



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

**AIR MONITORING SUMMARY REPORT 05 FOR  
PARCEL C  
RADIOLOGICAL CONFIRMATION SAMPLING AND  
SURVEY  
HUNTERS POINT NAVAL SHIPYARD, SAN FRANCISCO,  
CALIFORNIA**

December 5<sup>th</sup>, 2022 through June 8<sup>th</sup>, 2023

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## Acronyms and Abbreviations

AMSR .....	<i>Air Monitoring Summary Report</i>
ASRC .....	<i>Artic Slope Regional Corporation</i>
Cal/OSHA .....	<i>California Occupational Safety and Health Administration</i>
Cfm .....	<i>cubic feet per minute</i>
CFR .....	<i>Code of Federal Regulations</i>
CTO .....	<i>Contract Task Order</i>
DMAMP .....	<i>Dust Management and Air Monitoring Plan</i>
EPA .....	<i>United States Environmental Protection Agency</i>
fibers/cm <sup>3</sup> .....	<i>fibers per cubic centimeter</i>
Gilbane .....	<i>Gilbane Federal</i>
HPNS .....	<i>Hunters Point Naval Shipyard</i>
L/min .....	<i>liters per minute</i>
mg/m <sup>3</sup> .....	<i>milligrams per cubic meter</i>
Navy .....	<i>U.S. Department of the Navy</i>
NIOSH .....	<i>National Institute for Occupational Safety and Health</i>
PEL .....	<i>permissible exposure limit</i>
PM <sub>10</sub> .....	<i>particulate matter less than 10 microns in diameter</i>
TSP .....	<i>total suspended particulates</i>
TWA .....	<i>time-weighted average</i>
μCi/mL .....	<i>microcuries per milliliter</i>
μg/m <sup>3</sup> .....	<i>micrograms per cubic meter</i>
WP .....	<i>work plan</i>

## 1.0 Introduction

This Air Monitoring Summary Report (AMSR) was prepared by GES as requested by the United States Department of the Navy (Navy) under Radiological Environmental Multiple Award Contract N62473-17-D-0005, Contract Task Order (CTO) N6247318F5305. GES is performing air monitoring at Hunters Point Naval Shipyard (HPNS) in accordance with the Final Dust Management and Air Monitoring Plan (DMAMP), included as Appendix E to *Final Work Plan Parcel C Removal Site Evaluation, Hunters Point Naval Shipyard, San Francisco, California* (WP; Gilbane, 2022). The DMAMP describes the procedures that minimize dust during work activities and requires air monitoring to ensure these procedures are effective. The methods and procedures detailed in the DMAMP help to prevent exposure of residents and construction crews to potential airborne chemicals of concern, and dust from the work area.

This summary report describes the following:

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

This AMSR summarizes the air monitoring activities conducted by GES at HPNS Parcel C from December 5<sup>th</sup>, 2022 to June 8<sup>th</sup>, 2023 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 one upwind and downwind location from the work area whenever active soil handling operations were in progress. 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 C 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 HPNS - KCASANFR1504 or Bayview Manor - KCASANFR1775 published at Weather Underground ([www.wunderground.com](http://www.wunderground.com)).

Upwind/downwind station designations were assigned based on the prevalent wind direction. Atmospheric parameters were checked daily at [www.wunderground.com](http://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)
3. Total suspended particulates (TSP) and Metals (Lead and Manganese)
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**

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 or Eurofins Analytics, Ashland, VA 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.

### **3.3 TSP, Lead and Manganese**

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 sample is then shipped to Eurofins, West Sacramento, CA or Eurofins Analytics, Ashland, VA for analysis. 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. Once the TSP concentration was gravimetrically determined, the filter was analyzed for lead and manganese in accordance with EPA Method 6010B (equivalent to IO-3.4 in the Compendium of Methods for the Determination of Inorganic Compounds in Ambient Air [EPA, 1999b]).

### 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 and Eichrom ACW10
- Gas Flow Proportional Counting/Eichrom Resin Separation by SRW01.

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 ( $\mu\text{g}/\text{m}^3$ ).

**Table 4-1: Air Monitoring Threshold Criteria**

Test Parameter	Threshold Criteria	Threshold Criteria Reference
Asbestos	0.1 fibers/cm <sup>3</sup>	Cal/OSHA PEL (on-site workers)
PM10 <sup>a</sup>	50 $\mu\text{g}/\text{m}^3$	DTSC HERO developed action level (residents and public receptors) <sup>a</sup>
	5,000 $\mu\text{g}/\text{m}^3$	Cal/OSHA PEL (on-site workers) <sup>b</sup>
TSP	0.5 mg/m <sup>3</sup>	Basewide HPNS Level selected to minimize overall permissible dust release from sites
Lead	0.050 mg/m <sup>3</sup>	Cal/OSHA PEL (on-site workers)
Manganese	0.200 mg/m <sup>3</sup>	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) <sup>c</sup>
Cesium-137	4.00E-11 $\mu\text{Ci}/\text{mL}$	
Plutonium-239	4.00E-15 $\mu\text{Ci}/\text{mL}$	
Radium-226	1.80E-13 $\mu\text{Ci}/\text{mL}$	
Strontium-90	1.20E-12 $\mu\text{Ci}/\text{mL}$	
Cobalt-60	1.00E-11 $\mu\text{Ci}/\text{mL}$	
Thorium-232	1.20E-15 $\mu\text{Ci}/\text{mL}$	

**Notes:**

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

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

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

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

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

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

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



fibers/cm<sup>3</sup> = fibers per cubic centimeter

HPNS = Hunters Point Naval Shipyard

mg/m<sup>3</sup> = 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 and 2 were sourced from the Weather Underground (wunderground.com) station APTIM HPNS - KCASANFR1504 and Bayview Manor - KCASANFR1775. **Table 5-1** displays each air monitoring report and the associated dates covered in the report.

Air monitoring results are presented in the following attachments:

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

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

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

**Table 5-1: Air Monitoring Report Summary**

<b>Air Monitoring Report Number</b>	<b>Data Date Range</b>
01	12/05/22 – 12/22/22
02	12/23/22 – 3/02/23
03	3/03/23 – 3/23/23
04	3/24/23 – 5/04/23
05	5/05/23 – 6/08/23

### 5.1 Report 01

Air monitoring analytical results did not exceed project-specific screening criteria during this reporting period's site operations. The delta was taken by switching the upwind and downwind results due to the change in wind direction for sample end dates 12/15/22,

12/21/22, and 12/22/22.

## **5.2 Report 02**

Air monitoring analytical results did not exceed project-specific screening criteria during this reporting period's site operations. The delta was taken by switching the upwind and downwind results due to the change in wind direction for sample end dates 1/18/23, 1/24/23, 2/07/23, 2/08/23, 2/09/23, and 2/09/23 (second set of samples collected after field activities ceased).

## **5.3 Report 03**

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

## **5.4 Report 04**

Air monitoring analytical results did not exceed project-specific screening criteria during this reporting period's site operations. The delta was taken by switching the upwind and downwind results due to the change in wind direction for sample end dates 3/20/23, 4/13/23 (second set of samples collected after field activities ceased).

## **5.5 Report 05**

Air monitoring analytical results did not exceed project-specific screening criteria during this reporting period's site operations. It was discovered during this report generation there was a transcription error in the radiation data report. The data has been corrected accordingly. An exceedance was observed for the radiological data presented in AMR 03. The downwind MSC02 station recorded a Thorium-232 value above project screening criteria for the sampling week of 03/20/23 – 3/23/23. This exceedance is described in Attachment 1-6 respectively.

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## 6.0 References

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

National Institute for Occupational Safety and Health, (NIOSH), 1994. Manual of Analytical Methods.

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 C Removal Site Evaluation Work Plan, Hunters Point Naval Shipyard, San Francisco, California. July

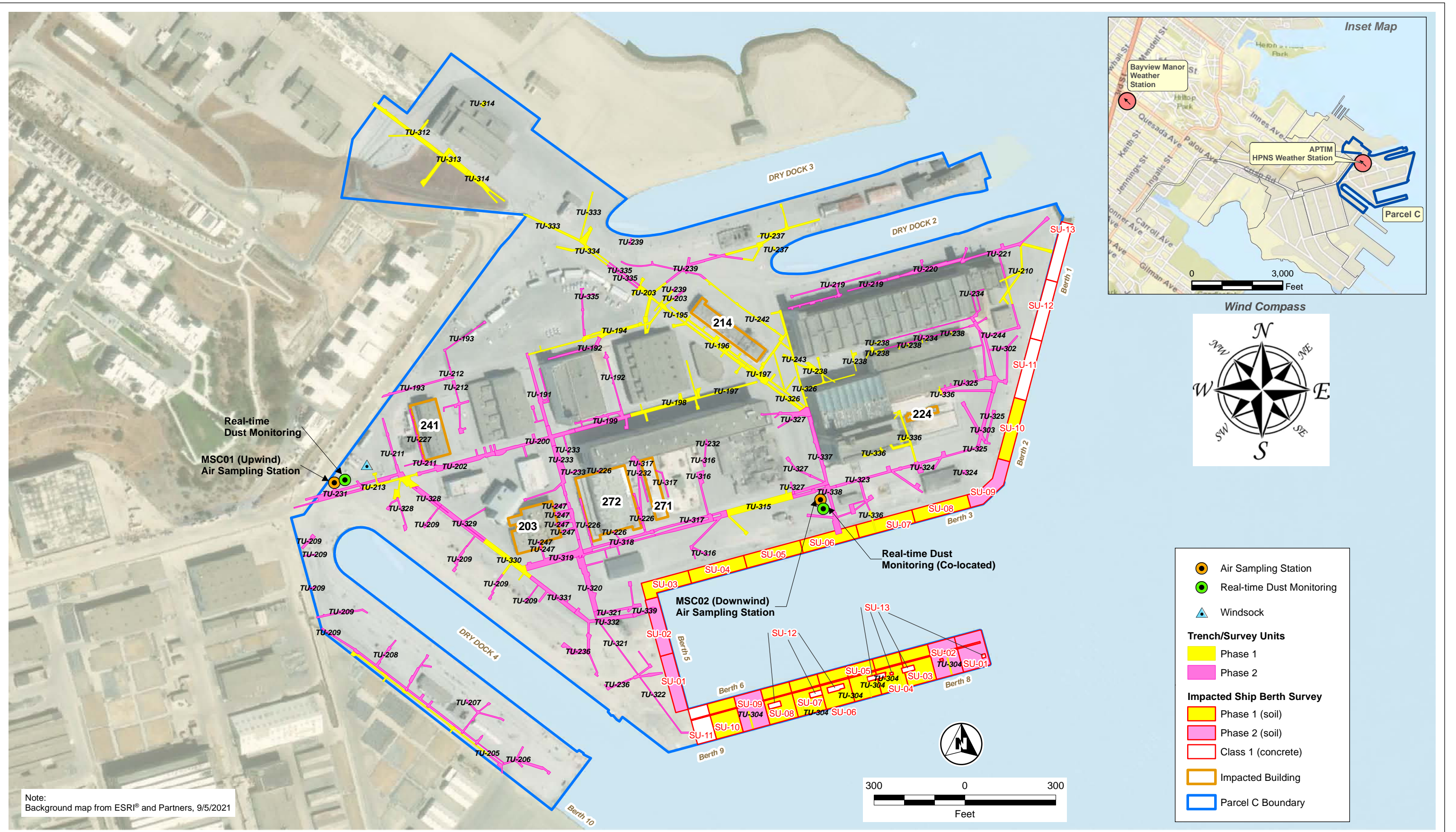
Tetra Tech EC, 2010, *Final Basewide Dust Control Plan, Revision 1, Hunters Point Shipyard, San Francisco, California*, November 29.

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# FIGURES



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

**Figure 2-1**  
Air Sampling and Dust Monitoring Locations

**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**

<b>Start Date</b>	<b>Ambient Pressure (in Hg)</b>	<b>Ambient Temperature (°F)</b>	<b>Prevalent Wind Direction</b>
12/6/2022 <sup>1</sup>	30.09	49.95	ESE
12/7/2022 <sup>1</sup>	30.25	49.27	S
12/8/2022 <sup>1</sup>	30.25	49.27	SSE
12/12/2022 <sup>1</sup>	30.01	46.32	NNW
12/13/2022 <sup>1</sup>	30.16	46.70	SE
12/14/2022 <sup>1</sup>	30.21	46.47	NNE
12/19/2022 <sup>1</sup>	30.30	44.40	NNW
12/20/2022 <sup>1</sup>	30.31	48.36	E
12/21/2022 <sup>1</sup>	30.20	50.77	N
01/17/2023 <sup>1</sup>	30.07	48.87	NNE
01/18/2023 <sup>1</sup>	30.16	49.90	ESE
01/19/2023 <sup>1</sup>	30.21	48.70	NNW
01/23/2023 <sup>1</sup>	30.20	53.48	ENE
01/24/2023 <sup>1</sup>	30.34	53.29	ESE
02/02/2023 <sup>1</sup>	30.23	50.22	ESE
02/06/2023 <sup>1</sup>	30.35	50.98	E
02/07/2023 <sup>1</sup>	30.34	51.78	E
02/08/2023 <sup>1</sup>	30.31	53.27	E
02/09/2023 <sup>1</sup>	30.27	55.79	ENE
02/13/2023 <sup>1</sup>	29.96	50.55	WNW
02/14/2023 <sup>1</sup>	30.09	47.83	WNW
02/15/2023 <sup>1</sup>	30.25	47.93	NNW
02/16/2023 <sup>1</sup>	30.24	48.58	SE
02/20/2023 <sup>1</sup>	30.05	54.52	WSW
02/21/2023 <sup>1</sup>	29.79	47.61	WNW
02/22/2023 <sup>1</sup>	29.82	43.07	WNW
02/23/2023 <sup>1</sup>	29.85	44.76	SSW
03/01/2023 <sup>1</sup>	30.01	48.32	NNW
03/02/2023 <sup>1</sup>	30.16	51.09	ESE
03/06/2023 <sup>1</sup>	30.16	46.84	SSE
03/07/2023 <sup>1</sup>	30.14	47.89	SSW
03/08/2023 <sup>1</sup>	30.14	47.45	SE
03/09/2023 <sup>1</sup>	29.97	47.73	SE
03/13/2023 <sup>1</sup>	29.96	57.83	SSE
03/15/2023 <sup>1</sup>	30.01	50.52	WSW
03/16/2023 <sup>1</sup>	30.08	52.34	SE
03/20/2023 <sup>1</sup>	29.77	49.75	SW
03/22/2023 <sup>1</sup>	30.00	51.79	NW
03/23/2023 <sup>1</sup>	30.25	51.43	NW
03/27/2023 <sup>1</sup>	30.10	51.34	SSE
03/30/2023 <sup>1</sup>	29.99	51.08	E
04/03/2023 <sup>1</sup>	30.15	47.46	WNW
04/04/2023 <sup>1</sup>	30.21	48.40	W
04/05/2023 <sup>1</sup>	30.18	49.79	WSW
04/06/2023 <sup>1</sup>	30.13	54.30	ESE

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

Start Date	Ambient Pressure (in Hg)	Ambient Temperature (°F)	Prevalent Wind Direction
04/10/2023 <sup>1</sup>	30.15	55.99	WSW
04/11/2023 <sup>2</sup>	30.14	53.33	WSW
04/12/2023 <sup>2</sup>	30.00	52.13	W
04/13/2023 <sup>2</sup>	29.98	55.71	NNE
04/17/2023 <sup>1</sup>	30.03	50.96	WNW
04/18/2023 <sup>1</sup>	30.12	50.69	WNW
04/19/2023 <sup>1</sup>	30.25	52.08	WNW
04/20/2023 <sup>1</sup>	30.32	58.36	SW
04/24/2023 <sup>1</sup>	29.97	53.17	WSW
04/25/2023 <sup>1</sup>	29.95	55.21	WSW
04/26/2023 <sup>1</sup>	29.95	55.43	W
04/27/2023 <sup>1</sup>	29.94	64.51	NW
05/01/2023 <sup>2</sup>	29.88	52.10	WSW
05/02/2023 <sup>2</sup>	29.89	52.56	ESE
05/04/2023 <sup>2</sup>	29.97	55.34	SW
05/08/2023 <sup>2</sup>	30.18	57.51	WSW
05/09/2023 <sup>2</sup>	30.09	56.20	W
05/10/2023 <sup>2</sup>	30.17	54.81	WSW
05/11/2023 <sup>2</sup>	30.17	50.77	SW
05/15/2023 <sup>1</sup>	30.07	56.20	W
05/16/2023 <sup>1</sup>	29.99	55.57	WSW
05/17/2023 <sup>2</sup>	30.01	54.94	WSW
05/18/2023 <sup>2</sup>	30.05	54.90	WSW
05/22/2023 <sup>1</sup>	29.88	56.00	SW
05/23/2023 <sup>1</sup>	29.87	55.59	SW
05/24/2023 <sup>1</sup>	29.89	54.76	SW
05/25/2023 <sup>1</sup>	29.88	56.02	SW
05/30/2023 <sup>1</sup>	30.04	57.05	SW
05/31/2023 <sup>1</sup>	29.97	55.47	SW
06/01/2023 <sup>1</sup>	29.99	59.03	WSW
06/05/2023 <sup>2</sup>	29.89	60.10	WSW
06/06/2023 <sup>2</sup>	29.95	60.40	SSW
06/07/2023 <sup>2</sup>	30.07	60.30	WSW
06/08/2023 <sup>2</sup>	30.12	62.20	W

**Notes:**

<sup>1</sup>Data collected using wunderground.com from Bayview Manor - KCASANFR1775

<sup>2</sup>Data collected using wunderground.com from APTIM HPNS - KCASANFR1504

°F = degree Fahrenheit

in Hg = inches of mercury

E = East

S = South

N = North

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 <sup>1</sup>	Monitoring Station	Ave Flow Rate (l/min)	Duration of Run (min)	Total Air Volume Monitored (L)	Asbestos (fibers)	Conc Asbestos (fibers/cm <sup>3</sup> )	Exceedance (Yes/No)
MSC01-120622	12/07/22	1	3.7	1,334	4935	8.5	0.001	No
MSC02-120622	12/07/22	2	3.7	1,353	5006	9.0	0.001	No
MSC01-120722	12/08/22	1	3.5	1,443	5050	6.0	0.001	No
MSC02-120722	12/08/22	2	3.7	1,442	5335	3.0	< 0.001	No
MSC01-120822	12/08/22 <sup>2</sup>	1	3.3	382	1260	5.0	< 0.002	No
MSC02-120822	12/08/22 <sup>2</sup>	2	3.4	383	1302	3.0	< 0.002	No
MSC01-121222	12/13/22	1	3.6	1,435	5166	9.5	0.001	No
MSC02-121222	12/13/22	2	3.3	1,433	4728	5.5	0.001	No
MSC01-121322	12/14/22	1	3.5	1,454	5089	5.0	< 0.001	No
MSC02-121322	12/14/22	2	3.3	1,456	4804	5.5	0.001	No
MSC01-121422	12/15/22	1	3.6	1,434	5162	7.5	0.001	No
MSC02-121422	12/15/22	2	3.3	1,432	4725	4.0	< 0.001	No
MSC01-121922	12/20/22	1	3.6	1,439	5180	4.0	< 0.001	No
MSC02-121922	12/20/22	2	3.4	1,430	4862	0.5	< 0.001	No
MSC01-122022	12/21/22	1	3.7	1,430	5291	3.0	< 0.001	No
MSC02-122022	12/21/22	2	3.7	1,443	5339	4.5	< 0.001	No
MSC01-122122	12/22/22	1	3.7	1,446	5350	7.0	0.001	No
MSC02-122122	12/22/22	2	3.7	1,447	5353	8.0	0.001	No
MSC01-011723	01/18/23	1	3.5	1,338	4683	21.0	0.002	No
MSC02-011723	01/18/23	2	3.4	1,383	4702	13.0	0.001	No
MSC01-011823	01/19/23	1	3.7	1,444	5342	16.0	0.001	No
MSC02-011823	01/19/23	2	3.2	1,438	4601	16.5	0.002	No
MSC01-011923	01/19/23 <sup>2</sup>	1	3.2	331	1059	6.5	0.003	No
MSC02-011923	01/19/23 <sup>2</sup>	2	3.4	323	1098	11.5	0.005	No
MSC01-012323	01/24/23	1	3.6	1,450	5220	12.5	0.001	No
MSC02-012323	01/24/23	2	3.6	1,456	5241	13.0	0.001	No
MSC01-012423	01/25/23	1	3.3	1,446	4771	19.5	0.002	No
MSC02-012423	01/25/23	2	3.3	1,446	4771	13.5	0.001	No
MSC01-020223	02/02/23 <sup>2</sup>	1	3.6	438	1576	10.0	0.003	No
MSC02-020223	02/02/23 <sup>2</sup>	2	3.3	458	1511	13.0	0.004	No
MSC01-020623	02/07/23	1	3.2	1,428	4569	9.5	0.001	No
MSC02-020623	02/07/23	2	3.3	1,431	4722	9.0	0.001	No
MSC01-020723	02/08/23	1	3.5	1,470	5145	10.0	0.001	No
MSC02-020723	02/08/23	2	3.5	1,464	5124	11.5	0.001	No
MSC01-020823	02/09/23	1	3.3	1,418	4679	14.5	0.002	No
MSC02-020823	02/09/23	2	3.5	1,419	4966	9.5	0.001	No
MSC01-020923	02/09/23 <sup>2</sup>	1	3.2	382	1222	9.5	0.004	No
MSC02-020923	02/09/23 <sup>2</sup>	2	3.5	384	1344	10.0	0.004	No
MSC01-021323	02/14/23	1	3.6	1,448	5212	10.0	0.001	No
MSC02-021323	02/14/23	2	3.7	1,472	5446	10.0	0.001	No
MSC01-021423	02/15/23	1	3.3	1,429	4715	15.0	0.002	No
MSC02-021423	02/15/23	2	3.7	1,406	5202	12.0	0.001	No
MSC01-021523	02/16/23	1	3.5	1,447	5064	12.0	0.001	No
MSC02-021523	02/16/23	2	3.4	1,446	4916	12.0	0.001	No
MSC01-021623	02/16/23 <sup>2</sup>	1	3.8	396	1504	10.5	0.003	No
MSC02-021623	02/16/23 <sup>2</sup>	2	3.6	399	1436	11.0	0.001	No
MSC01-022023	02/21/23	1	3.7	1,440	5328	15.5	0.001	No
MSC02-022023	02/21/23	2	3.7	1,424	5268	16.0	0.001	No
MSC01-022123	02/22/23	1	3.3	1,456	4804	14.0	0.001	No
MSC02-022123	02/22/23	2	3.5	1,459	5106	26.0	0.002	No
MSC01-022223	02/23/23	1	3.1	1,424	4414	12.5	0.001	No
MSC02-022223	02/23/23	2	3.2	1,417	4534	12.5	0.001	No
MSC01-022323	02/23/23 <sup>2</sup>	1	3.3	489	1613	7.0	0.002	No
MSC02-022323	02/23/23 <sup>2</sup>	2	3.2	494	1580	7.0	0.002	No
MSC01-030123	03/02/23	1	3.4	1,427	4851	18.0	0.002	No
MSC02-030123	03/02/23	2	3.2	1,422	4550	13.0	0.001	No
MSC01-030223	03/02/23 <sup>2</sup>	1	3.7	423	1565	16.5	0.005	No
MSC02-030223	03/02/23 <sup>2</sup>	2	3.4	436	1482	13.0	0.004	No
MSC01-030623	03/07/23	1	3.3	1,428	4712	10.0	0.001	No
MSC02-030623	03/07/23	2	3.3	1,422	4692	9.5	0.001	No
MSC01-030723	03/08/23	1	3.6	1,430	5148	14.5	0.001	No
MSC02-030723	03/08/23	2	3.1	1,433	4442	10.0	0.001	No
MSC01-030823	03/09/23	1	3.1	1,471	4560	15.5	0.002	No
MSC02-030823	03/09/23	2	3.2	1,470	4704	11.5	0.001	No
MSC01-030923	03/09/23 <sup>2</sup>	1	3.1	372	1153	12.5	0.005	No
MSC02-030923	03/09/23 <sup>2</sup>	2	3.1	387	1199	7.0	0.003	No

**Attachment 2: Asbestos Monitoring Results**

Sample, Date and Station Information			Sampler Run Information			Asbestos Fibers		
Sample ID	Sample End Date <sup>1</sup>	Monitoring Station	Ave Flow Rate (l/min)	Duration of Run (min)	Total Air Volume Monitored (L)	Asbestos (fibers)	Conc Asbestos (fibers/cm <sup>3</sup> )	Exceedance (Yes/No)
MSC01-031323	03/14/23	1	3.6	1,433	5158	12.5	0.001	No
MSC02-031323	03/14/23	2	3.3	1,444	4765	9.0	0.001	No
MSC01-031523	03/16/23	1	3.5	1,455	5092	16.5	0.002	No
MSC02-031523	03/16/23	2	3.6	1,434	5162	9.0	0.001	No
MSC01-031623	03/16/23 <sup>2</sup>	1	3.3	423	1395	8.0	0.003	No
MSC02-031623	03/16/23 <sup>2</sup>	2	3.6	423	1558	13.5	0.004	No
MSC01-032023	03/21/23	1	3.7	1,450	5365	14.5	0.001	No
MSC02-032023	03/21/23	2	3.7	1,450	5365	22.0	0.002	No
MSC01-032223	03/23/23	1	3.6	1,354	4874	6.5	0.001	No
MSC02-032223	03/23/23	2	3.7	1,390	5143	10.0	0.001	No
MSC01-032323	03/23/23 <sup>2</sup>	1	3.6	430	1539	10.0	0.003	No
MSC02-032323	03/23/23 <sup>2</sup>	2	3.6	423	1531	8.0	0.003	No
MSC01-032723	3/28/23	1	3.6	1,437	5173	14.5	0.001	No
MSC02-032723	3/28/23	2	3.7	1,444	5342	12.0	0.001	No
MSC01-033023	3/30/23 <sup>2</sup>	1	3.3	447	1564	10.0	0.003	No
MSC02-033023	3/30/23 <sup>2</sup>	2	3.6	463	1713	11.0	0.003	No
MSC01-040323	04/04/23	1	3.5	1,458	5103	18.5	0.002	No
MSC02-040323	04/04/23	2	3.6	1,438	5176	12.5	0.001	No
MSC01-040423	04/05/23	1	3.2	1,443	4617	16.0	0.002	No
MSC02-040423	04/05/23	2	3.5	1,447	5064	14.0	0.001	No
MSC01-040523	04/06/23	1	3.5	1,440	5040	21.0	0.002	No
MSC02-040523	04/06/23	2	3.8	1,435	5453	13.0	0.001	No
MSC01-040623	04/06/23 <sup>2</sup>	1	3.3	480	1584	10.5	0.003	No
MSC02-040623	04/06/23 <sup>2</sup>	2	3.7	489	1809	12.5	0.003	No
MSC01-041023	04/11/23	1	3.4	1,461	4967	15.0	0.001	No
MSC02-041023	04/11/23	2	3.1	1,464	4538	21.5	0.002	No
MSC01-041123	04/12/23	1	3.3	1,415	4669	16.0	0.002	No
MSC02-041123	04/12/23	2	3.2	1,407	4502	16.0	0.002	No
MSC01-041223	04/13/23	1	3.3	1,436	4738	14.0	0.001	No
MSC02-041223	04/13/23	2	3.2	1,442	4614	27.0	0.003	No
MSC01-041323	04/13/23 <sup>2</sup>	1	3.2	463	1481	20.0	0.007	No
MSC02-041323	04/13/23 <sup>2</sup>	2	3.3	461	1521	19.5	0.006	No
MSC01-041723	04/18/23	1	3.6	1,454	5234	10.5	0.001	No
MSC02-041723	04/18/23	2	3.3	1,445	4768	11.0	0.001	No
MSC01-041823	04/19/23	1	3.0	1,419	4257	14.0	0.002	No
MSC02-041823	04/19/23	2	3.1	1,423	4411	14.0	0.002	No
MSC01-041923	04/20/23	1	3.4	1,449	4926	20.5	0.002	No
MSC02-041923	04/20/23	2	3.5	1,457	5099	11.0	0.001	No
MSC01-042023	04/20/23 <sup>2</sup>	1	3.4	459	1560	14.5	0.005	No
MSC02-042023	04/20/23 <sup>2</sup>	2	3.1	498	1543	17.5	0.006	No
MSC01-042423	04/25/23	1	3.2	1,435	4592	24.0	0.003	No
MSC02-042423	04/25/23	2	3.2	1,438	4601	17.0	0.002	No
MSC01-042523	04/26/23	1	3.2	1,436	4595	20.5	0.002	No
MSC02-042523	04/26/23	2	3.2	1,435	4592	12.0	0.001	No
MSC01-042623	04/27/23	1	3.6	1,437	5173	24.5	0.002	No
MSC02-042623	04/27/23	2	3.1	1,438	4457	22.0	0.002	No
MSC01-042723	04/27/23 <sup>2</sup>	1	3.1	455	1410	19.0	0.007	No
MSC02-042723	04/27/23 <sup>2</sup>	2	3.1	431	1336	16.5	0.006	No
MSC01-050123	05/02/23	1	3.6	1,475	5310	20.5	0.002	No
MSC02-050123	05/02/23	2	3.2	1,461	4675	17.5	0.002	No
MSC01-050223	05/03/23	1	3.9	1,456	5678	22.0	0.002	No
MSC02-050223	05/03/23	2	3.3	1,479	4880	19.0	0.002	No
MSC01-050423	05/04/23 <sup>2</sup>	1	3.1	507	1571	22.0	0.007	No
MSC02-050423	05/04/23 <sup>2</sup>	2	3.2	481	1539	26.0	0.008	No
MSC01-050823	05/09/23	1	3.6	1,428	5140	13.5	0.001	No
MSC02-050823	05/09/23	2	3.3	1,441	4755	10.5	0.001	No
MSC01-050923	05/10/23	1	3.4	1,441	4899	17.0	0.002	No
MSC02-050923	05/10/23	2	3.2	1,439	4604	11.5	0.001	No
MSC01-051023	05/11/23	1	3.0	1,466	4398	22.0	0.002	No
MSC02-051023	05/11/23	2	3.2	1,435	4592	14.0	0.001	No
MSC01-051123	05/11/23 <sup>2</sup>	1	3.1	461	1429	23.0	0.008	No
MSC02-051123	05/11/23 <sup>2</sup>	2	3.2	487	1558	15.5	0.005	No
MSC01-051523	05/16/23	1	3.1	1,483	4597	19.5	0.002	No
MSC02-051523	05/16/23	2	3.2	1,459	4668	20.0	0.002	No
MSC01-051623	05/17/23	1	3.3	1,416	4672	15.0	0.002	No
MSC02-051623	05/17/23	2	3.0	1,415	4245	16.0	0.002	No

**Attachment 2: Asbestos Monitoring Results**

Sample, Date and Station Information			Sampler Run Information			Asbestos Fibers		
Sample ID	Sample End Date <sup>1</sup>	Monitoring Station	Ave Flow Rate (l/min)	Duration of Run (min)	Total Air Volume Monitored (L)	Asbestos (fibers)	Conc Asbestos (fibers/cm <sup>3</sup> )	Exceedance (Yes/No)
MSC01-051723	05/18/23	1	3.1	1,455	4510	17.0	0.002	No
MSC02-051723	05/18/23	2	3.0	1,455	4365	21.0	0.002	No
MSC01-051823	05/18/23 <sup>2</sup>	1	2.3	430	989	16.5	0.008	No
MSC02-051823	05/18/23 <sup>2</sup>	2	3.1	429	1329	20.0	0.007	No
MSC01-052223	05/23/23	1	3.2	1,465	4668	14.5	0.002	No
MSC02-052223	05/23/23	2	3.1	1,449	4491	24.5	0.003	No
MSC01-052323	05/24/23	1	3.2	1,423	4553	26.5	0.003	No
MSC02-052323	05/24/23	2	2.9	1,428	4141	17.5	0.002	No
MSC01-052423	05/25/23	1	3.1	1,423	4411	21.0	0.002	No
MSC02-052423	05/25/23	2	2.9	1,452	4210	16.0	0.002	No
MSC01-052523	05/25/23 <sup>2</sup>	1	3.2	458	1465	27.5	0.009	No
MSC02-052523	05/25/23 <sup>2</sup>	2	3.1	465	1441	31.5	0.011	No
MSC01-053023	05/31/23	1	3.7	1,427	5279	20.5	0.002	No
MSC02-053023	05/31/23	2	3.2	1,433	4585	29.0	0.003	No
MSC01-053123	06/01/23	1	3.4	1,447	4919	17.0	0.002	No
MSC02-053123	06/01/23	2	3.2	1,444	4620	16.5	0.002	No
MSC01-060123	06/01/23 <sup>2</sup>	1	3.4	501	1703	18.0	0.005	No
MSC02-060123	06/01/23 <sup>2</sup>	2	3.2	493	1577	17.5	0.005	No
MSC01-060523	06/06/23	1	3.7	1,433	5302	17.0	0.002	No
MSC02-060523	06/06/23	2	3.2	1,431	4579	12.0	0.001	No
MSC01-060623	06/07/23	1	3.6	1,433	5158	17.5	0.002	No
MSC02-060623	06/07/23	2	3.3	1,434	4732	14.0	0.001	No
MSC01-060723	06/08/23	1	3.7	1,457	5390	24.5	0.002	No
MSC02-060723	06/08/23	2	3.4	1,453	4940	16.0	0.002	No
MSC01-060823	06/08/23 <sup>2</sup>	1	3.6	423	1522	14.0	0.005	No
MSC02-060823	06/08/23 <sup>2</sup>	2	3.5	409	1431	18.5	0.006	No

**Notes:**

<sup>1</sup>Sample "end" date indicates the date upon which sample collection ended.  
<sup>2</sup>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<sup>3</sup> = 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	Total Air Volume Monitored (m <sup>3</sup> )	Concentration in Air (mg/m <sup>3</sup> )	PM10 Perimeter Concentration (Downwind - Upwind) (mg/m <sup>3</sup> )	PM10 Perimeter Concentration (Downwind - Upwind) (ug/m <sup>3</sup> )	Cal/OSHA PEL (ug/m <sup>3</sup> )	Exceedance (Yes/No)	HERO Action Level <sup>1</sup> (ug/m <sup>3</sup> )	Exceedance (Yes/No)
GESPM101722-640	MSC01	12/7/22	1507.84	0.011	0.0040	4.000	5,000	No	50	No
GESPM101722-641	MSC02	12/7/22	1621.97	0.015						
GESPM101722-642	MSC01	12/8/22	1591.23	0.013	0.0000	0.000	5,000	No	50	No
GESPM101722-643	MSC02	12/8/22	1712.70	0.013						
GESPM101722-644	MSC01	12/8/22 <sup>2</sup>	442.87	0.014	0.005	5.000	5,000	No	50	No
GESPM101722-645	MSC02	12/8/22 <sup>2</sup>	480.23	0.019						
GESPM101722-647	MSC01	12/13/22	1614.39	0.013	0.0030	3.000	5,000	No	50	No
GESPM101722-648	MSC02	12/13/22	1709.14	0.016						
GESPM101722-649	MSC01	12/14/22	1629.43	0.014	0.002	2.000	5,000	No	50	No
GESPM101722-650	MSC02	12/14/22	1729.85	0.016						
GESPM101722-651	MSC01	12/15/22	1635.44	0.024	0.002	2.000	5,000	No	50	No
GESPM101722-652	MSC02	12/15/22	1716.53	0.022						
PM113022-03	MSC01	12/20/22	1668.08	0.024 J+	0.001	1.000	5,000	No	50	No
PM113022-05	MSC02	12/20/22	1694.70	0.025 J+						
PM113022-07	MSC01	12/21/22	1698.07	0.030 J+	0.001	1.000	5,000	No	50	No
PM113022-09	MSC02	12/21/22	1704.09	0.029 J+						
PM113022-11	MSC01	12/22/22	1525.86	0.102 J+	0.0176	17.648	5,000	No	50	No
PM113022-13	MSC02	12/22/22	1619.58	0.085 J+						
PM113022-17	MSC01	1/18/23	1522.60	0.00985157	-0.0046	-4.588	5,000	No	50	No
PM113022-19	MSC02	1/18/23	1572.10	0.01443929						
PM113022-21	MSC01	1/19/23	1639.48	0.00640447	0.005821	5.821	5,000	No	50	No
PM113022-23	MSC02	1/19/23	1644.10	0.01222553						
PM113022-25	MSC01	1/19/23 <sup>2</sup>	400.35	0.37716998 J	-0.3744	-374.429	5,000	No	50	No
PM113022-27	MSC02	1/19/23 <sup>2</sup>	364.82	< 0.00274108						
PM113022-29	MSC01	1/24/23	1655.00	0.01111782	-0.002405	-2.405	5,000	No	50	No
PM113022-31	MSC02	1/24/23	1663.87	0.01352269						
PM113022-35	MSC01	1/25/23	1657.99	0.01827514	0.002547	2.547	5,000	No	50	No
PM113022-37	MSC02	1/25/23	1656.86	0.02082252						

**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	Total Air Volume Monitored (m <sup>3</sup> )	Concentration in Air (mg/m <sup>3</sup> )	PM10 Perimeter Concentration (Downwind - Upwind) (mg/m <sup>3</sup> )	PM10 Perimeter Concentration (Downwind - Upwind) (ug/m <sup>3</sup> )	Cal/OSHA PEL (ug/m <sup>3</sup> )	Exceedance (Yes/No)	HERO Action Level <sup>1</sup> (ug/m <sup>3</sup> )	Exceedance (Yes/No)
PM113022-49	MSC01	2/02/23	499.45	0.02322555	0.001430	1.430	5,000	No	50	No
PM113022-51	MSC02	2/02/23	515.09	0.02465589						
PM113022-55	MSC01	2/07/23	1625.88	0.01260856	-0.005	-4.671	5,000	No	50	No
PM113022-57	MSC02	2/07/23	1631.96	0.01727984						
PM113022-59	MSC01	2/08/23	1671.29	0.01537734	-0.0687	-68.651	5,000	No	50	No
PM113022-61	MSC02	2/08/23	1666.11	0.08402807						
PM113022-63	MSC01	2/09/23	1627.76	0.01947462	-0.001198	-1.198	5,000	No	50	No
PM113022-65	MSC02	2/09/23	1499.60	0.02067218						
PM112922-22	MSC01	2/09/23 <sup>2</sup>	447.97	0.01674219	0.0053	5.314	5,000	No	50	No
PM112922-24	MSC02	2/09/23 <sup>2</sup>	446.26	0.01142832						
PM011823-01	MSC01	2/14/23	1246.37	0.02302687	0.002	2.063	5,000	No	50	No
PM011823-03	MSC02	2/14/23	1642.07	0.02509028						
PM011823-05	MSC01	2/15/23	1264.50	0.00632661	0.0055	5.531	5,000	No	50	No
PM011823-07	MSC02	2/15/23	1568.66	0.01185725						
PM011823-09	MSC01	2/16/23	1629.47	0.01178297	-3.101E-05	-0.031	5,000	No	50	No
PM011823-11	MSC02	2/16/23	1633.77	0.01175196						
PM011823-13	MSC01	2/16/23 <sup>2</sup>	426.46	0.01055199	0.0018	1.767	5,000	No	50	No
PM011823-15	MSC02	2/16/23 <sup>2</sup>	446.47	0.01231886						
PM012323-02	MSC01	2/21/23	1637.36	0.02198661	0.005	4.783	5,000	No	50	No
PM012323-04	MSC02	2/21/23	1613.80	0.02676912						
PM012323-06	MSC01	2/22/23	1644.55	0.02389711	0.0188	18.770	5,000	No	50	No
PM012323-08	MSC02	2/22/23	1642.96	0.04266689						
PM012323-10	MSC01	2/23/23	1623.56	0.00856143	0.00271	2.709	5,000	No	50	No
PM012323-12	MSC02	2/23/23	1597.08	0.01127057						
PM011823-18	MSC01	2/23/23 <sup>2</sup>	557.83	0.00681211	0.0003	0.272	5,000	No	50	No
PM011823-20	MSC02	2/23/23 <sup>2</sup>	550.56	0.0070837						
PM013023-17	MSC01	3/02/23	1634.24	0.01994811	-0.0064	-6.444	5,000	No	50	No
PM013023-19	MSC02	3/02/23	1606.97	0.01350367						



**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	Total Air Volume Monitored (m <sup>3</sup> )	Concentration in Air (mg/m <sup>3</sup> )	PM10 Perimeter Concentration (Downwind - Upwind) (mg/m <sup>3</sup> )	PM10 Perimeter Concentration (Downwind - Upwind) (ug/m <sup>3</sup> )	Cal/OSHA PEL (ug/m <sup>3</sup> )	Exceedance (Yes/No)	HERO Action Level <sup>1</sup> (ug/m <sup>3</sup> )	Exceedance (Yes/No)
PM013123-51	MSC01	3/02/23 <sup>2</sup>	482.00	0.00497925	0.0104	10.425	5,000	No	50	No
PM013123-53	MSC02	3/02/23 <sup>2</sup>	480.38	0.01540447						
PM013123-55	MSC01	3/07/23	1633.72	0.0036726	0.003645	3.645	5,000	No	50	No
PM013123-57	MSC02	3/07/23	1612.46	0.00731801 J						
PM020323-11	MSC01	3/08/23	1632.65	0.00526751	0.002376	2.376	5,000	No	50	No
PM020323-13	MSC02	3/08/23	1609.23	0.00764341						
PM020323-15	MSC01	3/09/23	1683.06	0.00659513	0.003744	3.744	5,000	No	50	No
PM020323-17	MSC02	3/09/23	1644.17	0.01033956						
PM020323-19	MSC01	3/09/23 <sup>2</sup>	407.20	0.00589391	0.003109	3.109	5,000	No	50	No
PM020323-21	MSC02	3/09/23 <sup>2</sup>	433.17	0.00900339						
PM020323-25	MSC01	3/14/23	1643.65	0.00249445	0.004424	4.424	5,000	No	50	No
PM020323-27	MSC02	3/14/23	1633.23	0.00691881						
PM020323-29	MSC01	3/16/23	1699.08	0.00976999	0.005419	5.419	5,000	No	50	No
PM020323-31	MSC02	3/16/23	1626.15	0.01518925						
PM020323-33	MSC01	3/16/23 <sup>2</sup>	476.42	0.0182612	-0.008124	-8.124	5,000	No	50	No
PM020623-01	MSC02	3/16/23 <sup>2</sup>	493.24	0.01013705						
PM020623-05	MSC01	3/21/23	1658.27	0.00976922	0.003198	3.198	5,000	No	50	No
PM020623-11	MSC02	3/21/23	1634.89	0.01296723						
PM020623-13	MSC01	3/23/23	1545.09	0.00744293	0.003679	3.679	5,000	No	50	No
PM020623-15	MSC02	3/23/23	1564.49	0.01112184						
PM020623-17	MSC01	3/23/23 <sup>2</sup>	490.88	0.0077412	0.005404	5.404	5,000	No	50	No
PM020623-19	MSC02	3/23/23 <sup>2</sup>	479.26	0.01314527						
PM020223-22	MSC01	3/28/23	1619.55	0.0089531	0.002030	2.030	5,000	No	50	No
PM020223-24	MSC02	3/28/23	1593.35	0.01098315						
PM020223-26	MSC01	3/30/23 <sup>2</sup>	514.11	0.00213962	-0.008530	-8.530	5,000	No	50	No
PM020223-28	MSC02	3/30/23 <sup>2</sup>	515.50	0.01066925						
PM020223-38	MSC01	4/04/23	1685.57	0.01595899	-0.003060	-3.060	5,000	No	50	No
PM020223-40	MSC02	4/04/23	1620.26	0.01289916						



**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	Total Air Volume Monitored (m <sup>3</sup> )	Concentration in Air (mg/m <sup>3</sup> )	PM10 Perimeter Concentration (Downwind - Upwind) (mg/m <sup>3</sup> )	PM10 Perimeter Concentration (Downwind - Upwind) (ug/m <sup>3</sup> )	Cal/OSHA PEL (ug/m <sup>3</sup> )	Exceedance (Yes/No)	HERO Action Level <sup>1</sup> (ug/m <sup>3</sup> )	Exceedance (Yes/No)
PM020323-63	MSC01	4/05/23	1668.68	0.00946856	0.002919	2.919	5,000	No	50	No
PM020323-65	MSC02	4/05/23	1638.71	0.01238779						
PM020323-67	MSC01	4/06/23	1665.86	0.01134549	0.003470	3.470	5,000	No	50	No
PM020323-69	MSC02	4/06/23	1626.72	0.01481509						
PM020923-01	MSC01	4/06/23 <sup>2</sup>	554.30	0.00847916	0.003467	3.467	5,000	No	50	No
PM020923-03	MSC02	4/06/23 <sup>2</sup>	544.12	0.01194589						
PM021523-32	MSC01	4/11/23	1689.30	0.00384775	0.004132	4.132	5,000	No	50	No
PM021523-34	MSC02	4/11/23	1641.63	0.00797987						
PM020823-02	MSC01	4/12/23	1640.30	0.01450954	0.004268	4.268	5,000	No	50	No
PM020823-04	MSC02	4/12/23	1592.36	0.01877716						
PM020823-06	MSC01	4/13/23	1658.16	0.01658465	0.005463	5.463	5,000	No	50	No
PM020823-08	MSC02	4/13/23	1628.30	0.02204753						
PM020823-10	MSC01	4/13/23 <sup>2</sup>	539.42	0.01149383	-0.002648	-2.648	5,000	No	50	No
PM020823-12	MSC02	4/13/23 <sup>2</sup>	523.28	0.01414157						
PM021623-17	MSC01	4/18/23	1668.59	0.01114714	0.003765	3.765	5,000	No	50	No
PM021623-19	MSC02	4/18/23	1616.16	0.01491189						
PM021623-21	MSC01	4/19/23	1628.03	0.01111773	0.002891	2.891	5,000	No	50	No
PM021623-23	MSC02	4/19/23	1591.82	0.01400912						
PM021623-25	MSC01	4/20/23	1636.76	0.01515189	0.002320	2.320	5,000	No	50	No
PM022023-01	MSC02	4/20/23	1602.54	0.01747226						
PM022023-03	MSC01	4/20/23 <sup>2</sup>	519.91	0.02038814	0.003263	3.263	5,000	No	50	No
PM022023-05	MSC02	4/20/23 <sup>2</sup>	583.49	0.02365079						
PM030323-30	MSC01	4/25/23	1648.32	0.05156766	-0.021976	-21.976	5,000	No	50	No
PM030323-32	MSC02	4/25/23	1615.30	0.02959203						
PM030323-34	MSC01	4/26/23	1657.62	0.02684572	-0.001260	-1.260	5,000	No	50	No
PM030323-36	MSC02	4/26/23	1621.99	0.02558585						
PM030323-38	MSC01	4/27/23	1655.85	0.02306972	-0.008294	-8.294	5,000	No	50	No
PM030323-40	MSC02	4/27/23	1631.01	0.01477612						

**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	Total Air Volume Monitored (m <sup>3</sup> )	Concentration in Air (mg/m <sup>3</sup> )	PM10 Perimeter Concentration (Downwind - Upwind) (mg/m <sup>3</sup> )	PM10 Perimeter Concentration (Downwind - Upwind) (ug/m <sup>3</sup> )	Cal/OSHA PEL (ug/m <sup>3</sup> )	Exceedance (Yes/No)	HERO Action Level <sup>1</sup> (ug/m <sup>3</sup> )	Exceedance (Yes/No)
PM030923-02	MSC01	4/27/23 <sup>2</sup>	520.43	0.02497934	-0.000148	-0.148	5,000	No	50	No
PM030923-04	MSC02	4/27/23 <sup>2</sup>	471.18	0.02483127						
PM031223-03	MSC01	5/02/23	1684.21	0.03117188	-0.015939	-15.939	5,000	No	50	No
PM031223-05	MSC02	5/02/23	1634.60	0.01523308						
PM031223-07	MSC01	5/03/23	1647.28	0.00516002	0.001409	1.409	5,000	No	50	No
PM031223-09	MSC02	5/03/23	1644.00	0.00656934						
PM031223-11	MSC01	5/04/23 <sup>2</sup>	578.40	0.00639696 J+	0.005374	5.374	5,000	No	50	No
PM031223-13	MSC02	5/04/23 <sup>2</sup>	535.20	0.0117713						
PM031223-17	MSC01	5/09/23	1646.24	0.01099475	0.003592	3.592	5,000	No	50	No
PM031423-01	MSC02	5/09/23	1617.91	0.01458672						
PM031423-03	MSC01	5/10/23	1657.77	0.01007377	0.002382	2.382	5,000	No	50	No
PM031423-05	MSC02	5/10/23	1629.73	0.01245605						
PM031423-07	MSC01	5/11/23	1691.54	0.01075943	0.003199	3.199	5,000	No	50	No
PM031423-09	MSC02	5/11/23	1619.07	0.01395863						
PM031423-11	MSC01	5/11/23 <sup>2</sup>	507.13	0.01380317	0.003840	3.840	5,000	No	50	No
PM031423-13	MSC02	5/11/23 <sup>2</sup>	538.44	0.01764356						
PM031523-20	MSC01	5/16/23	1708.90	0.00544210	0.003596	3.596	5,000	No	50	No
PM031523-22	MSC02	5/16/23	1648.54	0.00903830						
PM031523-24	MSC01	5/17/23	1622.55	0.00751903	0.003741	3.741	5,000	No	50	No
PM031523-26	MSC02	5/17/23	1589.73	0.01125977						
PM031523-28	MSC01	5/18/23	1668.17	0.00791286	0.004036	4.036	5,000	No	50	No
PM031523-30	MSC02	5/18/23	1631.92	0.01194912						
PM031523-32	MSC01	5/18/23 <sup>2</sup>	484.26	0.00433651	0.009795	9.795	5,000	No	50	No
PM031523-34	MSC02	5/18/23 <sup>2</sup>	474.13	0.01413115						
PM030323-10	MSC01	5/23/23	1704.60	0.00874105	0.028104	28.104	5,000	No	50	No
PM030923-06	MSC02	5/23/23	1623.00	0.03684535						
PM030923-08	MSC01	5/24/23	1581.93	0.02642342	0.007307	7.307	5,000	No	50	No
PM030923-10	MSC02	5/24/23	1612.80	0.03373016						

**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	Total Air Volume Monitored (m <sup>3</sup> )	Concentration in Air (mg/m <sup>3</sup> )	PM10 Perimeter Concentration (Downwind - Upwind) (mg/m <sup>3</sup> )	PM10 Perimeter Concentration (Downwind - Upwind) (ug/m <sup>3</sup> )	Cal/OSHA PEL (ug/m <sup>3</sup> )	Exceedance (Yes/No)	HERO Action Level <sup>1</sup> (ug/m <sup>3</sup> )	Exceedance (Yes/No)
PM030923-12	MSC01	5/25/23	1568.80	0.01721061	0.007248	7.248	5,000	No	50	No
PM030923-14	MSC02	5/25/23	1631.31	0.02445887						
PM030923-16	MSC01	5/25/23 <sup>2</sup>	532.95	0.01200863	0.007579	7.579	5,000	No	50	No
PM030923-18	MSC02	5/25/23 <sup>2</sup>	520.74	0.01958751						
PM031223-32	MSC01	5/31/23	1649.15	0.00782221 J+	0.000316	0.316	5,000	No	50	No
PM031223-34	MSC02	5/31/23	1622.04	0.0081379 J+						
PM031223-36	MSC01	6/01/23	1666.71	0.02225942 J+	0.007277	7.277	5,000	No	50	No
PM031223-38	MSC02	6/01/23	1604.78	0.02953676 J+						
PM031223-40	MSC01	6/01/23 <sup>2</sup>	572.70	0.02514405 J+	0.003676	3.676	5,000	No	50	No
PM031223-42	MSC02	6/01/23 <sup>2</sup>	551.70	0.02882001 J+						
PM032123-14	MSC01	6/06/23	1644.60	0.01015444	0.003082	3.082	5,000	No	50	No
PM032123-16	MSC02	6/06/23	1631.90	0.01323611						
PM032123-18	MSC01	6/07/23	1645.89	0.00662256	0.002109	2.109	5,000	No	50	No
PM032123-20	MSC02	6/07/23	1614.85	0.00873146						
PM032123-22	MSC01	6/08/23	1672.94	0.00992265	0.000427	0.427	5,000	No	50	No
PM032123-24	MSC02	6/08/23	1642.62	0.01034932						
PM032123-26	MSC01	6/08/23 <sup>2</sup>	370.51	0.01268522 J+	0.000646	0.646	5,000	No	50	No
PM032123-28	MSC02	6/08/23 <sup>2</sup>	457.56	0.01333158 J+						

**Notes:**

<sup>1</sup>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.

