	N1	0.00	0.00	1	VOLUME: 1628.68 (M3)

Relinquished by: *(Signature)*	Date	Time	Received by: *(Signature)*	Date	Time
[redacted]	10-19-22	1600	FEDEX	10-19-22	1600
			[redacted]	10/20/22	920

Shipping Date / Carrier / Airbill Number

Shipping Date: 10/19/2022 / FEDEX 7701 7663 4980

Received by Laboratory: *(Signature, Date, Time)* **& condition**

CHAIN-OF-CUSTODY RECORD

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

COC # KT101922AIRB

GES

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:

Code	Matrix
A	Air
AQ	Air Quality Control Matrix

Code	Container/Preservative
1	1x 250-mL Plastic, 4 Degrees C
1	1x Envelope, None

						Analytical Test Method	CAAIR - Air PM10	N0500 - Air TSP	SW6020 - Air Pb Mn										
	Event: Parcel B Air Monitoring						1	1	1										
	Sample ID	Matrix	Date	Time	Samp Init.											Location ID	Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom	Cooler	Comments
12	GESTSP092122-319	A	10/12/2022	0735	[redacted]		X									MSB02	N1	0.00	0.00	1	VOLUME: 1780.40 (M3)
13	GESPM092122-320	A	10/12/2022	0750		X		X								MSB113A	N1	0.00	0.00	1	VOLUME: 1582.42 (M3)
14	GESTSP092122-320	A	10/12/2022	0750			X									MSB113A	N1	0.00	0.00	1	VOLUME: 1584.84 (M3)
15	GESPM092122-321	A	10/13/2022	0745		X		X								MSB01	N1	0.00	0.00	1	VOLUME: 1604.98 (M3)
16	GESTSP092122-321	A	10/13/2022	0745			X									MSB01	N1	0.00	0.00	1	VOLUME: 1750.70 (M3)
17	GESPM092122-322	A	10/13/2022	0718		X		X								MSB02	N1	0.00	0.00	1	VOLUME: 1605.94 (M3)
18	GESTSP092122-322	A	10/13/2022	0718			X									MSB02	N1	0.00	0.00	1	VOLUME: 1736.43 (M3)
19	GESPM092122-323	A	10/13/2022	0731		X		X								MSB113A	N1	0.00	0.00	1	VOLUME: 1574.95 (M3)
20	GESTSP092122-323	A	10/13/2022	0731			X									MSB113A	N1	0.00	0.00	1	VOLUME: 1568.74 (M3)
21	GESPM092122-324	A	10/13/2022	1446		X		X								MSB01	N1	0.00	0.00	1	VOLUME: 476.31 (M3)
22	GESTSP092122-324	A	10/13/2022	1446			X									MSB01	N1	0.00	0.00	1	VOLUME: 509.23 (M3)

Relinquished by: *(Signature)*	Date	Time	Received by: *(Signature)*	Date	Time
[redacted]	10-19-22	1600	FEDEX	10-19-22	1600
			[redacted]	10/20/22	920

Shipping Date / Carrier / Airbill Number

Shipping Date: 10/19/2022 / FEDEX 7701 7663 4980

Received by Laboratory: *(Signature, Date, Time)* **& condition**

GES.Navy_COC_Field
October 18, 2022

CHAIN-OF-CUSTODY RECORD

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

COC # KT101922AIRB

GES

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:

Code	Matrix
A	Air
AQ	Air Quality Control Matrix

Code	Container/Preservative
1	1x 250-mL Plastic, 4 Degrees C
1	1x Envelope, None

						Analytical Test Method	CAAIR - Air PM10	N0500 - Air TSP	SW6020 - Air Pb Mn										
	Event: Parcel B Air Monitoring						1	1	1										
	Sample ID	Matrix	Date	Time	Samp Init.										Location ID	Sample Type	Depth (ft bgs) Top	Depth (ft bgs) Bottom	Cooler	Comments
23	GESPM092122-325	A	10/13/2022	1442	[redacted]		X		X						MSB02	N1	0.00	0.00	1	VOLUME: 498.56 (M3)
24	GESTSP092122-325	A	10/13/2022	1442				X							MSB02	N1	0.00	0.00	1	VOLUME: 540.57 (M3)
25	GESPM092122-326	A	10/13/2022	1457			X		X						MSB113A	N1	0.00	0.00	1	VOLUME: 491.16 (M3)
26	GESTSP092122-326	A	10/13/2022	1457				X							MSB113A	N1	0.00	0.00	1	VOLUME: 487.18 (M3)
27																				
28																				
29																				

N/A

[redacted] 10-19-22

Turnaround Time: 5 days

Relinquished by: *(Signature)*	Date	Time	Received by: *(Signature)*	Date	Time
[redacted]	10-19-22	1600	FEDEX	10-19-22	1600
			[redacted]	10/20/22	940

Shipping Date / Carrier / Airbill Number

Shipping Date: 10/19/2022 / FEDEX 7701 7663 4980

Received by Laboratory: *(Signature, Date, Time)* **& condition**

GES.Navy_COC_Field
October 18, 2022

Login Sample Receipt Checklist

Client: GES-AIS LLC

Job Number: 320-93431-1

Login Number: 93431
List Number: 1
Creator: [redacted]

List Source: Eurofins Sacramento

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	