<sup>2</sup>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 = 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

# **ATTACHMENT 4**

## **LEAD AND MANGANESE MONITORING RESULTS**

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### Attachment 4: Lead and Manganese Monitoring Results

Sample, Date and Station Information			Sampler Run Information	Lead		Manganese	
Sample ID	Monitoring Station	Sample End Date	Total Air Volume Monitored (m <sup>3</sup> )	Concentration in Air (mg/m <sup>3</sup> )	Exceedance (Yes/No)	Concentration in Air (mg/m <sup>3</sup> )	Exceedance (Yes/No)
GESPM101722-640	MSC01	12/7/22	1507.84	0.0000017	No	0.0000032	No
GESPM101722-641	MSC02	12/7/22	1621.97	0.0000014	No	0.0000034	No
GESPM101722-642	MSC01	12/8/22	1591.23	0.0000009	No	0.0000028	No
GESPM101722-643	MSC02	12/8/22	1712.70	0.00000091	No	0.0000026 J	No
GESPM101722-644	MSC01	12/8/22 <sup>2</sup>	442.87	0.0000032	No	0.0000079	No
GESPM101722-645	MSC02	12/8/22 <sup>2</sup>	480.23	0.0000019 J	No	0.0000046	No
GESPM101722-647	MSC01	12/13/22	1614.39	0.0000012	No	0.0000027	No
GESPM101722-648	MSC02	12/13/22	1709.14	0.0000001	No	0.0000023	No
GESPM101722-649	MSC01	12/14/22	1629.43	0.0000011	No	0.0000036	No
GESPM101722-650	MSC02	12/14/22	1729.85	0.00000095	No	0.0000027	No
GESPM101722-651	MSC01	12/15/22	1635.44	0.0000024	No	0.0000073	No
GESPM101722-652	MSC02	12/15/22	1716.53	0.0000002	No	0.0000041	No
PM113022-03	MSC01	12/20/22	1668.08	< 0.00000839	No	< 0.00005875	No
PM113022-05	MSC02	12/20/22	1694.70	< 0.00000826	No	< 0.00005783	No
PM113022-07	MSC01	12/21/22	1698.07	< 0.00000824	No	< 0.00005771	No
PM113022-09	MSC02	12/21/22	1704.09	< 0.00000822	No	< 0.00005751	No
PM113022-11	MSC01	12/22/22	1525.86	< 0.00000918	No	< 0.00006423	No
PM113022-13	MSC02	12/22/22	1619.58	< 0.00000864	No	< 0.00006051	No
TSP113022-18	MSC01	1/18/23	1552.94	< 0.00000902	No	< 0.00006311	No
TSP113022-20	MSC02	1/18/23	1672.75	< 0.00000837	No	< 0.00005859	No
TSP113022-22	MSC01	1/19/23	1580.94	< 0.00000886	No	< 0.00006199	No
TSP113022-24	MSC02	1/19/23	1744.24	< 0.00000803	No	< 0.00005618	No
TSP113022-26	MSC01	1/19/23 <sup>2</sup>	397.82	< 0.00003519	No	< 0.00024634	No
TSP113022-28	MSC02	1/19/23 <sup>2</sup>	386.63	< 0.00003621	No	< 0.00025347	No
TSP113022-30	MSC01	1/24/23	1671.60	< 0.00000838	No	< 0.00005863	No
TSP113022-32	MSC02	1/24/23	1766.68	< 0.00000792	No	< 0.00005547	No
TSP113022-36	MSC01	1/25/23	1664.44	< 0.00000841	No	< 0.00005888	No
TSP113022-38	MSC02	1/25/23	1758.33	< 0.00000796	No	< 0.00005573	No
TSP113022-50	MSC01	2/02/23	500.30	< 0.00002798	No	< 0.00019588	No
TSP113022-52	MSC02	2/02/23	545.96	< 0.00002564	No	< 0.0001795	No
TSP113022-56	MSC01	2/07/23	1629.51	< 0.00000859 UJ	No	< 0.00006014	No
TSP113022-58	MSC02	2/07/23	1728.66	< 0.0000081 UJ	No	< 0.00005669	No
TSP113022-60	MSC01	2/08/23	1675.36	< 0.00000836 UJ	No	< 0.00005849	No
TSP113022-62	MSC02	2/08/23	1766.71	< 0.00000792 UJ	No	< 0.00005547	No
TSP113022-64	MSC01	2/09/23	1629.75	< 0.00000859 UJ	No	< 0.00006013	No
TSP113022-66	MSC02	2/09/23	1590.49	< 0.0000088 UJ	No	< 0.00006162	No
TSP112922-23	MSC01	2/09/23 <sup>2</sup>	447.38	< 0.00003129 UJ	No	< 0.00021905	No
TSP112922-25	MSC02	2/09/23 <sup>2</sup>	474.14	< 0.00002953 UJ	No	< 0.00020669	No
TSP011823-02	MSC01	2/14/23	1663.14	< 0.00000842	No	< 0.00005892	No
TSP011823-04	MSC02	2/14/23	1741.11	< 0.00000804	No	< 0.00005629	No
TSP011823-06	MSC01	2/15/23	1322.67	< 0.00001058	No	< 0.00007409	No
TSP011823-08	MSC02	2/15/23	1523.52	< 0.00000919	No	< 0.00006432	No
TSP011823-10	MSC01	2/16/23	1627.75	< 0.0000086	No	< 0.00006021	No

### Attachment 4: Lead and Manganese Monitoring Results

Sample, Date and Station Information			Sampler Run Information	Lead		Manganese	
Sample ID	Monitoring Station	Sample End Date	Total Air Volume Monitored (m <sup>3</sup> )	Concentration in Air (mg/m <sup>3</sup> )	Exceedance (Yes/No)	Concentration in Air (mg/m <sup>3</sup> )	Exceedance (Yes/No)
TSP011823-12	MSC02	2/16/23	1729.90	< 0.0000809	No	< 0.00005665	No
TSP011823-14	MSC01	2/16/23 <sup>2</sup>	424.73	< 0.00003296	No	< 0.00023073	No
TSP011823-16	MSC02	2/16/23 <sup>2</sup>	472.40	< 0.00002964	No	< 0.00020745	No
TSP012323-03	MSC01	2/21/23	1649.30	< 0.00000849	No	< 0.00005942	No
TSP012323-05	MSC02	2/21/23	1715.45	< 0.00000816	No	< 0.00005713	No
TSP012323-07	MSC01	2/22/23	1677.34	< 0.00000835	No	< 0.00005843	No
TSP012323-09	MSC02	2/22/23 <sup>3</sup>	732.84	0.00003084	No	< 0.00013373	No
TSP012323-11	MSC01	2/23/23	1631.81	< 0.00000858	No	< 0.00006006	No
TSP011823-17	MSC02	2/23/23	1676.16	< 0.00000835	No	< 0.00005847	No
TSP011823-19	MSC01	2/23/23 <sup>2</sup>	557.12	< 0.00002513	No	< 0.0001759	No
TSP011823-21	MSC02	2/23/23 <sup>2</sup>	585.02	< 0.00002393	No	< 0.00016752	No
TSP013023-18	MSC01	3/02/23	1630.46	< 0.00000859	No	< 0.00006011	No
TSP013023-20	MSC02	3/02/23	1707.28	< 0.0000082	No	< 0.0000574	No
TSP013123-52	MSC01	3/02/23 <sup>2</sup>	480.87	< 0.00002911	No	< 0.0002038	No
TSP013123-54	MSC02	3/02/23 <sup>2</sup>	514.50	< 0.00002721	No	< 0.00019048	No
TSP013123-56	MSC01	3/07/23	1643.67	< 0.00000852	No	< 0.00005962	No
TSP013123-58	MSC02	3/07/23 <sup>3</sup>	862.14	< 0.00001624	No	< 0.00011367	No
TSP020323-12	MSC01	3/08/23	1634.86	< 0.00000856	No	< 0.00005994	No
TSP020323-14	MSC02	3/08/23	1711.00	< 0.00000818	No	< 0.00005728	No
TSP020323-16	MSC01	3/09/23	1695.55	< 0.00000826	No	< 0.0000578	No
TSP020323-18	MSC02	3/09/23	1747.61	< 0.00000801	No	< 0.00005608	No
TSP020323-20	MSC01	3/09/23 <sup>2</sup>	404.96	< 0.00003457	No	< 0.000242	No
TSP020323-22	MSC02	3/09/23 <sup>2</sup>	456.94	< 0.00003064	No	< 0.00021447	No
TSP020323-26	MSC01	3/14/23	1655.51	< 0.00000846	No	< 0.0000592	No
TSP020323-28	MSC02	3/14/23	1739.40	< 0.00000805	No	< 0.00005634	No
TSP020323-30	MSC01	3/16/23	1694.68	< 0.00000826	No	< 0.00005783	No
TSP020323-32	MSC02	3/16/23	1728.70	< 0.0000081	No	< 0.00005669	No
TSP020323-34	MSC01	3/16/23 <sup>2</sup>	480.10	< 0.00002916	No	< 0.00020412	No
TSP020623-02	MSC02	3/16/23 <sup>2</sup>	519.14	< 0.00002697	No	< 0.00018877	No
TSP020623-06	MSC01	3/21/23	1667.66	< 0.00000839	No	< 0.00005876	No
TSP020623-12	MSC02	3/21/23	1735.74	< 0.00000807	No	< 0.00005646	No
TSP020623-14	MSC01	3/23/23	1556.49	< 0.00000899	No	< 0.00006296	No
TSP020623-16	MSC02	3/23/23	1667.06	< 0.0000084	No	< 0.00005879	No
TSP020623-18	MSC01	3/23/23 <sup>2</sup>	466.67	< 0.00003	No	< 0.00021	No
TSP020623-20	MSC02	3/23/23 <sup>1,2</sup>	293.01	< 0.00004778	No	< 0.00033446	No
TSP020223-23	MSC01	3/28/23	1624.27	< 0.00000862	No	< 0.00006033	No
TSP020223-25	MSC02	3/28/23	1692.62	< 0.00000827	No	< 0.0000579	No
TSP020223-27	MSC01	3/30/23 <sup>2</sup>	514.18	< 0.00002723	No	< 0.00019059	No
TSP020223-29	MSC02	3/30/23 <sup>2</sup>	548.95	< 0.0000255	No	< 0.00017852	No
TSP020223-39	MSC01	4/04/23	1693.85	< 0.00000827	No	< 0.00005786	No
TSP020323-62	MSC02	4/04/23	1720.87	< 0.00000814	No	< 0.00005695	No
TSP020323-64	MSC01	4/05/23	1663.88	< 0.00000841	No	< 0.0000589	No
TSP020323-66	MSC02	4/05/23	1735.90	< 0.00000806	No	< 0.00005645	No
TSP020323-68	MSC01	4/06/23	1661.80	< 0.00000842	No	< 0.00005897	No

### Attachment 4: Lead and Manganese Monitoring Results

Sample, Date and Station Information			Sampler Run Information	Lead		Manganese	
Sample ID	Monitoring Station	Sample End Date	Total Air Volume Monitored (m <sup>3</sup> )	Concentration in Air (mg/m <sup>3</sup> )	Exceedance (Yes/No)	Concentration in Air (mg/m <sup>3</sup> )	Exceedance (Yes/No)
TSP020323-70	MSC02	4/06/23	1724.78	< 0.0000812	No	< 0.00005682	No
TSP020923-02	MSC01	4/06/23 <sup>2</sup>	554.40	< 0.00002525	No	< 0.00017677	No
TSP020923-04	MSC02	4/06/23 <sup>2</sup>	581.88	< 0.00002406	No	< 0.00016842	No
TSP021523-33	MSC01	4/11/23	1698.82	< 0.00000824	No	< 0.00005769	No
TSP020823-01	MSC02	4/11/23	1761.73	< 0.00000795	No	< 0.00005563	No
TSP020823-03	MSC01	4/12/23	1629.85	< 0.00000859	No	< 0.00006013	No
TSP020823-05	MSC02	4/12/23	1688.62	< 0.00000829	No	< 0.00005804	No
TSP020823-07	MSC01	4/13/23	1650.61	< 0.00000848	No	< 0.00005937	No
TSP020823-09	MSC02	4/13/23	1387.10	< 0.00001009	No	< 0.00007065	No
TSP020823-11	MSC01	4/13/23 <sup>2</sup>	534.94	< 0.00002617	No	< 0.0001832	No
TSP020823-13	MSC02	4/13/23 <sup>2</sup>	552.25	< 0.00002535	No	< 0.00017746	No
TSP021623-18	MSC01	4/18/23	1675.38	< 0.00000836	No	< 0.00005849	No
TSP021623-20	MSC02	4/18/23	1714.56	< 0.00000817	No	< 0.00005716	No
TSP021623-22	MSC01	4/19/23	1626.92	< 0.00000861	No	< 0.00006024	No
TSP021623-24	MSC02	4/19/23	1692.11	< 0.00000827	No	< 0.00005792	No
TSP021623-26	MSC01	4/20/23	1616.86	< 0.00000866	No	< 0.00006061	No
TSP022023-02	MSC02	4/20/23	1701.84	< 0.00000823	No	< 0.00005758	No
TSP022023-04	MSC01	4/20/23 <sup>2</sup>	522.60	< 0.00002679	No	< 0.00018752	No
TSP022023-06	MSC02	4/20/23 <sup>2</sup>	619.33	< 0.00002261	No	< 0.00015824	No
TSP030323-31	MSC01	4/25/23	1659.15	0.00000982	No	0.00008559	No
TSP030323-33	MSC02	4/25/23	1711.83	< 0.00000818	No	< 0.00005725	No
TSP030323-35	MSC01	4/26/23	1654.76	< 0.00000846	No	< 0.00005922	No
TSP030323-37	MSC02	4/26/23	1722.56	< 0.00000813	No	< 0.00005689	No
TSP030323-39	MSC01	4/27/23	1661.46	< 0.00000843	No	< 0.00005898	No
TSP030923-01	MSC02	4/27/23 <sup>1</sup>	776.68	< 0.00001803	No	< 0.00012618	No
TSP030923-03	MSC01	4/27/23 <sup>2</sup>	525.64	< 0.00002663	No	< 0.00018644	No
TSP030923-05	MSC02	4/27/23 <sup>2</sup>	504.07	< 0.00002777	No	< 0.00019442	No
TSP031223-04	MSC01	5/02/23	1701.48	0.00000835	No	< 0.0000576	No
TSP031223-06	MSC02	5/02/23	1737.80	< 0.00000806	No	< 0.00005639	No
TSP031223-08	MSC01	5/03/23	1657.16	< 0.00000845	No	< 0.00005914	No
TSP031223-10	MSC02	5/03/23	1740.99	< 0.00000804	No	< 0.00005629	No
TSP031223-12	MSC01	5/04/23 <sup>2</sup>	578.57	< 0.0000242	No	< 0.00016938	No
TSP031223-14	MSC02	5/04/23 <sup>2</sup>	566.93	< 0.00002469	No	< 0.00017286	No
TSP031223-18	MSC01	5/09/23	1652.75	< 0.00000847	No	< 0.0000593	No
TSP031423-02	MSC02	5/09/23	1734.22	< 0.00000807	No	< 0.00005651	No
TSP031423-04	MSC01	5/10/23	1658.93	< 0.00000844	No	< 0.00005907	No
TSP031423-06	MSC02	5/10/23	1722.85	< 0.00000813	No	< 0.00005688	No
TSP031423-08	MSC01	5/11/23	1696.93	< 0.00000825	No	< 0.00005775	No
TSP031423-10	MSC02	5/11/23	1724.38	< 0.00000812	No	< 0.00005683	No
TSP031423-12	MSC01	5/11/23 <sup>2</sup>	512.83	< 0.0000273	No	< 0.0001911	No
TSP031423-14	MSC02	5/11/23 <sup>2</sup>	573.11	< 0.00002443	No	< 0.000171	No
TSP031523-21	MSC01	5/16/23	1718.40	< 0.00000815	No	< 0.00005703	No
TSP031523-23	MSC02	5/16/23	1708.00	< 0.0000082	No	< 0.00005738	No



**Attachment 4: Lead and Manganese Monitoring Results**

Sample, Date and Station Information			Sampler Run Information	Lead		Manganese	
Sample ID	Monitoring Station	Sample End Date	Total Air Volume Monitored (m <sup>3</sup> )	Concentration in Air (mg/m <sup>3</sup> )	Exceedance (Yes/No)	Concentration in Air (mg/m <sup>3</sup> )	Exceedance (Yes/No)
TSP031523-25	MSC01	5/17/23	1630.39	< 0.0000859	No	< 0.00006011	No
TSP031523-27	MSC02	5/17/23	1688.85	< 0.0000829	No	< 0.00005803	No
TSP031523-29	MSC01	5/18/23	1679.35	< 0.0000834	No	< 0.00005836	No
TSP031523-31	MSC02	5/18/23	1733.33	< 0.0000808	No	< 0.00005654	No
TSP031523-33	MSC01	5/18/23 <sup>2</sup>	488.64	< 0.00002865	No	< 0.00020056	No
TSP031523-35	MSC02	5/18/23 <sup>2</sup>	505.82	< 0.00002768	No	< 0.00019374	No
TSP030323-11	MSC01	5/23/23	1709.17	< 0.0000819	No	< 0.00005734	No
TSP030923-07	MSC02	5/23/23	1721.41	< 0.0000813	No	< 0.00005693	No
TSP030923-09	MSC01	5/24/23	1580.87	< 0.0000886	No	< 0.00006199	No
TSP030923-11	MSC02	5/24/23	1709.30	< 0.0000819	No	< 0.00005733	No
TSP030923-13	MSC01	5/25/23	1619.49	< 0.0000864	No	< 0.00006051	No
TSP030923-15	MSC02	5/25/23	1737.64	< 0.0000806	No	< 0.0000564	No
TSP030923-17	MSC01	5/25/23 <sup>2</sup>	534.21	< 0.00002621	No	< 0.00018345	No
TSP030923-19	MSC02	5/25/23 <sup>2</sup>	553.95	< 0.00002527	No	< 0.00017691	No
TSP031223-33	MSC01	5/31/23	1642.06	< 0.0000853	No	< 0.00005968	No
TSP031223-35	MSC02	5/31/23	1716.15	< 0.0000816	No	< 0.0000571	No
TSP031223-37	MSC01	6/01/23	1666.80	< 0.000084	No	< 0.0000588	No
TSP031223-39	MSC02	6/01/23	1733.27	< 0.0000808	No	< 0.00005654	No
TSP031223-41	MSC01	6/01/23 <sup>2</sup>	575.36	< 0.00002433	No	< 0.00017033	No
TSP031223-43	MSC02	6/01/23 <sup>2</sup>	585.89	< 0.0000239	No	< 0.00016727	No
TSP032123-15	MSC01	6/06/23	1650.14	< 0.0000848	No	< 0.00005939	No
TSP032123-17	MSC02	6/06/23 <sup>1</sup>	913.80	< 0.00001532	No	< 0.00010724	No
TSP032123-19	MSC01	6/07/23	1645.12	< 0.0000851	No	< 0.00005957	No
TSP032123-21	MSC02	6/07/23	1718.75	< 0.0000815	No	< 0.00005702	No
TSP032123-23	MSC01	6/08/23	1669.41	< 0.0000839	No	< 0.0000587	No
TSP032123-25	MSC02	6/08/23	1742.99	< 0.0000803	No	< 0.00005623	No
TSP032123-27	MSC01	6/08/23 <sup>2</sup>	368.37	< 0.00003801	No	< 0.00026604	No
TSP032123-29	MSC02	6/08/23 <sup>2</sup>	481.50	< 0.00002908	No	< 0.00020353	No

**Notes:**

<sup>1</sup>Generator or sampler malfunction.

<sup>2</sup>Air sample was taken down during the afternoon after field activities ceased.

Sample locations are shown on Figure 2-1

m<sup>3</sup> = cubic meters

mg/m<sup>3</sup> = milligrams per cubic meter

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

J+ = estimated concentration biased high

< = below detection limit

< = below detection limit

**ATTACHMENT 5**  
**TOTAL SUSPENDED PARTICULATES**  
**MONITORING RESULTS**

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**Attachment 5: Total Suspended Particulates Monitoring Results**

Sample, Date and Station Information			Sampler Run Information	TSP						
Sample ID	Monitoring Station	Sample End Date	Total Air Volume Monitored (m <sup>3</sup> )	Concentration in Air (mg/m <sup>3</sup> )	TSP Perimeter Concentration (Downwind - Upwind) (mg/m <sup>3</sup> )	TSP Perimeter Concentration (Downwind - Upwind) (ug/m <sup>3</sup> )	Cal/OSHA PEL (ug/m <sup>3</sup> )	Exceedance (Yes/No)	HERO Action Level (ug/m <sup>3</sup> )	Exceedance (Yes/No)
GESTSP101722-640	MSC01	12/7/22	1528.50	0.0154	0.004200	4.200	5,000	No	500	No
GESTSP101722-641	MSC02	12/7/22	1774.67	0.0196						
GESTSP101722-642	MSC01	12/8/22	1612.07	0.0217	0.0000	0.00	5,000	No	500	No
GESTSP101722-643	MSC02	12/8/22	1814.62	0.0217						
GESTSP101722-644	MSC01	12/8/22 <sup>2</sup>	450.97	0.0495	-0.0189	-18.90	5,000	No	500	No
GESTSP101722-645	MSC02	12/8/22 <sup>2</sup>	506.50	0.0306						
GESTSP101722-647	MSC01	12/13/22	1630.62	0.0248	-0.003500	-3.50	5,000	No	500	No
GESTSP101722-648	MSC02	12/13/22	1809.55	0.0213						
GESTSP101722-649	MSC01	12/14/22	1634.67	0.0304	-0.010	-10.40	5,000	No	500	No
GESTSP101722-650	MSC02	12/14/22	1835.58	0.020						
GESTSP101722-651	MSC01	12/15/22	1615.77	0.0549	0.024	24.00	5,000	No	500	No
GESTSP101722-652	MSC02	12/15/22	1823.15	0.0309						
TSP113022-04	MSC01	12/20/22	1682.18	0.0838	-0.0505	-50.50	5,000	No	500	No
TSP113022-06	MSC02	12/20/22	1798.10	0.0333						
TSP113022-08	MSC01	12/21/22	1720.20	0.0368	-0.0001	-0.10	5,000	No	500	No
TSP113022-10	MSC02	12/21/22	1808.38	0.0369						
TSP113022-12	MSC01	12/22/22	1537.10	0.0485	-0.0675	-67.50	5,000	No	500	No
TSP113022-14	MSC02	12/22/22	1720.94	0.116						
TSP113022-18	MSC01	1/18/23	1552.94	0.0164	-0.080400	-80.40	5,000	No	500	No
TSP113022-20	MSC02	1/18/23	1672.75	0.0968						
TSP113022-22	MSC01	1/19/23	1580.94	0.00816	0.0663	66.34	5,000	No	500	No
TSP113022-24	MSC02	1/19/23	1744.24	0.0745						
TSP113022-26	MSC01	1/19/23 <sup>2</sup>	397.82	0.00327 J	-0.00068	-0.68	5,000	No	500	No
TSP113022-28	MSC02	1/19/23 <sup>2</sup>	386.63	< 0.00259						
TSP113022-30	MSC01	1/24/23	1671.60	0.0235	-0.080500	-80.50	5,000	No	500	No
TSP113022-32	MSC02	1/24/23	1766.68	0.104						

**Attachment 5: Total Suspended Particulates Monitoring Results**

Sample, Date and Station Information			Sampler Run Information	TSP						
Sample ID	Monitoring Station	Sample End Date	Total Air Volume Monitored (m <sup>3</sup> )	Concentration in Air (mg/m <sup>3</sup> )	TSP Perimeter Concentration (Downwind - Upwind) (mg/m <sup>3</sup> )	TSP Perimeter Concentration (Downwind - Upwind) (ug/m <sup>3</sup> )	Cal/OSHA PEL (ug/m <sup>3</sup> )	Exceedance (Yes/No)	HERO Action Level (ug/m <sup>3</sup> )	Exceedance (Yes/No)
TSP113022-36	MSC01	1/25/23	1664.44	0.035	0.070	70.00	5,000	No	500	No
TSP113022-38	MSC02	1/25/23	1758.33	0.105						
TSP113022-50	MSC01	2/02/23	500.30	0.0372	-0.0053	-5.30	5,000	No	500	No
TSP113022-52	MSC02	2/02/23	545.96	0.0319						
TSP113022-56	MSC01	2/07/23	1629.51	0.0270	0.0018	1.80	5,000	No	500	No
TSP113022-58	MSC02	2/07/23	1728.66	0.0252						
TSP113022-60	MSC01	2/08/23	1675.36	0.0321	0.0067	6.70	5,000	No	500	No
TSP113022-62	MSC02	2/08/23	1766.71	0.0254						
TSP113022-64	MSC01	2/09/23	1629.75	0.0329	0.0035	3.50	5,000	No	500	No
TSP113022-66	MSC02	2/09/23	1590.49	0.0294						
TSP112922-23	MSC01	2/09/23 <sup>2</sup>	447.38	0.0329	0.008000	8.00	5,000	No	500	No
TSP112922-25	MSC02	2/09/23 <sup>2</sup>	474.14	0.0249						
TSP011823-02	MSC01	2/14/23	1663.14	0.045	-0.0035	-3.50	5,000	No	500	No
TSP011823-04	MSC02	2/14/23	1741.11	0.0415						
TSP011823-06	MSC01	2/15/23	1322.67	0.0213	0.0032	3.20	5,000	No	500	No
TSP011823-08	MSC02	2/15/23	1523.52	0.0245						
TSP011823-10	MSC01	2/16/23	1627.75	0.0286	-0.011500	-11.50	5,000	No	500	No
TSP011823-12	MSC02	2/16/23	1729.90	0.0171						
TSP011823-14	MSC01	2/16/23 <sup>2</sup>	424.73	0.0165	0.003	2.60	5,000	No	500	No
TSP011823-16	MSC02	2/16/23 <sup>2</sup>	472.40	0.0191						
TSP012323-03	MSC01	2/21/23	1649.30	0.0361	-0.0005	-0.50	5,000	No	500	No
TSP012323-05	MSC02	2/21/23	1715.45	0.0356						
TSP012323-07	MSC01	2/22/23	1677.34	0.0411	0.0799	79.90	5,000	No	500	No
TSP012323-09	MSC02	2/22/23 <sup>3</sup>	732.84	0.121						
TSP012323-11	MSC01	2/23/23	1631.81	0.0192	-0.0002	-0.20	5,000	No	500	No
TSP011823-17	MSC02	2/23/23	1676.16	0.019						

**Attachment 5: Total Suspended Particulates Monitoring Results**

Sample, Date and Station Information			Sampler Run Information	TSP						
Sample ID	Monitoring Station	Sample End Date	Total Air Volume Monitored (m <sup>3</sup> )	Concentration in Air (mg/m <sup>3</sup> )	TSP Perimeter Concentration (Downwind - Upwind) (mg/m <sup>3</sup> )	TSP Perimeter Concentration (Downwind - Upwind) (ug/m <sup>3</sup> )	Cal/OSHA PEL (ug/m <sup>3</sup> )	Exceedance (Yes/No)	HERO Action Level (ug/m <sup>3</sup> )	Exceedance (Yes/No)
TSP011823-19	MSC01	2/23/23 <sup>2</sup>	557.12	0.0185	-0.0082	-8.20	5,000	No	500	No
TSP011823-21	MSC02	2/23/23 <sup>2</sup>	585.02	0.0103						
TSP013023-18	MSC01	3/02/23	1630.46	0.0182	-0.0046	-4.60	5,000	No	500	No
TSP013023-20	MSC02	3/02/23	1707.28	0.0136						
TSP013123-52	MSC01	3/02/23 <sup>2</sup>	480.87	0.0206	0.0041	4.10	5,000	No	500	No
TSP013123-54	MSC02	3/02/23 <sup>2</sup>	514.50	0.0247						
TSP013123-56	MSC01	3/07/23	1643.67	0.0073	0.0033	3.30	5,000	No	500	No
TSP013123-58	MSC02	3/07/23 <sup>3</sup>	862.14	0.0106 J						
TSP020323-12	MSC01	3/08/23	1634.86	0.00924	0.0002	0.17	5,000	No	500	No
TSP020323-14	MSC02	3/08/23	1711.00	0.00941						
TSP020323-16	MSC01	3/09/23	1695.55	0.0117	0.0015	1.50	5,000	No	500	No
TSP020323-18	MSC02	3/09/23	1747.61	0.0132						
TSP020323-20	MSC01	3/09/23 <sup>2</sup>	404.96	0.0143	-0.0001	-0.10	5,000	No	500	No
TSP020323-22	MSC02	3/09/23 <sup>2</sup>	456.94	0.0142						
TSP020323-26	MSC01	3/14/23	1655.51	0.010	-0.0005	-0.51	5,000	No	500	No
TSP020323-28	MSC02	3/14/23	1739.40	0.00949						
TSP020323-30	MSC01	3/16/23	1694.68	0.0218	0.0001	0.10	5,000	No	500	No
TSP020323-32	MSC02	3/16/23	1728.70	0.0219						
TSP020323-34	MSC01	3/16/23 <sup>2</sup>	480.10	0.0344	-0.0020	-2.00	5,000	No	500	No
TSP020623-02	MSC02	3/16/23 <sup>2</sup>	519.14	0.0324						
TSP020623-06	MSC01	3/21/23	1667.66	0.0188	0.0010	1.00	5,000	No	500	No
TSP020623-12	MSC02	3/21/23	1735.74	0.0198						
TSP020623-14	MSC01	3/23/23	1556.49	0.0242	-0.0054	-5.40	5,000	No	500	No
TSP020623-16	MSC02	3/23/23	1667.06	0.0188						
TSP020623-18	MSC01	3/23/23 <sup>2</sup>	466.67	0.0334	-0.0122	-12.20	5,000	No	500	No
TSP020623-20	MSC02	3/23/23 <sup>1,2</sup>	293.01	0.0212						

**Attachment 5: Total Suspended Particulates Monitoring Results**

Sample, Date and Station Information			Sampler Run Information	TSP						
Sample ID	Monitoring Station	Sample End Date	Total Air Volume Monitored (m <sup>3</sup> )	Concentration in Air (mg/m <sup>3</sup> )	TSP Perimeter Concentration (Downwind - Upwind) (mg/m <sup>3</sup> )	TSP Perimeter Concentration (Downwind - Upwind) (ug/m <sup>3</sup> )	Cal/OSHA PEL (ug/m <sup>3</sup> )	Exceedance (Yes/No)	HERO Action Level (ug/m <sup>3</sup> )	Exceedance (Yes/No)
TSP020223-23	MSC01	3/28/23	1624.27	0.0215	0.0002	0.20	5,000	No	500	No
TSP020223-25	MSC02	3/28/23	1692.62	0.0217						
TSP020223-27	MSC01	3/30/23 <sup>2</sup>	514.18	0.00778 J+	-0.0066	-6.62	5,000	No	500	No
TSP020223-29	MSC02	3/30/23 <sup>2</sup>	548.95	0.0144						
TSP020223-39	MSC01	4/04/23	1693.85	0.0237	-0.0025	-2.50	5,000	No	500	No
TSP020323-62	MSC02	4/04/23	1720.87	0.0212						
TSP020323-64	MSC01	4/05/23	1663.88	0.0211	-0.0036	-3.60	5,000	No	500	No
TSP020323-66	MSC02	4/05/23	1735.90	0.0175						
TSP020323-68	MSC01	4/06/23	1661.80	0.0285	-0.0051	-5.10	5,000	No	500	No
TSP020323-70	MSC02	4/06/23	1724.78	0.0234						
TSP020923-02	MSC01	4/06/23 <sup>2</sup>	554.40	0.0162	0.0008	0.80	5,000	No	500	No
TSP020923-04	MSC02	4/06/23 <sup>2</sup>	581.88	0.017						
TSP021523-33	MSC01	4/11/23	1698.82	0.024	-0.0085	-8.50	5,000	No	500	No
TSP020823-01	MSC02	4/11/23	1761.73	0.0155						
TSP020823-03	MSC01	4/12/23	1629.85	0.0306	0.0008	0.80	5,000	No	500	No
TSP020823-05	MSC02	4/12/23	1688.62	0.0314						
TSP020823-07	MSC01	4/13/23	1650.61	0.0351	0.0007	0.70	5,000	No	500	No
TSP020823-09	MSC02	4/13/23	1387.10	0.0358						
TSP020823-11	MSC01	4/13/23 <sup>2</sup>	534.94	0.0295	-0.0011	-1.10	5,000	No	500	No
TSP020823-13	MSC02	4/13/23 <sup>2</sup>	552.25	0.0284						
TSP021623-18	MSC01	4/18/23	1675.38	0.0205	0.0071	7.10	5,000	No	500	No
TSP021623-20	MSC02	4/18/23	1714.56	0.0276						
TSP021623-22	MSC01	4/19/23	1626.92	0.0202	0.00	0.00	5,000	No	500	No
TSP021623-24	MSC02	4/19/23	1692.11	0.0202						
TSP021623-26	MSC01	4/20/23	1616.86	0.0283	-0.0023	-2.30	5,000	No	500	No
TSP022023-02	MSC02	4/20/23	1701.84	0.026						

**Attachment 5: Total Suspended Particulates Monitoring Results**

Sample, Date and Station Information			Sampler Run Information	TSP						
Sample ID	Monitoring Station	Sample End Date	Total Air Volume Monitored (m <sup>3</sup> )	Concentration in Air (mg/m <sup>3</sup> )	TSP Perimeter Concentration (Downwind - Upwind) (mg/m <sup>3</sup> )	TSP Perimeter Concentration (Downwind - Upwind) (ug/m <sup>3</sup> )	Cal/OSHA PEL (ug/m <sup>3</sup> )	Exceedance (Yes/No)	HERO Action Level (ug/m <sup>3</sup> )	Exceedance (Yes/No)
TSP022023-04	MSC01	4/20/23 <sup>2</sup>	522.60	0.0346	0.0051	5.10	5,000	No	500	No
TSP022023-06	MSC02	4/20/23 <sup>2</sup>	619.33	0.0397						
TSP030323-31	MSC01	4/25/23	1659.15	0.141	-0.0876	-87.60	5,000	No	500	No
TSP030323-33	MSC02	4/25/23	1711.83	0.0534						
TSP030323-35	MSC01	4/26/23	1654.76	0.0816	-0.0411	-41.10	5,000	No	500	No
TSP030323-37	MSC02	4/26/23	1722.56	0.0405						
TSP030323-39	MSC01	4/27/23	1661.46	0.0716	-0.0296	-29.60	5,000	No	500	No
TSP030923-01	MSC02	4/27/23 <sup>1</sup>	776.68	0.042						
TSP030923-03	MSC01	4/27/23 <sup>2</sup>	525.64	0.0795	-0.0295	-29.50	5,000	No	500	No
TSP030923-05	MSC02	4/27/23 <sup>2</sup>	504.07	0.05						
TSP031223-04	MSC01	5/02/23	1701.48	0.0987	-0.0645	-64.50	5,000	No	500	No
TSP031223-06	MSC02	5/02/23	1737.80	0.0342						
TSP031223-08	MSC01	5/03/23	1657.16	0.0132	-0.0020	-2.00	5,000	No	500	No
TSP031223-10	MSC02	5/03/23	1740.99	0.0112						
TSP031223-12	MSC01	5/04/23 <sup>2</sup>	578.57	0.0164	0.0011	1.10	5,000	No	500	No
TSP031223-14	MSC02	5/04/23 <sup>2</sup>	566.93	0.0175						
TSP031223-18	MSC01	5/09/23	1652.75	0.0241	-0.0056	-5.60	5,000	No	500	No
TSP031423-02	MSC02	5/09/23	1734.22	0.0185						
TSP031423-04	MSC01	5/10/23	1658.93	0.0307	-0.0075	-7.50	5,000	No	500	No
TSP031423-06	MSC02	5/10/23	1722.85	0.0232						
TSP031423-08	MSC01	5/11/23	1696.93	0.0259	-0.0028	-2.80	5,000	No	500	No
TSP031423-10	MSC02	5/11/23	1724.38	0.0231						
TSP031423-12	MSC01	5/11/23 <sup>2</sup>	512.83	0.0228	0.0133	13.30	5,000	No	500	No
TSP031423-14	MSC02	5/11/23 <sup>2</sup>	573.11	0.0361						
TSP031523-21	MSC01	5/16/23	1718.40	0.0164	0.0003	0.30	5,000	No	500	No
TSP031523-23	MSC02	5/16/23	1708.00	0.0167						



**Attachment 5: Total Suspended Particulates Monitoring Results**

Sample, Date and Station Information			Sampler Run Information	TSP						
Sample ID	Monitoring Station	Sample End Date	Total Air Volume Monitored (m <sup>3</sup> )	Concentration in Air (mg/m <sup>3</sup> )	TSP Perimeter Concentration (Downwind - Upwind) (mg/m <sup>3</sup> )	TSP Perimeter Concentration (Downwind - Upwind) (ug/m <sup>3</sup> )	Cal/OSHA PEL (ug/m <sup>3</sup> )	Exceedance (Yes/No)	HERO Action Level (ug/m <sup>3</sup> )	Exceedance (Yes/No)
TSP031523-25	MSC01	5/17/23	1630.39	0.0212	-0.002	-1.60	5,000	No	500	No
TSP031523-27	MSC02	5/17/23	1688.85	0.0196						
TSP031523-29	MSC01	5/18/23	1679.35	0.0176	0.0019	1.90	5,000	No	500	No
TSP031523-31	MSC02	5/18/23	1733.33	0.0195						
TSP031523-33	MSC01	5/18/23 <sup>2</sup>	488.64	0.0244	0.0007	0.70	5,000	No	500	No
TSP031523-35	MSC02	5/18/23 <sup>2</sup>	505.82	0.0251						
TSP030323-11	MSC01	5/23/23	1709.17	0.0304	0.0294	29.40	5,000	No	500	No
TSP030923-07	MSC02	5/23/23	1721.41	0.0598						
TSP030923-09	MSC01	5/24/23	1580.87	0.0513	0.0007	0.70	5,000	No	500	No
TSP030923-11	MSC02	5/24/23	1709.30	0.052						
TSP030923-13	MSC01	5/25/23	1619.49	0.0373	-0.0032	-3.20	5,000	No	500	No
TSP030923-15	MSC02	5/25/23	1737.64	0.0341						
TSP030923-17	MSC01	5/25/23 <sup>2</sup>	534.21	0.0268	0.0086	8.60	5,000	No	500	No
TSP030923-19	MSC02	5/25/23 <sup>2</sup>	553.95	0.0354						
TSP031223-33	MSC01	5/31/23	1642.06	0.0245	-0.0078	-7.80	5,000	No	500	No
TSP031223-35	MSC02	5/31/23	1716.15	0.0167						
TSP031223-37	MSC01	6/01/23	1666.80	0.0499	0.0066	6.60	5,000	No	500	No
TSP031223-39	MSC02	6/01/23	1733.27	0.0565						
TSP031223-41	MSC01	6/01/23 <sup>2</sup>	575.36	0.0525	0.0008	0.80	5,000	No	500	No
TSP031223-43	MSC02	6/01/23 <sup>2</sup>	585.89	0.0533						
TSP032123-15	MSC01	6/06/23	1650.14	0.0233	0.0182	18.20	5,000	No	500	No
TSP032123-17	MSC02	6/06/23 <sup>1</sup>	913.80	0.0415						
TSP032123-19	MSC01	6/07/23	1645.12	0.0168	0.0001	0.10	5,000	No	500	No
TSP032123-21	MSC02	6/07/23	1718.75	0.0169						
TSP032123-23	MSC01	6/08/23	1669.41	0.035	-0.0141	-14.10	5,000	No	500	No
TSP032123-25	MSC02	6/08/23	1742.99	0.0209						

### Attachment 5: Total Suspended Particulates Monitoring Results

Sample, Date and Station Information			Sampler Run Information	TSP						
Sample ID	Monitoring Station	Sample End Date	Total Air Volume Monitored (m <sup>3</sup> )	Concentration in Air (mg/m <sup>3</sup> )	TSP Perimeter Concentration (Downwind - Upwind) (mg/m <sup>3</sup> )	TSP Perimeter Concentration (Downwind - Upwind) (ug/m <sup>3</sup> )	Cal/OSHA PEL (ug/m <sup>3</sup> )	Exceedance (Yes/No)	HERO Action Level (ug/m <sup>3</sup> )	Exceedance (Yes/No)
TSP032123-27	MSC01	6/08/23 <sup>2</sup>	368.37	0.0282	0.0009	0.90	5,000	No	500	No
TSP032123-29	MSC02	6/08/23 <sup>2</sup>	481.50	0.0291						

**Notes:**

<sup>1</sup>Generator or sampler malfunction

<sup>2</sup>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

m<sup>3</sup> = cubic meters

mg/m<sup>3</sup> = milligrams per cubic meter

**Bold** = result above project screening criteria

# **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	Thorium-232	Exceedance (Yes/No)
Action Level		Duration of Run (min)	4.00E-11	4.00E-15	1.80E-13	1.20E-12	1.00E-11	1.20E-15	Exceedance (Yes/No)
Units			µCi/mL	µCi/mL	µCi/mL	µCi/mL	µCi/mL	µCi/mL	
12/6/22 -12/8/22	1	3178	3.91E-15 U	7.24E-16 UJ	4.57E-15 U	2.1E-14 U	5.28E-15 U	3.94E-16 U	No
	2	3189	4.13E-15 U	1.61E-15 UJ	5.73E-15 J	1.9E-14 U	4.91E-15 U	1.24E-16	No
12/12/22-12/15/22	1	4747	2.85E-15 U	6.01E-16 UJ	2.42E-15 U	1.69E-14 U	2.8E-15 U	2.75E-16 U	No
	2	4777	2.91E-15 U	9.2E-16 UJ	4.84E-15 J	1.39E-14 U	2.77E-15 U	2.63E-16	No
12/19/22-12/22/22	1	4342	2.63E-15 U	6.31E-16 UJ	5.32E-15 J	1.9E-14 U	3.6E-15 U	2.64E-16 J	No
	2	4348	7.16E-15 U	6.72E-16 UJ	4.65E-15 J	1.6E-14 U	7.04E-15 U	2.92E-16 UJ	No
01/17/23-01/19/23	1	3089	5.32E-15 U	5.7E-16 U	8.1E-14 U	2.48E-14 UJ	5.08E-15 U	4.01E-16 U	No
	2	3097	3.83E-15 U	7.51E-16 U	4.83E-14 U	2.03E-14 U	4.53E-15 U	3.98E-16 U	No
01/23/23-01/25/23	1	3403	3.58E-15 U	6.37E-16 UJ	4.55E-14 UJ	1.68E-14 U	4.13E-15 UJ	3.87E-16 U	No
	1*	3403	4.41E-15 U	9.47E-16 UJ	4.34E-14 UJ	2E-14 U	5.59E-15 U	4.1E-16 U	No
	2	3233	4.58E-15 UJ	6.03E-16 UJ	8.04E-14 UJ	1.98E-14 U	5.72E-15 U	4.68E-16 U	No
02/01/23-02/02/23	1	1819	1.42E-14 U	9.32E-16 U	2.86E-13 UJ	3.74E-14 U	1.64E-14 U	4.26E-16 U	No <sup>1</sup>
	2	1900	9.03E-15 U	1.47E-15 U	1.37E-13 UJ	3.27E-14 U	9.52E-15 U	7.28E-16 U	No
02/06/23-02/09/23	1	4717	3.23E-15 U	4.56E-16 UJ	7.41E-14	1.21E-14 U	3.42E-15 U	2.18E-16 UJ	No
	2	4751	2.54E-15 U	4.47E-16 UJ	3.07E-14 U	1.33E-14 U	3.23E-15 U	5.65E-16 U	No
02/13/23-02/16/23	1	4684	3.13E-15 U	1.03E-15 J	5.47E-14 UJ	1.5E-14 U	3.8E-15 U	2.69E-16 UJ	No
	2	4716	2.4E-15 U	4.5E-16 UJ	3.45E-14 UJ	1.45E-14 U	3.52E-15 U	3E-16 UJ	No
02/20/23-02/23/23	1	4813	2.68E-15 U	2.54E-16 UJ	3.18E-14 UJ	1.4E-14 U	3.04E-15 U	3.34E-16 UJ	No
	2	4784	2.94E-15 U	4.07E-16 UJ	5.03E-14 UJ	1.39E-14 U	3.52E-15 U	3.48E-16 UJ	No
02/27/23-03/02/23	1	1991	6.38E-15 U	8.56E-16 UJ	7.43E-14 UJ	3.39E-14 U	7.8E-15 U	5.59E-16 UJ	No
	1*	1991	6.2E-15 U	2.7E-15 J	7.64E-14 UJ	3.62E-14 U	6.1E-15 U	7.48E-16 UJ	No
	2	1996	5.97E-15 U	5.84E-16 UJ	7.88E-14 UJ	3.26E-14 U	8.09E-15 U	7.33E-16 UJ	No
03/13/23-03/16/23	1	3319	3.97E-15 U	6.11E-16 UJ	7.92E-14 UJ	1.9E-14 U	4.95E-15 U	3.79E-16 UJ	No
	2	3308	4.63E-15	4E-16 UJ	6.44E-14 UJ	2.12E-14 U	5.73E-15 U	4.75E-16 UJ	No
03/20/23-03/23/23	1	1774	7.83E-15 U	1.2E-15 UJ	8.87E-14 UJ	3.99E-14 U	8.62E-15 U	5.86E-16 UJ	No
	2	1780	7.25E-15 U	6.99E-16 UJ	8.9E-14 UJ	3.8E-14 U	8.15E-15 U	1.49E-15 J	Yes <sup>2</sup>
03/27/23-03/30/23	1	1921	6.71E-15 U	1.26E-15 UJ	8.18E-14 UJ	3.72E-14 U	6.55E-15 U	6.98E-16 UJ	No
	2	1935	6.3E-15 U	1.49E-15 UJ	7.75E-14 UJ	3.73E-14 UJ	7.81E-15 U	9.53E-16 UJ	No
04/03/23-04/06/23	1	4851	2.88E-15	3.37E-16 UJ	5.39E-14 UJ	1.21E-14 U	3.51E-15 U	2.58E-16 J	No
	2	4837	2.79E-15 U	4.31E-16 UJ	3.2E-14 UJ	1.43E-14 U	3.2E-15 U	2.13E-16 UJ	No
04/10/23-04/13/23	1	4966	2.61E-15 U	3.89E-16 U	3.21E-14 U	1.31E-14 U	3.05E-15 U	2.59E-16 U	No
	2	4948	3.05E-15 U	3.43E-16 U	5.05E-14 U	1.35E-14 U	3.54E-15 U	3.07E-16 J	No
04/17/23-04/20/23	1	4834	2.73E-15 U	1.6E-16 U	5.24E-14 UJ	1.23E-14 U	3.38E-15 U	3.24E-16 UJ	No
	2	4858	3.2E-15 U	3.55E-16 UJ	5.22E-14 UJ	1.23E-14 U	3.34E-15 U	3.62E-16 UJ	No
04/24/23-04/27/23	1	4886	2.48E-15 U	2.95E-16 UJ	3.31E-14 UJ	1.31E-14 U	2.76E-15 U	2.42E-16 UJ	No
	2	4861	2.31E-15 U	3E-16 UJ	5.24E-14 UJ	1.2E-14 U	3.04E-15 U	2.48E-16 UJ	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	Thorium-232	Exceedance (Yes/No)
Action Level			4.00E-11	4.00E-15	1.80E-13	1.20E-12	1.00E-11	1.20E-15	
Units			μCi/mL	μCi/mL	μCi/mL	μCi/mL	μCi/mL	μCi/mL	
05/01/23-05/04/23	1	3399	3.79E-15 U	4.89E-16 UJ	4.77E-14 UJ	2.16E-14 U	5.08E-15 U	3.56E-16 UJ	No
	2	3376	7.94E-15 U	5.42E-16 UJ	1.49E-13 UJ	1.89E-14 U	9.69E-15 U	4.69E-16 J	No
05/08/23-05/11/23	1	4948	-1.6E-15 U	-9.3E-17 J	5.38E-14 UJ	1.34E-14 U	-2.1E-15 U	1.83E-16 UJ	No
	2	4944	-1.6E-15 U	-6E-17 J	-2E-14 J	-6E-16 U	-1.9E-15 U	2.08E-16 UJ	No

Notes:

\* = duplicate sample

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

min = minutes

U = activity is less than the MDC

UJ = estimated MDC

<sup>1</sup> = MDC value used in calculation due to activity reported as less than MDC; therefore, reported concentration is associated with an indeterminate probability and cannot be used reliably to support any quantitative conclusion

<sup>2</sup> = Exceedance changed from "No" to "Yes" as part of AMR #5. The sample has been consumed and no add'l analysis to confirm result could be performed.

μCi/mL= microcuries per milliliter

NA = Not Applicable

# **ATTACHMENT 7 LABORATORY REPORTS**

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# Laboratory Analysis Report

Job ID : 23051993



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

---

**Client Project Name :**  
**J310000600 / Hunters Point Shipyard, Parcel C Removal Site Evaluation**

**Report To :** Client Name: GES - ASRC Industrial Total Number of Pages: 9  
Attn: [REDACTED] P.O.#. :  
Client Address: 1501 West Fountainhead Parkway, Ste. #550 Date Received : 05/17/2023 10:23  
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
FBC-050823	5/8/2023 8:00	Cassette	23051993.01
MSC01-050823	5/9/2023 6:50	Cassette	23051993.02
MSC02-050823	5/9/2023 7:14	Cassette	23051993.03
MSC01-050923	5/10/2023 6:52	Cassette	23051993.04
MSC02-050923	5/10/2023 7:05	Cassette	23051993.05
MSC01-051023	5/11/2023 7:20	Cassette	23051993.06
MSC02-051023	5/11/2023 7:02	Cassette	23051993.07
MSC01-051123	5/11/2023 15:02	Cassette	23051993.08
MSC02-051123	5/11/2023 15:10	Cassette	23051993.09

[REDACTED]  
Released By: [REDACTED]  
Title: Vice President Operations

Analyst: [REDACTED]

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

ab-q210-0321

5/24/2023



**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 5/24/2023

Job ID : 23051993  
Analytical Method: NIOSH 7400-I3-June2019

Client: GES - ASRC Industrial			Project: J310000600 / Hunters Point Shipyard, Parcel C 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
23051993.01	FBC-050823	05/08/2023						0	100	18.0	22.930	0.000		05/24/23	[REDACTED]
23051993.02	MSC01-050823	05/09/2023	Area	3.6			1428	5140.	100	13.5	17.197	0.001		05/24/23	[REDACTED]
23051993.03	MSC02-050823	05/09/2023	Area	3.3			1441	4755.	100	10.5	13.376	0.001		05/24/23	[REDACTED]
23051993.04	MSC01-050923	05/10/2023	Area	3.4			1441	4899.	100	17	21.656	0.002		05/24/23	[REDACTED]
23051993.05	MSC02-050923	05/10/2023	Area	3.2			1439	4604.	100	11.5	14.650	0.001		05/24/23	[REDACTED]
23051993.06	MSC01-051023	05/11/2023	Area	3			1466	4398	100	22.0	28.025	0.002		05/24/23	[REDACTED]
23051993.07	MSC02-051023	05/11/2023	Area	3.2			1435	4592	100	14	17.834	0.001		05/24/23	[REDACTED]
23051993.08	MSC01-051123	05/11/2023	Area	3.1			461	1429.	100	23.0	29.299	0.008		05/24/23	[REDACTED]
23051993.09	MSC02-051123	05/11/2023	Area	3.2			487	1558.	100	15.5	19.745	0.005		05/24/23	[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

OUTR = Overload,Unable To Read



# Sample Condition Checklist

A&B JobID : <b>23051993</b>	Date Received : <b>05/17/2023</b>	Time Received : <b>10:23AM</b>		
Client Name : <b>GES - ASRC Industrial</b>				
Temperature : <b>23.7°C</b>	Sample pH : <b>NA</b>			
Thermometer ID : <b>IR5</b>	pH Paper ID : <b>NA</b>			
Perservative :				
	<b>Check Points</b>	<b>Yes</b>	<b>No</b>	<b>N/A</b>
<b>1.</b>	<b>Cooler Seal present and signed.</b>	X		
<b>2.</b>	<b>Sample(s) in a cooler.</b>		X	
<b>3.</b>	<b>If yes, ice in cooler.</b>			X
<b>4.</b>	<b>Sample(s) received with chain-of-custody.</b>	X		
<b>5.</b>	<b>C-O-C signed and dated.</b>	X		
<b>6.</b>	<b>Sample(s) received with signed sample custody seal.</b>		X	
<b>7.</b>	<b>Sample containers arrived intact. (If No comment)</b>	X		
<b>8.</b>	<b>Matrix:</b> <b>Water</b> <b>Soil</b> <b>Liquid</b> <b>Sludge</b> <b>Solid</b> <b>Cassette</b> <b>Tube</b> <b>Bulk</b> <b>Badge</b> <b>Food</b> <b>Other</b> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>			
<b>9.</b>	<b>Samples were received in appropriate container(s)</b>	X		
<b>10.</b>	<b>Sample(s) were received with Proper preservative</b>			X
<b>11.</b>	<b>All samples were tagged or labeled.</b>	X		
<b>12.</b>	<b>Sample ID labels match C-O-C ID's.</b>	X		
<b>13.</b>	<b>Bottle count on C-O-C matches bottles found.</b>	X		
<b>14.</b>	<b>Sample volume is sufficient for analyses requested.</b>	X		
<b>15.</b>	<b>Samples were received with in the hold time.</b>	X		
<b>16.</b>	<b>VOA vials completely filled.</b>			X
<b>17.</b>	<b>Sample accepted.</b>	X		
<b>18.</b>	<b>Has client been contacted about sub-out</b>			X

**Comments : Include actions taken to resolve discrepancies/problem:**  
 No cooler was received, however samples are received in a box with a custody seal. Black cassettes. ~ 5/17/2023

Received by : ██████████

Check in by/date : ██████████ / 05/17/2023

ab-s005-0321

**CHAIN-OF-CUSTODY  
RECORD**

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

COC ID # [Redacted] 051623ASBC



Project Name: Hunters Point Shipyard, Parcel C Removal Site Evaluation	Laboratory: A&B Labs	Event: Parcel C Asbestos
Project Number: J31000600	POC: [Redacted]	
WBS Code: J31000600	Ship to: 10100 East Fwy Ste. 100 Houston TX 77029	

Comments: **Please consolidate all COC pages that share the same COC ID into one SDG.**

**Job ID: 23051993**



05/17/2023 GES - ASRC Industrial ACH

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

Page 1 of 4

**Equipment:**

Event: Parcel C Asbestos

1

Sample ID	Matrix	Date	Time	Samp Init.	Analytical Test Method	Asbestos	Location ID	Sample Type	Depth (ft bgs)		Cooler	Comments
									Top	Bottom		
1	FBC-050823	05/08/2023	0800	[Redacted]	x		FBC	FB1	0.00	0.00	1	
2	MSC01-050823	05/09/2023	0650	[Redacted]	x		MSC01	N1	0.00	0.00	1	
3	MSC02-050823	05/09/2023	0714	[Redacted]	x		MSC02	N1	0.00	0.00	1	
4												
5												
6												
7												
8												
9												
10												
11												

01B  
02B  
03B

Analytical Test Method

Asbestos

5/16/23

5/16/23

Turnaround Time: 7 days

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time	Shipping Date / Carrier / Airbill Number
[Redacted]	5/16/23	1400	Fedex	5/16/23	1400	Shipping Date: 05/16/23 / FEDEX 7720 0641 0270
Fedex	5/17/23	10:23	[Redacted]			Signature, Date, Time) & condition 5/17/23 10:23

23.7°C SAS  
[Redacted]



**CHAIN-OF-CUSTODY  
RECORD**

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

COC ID # 051623ASBC



Project Name: Hunters Point Shipyard, Parcel C Removal Site Evaluation	Laboratory: A&B Labs	Event: Parcel C Asbestos
Project Number: J31000600	POC: [Redacted]	
WBS Code: J31000600	Ship to: 10100 East Fwy Ste. 100 Houston TX 77029	

Comments: **Please consolidate all COC pages that share the same COC ID into one SDG.**

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

Page 2 of 4

Sample ID	Matrix	Date	Time	Samp Init.	Asbestos	Location ID	Sample Type	Depth (ft bgs)		Cooler	Comments
								Top	Bottom		
1	A	05/10/2023	0652	[Redacted]	x	MSC01	N1	0.00	0.00	1	
2	A	05/10/2023	0705	[Redacted]	x	MSC02	N1	0.00	0.00	1	
3											
4											
5											
6											
7											
8											
9											
10											
11											

040  
050

Turnaround Time: 7 days

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time	Shipping Date / Carrier / Airbill Number
[Redacted]	5/16/23	1400	Fedex	5/16/23	1400	Shipping Date: 05/16/23 / FEDEX 7720 0641 0270
FCM	5/17/23	10:23				[Redacted] Signature, Date, Time) & condition 5/17/23 10:23

23.7°C In 5

**CHAIN-OF-CUSTODY  
RECORD**

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

COC ID # [Redacted] 051623ASBC



Project Name: Hunters Point Shipyard, Parcel C Removal Site Evaluation	Laboratory: A&B Labs	Event: Parcel C Asbestos
Project Number: J31000600	POC: [Redacted]	
WBS Code: J31000600	Ship to: 10100 East Fwy Ste. 100 Houston TX 77029	

Comments: **Please consolidate all COC pages that share the same COC ID into one SDG.**

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

Equipment:  
Event: Parcel C Asbestos

Page 3 of 4

Sample ID	Matrix	Date	Time	Samp Init.	x	Location ID	Sample Type	Depth (ft bgs)		Cooler	Comments
								Top	Bottom		
1	A	05/11/2023	0720	[Redacted]	x	MSC01	N1	0.00	0.00	1	
2	A	05/11/2023	0702	[Redacted]	x	MSC02	N1	0.00	0.00	1	
3											
4											
5											
6											
7											
8											
9											
10											
11											

06A  
070

Turnaround Time: 7 days

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time	Shipping Date / Carrier / Airbill Number
[Redacted]	5/16/23	1400	Fedex	5/16/23	1240	Shipping Date: 05/16/23 / FEDEX 7720 0641 0270
[Redacted]	5/17/23	10:23				(Signature, Date, Time) & condition

[Redacted]  
FCA

(Signature, Date, Time) & condition

5/17/23 10:23

23.7°C JAS



**CHAIN-OF-CUSTODY  
RECORD**

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

COC ID # [REDACTED] 051623ASBC



Project Name: Hunters Point Shipyard, Parcel C Removal Site Evaluation	Laboratory: A&B Labs	Event: Parcel C Asbestos
Project Number: J31000600	POC: [REDACTED]	
WBS Code: J31000600	Ship to: 10100 East Fwy Ste. 100 Houston TX 77029	

Comments: **Please consolidate all COC pages that share the same COC ID into one SDG.**

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

Equipment:

Event: Parcel C Asbestos

1

Page 4 of 4

Sample ID	Matrix	Date	Time	Samp Init.	Location ID	Sample Type	Depth (ft bgs)		Cooler	Comments
							Top	Bottom		
1	A	05/11/2023	1502	[REDACTED]	MSC01	N1	0.00	0.00	1	
2	A	05/11/2023	1510	[REDACTED]	MSC02	N1	0.00	0.00	1	
3										
4										
5										
6										
7										
8										
9										
10										
11										

Turnaround Time: 7 days

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time	Shipping Date / Carrier / Airbill Number
[REDACTED]	5/16/23	11:00	Fedex	5/16/23	11:00	Shipping Date: 05/16/23 / FEDEX 7720 0641 0270
[REDACTED]						5/17/23 10:23
Fedex	5/17/23	10:23				

08A  
09B

23.7°C  
5/15

**Flow Rate, Total Time**

Sample ID	End Date	End Time	Flow Rate (L/min), Total Time (mins)
FBC-050823	5/8/23	8:00:00 AM	N/A
MSC01-050823	5/9/23	6:50:00 AM	3.6; 1428
MSC02-050823	5/9/23	7:14:00 AM	3.3; 1441
MSC01-050923	5/10/23	6:52:00 AM	3.4; 1441
MSC02-050923	5/10/23	7:05:00 AM	3.2; 1439
MSC01-051023	5/11/23	7:20:00 AM	3; 1466
MSC02-051023	5/11/23	7:02:00 AM	3.2; 1435
MSC01-051123	5/11/23	3:02:00 PM	3.1; 461
MSC02-051123	5/11/23	3:10:00 PM	3.2; 487



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

SHIP DATE: 09MAY23  
ACTWGT: 1.00 LB  
CAD: 254128867/INET4610

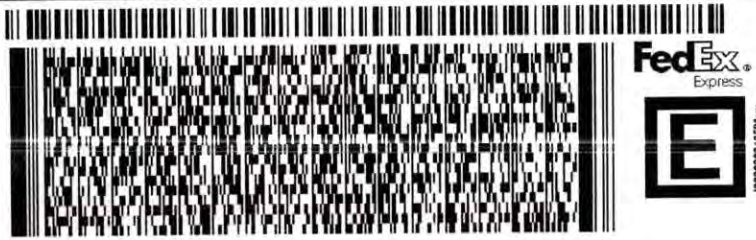
BILL SENDER

TO  
**A&B LABS**  
10100 EAST FREEWAY, SUITE 100

**HOUSTON TX 77029**

(713) 453-6060 REF: J31000900 02.04.05  
INV PO DEPT

563.G12BC3/FE2D

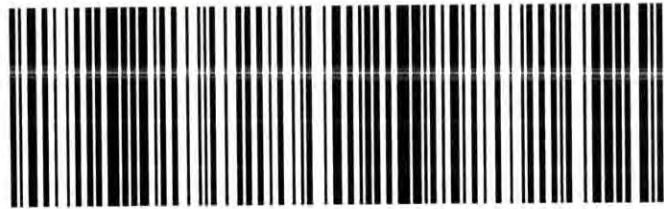


WED - 10 MAY 4:30P  
STANDARD OVERNIGHT

TRK# 7720 0641 0270  
0201

**AB HBYA**

TX-US 77029 IAH



**After printing this label:**

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

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# Laboratory Analysis Report

Job ID : 23052711



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

---

**Client Project Name :**  
**J31000600 / Hunters Point Shipyard, Parcel C Removal Site Evaluation**

**Report To :** Client Name: GES - ASRC Industrial Total Number of Pages: 9  
Attn: [REDACTED] P.O.#. :  
Client Address: 1501 West Fountainhead Parkway, Ste. #550 Date Received : 05/24/2023 09:55  
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
FBC-051523	5/15/2023 8:00	Cassette	23052711.01
MSC01-051523	5/16/2023 7:35	Cassette	23052711.02
MSC02-051523	5/16/2023 7:23	Cassette	23052711.03
MSC01-051623	5/17/2023 7:12	Cassette	23052711.04
MSC02-051623	5/17/2023 6:59	Cassette	23052711.05
MSC01-051723	5/18/2023 7:28	Cassette	23052711.06
MSC02-051723	5/18/2023 7:15	Cassette	23052711.07
MSC01-051823	5/18/2023 14:38	Cassette	23052711.08
MSC02-051823	5/18/2023 14:24	Cassette	23052711.09

[REDACTED]  
Released By: [REDACTED]  
Title: Vice President Operations

Analyst: [REDACTED]

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

ab-q210-0321

6/1/2023



**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 6/1/2023

Job ID : 23052711  
 Analytical Method: NIOSH 7400-I3-June2019

Client: GES - ASRC Industrial			Project: J310000600 / Hunters Point Shipyard, Parcel C 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
23052711.01	FBC-051523	05/15/2023	Area					0	100	8.5	10.828	0.000		06/01/23	[REDACTED]
23052711.02	MSC01-051523	05/16/2023	Area	3.1			1483	4597.	100	19.5	24.841	0.002		06/01/23	[REDACTED]
23052711.03	MSC02-051523	05/16/2023	Area	3.2			1459	4668.	100	20.0	25.478	0.002		06/01/23	[REDACTED]
23052711.04	MSC01-051623	05/17/2023	Area	3.3			1416	4672.	100	15.0	19.108	0.002		06/01/23	[REDACTED]
23052711.05	MSC02-051623	05/17/2023	Area	3			1415	4245	100	16.0	20.382	0.002		06/01/23	[REDACTED]
23052711.06	MSC01-051723	05/18/2023	Area	3.1			1455	4510.	100	17.0	21.656	0.002		06/01/23	[REDACTED]
23052711.07	MSC02-051723	05/18/2023	Area	3			1455	4365	100	21.0	26.752	0.002		06/01/23	[REDACTED]
23052711.08	MSC01-051823	05/18/2023	Area	2.3			430	989	100	16.5	21.019	0.008		06/01/23	[REDACTED]
23052711.09	MSC02-051823	05/18/2023	Area	3.1			429	1329.	100	20.0	25.478	0.007		06/01/23	[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

OUTR = Overload,Unable To Read



## Sample Condition Checklist

A&B JobID : <b>23052711</b>	Date Received : <b>05/24/2023</b>	Time Received : <b>9:55AM</b>
Client Name : <b>GES - ASRC Industrial</b>		
Temperature : <b>24.1°C</b>	Sample pH : <b>NA</b>	
Thermometer ID : <b>IR5</b>	pH Paper ID : <b>NA</b>	
Perservative :		
	<b>Check Points</b>	<b>Yes No N/A</b>
<b>1.</b>	<b>Cooler Seal present and signed.</b>	X
<b>2.</b>	<b>Sample(s) in a cooler.</b>	X
<b>3.</b>	<b>If yes, ice in cooler.</b>	X
<b>4.</b>	<b>Sample(s) received with chain-of-custody.</b>	X
<b>5.</b>	<b>C-O-C signed and dated.</b>	X
<b>6.</b>	<b>Sample(s) received with signed sample custody seal.</b>	X
<b>7.</b>	<b>Sample containers arrived intact. (If No comment)</b>	X
<b>8.</b>	<b>Matrix:</b> <b>Water</b> <b>Soil</b> <b>Liquid</b> <b>Sludge</b> <b>Solid</b> <b>Cassette</b> <b>Tube</b> <b>Bulk</b> <b>Badge</b> <b>Food</b> <b>Other</b> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	
<b>9.</b>	<b>Samples were received in appropriate container(s)</b>	X
<b>10.</b>	<b>Sample(s) were received with Proper preservative</b>	X
<b>11.</b>	<b>All samples were tagged or labeled.</b>	X
<b>12.</b>	<b>Sample ID labels match C-O-C ID's.</b>	X
<b>13.</b>	<b>Bottle count on C-O-C matches bottles found.</b>	X
<b>14.</b>	<b>Sample volume is sufficient for analyses requested.</b>	X
<b>15.</b>	<b>Samples were received with in the hold time.</b>	X
<b>16.</b>	<b>VOA vials completely filled.</b>	X
<b>17.</b>	<b>Sample accepted.</b>	X
<b>18.</b>	<b>Has client been contacted about sub-out</b>	X

**Comments : Include actions taken to resolve discrepancies/problem:**  
 Black Cassettes. No cooler was received, however samples are received in a box with a custody seal. 05/24/23

Received by : ██████████

Check in by/date : ██████████ / 05/24/2023

**CHAIN-OF-CUSTODY  
RECORD**

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

COC ID # [Redacted] 052323ASBC



Project Name: Hunters Point Shipyard, Parcel C Removal Site Evaluation	Laboratory: A&B Labs	Event: Parcel C Asbestos
Project Number: J31000600	POC: [Redacted]	
WBS Code: J31000600	Ship to: 10100 East Fwy Ste. 100 Houston TX 77029	

Comments: Please consolidate all COC pages that share the same COC ID into one SDG.

**Job ID: 23052711**

05/24/2023 GES - ASRC Industrial ACH

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

Page 1 of 4

OIA  
OZA  
O3A

Event: Parcel C Asbestos											
Sample ID	Matrix	Date	Time	Samp Init.	x	Location ID	Sample Type	Depth (ft bgs)		Cooler	Comments
								Top	Bottom		
1 FBC-051523	AQ	05/15/2023	0800	[Redacted]	x	FBC	FB1	0.00	0.00	1	
2 MSC01-051523	A	05/16/2023	0735	[Redacted]	x	MSC01	N1	0.00	0.00	1	
3 MSC02-051523	A	05/16/2023	0723	[Redacted]	x	MSC02	N1	0.00	0.00	1	
4											
5											
6											
7											
8											
9											
10											
11											

Turnaround Time: 7 days

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time	Shipping Date / Carrier / Airbill Number
[Redacted]	5/23/23	1400	FedEx	5/23/23	1400	Shipping Date: 05/16/23 / FEDEX 7721 0770 9609 5/23/23 5/23/23
FED EX	5/24/23					Received by Laboratory (Signature, Date, Time) & condition [Redacted] 5/24/23 0955 24.1°C 1R5



**CHAIN-OF-CUSTODY  
RECORD**

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

COC ID # [REDACTED] 052323ASBC



Project Name: Hunters Point Shipyard, Parcel C Removal Site Evaluation	Laboratory: A&B Labs	Event: Parcel C Asbestos
Project Number: J31000600	POC: [REDACTED]	
WBS Code: J310000600	Ship to: 10100 East Fwy Ste. 100 Houston TX 77029	

Comments: Please consolidate all COC pages that share the same COC ID into one SDG.

Analytical Test Method	Asbestos	[REDACTED]

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

5/23/23 Page 3 of 4  
2

Equipment: [REDACTED]

Event: Parcel C Asbestos 1

Sample ID	Matrix	Date	Time	Samp Init.	x	Location ID	Sample Type	Depth (ft bgs)		Cooler	Comments	
								Top	Bottom			
1	MSC01-051623	A	05/17/2023	0712	[REDACTED]	x	MSC01	N1	0.00	0.00	1	
2	MSC02-051623	A	05/17/2023	0659	[REDACTED]	x	MSC02	N1	0.00	0.00	1	
3												
4												
5												
6												
7												
8												
9												
10												
11												

04A  
05A

Turnaround Time: 7 days

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time	Shipping Date / Carrier / Airbill Number
[REDACTED]	5/23/23	1400	FedEx	5/23/23	1400	Shipping Date: 05/23/23 / FEDEX 7721 0770 9609
FED EX	5/24/23					Received by Laboratory: (Signature, Date, Time) & condition [REDACTED] 5/24/23 0955

24.1°C IR [REDACTED]

**CHAIN-OF-CUSTODY  
RECORD**

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

COC ID # [Redacted] 052323ASBC



Project Name: Hunters Point Shipyard, Parcel C Removal Site Evaluation	Laboratory: A&B Labs	Event: Parcel C Asbestos
Project Number: J31000600	POC: [Redacted]	
WBS Code: J310000600	Ship to: 10100 East Fwy Ste. 100 Houston TX 77029	

Comments: Please consolidate all COC pages that share the same COC ID into one SDG.

Analytical Test Method	Code	Matrix
	A	Air
Asbestos	Code	Container/Preservative
	1	Filter/No Preservatives

Equipment:

Page 3 of 4

Sample ID	Matrix	Date	Time	Samp Init.	Location ID	Sample Type	Depth (ft bgs)		Cooler	Comments
							Top	Bottom		
1	A	05/18/2023	0728	[Redacted]	MSC01	N1	0.00	0.00	1	
2	A	05/18/2023	0715	[Redacted]	MSC02	N1	0.00	0.00	1	
3										
4										
5										
6										
7										
8										
9										
10										
11										

OLA  
OTA

Turnaround Time: 7 days

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time	Shipping Date / Carrier / Airbill Number
[Redacted]	5/23/23	1400	Fedex	5/23/23	1400	Shipping Date: 05/23/23 / FEDEX 7721 0770 9609
FED EX	5/24/23					Received by Laboratory: (Signature, Date, Time) & condition [Redacted] 5/24/23 0955

24.1°C IR5 [Redacted]

**CHAIN-OF-CUSTODY RECORD**

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

COC ID # [Redacted] 052323ASBC



Project Name: Hunters Point Shipyard, Parcel C Removal Site Evaluation	Laboratory: A&B Labs	Event: Parcel C Asbestos
Project Number: J31000600	POC: [Redacted]	
WBS Code: J31000600	Ship to: 10100 East Fwy Ste. 100 Houston TX 77029	

Comments: Please consolidate all COC pages that share the same COC ID into one SDG.

Analytical Test Method	Asbestos
[Redacted]	[Redacted]

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

5/23/23 Page 3 of 4  
4

Equipment:	1
Event: Parcel C Asbestos	1

08A  
09A

Sample ID	Matrix	Date	Time	Samp Init.			Location ID	Sample Type	Depth (ft bgs)		Cooler	Comments
									Top	Bottom		
1 MSC01-051823	A	05/18/2023	1438	[Redacted]	x		MSC01	N1	0.00	0.00	1	
2 MSC02-051823	A	05/18/2023	1424	[Redacted]	x		MSC02	N1	0.00	0.00	1	
3												
4												
5												
6												
7												
8												
9												
10												
11												

Turnaround Time: 7 days											
Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time	Shipping Date / Carrier / Airbill Number					
[Redacted]	5/23/23	1400	Fedex	5/23/23	1400	Shipping Date: 05/23/23 / FEDEX 7721 0770 9609					
FED EX	5/24/23					Received by Laboratory: (Signature, Date, Time) & condition [Redacted] 5/24/23 0955					

24.12 185 [Redacted]



### Flow Rate, Total Time

Sample ID	End Date	End Time	Flow Rate (L/min), Total Time (mins)
FBC-051523	5/15/23	8:00:00 AM	N/A
MSC01-051523	5/16/23	7:35:00 AM	3.1; 1483
MSC02-051523	5/16/23	7:23:00 AM	3.2; 1459
MSC01-051623	5/17/23	7:12:00 AM	3.3; 1416
MSC02-051623	5/17/23	6:59:00 AM	3; 1415
MSC01-051723	5/18/23	7:28:00 AM	3.1; 1455
MSC02-051723	5/18/23	7:15:00 AM	3; 1455
MSC01-051823	5/18/23	2:38:00 PM	2.3; 430
MSC02-051823	5/18/23	2:24:00 PM	3.1; 429

ORIGIN ID: JCCA

GES-AIS  
200 FISCHER AVE

SAN FRANCISCO, CA 94124  
UNITED STATES US

SHIP DATE: 16MAY23  
ACTWGT: 1.00 LB  
CAD: 254128867/INET4610

BILL SENDER

TO

**A&B LABS**  
10100 EAST FREEWAY, SUITE 100

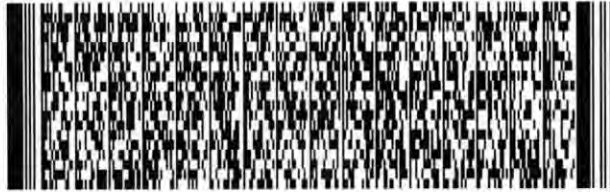
**HOUSTON TX 77029**

(713) 453-6060

REF J31000 900 02 04 05

INV  
PO

DEPT:



563J3ZB3JFEZD

WED - 17 MAY 4:30P

STANDARD OVERNIGHT

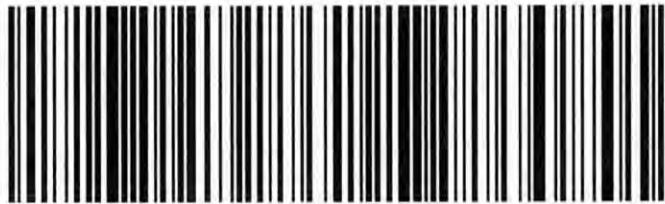
TRK#  
0201

7721 0770 9609

77029

TX-US IAH

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# Laboratory Analysis Report

Job ID : 23053292



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

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## Client Project Name :

**J31000600 / Hunters Point Shipyard, Parcel C Removal Site Evaluation**

<b>Report To :</b>	Client Name: GES - ASRC Industrial	Total Number of Pages: 9
	Attn: [REDACTED]	P.O.#. :
	Client Address: 1501 West Fountainhead Parkway, Ste. #550	Date Received : 05/31/2023 10:22
	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
FBC-052223	5/22/2023 8:00	Cassette	23053292.01
MSC01-052223	5/23/2023 7:32	Cassette	23053292.02
MSC02-052223	5/23/2023 7:08	Cassette	23053292.03
MSC01-052323	5/24/2023 7:16	Cassette	23053292.04
MSC02-052323	5/24/2023 6:57	Cassette	23053292.05
MSC01-052423	5/25/2023 7:00	Cassette	23053292.06
MSC02-052423	5/25/2023 7:10	Cassette	23053292.07
MSC01-052523	5/25/2023 14:38	Cassette	23053292.08
MSC02-052523	5/25/2023 15:00	Cassette	23053292.09

[REDACTED]  
Released By: [REDACTED]  
Title: Project Manager

Analyst: [REDACTED]

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

ab-q210-0321

6/9/2023



**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 6/9/2023

Job ID : 23053292  
Analytical Method: NIOSH 7400-I3-June2019

Client: GES - ASRC Industrial		Project: J31000600 / Hunters Point Shipyard, Parcel C Removal Site Evaluation													
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
23053292.01	FBC-052223	05/22/2023						0	100	11.5	14.650	0.000		06/09/23	
23053292.02	MSC01-052223	05/23/2023		3.2			1465	4688	100	14.5	18.471	0.002		06/09/23	
23053292.03	MSC02-052223	05/23/2023		3.1			1449	4491.	100	24.5	31.210	0.003		06/09/23	
23053292.04	MSC01-052323	05/24/2023		3.2			1423	4553.	100	26.5	33.758	0.003		06/09/23	
23053292.05	MSC02-052323	05/24/2023		2.9			1428	4141.	100	17.5	22.293	0.002		06/09/23	
23053292.06	MSC01-052423	05/25/2023		3.1			1423	4411.	100	21.0	26.752	0.002		06/09/23	
23053292.07	MSC02-052423	05/25/2023		2.9			1452	4210.	100	16.0	20.382	0.002		06/09/23	
23053292.08	MSC01-052523	05/25/2023		3.2			458	1465.	100	27.5	35.032	0.009		06/09/23	
23053292.09	MSC02-052523	05/25/2023		3.1			465	1441.	100	31.5	40.127	0.011		06/09/23	

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

OUTR = Overload,Unable To Read



# Sample Condition Checklist

A&B JobID : <b>23053292</b>		Date Received : <b>05/31/2023</b>	Time Received : <b>10:22AM</b>									
Client Name : <b>GES - ASRC Industrial</b>												
Temperature : <b>25.6°C</b>		Sample pH : <b>N/A</b>										
Thermometer ID : <b>IR5</b>		pH Paper ID : <b>N/A</b>										
Perservative :												
	<b>Check Points</b>			<b>Yes</b>	<b>No</b>	<b>N/A</b>						
<b>1.</b>	<b>Cooler Seal present and signed.</b>			X								
<b>2.</b>	<b>Sample(s) in a cooler.</b>				X							
<b>3.</b>	<b>If yes, ice in cooler.</b>					X						
<b>4.</b>	<b>Sample(s) received with chain-of-custody.</b>			X								
<b>5.</b>	<b>C-O-C signed and dated.</b>			X								
<b>6.</b>	<b>Sample(s) received with signed sample custody seal.</b>				X							
<b>7.</b>	<b>Sample containers arrived intact. (If No comment)</b>			X								
<b>8.</b>	<b>Matrix:</b>	<b>Water</b>	<b>Soil</b>	<b>Liquid</b>	<b>Sludge</b>	<b>Solid</b>	<b>Cassette</b>	<b>Tube</b>	<b>Bulk</b>	<b>Badge</b>	<b>Food</b>	<b>Other</b>
		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>9.</b>	<b>Samples were received in appropriate container(s)</b>			X								
<b>10.</b>	<b>Sample(s) were received with Proper preservative</b>					X						
<b>11.</b>	<b>All samples were tagged or labeled.</b>			X								
<b>12.</b>	<b>Sample ID labels match C-O-C ID's.</b>			X								
<b>13.</b>	<b>Bottle count on C-O-C matches bottles found.</b>			X								
<b>14.</b>	<b>Sample volume is sufficient for analyses requested.</b>			X								
<b>15.</b>	<b>Samples were received with in the hold time.</b>			X								
<b>16.</b>	<b>VOA vials completely filled.</b>					X						
<b>17.</b>	<b>Sample accepted.</b>			X								
<b>18.</b>	<b>Has client been contacted about sub-out</b>					X						

**Comments : Include actions taken to resolve discrepancies/problem:**

Samples received in black cassettes. No cooler was received, however samples are received in a box with a custody seal. ~ 5/31/2023

Received by : ██████████

Check in by/date : ██████████ / 05/31/2023

ab-s005-0321

**CHAIN-OF-CUSTODY  
RECORD**

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

COC ID: [REDACTED] 053023ASBC



Project Name: Hunters Point Shipyard, Parcel C Removal Site Evaluation	Laboratory: A&B Labs	Event: Parcel C Asbestos
Project Number: J31000600	POC: [REDACTED]	
WBS Code: J310000600	Ship to: 10100 East Fwy Ste. 100 Houston TX 77029	

Comments: **Please consolidate all COC pages that share the same COC ID into one SDG.**

**Job ID: 23053292**



05/31/2023 GES - ASRC Industrial ACH

Analytical Test Method

Asbestos

[REDACTED]

5/30/23

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

Page 1 of 4

Equipment:

Event: Parcel C Asbestos

1

OIA  
O2A  
O3A

Sample ID	Matrix	Date	Time	Samp Init	x	Location ID	Sample Type	Depth (ft bgs)		Cooler	Comments
								Top	Bottom		
1 FBC-052223	AQ	05/22/2023	0800	[REDACTED]	x	FBC	FB1	0.00	0.00	1	
2 MSC01-052223	A	05/23/2023	0732	[REDACTED]	x	MSC01	N1	0.00	0.00	1	
3 MSC02-052223	A	05/23/2023	0708	[REDACTED]	x	MSC02	N1	0.00	0.00	1	
4											
5											
6											
7											
8											
9											
10											
11											

5/30/23

Turnaround Time: 7 days

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time	Shipping Date / Carrier / Airbill Number
[REDACTED]	5/30/23	1400	Fedex	5/30/23	1400	Shipping Date: 5/30/23 / FEDEX 7721 6431 6180
FED EX	5/31/23					Received by Laboratory: (Signature, Date, Time) & condition [REDACTED] 5/31/23 25.6°C 1RS [REDACTED]



**CHAIN-OF-CUSTODY  
RECORD**

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

COC ID # 053023ASBC



Project Name: Hunters Point Shipyard, Parcel C Removal Site Evaluation	Laboratory: A&B Labs	Event: Parcel C Asbestos
Project Number: J31000600	POC	
WBS Code: J31000600	Ship to: 10100 East Fwy Ste. 100 Houston TX 77029	

Comments: <b>Please consolidate all COC pages that share the same COC ID into one SDG.</b>	Analytical Test Method Asbestos	Code Matrix A Air AQ Air Quality Control Matrix	Page 2 of 4
		Code Contained/Preservatives 1 Fiber/No Preservatives	

Equipment:	Event: Parcel C Asbestos	1
------------	--------------------------	---

Sample ID	Matrix	Date	Time	Samp Init.	x	Location ID	Sample Type	Depth (ft bgs)		Cooler	Comments
								Top	Bottom		
1	A	05/24/2023	0716		x	MSC01	NI	0.00	0.00	1	
2	A	05/24/2023	0657		x	MSC02	NI	0.00	0.00	1	
3											
4											
5											
6											
7											
8											
9											
10											
11											

04A  
05A

Turnaround Time: 7 days											
Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time	Shipping Date / Carrier / Airbill Number					
	5/30/23	1400	Fedex	5/30/23	1400	Shipping Date: 5/30/23 / FEDEX 7721 6431 6180					
Fed Ex	5/31/23					Received by Laboratory: (Signature, Date, Time) & condition					
						29.6°C 1RS					

**CHAIN-OF-CUSTODY  
RECORD**

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

COC ID # [Redacted] 053023ASBC



Project Name: Hunters Point Shipyard, Parcel C Removal Site Evaluation	Laboratory: A&B Labs	Event: Parcel C Asbestos
Project Number: J31000600	POC: [Redacted]	
WBS Code: J31000600	Ship to: 10100 East Fwy Ste. 100 Houston TX 77029	

Comments: **Please consolidate all COC pages that share the same COC ID into one SDG.**

Analytical Test Method	Asbestos	[Redacted]
		5/30/23

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

Sample ID	Matrix	Date	Time	Samp Init.	x	Location ID	Sample Type	Depth (ft bgs)		Cooler	Comments	
								Top	Bottom			
1	MSC01-052423	A	05/25/2023	0700	[Redacted]	x	MSC01	N1	0.00	0.00	1	
2	MSC02-052423	A	05/25/2023	0710	[Redacted]	x	MSC02	N1	0.00	0.00	1	
3												
4												
5												
6												
7												
8												
9												
10												
11												

OGA  
OTA

Turnaround Time: 7 days

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time	Shipping Date / Carrier / Airbill Number
[Redacted]	5/30/23	1400	Fedex	5/30/23	1400	Shipping Date: 5/30/23 / FEDEX 7721 6431 6180
FETS OY	5/31/23					Received by Laboratory: (Signature, Date, Time) & condition [Redacted] 5/31/23 29.6°C IRG [Redacted]



**CHAIN-OF-CUSTODY  
RECORD**

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

COC ID # [REDACTED] 053023ASBC



Project Name: Hunters Point Shipyard, Parcel C Removal Site Evaluation	Laboratory: A&B Labs	Event: Parcel C Asbestos
Project Number: J31000600	PO [REDACTED]	
WBS Code: J31000600	Ship to: 10100 East Fwy Ste. 100 Houston TX 77029	

Comments: **Please consolidate all COC pages that share the same COC-ID into one SDG.**

Analytical Test Method	Code	Matrix
	A	Air
Asbestos	AQ	Air Quality Control Matrix
	Code	Container/Preservative
	1	Filter No Preservative(s)

5/30/23

Page 4 of 4

Equipment:

Event: Parcel C Asbestos

1

08A  
09A

Sample ID	Matrix	Date	Time	Samp Init.	x	Location ID	Sample Type	Depth (ft bgs)		Cooler	Comments
								Top	Bottom		
1 MSC01-052523	A	05/25/2023	1438	[REDACTED]	x	MSC01	N1	0.00	0.00	1	
2 MSC02-052523	A	05/25/2023	1500	[REDACTED]	x	MSC02	N1	0.00	0.00	1	
3											
4											
5											
6											
7											
8											
9											
10											
11											

5/30/23

Turnaround Time: 7 days

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time	Shipping Date / Carrier / Airbill Number
[REDACTED]	5/30/23	1400	Fedex	5/30/23	1400	Shipping Date: 5/30/23 / FEDEX 7721 6431 6180
FedEx	5/31/23					[REDACTED] (Time) & condition 5/31/23

### Flow Rate, Total Time

Sample ID	End Date	End Time	Flow Rate (L/min), Total Time (mins)
FBC-052223	5/22/23	8:00:00 AM	N/A
MSC01-052223	5/23/23	7:32:00 AM	3.2; 1465
MSC02-052223	5/23/23	7:08:00 AM	3.1; 1449
MSC01-052323	5/24/23	7:16:00 AM	3.2; 1423
MSC02-052323	5/24/23	6:57:00 AM	2.9; 1428
MSC01-052423	5/25/23	7:00:00 AM	3.1; 1423
MSC02-052423	5/25/23	7:10:00 AM	2.9; 1452
MSC01-052523	5/25/23	2:38:00 PM	3.2; 458
MSC02-052523	5/25/23	3:00:00 PM	3.1; 465

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

SHIP DATE: 26MAY23  
ACTWGT: 1.00 LB  
CAD: 254128867/NET4610  
BILL SENDER

TO  
A&B LABS  
10100 EAST FREEWAY, SUITE 100

HOUSTON TX 77029

(713) 453-6060 REF: J11000 900-02 04 05  
INV PO DEPT

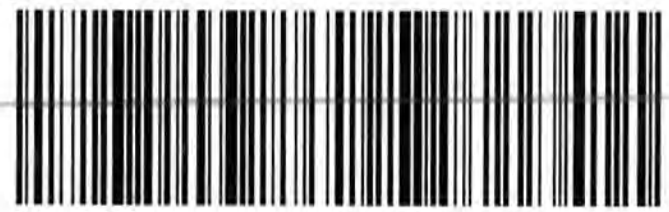


TUE - 30 MAY 4:30P  
STANDARD OVERNIGHT

TRK# 7721 6431 6180  
0201

XA HBYA

77029  
TX-US IAH



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9803321814FE210

221223448914

# Laboratory Analysis Report

Job ID : 23060616



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

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## Client Project Name :

**J31000600 / Hunters Point Shipyard, Parcel C Removal Site Evaluation**

<b>Report To :</b>	Client Name: GES - ASRC Industrial	Total Number of Pages: 8
	Attn: [REDACTED]	P.O.#. :
	Client Address: 1501 West Fountainhead Parkway, Ste. #550	Date Received : 06/07/2023 10:12
	City, State, Zip: Tempe, Arizona, 85282	Sample Collected By :

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

Client Sample ID	Sample Collection Date & Time	Matrix	A&B Job Sample ID
MSC01-053023	5/31/2023 6:46	Cassette	23060616.01
MSC02-053023	5/31/2023 7:03	Cassette	23060616.02
FBC-053023	5/30/2023 8:00	Cassette	23060616.03
MSC01-053123	6/1/2023 6:54	Cassette	23060616.04
MSC02-053123	6/1/2023 7:08	Cassette	23060616.05
MSC01-060123	6/1/2023 15:16	Cassette	23060616.06
MSC02-060123	6/1/2023 15:22	Cassette	23060616.07



Released By: [REDACTED]  
Title: Vice President Operations



Analyst:

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

ab-q210-0321

6/14/2023



**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 6/14/2023

Job ID : 23060616  
Analytical Method: NIOSH 7400-I3-June2019

Client: GES - ASRC Industrial			Project: J31000600 / Hunters Point Shipyard, Parcel C 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
23060616.01	MSC01-053023	05/31/2023	Area	3.7			1427	5279.	100	20.5	26.115	0.002		06/14/23	[REDACTED]
23060616.02	MSC02-053023	05/31/2023	Area	3.2			1433	4585.	100	29.0	36.943	0.003		06/14/23	[REDACTED]
23060616.03	FBC-053023	05/30/2023						0	100	23.0	29.299	0.000		06/14/23	[REDACTED]
23060616.04	MSC01-053123	06/01/2023	Area	3.4			1447	4919.	100	17.0	21.656	0.002		06/14/23	[REDACTED]
23060616.05	MSC02-053123	06/01/2023	Area	3.2			1444	4620.	100	16.5	21.019	0.002		06/14/23	[REDACTED]
23060616.06	MSC01-060123	06/01/2023	Area	3.4			501	1703.	100	18.0	22.930	0.005		06/14/23	[REDACTED]
23060616.07	MSC02-060123	06/01/2023	Area	3.2			493	1577.	100	17.5	22.293	0.005		06/14/23	[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

OUTR = Overload,Unable To Read





## Sample Condition Checklist

A&B JobID : <b>23060616</b>	Date Received : <b>06/07/2023</b>	Time Received : <b>10:12AM</b>		
Client Name : <b>GES - ASRC Industrial</b>				
Temperature : <b>20.3°C</b>	Sample pH : <b>NA</b>			
Thermometer ID : <b>IR5</b>	pH Paper ID : <b>NA</b>			
Perservative :				
	<b>Check Points</b>	<b>Yes</b>	<b>No</b>	<b>N/A</b>
<b>1.</b>	<b>Cooler Seal present and signed.</b>	X		
<b>2.</b>	<b>Sample(s) in a cooler.</b>		X	
<b>3.</b>	<b>If yes, ice in cooler.</b>			X
<b>4.</b>	<b>Sample(s) received with chain-of-custody.</b>	X		
<b>5.</b>	<b>C-O-C signed and dated.</b>	X		
<b>6.</b>	<b>Sample(s) received with signed sample custody seal.</b>		X	
<b>7.</b>	<b>Sample containers arrived intact. (If No comment)</b>	X		
<b>8.</b>	<b>Matrix:</b> <b>Water</b> <b>Soil</b> <b>Liquid</b> <b>Sludge</b> <b>Solid</b> <b>Cassette</b> <b>Tube</b> <b>Bulk</b> <b>Badge</b> <b>Food</b> <b>Other</b> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>			
<b>9.</b>	<b>Samples were received in appropriate container(s)</b>	X		
<b>10.</b>	<b>Sample(s) were received with Proper preservative</b>			X
<b>11.</b>	<b>All samples were tagged or labeled.</b>	X		
<b>12.</b>	<b>Sample ID labels match C-O-C ID's.</b>	X		
<b>13.</b>	<b>Bottle count on C-O-C matches bottles found.</b>	X		
<b>14.</b>	<b>Sample volume is sufficient for analyses requested.</b>	X		
<b>15.</b>	<b>Samples were received with in the hold time.</b>	X		
<b>16.</b>	<b>VOA vials completely filled.</b>			X
<b>17.</b>	<b>Sample accepted.</b>	X		
<b>18.</b>	<b>Has client been contacted about sub-out</b>			X

**Comments : Include actions taken to resolve discrepancies/problem:**

No cooler was received, however samples are received in a box with a custody seal. Black cassettes.

Received by : ██████████

Check in by/date : ██████████ / 06/07/2023

ab-s005-0321



**CHAIN-OF-CUSTODY RECORD**

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

COC ID # 060623ASBC



Project Name: Hunters Point Shipyard, Parcel C Removal Site Evaluation	Laboratory: A&B Labs	Event: Parcel C Asbestos
Project Number: J31000600	POC: [Redacted]	
WBS Code: J31000600	Ship to: 10100 East Fwy Ste, 100 Houston TX 77029	

Comments: **Please consolidate all COC pages that share the same COC ID into one SDG.**

Analytical Test Method	Asbestos
[Redacted]	[Redacted]

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

Page 2 of 4  
1 of 3  
6/6/23

Equipment: [Redacted]

Event: Parcel C Asbestos 1

O1A  
O2A  
O3A

Sample ID	Matrix	Date	Time	Samp Init.	Location ID	Sample Type	Depth (ft bgs)		Cooler	Comments
							Top	Bottom		
1	A	05/31/2023	0646	[Redacted]	MSC01	N1	0.00	0.00	1	
2	A	05/31/2023	0703	[Redacted]	MSC02	N1	0.00	0.00	1	
3	AQ	5/30/23	0800	[Redacted]	QC/FB	FB1	0.00	0.00	1	
4										
5										
6										
7										
8										
9										
10										
11										

Turnaround Time: 7 days

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time	Shipping Date / Carrier / Airbill Number
[Redacted]	6/6/23	1400	Fedex	6/6/23	1400	Shipping Date: 06/06/23 / FEDEX 7722 5216 7552
FED EX	6/7/23					[Redacted] & condition 20.3°C (RS) [Redacted] 10:12

**CHAIN-OF-CUSTODY  
RECORD**

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

COC ID # [REDACTED] 060623ASBC



Project Name: Hunters Point Shipyard, Parcel C Removal Site Evaluation	Laboratory: A&B Labs	Event: Parcel C Asbestos
Project Number: J31000600	POC: [REDACTED]	
WBS Code: J31000600	Ship to: 10100 East Fwy Ste. 100 Houston TX 77029	

Comments: **Please consolidate all COC pages that share the same COC ID into one SDG.**

Analytical Test Method: Asbestos

Code	Matrix
A	Air
AQ	Air Quality Control Matrix

Code	Container/Preservative
1	Fiber/In Preservatives

Equipment: [REDACTED]

Event: Parcel C Asbestos

Page 3 of 4  
2 of 3  
[REDACTED] 6/6/23

04A  
05A

Sample ID	Matrix	Date	Time	Samp Init.	Location ID	Sample Type	Depth (ft bgs)		Cooler	Comments
							Top	Bottom		
1	A	06/01/2023	0654	[REDACTED]	MSC01	N1	0.00	0.00	1	
2	A	06/01/2023	0708	[REDACTED]	MSC02	N1	0.00	0.00	1	
3										
4										
5										
6										
7										
8										
9										
10										
11										

Turnaround Time: 7 days

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time	Shipping Date / Carrier / Airbill Number
[REDACTED]	6/6/23	1400	Fedex	6/6/23	1400	Shipping Date: 06/06/23 / FEDEX 7722 5216 7552
FED EX	6/7/23					Received by Laboratory: (Signature, Date, Time) & condition [REDACTED] 6/7/23 10:32 20.3°C IRS [REDACTED] 10:12

[REDACTED] 6/7/23



**CHAIN-OF-CUSTODY  
RECORD**

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

COC ID # [REDACTED] 060623ASBC



Project Name: Hunters Point Shipyard, Parcel C Removal Site Evaluation	Laboratory: A&B Labs	Event: Parcel C Asbestos
Project Number: J31000600	POC [REDACTED]	
WBS Code: J31000600	Ship to: 10100 East Fwy Ste. 100 Houston TX 77029	

Comments: **Please consolidate all COC pages that share the same COC ID into one SDG.**

Analytical Test Method: Asbestos

Code Matrix

A	Air
AQ	Air Quality Control Matrix

Code Container/Preservative

1	Filter/No Preservatives
---	-------------------------

Equipment:

Event: Parcel C Asbestos

1

Page 4 of 4  
3 of 3  
6/6/23

06A  
07A

Sample ID	Matrix	Date	Time	Samp Init.			Location ID	Sample Type	Depth (ft bgs)		Cooler	Comments
									Top	Bottom		
1	MSC01-060123	A	06/01/2023	1516	[REDACTED]	x	MSC01	N1	0.00	0.00	1	
2	MSC02-060123	A	06/01/2023	1522	[REDACTED]	x	MSC02	N1	0.00	0.00	1	
3												
4												
5												
6												
7												
8												
9												
10												
11												

Turnaround Time: 7 days

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time	Shipping Date / Carrier / Airbill Number
[REDACTED]	6/6/23	1400	Fedex	6/6/23	1400	Shipping Date: 06/06/23 / FEDEX 7722 5216 7552
FED EX	6/7/23					Received by Laboratory: (Signature, Date, Time) & condition [REDACTED] 6/7/23 10:12 20.3°C 1RS [REDACTED]

5/30/23 **Flow Rate, Total Time**

FBC-053023

Sample ID	End Date	End Time	Flow Rate (L/min), Total Time (mins)
<del>FBC-052923</del>	<del>5/29/23</del>	8:00:00 AM	N/A
MSC01-053023	5/31/23	6:46:00 AM	3.7; 1427
MSC02-053023	5/31/23	7:03:00 AM	3.2; 1433
MSC01-053123	6/1/23	6:54:00 AM	3.4; 1447
MSC02-053123	6/1/23	7:08:00 AM	3.2; 1444
MSC01-060123	6/1/23	3:16:00 PM	3.4; 501
MSC02-060123	6/1/23	3:22:00 PM	3.2; 493

ORIGINID: ICCA  
GES-AIS  
200 FISCHER AVE  
SAN FRANCISCO, CA 94124  
UNITED STATES US

SHIP DATE: 30MAY23  
ACTWGT: 1.00 LB  
CAD: 254128867/INET4610

BILL SENDER

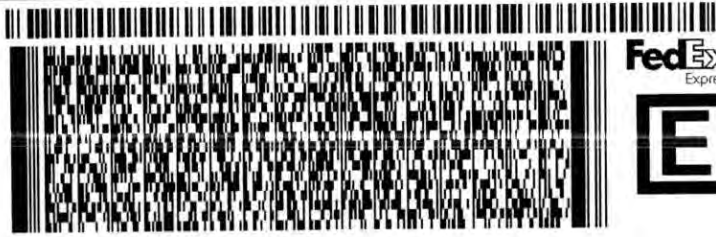
TO  
**A&B LABS**  
10100 EAST FREEWAY, SUITE 100

**HOUSTON TX 77029**

(713) 453-6060  
INV  
PO

REF J31000.900 02.04.05

DEPT.



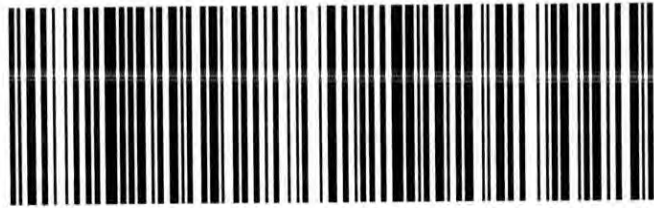
583.02/29ABFEZD

J2202234301uy

WED - 31 MAY 4:30P  
STANDARD OVERNIGHT

TRK# 7722 5216 7552  
0201

**AB HBYA** 77029  
TX-US IAH



**After printing this label:**

1. Use the "Print" button on this page to print your label to your laser or inkjet printer.
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# Laboratory Analysis Report

Job ID : 23061351



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

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## Client Project Name :

**J31000600 / Hunters Point Shipyard, Parcel C Removal Site Evaluation**

<b>Report To :</b>	Client Name: GES - ASRC Industrial	Total Number of Pages: 9
	Attn: [REDACTED]	P.O.#. : J310000600-006
	Client Address: 1501 West Fountainhead Parkway, Ste. #550	Date Received : 06/14/2023 08:54
	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
FBC-060523	6/5/2023 8:00	Cassette	23061351.01
MSC01-060523	6/6/2023 7:00	Cassette	23061351.02
MSC02-060523	6/6/2023 7:12	Cassette	23061351.03
MSC01-060623	6/7/2023 6:53	Cassette	23061351.04
MSC02-060623	6/7/2023 7:08	Cassette	23061351.05
MSC01-060723	6/8/2023 7:12	Cassette	23061351.06
MSC02-060723	6/8/2023 7:23	Cassette	23061351.07
MSC01-060823	6/8/2023 14:16	Cassette	23061351.08
MSC02-060823	6/8/2023 14:14	Cassette	23061351.09

[REDACTED]  
Released By: [REDACTED]  
Title: Vice President Operations

Analyst: [REDACTED]

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ab-q210-0321

6/20/2023





**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 6/20/2023

Job ID : 23061351  
Analytical Method: NIOSH 7400-I3-June2019

Client: GES - ASRC Industrial			Project: J31000600 / Hunters Point Shipyard, Parcel C 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
23061351.01	FBC-060523	06/05/2023						0	100	13.5	17.197	0.000		06/19/23	[REDACTED]
23061351.02	MSC01-060523	06/06/2023	Area	3.7			1433	5302.	100	17.0	21.656	0.002		06/19/23	[REDACTED]
23061351.03	MSC02-060523	06/06/2023	Area	3.2			1431	4579.	100	12.0	15.287	0.001		06/19/23	[REDACTED]
23061351.04	MSC01-060623	06/07/2023	Area	3.6			1433	5158.	100	17.5	22.293	0.002		06/19/23	[REDACTED]
23061351.05	MSC02-060623	06/07/2023	Area	3.3			1434	4732.	100	14	17.834	0.001		06/20/23	[REDACTED]
23061351.06	MSC01-060723	06/08/2023	Area	3.7			1457	5390.	100	24.5	31.210	0.002		06/20/23	[REDACTED]
23061351.07	MSC02-060723	06/08/2023	Area	3.4			1453	4940.	100	16.0	20.382	0.002		06/20/23	[REDACTED]
23061351.08	MSC01-060823	06/08/2023	Area	3.6			423	1522.	100	14.0	17.834	0.005		06/20/23	[REDACTED]
23061351.09	MSC02-060823	06/08/2023	Area	3.5			409	1431.	100	18.5	23.567	0.006		06/20/23	[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

OUTR = Overload,Unable To Read



# Sample Condition Checklist

A&B JobID : <b>23061351</b>	Date Received : <b>06/14/2023</b>	Time Received : <b>8:54AM</b>		
Client Name : <b>GES - ASRC Industrial</b>				
Temperature : <b>24.6°C</b>	Sample pH : <b>NA</b>			
Thermometer ID : <b>IR5</b>	pH Paper ID : <b>NA</b>			
Perservative :				
	<b>Check Points</b>	<b>Yes</b>	<b>No</b>	<b>N/A</b>
<b>1.</b>	<b>Cooler Seal present and signed.</b>	X		
<b>2.</b>	<b>Sample(s) in a cooler.</b>		X	
<b>3.</b>	<b>If yes, ice in cooler.</b>			X
<b>4.</b>	<b>Sample(s) received with chain-of-custody.</b>	X		
<b>5.</b>	<b>C-O-C signed and dated.</b>	X		
<b>6.</b>	<b>Sample(s) received with signed sample custody seal.</b>		X	
<b>7.</b>	<b>Sample containers arrived intact. (If No comment)</b>	X		
<b>8.</b>	<b>Matrix:</b> <b>Water</b> <b>Soil</b> <b>Liquid</b> <b>Sludge</b> <b>Solid</b> <b>Cassette</b> <b>Tube</b> <b>Bulk</b> <b>Badge</b> <b>Food</b> <b>Other</b> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>			
<b>9.</b>	<b>Samples were received in appropriate container(s)</b>	X		
<b>10.</b>	<b>Sample(s) were received with Proper preservative</b>			X
<b>11.</b>	<b>All samples were tagged or labeled.</b>	X		
<b>12.</b>	<b>Sample ID labels match C-O-C ID's.</b>	X		
<b>13.</b>	<b>Bottle count on C-O-C matches bottles found.</b>	X		
<b>14.</b>	<b>Sample volume is sufficient for analyses requested.</b>	X		
<b>15.</b>	<b>Samples were received with in the hold time.</b>	X		
<b>16.</b>	<b>VOA vials completely filled.</b>			X
<b>17.</b>	<b>Sample accepted.</b>	X		
<b>18.</b>	<b>Has client been contacted about sub-out</b>			X

**Comments : Include actions taken to resolve discrepancies/problem:**  
 No cooler was received, however samples are received in a box with a custody seal. Black cassettes. ~ 6/14/2023

Received by : ██████████

Check in by/date : ██████████ / 06/14/2023

ab-s005-0321



RECORD

Project Name: Hunters Point Shipyard, Parcel C Removal Site Evaluation	Laboratory: A&B Labs	Event: Parcel C Asbestos
Project Number: J31000600	POC: [REDACTED]	
WBS Code: J31000600	Ship to: 10100 East Fwy Ste. 100 Houston TX 77029	

Comments: <b>Please consolidate all COC pages that share the same COC ID into one SDG.</b>	Analytical Test Method Asbestos [REDACTED]	Code Matrix	Page 1 of 4
		A Air	
		AQ Air Quality Control Matrix	
		Code Container/Preservative	
		1 Filter/No Preservatives	

Equipment:

Event: Parcel C Asbestos

1

01A  
02A  
03A

Sample ID	Matrix	Date	Time	Samp Init.	x	Location ID	Sample Type	Depth (ft bgs)		Cooler	Comments
								Top	Bottom		
1 FBC-060523	AQ	06/05/2023	0800	[REDACTED]	x	FBC	FB1	0.00	0.00	1	
2 MSC01-060523	A	06/06/2023	0700	[REDACTED]	x	MSC01	N1	0.00	0.00	1	
3 MSC02-060523	A	06/06/2023	0712	[REDACTED]	x	MSC02	N1	0.00	0.00	1	
4											
5											
6											
7											
8											
9											
10											
11											

Turnaround Time: 7 days

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time	Shipping Date / Carrier / Airbill Number
[REDACTED]	6/13/23	1300	Fedex	6/13/23	1300	Shipping Date: 06/13/23 / FEDEX 7723 1803 3507 [REDACTED] 7723 1809 1036
FED EX	6/14/23	8:54	[REDACTED]	6/14/23	8:54	Received by Laboratory: (Signature, Date, Time) & condition

24.6°C  
IR5



**CHAIN-OF-CUSTODY  
RECORD**

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

COC ID # [REDACTED] 061323ASBC



Project Name: Hunters Point Shipyard, Parcel C Removal Site Evaluation	Laboratory: A&B Labs	Event: Parcel C Asbestos
Project Number: J31000600	POC: [REDACTED]	
WBS Code: J31000600	Ship to: 10100 East Fwy Ste. 100 Houston TX 77029	

Comments: **Please consolidate all COC pages that share the same COC ID into one SDG.**

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

Analytical Test Method: Asbestos [REDACTED] 6/13/23

Equipment: Event: Parcel C Asbestos 1

04A  
05A

Sample ID	Matrix	Date	Time	Samp Init.	x	Location ID	Sample Type	Depth (ft bgs)		Cooler	Comments	
								Top	Bottom			
1	MSC01-060623	A	06/07/2023	0653	[REDACTED]	x	MSC01	N1	0.00	0.00	1	
2	MSC02-060623	A	06/07/2023	0708	[REDACTED]	x	MSC02	N1	0.00	0.00	1	
3												
4												
5												
6												
7												
8												
9												
10												
11												

Turnaround Time: 7 days

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time	Shipping Date / Carrier / Airbill Number
[REDACTED]	6/13/23	1300	Fedex	6/13/23	1300	Shipping Date: 06/13/23 / FEDEX 7723 1803 5507 [REDACTED] 7723 1809 1036
FED EX	6/14/23	8:54	[REDACTED]	6/14/23	8:54	Received by Laboratory: (Signature, Date, Time) & condition

24.6°C  
1R5

**CHAIN-OF-CUSTODY  
RECORD**

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

COC ID # 061323ASBC



Project Name: Hunters Point Shipyard, Parcel C Removal Site Evaluation	Laboratory: A&B Labs	Event: Parcel C Asbestos
Project Number: J31000600	POC: [Redacted]	
WBS Code: J31000600	Ship to: 10100 East Fwy Ste. 100 Houston TX 77029	

Comments: **Please consolidate all COC pages that share the same COC ID into one SDG.**

Analytical Test Method: Asbestos

Code Matrix

A	Air
AQ	Air Quality Control Matrix

Code Container/Preservative

1	Filter/No Preservatives
---	-------------------------

Page 3 of 4

06A  
07A

Sample ID	Matrix	Date	Time	Samp Init.	Location ID	Sample Type	Depth (ft bgs)		Cooler	Comments
							Top	Bottom		
1	A	06/08/2023	0712	x	MSC01	N1	0.00	0.00	1	
2	A	06/08/2023	0723	x	MSC02	N1	0.00	0.00	1	
3										
4										
5										
6										
7										
8										
9										
10										
11										

Turnaround Time: 7 days

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time	Shipping Date / Carrier / Airbill Number
[Redacted]	6/13/23	1300	Fedex	6/13/23	1300	Shipping Date: 06/13/23 / FEDEX 7723 1809 5507
FED EX	06/14/23	8:54	[Redacted]	06/14/23	8:54	Received by Laboratory: (Signature, Date, Time) & condition

24.6 e  
1.85



**CHAIN-OF-CUSTODY  
RECORD**

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

COC ID # [REDACTED] 061323ASBC



Project Name: Hunters Point Shipyard, Parcel C Removal Site Evaluation	Laboratory: A&B Labs	Event: Parcel C Asbestos
Project Number: J31000600	POC [REDACTED]	
WBS Code: J31000600	Ship to: 10100 East Fwy Ste. 100 Houston TX 77029	

Comments: **Please consolidate all COC pages that share the same COC ID into one SDG.**

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

Equipment:  
Event: Parcel C Asbestos

Page 4 of 4

OBA  
09A

Sample ID	Matrix	Date	Time	Samp Init.	x	Location ID	Sample Type	Depth (ft bgs)		Cooler	Comments	
								Top	Bottom			
1	MSC01-060823	A	06/08/2023	1416	[REDACTED]	x	MSC01	N1	0.00	0.00	1	
2	MSC02-060823	A	06/08/2023	1414	[REDACTED]	x	MSC02	N1	0.00	0.00	1	
3												
4												
5												
6												
7												
8												
9												
10												
11												

Turnaround Time: 7 days

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time	Shipping Date / Carrier / Airbill Number
[REDACTED]	6/13/23	1300	Fedex	6/13/23	1300	Shipping Date: 06/13/23 / FEDEX 7723 1803 5507 [REDACTED] 7723 1809 1036
FED EX	6/14/23	8:54	ARMITH	6/14/23	8:54	Received by Laboratory: (Signature, Date, Time) & condition

24-60  
125

COC ID # ■■■061323ASBC

**Flow Rate, Total Time**

Sample ID	End Date	End Time	Flow Rate (L/min), Total Time (mins)
FBC-060523	6/5/23	8:00:00 AM	N/A
MSC01-060523	6/6/23	7:00:00 AM	3.7; 1433
MSC02-060523	6/6/23	7:12:00 AM	3.2; 1431
MSC01-060623	6/7/23	6:53:00 AM	3.6; 1433
MSC02-060623	6/7/23	7:08:00 AM	3.3; 1434
MSC01-060723	6/8/23	7:12:00 AM	3.7; 1457
MSC02-060723	6/8/23	7:23:00 AM	3.4; 1453
MSC01-060823	6/8/23	2:16:00 PM	3.6; 423
MSC02-060823	6/8/23	2:14:00 PM	3.5; 409

ORIGIN ID: ICCA

GES-AIS  
200 FISCHER AVE

SAN FRANCISCO, CA 94124  
UNITED STATES US

SHIP DATE: 10JUN23  
ACTWGT: 1.00 LB  
CAD: 254128867/INET4610

BILL SENDER

TO

**A&B LABS**  
**10100 EAST FREEWAY, SUITE 100**

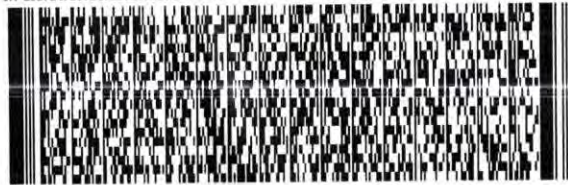
**HOUSTON TX 77029**

(713) 453-6060

REF J31000 900 02 04 05

INV  
PO

DEPT



J23232944-97ur

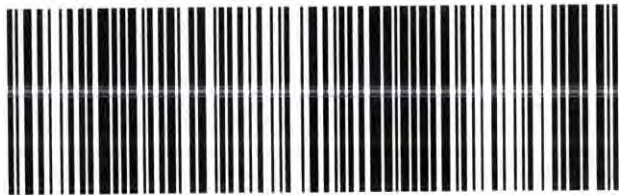
583,029ABFE7D

TRK# 7723 1809 1036  
0201

MON - 12 JUN 4:30P  
STANDARD OVERNIGHT

**XA HBYA**

77029  
TX-US IAH



**After printing this label:**

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

# ARS Aleut Analytical, LLC

## Laboratory Analytical Report

### ARS1-23-00901


GES-AIS, LLC



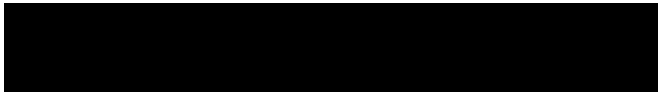
1501 West Fountainhead Parkway  
Suite 550  
Tempe, AZ 94520



COC Number: **042523RADC**  
PO Number: **Parcel C Air Monitoring RAD**  
Job Number: **J310000600**  
Job Location: **Hunters Point Shipyard, Parcel C Removal Site Evaluation**  
Project Name: **Parcel C Air Monitoring RAD**

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





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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	66780 (NPW) / 66781 (SHW)
Texas	T104704447-22-18
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.alcutfederal.com](mailto:QA@aaa.alcutfederal.com) for additional information.



# **ARS Aleut Analytical, LLC Analytical Reports**

**for**

# **GES-AIS, LLC**

# **Case Narrative**



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

Client Sample ID	ARS Aleut Analytical Sample ID
FBC-041723	ARS1-23-00901-001
MSC01-041723	ARS1-23-00901-002
MSC02-041723	ARS1-23-00901-003

Sample	Date Collected	Date Received	Analysis	Basis	Prep Date/Time	Analysis Date/Time
001	04/17/23 08:00	04/26/23	ASP-PU239-AF	As Received	05/09/23 12:02	05/13/23 01:51
001	04/17/23 08:00	04/26/23	ASP-TH-AF	As Received	05/23/23 14:37	05/27/23 03:49
001	04/17/23 08:00	04/26/23	GAM-A-AF	As Received	NA	05/04/23 14:24
001	04/17/23 08:00	04/26/23	GPC-SR90-AF	As Received	05/09/23 12:02	05/17/23 11:02
002	04/20/23 15:01	04/26/23	ASP-PU239-AF	As Received	05/09/23 12:02	05/13/23 01:51
002	04/20/23 15:01	04/26/23	ASP-TH-AF	As Received	05/23/23 14:37	05/27/23 03:49
002	04/20/23 15:01	04/26/23	GAM-A-AF	As Received	NA	05/05/23 15:56
002	04/20/23 15:01	04/26/23	GPC-SR90-AF	As Received	05/09/23 12:02	05/17/23 11:02
003	04/20/23 15:32	04/26/23	ASP-PU239-AF	As Received	05/09/23 12:02	05/13/23 01:51
003	04/20/23 15:32	04/26/23	ASP-TH-AF	As Received	05/23/23 14:37	05/27/23 03:49
003	04/20/23 15:32	04/26/23	GAM-A-AF	As Received	NA	05/08/23 14:09
003	04/20/23 15:32	04/26/23	GPC-SR90-AF	As Received	05/09/23 12:02	05/17/23 11:02

**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)"**.

Ac-228, Am-241, Bi-212, Bi-214, Co-60, Cs-137, Eu-152, Eu-154, K-40, Pa-234, Pb-210, Pb-212, Pb-214, Ra-226, Ra-228, Th-234, Tl-208, U-235, and U-238 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)"**.

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-B23-00873 MBL tracer recovery values are outside limits of 30%-110%. The tracer recoveries, though biased, are used in the final calculation of the calculated result, which passed QC criteria.

Fraction 001 in batch ARS1-B23-00817 has elevated MDA for Pu-239/240 with ACT of  $-1.265E-8$  uCi/filter, MDA of  $1.273E-7$  uCi/filter and CRDL of  $4.8E-08$  uCi/filter.

Fraction 001 in batch ARS1-B23-00873 has elevated MDA for Th-232 with ACT of  $3.191E-8$  uCi/filter, MDA of  $9.882E-8$  uCi/filter and CRDL of  $1.4E-08$  uCi/filter.

Fraction 001 in batch ARS1-B23-00744 has elevated MDA for Ra-226 with ACT of  $2.304E-6$  uCi/filter, MDA of  $9.372E-6$  uCi/filter and CRDL of  $4.4E-06$  uCi/filter.

Fraction 002 in batch ARS1-B23-00873 has elevated MDA for Th-232 with ACT of  $1.253E-8$  uCi/filter, MDA of  $9.413E-8$  uCi/filter and CRDL of  $1.4E-08$  uCi/filter.

Fraction 002 in batch ARS1-B23-00744 has elevated MDA for Ra-226 with ACT of  $-6.831E-6$  uCi/filter, MDA of  $1.521E-5$  uCi/filter and CRDL of  $4.4E-06$  uCi/filter.

Fraction 003 in batch ARS1-B23-00817 has elevated MDA for Pu-239/240 with ACT of  $6.887E-9$  uCi/filter, MDA of  $1.034E-7$  uCi/filter and CRDL of  $4.8E-08$  uCi/filter.

Fraction 003 in batch ARS1-B23-00873 has elevated MDA for Th-232 with ACT of  $0.000$  uCi/filter, MDA of  $1.058E-7$  uCi/filter and CRDL of  $1.4E-08$  uCi/filter.

Fraction 003 in batch ARS1-B23-00744 has elevated MDA for Ra-226 with ACT of  $-2.474E-6$  uCi/filter, MDA of  $1.523E-5$  uCi/filter and CRDL of  $4.4E-06$  uCi/filter.

ARS1-23-00901: Per Evelyn Dawson on 4-26-23, the clean filter in envelope for FBC-041723 will be analyzed as the field blank, whereas the dirty filter will be tested as MSC02-041723. The clean filter in the MSC02-041723 envelope was discarded.

ARS1-B23-00817: ROI's adjusted to better fit the peaks of interest.

ARS1-B23-00873: ROI's adjusted to better fit the peaks of interest.

# Notes (Case Narrative)

## Definitions:

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

## Data Qualifiers:

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

## Radiochemistry Comments:

- 1.0) All MDA/MDC values are calculated on a sample specific basis.
- 2.0) Data in this report are within the limits of uncertainty specified in the reference method unless otherwise specified.
- 3.0) Total activity is actually total gamma activity and is determined utilizing the prominent gamma emitters from the naturally occurring radioactive decay chains and other prominent radioactive nuclides. Total activity may be lower than the actual total activity due to the extent of secular equilibrium achieved in the various decay chains at the time of analysis. The total activity is not representative of nuclides that emit solely alpha or beta particles.
- 4.0) Ra-226 after ingrowth is determined via secular equilibrium with its daughter, Bismuth 214 (Gamma Spectroscopy only).
- 5.0) Ra-228 is determined via secular equilibrium with its daughter, Actinium 228 (Gamma Spectroscopy only).
- 6.0) U-238 is determined via secular equilibrium with its daughter, Thorium 234 (Gamma Spectroscopy only).
- 7.0) All gamma spectroscopy was performed utilizing high purity germanium detectors (HPGe).
- 8.0) 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).
- 9.0) Gamma spectroscopy results are calculated values based on the **ORTEC®** GammaVision ENV32 Analysis Engine.
- 10.0) 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, Eichrom ACW16, HASL 300 Se-03, HASL 300 Am-03); Neptunium 237 (Eichrom ACW16); Plutonium 238, Plutonium 239/240, Plutonium-241 (Eichrom ACW03, Eichrom ACW16, HASL 300 Se-03, HASL 300 Pu-10); Thorium-228, Thorium 230, Thorium-232 (Eichrom ACW10); Uranium-234, Uranium-235, Uranium-238 (Eichrom ACW03, Eichrom ACW16, HASL 300 Se-03); Technetium-99 (Eichrom TCW02)
- 11.0) 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); Neptunium 237 (Eichrom ACW16); Plutonium 238, Plutonium 239/240, Plutonium-241 (Eichrom ACW03, Eichrom ACW16, 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, Eichrom ACW16, HASL 300 Se-03, HASL 300 U-02, HASL 300 U-04); Technetium-99 (Eichrom TCS01)
- 12.0) 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); Neptunium 237 (Eichrom ACW16); Plutonium 238, Plutonium 239/240, Plutonium-241 (Eichrom ACW03, Eichrom ACW16, HASL 300 Se-03); Thorium-228, Thorium 230, Thorium-232 (Eichrom ACW10); Uranium-234, Uranium-235, Uranium-238 (Eichrom ACW03, Eichrom ACW16, HASL 300 Se-03); Technetium-99 (Eichrom TCW02, Eichrom TCS01)

## General Comments:

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



# **ARS Aleut Analytical, LLC Analytical Reports**

**for**

# **GES-AIS, LLC**

# **Analytical Results**



**ARS Sample Delivery Group:** ARS1-23-00901

**Client Sample ID:** FBC-041723

**Sample Collection Date:** 04/17/23 8:00

**Sample Matrix:** Air Filter

**Percent Solids:** N/A

**Request or PO Number:** Parcel C Air Monitoring RAD

**ARS Sample ID:** ARS1-23-00901-001

**Date Received:** 04/26/23

**Report Date:** 05/30/23

## Radiochemistry

**Analysis Method:** Eichrom ACW03

**ABatch Sample ID:** ARS1-B23-00817-11

Analysis Description	Analysis Results	CSU +/- 2 s	MDA	DLC	CRDL	Qual	Analysis Units	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
Pu-239/240	-1.265E-8	6.324E-8	1.273E-7	5.507E-8	4.8E-08	U	uCi/filter	05/13/23 1:51		69.6%

**Analysis Method:** Eichrom ACW10

**ABatch Sample ID:** ARS1-B23-00873-04

Analysis Description	Analysis Results	CSU +/- 2 s	MDA	DLC	CRDL	Qual	Analysis Units	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
Th-232	3.191E-8	5.529E-8	9.882E-8	3.500E-8	1.4E-08	U	uCi/filter	05/27/23 3:49		37.1%

**Analysis Method:** EPA 901.1M

**ABatch Sample ID:** ARS1-B23-00744-11

Analysis Description	Analysis Results	CSU +/- 2 s	MDA	DLC	CRDL	Qual	Analysis Units	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
Bi-214	1.583E-6	1.124E-6	1.421E-6	7.105E-7	NP		uCi/filter	05/04/23 14:24		N/A
Co-60	-5.991E-7	1.114E-6	1.127E-6	5.635E-7	0.00024	U	uCi/filter	05/04/23 14:24		N/A
Cs-137	-1.357E-7	7.049E-7	7.654E-7	3.827E-7	0.00048	U	uCi/filter	05/04/23 14:24		N/A
Pb-214	1.690E-6	8.284E-7	1.081E-6	5.405E-7	NP		uCi/filter	05/04/23 14:24		N/A
Ra-226	2.304E-6	7.421E-6	9.372E-6	4.686E-6	4.4E-06	U	uCi/filter	05/04/23 14:24		N/A

**Analysis Method:** Eichrom SRW01

**ABatch Sample ID:** ARS1-B23-00818-11

Analysis Description	Analysis Results	CSU +/- 2 s	MDA	DLC	CRDL	Qual	Analysis Units	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
SR-90	6.375E-6	2.798E-6	3.764E-6	1.732E-6	2.4E-05		uCi/filter	05/17/23 11:02		92.2%





**ARS Sample Delivery Group:** ARS1-23-00901  
**Client Sample ID:** MSC01-041723  
**Sample Collection Date:** 04/20/23 15:01  
**Sample Matrix:** Air Filter  
**Percent Solids:** N/A

**Request or PO Number:** Parcel C Air Monitoring RAD  
**ARS Sample ID:** ARS1-23-00901-002  
**Date Received:** 04/26/23  
**Report Date:** 05/30/23

## Radiochemistry

**Analysis Method:** Eichrom ACW03

**ABatch Sample ID:** ARS1-B23-00817-12

Analysis Description	Analysis Results	CSU +/- 2 s	MDA	DLC	CRDL	Qual	Analysis Units	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
Pu-239/240	2.530E-8	3.053E-8	4.658E-8	1.472E-8	4.8E-08	U	uCi/filter	05/13/23 1:51		61.7%

**Analysis Method:** Eichrom ACW10

**ABatch Sample ID:** ARS1-B23-00873-05

Analysis Description	Analysis Results	CSU +/- 2 s	MDA	DLC	CRDL	Qual	Analysis Units	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
Th-232	1.253E-8	4.916E-8	9.413E-8	3.858E-8	1.4E-08	U	uCi/filter	05/27/23 3:49		64.4%

**Analysis Method:** EPA 901.1M

**ABatch Sample ID:** ARS1-B23-00744-12

Analysis Description	Analysis Results	CSU +/- 2 s	MDA	DLC	CRDL	Qual	Analysis Units	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
Ac-228	5.269E-6	1.924E-6	2.836E-6	1.418E-6	NP		uCi/filter	05/05/23 15:56		N/A
Co-60	1.626E-7	9.531E-7	9.820E-7	4.910E-7	0.00024	U	uCi/filter	05/05/23 15:56		N/A
Cs-137	2.287E-7	7.039E-7	7.923E-7	3.962E-7	0.00048	U	uCi/filter	05/05/23 15:56		N/A
Ra-226	-6.831E-6	1.576E-5	1.521E-5	7.605E-6	4.4E-06	U	uCi/filter	05/05/23 15:56		N/A
Ra-228	5.269E-6	1.924E-6	2.836E-6	1.418E-6	NP		uCi/filter	05/05/23 15:56		N/A

**Analysis Method:** Eichrom SRW01

**ABatch Sample ID:** ARS1-B23-00818-12

Analysis Description	Analysis Results	CSU +/- 2 s	MDA	DLC	CRDL	Qual	Analysis Units	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
SR-90	2.433E-6	2.230E-6	3.588E-6	1.654E-6	2.4E-05	U	uCi/filter	05/17/23 11:02		93.9%



**ARS Sample Delivery Group:** ARS1-23-00901  
**Client Sample ID:** MSC02-041723  
**Sample Collection Date:** 04/20/23 15:32  
**Sample Matrix:** Air Filter  
**Percent Solids:** N/A

**Request or PO Number:** Parcel C Air Monitoring RAD  
**ARS Sample ID:** ARS1-23-00901-003  
**Date Received:** 04/26/23  
**Report Date:** 05/30/23

## Radiochemistry

**Analysis Method:** Eichrom ACW03

**ABatch Sample ID:** ARS1-B23-00817-13

Analysis Description	Analysis Results	CSU +/- 2 s	MDA	DLC	CRDL	Qual	Analysis Units	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
Pu-239/240	6.887E-9	5.229E-8	1.034E-7	4.239E-8	4.8E-08	U	uCi/filter	05/13/23 1:51		59.6%

**Analysis Method:** Eichrom ACW10

**ABatch Sample ID:** ARS1-B23-00873-06

Analysis Description	Analysis Results	CSU +/- 2 s	MDA	DLC	CRDL	Qual	Analysis Units	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
Th-232	0.000	5.001E-8	1.058E-7	4.198E-8	1.4E-08	U	uCi/filter	05/27/23 3:49		50.1%

**Analysis Method:** EPA 901.1M

**ABatch Sample ID:** ARS1-B23-00744-13

Analysis Description	Analysis Results	CSU +/- 2 s	MDA	DLC	CRDL	Qual	Analysis Units	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
Ac-228	4.051E-6	1.628E-6	2.046E-6	1.023E-6	NP		uCi/filter	05/08/23 14:09		N/A
Bi-212	8.985E-6	3.822E-6	4.763E-6	2.382E-6	NP		uCi/filter	05/08/23 14:09		N/A
Co-60	2.959E-8	9.423E-7	9.754E-7	4.877E-7	0.00024	U	uCi/filter	05/08/23 14:09		N/A
Cs-137	-2.513E-7	8.323E-7	9.338E-7	4.669E-7	0.00048	U	uCi/filter	05/08/23 14:09		N/A
Ra-226	-2.474E-6	1.581E-5	1.523E-5	7.615E-6	4.4E-06	U	uCi/filter	05/08/23 14:09		N/A
Ra-228	4.051E-6	1.628E-6	2.046E-6	1.023E-6	NP		uCi/filter	05/08/23 14:09		N/A

**Analysis Method:** Eichrom SRW01

**ABatch Sample ID:** ARS1-B23-00818-13

Analysis Description	Analysis Results	CSU +/- 2 s	MDA	DLC	CRDL	Qual	Analysis Units	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
SR-90	7.926E-7	2.068E-6	3.610E-6	1.670E-6	2.4E-05	U	uCi/filter	05/17/23 11:02		99.8%



# **ARS Aleut Analytical, LLC Analytical Reports**

**for**

# **GES-AIS, LLC**

# **QC Summary**



### QC Sample Results

**Analytical Batch:** ARS1-B23-00744  
**Lab Sample ID:** ARS1-B23-00744-01  
**Method:** EPA 901.1M

**Sample Type:** LCS  
**Matrix:** Air Filter  
**Analysis Date:** 04/26/23 13:25

Analyte	Spike Added	Analysis Result	Qual	Analysis Units	% Rec	% Rec Limits
Am-241	33.065	31.713		uCi/filter	95.9	75 - 125
Co-60	20.928	20.564		uCi/filter	98.3	75 - 125
Cs-137	12.996	13.326		uCi/filter	102.5	75 - 125



### QC Sample Results

**Analytical Batch:** ARS1-B23-00744

**Lab Sample ID:** ARS1-B23-00744-02

**Method:** EPA 901.1M

**Sample Type:** LCSD

**Matrix:** Air Filter

**Analysis Date:** 04/26/23 13:43

Analyte	Spike Added	Analysis Result	Qual	Analysis Units	% Rec	% Rec Limits	RPD	RPD Limit	DER	DER Limit
Am-241	33.065	32.333		uCi/filter	97.8	75 - 125	1.9	25	0.346	3
Co-60	20.928	22.277		uCi/filter	106.4	75 - 125	8.0	25	1.926	3
Cs-137	12.996	13.553		uCi/filter	104.3	75 - 125	1.7	25	0.439	3



### QC Sample Results

**Analytical Batch:** ARS1-B23-00744  
**Lab Sample ID:** ARS1-B23-00744-03  
**Method:** EPA 901.1M

**Sample Type:** MBL  
**Matrix:** Air Filter  
**Analysis Date:** 04/27/23 14:02

Analyte	Analysis Result	CSU +/- 2 s	MDA	DLC	Qual	Analysis Units
Ac-228	-0.007	0.007	0.007	0.003	U	uCi/filter
Am-241	1.175E-4	0.001	0.002	0.001	U	uCi/filter
Bi-212	-0.004	0.011	0.013	0.006	U	uCi/filter
Bi-214	-0.003	0.004	0.004	0.002	U	uCi/filter
Co-60	5.582E-4	0.002	0.002	7.700E-4	U	uCi/filter
Cs-137	5.458E-4	0.001	0.002	7.700E-4	U	uCi/filter
Eu-152	-1.777E-4	0.001	0.002	8.750E-4	U	uCi/filter
Eu-154	5.216E-4	0.001	0.001	6.850E-4	U	uCi/filter
K-40	-0.036	0.027	0.026	0.013	U	uCi/filter
Pa-234	7.341E-4	0.002	0.002	0.001	U	uCi/filter
Pb-210	-0.003	0.015	0.017	0.009	U	uCi/filter
Pb-212	5.896E-4	0.002	0.002	0.001	U	uCi/filter
Pb-214	0.001	0.003	0.003	0.002	U	uCi/filter
Ra-226	-0.070	0.025	0.031	0.016	U	uCi/filter
Ra-228	-0.007	0.007	0.007	0.003	U	uCi/filter
Th-234	0.002	0.016	0.017	0.008	U	uCi/filter
Tl-208	-0.001	0.002	0.002	8.650E-4	U	uCi/filter
U-235	-0.006	0.005	0.007	0.003	U	uCi/filter
U-238	0.002	0.016	0.017	0.008	U	uCi/filter



### QC Association Summary

**ARS Sample Delivery Group:** ARS1-23-00901

**Analytical Batch:** ARS1-B23-00744

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

Batch Sample ID	Lab Sample ID	Client Sample ID	Matrix	Method	Prep Method
ARS1-B23-00744-01		Lab Control Sample	Air Filter	EPA 901.1M	N/A
ARS1-B23-00744-02		Lab Control Sample Duplicate	Air Filter	EPA 901.1M	N/A
ARS1-B23-00744-03		Method Blank	Air Filter	EPA 901.1M	N/A
ARS1-B23-00744-11	ARS1-23-00901-001	FBC-041723	Air Filter	EPA 901.1M	N/A
ARS1-B23-00744-12	ARS1-23-00901-002	MSC01-041723	Air Filter	EPA 901.1M	N/A
ARS1-B23-00744-13	ARS1-23-00901-003	MSC02-041723	Air Filter	EPA 901.1M	N/A





### QC Sample Results

**Analytical Batch:** ARS1-B23-00817

**Lab Sample ID:** ARS1-B23-00817-01

**Method:** Eichrom ACW03

**Sample Type:** LCS

**Matrix:** Air Filter

**Analysis Date:** 05/13/23 1:51

Analyte	Spike Added	Analysis Result	Qual	Analysis Units	% Rec	% Rec Limits
Pu-239/240	7.747E-6	7.664E-6		uCi/filter	98.9	75 - 125



### QC Sample Results

**Analytical Batch:** ARS1-B23-00817

**Lab Sample ID:** ARS1-B23-00817-02

**Method:** Eichrom ACW03

**Sample Type:** LCSD

**Matrix:** Air Filter

**Analysis Date:** 05/13/23 1:51

Analyte	Spike Added	Analysis Result	Qual	Analysis Units	% Rec	% Rec Limits	RPD	RPD Limit	DER	DER Limit
Pu-239/240	7.775E-6	7.500E-6		uCi/filter	96.5	75 - 125	2.2	25	0.239	3



### QC Sample Results

**Analytical Batch:** ARS1-B23-00817

**Lab Sample ID:** ARS1-B23-00817-03

**Method:** Eichrom ACW03

**Sample Type:** MBL

**Matrix:** Air Filter

**Analysis Date:** 05/13/23 1:51

Analyte	Analysis Result	CSU +/- 2 s	MDA	DLC	Qual	Analysis Units
Pu-238	4.834E-9	3.416E-8	6.819E-8	2.754E-8	U	uCi/filter
Pu-239/240	-5.800E-8	4.694E-8	1.085E-7	4.771E-8	U	uCi/filter



### QC Association Summary

**ARS Sample Delivery Group:** ARS1-23-00901

**Analytical Batch:** ARS1-B23-00817

**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-B23-00817-01		Lab Control Sample	Air Filter	Eichrom ACW03	N/A
ARS1-B23-00817-02		Lab Control Sample Duplicate	Air Filter	Eichrom ACW03	N/A
ARS1-B23-00817-03		Method Blank	Air Filter	Eichrom ACW03	N/A
ARS1-B23-00817-11	ARS1-23-00901-001	FBC-041723	Air Filter	Eichrom ACW03	N/A
ARS1-B23-00817-12	ARS1-23-00901-002	MSC01-041723	Air Filter	Eichrom ACW03	N/A
ARS1-B23-00817-13	ARS1-23-00901-003	MSC02-041723	Air Filter	Eichrom ACW03	N/A



### QC Sample Results

**Analytical Batch:** ARS1-B23-00818

**Lab Sample ID:** ARS1-B23-00818-01

**Method:** Eichrom SRW01

**Sample Type:** LCS

**Matrix:** Air Filter

**Analysis Date:** 05/17/23 11:02

Analyte	Spike Added	Analysis Result	Qual	Analysis Units	% Rec	% Rec Limits
SR-90	2.013E-5	2.143E-5		uCi/filter	106.4	75 - 125



### QC Sample Results

**Analytical Batch:** ARS1-B23-00818

**Lab Sample ID:** ARS1-B23-00818-02

**Method:** Eichrom SRW01

**Sample Type:** LCSD

**Matrix:** Air Filter

**Analysis Date:** 05/17/23 11:02

Analyte	Spike Added	Analysis Result	Qual	Analysis Units	% Rec	% Rec Limits	RPD	RPD Limit	DER	DER Limit
SR-90	2.009E-5	2.331E-5		uCi/filter	116.0	75 - 125	8.4	25	0.761	3



### QC Sample Results

**Analytical Batch:** ARS1-B23-00818

**Lab Sample ID:** ARS1-B23-00818-03

**Method:** Eichrom SRW01

**Sample Type:** MBL

**Matrix:** Air Filter

**Analysis Date:** 05/17/23 11:02

Analyte	Analysis Result	CSU +/- 2 s	MDA	DLC	Qual	Analysis Units
SR-90	2.257E-6	2.239E-6	3.633E-6	1.665E-6	U	uCi/filter





### QC Association Summary

**ARS Sample Delivery Group:** ARS1-23-00901

**Analytical Batch:** ARS1-B23-00818

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

Batch Sample ID	Lab Sample ID	Client Sample ID	Matrix	Method	Prep Method
ARS1-B23-00818-01		Lab Control Sample	Air Filter	Eichrom SRW01	N/A
ARS1-B23-00818-02		Lab Control Sample Duplicate	Air Filter	Eichrom SRW01	N/A
ARS1-B23-00818-03		Method Blank	Air Filter	Eichrom SRW01	N/A
ARS1-B23-00818-11	ARS1-23-00901-001	FBC-041723	Air Filter	Eichrom SRW01	N/A
ARS1-B23-00818-12	ARS1-23-00901-002	MSC01-041723	Air Filter	Eichrom SRW01	N/A
ARS1-B23-00818-13	ARS1-23-00901-003	MSC02-041723	Air Filter	Eichrom SRW01	N/A



### QC Sample Results

**Analytical Batch:** ARS1-B23-00873

**Lab Sample ID:** ARS1-B23-00873-01

**Method:** Eichrom ACW10

**Sample Type:** LCS

**Matrix:** Air Filter

**Analysis Date:** 05/27/23 3:49

Analyte	Spike Added	Analysis Result	Qual	Analysis Units	% Rec	% Rec Limits
Th-230	5.314E-6	5.652E-6		uCi/filter	106.4	75 - 125



### QC Sample Results

**Analytical Batch:** ARS1-B23-00873

**Lab Sample ID:** ARS1-B23-00873-02

**Method:** Eichrom ACW10

**Sample Type:** LCSD

**Matrix:** Air Filter

**Analysis Date:** 05/27/23 3:49

Analyte	Spike Added	Analysis Result	Qual	Analysis Units	% Rec	% Rec Limits	RPD	RPD Limit	DER	DER Limit
Th-230	5.253E-6	5.764E-6		uCi/filter	109.7	75 - 125	2.0	25	0.212	3



### QC Sample Results

**Analytical Batch:** ARS1-B23-00873

**Lab Sample ID:** ARS1-B23-00873-03

**Method:** Eichrom ACW10

**Sample Type:** MBL

**Matrix:** Air Filter

**Analysis Date:** 05/27/23 3:49

Analyte	Analysis Result	CSU +/- 2 s	MDA	DLC	Qual	Analysis Units
Th-228	2.008E-7	1.983E-7	3.151E-7	1.349E-7	U	uCi/filter
Th-230	8.305E-8	1.631E-7	2.894E-7	1.222E-7	U	uCi/filter
Th-232	-3.316E-8	4.613E-8	1.540E-7	5.454E-8	U	uCi/filter



### QC Association Summary

**ARS Sample Delivery Group:** ARS1-23-00901

**Analytical Batch:** ARS1-B23-00873

**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-B23-00873-01		Lab Control Sample	Air Filter	Eichrom ACW10	N/A
ARS1-B23-00873-02		Lab Control Sample Duplicate	Air Filter	Eichrom ACW10	N/A
ARS1-B23-00873-03		Method Blank	Air Filter	Eichrom ACW10	N/A
ARS1-B23-00873-04	ARS1-23-00901-001	FBC-041723	Air Filter	Eichrom ACW10	N/A
ARS1-B23-00873-05	ARS1-23-00901-002	MSC01-041723	Air Filter	Eichrom ACW10	N/A
ARS1-B23-00873-06	ARS1-23-00901-003	MSC02-041723	Air Filter	Eichrom ACW10	N/A



# **ARS Aleut Analytical, LLC Analytical Reports**

**for**

# **GES-AIS, LLC**

# **Batch QC**



## QC Results per Analytical Batch

Analytical Batch	<b>ARS1-B23-00744</b>
SDG	<b>ARS1-23-00901</b>
Analysis	Gamma Spec (Short) in (Air Filters, Smears [AF])
Method	<b>EPA 901.1M</b>
Analysis Code	<b>GAM-A-AF</b>
Report Units	<b>uCi/filter</b>

### 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	04/26/23 13:25	Analysis Technician	█	
Analysis Batch Sample ID	QC Type	Analyte	Results	CSU (2s)	Expected Value	LCS Rec (%)	MDA
ARS1-B23-00744-01	LCS	AM-241	31.713	2.463	33.065	95.9	0.118
ARS1-B23-00744-01	LCS	CO-60	20.564	1.289	20.928	98.3	0.394
ARS1-B23-00744-01	LCS	CS-137	13.326	0.710	12.996	102.5	0.070

Duplicate RER/DER/RPD			Analysis Date	04/26/23 13:43	Analysis Technician	█
Analyte	Results LCS	CSU LCS (2s)	Results LCSD	CSU LCSD (2s)	DER	RPD
AM-241	31.713	2.463	32.333	2.510	0.346	1.9
CO-60	20.564	1.289	22.277	1.173	1.926	8.0
CS-137	13.326	0.710	13.553	0.722	0.439	1.7

Method Blank			Analysis Date	04/27/23 14:02	Analysis Technician	█
Analysis Batch Sample ID	QC Type	Analyte	Results	CSU (2s)	MDA	Qual
ARS1-B23-00744-03	MBL	AC-228	-0.007	0.007	0.007	U
ARS1-B23-00744-03	MBL	AM-241	1.175E-4	0.001	0.002	U
ARS1-B23-00744-03	MBL	BI-212	-0.004	0.011	0.013	U
ARS1-B23-00744-03	MBL	BI-214	-0.003	0.004	0.004	U
ARS1-B23-00744-03	MBL	CO-60	5.582E-4	0.002	0.002	U
ARS1-B23-00744-03	MBL	CS-137	5.458E-4	0.001	0.002	U
ARS1-B23-00744-03	MBL	EU-152	-1.777E-4	0.001	0.002	U
ARS1-B23-00744-03	MBL	EU-154	5.216E-4	0.001	0.001	U
ARS1-B23-00744-03	MBL	K-40	-0.036	0.027	0.026	U
ARS1-B23-00744-03	MBL	PA-234	7.341E-4	0.002	0.002	U
ARS1-B23-00744-03	MBL	PB-210	-0.003	0.015	0.017	U
ARS1-B23-00744-03	MBL	PB-212	5.896E-4	0.002	0.002	U
ARS1-B23-00744-03	MBL	PB-214	0.001	0.003	0.003	U
ARS1-B23-00744-03	MBL	RA-226	-0.070	0.025	0.031	U
ARS1-B23-00744-03	MBL	RA-228	-0.007	0.007	0.007	U
ARS1-B23-00744-03	MBL	TH-234	0.002	0.016	0.017	U
ARS1-B23-00744-03	MBL	TL-208	-0.001	0.002	0.002	U
ARS1-B23-00744-03	MBL	U-235	-0.006	0.005	0.007	U
ARS1-B23-00744-03	MBL	U-238	0.002	0.016	0.017	U





## QC Results per Analytical Batch

Analytical Batch	<b>ARS1-B23-00817</b>
SDG	<b>ARS1-23-00901</b>
Analysis	Plutonium (239, 240Pu) in (Air Filters, Smears, Leak Test [AF, SM, LT])
Method	<b>Eichrom ACW03</b>
Analysis Code	<b>ASP-PU239-AF</b>
Report Units	<b>uCi/filter</b>

### 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	05/13/23 01:51	Analysis Technician	
Analysis Batch Sample ID	QC Type	Analyte	Results	CSU (2s)	Expected Value	LCS Rec (%)	MDA
ARS1-B23-00817-01	LCS	PU-239/240	7.664E-6	9.612E-7	7.747E-6	98.9	8.755E-8

Duplicate RER/DER/RPD				Analysis Date	05/13/23 01:51	Analysis Technician	
Analyte	Results LCS	CSU LCS (2s)	Results LCSD	CSU LCSD (2s)	DER	RPD	
PU-239/240	7.664E-6	9.612E-7	7.500E-6	9.390E-7	0.239	2.2	

Method Blank				Analysis Date	05/13/23 01:51	Analysis Technician	
Analysis Batch Sample ID	QC Type	Analyte	Results	CSU (2s)	MDA	Qual	
ARS1-B23-00817-03	MBL	PU-238	4.834E-9	3.416E-8	6.819E-8	U	
ARS1-B23-00817-03	MBL	PU-239/240	-5.800E-8	4.694E-8	1.085E-7	U	



## QC Results per Analytical Batch

Analytical Batch	<b>ARS1-B23-00818</b>
SDG	<b>ARS1-23-00901</b>
Analysis	Strontium-90 in (Air Filters, Smears [AF])
Method	<b>Eichrom SRW01</b>
Analysis Code	<b>GPC-SR90-AF</b>
Report Units	<b>uCi/filter</b>

### 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	05/17/23 11:02	Analysis Technician	
Analysis Batch Sample ID	QC Type	Analyte	Results	CSU (2s)	Expected Value	LCS Rec (%)	MDA
ARS1-B23-00818-01	LCS	SR-90	2.143E-5	3.276E-6	2.013E-5	106.4	3.723E-7

Duplicate RER/DER/RPD				Analysis Date	05/17/23 11:02	Analysis Technician	
Analyte	Results LCS	CSU LCS (2s)	Results LCSD	CSU LCSD (2s)	DER	RPD	
SR-90	2.143E-5	3.276E-6	2.331E-5	3.550E-6	0.761	8.4	

Method Blank				Analysis Date	05/17/23 11:02	Analysis Technician	
Analysis Batch Sample ID	QC Type	Analyte	Results	CSU (2s)	MDA	Qual	
ARS1-B23-00818-03	MBL	SR-90	2.257E-6	2.239E-6	3.633E-6	U	



## QC Results per Analytical Batch

Analytical Batch	ARS1-B23-00873
SDG	ARS1-23-00901
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	05/27/23 03:49	Analysis Technician	[REDACTED]
Analysis Batch Sample ID	QC Type	Analyte	Results	CSU (2s)	Expected Value	LCS Rec (%)	MDA
ARS1-B23-00873-01	LCS	TH-230	5.652E-6	7.130E-7	5.314E-6	106.4	3.185E-8

Duplicate RER/DER/RPD				Analysis Date	05/27/23 03:49	Analysis Technician	[REDACTED]
Analyte	Results LCS	CSU LCS (2s)	Results LCSD	CSU LCSD (2s)	DER	RPD	
TH-230	5.652E-6	7.130E-7	5.764E-6	7.435E-7	0.212	2.0	

Method Blank				Analysis Date	05/27/23 03:49	Analysis Technician	[REDACTED]
Analysis Batch Sample ID	QC Type	Analyte	Results	CSU (2s)	MDA	Qual	
ARS1-B23-00873-03	MBL	TH-228	2.008E-7	1.983E-7	3.151E-7	U	
ARS1-B23-00873-03	MBL	TH-230	8.305E-8	1.631E-7	2.894E-7	U	
ARS1-B23-00873-03	MBL	TH-232	-3.316E-8	4.613E-8	1.540E-7	U	



# **ARS Aleut Analytical, LLC Analytical Reports**

**for**

# **GES-AIS, LLC**

# **Sample Management Records**

**CHAIN-OF-CUSTODY  
RECORD**

Gilbane Federal  
 2300 Clayton Road, Suite 1050, Concord, CA 94520

**COC #** 042523RADC



<b>Project Name:</b> Hunters Point Shipyard, Parcel C Removal Site Evaluation		<b>Laboratory:</b> ARS Aleut Analytical (AAA), Port Allen, LA		<b>Event:</b> Parcel C Air Monitoring RAD	
<b>Project Number:</b> J31000600		<b>POC:</b> [Redacted]			
<b>WBS Code:</b> J31000600		<b>Ship to:</b> 2609 North River Road, Port Allen, LA 70767-3469			

<b>Comments:</b>	<b>Analytical Test Method</b>	E901.1 - Gamma Spec	RC0240 - Pu and Th Isotopes	SR02RC - S90								<b>Code Matrix</b>			
												<b>A</b>	Air		
<b>Equipment:</b>													<b>AQ</b>	Air Quality Control Matrix	
	<b>Code Container/Preservative</b>												<b>5</b>	1x 1 L. Plastic, HNO3, pH < 2	
														<b>15</b>	1x 250-ml. Plastic, 4 Degrees C

Event: Parcel C Air Monitoring RAD																
Sample ID	Matrix	Date	Time	Samp Init.							Location ID	Sample Type	Depth (ft bgs) Top - Bottom	Cooler	Comments	
1	FBC-041723	AQ	04/17/2023	0800	[Redacted]	X	X	X			FIELDQC	FB2	0.00	0.00	1	
2	MSC01-041723	A	04/20/2023	1501	[Redacted]	X	X	X			MSC01	N1	0.00	0.00	1	
3	MSC02-041723	A	04/20/2023	1532	[Redacted]	X	X	X			MSC02	N1	0.00	0.00	1	

Turnaround Time: 28 days

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time	Shipping Date / Carrier / Airbill Number
[Redacted Signature]	4/25/23	1600	Jed G	4/25/23	1600	Shipping Date: 4/27/2023 / FEDEX / 7718 3320 9073
[Redacted Signature]			[Redacted Signature]	4/26/23	920	
<b>Received by Laboratory: (Signature, Date, Time) &amp; condition</b>						



Procedures: GES-003 / EPA 900.0M

Start Date: 4/17/23

File ID Number: 042523RADC

Stop Date: 4/20/23

Field Entry

Station	Sample ID	Date In	Time In	Date Out	Time Out	Initial Flow Rate (LPM)	Final Flow Rate (LPM)	Flow volume Cu.M	Julian Date for Date Out	Total Run Time (Days)	Total Run Time (Hours)	Total Run Time (Minutes)	Average Flow Rate (LPM)	Initial Flow Rate (CFM)	Final Flow Rate (CFM)	Average Flow Rate (CFM)	Average Flow Rate (Cu.M/h)	Flow Rate (Cu.M/min)	Total Flow (L)
1	MSC01	MSC01-041723	04/17/23	8:08	04/20/23	15.92	60	290.0	110	3.36	80.97	4834.0	60	2.11888	2.11888	2.11888	3.6	0.06	250.040
2	MSC02	MSC02-041723	04/17/23	6:34	04/20/23	15.92	60	291.5	110	3.37	80.97	4858.0	60	2.11888	2.11888	2.11888	3.6	0.06	251.480

**FORMULAS**

Number of Days = (Date Out + Time Out) minus (Date In + Time In)  
 Number of Minutes = # of Days X 24hr X 60min  
 Flow Rate (m3/h) = Flow Rate (CFM) x 60min x (12in x 2.54cm/in / 1000mm)<sup>3</sup>  
 Mid-Sample Date/Time = [(Date + Time Out) + (Date + Time In)] / 2  
 Flow Rate (Cu.M/min) = CFM X 0.0283168466 Cu.M/CF  
 Flow Rate (LPM) = Cu.M X 1000  
 Total Flow (L) = LPM X Total Minutes

### SDG Report - Samples and Containers

SDG Specific Data							
<b>SDG</b>	<b>ARS1-23-00901</b>			<b>TAT Days</b>	<b>28 Calendar Days</b>	<b>Project Type</b>	<b>Environmental</b>
<b>Sample Count</b>	<b>3</b>	<b>Rpt Level</b>	<b>4</b>	<b>Date Received</b>	<b>04/26/2023</b>	<b>COC Number</b>	<b>KT042523RADC</b>
<b>Client</b>	<b>GES-AIS, LLC</b>			<b>Discrepancy Resol</b>	<b>N/A</b>	<b>PO Number</b>	<b>Parcel C Air Monitoring RAD</b>
<b>Client Code</b>	<b>1138</b>			<b>Client Deadline</b>	<b>05/24/2023</b>	<b>Job Number</b>	<b>J31000600</b>
<b>Profile Number</b>	<b>PN-01440</b>					<b>Job Location</b>	<b>Hunters Point Shipyard, Parcel C Removal Site Evaluation</b>
<b>Comment</b>							

Samples and Containers Checked In Thus Far									
FR	Name	Matrix	Start Date	End Date	Disp	Hold	Arch	Storage	Comments
001	FBC-041723	Air Filter	04/17/2023 07:59	04/17/2023 08:00	H	30	10	PrePrep	
	<b>IC_ID</b>	<b>Cnt</b>	<b>Container Type</b>	<b>AF Volume (L)</b>	<b>AF Units</b>		<b>Rate</b>	<b>Mins</b>	<b>Comments</b>
	435683	1	HDP Container	1	LPM			1	
			Mid-Sample Date:	04/17/2023 07:59	AF Volume (CuM):			0.001	
002	MSC01-041723	Air Filter	04/20/2023 15:00	04/20/2023 15:01	H	30	10	PrePrep	
	<b>IC_ID</b>	<b>Cnt</b>	<b>Container Type</b>	<b>AF Volume (L)</b>	<b>AF Units</b>		<b>Rate</b>	<b>Mins</b>	<b>Comments</b>
	435684	1	HDP Container	1	LPM			1	
			Mid-Sample Date:	04/20/2023 15:00	AF Volume (CuM):			0.001	
003	MSC02-041723	Air Filter	04/20/2023 15:31	04/20/2023 15:32	H	30	10	PrePrep	
	<b>IC_ID</b>	<b>Cnt</b>	<b>Container Type</b>	<b>AF Volume (L)</b>	<b>AF Units</b>		<b>Rate</b>	<b>Mins</b>	<b>Comments</b>
	435685	1	HDP Container	1	LPM			1	
			Mid-Sample Date:	04/20/2023 15:31	AF Volume (CuM):			0.001	

### SDG Report - Analysis Assignments

<b>SDG</b>	<b>ARS1-23-00901</b>	<b>Sample Count</b>	<b>3</b>
<b>Client</b>	<b>GES-AIS, LLC</b>	<b>Analysis Count</b>	<b>4-12</b>

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	3
ASP-TH-AF	Thorium in (Air Filters, Smears, Leak Test [AF, SM, LT])	I	3
GAM-A-AF	Gamma Spec (Short) in (Air Filters, Smears [AF])	I	3
GPC-SR90-AF	Strontium-90 in (Air Filters, Smears [AF])	I	3

Analyses Assigned Per Fraction		
Fraction	Analysis Code	X = Assigned
001	ASP-PU239-AF	<b>X</b>
001	ASP-TH-AF	<b>X</b>
001	GAM-A-AF	<b>X</b>
001	GPC-SR90-AF	<b>X</b>
002	ASP-PU239-AF	<b>X</b>
002	ASP-TH-AF	<b>X</b>
002	GAM-A-AF	<b>X</b>
002	GPC-SR90-AF	<b>X</b>
003	ASP-PU239-AF	<b>X</b>
003	ASP-TH-AF	<b>X</b>
003	GAM-A-AF	<b>X</b>
003	GPC-SR90-AF	<b>X</b>



Client Name: GES-AIS, LLC

Profile Name: Parcel C 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							
	<b>Analyte</b>			<b>RDL</b>	<b>LCS LL/UL</b>	<b>MS LL/UL</b>	<b>RadY LL/UL</b>	<b>GravY LL/UL</b>	<b>RER</b>	<b>RPD</b>	<b>Surr LL/UL</b>	
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							
	<b>Analyte</b>			<b>RDL</b>	<b>LCS LL/UL</b>	<b>MS LL/UL</b>	<b>RadY LL/UL</b>	<b>GravY LL/UL</b>	<b>RER</b>	<b>RPD</b>	<b>Surr LL/UL</b>	
Th-232 (7440-29-1)				1.4E-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							
	<b>Analyte</b>			<b>RDL</b>	<b>LCS LL/UL</b>	<b>MS LL/UL</b>	<b>RadY LL/UL</b>	<b>GravY LL/UL</b>	<b>RER</b>	<b>RPD</b>	<b>Surr LL/UL</b>	
	Ac-228 (14331-83-0)				uCi/filter	75/125	60/140	30/110	30/110	1	25	N/A
	Am-241 (14596-10-2)				uCi/filter	75/125	60/140	30/110	30/110	1	25	N/A
	Bi-212 (14913-49-6)				uCi/filter	75/125	60/140	30/110	30/110	1	25	N/A
	Bi-214 (14733-03-0)				uCi/filter	75/125	60/140	30/110	30/110	1	25	N/A
	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
	Eu-152 (14683-23-9)				uCi/filter	75/125	60/140	30/110	30/110	1	25	N/A
	Eu-154 (15585-10-1)				uCi/filter	75/125	60/140	30/110	30/110	1	25	N/A
	K-40 (13966-00-2)				uCi/filter	75/125	60/140	30/110	30/110	1	25	N/A
	Pb-210 (14255-04-0)				uCi/filter	75/125	60/140	30/110	30/110	1	25	N/A
	Pb-212 (15092-94-1)				uCi/filter	75/125	60/140	30/110	30/110	1	25	N/A
	Pb-214 (15067-28-4)				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
	Ra-228 (15262-20-1)				uCi/filter	75/125	60/140	30/110	30/110	1	25	N/A
Th-234 (15065-10-8)				uCi/filter	75/125	60/140	30/110	30/110	1	25	N/A	
Tl-208 (14913-50-9)				uCi/filter	75/125	60/140	30/110	30/110	1	25	N/A	
U-235 (15117-96-1)				uCi/filter	75/125	60/140	30/110	30/110	1	25	N/A	
U-238 (7440-61-1)				uCi/filter	75/125	60/140	30/110	30/110	1	25	N/A	

GAM-A-AF	Pa-234 (15100-28-4)			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						
	<b>Analyte</b>			<b>RDL</b>	<b>LCS LL/UL</b>	<b>MS LL/UL</b>	<b>RadY LL/UL</b>	<b>GravY LL/UL</b>	<b>RER</b>	<b>RPD</b>	<b>Surr LL/UL</b>
	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
		<b>Group</b>		<b>Analyte</b>	
		Parcel C Rad Sampling		Pu-239/240	
ASP-PU239-AF	002	uCi	filter	N/A	1
		<b>Group</b>		<b>Analyte</b>	
		Parcel C Rad Sampling		Pu-239/240	
ASP-PU239-AF	003	uCi	filter	N/A	1
		<b>Group</b>		<b>Analyte</b>	
		Parcel C Rad Sampling		Pu-239/240	
ASP-TH-AF	001	uCi	filter	N/A	1
		<b>Group</b>		<b>Analyte</b>	
		Parcel C Rad Sampling		Th-232	
ASP-TH-AF	002	uCi	filter	N/A	1
		<b>Group</b>		<b>Analyte</b>	
		Parcel C Rad Sampling		Th-232	
ASP-TH-AF	003	uCi	filter	N/A	1
		<b>Group</b>		<b>Analyte</b>	
		Parcel C Rad Sampling		Th-232	
GAM-A-AF	001	uCi	filter	N/A	19
		<b>Group</b>		<b>Analyte</b>	
		Parcel C Rad Sampling		Ac-228	
		Parcel C Rad Sampling		Am-241	
		Parcel C Rad Sampling		Bi-212	
		Parcel C Rad Sampling		Bi-214	
		Parcel C Rad Sampling		Co-60	
		Parcel C Rad Sampling		Cs-137	
Parcel C Rad Sampling		Eu-152			

**DQO Report for SDG**  
ARS1-23-00901

GAM-A-AF	001	Parcel C Rad Sampling		Eu-154	
		Parcel C Rad Sampling		K-40	
		Parcel C Rad Sampling		Pa-234	
		Parcel C Rad Sampling		Pb-210	
		Parcel C Rad Sampling		Pb-212	
		Parcel C Rad Sampling		Pb-214	
		Parcel C Rad Sampling		Ra-226	
		Parcel C Rad Sampling		Ra-228	
		Parcel C Rad Sampling		Th-234	
		Parcel C Rad Sampling		Tl-208	
		Parcel C Rad Sampling		U-235	
		Parcel C Rad Sampling		U-238	
		GAM-A-AF	002	uCi	filter
<b>Group</b>				<b>Analyte</b>	
Parcel C Rad Sampling				Ac-228	
Parcel C Rad Sampling				Am-241	
Parcel C Rad Sampling				Bi-212	
Parcel C Rad Sampling				Bi-214	
Parcel C Rad Sampling				Co-60	
Parcel C Rad Sampling				Cs-137	
Parcel C Rad Sampling				Eu-152	
Parcel C Rad Sampling				Eu-154	
Parcel C Rad Sampling				K-40	
Parcel C Rad Sampling				Pa-234	
Parcel C Rad Sampling				Pb-210	
Parcel C Rad Sampling				Pb-212	
Parcel C Rad Sampling				Pb-214	
Parcel C Rad Sampling				Ra-226	
Parcel C Rad Sampling				Ra-228	
Parcel C Rad Sampling				Th-234	
Parcel C Rad Sampling				Tl-208	
Parcel C Rad Sampling				U-235	
Parcel C Rad Sampling		U-238			

**DQO Report for SDG**  
ARS1-23-00901

GAM-A-AF	003	uCi	filter	N/A	19	
		<b>Group</b>		<b>Analyte</b>		
		Parcel C Rad Sampling		Ac-228		
		Parcel C Rad Sampling		Am-241		
		Parcel C Rad Sampling		Bi-212		
		Parcel C Rad Sampling		Bi-214		
		Parcel C Rad Sampling		Co-60		
		Parcel C Rad Sampling		Cs-137		
		Parcel C Rad Sampling		Eu-152		
		Parcel C Rad Sampling		Eu-154		
		Parcel C Rad Sampling		K-40		
		Parcel C Rad Sampling		Pa-234		
		Parcel C Rad Sampling		Pb-210		
		Parcel C Rad Sampling		Pb-212		
		Parcel C Rad Sampling		Pb-214		
		Parcel C Rad Sampling		Ra-226		
		Parcel C Rad Sampling		Ra-228		
		Parcel C Rad Sampling		Th-234		
Parcel C Rad Sampling		Tl-208				
Parcel C Rad Sampling		U-235				
Parcel C Rad Sampling		U-238				
GPC-SR90-AF	001	uCi	filter	N/A	1	
		<b>Group</b>		<b>Analyte</b>		
Parcel C Rad Sampling		Sr-90				
GPC-SR90-AF	002	uCi	filter	N/A	1	
		<b>Group</b>		<b>Analyte</b>		
Parcel C Rad Sampling		Sr-90				
GPC-SR90-AF	003	uCi	filter	N/A	1	
		<b>Group</b>		<b>Analyte</b>		
Parcel C Rad Sampling		Sr-90				

[REDACTED]

---

**From:** [REDACTED]  
**Sent:** Wednesday, April 26, 2023 2:49 PM  
**To:** [REDACTED] DL - GES - ChemDM-HPNS; DL - GES - SynecticsDM-HPNS  
**Cc:** Project Managers AAA  
**Subject:** RE: GES-AIS Sample Receipt - Parcel C Air (ARS1-23-00901) - DISCREPANCIES

Hi [REDACTED]

See notes below and please add what we are doing to the case narrative so we can review the analytical results considering the anomaly.

Thanks,

[REDACTED] CHMM, PMP  
Sr. Chemist | Project Manager

[REDACTED]  
[GES-AIS.COM](mailto:GES-AIS.COM)

---

**From:** [REDACTED]  
**Sent:** Wednesday, April 26, 2023 11:52 AM  
**To:** DL - GES - ChemDM-HPNS <chemdm-hpns@ges-ais.com>; DL - GES - SynecticsDM-HPNS <SynecticsDM-HPNS@ges-ais.com>  
**Cc:** Project Managers AAA <ProjectManagers@aaa.alut federal.com>; [REDACTED]  
**Subject:** RE: GES-AIS Sample Receipt - Parcel C Air (ARS1-23-00901) - DISCREPANCIES

**⚠ CAUTION: EXTERNAL SENDER** *This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.*

Hi – we have noticed some discrepancies associated with these samples – I’ve attached a picture of all 3.

Fraction #1 the field blank (FBC-041723) has 2 filters in the bag – 1 clean and 1 dirty. – **The clean filter is the field blank, please analyze it as FBC-041723; please analyze the dirty filter as MSC02-041723.**

Fraction #2 (MSC01-041723) has 1 dirty filter (as expected)

Fraction #3 (MSC02-041723) has 1 clean filter. – **please discard**

Please advise as to how you’d like to proceed-

Thank you,  
[REDACTED]

---

**From:** [REDACTED]  
**Sent:** Wednesday, April 26, 2023 11:25 AM  
**To:** [chemdm-hpns@ges-ais.com](mailto:chemdm-hpns@ges-ais.com); DL - GES - SynecticsDM-HPNS <[SynecticsDM-HPNS@ges-ais.com](mailto:SynecticsDM-HPNS@ges-ais.com)>  
**Cc:** Project Managers AAA <[ProjectManagers@aaa.alut federal.com](mailto:ProjectManagers@aaa.alut federal.com)>  
**Subject:** GES-AIS Sample Receipt - Parcel C Air (ARS1-23-00901)

Please see attached log-in paperwork for ARS1-23-00901.

# PALA Sample Receipt Inspection Form

Client Name: GES-ADS

SDG: ARS1-23-0901

Sample Custodian: [REDACTED] Survey Start Date: 4-26-23 Survey Start Time: 9:25

Thermometer ID: E1054012261 Calibration Due Date: 1/12/24 pH Paper Lot# NA

Exposure Rate Meter + Probe Unit ID: 273629 Calibration Due Date: 9/13/23 Background: 4  $\mu$ R/hr

Count Rate Meter + Probe Unit ID: 268993 Calibration Due Date: 9/29/23 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 ( $\mu$ R/hr) (limit <500 $\mu$ R/hr)	Max External Swipe Counts (cpm)	Max Internal Swipe Counts (cpm)	ESC True Temps* ( $^{\circ}$ C)	TRAX Matrix ID (circle all that apply): (See Section 4.3 of SOP)
A: <u>771833299073</u>	<u>5</u>	<u>20</u>	<u>30</u>	<u>NA</u>	AQ WD WG WO
B: _____	_____	_____	_____	_____	WS WW SI UR
C: _____	_____	_____	_____	_____	SO OL BI VG
D: _____	_____	_____	_____	_____	WP SM <u>AE</u>
E: _____	_____	_____	_____	_____	
F: _____	_____	_____	_____	_____	

**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 relinquished/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:

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## PALA Sample Survey Form

Client Name: GES-AIS  
SDG: ARS1-23-00901

Pipette ID: NA Tip Lot#: NA

Disposable pipette lot#: NA

Sample ID from Client on COC or Sample	ESC Letter	Sample Container Type	Approx. Fill Level (%)	pH < 2 is Acceptable		Acid Lot # or Ind container temp (°C)	Vol. of Acid Used (mL)	Acceptance Limits
				pH As Rec'd	pH Adjusted			<100 cpm/cm
FBL-041723	A	Ziploc	25	NA	NA	NA	NA	30
MSC01 ↓	↓	↓	↓	↓	↓	↓	↓	↓
MSC02 ↓	↓	↓	↓	↓	↓	↓	↓	↓

Sample Custodian: [REDACTED] Survey End Date: 4-26-23 Survey/pH End Time: 930

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).

ORIGIN ID: ICCA

200 FISHER STREET

SAN FRANCISCO, CA 94124  
UNITED STATES US

SHIP DATE: 18APR23  
ACTWGT: 1.00 LB  
CAD: 254128867/INET4580

BILL SENDER

TO  
ARS ALEUT ANALYTICAL, LLC  
2609 NORTH RIVER ROAD

PORT ALLEN LA 70767

(225) 381-2991

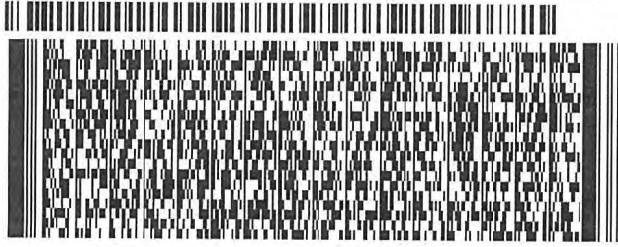
REF: J31000600020405

INV:

PO:

DEPT:

581J3178CFE2D



FedEx  
Express



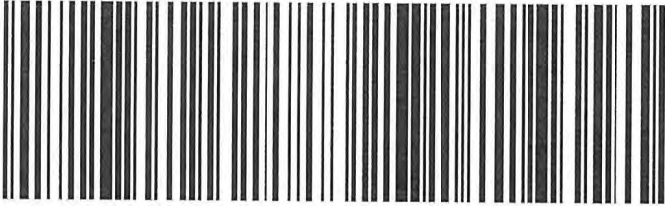
J231023011101uv

WED - 19 APR 4:30P  
STANDARD OVERNIGHT

TRK# 7718 3329 9073  
0201

XN OPLA

70767  
LA-US MSY



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

# ARS Aleut Analytical, LLC

## Laboratory Analytical Report

### ARS1-23-00968


GES-AIS, LLC



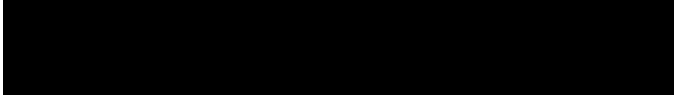
1501 West Fountainhead Parkway  
Suite 550  
Tempe, AZ 94520



COC Number: **050223RADC**  
PO Number: **Parcel C Air Monitoring RAD**  
Job Number: **J310000600**  
Job Location: **Hunters Point Shipyard, Parcel C Removal Site Evaluation**  
Project Name: **Parcel C Air Monitoring RAD**

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





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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	66780 (NPW) / 66781 (SHW)
Texas	T104704447-22-18
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.alcutfederal.com](mailto:QA@aaa.alcutfederal.com) for additional information.



# **ARS Aleut Analytical, LLC Analytical Reports**

**for**

# **GES-AIS, LLC**

# **Case Narrative**



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

Client Sample ID	ARS Aleut Analytical Sample ID
FBC-042423	ARS1-23-00968-001
MSC01-042423	ARS1-23-00968-002
MSC02-042423	ARS1-23-00968-003

Sample	Date Collected	Date Received	Analysis	Basis	Prep Date/Time	Analysis Date/Time
001	04/24/23 08:00	05/03/23	ASP-PU239-AF	As Received	05/26/23 09:22	06/01/23 02:42
001	04/24/23 08:00	05/03/23	ASP-TH-AF	As Received	05/23/23 14:37	05/27/23 03:49
001	04/24/23 08:00	05/03/23	GAM-A-AF	As Received	NA	05/12/23 15:44
001	04/24/23 08:00	05/03/23	GPC-SR90-AF	As Received	05/26/23 09:22	05/30/23 12:44
002	04/27/23 14:29	05/03/23	ASP-PU239-AF	As Received	05/26/23 09:22	06/01/23 02:42
002	04/27/23 14:29	05/03/23	ASP-TH-AF	As Received	05/23/23 14:37	05/27/23 03:49
002	04/27/23 14:29	05/03/23	GAM-A-AF	As Received	NA	05/12/23 15:36
002	04/27/23 14:29	05/03/23	GPC-SR90-AF	As Received	05/26/23 09:22	05/30/23 12:44
003	04/27/23 14:14	05/03/23	ASP-PU239-AF	As Received	05/26/23 09:22	06/01/23 02:43
003	04/27/23 14:14	05/03/23	ASP-TH-AF	As Received	05/23/23 14:37	05/27/23 03:49
003	04/27/23 14:14	05/03/23	GAM-A-AF	As Received	NA	05/15/23 14:43
003	04/27/23 14:14	05/03/23	GPC-SR90-AF	As Received	05/26/23 09:22	05/30/23 12:44

**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)"**.

Ac-228, Am-241, Bi-212, Bi-214, Co-60, Cs-137, Eu-152, Eu-154, K-40, Pa-234, Pb-210, Pb-212, Pb-214, Ra-226, Ra-228, Th-234, Tl-208, U-235, and U-238 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)"**.

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-B23-00873 MBL tracer recovery values are outside limits of 30%-110%. The tracer recoveries, though biased, are used in the final calculation of the calculated result, which passed QC criteria.

Fraction 001 in batch ARS1-B23-00874 has elevated MDA for Pu-239/240 with ACT of 0.000 uCi/filter, MDA of 8.717E-8 uCi/filter and CRDL of 4.8E-08 uCi/filter.

Fraction 001 in batch ARS1-B23-00824 has elevated MDA for Ra-226 with ACT of -6.669E-6 uCi/filter, MDA of 1.547E-5 uCi/filter and CRDL of 4.4E-06 uCi/filter.

Fraction 002 in batch ARS1-B23-00874 has elevated MDA for Pu-239/240 with ACT of 2.729E-8 uCi/filter, MDA of 8.663E-8 uCi/filter and CRDL of 4.8E-08 uCi/filter.

Fraction 002 in batch ARS1-B23-00873 has elevated MDA for Th-232 with ACT of 5.336E-8 uCi/filter, MDA of 7.123E-8 uCi/filter and CRDL of 1.4E-08 uCi/filter.

Fraction 002 in batch ARS1-B23-00824 has elevated MDA for Ra-226 with ACT of -4.078E-6 uCi/filter, MDA of 9.704E-6 uCi/filter and CRDL of 4.4E-06 uCi/filter.

Fraction 003 in batch ARS1-B23-00874 has elevated MDA for Pu-239/240 with ACT of -1.105E-8 uCi/filter, MDA of 8.765E-8 uCi/filter and CRDL of 4.8E-08 uCi/filter.

Fraction 003 in batch ARS1-B23-00873 has elevated MDA for Th-232 with ACT of 5.902E-8 uCi/filter, MDA of 7.242E-8 uCi/filter and CRDL of 1.4E-08 uCi/filter.

Fraction 003 in batch ARS1-B23-00824 has elevated MDA for Ra-226 with ACT of -1.223E-5 uCi/filter, MDA of 1.531E-5 uCi/filter and CRDL of 4.4E-06 uCi/filter.

ARS1-B23-00873: ROI's adjusted to better fit the peaks of interest.

ARS1-B23-00874: ROI's adjusted to better fit the peaks of interest.

# Notes (Case Narrative)

## Definitions:

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

## Data Qualifiers:

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

## Radiochemistry Comments:

- 1.0) All MDA/MDC values are calculated on a sample specific basis.
- 2.0) Data in this report are within the limits of uncertainty specified in the reference method unless otherwise specified.
- 3.0) Total activity is actually total gamma activity and is determined utilizing the prominent gamma emitters from the naturally occurring radioactive decay chains and other prominent radioactive nuclides. Total activity may be lower than the actual total activity due to the extent of secular equilibrium achieved in the various decay chains at the time of analysis. The total activity is not representative of nuclides that emit solely alpha or beta particles.
- 4.0) Ra-226 after ingrowth is determined via secular equilibrium with its daughter, Bismuth 214 (Gamma Spectroscopy only).
- 5.0) Ra-228 is determined via secular equilibrium with its daughter, Actinium 228 (Gamma Spectroscopy only).
- 6.0) U-238 is determined via secular equilibrium with its daughter, Thorium 234 (Gamma Spectroscopy only).
- 7.0) All gamma spectroscopy was performed utilizing high purity germanium detectors (HPGe).
- 8.0) 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).
- 9.0) Gamma spectroscopy results are calculated values based on the ORTEC® GammaVision ENV32 Analysis Engine.
- 10.0) 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, Eichrom ACW16, HASL 300 Se-03, HASL 300 Am-03); Neptunium 237 (Eichrom ACW16); Plutonium 238, Plutonium 239/240, Plutonium-241 (Eichrom ACW03, Eichrom ACW16, HASL 300 Se-03, HASL 300 Pu-10); Thorium-228, Thorium 230, Thorium-232 (Eichrom ACW10); Uranium-234, Uranium-235, Uranium-238 (Eichrom ACW03, Eichrom ACW16, HASL 300 Se-03); Technetium-99 (Eichrom TCW02)
- 11.0) 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); Neptunium 237 (Eichrom ACW16); Plutonium 238, Plutonium 239/240, Plutonium-241 (Eichrom ACW03, Eichrom ACW16, 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, Eichrom ACW16, HASL 300 Se-03, HASL 300 U-02, HASL 300 U-04); Technetium-99 (Eichrom TCS01)
- 12.0) 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); Neptunium 237 (Eichrom ACW16); Plutonium 238, Plutonium 239/240, Plutonium-241 (Eichrom ACW03, Eichrom ACW16, HASL 300 Se-03); Thorium-228, Thorium 230, Thorium-232 (Eichrom ACW10); Uranium-234, Uranium-235, Uranium-238 (Eichrom ACW03, Eichrom ACW16, HASL 300 Se-03); Technetium-99 (Eichrom TCW02, Eichrom TCS01)

## General Comments:

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





# **ARS Aleut Analytical, LLC Analytical Reports**

**for**

# **GES-AIS, LLC**

# **Analytical Results**



**ARS Sample Delivery Group:** ARS1-23-00968

**Client Sample ID:** FBC-042423

**Sample Collection Date:** 04/24/23 8:00

**Sample Matrix:** Air Filter

**Percent Solids:** N/A

**Request or PO Number:** Parcel C Air Monitoring RAD

**ARS Sample ID:** ARS1-23-00968-001

**Date Received:** 05/03/23

**Report Date:** 06/02/23

## Radiochemistry

**Analysis Method:** Eichrom ACW03

**ABatch Sample ID:** ARS1-B23-00874-08

Analysis Description	Analysis Results	CSU +/- 2 s	MDA	DLC	CRDL	Qual	Analysis Units	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
Pu-239/240	0.000	4.417E-8	8.717E-8	3.708E-8	4.8E-08	U	uCi/filter	06/01/23 2:42		82.0%

**Analysis Method:** Eichrom ACW10

**ABatch Sample ID:** ARS1-B23-00873-07

Analysis Description	Analysis Results	CSU +/- 2 s	MDA	DLC	CRDL	Qual	Analysis Units	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
Th-232	8.452E-8	4.707E-8	1.762E-8	0.000	1.4E-08		uCi/filter	05/27/23 3:49		60.6%

**Analysis Method:** EPA 901.1M

**ABatch Sample ID:** ARS1-B23-00824-08

Analysis Description	Analysis Results	CSU +/- 2 s	MDA	DLC	CRDL	Qual	Analysis Units	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
Ac-228	4.126E-6	2.116E-6	2.987E-6	1.494E-6	NP		uCi/filter	05/12/23 15:44		N/A
Co-60	-1.381E-7	9.817E-7	1.011E-6	5.055E-7	0.00024	U	uCi/filter	05/12/23 15:44		N/A
Cs-137	3.512E-7	7.528E-7	8.429E-7	4.215E-7	0.00048	U	uCi/filter	05/12/23 15:44		N/A
Ra-226	-6.669E-6	1.594E-5	1.547E-5	7.735E-6	4.4E-06	U	uCi/filter	05/12/23 15:44		N/A
Ra-228	4.126E-6	2.116E-6	2.987E-6	1.494E-6	NP		uCi/filter	05/12/23 15:44		N/A

**Analysis Method:** Eichrom SRW01

**ABatch Sample ID:** ARS1-B23-00875-08

Analysis Description	Analysis Results	CSU +/- 2 s	MDA	DLC	CRDL	Qual	Analysis Units	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
SR-90	2.416E-6	2.274E-6	3.672E-6	1.692E-6	2.4E-05	U	uCi/filter	05/30/23 12:44		99.8%



**ARS Sample Delivery Group:** ARS1-23-00968  
**Client Sample ID:** MSC01-042423  
**Sample Collection Date:** 04/27/23 14:29  
**Sample Matrix:** Air Filter  
**Percent Solids:** N/A

**Request or PO Number:** Parcel C Air Monitoring RAD  
**ARS Sample ID:** ARS1-23-00968-002  
**Date Received:** 05/03/23  
**Report Date:** 06/02/23

## Radiochemistry

**Analysis Method:** Eichrom ACW03

**ABatch Sample ID:** ARS1-B23-00874-09

Analysis Description	Analysis Results	CSU +/- 2 s	MDA	DLC	CRDL	Qual	Analysis Units	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
Pu-239/240	2.729E-8	4.914E-8	8.663E-8	3.592E-8	4.8E-08	U	uCi/filter	06/01/23 2:42		80.7%

**Analysis Method:** Eichrom ACW10

**ABatch Sample ID:** ARS1-B23-00873-08

Analysis Description	Analysis Results	CSU +/- 2 s	MDA	DLC	CRDL	Qual	Analysis Units	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
Th-232	5.336E-8	4.834E-8	7.123E-8	2.758E-8	1.4E-08	U	uCi/filter	05/27/23 3:49		74.3%

**Analysis Method:** EPA 901.1M

**ABatch Sample ID:** ARS1-B23-00824-09

Analysis Description	Analysis Results	CSU +/- 2 s	MDA	DLC	CRDL	Qual	Analysis Units	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
Co-60	2.681E-7	7.896E-7	8.103E-7	4.052E-7	0.00024	U	uCi/filter	05/12/23 15:36		N/A
Cs-137	-1.250E-7	6.694E-7	7.278E-7	3.639E-7	0.00048	U	uCi/filter	05/12/23 15:36		N/A
Pb-210	5.743E-6	3.607E-6	5.488E-6	2.744E-6	NP		uCi/filter	05/12/23 15:36		N/A
Ra-226	-4.078E-6	7.720E-6	9.704E-6	4.852E-6	4.4E-06	U	uCi/filter	05/12/23 15:36		N/A

**Analysis Method:** Eichrom SRW01

**ABatch Sample ID:** ARS1-B23-00875-09

Analysis Description	Analysis Results	CSU +/- 2 s	MDA	DLC	CRDL	Qual	Analysis Units	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
SR-90	7.522E-7	2.195E-6	3.846E-6	1.781E-6	2.4E-05	U	uCi/filter	05/30/23 12:44		97.3%



**ARS Sample Delivery Group:** ARS1-23-00968  
**Client Sample ID:** MSC02-042423  
**Sample Collection Date:** 04/27/23 14:14  
**Sample Matrix:** Air Filter  
**Percent Solids:** N/A

**Request or PO Number:** Parcel C Air Monitoring RAD  
**ARS Sample ID:** ARS1-23-00968-003  
**Date Received:** 05/03/23  
**Report Date:** 06/02/23

## Radiochemistry

**Analysis Method:** Eichrom ACW03

**ABatch Sample ID:** ARS1-B23-00874-10

Analysis Description	Analysis Results	CSU +/- 2 s	MDA	DLC	CRDL	Qual	Analysis Units	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
Pu-239/240	-1.105E-8	4.053E-8	8.765E-8	3.634E-8	4.8E-08	U	uCi/filter	06/01/23 2:43		70.7%

**Analysis Method:** Eichrom ACW10

**ABatch Sample ID:** ARS1-B23-00873-09

Analysis Description	Analysis Results	CSU +/- 2 s	MDA	DLC	CRDL	Qual	Analysis Units	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
Th-232	5.902E-8	5.499E-8	7.242E-8	2.288E-8	1.4E-08	U	uCi/filter	05/27/23 3:49		39.7%

**Analysis Method:** EPA 901.1M

**ABatch Sample ID:** ARS1-B23-00824-10

Analysis Description	Analysis Results	CSU +/- 2 s	MDA	DLC	CRDL	Qual	Analysis Units	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
Ac-228	6.043E-6	2.206E-6	2.607E-6	1.304E-6	NP		uCi/filter	05/15/23 14:43		N/A
Co-60	4.300E-7	8.157E-7	8.884E-7	4.442E-7	0.00024	U	uCi/filter	05/15/23 14:43		N/A
Cs-137	6.348E-7	4.695E-7	6.751E-7	3.376E-7	0.00048	U	uCi/filter	05/15/23 14:43		N/A
Ra-226	-1.223E-5	1.477E-5	1.531E-5	7.655E-6	4.4E-06	U	uCi/filter	05/15/23 14:43		N/A
Ra-228	6.043E-6	2.206E-6	2.607E-6	1.304E-6	NP		uCi/filter	05/15/23 14:43		N/A

**Analysis Method:** Eichrom SRW01

**ABatch Sample ID:** ARS1-B23-00875-10

Analysis Description	Analysis Results	CSU +/- 2 s	MDA	DLC	CRDL	Qual	Analysis Units	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
SR-90	1.247E-6	2.065E-6	3.521E-6	1.629E-6	2.4E-05	U	uCi/filter	05/30/23 12:44		102%



# **ARS Aleut Analytical, LLC Analytical Reports**

**for**

## **GES-AIS, LLC**

## **QC Summary**



### QC Sample Results

**Analytical Batch:** ARS1-B23-00824  
**Lab Sample ID:** ARS1-B23-00824-01  
**Method:** EPA 901.1M

**Sample Type:** LCS  
**Matrix:** Air Filter  
**Analysis Date:** 05/11/23 13:50

Analyte	Spike Added	Analysis Result	Qual	Analysis Units	% Rec	% Rec Limits
Am-241	33.065	31.836		uCi/filter	96.3	75 - 125
Co-60	20.928	21.884		uCi/filter	104.6	75 - 125
Cs-137	12.996	13.460		uCi/filter	103.6	75 - 125



### QC Sample Results

**Analytical Batch:** ARS1-B23-00824

**Lab Sample ID:** ARS1-B23-00824-02

**Method:** EPA 901.1M

**Sample Type:** LCSD

**Matrix:** Air Filter

**Analysis Date:** 05/11/23 14:21

Analyte	Spike Added	Analysis Result	Qual	Analysis Units	% Rec	% Rec Limits	RPD	RPD Limit	DER	DER Limit
Am-241	33.065	31.899		uCi/filter	96.5	75 - 125	0.2	25	0.035	3
Co-60	20.928	21.724		uCi/filter	103.8	75 - 125	0.7	25	0.190	3
Cs-137	12.996	13.256		uCi/filter	102.0	75 - 125	1.5	25	0.397	3



### QC Sample Results

**Analytical Batch:** ARS1-B23-00824  
**Lab Sample ID:** ARS1-B23-00824-03  
**Method:** EPA 901.1M

**Sample Type:** MBL  
**Matrix:** Air Filter  
**Analysis Date:** 05/10/23 14:36

Analyte	Analysis Result	CSU +/- 2 s	MDA	DLC	Qual	Analysis Units
Ac-228	-0.004	0.006	0.006	0.003	U	uCi/filter
Am-241	-5.073E-4	0.001	0.002	0.001	U	uCi/filter
Bi-212	0.006	0.010	0.011	0.006	U	uCi/filter
Bi-214	5.423E-4	0.004	0.003	0.002	U	uCi/filter
Co-60	4.531E-4	0.002	0.002	7.950E-4	U	uCi/filter
Cs-137	-7.674E-4	0.002	0.002	8.400E-4	U	uCi/filter
Eu-152	4.158E-4	0.001	0.002	8.450E-4	U	uCi/filter
Eu-154	5.099E-4	0.001	0.001	6.700E-4	U	uCi/filter
K-40	-0.024	0.027	0.025	0.012	U	uCi/filter
Pa-234	-7.709E-4	0.002	0.002	0.001	U	uCi/filter
Pb-210	-0.002	0.015	0.017	0.008	U	uCi/filter
Pb-212	-0.001	0.002	0.002	0.001	U	uCi/filter
Pb-214	-0.001	0.003	0.003	0.002	U	uCi/filter
Ra-226	-0.071	0.025	0.031	0.015	U	uCi/filter
Ra-228	-0.004	0.006	0.006	0.003	U	uCi/filter
Th-234	0.007	0.016	0.017	0.008	U	uCi/filter
Tl-208	-0.001	0.002	0.002	8.550E-4	U	uCi/filter
U-235	-0.003	0.006	0.007	0.003	U	uCi/filter
U-238	0.007	0.016	0.017	0.008	U	uCi/filter





### QC Association Summary

**ARS Sample Delivery Group:** ARS1-23-00968

**Analytical Batch:** ARS1-B23-00824

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

Batch Sample ID	Lab Sample ID	Client Sample ID	Matrix	Method	Prep Method
ARS1-B23-00824-01		Lab Control Sample	Air Filter	EPA 901.1M	N/A
ARS1-B23-00824-02		Lab Control Sample Duplicate	Air Filter	EPA 901.1M	N/A
ARS1-B23-00824-03		Method Blank	Air Filter	EPA 901.1M	N/A
ARS1-B23-00824-08	ARS1-23-00968-001	FBC-042423	Air Filter	EPA 901.1M	N/A
ARS1-B23-00824-09	ARS1-23-00968-002	MSC01-042423	Air Filter	EPA 901.1M	N/A
ARS1-B23-00824-10	ARS1-23-00968-003	MSC02-042423	Air Filter	EPA 901.1M	N/A



### QC Sample Results

**Analytical Batch:** ARS1-B23-00873

**Lab Sample ID:** ARS1-B23-00873-01

**Method:** Eichrom ACW10

**Sample Type:** LCS

**Matrix:** Air Filter

**Analysis Date:** 05/27/23 3:49

Analyte	Spike Added	Analysis Result	Qual	Analysis Units	% Rec	% Rec Limits
Th-230	5.314E-6	5.652E-6		uCi/filter	106.4	75 - 125



### QC Sample Results

**Analytical Batch:** ARS1-B23-00873

**Lab Sample ID:** ARS1-B23-00873-02

**Method:** Eichrom ACW10

**Sample Type:** LCSD

**Matrix:** Air Filter

**Analysis Date:** 05/27/23 3:49

Analyte	Spike Added	Analysis Result	Qual	Analysis Units	% Rec	% Rec Limits	RPD	RPD Limit	DER	DER Limit
Th-230	5.253E-6	5.764E-6		uCi/filter	109.7	75 - 125	2.0	25	0.212	3



### QC Sample Results

**Analytical Batch:** ARS1-B23-00873

**Lab Sample ID:** ARS1-B23-00873-03

**Method:** Eichrom ACW10

**Sample Type:** MBL

**Matrix:** Air Filter

**Analysis Date:** 05/27/23 3:49

Analyte	Analysis Result	CSU +/- 2 s	MDA	DLC	Qual	Analysis Units
Th-228	2.008E-7	1.983E-7	3.151E-7	1.349E-7	U	uCi/filter
Th-230	8.305E-8	1.631E-7	2.894E-7	1.222E-7	U	uCi/filter
Th-232	-3.316E-8	4.613E-8	1.540E-7	5.454E-8	U	uCi/filter



### QC Association Summary

**ARS Sample Delivery Group:** ARS1-23-00968

**Analytical Batch:** ARS1-B23-00873

**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-B23-00873-01		Lab Control Sample	Air Filter	Eichrom ACW10	N/A
ARS1-B23-00873-02		Lab Control Sample Duplicate	Air Filter	Eichrom ACW10	N/A
ARS1-B23-00873-03		Method Blank	Air Filter	Eichrom ACW10	N/A
ARS1-B23-00873-07	ARS1-23-00968-001	FBC-042423	Air Filter	Eichrom ACW10	N/A
ARS1-B23-00873-08	ARS1-23-00968-002	MSC01-042423	Air Filter	Eichrom ACW10	N/A
ARS1-B23-00873-09	ARS1-23-00968-003	MSC02-042423	Air Filter	Eichrom ACW10	N/A



### QC Sample Results

**Analytical Batch:** ARS1-B23-00874

**Lab Sample ID:** ARS1-B23-00874-01

**Method:** Eichrom ACW03

**Sample Type:** LCS

**Matrix:** Air Filter

**Analysis Date:** 06/01/23 2:42

Analyte	Spike Added	Analysis Result	Qual	Analysis Units	% Rec	% Rec Limits
Pu-239/240	7.838E-6	7.688E-6		uCi/filter	98.1	75 - 125



### QC Sample Results

**Analytical Batch:** ARS1-B23-00874

**Lab Sample ID:** ARS1-B23-00874-02

**Method:** Eichrom ACW03

**Sample Type:** LCSD

**Matrix:** Air Filter

**Analysis Date:** 06/01/23 2:42

Analyte	Spike Added	Analysis Result	Qual	Analysis Units	% Rec	% Rec Limits	RPD	RPD Limit	DER	DER Limit
Pu-239/240	7.768E-6	7.054E-6		uCi/filter	90.8	75 - 125	8.6	25	0.949	3



### QC Sample Results

**Analytical Batch:** ARS1-B23-00874

**Lab Sample ID:** ARS1-B23-00874-03

**Method:** Eichrom ACW03

**Sample Type:** MBL

**Matrix:** Air Filter

**Analysis Date:** 06/01/23 2:43

Analyte	Analysis Result	CSU +/- 2 s	MDA	DLC	Qual	Analysis Units
Pu-238	-3.062E-8	6.474E-8	1.341E-7	5.874E-8	U	uCi/filter
Pu-239/240	-3.674E-8	6.588E-8	1.375E-7	6.043E-8	U	uCi/filter





### QC Association Summary

**ARS Sample Delivery Group:** ARS1-23-00968

**Analytical Batch:** ARS1-B23-00874

**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-B23-00874-01		Lab Control Sample	Air Filter	Eichrom ACW03	N/A
ARS1-B23-00874-02		Lab Control Sample Duplicate	Air Filter	Eichrom ACW03	N/A
ARS1-B23-00874-03		Method Blank	Air Filter	Eichrom ACW03	N/A
ARS1-B23-00874-08	ARS1-23-00968-001	FBC-042423	Air Filter	Eichrom ACW03	N/A
ARS1-B23-00874-09	ARS1-23-00968-002	MSC01-042423	Air Filter	Eichrom ACW03	N/A
ARS1-B23-00874-10	ARS1-23-00968-003	MSC02-042423	Air Filter	Eichrom ACW03	N/A



### QC Sample Results

**Analytical Batch:** ARS1-B23-00875

**Lab Sample ID:** ARS1-B23-00875-01

**Method:** Eichrom SRW01

**Sample Type:** LCS

**Matrix:** Air Filter

**Analysis Date:** 05/30/23 12:44

Analyte	Spike Added	Analysis Result	Qual	Analysis Units	% Rec	% Rec Limits
SR-90	2.033E-5	1.940E-5		uCi/filter	95.4	75 - 125



### QC Sample Results

**Analytical Batch:** ARS1-B23-00875

**Lab Sample ID:** ARS1-B23-00875-02

**Method:** Eichrom SRW01

**Sample Type:** LCSD

**Matrix:** Air Filter

**Analysis Date:** 05/30/23 12:44

Analyte	Spike Added	Analysis Result	Qual	Analysis Units	% Rec	% Rec Limits	RPD	RPD Limit	DER	DER Limit
SR-90	2.027E-5	1.975E-5		uCi/filter	97.4	75 - 125	1.8	25	0.159	3



### QC Sample Results

**Analytical Batch:** ARS1-B23-00875  
**Lab Sample ID:** ARS1-B23-00875-03  
**Method:** Eichrom SRW01

**Sample Type:** MBL  
**Matrix:** Air Filter  
**Analysis Date:** 05/30/23 12:44

Analyte	Analysis Result	CSU +/- 2 s	MDA	DLC	Qual	Analysis Units
SR-90	1.950E-6	2.635E-6	4.424E-6	2.047E-6	U	uCi/filter



### QC Association Summary

**ARS Sample Delivery Group:** ARS1-23-00968

**Analytical Batch:** ARS1-B23-00875

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

Batch Sample ID	Lab Sample ID	Client Sample ID	Matrix	Method	Prep Method
ARS1-B23-00875-01		Lab Control Sample	Air Filter	Eichrom SRW01	N/A
ARS1-B23-00875-02		Lab Control Sample Duplicate	Air Filter	Eichrom SRW01	N/A
ARS1-B23-00875-03		Method Blank	Air Filter	Eichrom SRW01	N/A
ARS1-B23-00875-08	ARS1-23-00968-001	FBC-042423	Air Filter	Eichrom SRW01	N/A
ARS1-B23-00875-09	ARS1-23-00968-002	MSC01-042423	Air Filter	Eichrom SRW01	N/A
ARS1-B23-00875-10	ARS1-23-00968-003	MSC02-042423	Air Filter	Eichrom SRW01	N/A



# **ARS Aleut Analytical, LLC Analytical Reports**

**for**

# **GES-AIS, LLC**

# **Batch QC**



## QC Results per Analytical Batch

Analytical Batch	<b>ARS1-B23-00824</b>
SDG	<b>ARS1-23-00968</b>
Analysis	Gamma Spec (Short) in (Air Filters, Smears [AF])
Method	<b>EPA 901.1M</b>
Analysis Code	<b>GAM-A-AF</b>
Report Units	<b>uCi/filter</b>

### 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	05/11/23 13:50	Analysis Technician	█	
Analysis Batch Sample ID	QC Type	Analyte	Results	CSU (2s)	Expected Value	LCS Rec (%)	MDA
ARS1-B23-00824-01	LCS	AM-241	31.836	2.473	33.065	96.3	0.118
ARS1-B23-00824-01	LCS	CO-60	21.884	1.167	20.928	104.6	0.392
ARS1-B23-00824-01	LCS	CS-137	13.460	0.717	12.996	103.6	0.070

Duplicate RER/DER/RPD			Analysis Date	05/11/23 14:21	Analysis Technician	█
Analyte	Results LCS	CSU LCS (2s)	Results LCSD	CSU LCSD (2s)	DER	RPD
AM-241	31.836	2.473	31.899	2.478	0.035	0.2
CO-60	21.884	1.167	21.724	1.164	0.190	0.7
CS-137	13.460	0.717	13.256	0.706	0.397	1.5

Method Blank			Analysis Date	05/10/23 14:36	Analysis Technician	█
Analysis Batch Sample ID	QC Type	Analyte	Results	CSU (2s)	MDA	Qual
ARS1-B23-00824-03	MBL	AC-228	-0.004	0.006	0.006	U
ARS1-B23-00824-03	MBL	AM-241	-5.073E-4	0.001	0.002	U
ARS1-B23-00824-03	MBL	BI-212	0.006	0.010	0.011	U
ARS1-B23-00824-03	MBL	BI-214	5.423E-4	0.004	0.003	U
ARS1-B23-00824-03	MBL	CO-60	4.531E-4	0.002	0.002	U
ARS1-B23-00824-03	MBL	CS-137	-7.674E-4	0.002	0.002	U
ARS1-B23-00824-03	MBL	EU-152	4.158E-4	0.001	0.002	U
ARS1-B23-00824-03	MBL	EU-154	5.099E-4	0.001	0.001	U
ARS1-B23-00824-03	MBL	K-40	-0.024	0.027	0.025	U
ARS1-B23-00824-03	MBL	PA-234	-7.709E-4	0.002	0.002	U
ARS1-B23-00824-03	MBL	PB-210	-0.002	0.015	0.017	U
ARS1-B23-00824-03	MBL	PB-212	-0.001	0.002	0.002	U
ARS1-B23-00824-03	MBL	PB-214	-0.001	0.003	0.003	U
ARS1-B23-00824-03	MBL	RA-226	-0.071	0.025	0.031	U
ARS1-B23-00824-03	MBL	RA-228	-0.004	0.006	0.006	U
ARS1-B23-00824-03	MBL	TH-234	0.007	0.016	0.017	U
ARS1-B23-00824-03	MBL	TL-208	-0.001	0.002	0.002	U
ARS1-B23-00824-03	MBL	U-235	-0.003	0.006	0.007	U
ARS1-B23-00824-03	MBL	U-238	0.007	0.016	0.017	U



## QC Results per Analytical Batch

Analytical Batch	<b>ARS1-B23-00873</b>
SDG	<b>ARS1-23-00968</b>
Analysis	Thorium in (Air Filters, Smears, Leak Test [AF, SM, LT])
Method	<b>Eichrom ACW10</b>
Analysis Code	<b>ASP-TH-AF</b>
Report Units	<b>uCi/filter</b>

### 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	05/27/23 03:49	Analysis Technician	
Analysis Batch Sample ID	QC Type	Analyte	Results	CSU (2s)	Expected Value	LCS Rec (%)	MDA
ARS1-B23-00873-01	LCS	TH-230	5.652E-6	7.130E-7	5.314E-6	106.4	3.185E-8

Duplicate RER/DER/RPD				Analysis Date	05/27/23 03:49	Analysis Technician	
Analyte	Results LCS	CSU LCS (2s)	Results LCSD	CSU LCSD (2s)	DER	RPD	
TH-230	5.652E-6	7.130E-7	5.764E-6	7.435E-7	0.212	2.0	

Method Blank				Analysis Date	05/27/23 03:49	Analysis Technician	
Analysis Batch Sample ID	QC Type	Analyte	Results	CSU (2s)	MDA	Qual	
ARS1-B23-00873-03	MBL	TH-228	2.008E-7	1.983E-7	3.151E-7	U	
ARS1-B23-00873-03	MBL	TH-230	8.305E-8	1.631E-7	2.894E-7	U	
ARS1-B23-00873-03	MBL	TH-232	-3.316E-8	4.613E-8	1.540E-7	U	





## QC Results per Analytical Batch

Analytical Batch	<b>ARS1-B23-00874</b>
SDG	<b>ARS1-23-00968</b>
Analysis	Plutonium (239, 240Pu) in (Air Filters, Smears, Leak Test [AF, SM, LT])
Method	<b>Eichrom ACW03</b>
Analysis Code	<b>ASP-PU239-AF</b>
Report Units	<b>uCi/filter</b>

### 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	06/01/23 02:42	Analysis Technician	
Analysis Batch Sample ID	QC Type	Analyte	Results	CSU (2s)	Expected Value	LCS Rec (%)	MDA
ARS1-B23-00874-01	LCS	PU-239/240	7.688E-6	9.608E-7	7.838E-6	98.1	6.972E-8

Duplicate RER/DER/RPD				Analysis Date	06/01/23 02:42	Analysis Technician	
Analyte	Results LCS	CSU LCS (2s)	Results LCSD	CSU LCSD (2s)	DER	RPD	
PU-239/240	7.688E-6	9.608E-7	7.054E-6	8.892E-7	0.949	8.6	

Method Blank				Analysis Date	06/01/23 02:43	Analysis Technician	
Analysis Batch Sample ID	QC Type	Analyte	Results	CSU (2s)	MDA	Qual	
ARS1-B23-00874-03	MBL	PU-238	-3.062E-8	6.474E-8	1.341E-7	U	
ARS1-B23-00874-03	MBL	PU-239/240	-3.674E-8	6.588E-8	1.375E-7	U	



## QC Results per Analytical Batch

Analytical Batch	<b>ARS1-B23-00875</b>
SDG	<b>ARS1-23-00968</b>
Analysis	Strontium-90 in (Air Filters, Smears [AF])
Method	<b>Eichrom SRW01</b>
Analysis Code	<b>GPC-SR90-AF</b>
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	05/30/23 12:44	Analysis Technician	
Analysis Batch Sample ID	QC Type	Analyte	Results	CSU (2s)	Expected Value	LCS Rec (%)	MDA
ARS1-B23-00875-01	LCS	SR-90	1.940E-5	2.990E-6	2.033E-5	95.4	4.312E-7

Duplicate RER/DER/RPD				Analysis Date	05/30/23 12:44	Analysis Technician	
Analyte	Results LCS	CSU LCS (2s)	Results LCSD	CSU LCSD (2s)	DER	RPD	
SR-90	1.940E-5	2.990E-6	1.975E-5	3.041E-6	0.159	1.8	

Method Blank				Analysis Date	05/30/23 12:44	Analysis Technician	
Analysis Batch Sample ID	QC Type	Analyte	Results	CSU (2s)	MDA	Qual	
ARS1-B23-00875-03	MBL	SR-90	1.950E-6	2.635E-6	4.424E-6	U	



# **ARS Aleut Analytical, LLC Analytical Reports**

**for**

# **GES-AIS, LLC**

# **Sample Management Records**

**CHAIN-OF-CUSTODY  
RECORD**

Gilbane Federal  
1501 W Fountainhead Parkway, Suite 550, Tempe, Arizona 85282

COC # █050223RADC



Project Name: Hunters Point Shipyard, Parcel C Removal Site Evaluation	Laboratory: ARS Aleut Analytical (AAA), Port Allen, LA	Event: Parcel C Air Monitoring RAD
Project Number: J31000600	POC: █	
WBS Code: J31000600	Ship to: 2609 North River Road, Port Allen, LA 70767-3469	

Comments:	Analytical Test Method E9011 - Gamma Spec. RC0240 - Pu and Th Isotopes SR02RC - Sr90	Code Matrix	
		A Air	
Equipment:		AQ Air Quality Control Matrix	
		Code Container/Preservative	
		5 1x 1-L Plastic, HNO3, pH < 2	
		15 1x 250-mL Plastic, 4 Degrees C	

Event: Parcel C Air Monitoring RAD														
Sample ID	Matrix	Date	Time	Samp Init.				Location ID	Sample Type	Depth (ft bgs)	Cooler	Comments		
1	FBC-042423	AQ	04/24/2023	0800	█	X	X	X	FIELDQC	FB2	0.00	0.00	1	
2	MSC01-042423	A	04/27/2023	1429	█	X	X	X	MSC01	N1	0.00	0.00	1	
3	MSC02-042423	A	04/27/2023	1414	█	X	X	X	MSC02	N1	0.00	0.00	1	

Turnaround Time: 28 days

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time	Shipping Date / Carrier / Airbill Number
█	5/2/23	1400	Fedex	5/2/23	1400	Shipping Date: 5/2/2023 / FEDEX / 7718 7207 1440
			█	5-3-23	1500	
						Received by Laboratory: (Signature, Date, Time) & condition



Procedures: GES-003 / EPA 900.0M

Start Date: 4/24/23  
Stop Date: 4/27/23

File ID Number: MSC223RADC

Field Entry

Station	Sample ID	Date In	Time In	Date Out	Time Out	Initial Flow Rate (LPM)	Final Flow Rate (LPM)	Flow volume Cu M	Julian Date for Out	Total Run Time (Days)	Total Run Time (Hours)	Total Run Time (Minutes)	Average Flow Rate (LPM)	Initial Flow Rate (CFM)	Final Flow Rate (CFM)	Average Flow Rate (CFM)	Average Flow Rate (Cu M/h)	Flow Rate (Cu M/min)	Total Flow (L)
1	MSC01-042423	4/24/2023	8:00	4/24/2023	8:00			293.2	117	3.39	81.43	4886.0	60	2.11888	2.11888	2.11888	3.6	0.06	293,160
2	MSC02-042423	04/24/23	5:18	04/27/23	14:14	14.28	60	291.7	117	3.38	81.02	4861.0	60	2.11888	2.11888	2.11888	3.6	0.06	291,690

**FORMULAS**  
 Number of Days = (Date Out + Time Out) minus (Date In + Time In)  
 Number of Minutes = # of Days X 24hr X 60min  
 Flow Rate (m3/h) = Flow Rate (CFM) x 60min x (12in x 2.54cm/in / 100cm/min)<sup>3</sup>  
 Mid-Sample Date/Time = ((Date + Time Out) + (Date + Time In)) / 2  
 Flow Rate (Cu M/min) = CFM X 0.0283168466 Cu MCF  
 Flow Rate (LPM) = Cu M X 1000  
 Total Flow (L) = LPM X Total Minutes

### SDG Report - Samples and Containers

SDG Specific Data							
<b>SDG</b>	<b>ARS1-23-00968</b>			<b>TAT Days</b>	<b>28 Calendar Days</b>	<b>Project Type</b>	<b>Environmental</b>
<b>Sample Count</b>	<b>3</b>	<b>Rpt Level</b>	<b>4</b>	<b>Date Received</b>	<b>05/03/2023</b>	<b>COC Number</b>	<b>050223RADC</b>
<b>Client</b>	<b>GES-AIS, LLC</b>			<b>Discrepancy Resol</b>	<b>N/A</b>	<b>PO Number</b>	<b>Parcel C Air Monitoring RAD</b>
<b>Client Code</b>	<b>1138</b>			<b>Client Deadline</b>	<b>06/01/2023</b>	<b>Job Number</b>	<b>J31000600</b>
<b>Profile Number</b>	<b>PN-01440</b>					<b>Job Location</b>	<b>Hunters Point Shipyard, Parcel C Removal Site Evaluation</b>
<b>Comment</b>							

Samples and Containers Checked In Thus Far									
FR	Name	Matrix	Start Date	End Date	Disp	Hold	Arch	Storage	Comments
001	FBC-042423	Air Filter	04/24/2023 07:59	04/24/2023 08:00	H	30	10	PrePrep	
	<b>IC_ID</b>	<b>Cnt</b>	<b>Container Type</b>	<b>AF Volume (L)</b>	<b>AF Units</b>		<b>Rate</b>	<b>Mins</b>	<b>Comments</b>
	436529	1	HDP Container	1	LPM			1	
			Mid-Sample Date:	04/24/2023 07:59	AF Volume (CuM):			0.001	
002	MSC01-042423	Air Filter	04/27/2023 14:28	04/27/2023 14:29	H	30	10	PrePrep	
	<b>IC_ID</b>	<b>Cnt</b>	<b>Container Type</b>	<b>AF Volume (L)</b>	<b>AF Units</b>		<b>Rate</b>	<b>Mins</b>	<b>Comments</b>
	436530	1	HDP Container	1	LPM			1	
			Mid-Sample Date:	04/27/2023 14:28	AF Volume (CuM):			0.001	
003	MSC02-042423	Air Filter	04/27/2023 14:13	04/27/2023 14:14	H	30	10	PrePrep	
	<b>IC_ID</b>	<b>Cnt</b>	<b>Container Type</b>	<b>AF Volume (L)</b>	<b>AF Units</b>		<b>Rate</b>	<b>Mins</b>	<b>Comments</b>
	436531	1	HDP Container	1	LPM			1	
			Mid-Sample Date:	04/27/2023 14:13	AF Volume (CuM):			0.001	

### SDG Report - Analysis Assignments

<b>SDG</b>	<b>ARS1-23-00968</b>	<b>Sample Count</b>	<b>3</b>
<b>Client</b>	<b>GES-AIS, LLC</b>	<b>Analysis Count</b>	<b>4-12</b>

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	3
ASP-TH-AF	Thorium in (Air Filters, Smears, Leak Test [AF, SM, LT])	I	3
GAM-A-AF	Gamma Spec (Short) in (Air Filters, Smears [AF])	I	3
GPC-SR90-AF	Strontium-90 in (Air Filters, Smears [AF])	I	3

Analyses Assigned Per Fraction		
Fraction	Analysis Code	X = Assigned
001	ASP-PU239-AF	<b>X</b>
001	ASP-TH-AF	<b>X</b>
001	GAM-A-AF	<b>X</b>
001	GPC-SR90-AF	<b>X</b>
002	ASP-PU239-AF	<b>X</b>
002	ASP-TH-AF	<b>X</b>
002	GAM-A-AF	<b>X</b>
002	GPC-SR90-AF	<b>X</b>
003	ASP-PU239-AF	<b>X</b>
003	ASP-TH-AF	<b>X</b>
003	GAM-A-AF	<b>X</b>
003	GPC-SR90-AF	<b>X</b>

**DQO Report for SDG**  
ARS1-23-00968

Client Name: GES-AIS, LLC

Profile Name: Parcel C 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							
	<b>Analyte</b>			<b>RDL</b>	<b>LCS LL/UL</b>	<b>MS LL/UL</b>	<b>RadY LL/UL</b>	<b>GravY LL/UL</b>	<b>RER</b>	<b>RPD</b>	<b>Surr LL/UL</b>	
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							
	<b>Analyte</b>			<b>RDL</b>	<b>LCS LL/UL</b>	<b>MS LL/UL</b>	<b>RadY LL/UL</b>	<b>GravY LL/UL</b>	<b>RER</b>	<b>RPD</b>	<b>Surr LL/UL</b>	
Th-232 (7440-29-1)				1.4E-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							
	<b>Analyte</b>			<b>RDL</b>	<b>LCS LL/UL</b>	<b>MS LL/UL</b>	<b>RadY LL/UL</b>	<b>GravY LL/UL</b>	<b>RER</b>	<b>RPD</b>	<b>Surr LL/UL</b>	
	Ac-228 (14331-83-0)				uCi/filter	75/125	60/140	30/110	30/110	1	25	N/A
	Am-241 (14596-10-2)				uCi/filter	75/125	60/140	30/110	30/110	1	25	N/A
	Bi-212 (14913-49-6)				uCi/filter	75/125	60/140	30/110	30/110	1	25	N/A
	Bi-214 (14733-03-0)				uCi/filter	75/125	60/140	30/110	30/110	1	25	N/A
	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
	Eu-152 (14683-23-9)				uCi/filter	75/125	60/140	30/110	30/110	1	25	N/A
	Eu-154 (15585-10-1)				uCi/filter	75/125	60/140	30/110	30/110	1	25	N/A
	K-40 (13966-00-2)				uCi/filter	75/125	60/140	30/110	30/110	1	25	N/A
	Pb-210 (14255-04-0)				uCi/filter	75/125	60/140	30/110	30/110	1	25	N/A
	Pb-212 (15092-94-1)				uCi/filter	75/125	60/140	30/110	30/110	1	25	N/A
	Pb-214 (15067-28-4)				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
Ra-228 (15262-20-1)				uCi/filter	75/125	60/140	30/110	30/110	1	25	N/A	
Th-234 (15065-10-8)				uCi/filter	75/125	60/140	30/110	30/110	1	25	N/A	
Tl-208 (14913-50-9)				uCi/filter	75/125	60/140	30/110	30/110	1	25	N/A	
U-235 (15117-96-1)				uCi/filter	75/125	60/140	30/110	30/110	1	25	N/A	
U-238 (7440-61-1)				uCi/filter	75/125	60/140	30/110	30/110	1	25	N/A	



GAM-A-AF	Pa-234 (15100-28-4)			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						
	<b>Analyte</b>			<b>RDL</b>	<b>LCS LL/UL</b>	<b>MS LL/UL</b>	<b>RadY LL/UL</b>	<b>GravY LL/UL</b>	<b>RER</b>	<b>RPD</b>	<b>Surr LL/UL</b>
	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
		<b>Group</b>		<b>Analyte</b>	
		Parcel C Rad Sampling		Pu-239/240	
ASP-PU239-AF	002	uCi	filter	N/A	1
		<b>Group</b>		<b>Analyte</b>	
		Parcel C Rad Sampling		Pu-239/240	
ASP-PU239-AF	003	uCi	filter	N/A	1
		<b>Group</b>		<b>Analyte</b>	
		Parcel C Rad Sampling		Pu-239/240	
ASP-TH-AF	001	uCi	filter	N/A	1
		<b>Group</b>		<b>Analyte</b>	
		Parcel C Rad Sampling		Th-232	
ASP-TH-AF	002	uCi	filter	N/A	1
		<b>Group</b>		<b>Analyte</b>	
		Parcel C Rad Sampling		Th-232	
ASP-TH-AF	003	uCi	filter	N/A	1
		<b>Group</b>		<b>Analyte</b>	
		Parcel C Rad Sampling		Th-232	
GAM-A-AF	001	uCi	filter	N/A	19
		<b>Group</b>		<b>Analyte</b>	
		Parcel C Rad Sampling		Ac-228	
		Parcel C Rad Sampling		Am-241	
		Parcel C Rad Sampling		Bi-212	
		Parcel C Rad Sampling		Bi-214	
		Parcel C Rad Sampling		Co-60	
		Parcel C Rad Sampling		Cs-137	
Parcel C Rad Sampling		Eu-152			

**DQO Report for SDG**  
ARS1-23-00968

GAM-A-AF	001	Parcel C Rad Sampling		Eu-154	
		Parcel C Rad Sampling		K-40	
		Parcel C Rad Sampling		Pa-234	
		Parcel C Rad Sampling		Pb-210	
		Parcel C Rad Sampling		Pb-212	
		Parcel C Rad Sampling		Pb-214	
		Parcel C Rad Sampling		Ra-226	
		Parcel C Rad Sampling		Ra-228	
		Parcel C Rad Sampling		Th-234	
		Parcel C Rad Sampling		Tl-208	
		Parcel C Rad Sampling		U-235	
		Parcel C Rad Sampling		U-238	
		GAM-A-AF	002	uCi	filter
<b>Group</b>				<b>Analyte</b>	
Parcel C Rad Sampling				Ac-228	
Parcel C Rad Sampling				Am-241	
Parcel C Rad Sampling				Bi-212	
Parcel C Rad Sampling				Bi-214	
Parcel C Rad Sampling				Co-60	
Parcel C Rad Sampling				Cs-137	
Parcel C Rad Sampling				Eu-152	
Parcel C Rad Sampling				Eu-154	
Parcel C Rad Sampling				K-40	
Parcel C Rad Sampling				Pa-234	
Parcel C Rad Sampling				Pb-210	
Parcel C Rad Sampling				Pb-212	
Parcel C Rad Sampling				Pb-214	
Parcel C Rad Sampling				Ra-226	
Parcel C Rad Sampling				Ra-228	
Parcel C Rad Sampling				Th-234	
Parcel C Rad Sampling				Tl-208	
Parcel C Rad Sampling				U-235	
Parcel C Rad Sampling		U-238			

**DQO Report for SDG**  
ARS1-23-00968

GAM-A-AF	003	uCi	filter	N/A	19	
		<b>Group</b>		<b>Analyte</b>		
		Parcel C Rad Sampling		Ac-228		
		Parcel C Rad Sampling		Am-241		
		Parcel C Rad Sampling		Bi-212		
		Parcel C Rad Sampling		Bi-214		
		Parcel C Rad Sampling		Co-60		
		Parcel C Rad Sampling		Cs-137		
		Parcel C Rad Sampling		Eu-152		
		Parcel C Rad Sampling		Eu-154		
		Parcel C Rad Sampling		K-40		
		Parcel C Rad Sampling		Pa-234		
		Parcel C Rad Sampling		Pb-210		
		Parcel C Rad Sampling		Pb-212		
		Parcel C Rad Sampling		Pb-214		
		Parcel C Rad Sampling		Ra-226		
		Parcel C Rad Sampling		Ra-228		
		Parcel C Rad Sampling		Th-234		
Parcel C Rad Sampling		Tl-208				
Parcel C Rad Sampling		U-235				
Parcel C Rad Sampling		U-238				
GPC-SR90-AF	001	uCi	filter	N/A	1	
		<b>Group</b>		<b>Analyte</b>		
Parcel C Rad Sampling		Sr-90				
GPC-SR90-AF	002	uCi	filter	N/A	1	
		<b>Group</b>		<b>Analyte</b>		
Parcel C Rad Sampling		Sr-90				
GPC-SR90-AF	003	uCi	filter	N/A	1	
		<b>Group</b>		<b>Analyte</b>		
Parcel C Rad Sampling		Sr-90				

# PALA Sample Receipt Inspection Form

Client Name: RES-AIS  
 SDG: ARS1-23-009108

Sample Custodian: [REDACTED] Survey Start Date: 5-3-23 Survey Start Time: 1530  
 Thermometer ID: E1054012261 Calibration Due Date: 1/12/24 pH Paper Lot# NA  
 Exposure Rate Meter + Probe Unit ID: 273629 Calibration Due Date: 9/13/23 Background: 4  $\mu$ R/hr  
 Count Rate Meter + Probe Unit ID: 268993 Calibration Due Date: 9/29/23 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 ( $\mu$ R/hr) (limit <500 $\mu$ R/hr)	Max External Swipe Counts (cpm)	Max Internal Swipe Counts (cpm)	ESC True Temps* ( $^{\circ}$ C)	TRAX Matrix ID (circle all that apply): (See Section 4.3 of SOP)
A: <u>71872071440</u>	<u>5</u>	<u>30</u>	<u>30</u>	<u>NA</u>	AQ WD WG WO
B: _____	_____	_____	_____	_____	WS WW SI UR
C: _____	_____	_____	_____	_____	SO OL BI VG
D: _____	_____	_____	_____	_____	WP SM <u>AF</u>
E: _____	_____	_____	_____	_____	
F: _____	_____	_____	_____	_____	

**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 relinquished/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:

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# PALA Sample Survey Form

Client Name: GES-AIS  
 SDG: ARS1-23-00908

Pipette ID: NA Tip Lot#: NA

Disposable pipette lot#: NA

Sample ID from Client on COC or Sample	ESC Letter	Sample Container Type	Approx. Fill Level (%)	pH < 2 is Acceptable		Acid Lot # or Ind container temp (°C)	Vol. of Acid Used (mL)	Acceptance Limits <100 cpm/cm
				pH As Rec'd	pH Adjusted			
<u>FBC-042423</u>	<u>A</u>	<u>Ziploc</u>	<u>25</u>	<u>NA</u>	<u>NA</u>	<u>NA</u>	<u>NA</u>	<u>30</u>
<u>MSC01 - ↓</u>	<u>↓</u>	<u>↓</u>	<u>↓</u>	<u>↓</u>	<u>↓</u>	<u>↓</u>	<u>↓</u>	<u>↓</u>
<u>MSC02 - ↓</u>	<u>↓</u>	<u>↓</u>	<u>↓</u>	<u>↓</u>	<u>↓</u>	<u>↓</u>	<u>↓</u>	<u>↓</u>

Sample Custodian: [REDACTED]

Survey End Date: 5-3-23 Survey/pH End Time: 1535

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).



FedEx Ship Manager - Print Your Label(s)

4/17/23, 9:36 AM

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

SHIP DATE: 25APR23  
ACTWGT: 1.00 LB  
CAD: 254128867/NET4610

BILL SENDER

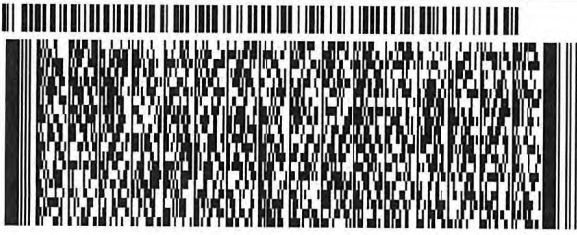
TO [REDACTED]  
**ARS ALEUT ANALYTICAL, LLC**  
**2609 NORTH RIVER ROAD**

**PORT ALLEN LA 70767**

(225) 381-2991  
INV:  
PO:

REF: J31000.600 02.04.05

DEPT:



**FedEx**  
Express



583.0378CF.FE2D

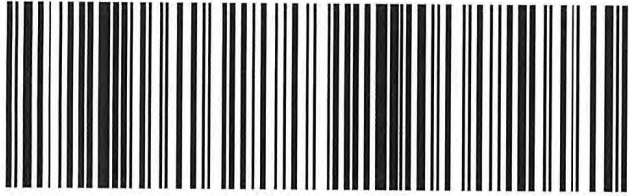
J232023946-01 UV

**WED - 26 APR 4:30P**  
**STANDARD OVERNIGHT**

TRK#  
0201 **7718 7207 1440**

**XN OPLA**

**70767**  
LA-US **MSY**



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

# ARS Aleut Analytical, LLC

## Laboratory Analytical Report

### ARS1-23-01023


GES-AIS, LLC



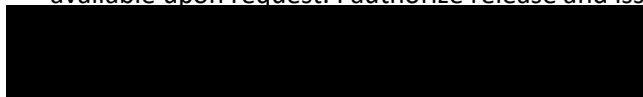
1501 West Fountainhead Parkway  
Suite 550  
Tempe, AZ 94520



COC Number: **050923RADC**  
PO Number: **Parcel C Air Monitoring RAD**  
Job Number: **J310000600**  
Job Location: **Hunters Point Shipyard, Parcel C Removal Site Evaluation**  
Project Name: **Parcel C Air Monitoring RAD**

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





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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	66780 (NPW) / 66781 (SHW)
Texas	T104704447-22-18
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.alcutfederal.com](mailto:QA@aaa.alcutfederal.com) for additional information.



# **ARS Aleut Analytical, LLC Analytical Reports**

**for**

# **GES-AIS, LLC**

# **Case Narrative**



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

Client Sample ID	ARS Aleut Analytical Sample ID
FBC-050123	ARS1-23-01023-001
MSC01-050123	ARS1-23-01023-002
MSC02-050123	ARS1-23-01023-003

Sample	Date Collected	Date Received	Analysis	Basis	Prep Date/Time	Analysis Date/Time
001	05/01/23 08:00	05/10/23	ASP-PU239-AF	As Received	05/26/23 09:22	06/01/23 02:43
001	05/01/23 08:00	05/10/23	ASP-TH-AF	As Received	05/23/23 14:37	05/27/23 03:49
001	05/01/23 08:00	05/10/23	GAM-A-AF	As Received	NA	05/15/23 14:52
001	05/01/23 08:00	05/10/23	GPC-SR90-AF	As Received	05/26/23 09:22	05/30/23 12:44
002	05/04/23 15:21	05/10/23	ASP-PU239-AF	As Received	05/26/23 09:22	06/01/23 02:43
002	05/04/23 15:21	05/10/23	ASP-TH-AF	As Received	05/23/23 14:37	05/27/23 03:49
002	05/04/23 15:21	05/10/23	GAM-A-AF	As Received	NA	05/15/23 15:36
002	05/04/23 15:21	05/10/23	GPC-SR90-AF	As Received	05/26/23 09:22	05/30/23 12:44
003	05/04/23 15:10	05/10/23	ASP-PU239-AF	As Received	05/26/23 09:22	06/01/23 02:43
003	05/04/23 15:10	05/10/23	ASP-TH-AF	As Received	05/23/23 14:37	05/27/23 03:49
003	05/04/23 15:10	05/10/23	GAM-A-AF	As Received	NA	05/17/23 14:07
003	05/04/23 15:10	05/10/23	GPC-SR90-AF	As Received	05/26/23 09:22	05/30/23 12:44

**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)"**.

Ac-228, Am-241, Bi-212, Bi-214, Co-60, Cs-137, Eu-152, Eu-154, K-40, Pa-234, Pb-210, Pb-212, Pb-214, Ra-226, Ra-228, Th-234, Tl-208, U-235, and U-238 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)"**.

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-B23-00873 MBL tracer recovery values are outside limits of 30%-110%. The tracer recoveries, though biased, are used in the final calculation of the calculated result, which passed QC criteria.

Fraction 001 in batch ARS1-B23-00874 has elevated MDA for Pu-239/240 with ACT of 0.000 uCi/filter, MDA of 7.986E-8 uCi/filter and CRDL of 4.8E-08 uCi/filter.

Fraction 001 in batch ARS1-B23-00873 has elevated MDA for Th-232 with ACT of 2.384E-8 uCi/filter, MDA of 6.418E-8 uCi/filter and CRDL of 1.4E-08 uCi/filter.

Fraction 001 in batch ARS1-B23-00841 has elevated MDA for Ra-226 with ACT of -3.442E-6 uCi/filter, MDA of 1.521E-5 uCi/filter and CRDL of 4.4E-06 uCi/filter.

Fraction 002 in batch ARS1-B23-00874 has elevated MDA for Pu-239/240 with ACT of -5.301E-9 uCi/filter, MDA of 9.980E-8 uCi/filter and CRDL of 4.8E-08 uCi/filter.

Fraction 002 in batch ARS1-B23-00873 has elevated MDA for Th-232 with ACT of 3.916E-8 uCi/filter, MDA of 7.275E-8 uCi/filter and CRDL of 1.4E-08 uCi/filter.

Fraction 002 in batch ARS1-B23-00841 has elevated MDA for Ra-226 with ACT of 3.297E-7 uCi/filter, MDA of 9.740E-6 uCi/filter and CRDL of 4.4E-06 uCi/filter.

Fraction 003 in batch ARS1-B23-00874 has elevated MDA for Pu-239/240 with ACT of 4.513E-8 uCi/filter, MDA of 1.099E-7 uCi/filter and CRDL of 4.8E-08 uCi/filter.

Fraction 003 in batch ARS1-B23-00841 has elevated MDA for Ra-226 with ACT of -7.143E-5 uCi/filter, MDA of 3.032E-5 uCi/filter and CRDL of 4.4E-06 uCi/filter.

ARS1-B23-00873: ROI's adjusted to better fit the peaks of interest.

ARS1-B23-00874: ROI's adjusted to better fit the peaks of interest.

# Notes (Case Narrative)

## Definitions:

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

## Data Qualifiers:

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

## Radiochemistry Comments:

- 1.0) All MDA/MDC values are calculated on a sample specific basis.
- 2.0) Data in this report are within the limits of uncertainty specified in the reference method unless otherwise specified.
- 3.0) Total activity is actually total gamma activity and is determined utilizing the prominent gamma emitters from the naturally occurring radioactive decay chains and other prominent radioactive nuclides. Total activity may be lower than the actual total activity due to the extent of secular equilibrium achieved in the various decay chains at the time of analysis. The total activity is not representative of nuclides that emit solely alpha or beta particles.
- 4.0) Ra-226 after ingrowth is determined via secular equilibrium with its daughter, Bismuth 214 (Gamma Spectroscopy only).
- 5.0) Ra-228 is determined via secular equilibrium with its daughter, Actinium 228 (Gamma Spectroscopy only).
- 6.0) U-238 is determined via secular equilibrium with its daughter, Thorium 234 (Gamma Spectroscopy only).
- 7.0) All gamma spectroscopy was performed utilizing high purity germanium detectors (HPGe).
- 8.0) 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).
- 9.0) Gamma spectroscopy results are calculated values based on the **ORTEC®** GammaVision ENV32 Analysis Engine.
- 10.0) 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, Eichrom ACW16, HASL 300 Se-03, HASL 300 Am-03); Neptunium 237 (Eichrom ACW16); Plutonium 238, Plutonium 239/240, Plutonium-241 (Eichrom ACW03, Eichrom ACW16, HASL 300 Se-03, HASL 300 Pu-10); Thorium-228, Thorium 230, Thorium-232 (Eichrom ACW10); Uranium-234, Uranium-235, Uranium-238 (Eichrom ACW03, Eichrom ACW16, HASL 300 Se-03); Technetium-99 (Eichrom TCW02)
- 11.0) 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); Neptunium 237 (Eichrom ACW16); Plutonium 238, Plutonium 239/240, Plutonium-241 (Eichrom ACW03, Eichrom ACW16, 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, Eichrom ACW16, HASL 300 Se-03, HASL 300 U-02, HASL 300 U-04); Technetium-99 (Eichrom TCS01)
- 12.0) 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); Neptunium 237 (Eichrom ACW16); Plutonium 238, Plutonium 239/240, Plutonium-241 (Eichrom ACW03, Eichrom ACW16, HASL 300 Se-03); Thorium-228, Thorium 230, Thorium-232 (Eichrom ACW10); Uranium-234, Uranium-235, Uranium-238 (Eichrom ACW03, Eichrom ACW16, HASL 300 Se-03); Technetium-99 (Eichrom TCW02, Eichrom TCS01)

## General Comments:

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



# **ARS Aleut Analytical, LLC Analytical Reports**

**for**

# **GES-AIS, LLC**

# **Analytical Results**



**ARS Sample Delivery Group:** ARS1-23-01023

**Client Sample ID:** FBC-050123

**Sample Collection Date:** 05/01/23 8:00

**Sample Matrix:** Air Filter

**Percent Solids:** N/A

**Request or PO Number:** Parcel C Air Monitoring RAD

**ARS Sample ID:** ARS1-23-01023-001

**Date Received:** 05/10/23

**Report Date:** 06/02/23

## Radiochemistry

**Analysis Method:** Eichrom ACW03

**ABatch Sample ID:** ARS1-B23-00874-11

Analysis Description	Analysis Results	CSU +/- 2 s	MDA	DLC	CRDL	Qual	Analysis Units	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
Pu-239/240	0.000	3.844E-8	7.986E-8	3.226E-8	4.8E-08	U	uCi/filter	06/01/23 2:43		72.5%

**Analysis Method:** Eichrom ACW10

**ABatch Sample ID:** ARS1-B23-00873-10

Analysis Description	Analysis Results	CSU +/- 2 s	MDA	DLC	CRDL	Qual	Analysis Units	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
Th-232	2.384E-8	3.705E-8	6.418E-8	2.402E-8	1.4E-08	U	uCi/filter	05/27/23 3:49		68.9%

**Analysis Method:** EPA 901.1M

**ABatch Sample ID:** ARS1-B23-00841-04

Analysis Description	Analysis Results	CSU +/- 2 s	MDA	DLC	CRDL	Qual	Analysis Units	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
Ac-228	4.510E-6	1.796E-6	2.431E-6	1.216E-6	NP		uCi/filter	05/15/23 14:52		N/A
Co-60	-1.675E-7	9.812E-7	1.010E-6	5.050E-7	0.00024	U	uCi/filter	05/15/23 14:52		N/A
Cs-137	4.832E-8	7.370E-7	8.343E-7	4.172E-7	0.00048	U	uCi/filter	05/15/23 14:52		N/A
Ra-226	-3.442E-6	1.579E-5	1.521E-5	7.605E-6	4.4E-06	U	uCi/filter	05/15/23 14:52		N/A
Ra-228	4.510E-6	1.796E-6	2.431E-6	1.216E-6	NP		uCi/filter	05/15/23 14:52		N/A

**Analysis Method:** Eichrom SRW01

**ABatch Sample ID:** ARS1-B23-00875-11

Analysis Description	Analysis Results	CSU +/- 2 s	MDA	DLC	CRDL	Qual	Analysis Units	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
SR-90	4.641E-7	2.112E-6	3.741E-6	1.736E-6	2.4E-05	U	uCi/filter	05/30/23 12:44		102%



**ARS Sample Delivery Group:** ARS1-23-01023  
**Client Sample ID:** MSC01-050123  
**Sample Collection Date:** 05/04/23 15:21  
**Sample Matrix:** Air Filter  
**Percent Solids:** N/A

**Request or PO Number:** Parcel C Air Monitoring RAD  
**ARS Sample ID:** ARS1-23-01023-002  
**Date Received:** 05/10/23  
**Report Date:** 06/02/23

## Radiochemistry

**Analysis Method:** Eichrom ACW03

**ABatch Sample ID:** ARS1-B23-00874-12

Analysis Description	Analysis Results	CSU +/- 2 s	MDA	DLC	CRDL	Qual	Analysis Units	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
Pu-239/240	-5.301E-9	4.983E-8	9.980E-8	4.272E-8	4.8E-08	U	uCi/filter	06/01/23 2:43		80.8%

**Analysis Method:** Eichrom ACW10

**ABatch Sample ID:** ARS1-B23-00873-11

Analysis Description	Analysis Results	CSU +/- 2 s	MDA	DLC	CRDL	Qual	Analysis Units	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
Th-232	3.916E-8	4.629E-8	7.275E-8	2.576E-8	1.4E-08	U	uCi/filter	05/27/23 3:49		54.7%

**Analysis Method:** EPA 901.1M

**ABatch Sample ID:** ARS1-B23-00841-05

Analysis Description	Analysis Results	CSU +/- 2 s	MDA	DLC	CRDL	Qual	Analysis Units	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
Bi-214	1.857E-6	8.753E-7	1.157E-6	5.785E-7	NP		uCi/filter	05/15/23 15:36		N/A
Co-60	-2.779E-7	6.202E-7	1.037E-6	5.185E-7	0.00024	U	uCi/filter	05/15/23 15:36		N/A
Cs-137	1.755E-7	7.143E-7	7.744E-7	3.872E-7	0.00048	U	uCi/filter	05/15/23 15:36		N/A
Pb-214	1.993E-6	7.205E-7	9.712E-7	4.856E-7	NP		uCi/filter	05/15/23 15:36		N/A
Ra-226	3.297E-7	7.679E-6	9.740E-6	4.870E-6	4.4E-06	U	uCi/filter	05/15/23 15:36		N/A

**Analysis Method:** Eichrom SRW01

**ABatch Sample ID:** ARS1-B23-00875-12

Analysis Description	Analysis Results	CSU +/- 2 s	MDA	DLC	CRDL	Qual	Analysis Units	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
SR-90	2.207E-6	2.652E-6	4.406E-6	2.043E-6	2.4E-05	U	uCi/filter	05/30/23 12:44		92.2%





**ARS Sample Delivery Group:** ARS1-23-01023  
**Client Sample ID:** MSC02-050123  
**Sample Collection Date:** 05/04/23 15:10  
**Sample Matrix:** Air Filter  
**Percent Solids:** N/A

**Request or PO Number:** Parcel C Air Monitoring RAD  
**ARS Sample ID:** ARS1-23-01023-003  
**Date Received:** 05/10/23  
**Report Date:** 06/02/23

## Radiochemistry

**Analysis Method:** Eichrom ACW03

**ABatch Sample ID:** ARS1-B23-00874-13

Analysis Description	Analysis Results	CSU +/- 2 s	MDA	DLC	CRDL	Qual	Analysis Units	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
Pu-239/240	4.513E-8	6.470E-8	1.099E-7	4.731E-8	4.8E-08	U	uCi/filter	06/01/23 2:43		72.2%

**Analysis Method:** Eichrom ACW10

**ABatch Sample ID:** ARS1-B23-00873-12

Analysis Description	Analysis Results	CSU +/- 2 s	MDA	DLC	CRDL	Qual	Analysis Units	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
Th-232	9.505E-8	5.668E-8	5.383E-8	1.701E-8	1.4E-08		uCi/filter	05/27/23 3:49		55.7%

**Analysis Method:** EPA 901.1M

**ABatch Sample ID:** ARS1-B23-00841-06

Analysis Description	Analysis Results	CSU +/- 2 s	MDA	DLC	CRDL	Qual	Analysis Units	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
Co-60	-9.956E-7	1.194E-6	1.964E-6	9.820E-7	0.00024	U	uCi/filter	05/17/23 14:07		N/A
Cs-137	2.204E-7	1.429E-6	1.609E-6	8.045E-7	0.00048	U	uCi/filter	05/17/23 14:07		N/A
Ra-226	-7.143E-5	2.490E-5	3.032E-5	1.516E-5	4.4E-06	U	uCi/filter	05/17/23 14:07		N/A

**Analysis Method:** Eichrom SRW01

**ABatch Sample ID:** ARS1-B23-00875-13

Analysis Description	Analysis Results	CSU +/- 2 s	MDA	DLC	CRDL	Qual	Analysis Units	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
SR-90	1.999E-6	2.317E-6	3.836E-6	1.778E-6	2.4E-05	U	uCi/filter	05/30/23 12:44		103%



# **ARS Aleut Analytical, LLC Analytical Reports**

**for**

## **GES-AIS, LLC**

## **QC Summary**



### QC Sample Results

**Analytical Batch:** ARS1-B23-00841  
**Lab Sample ID:** ARS1-B23-00841-01  
**Method:** EPA 901.1M

**Sample Type:** LCS  
**Matrix:** Air Filter  
**Analysis Date:** 05/16/23 14:55

Analyte	Spike Added	Analysis Result	Qual	Analysis Units	% Rec	% Rec Limits
Am-241	33.065	31.994		uCi/filter	96.8	75 - 125
Co-60	20.928	21.501		uCi/filter	102.7	75 - 125
Cs-137	12.996	13.241		uCi/filter	101.9	75 - 125



### QC Sample Results

**Analytical Batch:** ARS1-B23-00841

**Lab Sample ID:** ARS1-B23-00841-02

**Method:** EPA 901.1M

**Sample Type:** LCSD

**Matrix:** Air Filter

**Analysis Date:** 05/16/23 15:07

Analyte	Spike Added	Analysis Result	Qual	Analysis Units	% Rec	% Rec Limits	RPD	RPD Limit	DER	DER Limit
Am-241	33.065	32.999		uCi/filter	99.8	75 - 125	3.1	25	0.552	3
Co-60	20.928	22.008		uCi/filter	105.2	75 - 125	2.3	25	0.564	3
Cs-137	12.996	13.129		uCi/filter	101.0	75 - 125	0.8	25	0.221	3



### QC Sample Results

**Analytical Batch:** ARS1-B23-00841  
**Lab Sample ID:** ARS1-B23-00841-03  
**Method:** EPA 901.1M

**Sample Type:** MBL  
**Matrix:** Air Filter  
**Analysis Date:** 05/15/23 14:41

Analyte	Analysis Result	CSU +/- 2 s	MDA	DLC	Qual	Analysis Units
Ac-228	-0.007	0.007	0.007	0.003	U	uCi/filter
Am-241	-5.321E-4	0.001	0.002	0.001	U	uCi/filter
Bi-212	0.004	0.011	0.012	0.006	U	uCi/filter
Bi-214	-0.004	0.004	0.004	0.002	U	uCi/filter
Co-60	7.200E-4	0.001	0.001	7.400E-4	U	uCi/filter
Cs-137	-6.456E-4	0.001	0.002	8.300E-4	U	uCi/filter
Eu-152	-6.177E-4	0.001	0.002	9.200E-4	U	uCi/filter
Eu-154	5.119E-4	0.001	0.001	6.850E-4	U	uCi/filter
K-40	-0.016	0.026	0.024	0.012	U	uCi/filter
Pa-234	7.615E-4	0.002	0.002	0.001	U	uCi/filter
Pb-210	0.007	0.016	0.018	0.009	U	uCi/filter
Pb-212	2.788E-4	0.002	0.003	0.001	U	uCi/filter
Pb-214	0.002	0.001	0.003	0.002	U	uCi/filter
Ra-226	-0.026	0.026	0.027	0.013	U	uCi/filter
Ra-228	-0.007	0.007	0.007	0.003	U	uCi/filter
Th-234	-0.011	0.017	0.018	0.009	U	uCi/filter
Tl-208	-0.001	0.002	0.002	8.550E-4	U	uCi/filter
U-235	-0.007	0.009	0.007	0.003	U	uCi/filter
U-238	-0.011	0.017	0.018	0.009	U	uCi/filter



### QC Association Summary

**ARS Sample Delivery Group:** ARS1-23-01023

**Analytical Batch:** ARS1-B23-00841

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

Batch Sample ID	Lab Sample ID	Client Sample ID	Matrix	Method	Prep Method
ARS1-B23-00841-01		Lab Control Sample	Air Filter	EPA 901.1M	N/A
ARS1-B23-00841-02		Lab Control Sample Duplicate	Air Filter	EPA 901.1M	N/A
ARS1-B23-00841-03		Method Blank	Air Filter	EPA 901.1M	N/A
ARS1-B23-00841-04	ARS1-23-01023-001	FBC-050123	Air Filter	EPA 901.1M	N/A
ARS1-B23-00841-05	ARS1-23-01023-002	MSC01-050123	Air Filter	EPA 901.1M	N/A
ARS1-B23-00841-06	ARS1-23-01023-003	MSC02-050123	Air Filter	EPA 901.1M	N/A



### QC Sample Results

**Analytical Batch:** ARS1-B23-00873

**Lab Sample ID:** ARS1-B23-00873-01

**Method:** Eichrom ACW10

**Sample Type:** LCS

**Matrix:** Air Filter

**Analysis Date:** 05/27/23 3:49

Analyte	Spike Added	Analysis Result	Qual	Analysis Units	% Rec	% Rec Limits
Th-230	5.314E-6	5.652E-6		uCi/filter	106.4	75 - 125



### QC Sample Results

**Analytical Batch:** ARS1-B23-00873

**Lab Sample ID:** ARS1-B23-00873-02

**Method:** Eichrom ACW10

**Sample Type:** LCSD

**Matrix:** Air Filter

**Analysis Date:** 05/27/23 3:49

Analyte	Spike Added	Analysis Result	Qual	Analysis Units	% Rec	% Rec Limits	RPD	RPD Limit	DER	DER Limit
Th-230	5.253E-6	5.764E-6		uCi/filter	109.7	75 - 125	2.0	25	0.212	3





### QC Sample Results

**Analytical Batch:** ARS1-B23-00873

**Lab Sample ID:** ARS1-B23-00873-03

**Method:** Eichrom ACW10

**Sample Type:** MBL

**Matrix:** Air Filter

**Analysis Date:** 05/27/23 3:49

Analyte	Analysis Result	CSU +/- 2 s	MDA	DLC	Qual	Analysis Units
Th-228	2.008E-7	1.983E-7	3.151E-7	1.349E-7	U	uCi/filter
Th-230	8.305E-8	1.631E-7	2.894E-7	1.222E-7	U	uCi/filter
Th-232	-3.316E-8	4.613E-8	1.540E-7	5.454E-8	U	uCi/filter



### QC Association Summary

**ARS Sample Delivery Group:** ARS1-23-01023

**Analytical Batch:** ARS1-B23-00873

**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-B23-00873-01		Lab Control Sample	Air Filter	Eichrom ACW10	N/A
ARS1-B23-00873-02		Lab Control Sample Duplicate	Air Filter	Eichrom ACW10	N/A
ARS1-B23-00873-03		Method Blank	Air Filter	Eichrom ACW10	N/A
ARS1-B23-00873-10	ARS1-23-01023-001	FBC-050123	Air Filter	Eichrom ACW10	N/A
ARS1-B23-00873-11	ARS1-23-01023-002	MSC01-050123	Air Filter	Eichrom ACW10	N/A
ARS1-B23-00873-12	ARS1-23-01023-003	MSC02-050123	Air Filter	Eichrom ACW10	N/A



### QC Sample Results

**Analytical Batch:** ARS1-B23-00874

**Lab Sample ID:** ARS1-B23-00874-01

**Method:** Eichrom ACW03

**Sample Type:** LCS

**Matrix:** Air Filter

**Analysis Date:** 06/01/23 2:42

Analyte	Spike Added	Analysis Result	Qual	Analysis Units	% Rec	% Rec Limits
Pu-239/240	7.838E-6	7.688E-6		uCi/filter	98.1	75 - 125



### QC Sample Results

**Analytical Batch:** ARS1-B23-00874

**Lab Sample ID:** ARS1-B23-00874-02

**Method:** Eichrom ACW03

**Sample Type:** LCSD

**Matrix:** Air Filter

**Analysis Date:** 06/01/23 2:42

Analyte	Spike Added	Analysis Result	Qual	Analysis Units	% Rec	% Rec Limits	RPD	RPD Limit	DER	DER Limit
Pu-239/240	7.768E-6	7.054E-6		uCi/filter	90.8	75 - 125	8.6	25	0.949	3



### QC Sample Results

**Analytical Batch:** ARS1-B23-00874

**Lab Sample ID:** ARS1-B23-00874-03

**Method:** Eichrom ACW03

**Sample Type:** MBL

**Matrix:** Air Filter

**Analysis Date:** 06/01/23 2:43

Analyte	Analysis Result	CSU +/- 2 s	MDA	DLC	Qual	Analysis Units
Pu-238	-3.062E-8	6.474E-8	1.341E-7	5.874E-8	U	uCi/filter
Pu-239/240	-3.674E-8	6.588E-8	1.375E-7	6.043E-8	U	uCi/filter



### QC Association Summary

**ARS Sample Delivery Group:** ARS1-23-01023

**Analytical Batch:** ARS1-B23-00874

**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-B23-00874-01		Lab Control Sample	Air Filter	Eichrom ACW03	N/A
ARS1-B23-00874-02		Lab Control Sample Duplicate	Air Filter	Eichrom ACW03	N/A
ARS1-B23-00874-03		Method Blank	Air Filter	Eichrom ACW03	N/A
ARS1-B23-00874-11	ARS1-23-01023-001	FBC-050123	Air Filter	Eichrom ACW03	N/A
ARS1-B23-00874-12	ARS1-23-01023-002	MSC01-050123	Air Filter	Eichrom ACW03	N/A
ARS1-B23-00874-13	ARS1-23-01023-003	MSC02-050123	Air Filter	Eichrom ACW03	N/A



### QC Sample Results

**Analytical Batch:** ARS1-B23-00875

**Lab Sample ID:** ARS1-B23-00875-01

**Method:** Eichrom SRW01

**Sample Type:** LCS

**Matrix:** Air Filter

**Analysis Date:** 05/30/23 12:44

Analyte	Spike Added	Analysis Result	Qual	Analysis Units	% Rec	% Rec Limits
SR-90	2.033E-5	1.940E-5		uCi/filter	95.4	75 - 125



### QC Sample Results

**Analytical Batch:** ARS1-B23-00875

**Lab Sample ID:** ARS1-B23-00875-02

**Method:** Eichrom SRW01

**Sample Type:** LCSD

**Matrix:** Air Filter

**Analysis Date:** 05/30/23 12:44

Analyte	Spike Added	Analysis Result	Qual	Analysis Units	% Rec	% Rec Limits	RPD	RPD Limit	DER	DER Limit
SR-90	2.027E-5	1.975E-5		uCi/filter	97.4	75 - 125	1.8	25	0.159	3





### QC Sample Results

**Analytical Batch:** ARS1-B23-00875

**Lab Sample ID:** ARS1-B23-00875-03

**Method:** Eichrom SRW01

**Sample Type:** MBL

**Matrix:** Air Filter

**Analysis Date:** 05/30/23 12:44

Analyte	Analysis Result	CSU +/- 2 s	MDA	DLC	Qual	Analysis Units
SR-90	1.950E-6	2.635E-6	4.424E-6	2.047E-6	U	uCi/filter



### QC Association Summary

**ARS Sample Delivery Group:** ARS1-23-01023

**Analytical Batch:** ARS1-B23-00875

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

Batch Sample ID	Lab Sample ID	Client Sample ID	Matrix	Method	Prep Method
ARS1-B23-00875-01		Lab Control Sample	Air Filter	Eichrom SRW01	N/A
ARS1-B23-00875-02		Lab Control Sample Duplicate	Air Filter	Eichrom SRW01	N/A
ARS1-B23-00875-03		Method Blank	Air Filter	Eichrom SRW01	N/A
ARS1-B23-00875-11	ARS1-23-01023-001	FBC-050123	Air Filter	Eichrom SRW01	N/A
ARS1-B23-00875-12	ARS1-23-01023-002	MSC01-050123	Air Filter	Eichrom SRW01	N/A
ARS1-B23-00875-13	ARS1-23-01023-003	MSC02-050123	Air Filter	Eichrom SRW01	N/A



# **ARS Aleut Analytical, LLC Analytical Reports**

**for**

# **GES-AIS, LLC**

# **Batch QC**



## QC Results per Analytical Batch

Analytical Batch	<b>ARS1-B23-00841</b>
SDG	<b>ARS1-23-01023</b>
Analysis	Gamma Spec (Short) in (Air Filters, Smears [AF])
Method	<b>EPA 901.1M</b>
Analysis Code	<b>GAM-A-AF</b>
Report Units	<b>uCi/filter</b>

### 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	05/16/23 14:55	Analysis Technician	█	
Analysis Batch Sample ID	QC Type	Analyte	Results	CSU (2s)	Expected Value	LCS Rec (%)	MDA
ARS1-B23-00841-01	LCS	AM-241	31.994	2.485	33.065	96.8	0.122
ARS1-B23-00841-01	LCS	CO-60	21.501	1.312	20.928	102.7	0.332
ARS1-B23-00841-01	LCS	CS-137	13.241	0.706	12.996	101.9	0.075

Duplicate RER/DER/RPD			Analysis Date	05/16/23 15:07	Analysis Technician	█
Analyte	Results LCS	CSU LCS (2s)	Results LCSD	CSU LCSD (2s)	DER	RPD
AM-241	31.994	2.485	32.999	2.562	0.552	3.1
CO-60	21.501	1.312	22.008	1.177	0.564	2.3
CS-137	13.241	0.706	13.129	0.701	0.221	0.8

Method Blank			Analysis Date	05/15/23 14:41	Analysis Technician	█
Analysis Batch Sample ID	QC Type	Analyte	Results	CSU (2s)	MDA	Qual
ARS1-B23-00841-03	MBL	AC-228	-0.007	0.007	0.007	U
ARS1-B23-00841-03	MBL	AM-241	-5.321E-4	0.001	0.002	U
ARS1-B23-00841-03	MBL	BI-212	0.004	0.011	0.012	U
ARS1-B23-00841-03	MBL	BI-214	-0.004	0.004	0.004	U
ARS1-B23-00841-03	MBL	CO-60	7.200E-4	0.001	0.001	U
ARS1-B23-00841-03	MBL	CS-137	-6.456E-4	0.001	0.002	U
ARS1-B23-00841-03	MBL	EU-152	-6.177E-4	0.001	0.002	U
ARS1-B23-00841-03	MBL	EU-154	5.119E-4	0.001	0.001	U
ARS1-B23-00841-03	MBL	K-40	-0.016	0.026	0.024	U
ARS1-B23-00841-03	MBL	PA-234	7.615E-4	0.002	0.002	U
ARS1-B23-00841-03	MBL	PB-210	0.007	0.016	0.018	U
ARS1-B23-00841-03	MBL	PB-212	2.788E-4	0.002	0.003	U
ARS1-B23-00841-03	MBL	PB-214	0.002	0.001	0.003	U
ARS1-B23-00841-03	MBL	RA-226	-0.026	0.026	0.027	U
ARS1-B23-00841-03	MBL	RA-228	-0.007	0.007	0.007	U
ARS1-B23-00841-03	MBL	TH-234	-0.011	0.017	0.018	U
ARS1-B23-00841-03	MBL	TL-208	-0.001	0.002	0.002	U
ARS1-B23-00841-03	MBL	U-235	-0.007	0.009	0.007	U
ARS1-B23-00841-03	MBL	U-238	-0.011	0.017	0.018	U



## QC Results per Analytical Batch

Analytical Batch	<b>ARS1-B23-00873</b>
SDG	<b>ARS1-23-01023</b>
Analysis	Thorium in (Air Filters, Smears, Leak Test [AF, SM, LT])
Method	<b>Eichrom ACW10</b>
Analysis Code	<b>ASP-TH-AF</b>
Report Units	<b>uCi/filter</b>

### 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	05/27/23 03:49	Analysis Technician	[REDACTED]
Analysis Batch Sample ID	QC Type	Analyte	Results	CSU (2s)	Expected Value	LCS Rec (%)	MDA
ARS1-B23-00873-01	LCS	TH-230	5.652E-6	7.130E-7	5.314E-6	106.4	3.185E-8

Duplicate RER/DER/RPD				Analysis Date	05/27/23 03:49	Analysis Technician	[REDACTED]
Analyte	Results LCS	CSU LCS (2s)	Results LCSD	CSU LCSD (2s)	DER	RPD	
TH-230	5.652E-6	7.130E-7	5.764E-6	7.435E-7	0.212	2.0	

Method Blank				Analysis Date	05/27/23 03:49	Analysis Technician	[REDACTED]
Analysis Batch Sample ID	QC Type	Analyte	Results	CSU (2s)	MDA	Qual	
ARS1-B23-00873-03	MBL	TH-228	2.008E-7	1.983E-7	3.151E-7	U	
ARS1-B23-00873-03	MBL	TH-230	8.305E-8	1.631E-7	2.894E-7	U	
ARS1-B23-00873-03	MBL	TH-232	-3.316E-8	4.613E-8	1.540E-7	U	



## QC Results per Analytical Batch

Analytical Batch	ARS1-B23-00874
SDG	ARS1-23-01023
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	06/01/23 02:42	Analysis Technician	
Analysis Batch Sample ID	QC Type	Analyte	Results	CSU (2s)	Expected Value	LCS Rec (%)	MDA
ARS1-B23-00874-01	LCS	PU-239/240	7.688E-6	9.608E-7	7.838E-6	98.1	6.972E-8

Duplicate RER/DER/RPD				Analysis Date	06/01/23 02:42	Analysis Technician	
Analyte	Results LCS	CSU LCS (2s)	Results LCSD	CSU LCSD (2s)	DER	RPD	
PU-239/240	7.688E-6	9.608E-7	7.054E-6	8.892E-7	0.949	8.6	

Method Blank				Analysis Date	06/01/23 02:43	Analysis Technician	
Analysis Batch Sample ID	QC Type	Analyte	Results	CSU (2s)	MDA	Qual	
ARS1-B23-00874-03	MBL	PU-238	-3.062E-8	6.474E-8	1.341E-7	U	
ARS1-B23-00874-03	MBL	PU-239/240	-3.674E-8	6.588E-8	1.375E-7	U	



## QC Results per Analytical Batch

Analytical Batch	<b>ARS1-B23-00875</b>
SDG	<b>ARS1-23-01023</b>
Analysis	Strontium-90 in (Air Filters, Smears [AF])
Method	<b>Eichrom SRW01</b>
Analysis Code	<b>GPC-SR90-AF</b>
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	05/30/23 12:44	Analysis Technician	
Analysis Batch Sample ID	QC Type	Analyte	Results	CSU (2s)	Expected Value	LCS Rec (%)	MDA
ARS1-B23-00875-01	LCS	SR-90	1.940E-5	2.990E-6	2.033E-5	95.4	4.312E-7

Duplicate RER/DER/RPD				Analysis Date	05/30/23 12:44	Analysis Technician	
Analyte	Results LCS	CSU LCS (2s)	Results LCSD	CSU LCSD (2s)	DER	RPD	
SR-90	1.940E-5	2.990E-6	1.975E-5	3.041E-6	0.159	1.8	

Method Blank				Analysis Date	05/30/23 12:44	Analysis Technician	
Analysis Batch Sample ID	QC Type	Analyte	Results	CSU (2s)	MDA	Qual	
ARS1-B23-00875-03	MBL	SR-90	1.950E-6	2.635E-6	4.424E-6	U	



# **ARS Aleut Analytical, LLC Analytical Reports**

**for**

# **GES-AIS, LLC**

# **Sample Management Records**



**CHAIN-OF-CUSTODY  
RECORD**

Gilbane Federal  
1501 W Fountainhead Parkway, Suite 550, Tempe, Arizona 85282

COC # 050923RADC



Project Name: Hunters Point Shipyard, Parcel C Removal Site Evaluation	Laboratory: ARS Aleut Analytical (AAA), Port Allen, LA	Event: Parcel C Air Monitoring RAD
Project Number: J310000600	POC:	
WBS Code: J310000600	Ship to: 2609 North River Road, Port Allen, LA 70767-3469	

Comments:	Analytical Test Method E901.1 - Gamma Spec RC0240 - Pu and Th Isotopes SR02RC - Sr90	Code	Matrix
		A	Air
Equipment:		AQ	Air Quality Control Matrix
		Code	Container/Preservative
		5	1x 1-L Plastic: HNO3, pH < 2
		15	1x 250-mL Plastic, 4 Degrees C

Event: Parcel C Air Monitoring RAD																			
Sample ID	Matrix	Date	Time	Samp Init.	Analytical Test Method							Location ID	Sample Type	Depth (ft bgs)		Cooler	Comments		
					X	X	X											Top	Bottom
1	FBC-050123	AQ	05/01/2023	0800		X	X	X						FIELDQC	FB2	0.00	0.00	1	
2	MSC01-050123	A	05/04/2023	1521		X	X	X						MSC01	N1	0.00	0.00	1	
3	MSC02-050123	A	05/04/2023	1510		X	X	X						MSC02	N1	0.00	0.00	1	

Turnaround Time: 28 days

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time	Shipping Date / Carrier / Airbill Number
	5/9/23	1600		5/9/23	1600	Shipping Date: 5/9/2023 / FEDEX / 7719 8358 5223
				5-10-23	1100	Received by Laboratory: (Signature, Date, Time) & condition



Procedures: GES-003 / EPA 900.0M

Start Date 5/1/23  
Stop Date 5/4/23

File ID Number 150923RADC

Field Entry

Station	Sample ID	Date In	Time In	Date Out	Time Out	Initial Flow Rate (LPM)	Final Flow Rate (LPM)	Flow volume Cu.M	Julian Date for Date Out	Total Run Time (Days)	Total Run Time (Hours)	Total Run Time (Minutes)	Average Flow Rate (LPM)	Initial Flow Rate (CFM)	Final Flow Rate (CFM)	Average Flow Rate (CFM)	Average Flow Rate (Cu.M/h)	Flow Rate (Cu.M/minute)	Total Flow (L)
1	MSC01	FBG-050123	5/1/2023	8:00	5/1/2023	8:00													
		MSC01-050123	05/01/23	8:34	05/04/23	18:11	60	202.6	174	2.34	56.27	3376.0	60	2.11888	2.11888	2.11888	3.6	0.06	202.560
2	MSC02	MSC02-050123	05/01/23	0:42	05/04/23	18:21	60	203.9	124	2.36	56.65	3399.0	60	2.11888	2.11888	2.11888	3.6	0.06	203.940

**FORMULAS:**

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

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

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

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

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

Flow Rate (L\*M) = Cu.M X 1000

Total Flow (L) = LPM X Total Minutes

### SDG Report - Samples and Containers

SDG Specific Data						
<b>SDG</b>	<b>ARS1-23-01023</b>		<b>TAT Days</b>	<b>28 Calendar Days</b>	<b>Project Type</b>	<b>Environmental</b>
<b>Sample Count</b>	<b>3</b>	<b>Rpt Level</b>	<b>4</b>	<b>Date Received</b>	<b>05/10/2023</b>	<b>COC Number</b> <b>050923RADC</b>
<b>Client</b>	<b>GES-AIS, LLC</b>		<b>Discrepancy Resol</b>	<b>N/A</b>	<b>PO Number</b>	<b>Parcel C Air Monitoring RAD</b>
<b>Client Code</b>	<b>1138</b>		<b>Client Deadline</b>	<b>06/07/2023</b>	<b>Job Number</b>	<b>J31000600</b>
<b>Profile Number</b>	<b>PN-01440</b>				<b>Job Location</b>	<b>Hunters Point Shipyard, Parcel C Removal Site Evaluation</b>
<b>Comment</b>						

Samples and Containers Checked In Thus Far									
FR	Name	Matrix	Start Date	End Date	Disp	Hold	Arch	Storage	Comments
001	FBC-050123	Air Filter	05/01/2023 07:59	05/01/2023 08:00	H	30	10	PrePrep	
	<b>IC_ID</b>	<b>Cnt</b>	<b>Container Type</b>	<b>AF Volume (L)</b>	<b>AF Units</b>		<b>Rate</b>	<b>Mins</b>	<b>Comments</b>
	437387	1	HDP Container	1	LPM			1	
			Mid-Sample Date:	05/01/2023 07:59	AF Volume (CuM):			0.001	
002	MSC01-050123	Air Filter	05/04/2023 15:20	05/04/2023 15:21	H	30	10	PrePrep	
	<b>IC_ID</b>	<b>Cnt</b>	<b>Container Type</b>	<b>AF Volume (L)</b>	<b>AF Units</b>		<b>Rate</b>	<b>Mins</b>	<b>Comments</b>
	437388	1	HDP Container	1	LPM			1	
			Mid-Sample Date:	05/04/2023 15:20	AF Volume (CuM):			0.001	
003	MSC02-050123	Air Filter	05/04/2023 15:09	05/04/2023 15:10	H	30	10	PrePrep	
	<b>IC_ID</b>	<b>Cnt</b>	<b>Container Type</b>	<b>AF Volume (L)</b>	<b>AF Units</b>		<b>Rate</b>	<b>Mins</b>	<b>Comments</b>
	437389	1	HDP Container	1	LPM			1	
			Mid-Sample Date:	05/04/2023 15:09	AF Volume (CuM):			0.001	

### SDG Report - Analysis Assignments

<b>SDG</b>	<b>ARS1-23-01023</b>	<b>Sample Count</b>	<b>3</b>
<b>Client</b>	<b>GES-AIS, LLC</b>	<b>Analysis Count</b>	<b>4-12</b>

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	3
ASP-TH-AF	Thorium in (Air Filters, Smears, Leak Test [AF, SM, LT])	I	3
GAM-A-AF	Gamma Spec (Short) in (Air Filters, Smears [AF])	I	3
GPC-SR90-AF	Strontium-90 in (Air Filters, Smears [AF])	I	3

Analyses Assigned Per Fraction		
Fraction	Analysis Code	X = Assigned
001	ASP-PU239-AF	<b>X</b>
001	ASP-TH-AF	<b>X</b>
001	GAM-A-AF	<b>X</b>
001	GPC-SR90-AF	<b>X</b>
002	ASP-PU239-AF	<b>X</b>
002	ASP-TH-AF	<b>X</b>
002	GAM-A-AF	<b>X</b>
002	GPC-SR90-AF	<b>X</b>
003	ASP-PU239-AF	<b>X</b>
003	ASP-TH-AF	<b>X</b>
003	GAM-A-AF	<b>X</b>
003	GPC-SR90-AF	<b>X</b>

**DQO Report for SDG**  
ARS1-23-01023

Client Name: GES-AIS, LLC

Profile Name: Parcel C 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							
	<b>Analyte</b>			<b>RDL</b>	<b>LCS LL/UL</b>	<b>MS LL/UL</b>	<b>RadY LL/UL</b>	<b>GravY LL/UL</b>	<b>RER</b>	<b>RPD</b>	<b>Surr LL/UL</b>	
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							
	<b>Analyte</b>			<b>RDL</b>	<b>LCS LL/UL</b>	<b>MS LL/UL</b>	<b>RadY LL/UL</b>	<b>GravY LL/UL</b>	<b>RER</b>	<b>RPD</b>	<b>Surr LL/UL</b>	
Th-232 (7440-29-1)				1.4E-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							
	<b>Analyte</b>			<b>RDL</b>	<b>LCS LL/UL</b>	<b>MS LL/UL</b>	<b>RadY LL/UL</b>	<b>GravY LL/UL</b>	<b>RER</b>	<b>RPD</b>	<b>Surr LL/UL</b>	
	Ac-228 (14331-83-0)				uCi/filter	75/125	60/140	30/110	30/110	1	25	N/A
	Am-241 (14596-10-2)				uCi/filter	75/125	60/140	30/110	30/110	1	25	N/A
	Bi-212 (14913-49-6)				uCi/filter	75/125	60/140	30/110	30/110	1	25	N/A
	Bi-214 (14733-03-0)				uCi/filter	75/125	60/140	30/110	30/110	1	25	N/A
	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
	Eu-152 (14683-23-9)				uCi/filter	75/125	60/140	30/110	30/110	1	25	N/A
	Eu-154 (15585-10-1)				uCi/filter	75/125	60/140	30/110	30/110	1	25	N/A
	K-40 (13966-00-2)				uCi/filter	75/125	60/140	30/110	30/110	1	25	N/A
	Pb-210 (14255-04-0)				uCi/filter	75/125	60/140	30/110	30/110	1	25	N/A
	Pb-212 (15092-94-1)				uCi/filter	75/125	60/140	30/110	30/110	1	25	N/A
	Pb-214 (15067-28-4)				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
	Ra-228 (15262-20-1)				uCi/filter	75/125	60/140	30/110	30/110	1	25	N/A
Th-234 (15065-10-8)				uCi/filter	75/125	60/140	30/110	30/110	1	25	N/A	
Tl-208 (14913-50-9)				uCi/filter	75/125	60/140	30/110	30/110	1	25	N/A	
U-235 (15117-96-1)				uCi/filter	75/125	60/140	30/110	30/110	1	25	N/A	
U-238 (7440-61-1)				uCi/filter	75/125	60/140	30/110	30/110	1	25	N/A	

GAM-A-AF	Pa-234 (15100-28-4)			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						
	<b>Analyte</b>			<b>RDL</b>	<b>LCS LL/UL</b>	<b>MS LL/UL</b>	<b>RadY LL/UL</b>	<b>GravY LL/UL</b>	<b>RER</b>	<b>RPD</b>	<b>Surr LL/UL</b>
	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
		<b>Group</b>		<b>Analyte</b>	
		Parcel C Rad Sampling		Pu-239/240	
ASP-PU239-AF	002	uCi	filter	N/A	1
		<b>Group</b>		<b>Analyte</b>	
		Parcel C Rad Sampling		Pu-239/240	
ASP-PU239-AF	003	uCi	filter	N/A	1
		<b>Group</b>		<b>Analyte</b>	
		Parcel C Rad Sampling		Pu-239/240	
ASP-TH-AF	001	uCi	filter	N/A	1
		<b>Group</b>		<b>Analyte</b>	
		Parcel C Rad Sampling		Th-232	
ASP-TH-AF	002	uCi	filter	N/A	1
		<b>Group</b>		<b>Analyte</b>	
		Parcel C Rad Sampling		Th-232	
ASP-TH-AF	003	uCi	filter	N/A	1
		<b>Group</b>		<b>Analyte</b>	
		Parcel C Rad Sampling		Th-232	
GAM-A-AF	001	uCi	filter	N/A	19
		<b>Group</b>		<b>Analyte</b>	
		Parcel C Rad Sampling		Ac-228	
		Parcel C Rad Sampling		Am-241	
		Parcel C Rad Sampling		Bi-212	
		Parcel C Rad Sampling		Bi-214	
		Parcel C Rad Sampling		Co-60	
		Parcel C Rad Sampling		Cs-137	
Parcel C Rad Sampling		Eu-152			

**DQO Report for SDG**  
ARS1-23-01023

GAM-A-AF	001	Parcel C Rad Sampling		Eu-154	
		Parcel C Rad Sampling		K-40	
		Parcel C Rad Sampling		Pa-234	
		Parcel C Rad Sampling		Pb-210	
		Parcel C Rad Sampling		Pb-212	
		Parcel C Rad Sampling		Pb-214	
		Parcel C Rad Sampling		Ra-226	
		Parcel C Rad Sampling		Ra-228	
		Parcel C Rad Sampling		Th-234	
		Parcel C Rad Sampling		Tl-208	
		Parcel C Rad Sampling		U-235	
		Parcel C Rad Sampling		U-238	
		GAM-A-AF	002	uCi	filter
<b>Group</b>				<b>Analyte</b>	
Parcel C Rad Sampling				Ac-228	
Parcel C Rad Sampling				Am-241	
Parcel C Rad Sampling				Bi-212	
Parcel C Rad Sampling				Bi-214	
Parcel C Rad Sampling				Co-60	
Parcel C Rad Sampling				Cs-137	
Parcel C Rad Sampling				Eu-152	
Parcel C Rad Sampling				Eu-154	
Parcel C Rad Sampling				K-40	
Parcel C Rad Sampling				Pa-234	
Parcel C Rad Sampling				Pb-210	
Parcel C Rad Sampling				Pb-212	
Parcel C Rad Sampling				Pb-214	
Parcel C Rad Sampling				Ra-226	
Parcel C Rad Sampling				Ra-228	
Parcel C Rad Sampling				Th-234	
Parcel C Rad Sampling				Tl-208	
Parcel C Rad Sampling				U-235	
Parcel C Rad Sampling		U-238			

**DQO Report for SDG**  
ARS1-23-01023

GAM-A-AF	003	uCi	filter	N/A	19	
		<b>Group</b>		<b>Analyte</b>		
		Parcel C Rad Sampling		Ac-228		
		Parcel C Rad Sampling		Am-241		
		Parcel C Rad Sampling		Bi-212		
		Parcel C Rad Sampling		Bi-214		
		Parcel C Rad Sampling		Co-60		
		Parcel C Rad Sampling		Cs-137		
		Parcel C Rad Sampling		Eu-152		
		Parcel C Rad Sampling		Eu-154		
		Parcel C Rad Sampling		K-40		
		Parcel C Rad Sampling		Pa-234		
		Parcel C Rad Sampling		Pb-210		
		Parcel C Rad Sampling		Pb-212		
		Parcel C Rad Sampling		Pb-214		
		Parcel C Rad Sampling		Ra-226		
		Parcel C Rad Sampling		Ra-228		
		Parcel C Rad Sampling		Th-234		
Parcel C Rad Sampling		Tl-208				
Parcel C Rad Sampling		U-235				
Parcel C Rad Sampling		U-238				
GPC-SR90-AF	001	uCi	filter	N/A	1	
		<b>Group</b>		<b>Analyte</b>		
Parcel C Rad Sampling		Sr-90				
GPC-SR90-AF	002	uCi	filter	N/A	1	
		<b>Group</b>		<b>Analyte</b>		
Parcel C Rad Sampling		Sr-90				
GPC-SR90-AF	003	uCi	filter	N/A	1	
		<b>Group</b>		<b>Analyte</b>		
Parcel C Rad Sampling		Sr-90				



# PALA Sample Receipt Inspection Form

Client Name: GES-AIS

SDG: ARS1-23-01023

Sample Custodian: [REDACTED] Survey Start Date: 5-10-23 Survey Start Time: 1320

Thermometer ID: E1054012261 Calibration Due Date: 1-12-24 pH Paper Lot# NA

Exposure Rate Meter + Probe Unit ID: 273629 Calibration Due Date: 9-13-23 Background: 4  $\mu\text{R/hr}$

Count Rate Meter + Probe Unit ID: 268993 Calibration Due Date: 9-19-23 Background: 20 cpm

Delivery Type (circle one): Direct Lock Box Commercial Carrier: FEDEX Total # of ESCs: 1

External Shipping Container Tracking:	Exposure Rate ( $\mu\text{R/hr}$ ) (limit <500 $\mu\text{R/hr}$ )	Max External Swipe Counts (cpm)	Max Internal Swipe Counts (cpm)	ESC True Temps* ( $^{\circ}\text{C}$ )	*True temperature is recorded which includes any applicable correction factors. TRAX Matrix ID (circle all that apply): (See Section 4.3 of SOP)			
					AQ	WD	WG	WO
A: <u>771983585223</u>	<u>5</u>	<u>30</u>	<u>40</u>	<u>NA</u>				
B: _____	_____	_____	_____	_____	WS	WW	SI	UR
C: _____	_____	_____	_____	_____	SO	OL	BI	VG
D: _____	_____	_____	_____	_____	WP	SM	<u>AF</u>	
E: _____	_____	_____	_____	_____				
F: _____	_____	_____	_____	_____				

**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 relinquished/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:

---



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# PALA Sample Survey Form

Client Name: GES-AIS  
SDG: ARS1-23-01023

Pipette ID: NA Tip Lot#: NA

Disposable pipette lot#: NA

Acceptance Limits
<100 cpm/cm

pH < 2 is Acceptable

Sample ID from Client on COC or Sample	ESC Letter	Sample Container Type	Approx. Fill Level (%)	pH < 2 is Acceptable		Acid Lot # or Ind container temp (°C)	Vol. of Acid Used (mL)	cpm
				pH As Rec'd	pH Adjusted			
FBC-050123	A	Ziploc	25	NA	NA	NA	NA	40
MSL01	↓	↓	↓	↓	↓	↓	↓	↓
MSL02	↓	↓	↓	↓	↓	↓	↓	↓

Sample Custodian: [REDACTED] Survey End Date: 5-10-23 Survey/pH End Time: 1325

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).



ORIGIN ID: JCCA

200 FISHER STREET

SAN FRANCISCO, CA 94124  
UNITED STATES US

SHIP DATE: 02MAY23  
ACTWGT: 1.00 LB  
CAD: 254128867/INET4610

BILL SENDER

TO  
ARS ALEUT ANALYTICAL, LLC  
2609 NORTH RIVER ROAD

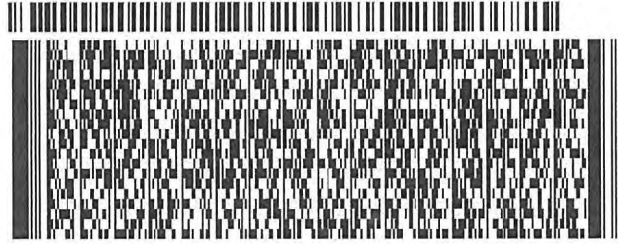
PORT ALLEN LA 70767

(225) 381-2991

REF: J31000.600 02.04.05

INV:  
PO:

DEPT:



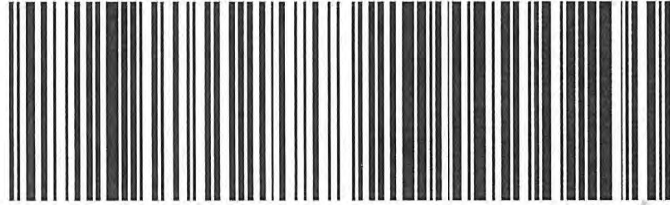
583.02B03/FEZD

WED - 03 MAY 4:30P  
STANDARD OVERNIGHT

TRK# 7719 8358 5223  
0201

XN OPLA

70767  
LA-US MSY



**After printing this label:**

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

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

# ARS Aleut Analytical, LLC

## Laboratory Analytical Report

### ARS1-23-01081


GES-AIS, LLC



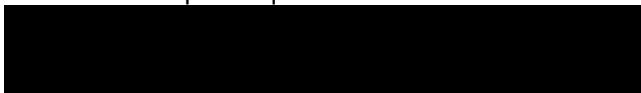
1501 West Fountainhead Parkway  
Suite 550  
Tempe, AZ 94520



COC Number: **051623RADC**  
PO Number: **Parcel C Air Monitoring RAD**  
Job Number: **J310000600**  
Job Location: **Hunters Point Shipyard, Parcel C Removal Site Evaluation**  
Project Name: **Parcel C Air Monitoring RAD**

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





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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	66780 (NPW) / 66781 (SHW)
Texas	T104704447-22-18
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.alcutfederal.com](mailto:QA@aaa.alcutfederal.com) for additional information.



# **ARS Aleut Analytical, LLC Analytical Reports**

**for**

# **GES-AIS, LLC**

# **Case Narrative**



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

Client Sample ID	ARS Aleut Analytical Sample ID
FBC-050823	ARS1-23-01081-001
MSC01-050823	ARS1-23-01081-002
MSC02-050823	ARS1-23-01081-003

Sample	Date Collected	Date Received	Analysis	Basis	Prep Date/Time	Analysis Date/Time
001	05/08/23 08:00	05/17/23	ASP-PU239-AF	As Received	06/05/23 12:09	06/08/23 03:06
001	05/08/23 08:00	05/17/23	ASP-TH-AF	As Received	06/02/23 10:38	06/06/23 23:52
001	05/08/23 08:00	05/17/23	GAM-A-AF	As Received	NA	05/23/23 14:35
001	05/08/23 08:00	05/17/23	GPC-SR90-AF	As Received	06/05/23 12:09	06/07/23 10:52
002	05/11/23 15:03	05/17/23	ASP-PU239-AF	As Received	06/05/23 12:09	06/08/23 03:06
002	05/11/23 15:03	05/17/23	ASP-TH-AF	As Received	06/02/23 10:38	06/06/23 23:52
002	05/11/23 15:03	05/17/23	GAM-A-AF	As Received	NA	05/23/23 14:18
002	05/11/23 15:03	05/17/23	GPC-SR90-AF	As Received	06/05/23 12:09	06/07/23 10:52
003	05/11/23 15:09	05/17/23	ASP-PU239-AF	As Received	06/05/23 12:09	06/08/23 03:06
003	05/11/23 15:09	05/17/23	ASP-TH-AF	As Received	06/02/23 10:38	06/06/23 23:52
003	05/11/23 15:09	05/17/23	GAM-A-AF	As Received	NA	05/30/23 14:10
003	05/11/23 15:09	05/17/23	GPC-SR90-AF	As Received	06/05/23 12:09	06/07/23 10:52

**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)"**.

Ac-228, Am-241, Bi-212, Bi-214, Co-60, Cs-137, Eu-152, Eu-154, K-40, Pa-234, Pb-210, Pb-212, Pb-214, Ra-226, Ra-228, Th-234, Tl-208, U-235, and U-238 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)"**.

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 in batch ARS1-B23-00926 has elevated MDA for Pu-239/240 with ACT of  $-3.018E-8$  uCi/filter, MDA of  $1.251E-7$  uCi/filter and CRDL of  $4.8E-08$  uCi/filter.

Fraction 001 in batch ARS1-B23-00880 has elevated MDA for Ra-226 with ACT of  $-1.528E-5$  uCi/filter, MDA of  $1.503E-5$  uCi/filter and CRDL of  $4.4E-06$  uCi/filter.

Fraction 002 in batch ARS1-B23-00926 has elevated MDA for Pu-239/240 with ACT of  $-2.763E-8$  uCi/filter, MDA of  $1.040E-7$  uCi/filter and CRDL of  $4.8E-08$  uCi/filter.

Fraction 002 in batch ARS1-B23-00919 has elevated MDA for Th-232 with ACT of  $4.057E-8$  uCi/filter, MDA of  $5.461E-8$  uCi/filter and CRDL of  $1.4E-08$  uCi/filter.

Fraction 002 in batch ARS1-B23-00880 has elevated MDA for Ra-226 with ACT of  $-1.320E-5$  uCi/filter, MDA of  $1.600E-5$  uCi/filter and CRDL of  $4.4E-06$  uCi/filter.

Fraction 003 in batch ARS1-B23-00926 has elevated MDA for Pu-239/240 with ACT of  $-1.780E-8$  uCi/filter, MDA of  $9.418E-8$  uCi/filter and CRDL of  $4.8E-08$  uCi/filter.

Fraction 003 in batch ARS1-B23-00919 has elevated MDA for Th-232 with ACT of  $1.151E-8$  uCi/filter, MDA of  $6.197E-8$  uCi/filter and CRDL of  $1.4E-08$  uCi/filter.

Fraction 003 in batch ARS1-B23-00880 has elevated MDA for Ra-226 with ACT of  $-5.944E-6$  uCi/filter, MDA of  $1.570E-5$  uCi/filter and CRDL of  $4.4E-06$  uCi/filter.

ARS1-B23-00919: ROI's adjusted to better fit the peaks of interest.

ARS1-B23-00926: ROI's adjusted to better fit the peaks of interest.

# Notes (Case Narrative)

## Definitions:

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

## Data Qualifiers:

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

## Radiochemistry Comments:

- 1.0) All MDA/MDC values are calculated on a sample specific basis.
- 2.0) Data in this report are within the limits of uncertainty specified in the reference method unless otherwise specified.
- 3.0) Total activity is actually total gamma activity and is determined utilizing the prominent gamma emitters from the naturally occurring radioactive decay chains and other prominent radioactive nuclides. Total activity may be lower than the actual total activity due to the extent of secular equilibrium achieved in the various decay chains at the time of analysis. The total activity is not representative of nuclides that emit solely alpha or beta particles.
- 4.0) Ra-226 after ingrowth is determined via secular equilibrium with its daughter, Bismuth 214 (Gamma Spectroscopy only).
- 5.0) Ra-228 is determined via secular equilibrium with its daughter, Actinium 228 (Gamma Spectroscopy only).
- 6.0) U-238 is determined via secular equilibrium with its daughter, Thorium 234 (Gamma Spectroscopy only).
- 7.0) All gamma spectroscopy was performed utilizing high purity germanium detectors (HPGe).
- 8.0) 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).
- 9.0) Gamma spectroscopy results are calculated values based on the ORTEC® GammaVision ENV32 Analysis Engine.
- 10.0) 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, Eichrom ACW16, HASL 300 Se-03, HASL 300 Am-03); Neptunium 237 (Eichrom ACW16); Plutonium 238, Plutonium 239/240, Plutonium-241 (Eichrom ACW03, Eichrom ACW16, HASL 300 Se-03, HASL 300 Pu-10); Thorium-228, Thorium 230, Thorium-232 (Eichrom ACW10); Uranium-234, Uranium-235, Uranium-238 (Eichrom ACW03, Eichrom ACW16, HASL 300 Se-03); Technetium-99 (Eichrom TCW02)
- 11.0) 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); Neptunium 237 (Eichrom ACW16); Plutonium 238, Plutonium 239/240, Plutonium-241 (Eichrom ACW03, Eichrom ACW16, 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, Eichrom ACW16, HASL 300 Se-03, HASL 300 U-02, HASL 300 U-04); Technetium-99 (Eichrom TCS01)
- 12.0) 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); Neptunium 237 (Eichrom ACW16); Plutonium 238, Plutonium 239/240, Plutonium-241 (Eichrom ACW03, Eichrom ACW16, HASL 300 Se-03); Thorium-228, Thorium 230, Thorium-232 (Eichrom ACW10); Uranium-234, Uranium-235, Uranium-238 (Eichrom ACW03, Eichrom ACW16, HASL 300 Se-03); Technetium-99 (Eichrom TCW02, Eichrom TCS01)

## General Comments:

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



# **ARS Aleut Analytical, LLC Analytical Reports**

**for**

# **GES-AIS, LLC**

# **Analytical Results**



**ARS Sample Delivery Group:** ARS1-23-01081

**Client Sample ID:** FBC-050823

**Sample Collection Date:** 05/08/23 8:00

**Sample Matrix:** Air Filter

**Percent Solids:** N/A

**Request or PO Number:** Parcel C Air Monitoring RAD

**ARS Sample ID:** ARS1-23-01081-001

**Date Received:** 05/17/23

**Report Date:** 06/14/23

## Radiochemistry

**Analysis Method:** Eichrom ACW03

**ABatch Sample ID:** ARS1-B23-00926-04

Analysis Description	Analysis Results	CSU +/- 2 s	MDA	DLC	CRDL	Qual	Analysis Units	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
Pu-239/240	-3.018E-8	5.927E-8	1.251E-7	5.439E-8	4.8E-08	U	uCi/filter	06/08/23 3:06		67.0%

**Analysis Method:** Eichrom ACW10

**ABatch Sample ID:** ARS1-B23-00919-04

Analysis Description	Analysis Results	CSU +/- 2 s	MDA	DLC	CRDL	Qual	Analysis Units	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
Th-232	8.077E-8	5.570E-8	5.947E-8	1.879E-8	1.4E-08		uCi/filter	06/06/23 23:52		50.2%

**Analysis Method:** EPA 901.1M

**ABatch Sample ID:** ARS1-B23-00880-04

Analysis Description	Analysis Results	CSU +/- 2 s	MDA	DLC	CRDL	Qual	Analysis Units	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
Ac-228	8.597E-6	2.670E-6	2.728E-6	1.364E-6	NP		uCi/filter	05/23/23 14:35		N/A
Co-60	-3.989E-8	9.496E-7	1.047E-6	5.235E-7	0.00024	U	uCi/filter	05/23/23 14:35		N/A
Cs-137	-3.615E-7	8.234E-7	9.565E-7	4.783E-7	0.00048	U	uCi/filter	05/23/23 14:35		N/A
Ra-226	-1.528E-5	1.461E-5	1.503E-5	7.515E-6	4.4E-06	U	uCi/filter	05/23/23 14:35		N/A
Ra-228	8.597E-6	2.670E-6	2.728E-6	1.364E-6	NP		uCi/filter	05/23/23 14:35		N/A

**Analysis Method:** Eichrom SRW01

**ABatch Sample ID:** ARS1-B23-00927-04

Analysis Description	Analysis Results	CSU +/- 2 s	MDA	DLC	CRDL	Qual	Analysis Units	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
SR-90	-9.727E-7	2.021E-6	3.837E-6	1.773E-6	2.4E-05	U	uCi/filter	06/07/23 10:52		99.8%



**ARS Sample Delivery Group:** ARS1-23-01081  
**Client Sample ID:** MSC01-050823  
**Sample Collection Date:** 05/11/23 15:03  
**Sample Matrix:** Air Filter  
**Percent Solids:** N/A

**Request or PO Number:** Parcel C Air Monitoring RAD  
**ARS Sample ID:** ARS1-23-01081-002  
**Date Received:** 05/17/23  
**Report Date:** 06/14/23

## Radiochemistry

**Analysis Method:** Eichrom ACW03

**ABatch Sample ID:** ARS1-B23-00926-05

Analysis Description	Analysis Results	CSU +/- 2 s	MDA	DLC	CRDL	Qual	Analysis Units	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
Pu-239/240	-2.763E-8	4.733E-8	1.040E-7	4.453E-8	4.8E-08	U	uCi/filter	06/08/23 3:06		71.3%

**Analysis Method:** Eichrom ACW10

**ABatch Sample ID:** ARS1-B23-00919-05

Analysis Description	Analysis Results	CSU +/- 2 s	MDA	DLC	CRDL	Qual	Analysis Units	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
Th-232	4.057E-8	3.751E-8	5.461E-8	2.043E-8	1.4E-08	U	uCi/filter	06/06/23 23:52		80.6%

**Analysis Method:** EPA 901.1M

**ABatch Sample ID:** ARS1-B23-00880-05

Analysis Description	Analysis Results	CSU +/- 2 s	MDA	DLC	CRDL	Qual	Analysis Units	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
Ac-228	5.943E-6	2.191E-6	2.440E-6	1.220E-6	NP		uCi/filter	05/23/23 14:18		N/A
Co-60	-6.363E-7	1.119E-6	1.134E-6	5.670E-7	0.00024	U	uCi/filter	05/23/23 14:18		N/A
Cs-137	-4.938E-7	8.926E-7	9.944E-7	4.972E-7	0.00048	U	uCi/filter	05/23/23 14:18		N/A
Ra-226	-1.320E-5	1.625E-5	1.600E-5	8.000E-6	4.4E-06	U	uCi/filter	05/23/23 14:18		N/A
Ra-228	5.943E-6	2.191E-6	2.440E-6	1.220E-6	NP		uCi/filter	05/23/23 14:18		N/A

**Analysis Method:** Eichrom SRW01

**ABatch Sample ID:** ARS1-B23-00927-05

Analysis Description	Analysis Results	CSU +/- 2 s	MDA	DLC	CRDL	Qual	Analysis Units	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
SR-90	1.164E-6	2.313E-6	3.991E-6	1.841E-6	2.4E-05	U	uCi/filter	06/07/23 10:52		93.9%



**ARS Sample Delivery Group:** ARS1-23-01081  
**Client Sample ID:** MSC02-050823  
**Sample Collection Date:** 05/11/23 15:09  
**Sample Matrix:** Air Filter  
**Percent Solids:** N/A

**Request or PO Number:** Parcel C Air Monitoring RAD  
**ARS Sample ID:** ARS1-23-01081-003  
**Date Received:** 05/17/23  
**Report Date:** 06/14/23

## Radiochemistry

**Analysis Method:** Eichrom ACW03

**ABatch Sample ID:** ARS1-B23-00926-06

Analysis Description	Analysis Results	CSU +/- 2 s	MDA	DLC	CRDL	Qual	Analysis Units	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
Pu-239/240	-1.780E-8	4.199E-8	9.418E-8	3.905E-8	4.8E-08	U	uCi/filter	06/08/23 3:06		74.2%

**Analysis Method:** Eichrom ACW10

**ABatch Sample ID:** ARS1-B23-00919-06

Analysis Description	Analysis Results	CSU +/- 2 s	MDA	DLC	CRDL	Qual	Analysis Units	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
Th-232	1.151E-8	3.193E-8	6.197E-8	2.319E-8	1.4E-08	U	uCi/filter	06/06/23 23:52		72.4%

**Analysis Method:** EPA 901.1M

**ABatch Sample ID:** ARS1-B23-00880-06

Analysis Description	Analysis Results	CSU +/- 2 s	MDA	DLC	CRDL	Qual	Analysis Units	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
Ac-228	6.992E-6	2.304E-6	2.532E-6	1.266E-6	NP		uCi/filter	05/30/23 14:10		N/A
Co-60	-5.670E-7	1.053E-6	1.140E-6	5.700E-7	0.00024	U	uCi/filter	05/30/23 14:10		N/A
Cs-137	-4.805E-7	9.107E-7	1.054E-6	5.270E-7	0.00048	U	uCi/filter	05/30/23 14:10		N/A
Ra-226	-5.944E-6	1.525E-5	1.570E-5	7.850E-6	4.4E-06	U	uCi/filter	05/30/23 14:10		N/A
Ra-228	6.992E-6	2.304E-6	2.532E-6	1.266E-6	NP		uCi/filter	05/30/23 14:10		N/A

**Analysis Method:** Eichrom SRW01

**ABatch Sample ID:** ARS1-B23-00927-06

Analysis Description	Analysis Results	CSU +/- 2 s	MDA	DLC	CRDL	Qual	Analysis Units	Analysis Date/Time	Analysis Technician	Tracer/Chem Recovery
SR-90	-1.801E-7	2.104E-6	3.841E-6	1.780E-6	2.4E-05	U	uCi/filter	06/07/23 10:52		95.6%



# **ARS Aleut Analytical, LLC Analytical Reports**

**for**

# **GES-AIS, LLC**

# **QC Summary**



### QC Sample Results

**Analytical Batch:** ARS1-B23-00880  
**Lab Sample ID:** ARS1-B23-00880-01  
**Method:** EPA 901.1M

**Sample Type:** LCS  
**Matrix:** Air Filter  
**Analysis Date:** 05/23/23 13:53

Analyte	Spike Added	Analysis Result	Qual	Analysis Units	% Rec	% Rec Limits
Am-241	33.065	30.762		uCi/filter	93.0	75 - 125
Co-60	20.928	20.911		uCi/filter	99.9	75 - 125
Cs-137	12.996	13.117		uCi/filter	100.9	75 - 125





### QC Sample Results

**Analytical Batch:** ARS1-B23-00880  
**Lab Sample ID:** ARS1-B23-00880-02  
**Method:** EPA 901.1M

**Sample Type:** LCSD  
**Matrix:** Air Filter  
**Analysis Date:** 05/23/23 14:04

Analyte	Spike Added	Analysis Result	Qual	Analysis Units	% Rec	% Rec Limits	RPD	RPD Limit	DER	DER Limit
Am-241	33.065	30.806		uCi/filter	93.2	75 - 125	0.1	25	0.026	3
Co-60	20.928	20.870		uCi/filter	99.7	75 - 125	0.2	25	0.050	3
Cs-137	12.996	13.155		uCi/filter	101.2	75 - 125	0.3	25	0.074	3



### QC Sample Results

**Analytical Batch:** ARS1-B23-00880  
**Lab Sample ID:** ARS1-B23-00880-03  
**Method:** EPA 901.1M

**Sample Type:** MBL  
**Matrix:** Air Filter  
**Analysis Date:** 05/30/23 14:08

Analyte	Analysis Result	CSU +/- 2 s	MDA	DLC	Qual	Analysis Units
Ac-228	-0.003	0.007	0.006	0.003	U	uCi/filter
Am-241	-2.561E-4	0.001	0.002	0.001	U	uCi/filter
Bi-212	0.006	0.011	0.012	0.006	U	uCi/filter
Bi-214	-0.003	0.004	0.004	0.002	U	uCi/filter
Co-60	-0.001	0.002	0.002	9.300E-4	U	uCi/filter
Cs-137	7.873E-4	0.001	0.002	7.800E-4	U	uCi/filter
Eu-152	3.806E-4	0.001	0.002	8.800E-4	U	uCi/filter
Eu-154	5.039E-4	0.001	0.001	6.750E-4	U	uCi/filter
K-40	-0.008	0.023	0.023	0.011	U	uCi/filter
Pa-234	7.172E-4	0.002	0.002	0.001	U	uCi/filter
Pb-210	-0.008	0.015	0.017	0.009	U	uCi/filter
Pb-212	-0.002	0.002	0.002	0.001	U	uCi/filter
Pb-214	-0.003	0.003	0.003	0.002	U	uCi/filter
Ra-226	-0.083	0.032	0.032	0.016	U	uCi/filter
Ra-228	-0.003	0.007	0.006	0.003	U	uCi/filter
Th-234	0.007	0.015	0.017	0.009	U	uCi/filter
Tl-208	-2.989E-4	0.002	0.002	7.700E-4	U	uCi/filter
U-235	-0.004	0.006	0.008	0.004	U	uCi/filter
U-238	0.007	0.015	0.017	0.009	U	uCi/filter



### QC Association Summary

**ARS Sample Delivery Group:** ARS1-23-01081

**Analytical Batch:** ARS1-B23-00880

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

Batch Sample ID	Lab Sample ID	Client Sample ID	Matrix	Method	Prep Method
ARS1-B23-00880-01		Lab Control Sample	Air Filter	EPA 901.1M	N/A
ARS1-B23-00880-02		Lab Control Sample Duplicate	Air Filter	EPA 901.1M	N/A
ARS1-B23-00880-03		Method Blank	Air Filter	EPA 901.1M	N/A
ARS1-B23-00880-04	ARS1-23-01081-001	FBC-050823	Air Filter	EPA 901.1M	N/A
ARS1-B23-00880-05	ARS1-23-01081-002	MSC01-050823	Air Filter	EPA 901.1M	N/A
ARS1-B23-00880-06	ARS1-23-01081-003	MSC02-050823	Air Filter	EPA 901.1M	N/A



### QC Sample Results

**Analytical Batch:** ARS1-B23-00919

**Lab Sample ID:** ARS1-B23-00919-01

**Method:** Eichrom ACW10

**Sample Type:** LCS

**Matrix:** Air Filter

**Analysis Date:** 06/06/23 23:52

Analyte	Spike Added	Analysis Result	Qual	Analysis Units	% Rec	% Rec Limits
Th-230	5.268E-6	6.163E-6		uCi/filter	117.0	75 - 125



### QC Sample Results

**Analytical Batch:** ARS1-B23-00919

**Lab Sample ID:** ARS1-B23-00919-02

**Method:** Eichrom ACW10

**Sample Type:** LCSD

**Matrix:** Air Filter

**Analysis Date:** 06/06/23 23:52

Analyte	Spike Added	Analysis Result	Qual	Analysis Units	% Rec	% Rec Limits	RPD	RPD Limit	DER	DER Limit
Th-230	5.227E-6	6.143E-6		uCi/filter	117.5	75 - 125	0.3	25	0.036	3



### QC Sample Results

**Analytical Batch:** ARS1-B23-00919

**Lab Sample ID:** ARS1-B23-00919-03

**Method:** Eichrom ACW10

**Sample Type:** MBL

**Matrix:** Air Filter

**Analysis Date:** 06/06/23 23:52

Analyte	Analysis Result	CSU +/- 2 s	MDA	DLC	Qual	Analysis Units
Th-228	-6.477E-8	9.187E-8	1.853E-7	8.389E-8	U	uCi/filter
Th-230	7.706E-8	8.015E-8	1.292E-7	5.590E-8	U	uCi/filter
Th-232	-3.204E-8	3.346E-8	9.041E-8	3.652E-8	U	uCi/filter



### QC Association Summary

**ARS Sample Delivery Group:** ARS1-23-01081

**Analytical Batch:** ARS1-B23-00919

**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-B23-00919-01		Lab Control Sample	Air Filter	Eichrom ACW10	N/A
ARS1-B23-00919-02		Lab Control Sample Duplicate	Air Filter	Eichrom ACW10	N/A
ARS1-B23-00919-03		Method Blank	Air Filter	Eichrom ACW10	N/A
ARS1-B23-00919-04	ARS1-23-01081-001	FBC-050823	Air Filter	Eichrom ACW10	N/A
ARS1-B23-00919-05	ARS1-23-01081-002	MSC01-050823	Air Filter	Eichrom ACW10	N/A
ARS1-B23-00919-06	ARS1-23-01081-003	MSC02-050823	Air Filter	Eichrom ACW10	N/A



### QC Sample Results

**Analytical Batch:** ARS1-B23-00926

**Lab Sample ID:** ARS1-B23-00926-01

**Method:** Eichrom ACW03

**Sample Type:** LCS

**Matrix:** Air Filter

**Analysis Date:** 06/08/23 3:06

Analyte	Spike Added	Analysis Result	Qual	Analysis Units	% Rec	% Rec Limits
Pu-239/240	7.810E-6	7.895E-6		uCi/filter	101.1	75 - 125





### QC Sample Results

**Analytical Batch:** ARS1-B23-00926

**Lab Sample ID:** ARS1-B23-00926-02

**Method:** Eichrom ACW03

**Sample Type:** LCSD

**Matrix:** Air Filter

**Analysis Date:** 06/08/23 3:06

Analyte	Spike Added	Analysis Result	Qual	Analysis Units	% Rec	% Rec Limits	RPD	RPD Limit	DER	DER Limit
Pu-239/240	7.768E-6	8.050E-6		uCi/filter	103.6	75 - 125	1.9	25	0.214	3



### QC Sample Results

**Analytical Batch:** ARS1-B23-00926

**Lab Sample ID:** ARS1-B23-00926-03

**Method:** Eichrom ACW03

**Sample Type:** MBL

**Matrix:** Air Filter

**Analysis Date:** 06/08/23 3:06

Analyte	Analysis Result	CSU +/- 2 s	MDA	DLC	Qual	Analysis Units
Pu-238	-6.780E-8	7.760E-8	1.577E-7	7.178E-8	U	uCi/filter
Pu-239/240	-7.301E-8	6.988E-8	1.470E-7	6.645E-8	U	uCi/filter



### QC Association Summary

**ARS Sample Delivery Group:** ARS1-23-01081

**Analytical Batch:** ARS1-B23-00926

**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-B23-00926-01		Lab Control Sample	Air Filter	Eichrom ACW03	N/A
ARS1-B23-00926-02		Lab Control Sample Duplicate	Air Filter	Eichrom ACW03	N/A
ARS1-B23-00926-03		Method Blank	Air Filter	Eichrom ACW03	N/A
ARS1-B23-00926-04	ARS1-23-01081-001	FBC-050823	Air Filter	Eichrom ACW03	N/A
ARS1-B23-00926-05	ARS1-23-01081-002	MSC01-050823	Air Filter	Eichrom ACW03	N/A
ARS1-B23-00926-06	ARS1-23-01081-003	MSC02-050823	Air Filter	Eichrom ACW03	N/A



### QC Sample Results

**Analytical Batch:** ARS1-B23-00927

**Lab Sample ID:** ARS1-B23-00927-01

**Method:** Eichrom SRW01

**Sample Type:** LCS

**Matrix:** Air Filter

**Analysis Date:** 06/07/23 10:52

Analyte	Spike Added	Analysis Result	Qual	Analysis Units	% Rec	% Rec Limits
SR-90	1.995E-5	2.178E-5		uCi/filter	109.2	75 - 125



### QC Sample Results

**Analytical Batch:** ARS1-B23-00927

**Lab Sample ID:** ARS1-B23-00927-02

**Method:** Eichrom SRW01

**Sample Type:** LCSD

**Matrix:** Air Filter

**Analysis Date:** 06/07/23 10:52

Analyte	Spike Added	Analysis Result	Qual	Analysis Units	% Rec	% Rec Limits	RPD	RPD Limit	DER	DER Limit
SR-90	1.969E-5	2.173E-5		uCi/filter	110.3	75 - 125	0.2	25	0.023	3



### QC Sample Results

**Analytical Batch:** ARS1-B23-00927

**Lab Sample ID:** ARS1-B23-00927-03

**Method:** Eichrom SRW01

**Sample Type:** MBL

**Matrix:** Air Filter

**Analysis Date:** 06/07/23 10:52

Analyte	Analysis Result	CSU +/- 2 s	MDA	DLC	Qual	Analysis Units
SR-90	-4.824E-7	2.664E-6	4.919E-6	2.275E-6	U	uCi/filter



### QC Association Summary

**ARS Sample Delivery Group:** ARS1-23-01081

**Analytical Batch:** ARS1-B23-00927

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

Batch Sample ID	Lab Sample ID	Client Sample ID	Matrix	Method	Prep Method
ARS1-B23-00927-01		Lab Control Sample	Air Filter	Eichrom SRW01	N/A
ARS1-B23-00927-02		Lab Control Sample Duplicate	Air Filter	Eichrom SRW01	N/A
ARS1-B23-00927-03		Method Blank	Air Filter	Eichrom SRW01	N/A
ARS1-B23-00927-04	ARS1-23-01081-001	FBC-050823	Air Filter	Eichrom SRW01	N/A
ARS1-B23-00927-05	ARS1-23-01081-002	MSC01-050823	Air Filter	Eichrom SRW01	N/A
ARS1-B23-00927-06	ARS1-23-01081-003	MSC02-050823	Air Filter	Eichrom SRW01	N/A



# **ARS Aleut Analytical, LLC Analytical Reports**

**for**

# **GES-AIS, LLC**

# **Batch QC**





## QC Results per Analytical Batch

Analytical Batch	<b>ARS1-B23-00880</b>
SDG	<b>ARS1-23-01081</b>
Analysis	Gamma Spec (Short) in (Air Filters, Smears [AF])
Method	<b>EPA 901.1M</b>
Analysis Code	<b>GAM-A-AF</b>
Report Units	<b>uCi/filter</b>

### 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	05/23/23 13:53	Analysis Technician		
Analysis Batch Sample ID	QC Type	Analyte	Results	CSU (2s)	Expected Value	LCS Rec (%)	MDA
ARS1-B23-00880-01	LCS	AM-241	30.762	2.381	33.065	93.0	0.125
ARS1-B23-00880-01	LCS	CO-60	20.911	1.139	20.928	99.9	0.301
ARS1-B23-00880-01	LCS	CS-137	13.117	0.707	12.996	100.9	0.067

Duplicate RER/DER/RPD			Analysis Date	05/23/23 14:04	Analysis Technician	
Analyte	Results LCS	CSU LCS (2s)	Results LCSD	CSU LCSD (2s)	DER	RPD
AM-241	30.762	2.381	30.806	2.384	0.026	0.1
CO-60	20.911	1.139	20.870	1.145	0.050	0.2
CS-137	13.117	0.707	13.155	0.709	0.074	0.3

Method Blank			Analysis Date	05/30/23 14:08	Analysis Technician	
Analysis Batch Sample ID	QC Type	Analyte	Results	CSU (2s)	MDA	Qual
ARS1-B23-00880-03	MBL	AC-228	-0.003	0.007	0.006	U
ARS1-B23-00880-03	MBL	AM-241	-2.561E-4	0.001	0.002	U
ARS1-B23-00880-03	MBL	BI-212	0.006	0.011	0.012	U
ARS1-B23-00880-03	MBL	BI-214	-0.003	0.004	0.004	U
ARS1-B23-00880-03	MBL	CO-60	-0.001	0.002	0.002	U
ARS1-B23-00880-03	MBL	CS-137	7.873E-4	0.001	0.002	U
ARS1-B23-00880-03	MBL	EU-152	3.806E-4	0.001	0.002	U
ARS1-B23-00880-03	MBL	EU-154	5.039E-4	0.001	0.001	U
ARS1-B23-00880-03	MBL	K-40	-0.008	0.023	0.023	U
ARS1-B23-00880-03	MBL	PA-234	7.172E-4	0.002	0.002	U
ARS1-B23-00880-03	MBL	PB-210	-0.008	0.015	0.017	U
ARS1-B23-00880-03	MBL	PB-212	-0.002	0.002	0.002	U
ARS1-B23-00880-03	MBL	PB-214	-0.003	0.003	0.003	U
ARS1-B23-00880-03	MBL	RA-226	-0.083	0.032	0.032	U
ARS1-B23-00880-03	MBL	RA-228	-0.003	0.007	0.006	U
ARS1-B23-00880-03	MBL	TH-234	0.007	0.015	0.017	U
ARS1-B23-00880-03	MBL	TL-208	-2.989E-4	0.002	0.002	U
ARS1-B23-00880-03	MBL	U-235	-0.004	0.006	0.008	U
ARS1-B23-00880-03	MBL	U-238	0.007	0.015	0.017	U



## QC Results per Analytical Batch

Analytical Batch	<b>ARS1-B23-00919</b>
SDG	<b>ARS1-23-01081</b>
Analysis	Thorium in (Air Filters, Smears, Leak Test [AF, SM, LT])
Method	<b>Eichrom ACW10</b>
Analysis Code	<b>ASP-TH-AF</b>
Report Units	<b>uCi/filter</b>

### 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	06/06/23 23:52	Analysis Technician	[REDACTED]
Analysis Batch Sample ID	QC Type	Analyte	Results	CSU (2s)	Expected Value	LCS Rec (%)	MDA
ARS1-B23-00919-01	LCS	TH-230	6.163E-6	7.749E-7	5.268E-6	117.0	2.880E-8

Duplicate RER/DER/RPD				Analysis Date	06/06/23 23:52	Analysis Technician	[REDACTED]
Analyte	Results LCS	CSU LCS (2s)	Results LCSD	CSU LCSD (2s)	DER	RPD	
TH-230	6.163E-6	7.749E-7	6.143E-6	7.755E-7	0.036	0.3	

Method Blank				Analysis Date	06/06/23 23:52	Analysis Technician	[REDACTED]
Analysis Batch Sample ID	QC Type	Analyte	Results	CSU (2s)	MDA	Qual	
ARS1-B23-00919-03	MBL	TH-228	-6.477E-8	9.187E-8	1.853E-7	U	
ARS1-B23-00919-03	MBL	TH-230	7.706E-8	8.015E-8	1.292E-7	U	
ARS1-B23-00919-03	MBL	TH-232	-3.204E-8	3.346E-8	9.041E-8	U	



## QC Results per Analytical Batch

Analytical Batch	<b>ARS1-B23-00926</b>
SDG	<b>ARS1-23-01081</b>
Analysis	Plutonium (239, 240Pu) in (Air Filters, Smears, Leak Test [AF, SM, LT])
Method	<b>Eichrom ACW03</b>
Analysis Code	<b>ASP-PU239-AF</b>
Report Units	<b>uCi/filter</b>

### 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	06/08/23 03:06	Analysis Technician	
Analysis Batch Sample ID	QC Type	Analyte	Results	CSU (2s)	Expected Value	LCS Rec (%)	MDA
ARS1-B23-00926-01	LCS	PU-239/240	7.895E-6	9.847E-7	7.810E-6	101.1	4.003E-8

Duplicate RER/DER/RPD				Analysis Date	06/08/23 03:06	Analysis Technician	
Analyte	Results LCS	CSU LCS (2s)	Results LCSD	CSU LCSD (2s)	DER	RPD	
PU-239/240	7.895E-6	9.847E-7	8.050E-6	1.009E-6	0.214	1.9	

Method Blank				Analysis Date	06/08/23 03:06	Analysis Technician	
Analysis Batch Sample ID	QC Type	Analyte	Results	CSU (2s)	MDA	Qual	
ARS1-B23-00926-03	MBL	PU-238	-6.780E-8	7.760E-8	1.577E-7	U	
ARS1-B23-00926-03	MBL	PU-239/240	-7.301E-8	6.988E-8	1.470E-7	U	



## QC Results per Analytical Batch

Analytical Batch	<b>ARS1-B23-00927</b>
SDG	<b>ARS1-23-01081</b>
Analysis	Strontium-90 in (Air Filters, Smears [AF])
Method	<b>Eichrom SRW01</b>
Analysis Code	<b>GPC-SR90-AF</b>
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	06/07/23 10:52	Analysis Technician	
Analysis Batch Sample ID	QC Type	Analyte	Results	CSU (2s)	Expected Value	LCS Rec (%)	MDA
ARS1-B23-00927-01	LCS	SR-90	2.178E-5	3.342E-6	1.995E-5	109.2	5.745E-7

Duplicate RER/DER/RPD				Analysis Date	06/07/23 10:52	Analysis Technician	
Analyte	Results LCS	CSU LCS (2s)	Results LCSD	CSU LCSD (2s)	DER	RPD	
SR-90	2.178E-5	3.342E-6	2.173E-5	3.324E-6	0.023	0.2	

Method Blank				Analysis Date	06/07/23 10:52	Analysis Technician	
Analysis Batch Sample ID	QC Type	Analyte	Results	CSU (2s)	MDA	Qual	
ARS1-B23-00927-03	MBL	SR-90	-4.824E-7	2.664E-6	4.919E-6	U	



# **ARS Aleut Analytical, LLC Analytical Reports**

**for**

# **GES-AIS, LLC**

# **Sample Management Records**

**CHAIN-OF-CUSTODY  
RECORD**

Gilbane Federal

1501 W Fountainhead Parkway, Suite 550, Tempe, Arizona 85282

COC # █ 051623RADC



<b>Project Name:</b> Hunters Point Shipyard, Parcel C Removal Site Evaluation		Laboratory: ARS Aleut Analytical (AAA), Port Allen, LA		<b>Event:</b> Parcel C Air Monitoring RAD
<b>Project Number:</b> J31000600		POC: █		
<b>WBS Code:</b> J31000600		Ship to: 2609 North River Road, Port Allen, LA 70767-3469		

<b>Comments:</b>	<b>Equipment:</b>	<b>Analytical Test Method</b> E901.1 - Gamma Spec RC0240 - Pu and Th Isotopes SR02RC - SR00	Code	Matrix
			A	Air
			AQ	Air Quality Control Matrix
			Code	Container/Preservative
			5	1x 1-L Plastic, HNO <sub>3</sub> , pH < 2
			15	1x 250 mL Plastic, 4 Degrees C

Event: Parcel C Air Monitoring RAD														
Sample ID	Matrix	Date	Time	Samp Init.					Location ID	Sample Type	Depth (ft bgs) Top - Bottom	Cooler	Comments	
1	FBC-050823	AQ	05/08/2023	0800	█	X	X	X	█	FIELDQC	FB2	0.00 0.00	1	
2	MSC01-050823	A	05/11/2023	1503	█	X	X	X	█	MSC01	N1	0.00 0.00	1	
3	MSC02-050823	A	05/11/2023	1509	█	X	X	X	█	MSC02	N1	0.00 0.00	1	

Turnaround Time: 28 days

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time	Shipping Date / Carrier / Airbill Number
█	5/16/23	1400	Fedkov	5/16/23	1400	Shipping Date: 5/16/2023 / FEDEX / 7720 0629 1408
			█	5-17-23	900	
						<b>Received by Laboratory: (Signature, Date, Time) &amp; condition</b>



Procedures: GES-002 / EPA 900 0M

Start Date: 5/8/23  
Stop Date: 5/11/23

File ID Number: 051623RAOC

Field Notes

Station	Sample ID	Date In	Time In	Date Out	Time Out	Flow Rate (LPM)	Flow Rate (LPM)	Flow volume Cu M	Julian Date for Out	Total Run Time (Days)	Total Run Time (Hours)	Total Run Time (Minutes)	Average Flow Rate (LPM)	Initial Flow Rate (CFM)	Final Flow Rate (CFM)	Average Flow Rate (CFM)	Average Flow Rate (Cu Min)	Flow Rate (Cu Min)	Total Flow (L)
	FGC-050823	5/8/2023	8:00	5/8/2023	8:00														
1 MSC01	MSC01-050823	05/08/23	8:35	05/11/23	15:03	80	80	296.8	131	3.44	82.47	4948.0	80	2.11888	2.11888	2.11888	3.6	0.06	296.880
2 MSC02	MSC02-050823	05/08/23	8:45	05/11/23	15:06	90	80	299.6	131	3.43	82.40	4944.0	60	2.11888	2.11888	2.11000	3.6	0.06	296.640

**FORMULAS**

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

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

Flow Rate (m<sup>3</sup>/h) = Flow Rate (CFM) x 60min x (12in x 2.54cm/in x 1000mm/m)<sup>3</sup>

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

Flow Rate (Cu Min) = CFM x 0.0283168466 Cu/MCF

Flow Rate (LPM) = Cu M X 1000

Total Flow (L) = LPM X Total Minutes

### SDG Report - Samples and Containers

SDG Specific Data							
<b>SDG</b>	<b>ARS1-23-01081</b>			<b>TAT Days</b>	<b>28 Calendar Days</b>	<b>Project Type</b>	<b>Environmental</b>
<b>Sample Count</b>	<b>3</b>	<b>Rpt Level</b>	<b>4</b>	<b>Date Received</b>	<b>05/17/2023</b>	<b>COC Number</b>	<b>051623RADC</b>
<b>Client</b>	<b>GES-AIS, LLC</b>			<b>Discrepancy Resol</b>	<b>N/A</b>	<b>PO Number</b>	<b>Parcel C Air Monitoring RAD</b>
<b>Client Code</b>	<b>1138</b>			<b>Client Deadline</b>	<b>06/14/2023</b>	<b>Job Number</b>	<b>J31000600</b>
<b>Profile Number</b>	<b>PN-01440</b>					<b>Job Location</b>	<b>Hunters Point Shipyard, Parcel C Removal Site Evaluation</b>
<b>Comment</b>							

Samples and Containers Checked In Thus Far									
FR	Name	Matrix	Start Date	End Date	Disp	Hold	Arch	Storage	Comments
001	FBC-050823	Air Filter	05/08/2023 07:59	05/08/2023 08:00	H	30	10	PrePrep	
	<b>IC_ID</b>	<b>Cnt</b>	<b>Container Type</b>	<b>AF Volume (L)</b>	<b>AF Units</b>		<b>Rate</b>	<b>Mins</b>	<b>Comments</b>
	438075	1	HDP Container	1	LPM			1	
			Mid-Sample Date:	05/08/2023 07:59	AF Volume (CuM):			0.001	
002	MSC01-050823	Air Filter	05/11/2023 15:02	05/11/2023 15:03	H	30	10	PrePrep	
	<b>IC_ID</b>	<b>Cnt</b>	<b>Container Type</b>	<b>AF Volume (L)</b>	<b>AF Units</b>		<b>Rate</b>	<b>Mins</b>	<b>Comments</b>
	438076	1	HDP Container	1	LPM			1	
			Mid-Sample Date:	05/11/2023 15:02	AF Volume (CuM):			0.001	
003	MSC02-050823	Air Filter	05/11/2023 15:08	05/11/2023 15:09	H	30	10	PrePrep	
	<b>IC_ID</b>	<b>Cnt</b>	<b>Container Type</b>	<b>AF Volume (L)</b>	<b>AF Units</b>		<b>Rate</b>	<b>Mins</b>	<b>Comments</b>
	438077	1	HDP Container	1	LPM			1	
			Mid-Sample Date:	05/11/2023 15:08	AF Volume (CuM):			0.001	



### SDG Report - Analysis Assignments

<b>SDG</b>	<b>ARS1-23-01081</b>	<b>Sample Count</b>	<b>3</b>
<b>Client</b>	<b>GES-AIS, LLC</b>	<b>Analysis Count</b>	<b>4-12</b>

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	3
ASP-TH-AF	Thorium in (Air Filters, Smears, Leak Test [AF, SM, LT])	I	3
GAM-A-AF	Gamma Spec (Short) in (Air Filters, Smears [AF])	I	3
GPC-SR90-AF	Strontium-90 in (Air Filters, Smears [AF])	I	3

Analyses Assigned Per Fraction		
Fraction	Analysis Code	X = Assigned
001	ASP-PU239-AF	<b>X</b>
001	ASP-TH-AF	<b>X</b>
001	GAM-A-AF	<b>X</b>
001	GPC-SR90-AF	<b>X</b>
002	ASP-PU239-AF	<b>X</b>
002	ASP-TH-AF	<b>X</b>
002	GAM-A-AF	<b>X</b>
002	GPC-SR90-AF	<b>X</b>
003	ASP-PU239-AF	<b>X</b>
003	ASP-TH-AF	<b>X</b>
003	GAM-A-AF	<b>X</b>
003	GPC-SR90-AF	<b>X</b>

Client Name: GES-AIS, LLC

Profile Name: Parcel C 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							
	<b>Analyte</b>			<b>RDL</b>	<b>LCS LL/UL</b>	<b>MS LL/UL</b>	<b>RadY LL/UL</b>	<b>GravY LL/UL</b>	<b>RER</b>	<b>RPD</b>	<b>Surr LL/UL</b>	
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							
	<b>Analyte</b>			<b>RDL</b>	<b>LCS LL/UL</b>	<b>MS LL/UL</b>	<b>RadY LL/UL</b>	<b>GravY LL/UL</b>	<b>RER</b>	<b>RPD</b>	<b>Surr LL/UL</b>	
Th-232 (7440-29-1)				1.4E-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							
	<b>Analyte</b>			<b>RDL</b>	<b>LCS LL/UL</b>	<b>MS LL/UL</b>	<b>RadY LL/UL</b>	<b>GravY LL/UL</b>	<b>RER</b>	<b>RPD</b>	<b>Surr LL/UL</b>	
	Ac-228 (14331-83-0)				uCi/filter	75/125	60/140	30/110	30/110	1	25	N/A
	Am-241 (14596-10-2)				uCi/filter	75/125	60/140	30/110	30/110	1	25	N/A
	Bi-212 (14913-49-6)				uCi/filter	75/125	60/140	30/110	30/110	1	25	N/A
	Bi-214 (14733-03-0)				uCi/filter	75/125	60/140	30/110	30/110	1	25	N/A
	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
	Eu-152 (14683-23-9)				uCi/filter	75/125	60/140	30/110	30/110	1	25	N/A
	Eu-154 (15585-10-1)				uCi/filter	75/125	60/140	30/110	30/110	1	25	N/A
	K-40 (13966-00-2)				uCi/filter	75/125	60/140	30/110	30/110	1	25	N/A
	Pb-210 (14255-04-0)				uCi/filter	75/125	60/140	30/110	30/110	1	25	N/A
	Pb-212 (15092-94-1)				uCi/filter	75/125	60/140	30/110	30/110	1	25	N/A
	Pb-214 (15067-28-4)				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
	Ra-228 (15262-20-1)				uCi/filter	75/125	60/140	30/110	30/110	1	25	N/A
Th-234 (15065-10-8)				uCi/filter	75/125	60/140	30/110	30/110	1	25	N/A	
Tl-208 (14913-50-9)				uCi/filter	75/125	60/140	30/110	30/110	1	25	N/A	
U-235 (15117-96-1)				uCi/filter	75/125	60/140	30/110	30/110	1	25	N/A	
U-238 (7440-61-1)				uCi/filter	75/125	60/140	30/110	30/110	1	25	N/A	

GAM-A-AF	Pa-234 (15100-28-4)			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						
	<b>Analyte</b>			<b>RDL</b>	<b>LCS LL/UL</b>	<b>MS LL/UL</b>	<b>RadY LL/UL</b>	<b>GravY LL/UL</b>	<b>RER</b>	<b>RPD</b>	<b>Surr LL/UL</b>
	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
		<b>Group</b>		<b>Analyte</b>	
		Parcel C Rad Sampling		Pu-239/240	
ASP-PU239-AF	002	uCi	filter	N/A	1
		<b>Group</b>		<b>Analyte</b>	
		Parcel C Rad Sampling		Pu-239/240	
ASP-PU239-AF	003	uCi	filter	N/A	1
		<b>Group</b>		<b>Analyte</b>	
		Parcel C Rad Sampling		Pu-239/240	
ASP-TH-AF	001	uCi	filter	N/A	1
		<b>Group</b>		<b>Analyte</b>	
		Parcel C Rad Sampling		Th-232	
ASP-TH-AF	002	uCi	filter	N/A	1
		<b>Group</b>		<b>Analyte</b>	
		Parcel C Rad Sampling		Th-232	
ASP-TH-AF	003	uCi	filter	N/A	1
		<b>Group</b>		<b>Analyte</b>	
		Parcel C Rad Sampling		Th-232	
GAM-A-AF	001	uCi	filter	N/A	19
		<b>Group</b>		<b>Analyte</b>	
		Parcel C Rad Sampling		Ac-228	
		Parcel C Rad Sampling		Am-241	
		Parcel C Rad Sampling		Bi-212	
		Parcel C Rad Sampling		Bi-214	
		Parcel C Rad Sampling		Co-60	
		Parcel C Rad Sampling		Cs-137	
Parcel C Rad Sampling		Eu-152			

**DQO Report for SDG**  
ARS1-23-01081

GAM-A-AF	001	Parcel C Rad Sampling		Eu-154	
		Parcel C Rad Sampling		K-40	
		Parcel C Rad Sampling		Pa-234	
		Parcel C Rad Sampling		Pb-210	
		Parcel C Rad Sampling		Pb-212	
		Parcel C Rad Sampling		Pb-214	
		Parcel C Rad Sampling		Ra-226	
		Parcel C Rad Sampling		Ra-228	
		Parcel C Rad Sampling		Th-234	
		Parcel C Rad Sampling		Tl-208	
		Parcel C Rad Sampling		U-235	
		Parcel C Rad Sampling		U-238	
		GAM-A-AF	002	uCi	filter
<b>Group</b>				<b>Analyte</b>	
Parcel C Rad Sampling				Ac-228	
Parcel C Rad Sampling				Am-241	
Parcel C Rad Sampling				Bi-212	
Parcel C Rad Sampling				Bi-214	
Parcel C Rad Sampling				Co-60	
Parcel C Rad Sampling				Cs-137	
Parcel C Rad Sampling				Eu-152	
Parcel C Rad Sampling				Eu-154	
Parcel C Rad Sampling				K-40	
Parcel C Rad Sampling				Pa-234	
Parcel C Rad Sampling				Pb-210	
Parcel C Rad Sampling				Pb-212	
Parcel C Rad Sampling				Pb-214	
Parcel C Rad Sampling				Ra-226	
Parcel C Rad Sampling				Ra-228	
Parcel C Rad Sampling				Th-234	
Parcel C Rad Sampling				Tl-208	
Parcel C Rad Sampling				U-235	
Parcel C Rad Sampling		U-238			

**DQO Report for SDG**  
ARS1-23-01081

GAM-A-AF	003	uCi	filter	N/A	19	
		<b>Group</b>		<b>Analyte</b>		
		Parcel C Rad Sampling		Ac-228		
		Parcel C Rad Sampling		Am-241		
		Parcel C Rad Sampling		Bi-212		
		Parcel C Rad Sampling		Bi-214		
		Parcel C Rad Sampling		Co-60		
		Parcel C Rad Sampling		Cs-137		
		Parcel C Rad Sampling		Eu-152		
		Parcel C Rad Sampling		Eu-154		
		Parcel C Rad Sampling		K-40		
		Parcel C Rad Sampling		Pa-234		
		Parcel C Rad Sampling		Pb-210		
		Parcel C Rad Sampling		Pb-212		
		Parcel C Rad Sampling		Pb-214		
		Parcel C Rad Sampling		Ra-226		
		Parcel C Rad Sampling		Ra-228		
		Parcel C Rad Sampling		Th-234		
Parcel C Rad Sampling		Tl-208				
Parcel C Rad Sampling		U-235				
Parcel C Rad Sampling		U-238				
GPC-SR90-AF	001	uCi	filter	N/A	1	
		<b>Group</b>		<b>Analyte</b>		
Parcel C Rad Sampling		Sr-90				
GPC-SR90-AF	002	uCi	filter	N/A	1	
		<b>Group</b>		<b>Analyte</b>		
Parcel C Rad Sampling		Sr-90				
GPC-SR90-AF	003	uCi	filter	N/A	1	
		<b>Group</b>		<b>Analyte</b>		
Parcel C Rad Sampling		Sr-90				

# PALA Sample Receipt Inspection Form

Client Name: GES-ABS  
 SDG: ARS1-23-01081

Sample Custodian: [REDACTED] Survey Start Date: 5-17-23 Survey Start Time: 920  
 Thermometer ID: E1054012261 Calibration Due Date: 1-12-24 pH Paper Lot#: NA  
 Exposure Rate Meter + Probe Unit ID: 273629 Calibration Due Date: 9-13-23 Background: 4  $\mu\text{R/hr}$   
 Count Rate Meter + Probe Unit ID: 268993 Calibration Due Date: 9-19-23 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 ( $\mu\text{R/hr}$ ) (limit <500 $\mu\text{R/hr}$ )	Max External Swipe Counts (cpm)	Max Internal Swipe Counts (cpm)	ESC True Temps* ( $^{\circ}\text{C}$ )	TRAX Matrix ID (circle all that apply); (See Section 4.3 of SOP)
A: <u>7720060291408</u>	<u>5</u>	<u>20</u>	<u>30</u>	<u>NA</u>	AQ WD WG WO
B: _____	_____	_____	_____	_____	WS WW SI UR
C: _____	_____	_____	_____	_____	SO OL BI VG
D: _____	_____	_____	_____	_____	WP SM <u>AF</u>
E: _____	_____	_____	_____	_____	
F: _____	_____	_____	_____	_____	

**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 relinquished/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:

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# PALA Sample Survey Form

Client Name: GES-AIS

SDG: ARS1-23-01081

Pipette ID: NA

Tip Lot#: NA

Disposable pipette lot#: NA

Sample ID from Client on COC or Sample	ESC Letter	Sample Container Type	Approx. Fill Level (%)	pH <2 is Acceptable		Acid Lot # or Ind container temp (°C)	Vol. of Acid Used (mL)	Acceptance Limits
				pH As Rec'd	pH Adjusted			<100 cpm/cm
<u>FBC-050823</u>	<u>A</u>	<u>ziploc</u>	<u>25</u>	<u>NA</u>	<u>NA</u>	<u>NA</u>	<u>NA</u>	<u>30</u>
<u>MSC01-</u>	↓	↓	↓	↓	↓	↓	↓	↓
<u>MSC02-</u>	↓	↓	↓	↓	↓	↓	↓	↓

Sample Custodian: [REDACTED]

Survey End Date: 5-17-23 Survey/pH End Time: 9:25

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).



ORIGIN ID: JCCA

200 FISHER STREET

SAN FRANCISCO, CA 94124  
UNITED STATES US

SHIP DATE: 09MAY23  
ACTWGT: 1.00 LB  
CAD: 254128867/NET4610

BILL SENDER

TO  
**ARS ALEUT ANALYTICAL, LLC**  
**2609 NORTH RIVER ROAD**

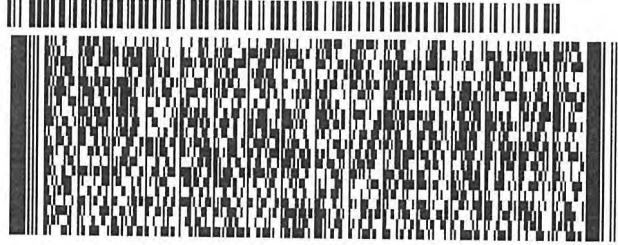
**PORT ALLEN LA 70767**

(225) 381-2991

REF: J31000.600 02.04 05

INV.  
PO:

DEPT:



583-332PC3FE2D

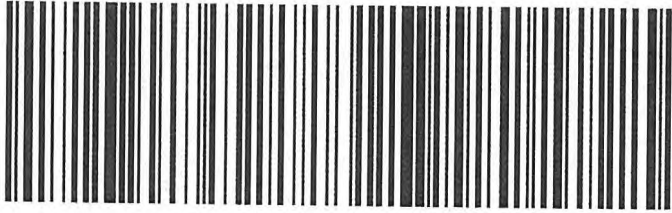
1232020409100

TRK# 7720 0629 1408  
0201

WED - 10 MAY 4:30P  
STANDARD OVERNIGHT

**XN OPLA**

70767  
LA-US MSY



**After printing this label:**

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

**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 Service Guide. Written claims must be filed within strict time limits, see current FedEx Service Guide.






Built Environment Testing  
Analytics

Eurofins Analytics, LLC  
10329 Stony Run Lane  
Ashland, Va 23005  
Phone: (804) 365-3000 Fax: (804) 365-3002  
AIHA LAP, LLC Accreditation ID 100531

June 6, 2023

  
AIS-GES, LLC  
1501 W. FOUNTAINHEAD PKWY,  
#550  
TEMPE, AZ 85282

**Laboratory Workorder ID: B137025**

Client Project ID: J310000600 PARCEL C HUNTERS PT

Received: May 17, 2023

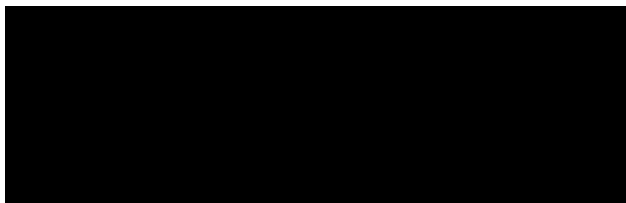
Reported: May 25, 2023

Attached are the results we obtained on the analysis of your samples submitted to Analytics. Any Chains-of-Custody associated by this sample group are enclosed. Air concentrations are calculated as a convenience to the client and the overall accuracy of this result depends on both the accuracy of the air volume and the amount found by analysis. Theoretical air volumes for passive monitors are calculated using the sampling time submitted and the manufacture's listed sampling rate for each compound. Results provided in this report relate only to the items tested.

For blanks and non-detects the results indicated with a '<' value represents the reporting limit for the analysis. Unless otherwise noted results are not corrected for blank values.

Unless the signature of the appropriate manager(s) appears on this report, this report should be considered PRELIMINARY and is subject to change.

We appreciate your confidence in allowing Analytics to be your testing laboratory. Any questions regarding this report can be addressed by calling our customer services department at (800) 888-8061.



 CIH  
Technical Director

Enclosures



Built Environment Testing  
Analytics

Eurofins Analytics, LLC  
10329 Stony Run Lane  
Ashland, Va 23005  
Phone: (804) 365-3000 Fax: (804) 365-3002  
AIHA LAP, LLC Accreditation ID 100531

### Final Report

AIS-GES, LLC  
1501 W. FOUNTAINHEAD PKWY,  
#550  
TEMPE, AZ 85282

Customer: PARCELC1  
Attention: XXXXXXXXXX  
PO Number J310000600

Date Received: 05/17/23  
Client Project ID J310000600 PARCEL C  
HUNTERS PT

Lab ID: B137025001	Sample ID: PM031223-15	FIELD QC	Media: 8X10 PREWEIGHED GLASS	Sample Date: 5/8/2023 8:00:00 AM
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Analyte	Method	Analysis Date	Volume	Reporting Limit	Front	Rear	Total	Concentration
PM10 Particulates	40CFR50 App.J	05/18/23	0 L	1000 ug			< 1000 ug	--

Lab ID: B137025002	Sample ID: TSP031223-16	FIELD QC	Media: 8X10 PREWEIGHED GLASS	Sample Date: 5/8/2023 8:00:00 AM
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Analyte	Method	Analysis Date	Volume	Reporting Limit	Front	Rear	Total	Concentration
Total Suspended Particulates	40CFR50 App.B	05/18/23	0 L	1000 ug			1000 ug	--
Lead	40 CFR Part 50 Appendix G	05/19/23	0 L	14 ug			< 14 ug	--
Manganese	40 CFR Part 50 Appendix G	05/19/23	0 L	98 ug			< 98 ug	--

Lab ID: B137025003	Sample ID: PM031223-17	MSC01	Media: 8X10 PREWEIGHED GLASS	Sample Date: 5/9/2023 6:52:00 AM
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Analyte	Method	Analysis Date	Volume	Reporting Limit	Front	Rear	Total	Concentration
PM10 Particulates	40CFR50 App.J	05/18/23	1646240 L	1000 ug			18100 ug	11 ug/M3



**Final Report**

<b>Lab ID:</b> B137025004	<b>Sample ID:</b> TSP031223-18	MSC01	<b>Media:</b> 8X10 PREWEIGHED GLASS	<b>Sample Date:</b> 5/9/2023 6:52:00 AM
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Analyte	Method	Analysis Date	Volume	Reporting Limit	Front	Rear	Total	Concentration
Total Suspended Particulates	40CFR50 App.B	05/18/23	1652750 L	1000 ug			39800 ug	24 ug/M3
Lead	40 CFR Part 50 Appendix G	05/19/23	1652750 L	14 ug			< 14 ug	< 0.008 ug/M3
Manganese	40 CFR Part 50 Appendix G	05/19/23	1652750 L	98 ug			< 98 ug	< 0.059 ug/M3

<b>Lab ID:</b> B137025005	<b>Sample ID:</b> PM031423-01	MSC02	<b>Media:</b> 8X10 PREWEIGHED GLASS	<b>Sample Date:</b> 5/9/2023 7:06:00 AM
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Analyte	Method	Analysis Date	Volume	Reporting Limit	Front	Rear	Total	Concentration
PM10 Particulates	40CFR50 App.J	05/18/23	1617910 L	1000 ug			23600 ug	15 ug/M3

<b>Lab ID:</b> B137025006	<b>Sample ID:</b> TSP031423-02	MSC02	<b>Media:</b> 8X10 PREWEIGHED GLASS	<b>Sample Date:</b> 5/9/2023 7:06:00 AM
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Analyte	Method	Analysis Date	Volume	Reporting Limit	Front	Rear	Total	Concentration
Total Suspended Particulates	40CFR50 App.B	05/18/23	1734220 L	1000 ug			32000 ug	18 ug/M3
Lead	40 CFR Part 50 Appendix G	05/19/23	1734220 L	14 ug			< 14 ug	< 0.008 ug/M3
Manganese	40 CFR Part 50 Appendix G	05/19/23	1734220 L	98 ug			< 98 ug	< 0.057 ug/M3

<b>Lab ID:</b> B137025007	<b>Sample ID:</b> PM031423-03	MSC01	<b>Media:</b> 8X10 PREWEIGHED GLASS	<b>Sample Date:</b> 5/10/2023 6:56:00 AM
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Analyte	Method	Analysis Date	Volume	Reporting Limit	Front	Rear	Total	Concentration
PM10 Particulates	40CFR50 App.J	05/18/23	1657770 L	1000 ug			16700 ug	10 ug/M3



**Final Report**

<b>Lab ID:</b> B137025008	<b>Sample ID:</b> TSP031423-04	MSC01	<b>Media:</b> 8X10 PREWEIGHED GLASS	<b>Sample Date:</b> 5/10/2023 6:56:00 AM
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Analyte	Method	Analysis Date	Volume	Reporting Limit	Front	Rear	Total	Concentration
Total Suspended Particulates	40CFR50 App.B	05/18/23	1658930 L	1000 ug			51000 ug	31 ug/M3
Lead	40 CFR Part 50 Appendix G	05/19/23	1658930 L	14 ug			< 14 ug	< 0.008 ug/M3
Manganese	40 CFR Part 50 Appendix G	05/19/23	1658930 L	98 ug			< 98 ug	< 0.059 ug/M3

<b>Lab ID:</b> B137025009	<b>Sample ID:</b> PM031423-05	MSC02	<b>Media:</b> 8X10 PREWEIGHED GLASS	<b>Sample Date:</b> 5/10/2023 7:08:00 AM
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Analyte	Method	Analysis Date	Volume	Reporting Limit	Front	Rear	Total	Concentration
PM10 Particulates	40CFR50 App.J	05/18/23	1629730 L	1000 ug			20300 ug	12 ug/M3

<b>Lab ID:</b> B137025010	<b>Sample ID:</b> TSP031423-06	MSC02	<b>Media:</b> 8X10 PREWEIGHED GLASS	<b>Sample Date:</b> 5/10/2023 7:08:00 AM
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Analyte	Method	Analysis Date	Volume	Reporting Limit	Front	Rear	Total	Concentration
Total Suspended Particulates	40CFR50 App.B	05/18/23	1722850 L	1000 ug			39900 ug	23 ug/M3
Lead	40 CFR Part 50 Appendix G	05/19/23	1722850 L	14 ug			< 14 ug	< 0.008 ug/M3
Manganese	40 CFR Part 50 Appendix G	05/19/23	1722850 L	98 ug			< 98 ug	< 0.057 ug/M3

<b>Lab ID:</b> B137025011	<b>Sample ID:</b> PM031423-07	MSC01	<b>Media:</b> 8X10 PREWEIGHED GLASS	<b>Sample Date:</b> 5/11/2023 7:24:00 AM
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Analyte	Method	Analysis Date	Volume	Reporting Limit	Front	Rear	Total	Concentration
PM10 Particulates	40CFR50 App.J	05/18/23	1691540 L	1000 ug			18200 ug	11 ug/M3



**Final Report**

<b>Lab ID:</b> B137025012	<b>Sample ID:</b> TSP031423-08	MSC01	<b>Media:</b> 8X10 PREWEIGHED GLASS	<b>Sample Date:</b> 5/11/2023 7:24:00 AM
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Analyte	Method	Analysis Date	Volume	Reporting Limit	Front	Rear	Total	Concentration
Total Suspended Particulates	40CFR50 App.B	05/18/23	1696930 L	1000 ug			44000 ug	26 ug/M3
Lead	40 CFR Part 50 Appendix G	05/19/23	1696930 L	14 ug			< 14 ug	< 0.008 ug/M3
Manganese	40 CFR Part 50 Appendix G	05/19/23	1696930 L	98 ug			< 98 ug	< 0.058 ug/M3

<b>Lab ID:</b> B137025013	<b>Sample ID:</b> PM031423-09	MSC02	<b>Media:</b> 8X10 PREWEIGHED GLASS	<b>Sample Date:</b> 5/11/2023 7:05:00 AM
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Analyte	Method	Analysis Date	Volume	Reporting Limit	Front	Rear	Total	Concentration
PM10 Particulates	40CFR50 App.J	05/18/23	1619070 L	1000 ug			22600 ug	14 ug/M3

<b>Lab ID:</b> B137025014	<b>Sample ID:</b> TSP031423-10	MSC02	<b>Media:</b> 8X10 PREWEIGHED GLASS	<b>Sample Date:</b> 5/11/2023 7:05:00 AM
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Analyte	Method	Analysis Date	Volume	Reporting Limit	Front	Rear	Total	Concentration
Total Suspended Particulates	40CFR50 App.B	05/18/23	1724380 L	1000 ug			39900 ug	23 ug/M3
Lead	40 CFR Part 50 Appendix G	05/19/23	1724380 L	14 ug			< 14 ug	< 0.008 ug/M3
Manganese	40 CFR Part 50 Appendix G	05/19/23	1724380 L	98 ug			< 98 ug	< 0.057 ug/M3

<b>Lab ID:</b> B137025015	<b>Sample ID:</b> PM031423-11	MSC01	<b>Media:</b> 8X10 PREWEIGHED GLASS	<b>Sample Date:</b> 5/11/2023 3:00:00 PM
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Analyte	Method	Analysis Date	Volume	Reporting Limit	Front	Rear	Total	Concentration
PM10 Particulates	40CFR50 App.J	05/18/23	507130 L	1000 ug			7000 ug	14 ug/M3



**Final Report**

<b>Lab ID:</b> B137025016	<b>Sample ID:</b> TSP031423-12	MSC01	<b>Media:</b> 8X10 PREWEIGHED GLASS	<b>Sample Date:</b> 5/11/2023 3:00:00 PM
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Analyte	Method	Analysis Date	Volume	Reporting Limit	Front	Rear	Total	Concentration
Total Suspended Particulates	40CFR50 App.B	05/18/23	512830 L	1000 ug			11700 ug	23 ug/M3
Lead	40 CFR Part 50 Appendix G	05/19/23	512830 L	14 ug			< 14 ug	< 0.027 ug/M3
Manganese	40 CFR Part 50 Appendix G	05/19/23	512830 L	98 ug			< 98 ug	< 0.191 ug/M3

<b>Lab ID:</b> B137025017	<b>Sample ID:</b> PM031423-13	MSC02	<b>Media:</b> 8X10 PREWEIGHED GLASS	<b>Sample Date:</b> 5/11/2023 3:12:00 PM
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Analyte	Method	Analysis Date	Volume	Reporting Limit	Front	Rear	Total	Concentration
PM10 Particulates	40CFR50 App.J	05/18/23	538440 L	1000 ug			9500 ug	18 ug/M3

<b>Lab ID:</b> B137025018	<b>Sample ID:</b> TSP031423-14	MSC02	<b>Media:</b> 8X10 PREWEIGHED GLASS	<b>Sample Date:</b> 5/11/2023 3:12:00 PM
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Analyte	Method	Analysis Date	Volume	Reporting Limit	Front	Rear	Total	Concentration
Total Suspended Particulates	40CFR50 App.B	05/18/23	573110 L	1000 ug			20700 ug	36 ug/M3
Lead	40 CFR Part 50 Appendix G	05/19/23	573110 L	14 ug			< 14 ug	< 0.024 ug/M3
Manganese	40 CFR Part 50 Appendix G	05/19/23	573110 L	98 ug			< 98 ug	< 0.171 ug/M3



Built Environment Testing  
Analytics

Eurofins Analytics, LLC  
10329 Stony Run Lane  
Ashland, Va 23005  
Phone: (804) 365-3000 Fax: (804) 365-3002  
AIHA LAP, LLC Accreditation ID 100531

## Final Report

### General Laboratory Comments

Abbreviations:

ug = micrograms; mg=milligrams; g = grams, ppm=parts per million (volume), ppb = parts per billion (volume), mg/M3=milligrams per cubic meter of air, ug/M3=micrograms per cubic meter of air; Min=minutes, Qual=Qualifiers



**CHAIN-OF-CUSTODY  
RECORD**

Gilbane Federal  
 1501 W Fountainhead Parkway, Suite 550, Tempe, Arizona 85282

COC # 051623AIRC



Project Name: Hunters Point Shipyard, Parcel C Removal Site Evaluation	Laboratory: EUROFINS BUILT ENVIRONMENT TESTING ANALYTICS, ASHLAND, VA	Event: Parcel C Air Monitoring
Project Number: J310000600	POC:	
WBS Code: J310000600	Ship to: 10329 Stony Run Lane, Ashland, VA 23005	

Comments:	Analytical Test Method	CAAIR - Air PM10	N0500 - Air TSP	SW6010B - Air Pb Mn	5/16/23	Code	Matrix
						A	Air
Equipment:						AQ	Air Quality Control Matrix
						Code	Container/Preservative
						1	1x 250-mL Plastic, 4 Degrees C
						1	1x Envelope, None

Event: Parcel C Air Monitoring														
Sample ID	Matrix	Date	Time	Samp Init.					Location ID	Sample Type	Depth (ft bgs) Top - Bottom	Cooler	Comments	
1	PM031223-15	AQ	05/08/2023	0800	X				FIELDQC	FB1	0.00	0.00	1	VOLUME (M3):
2	TSP031223-16	AQ	05/08/2023	0800		X	X		FIELDQC	FB1	0.00	0.00	1	VOLUME (M3):
3	PM031223-17	A	05/09/2023	0652	X				MSC01	N1	0.00	0.00	1	VOLUME (M3):
4	TSP031223-18	A	05/09/2023	0652		X	X		MSC01	N1	0.00	0.00	1	VOLUME (M3):
5	PM031423-01	A	05/09/2023	0706	X				MSC02	N1	0.00	0.00	1	VOLUME (M3):
6	TSP031423-02	A	05/09/2023	0706		X	X		MSC02	N1	0.00	0.00	1	VOLUME (M3):

Turnaround Time: NA

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time	Shipping Date / Carrier / Airbill Number
	5/16/23	1400	Fedex	5/16/23	1400	Shipping Date: 5/16/2023 / FEDEX / 7720 0639 7578
				5/17/23	1159	Received by Laboratory: (Signature, Date, Time) & condition
						5/17/23 1159 CUSTODY Seal INTACT



**CHAIN-OF-CUSTODY  
RECORD**

Gilbane Federal  
1501 W Fountainhead Parkway, Suite 550, Tempe, Arizona 85282

COC # 051623AIRC



Project Name: Hunters Point Shipyard, Parcel C Removal Site Evaluation	Laboratory: EUROFINS BUILT ENVIRONMENT TESTING ANALYTICS, ASHLAND, VA	Event: Parcel C Air Monitoring
Project Number: J310000600	POC:	
WBS Code: J310000600	Ship to: 10329 Stony Run Lane, Ashland, VA 23005	

Comments:	Analytical Test Method	CAAIR - Air PM10	N0500 - Air TSP	SW6010B - Air Pb Mn	Code	Matrix
					A	Air
Equipment:					Code	Container/Preservative
					1	1x 250-mL Plastic, 4 Degrees C
					1	1x Envelope, None

Event: Parcel C Air Monitoring													
					1	1	1						
Sample ID	Matrix	Date	Time	Samp Init					Location ID	Sample Type	Depth (ft bgs) Top - Bottom	Cooler	Comments
1 PM031423-03	A	05/10/2023	0656		X				MSC01	N1	0.00 0.00	1	VOLUME (M3):
2 TSP031423-04	A	05/10/2023	0656			X	X		MSC01	N1	0.00 0.00	1	VOLUME (M3):
3 PM031423-05	A	05/10/2023	0708		X				MSC02	N1	0.00 0.00	1	VOLUME (M3):
4 TSP031423-06	A	05/10/2023	0708			X	X		MSC02	N1	0.00 0.00	1	VOLUME (M3):
Turnaround Time: NA													

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time	Shipping Date / Carrier / Airbill Number
	5/16/23	1400	Fedex	5/16/23	1400	Shipping Date: 5/16/2023 / FEDEX / 7720 0639 7578
				5/17/23	1159	
						Signature: (Signature, Date, Time) & condition
						5/17/23 1159 Custody Seal Intact

**CHAIN-OF-CUSTODY  
RECORD**

Gilbane Federal  
1501 W Fountainhead Parkway, Suite 550, Tempe, Arizona 85282

COC # 051623AIRC



Project Name: Hunters Point Shipyard, Parcel C Removal Site Evaluation	Laboratory: EUROFINS BUILT ENVIRONMENT TESTING ANALYTICS, ASHLAND, VA	Event: Parcel C Air Monitoring
Project Number: J310000600	POC: [REDACTED]	
WBS Code: J310000600	Ship to: 10329 Stony Run Lane, Ashland, VA 23005	

Comments:	Analytical Test Method	CAAIR - Air PM10	NO500 - Air TSP	SW6010B - Air Pb Mn	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	Code	Matrix
											A	Air
Equipment:	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	Code	Container/Preservative
											1	1x 250-mL Plastic, 4 Degrees C
											1	1x Envelope, None

Event: Parcel C Air Monitoring										1	1	1							
Sample ID	Matrix	Date	Time	Samp Init.						Location ID	Sample Type	Depth (ft bgs)		Cooler	Comments				
1	PM031423-07	A	05/11/2023	0724	[REDACTED]	X				MSC01	N1	0.00	0.00	1	VOLUME (M3):				
2	TSP031423-08	A	05/11/2023	0724	[REDACTED]	X	X			MSC01	N1	0.00	0.00	1	VOLUME (M3):				
3	PM031423-09	A	05/11/2023	0705	[REDACTED]	X				MSC02	N1	0.00	0.00	1	VOLUME (M3):				
4	TSP031423-10	A	05/11/2023	0705	[REDACTED]	X	X			MSC02	N1	0.00	0.00	1	VOLUME (M3):				

Turnaround Time: NA

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time	Shipping Date / Carrier / Airbill Number
[REDACTED]	5/16/23	1400	Fedex	5/16/23	1400	Shipping Date: 5/16/2023 / FEDEX / 7720 0639 7578
[REDACTED]			[REDACTED]	5/17/23	1159	Received by Laboratory: (Signature, Date, Time) & condition
						5/17/23 1159 custody seal intact



**CHAIN-OF-CUSTODY  
RECORD**

Gilbane Federal

1501 W Fountainhead Parkway, Suite 550, Tempe, Arizona 85282

COC # [REDACTED] 051623AIRC



<b>Project Name:</b> Hunters Point Shipyard, Parcel C Removal Site Evaluation	<b>Laboratory:</b> EUROFINS BUILT ENVIRONMENT TESTING ANALYTICS, ASHLAND, VA	<b>Event:</b> Parcel C Air Monitoring
<b>Project Number:</b> J310000600	<b>POC:</b> [REDACTED]	
<b>WBS Code:</b> J310000600	<b>Ship to:</b> 10329 Stony Run Lane, Ashland, VA 23005	

<b>Comments:</b>	Analytical Test Method	CAAIR - Air PM10	N0500 - Air TSP	SW6010B - Air Pb Mn	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	Code	Matrix	
																A	Air	
<b>Equipment:</b>	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	Code	Container/Preservative
																	1	1x 250-mL Plastic, 4 Degrees C
																	1	1x Envelope, None

Event: Parcel C Air Monitoring																	
	Sample ID	Matrix	Date	Time	Samp Init.							Location ID	Sample Type	Depth (ft bgs) Top - Bottom	Cooler	Comments	
	1	PM031423-11	A	05/11/2023	1500	[REDACTED]	X					MSC01	N1	0.00	0.00	1	VOLUME (M3);
	2	TSP031423-12	A	05/11/2023	1500	[REDACTED]		X	X			MSC01	N1	0.00	0.00	1	VOLUME (M3);
	3	PM031423-13	A	05/11/2023	1512	[REDACTED]	X					MSC02	N1	0.00	0.00	1	VOLUME (M3);
	4	TSP031423-14	A	05/11/2023	1512	[REDACTED]		X	X			MSC02	N1	0.00	0.00	1	VOLUME (M3);
<b>Turnaround Time: NA</b>																	

<b>Relinquished by: (Signature)</b>	<b>Date</b>	<b>Time</b>	<b>Received by: (Signature)</b>	<b>Date</b>	<b>Time</b>	<b>Shipping Date / Carrier / Airbill Number</b>
[REDACTED]	5/16/23	1400	Fedex	5/16/23	1400	Shipping Date: 5/16/2023 / FEDEX / 7720 0639 7578
			[REDACTED]	5/17/23	1159	
						<b>Received by Laboratory: (Signature, Date, Time) &amp; condition</b>
						5/17/23 Custody seal intact 1159

# CHAIN-OF-CUSTODY RECORD

COC # 051623AIRC



Project Name: Hunters Point Shipyard, Parcel C Removal Site Evaluation					
Project Number: J310000600					
WBS Code: J310000600					
	Sample ID	Matrix	Date	Time	Comments
1	PM031223-15	AQ	05/08/2023	0800	
2	TSP031223-16	AQ	05/08/2023	0800	
3	PM031223-17	A	05/09/2023	0652	VOLUME (M3): 1646.24
4	TSP031223-18	A	05/09/2023	0652	VOLUME (M3): 1652.75
5	PM031423-01	A	05/09/2023	0706	VOLUME (M3):1617.91
6	TSP031423-02	A	05/09/2023	0706	VOLUME (M3): 1734.22
7	PM031423-03	A	05/10/2023	0656	VOLUME (M3): 1657.77
8	TSP031423-04	A	05/10/2023	0656	VOLUME (M3): 1658.93
9	PM031423-05	A	05/10/2023	0708	VOLUME (M3): 1629.73
10	TSP031423-06	A	05/10/2023	0708	VOLUME (M3): 1722.85
11	PM031423-07	A	05/11/2023	0724	VOLUME (M3): 1691.54
12	TSP031423-08	A	05/11/2023	0724	VOLUME (M3): 1696.93
13	PM031423-09	A	05/11/2023	0705	VOLUME (M3): 1619.07
14	TSP031423-10	A	05/11/2023	0705	VOLUME (M3): 1724.38
15	PM031423-11	A	05/11/2023	1500	VOLUME (M3): 507.13
16	TSP031423-12	A	05/11/2023	1500	VOLUME (M3): 512.83
17	PM031423-13	A	05/11/2023	1512	VOLUME (M3): 538.44
18	TSP031423-14	A	05/11/2023	1512	VOLUME (M3): 573.11





### Level 2 QA/QC Summary Report

Work Order #: B137025

Report Date: 6/6/2023

**Batch ID:** ICP230518B      Analysis Date: 5/19/2023  
**Media::** 8X10PW GFF      Preparation Date 5/18/2023

#### Blank Spike Results

QC ID	QC Type	Parameter	Percent Recovery			RPD	Limit
			LCS	LCSD	Acceptance		
LCS ICP23	BLKSPK	Lead	94	95	75-125	1.0	25
LCS ICP23	BLKSPK	Manganese	91	92	75-125	0.0	25

#### Method Blank Results


QC ID	QC Type	Parameter	Result	RL	Units
LMB ICP2	LMB	Lead	< 14	14	ug
LMB ICP2	LMB	Manganese	< 98	98	ug



Built Environment Testing  
Analytics

Eurofins Analytics, LLC  
10329 Stony Run Lane  
Ashland, Va 23005  
Phone: (804) 365-3000 Fax: (804) 365-3002  
AIHA LAP, LLC Accreditation ID 100531

June 1, 2023

  
AIS-GES, LLC  
1501 W. FOUNTAINHEAD PKWY,  
#550  
TEMPE, AZ 85282

**Laboratory Workorder ID: B144029**

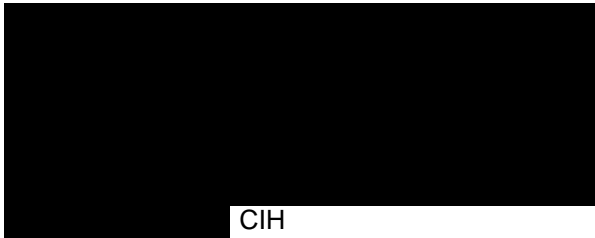
Client Project ID: J310000600 PARCEL C HUNTERS PT  
Received: May 24, 2023  
Reported: June 1, 2023

Attached are the results we obtained on the analysis of your samples submitted to Analytics. Any Chains-of-Custody associated by this sample group are enclosed. Air concentrations are calculated as a convenience to the client and the overall accuracy of this result depends on both the accuracy of the air volume and the amount found by analysis. Theoretical air volumes for passive monitors are calculated using the sampling time submitted and the manufacture's listed sampling rate for each compound. Results provided in this report relate only to the items tested.

For blanks and non-detects the results indicated with a '<' value represents the reporting limit for the analysis. Unless otherwise noted results are not corrected for blank values.

Unless the signature of the appropriate manager(s) appears on this report, this report should be considered PRELIMINARY and is subject to change.

We appreciate your confidence in allowing Analytics to be your testing laboratory. Any questions regarding this report can be addressed by calling our customer services department at (800) 888-8061.

  
CIH  
Technical Director

Enclosures



Built Environment Testing  
Analytics

Eurofins Analytics, LLC  
10329 Stony Run Lane  
Ashland, Va 23005  
Phone: (804) 365-3000 Fax: (804) 365-3002  
AIHA LAP, LLC Accreditation ID 100531

### Final Report

AIS-GES, LLC  
1501 W. FOUNTAINHEAD PKWY,  
#550  
TEMPE, AZ 85282

Customer: PARCELC1  
Attention: XXXXXXXXXX  
PO Number J310000600

Date Received: 05/24/23  
Client Project ID J310000600 PARCEL C  
HUNTERS PT

Lab ID: B144029001	Sample ID: PM031523-18	FIELDQC	Media: 8X10 PREWEIGHED GLASS	Sample Date: 5/15/2023 8:00:00 AM
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Analyte	Method	Analysis Date	Volume	Reporting Limit	Front	Rear	Total	Concentration
PM10 Particulates	40CFR50 App.J	05/25/23	0 L	1000 ug			< 1000 ug	--

Lab ID: B144029002	Sample ID: TSP031523-19	FIELDQC	Media: 8X10 PREWEIGHED GLASS	Sample Date: 5/15/2023 8:00:00 AM
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Analyte	Method	Analysis Date	Volume	Reporting Limit	Front	Rear	Total	Concentration
Total Suspended Particulates	40CFR50 App.B	05/25/23	0 L	1000 ug			< 1000 ug	--
Lead	40CFR50App.G Mod./EPA 6010B	05/31/23	0 L	14 ug			< 14 ug	--
Manganese	40CFR50App.G Mod./EPA 6010B	05/31/23	0 L	98 ug			< 98 ug	--

Lab ID: B144029003	Sample ID: PM031523-20	MSC01	Media: 8X10 PREWEIGHED GLASS	Sample Date: 5/16/2023 7:38:00 AM
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Analyte	Method	Analysis Date	Volume	Reporting Limit	Front	Rear	Total	Concentration
PM10 Particulates	40CFR50 App.J	05/25/23	1708900 L	1000 ug			9300 ug	5 ug/M3





**Final Report**

<b>Lab ID:</b> B144029004	<b>Sample ID:</b> TSP031523-21	MSC01	<b>Media:</b> 8X10 PREWEIGHED GLASS	<b>Sample Date:</b> 5/16/2023 7:38:00 AM
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Analyte	Method	Analysis Date	Volume	Reporting Limit	Front	Rear	Total	Concentration
Total Suspended Particulates	40CFR50 App.B	05/25/23	1718400 L	1000 ug			28100 ug	16 ug/M3
Lead	40CFR50App.G Mod./EPA 6010B	05/31/23	1718400 L	14 ug			< 14 ug	< 0.0081 ug/M3
Manganese	40CFR50App.G Mod./EPA 6010B	05/31/23	1718400 L	98 ug			< 98 ug	< 0.057 ug/M3

<b>Lab ID:</b> B144029005	<b>Sample ID:</b> PM031523-22	MSC02	<b>Media:</b> 8X10 PREWEIGHED GLASS	<b>Sample Date:</b> 5/16/2023 7:26:00 AM
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Analyte	Method	Analysis Date	Volume	Reporting Limit	Front	Rear	Total	Concentration
PM10 Particulates	40CFR50 App.J	05/25/23	1648540 L	1000 ug			14900 ug	9 ug/M3

<b>Lab ID:</b> B144029006	<b>Sample ID:</b> TSP031523-23	MSC02	<b>Media:</b> 8X10 PREWEIGHED GLASS	<b>Sample Date:</b> 5/16/2023 7:26:00 AM
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Analyte	Method	Analysis Date	Volume	Reporting Limit	Front	Rear	Total	Concentration
Total Suspended Particulates	40CFR50 App.B	05/25/23	1708000 L	1000 ug			28600 ug	17 ug/M3
Lead	40CFR50App.G Mod./EPA 6010B	05/31/23	1708000 L	14 ug			< 14 ug	< 0.0082 ug/M3
Manganese	40CFR50App.G Mod./EPA 6010B	05/31/23	1708000 L	98 ug			< 98 ug	< 0.0574 ug/M3

<b>Lab ID:</b> B144029007	<b>Sample ID:</b> PM031523-24	MSC01	<b>Media:</b> 8X10 PREWEIGHED GLASS	<b>Sample Date:</b> 5/17/2023 7:15:00 AM
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Analyte	Method	Analysis Date	Volume	Reporting Limit	Front	Rear	Total	Concentration
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**Final Report**

<b>Lab ID:</b> B144029007	<b>Sample ID:</b> PM031523-24	MSC01	<b>Media:</b> 8X10 PREWEIGHED GLASS	<b>Sample Date:</b> 5/17/2023 7:15:00 AM
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Analyte	Method	Analysis Date	Volume	Reporting Limit	Front	Rear	Total	Concentration
PM10 Particulates	40CFR50 App.J	05/25/23	1622550 L	1000 ug			12200 ug	8 ug/M3

<b>Lab ID:</b> B144029008	<b>Sample ID:</b> TSP031523-25	MSC01	<b>Media:</b> 8X10 PREWEIGHED GLASS	<b>Sample Date:</b> 5/17/2023 7:15:00 AM
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Analyte	Method	Analysis Date	Volume	Reporting Limit	Front	Rear	Total	Concentration
Total Suspended Particulates	40CFR50 App.B	05/25/23	1630390 L	1000 ug			34500 ug	21 ug/M3
Lead	40CFR50App.G Mod./EPA 6010B	05/31/23	1630390 L	14 ug			< 14 ug	< 0.0086 ug/M3
Manganese	40CFR50App.G Mod./EPA 6010B	05/31/23	1630390 L	98 ug			< 98 ug	< 0.0601 ug/M3

<b>Lab ID:</b> B144029009	<b>Sample ID:</b> PM031523-26	MSC02	<b>Media:</b> 8X10 PREWEIGHED GLASS	<b>Sample Date:</b> 5/17/2023 7:02:00 AM
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Analyte	Method	Analysis Date	Volume	Reporting Limit	Front	Rear	Total	Concentration
PM10 Particulates	40CFR50 App.J	05/25/23	1589730 L	1000 ug			17900 ug	11 ug/M3

<b>Lab ID:</b> B144029010	<b>Sample ID:</b> TSP031523-27	MSC02	<b>Media:</b> 8X10 PREWEIGHED GLASS	<b>Sample Date:</b> 5/17/2023 7:02:00 AM
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Analyte	Method	Analysis Date	Volume	Reporting Limit	Front	Rear	Total	Concentration
Total Suspended Particulates	40CFR50 App.B	05/25/23	1688850 L	1000 ug			33100 ug	20 ug/M3
Lead	40CFR50App.G Mod./EPA 6010B	05/31/23	1688850 L	14 ug			< 14 ug	< 0.0083 ug/M3



**Final Report**

<b>Lab ID:</b> B144029010	<b>Sample ID:</b> TSP031523-27	MSC02	<b>Media:</b> 8X10 PREWEIGHED GLASS	<b>Sample Date:</b> 5/17/2023 7:02:00 AM
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Analyte	Method	Analysis Date	Volume	Reporting Limit	Front	Rear	Total	Concentration
Manganese	40CFR50App.G Mod./EPA 6010B	05/31/23	1688850 L	98 ug			< 98 ug	< 0.058 ug/M3

<b>Lab ID:</b> B144029011	<b>Sample ID:</b> PM031523-28	MSC01	<b>Media:</b> 8X10 PREWEIGHED GLASS	<b>Sample Date:</b> 5/18/2023 7:27:00 AM
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Analyte	Method	Analysis Date	Volume	Reporting Limit	Front	Rear	Total	Concentration
PM10 Particulates	40CFR50 App.J	05/25/23	1668170 L	1000 ug			13200 ug	8 ug/M3

<b>Lab ID:</b> B144029012	<b>Sample ID:</b> TSP031523-29	MSC01	<b>Media:</b> 8X10 PREWEIGHED GLASS	<b>Sample Date:</b> 5/18/2023 7:27:00 AM
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Analyte	Method	Analysis Date	Volume	Reporting Limit	Front	Rear	Total	Concentration
Total Suspended Particulates	40CFR50 App.B	05/25/23	1679350 L	1000 ug			29600 ug	18 ug/M3
Lead	40CFR50App.G Mod./EPA 6010B	05/31/23	1679350 L	14 ug			< 14 ug	< 0.0083 ug/M3
Manganese	40CFR50App.G Mod./EPA 6010B	05/31/23	1679350 L	98 ug			< 98 ug	< 0.0584 ug/M3

<b>Lab ID:</b> B144029013	<b>Sample ID:</b> PM031523-30	MSC02	<b>Media:</b> 8X10 PREWEIGHED GLASS	<b>Sample Date:</b> 5/18/2023 7:09:00 AM
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Analyte	Method	Analysis Date	Volume	Reporting Limit	Front	Rear	Total	Concentration
PM10 Particulates	40CFR50 App.J	05/25/23	1631920 L	1000 ug			19500 ug	12 ug/M3



**Final Report**

<b>Lab ID:</b> B144029014	<b>Sample ID:</b> TSP031523-31	MSC02	<b>Media:</b> 8X10 PREWEIGHED GLASS	<b>Sample Date:</b> 5/18/2023 7:09:00 AM
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Analyte	Method	Analysis Date	Volume	Reporting Limit	Front	Rear	Total	Concentration
Total Suspended Particulates	40CFR50 App.B	05/25/23	1733330 L	1000 ug			33800 ug	20 ug/M3
Lead	40CFR50App.G Mod./EPA 6010B	05/31/23	1733330 L	14 ug			< 14 ug	< 0.0081 ug/M3
Manganese	40CFR50App.G Mod./EPA 6010B	05/31/23	1733330 L	98 ug			< 98 ug	< 0.0565 ug/M3

<b>Lab ID:</b> B144029015	<b>Sample ID:</b> PM031523-32	MSC01	<b>Media:</b> 8X10 PREWEIGHED GLASS	<b>Sample Date:</b> 5/18/2023 2:35:00 PM
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Analyte	Method	Analysis Date	Volume	Reporting Limit	Front	Rear	Total	Concentration
PM10 Particulates	40CFR50 App.J	05/25/23	484260 L	1000 ug			2100 ug	4 ug/M3

<b>Lab ID:</b> B144029016	<b>Sample ID:</b> TSP031523-33	MSC01	<b>Media:</b> 8X10 PREWEIGHED GLASS	<b>Sample Date:</b> 5/18/2023 2:35:00 PM
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Analyte	Method	Analysis Date	Volume	Reporting Limit	Front	Rear	Total	Concentration
Total Suspended Particulates	40CFR50 App.B	05/25/23	488640 L	1000 ug			11900 ug	24 ug/M3
Lead	40CFR50App.G Mod./EPA 6010B	05/31/23	488640 L	14 ug			< 14 ug	< 0.0287 ug/M3
Manganese	40CFR50App.G Mod./EPA 6010B	05/31/23	488640 L	98 ug			< 98 ug	< 0.2006 ug/M3

<b>Lab ID:</b> B144029017	<b>Sample ID:</b> PM031523-34	MSC02	<b>Media:</b> 8X10 PREWEIGHED GLASS	<b>Sample Date:</b> 5/18/2023 2:20:00 PM
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Analyte	Method	Analysis Date	Volume	Reporting Limit	Front	Rear	Total	Concentration
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**Final Report**

<b>Lab ID:</b> B144029017	<b>Sample ID:</b> PM031523-34	MSC02	<b>Media:</b> 8X10 PREWEIGHED GLASS	<b>Sample Date:</b> 5/18/2023 2:20:00 PM
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Analyte	Method	Analysis Date	Volume	Reporting Limit	Front	Rear	Total	Concentration
PM10 Particulates	40CFR50 App.J	05/25/23	474130 L	1000 ug			6700 ug	14 ug/M3

<b>Lab ID:</b> B144029018	<b>Sample ID:</b> TSP031523-35	MSC02	<b>Media:</b> 8X10 PREWEIGHED GLASS	<b>Sample Date:</b> 5/18/2023 2:20:00 PM
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Analyte	Method	Analysis Date	Volume	Reporting Limit	Front	Rear	Total	Concentration
Total Suspended Particulates	40CFR50 App.B	05/25/23	505820 L	1000 ug			12700 ug	25 ug/M3
Lead	40CFR50App.G Mod./EPA 6010B	05/31/23	505820 L	14 ug			< 14 ug	< 0.0277 ug/M3
Manganese	40CFR50App.G Mod./EPA 6010B	05/31/23	505820 L	98 ug			< 98 ug	< 0.1937 ug/M3



Built Environment Testing  
Analytics

Eurofins Analytics, LLC  
10329 Stony Run Lane  
Ashland, Va 23005  
Phone: (804) 365-3000 Fax: (804) 365-3002  
AIHA LAP, LLC Accreditation ID 100531

## Final Report

### General Laboratory Comments

#### Abbreviations:

ug = micrograms; mg=milligrams; g = grams, ppm=parts per million (volume), ppb = parts per billion (volume), mg/M3=milligrams per cubic meter of air, ug/M3=micrograms per cubic meter of air; Min=minutes, Qual=Qualifiers

**CHAIN-OF-CUSTODY RECORD**

Gilbane Federal  
 1501 W Fountainhead Parkway, Suite 550, Tempe, Arizona 85282

COC # 052323AIRC



144029

Project Name: Hunters Point Shipyard, Parcel C Removal Site Evaluation	Laboratory: EUROFINS BUILT ENVIRONMENT TESTING ANALYTICS, ASHLAND, VA	Event: Parcel C Air monitoring
Project Number: J310000600	POC: [Redacted]	
WBS Code: J310000600	Ship to: 10329 Stony Run Lane, Ashland, VA 23005	

Comments:	Analytical Test Method	CAAIR - Air PM10	N0500 - Air TSP	SW6010B - Air Pb Mn	[Redacted]	[Redacted]	[Redacted]	[Redacted]	[Redacted]	[Redacted]	Code	Matrix
											A	Air
Equipment:	[Redacted]	[Redacted]	[Redacted]	[Redacted]	[Redacted]	[Redacted]	[Redacted]	[Redacted]	[Redacted]	[Redacted]	Code	Container/Preservative
											1	1x 250-mL Plastic, 4 Degrees C
											1	1x Envelope, None

Event: Parcel C Air Monitoring															
						1	1	1							
Sample ID	Matrix	Date	Time	Samp Init.						Location ID	Sample Type	Depth (ft bgs)		Cooler	Comments
1	PM0315523-18	AQ	05/15/2023	0800	[Redacted]	X				FIELDQC	FB1	0.00	0.00	1	VOLUME (M3):
2	TSP031523-19	AQ	05/15/2023	0800	[Redacted]		X	X		FIELDQC	FB1	0.00	0.00	1	VOLUME (M3):
3	PM031523-20	A	05/16/2023	0738	[Redacted]	X				MSC01	N1	0.00	0.00	1	VOLUME (M3):
4	TSP031523-21	A	05/16/2023	0738	[Redacted]		X	X		MSC01	N1	0.00	0.00	1	VOLUME (M3):
5	PM031523-22	A	05/16/2023	0726	[Redacted]	X				MSC02	N1	0.00	0.00	1	VOLUME (M3):
6	TSP031523-23	A	05/16/2023	0726	[Redacted]		X	X		MSC02	N1	0.00	0.00	1	VOLUME (M3):

Turnaround Time: NA 5 days  
 5/23/23

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time	Shipping Date / Carrier / Airbill Number
[Redacted]	5/23/23	1400	Fedex	5/23/23	1400	Shipping Date: 5/23/2023 / FEDEX / 7721 0509 1979
			[Redacted]	5/24/23	1149	Received by Laboratory: (Signature, Date, Time) & condition
						5/24/23 Custody Seal Intact



**CHAIN-OF-CUSTODY  
RECORD**

Gilbane Federal

1501 W Fountainhead Parkway, Suite 550, Tempe, Arizona 85282

COC # 052323AIRC



Project Name: Hunters Point Shipyard, Parcel C Removal Site Evaluation	Laboratory: EUROFINs BUILT ENVIRONMENT TESTING ANALYTICS, ASHLAND, VA	Event: Parcel C Air Monitoring
Project Number: J310000600	POC: [Redacted]	
WBS Code: J310000600	Ship to: 10329 Stony Run Lane, Ashland, VA 23005	

Comments:	Analytical Test Method	CAAIR - Air PM10	N0500 - Air TSP	SW6010B - Air Pb Mn	[Redacted]	Code	Matrix
						A	Air
Equipment:	[Redacted]	[Redacted]	[Redacted]	[Redacted]	[Redacted]	Code	Container/Preservative
						1	1x 250-mL Plastic, 4 Degrees C
						1	1x Envelope, None

Event: Parcel C Air Monitoring													
					1	1	1						
Sample ID	Matrix	Date	Time	Samp Init.				Location ID	Sample Type	Depth (ft bgs)		Cooler	Comments
1	PM031523-24	A	05/17/2023	0715	[Redacted]	X		MSC01	N1	0.00	0.00	1	VOLUME (M3):
2	TSP031523-25	A	05/17/2023	0715	[Redacted]		X X	MSC01	N1	0.00	0.00	1	VOLUME (M3):
3	PM031523-26	A	05/17/2023	0702	[Redacted]	X		MSC02	N1	0.00	0.00	1	VOLUME (M3):
4	TSP031523-27	A	05/17/2023	0702	[Redacted]		X X	MSC02	N1	0.00	0.00	1	VOLUME (M3):
Turnaround Time: 5 days													

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time	Shipping Date / Carrier / Airbill Number
[Redacted]	5/23/23	1400	Fedex	5/23/23	1700	Shipping Date: 5/23/2023 / FEDEX / 7721 0509 1979
			[Redacted]	5/24/23	1149	Received by Laboratory: (Signature, Date, Time) & condition
			[Redacted]			5/24/23 1149 Custody Seal Intact



# CHAIN-OF-CUSTODY RECORD

Gilbane Federal

1501 W Fountainhead Parkway, Suite 550, Tempe, Arizona 85282

COC # 052323AIRC



Project Name: Hunters Point Shipyard, Parcel C Removal Site Evaluation	Laboratory: EUROFINS BUILT ENVIRONMENT TESTING ANALYTICS, ASHLAND, VA	Event: Parcel C Air Monitoring
Project Number: J310000600	POC: Stephanie Stimpson Stephanie.Stimson@ET.EurofinsUS.com	
WBS Code: J310000600	Ship to: 10329 Stony Run Lane, Ashland, VA 23005	

Comments:	Analytical Test Method	CAAIR - Air PM10	N0500 - Air TSP	SW6010B - Air Pb Mn	[Redacted]	[Redacted]	[Redacted]	[Redacted]	[Redacted]	[Redacted]	Code	Matrix
											A	Air
Equipment:	[Redacted]	[Redacted]	[Redacted]	[Redacted]	[Redacted]	[Redacted]	[Redacted]	[Redacted]	[Redacted]	[Redacted]	Code	Container/Preservative
											1	1x 250-mL Plastic, 4 Degrees C
											1	1x Envelope, None

Event: Parcel C Air Monitoring															
Sample ID	Matrix	Date	Time	Samp Init.						Location ID	Sample Type	Depth (ft bgs) Top - Bottom	Cooler	Comments	
1	PM031523-28	A	05/18/2023	0727	[Redacted]	X				MSC01	N1	0.00	0.00	1	VOLUME (M3):
2	TSP031523-29	A	05/18/2023	0727	[Redacted]		X	X		MSC01	N1	0.00	0.00	1	VOLUME (M3):
3	PM031523-30	A	05/18/2023	0709	[Redacted]	X				MSC02	N1	0.00	0.00	1	VOLUME (M3):
4	TSP031523-31	A	05/18/2023	0709	[Redacted]		X	X		MSC02	N1	0.00	0.00	1	VOLUME (M3):
Turnaround Time: 5 days															

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time	Shipping Date / Carrier / Airbill Number
[Redacted]	5/23/23	1400	Fedex	5/23/23	1400	Shipping Date: 5/23/2023 / FEDEX / 7721 0509 1979
			[Redacted]	5/24/23	1149	Received by Laboratory: (Signature, Date, Time) & condition
						5/24/23 custody seal intact

**CHAIN-OF-CUSTODY  
RECORD**

Gilbane Federal  
 1501 W Fountainhead Parkway, Suite 550, Tempe, Arizona 85282

COC # 052323AIRC



Project Name: Hunters Point Shipyard, Parcel C Removal Site Evaluation	Laboratory: EUROFINS BUILT ENVIRONMENT TESTING ANALYTICS, ASHLAND, VA	Event: Parcel C Air Monitoring
Project Number: J310000600	POC: [REDACTED]	
WBS Code: J310000600	Ship to: 10329 Stony Run Lane, Ashland, VA 23005	

Comments:	Analytical Test Method	CAAIR - Air PM10	N0500 - Air TSP	SW6010B - Air Pb Mn	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	Code	Matrix
											A	Air
Equipment:	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	Code	Container/Preservative
											1	1x 250-mL Plastic, 4 Degrees C
											1	1x Envelope, None

Event: Parcel C Air Monitoring															
						1	1	1							
Sample ID	Matrix	Date	Time	Samp Init.						Location ID	Sample Type	Depth (ft bgs)		Cooler	Comments
1	PM031523-32	A	05/18/2023	1435	[REDACTED]	X				MSC01	N1	0.00	0.00	1	VOLUME (M3):
2	TSP031523-33	A	05/18/2023	1435	[REDACTED]		X	X		MSC01	N1	0.00	0.00	1	VOLUME (M3):
3	PM031523-34	A	05/18/2023	1420	[REDACTED]	X				MSC02	N1	0.00	0.00	1	VOLUME (M3):
4	TSP031523-35	A	05/18/2023	1420	[REDACTED]		X	X		MSC02	N1	0.00	0.00	1	VOLUME (M3):
Turnaround Time: 5 days															

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time	Shipping Date / Carrier / Airbill Number
[REDACTED]	5/23/23	1408	Fedex	5/23/23	1400	Shipping Date: 5/23/2023 / FEDEX / 7721 0509 1979
			[REDACTED]	5/24/23	1149	Received by Laboratory: (Signature, Date, Time) & condition
			[REDACTED]			5/24/23 1149 custody seal intact



COC # 052323AIRC



Project Name: Hunters Point Shipyard, Parcel C Removal Site Evaluation	Event: Parcel C Air Monitoring
Project Number: J310000600	
WBS Code: J310000600	

	Sample ID	Matrix	Date	Time	Comments
1	PM0315523-18	AQ	05/15/2023	0800	VOLUME (M3):
2	TSP031523-19	AQ	05/15/2023	0800	VOLUME (M3):
3	PM031523-20	A	05/16/2023	0738	VOLUME (M3): 1708.90
4	TSP031523-21	A	05/16/2023	0738	VOLUME (M3): 1718.40
5	PM031523-22	A	05/16/2023	0726	VOLUME (M3): 1648.54
6	TSP031523-23	A	05/16/2023	0726	VOLUME (M3): 1708.00
7	PM031523-24	A	05/17/2023	0715	VOLUME (M3): 1622.55
8	TSP031523-25	A	05/17/2023	0715	VOLUME (M3): 1630.39
9	PM031523-26	A	05/17/2023	0702	VOLUME (M3): 1589.73
10	TSP031523-27	A	05/17/2023	0702	VOLUME (M3): 1688.85
11	PM031523-28	A	05/18/2023	0727	VOLUME (M3): 1668.17
12	TSP031523-29	A	05/18/2023	0727	VOLUME (M3): 1679.35
13	PM031523-30	A	05/18/2023	0709	VOLUME (M3): 1631.92
14	TSP031523-31	A	05/18/2023	0709	VOLUME (M3): 1733.33
15	PM031523-32	A	05/18/2023	1435	VOLUME (M3): 484.26
16	TSP031523-33	A	05/18/2023	1435	VOLUME (M3): 488.64
17	PM031523-34	A	05/18/2023	1420	VOLUME (M3): 474.13
18	TSP031523-35	A	05/18/2023	1420	VOLUME (M3): 505.82



# CHAIN-OF-CUSTODY RECORD

Gilbane Federal  
 1501 W. Fountainhead Parkway, Suite 550, Tempe, Arizona 85282

COC # 052323AIRC



B144029

Project Name: Hunters Point Shipyard, Parcel C Removal Site Evaluation	Laboratory: EUROFINS BUILT ENVIRONMENT TESTING ANALYTICS, ASHLAND, VA	Event: Parcel C Air monitoring
Project Number: J310000600	POC: [Redacted]	
WBS Code: J310000600	Ship to: 10329 Stony Run Lane, Ashland, VA 23005	

Comments:	Analytical Test Method	CAAIR - Air PM10	N0500 - Air TSP	SW6010B - Air Pb Mn	[Redacted]	[Redacted]	[Redacted]	[Redacted]	[Redacted]	[Redacted]	Code	Matrix
											A	Air
Equipment:											Code	Container/Preservative
											1	1x 250-mL Plastic, 4 Degrees C
											1	1x Envelope, None

Event: Parcel C Air Monitoring															
						1	1	1							
Sample ID	PM031523-18	Matrix	Date	Time	Samp Init.						Location ID	Sample Type	Depth (ft bgs) Top - Bottom	Cooler	Comments
1	<del>PM031523-18</del> KT 5/24/23	AQ	05/15/2023	0800	[Redacted]	X					FIELDQC	FB1	0.00 0.00	1	VOLUME (M3):
2	TSP031523-19	AQ	05/15/2023	0800	[Redacted]		X	X			FIELDQC	FB1	0.00 0.00	1	VOLUME (M3):
3	PM031523-20	A	05/16/2023	0738	[Redacted]	X					MSC01	N1	0.00 0.00	1	VOLUME (M3):
4	TSP031523-21	A	05/16/2023	0738	[Redacted]		X	X			MSC01	N1	0.00 0.00	1	VOLUME (M3):
5	PM031523-22	A	05/16/2023	0726	[Redacted]	X					MSC02	N1	0.00 0.00	1	VOLUME (M3):
6	TSP031523-23	A	05/16/2023	0726	[Redacted]		X	X			MSC02	N1	0.00 0.00	1	VOLUME (M3):

Turnaround Time: ~~NA~~ 5 days  
 5/23/23

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time	Shipping Date / Carrier / Airbill Number
[Redacted]	5/23/23	1400	Fedex	5/23/23	1400	Shipping Date: 5/23/2023 / FEDEX / 7721 0509 1979
			[Redacted]	5/24/23	1149	Received by Laboratory: (Signature, Date, Time) & condition
			[Redacted]			5/24/23 Custody Seal intact



## Level 2 QA/QC Summary Report

Work Order #: B144029

Report Date: 6/1/2023

**Batch ID:** ICP230526D      Analysis Date: 5/31/2023

**Media::** 8X10PW GFF      Preparation Date 5/26/2023

### Blank Spike Results

QC ID	QC Type	Parameter	Percent Recovery			RPD	Limit
			LCS	LCSD	Acceptance		
LCS ICP23	BLKSPK	Lead	95	95	75-125	0.0	25
LCS ICP23	BLKSPK	Manganese	98	98	75-125	0.0	25

### Method Blank Results


QC ID	QC Type	Parameter	Result	RL	Units
LMB ICP2	LMB	Lead	< 14	14	ug
LMB ICP2	LMB	Manganese	< 98	98	ug



Built Environment Testing  
Analytics

Eurofins Analytics, LLC  
10329 Stony Run Lane  
Ashland, Va 23005  
Phone: (804) 365-3000 Fax: (804) 365-3002  
AIHA LAP, LLC Accreditation ID 100531

June 7, 2023

  
AIS-GES, LLC  
1501 W. FOUNTAINHEAD PKWY,  
#550  
TEMPE, AZ 85282

**Laboratory Workorder ID: B152025**

Client Project ID: J310000600 PARCEL C HUNTERS PT

Received: June 1, 2023

Reported: June 7, 2023

Attached are the results we obtained on the analysis of your samples submitted to Analytics. Any Chains-of-Custody associated by this sample group are enclosed. Air concentrations are calculated as a convenience to the client and the overall accuracy of this result depends on both the accuracy of the air volume and the amount found by analysis. Theoretical air volumes for passive monitors are calculated using the sampling time submitted and the manufacture's listed sampling rate for each compound. Results provided in this report relate only to the items tested.

For blanks and non-detects the results indicated with a '<' value represents the reporting limit for the analysis. Unless otherwise noted results are not corrected for blank values.

Unless the signature of the appropriate manager(s) appears on this report, this report should be considered PRELIMINARY and is subject to change.

We appreciate your confidence in allowing Analytics to be your testing laboratory. Any questions regarding this report can be addressed by calling our customer services department at (800) 888-8061.

  
  
Technical Director

Enclosures



### Final Report

AIS-GES, LLC  
1501 W. FOUNTAINHEAD PKWY,  
#550  
TEMPE, AZ 85282

Customer: PARCELC1

Attention: [REDACTED]

PO Number J310000600

Date Received: 06/01/23

Client Project ID J310000600 PARCEL C  
HUNTERS PT

Lab ID: B152025001	Sample ID: PM030323-08	FIELDQC	Media: 8X10 PREWEIGHED GLASS	Sample Date: 5/22/2023 8:00:00 AM
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Analyte	Method	Analysis Date	Volume	Reporting Limit	Front	Rear	Total	Concentration
PM10 Particulates	40CFR50 App.J	06/05/23	0 L	1000 ug			< 1000 ug	--

Lab ID: B152025002	Sample ID: TSP030323-09	FIELDQC	Media: 8X10 PREWEIGHED GLASS	Sample Date: 5/22/2023 8:00:00 AM
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Analyte	Method	Analysis Date	Volume	Reporting Limit	Front	Rear	Total	Concentration
Total Suspended Particulates	40CFR50 App.B	06/05/23	0 L	1000 ug			1400 ug	--
Lead	40 CFR Part 50 Appendix G	06/06/23	0 L	14 ug			< 14 ug	--
Manganese	40 CFR Part 50 Appendix G	06/06/23	0 L	98 ug			< 98 ug	--

Lab ID: B152025003	Sample ID: PM030323-10	MSC01	Media: 8X10 PREWEIGHED GLASS	Sample Date: 5/23/2023 7:35:00 AM
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Analyte	Method	Analysis Date	Volume	Reporting Limit	Front	Rear	Total	Concentration
PM10 Particulates	40CFR50 App.J	06/05/23	1704600 L	1000 ug			14900 ug	9 ug/M3





**Final Report**

<b>Lab ID:</b> B152025004	<b>Sample ID:</b> TSP030323-11	MSC01	<b>Media:</b> 8X10 PREWEIGHED GLASS	<b>Sample Date:</b> 5/23/2023 7:35:00 AM
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Analyte	Method	Analysis Date	Volume	Reporting Limit	Front	Rear	Total	Concentration
Total Suspended Particulates	40CFR50 App.B	06/05/23	1709170 L	1000 ug			51900 ug	30 ug/M3
Lead	40 CFR Part 50 Appendix G	06/06/23	1709170 L	14 ug			< 14 ug	< 0.008 ug/M3
Manganese	40 CFR Part 50 Appendix G	06/06/23	1709170 L	98 ug			< 98 ug	< 0.057 ug/M3

<b>Lab ID:</b> B152025005	<b>Sample ID:</b> PM030923-06	MSC02	<b>Media:</b> 8X10 PREWEIGHED GLASS	<b>Sample Date:</b> 5/23/2023 7:11:00 AM
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Analyte	Method	Analysis Date	Volume	Reporting Limit	Front	Rear	Total	Concentration
PM10 Particulates	40CFR50 App.J	06/05/23	1623000 L	1000 ug			59800 ug	37 ug/M3

<b>Lab ID:</b> B152025006	<b>Sample ID:</b> TSP030923-07	MSC02	<b>Media:</b> 8X10 PREWEIGHED GLASS	<b>Sample Date:</b> 5/23/2023 7:11:00 AM
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Analyte	Method	Analysis Date	Volume	Reporting Limit	Front	Rear	Total	Concentration
Total Suspended Particulates	40CFR50 App.B	06/05/23	1721410 L	1000 ug			103000 ug	60 ug/M3
Lead	40 CFR Part 50 Appendix G	06/06/23	1721410 L	14 ug			< 14 ug	< 0.008 ug/M3
Manganese	40 CFR Part 50 Appendix G	06/06/23	1721410 L	98 ug			< 98 ug	< 0.057 ug/M3

<b>Lab ID:</b> B152025007	<b>Sample ID:</b> PM030923-08	MSC01	<b>Media:</b> 8X10 PREWEIGHED GLASS	<b>Sample Date:</b> 5/24/2023 7:20:00 AM
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Analyte	Method	Analysis Date	Volume	Reporting Limit	Front	Rear	Total	Concentration
PM10 Particulates	40CFR50 App.J	06/05/23	1581930 L	1000 ug			41800 ug	26 ug/M3



**Final Report**

<b>Lab ID:</b> B152025008	<b>Sample ID:</b> TSP030923-09	MSC01	<b>Media:</b> 8X10 PREWEIGHED GLASS	<b>Sample Date:</b> 5/24/2023 7:20:00 AM
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Analyte	Method	Analysis Date	Volume	Reporting Limit	Front	Rear	Total	Concentration
Total Suspended Particulates	40CFR50 App.B	06/05/23	1580870 L	1000 ug			81100 ug	51 ug/M3
Lead	40 CFR Part 50 Appendix G	06/06/23	1580870 L	14 ug			< 14 ug	< 0.009 ug/M3
Manganese	40 CFR Part 50 Appendix G	06/06/23	1580870 L	98 ug			< 98 ug	< 0.062 ug/M3

<b>Lab ID:</b> B152025009	<b>Sample ID:</b> PM030923-10	MSC02	<b>Media:</b> 8X10 PREWEIGHED GLASS	<b>Sample Date:</b> 5/24/2023 7:01:00 AM
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Analyte	Method	Analysis Date	Volume	Reporting Limit	Front	Rear	Total	Concentration
PM10 Particulates	40CFR50 App.J	06/05/23	1612800 L	1000 ug			54400 ug	34 ug/M3

<b>Lab ID:</b> B152025010	<b>Sample ID:</b> TSP030923-11	MSC02	<b>Media:</b> 8X10 PREWEIGHED GLASS	<b>Sample Date:</b> 5/24/2023 7:01:00 AM
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Analyte	Method	Analysis Date	Volume	Reporting Limit	Front	Rear	Total	Concentration
Total Suspended Particulates	40CFR50 App.B	06/05/23	1709300 L	1000 ug			88900 ug	52 ug/M3
Lead	40 CFR Part 50 Appendix G	06/06/23	1709300 L	14 ug			< 14 ug	< 0.008 ug/M3
Manganese	40 CFR Part 50 Appendix G	06/06/23	1709300 L	98 ug			< 98 ug	< 0.057 ug/M3

<b>Lab ID:</b> B152025011	<b>Sample ID:</b> PM030923-12	MSC01	<b>Media:</b> 8X10 PREWEIGHED GLASS	<b>Sample Date:</b> 5/25/2023 6:55:00 AM
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Analyte	Method	Analysis Date	Volume	Reporting Limit	Front	Rear	Total	Concentration
PM10 Particulates	40CFR50 App.J	06/05/23	1568800 L	1000 ug			27000 ug	17 ug/M3



### Final Report

<b>Lab ID:</b> B152025012	<b>Sample ID:</b> TSP030923-13	MSC01	<b>Media:</b> 8X10 PREWEIGHED GLASS	<b>Sample Date:</b> 5/25/2023 6:55:00 AM
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Analyte	Method	Analysis Date	Volume	Reporting Limit	Front	Rear	Total	Concentration
Total Suspended Particulates	40CFR50 App.B	06/05/23	1619490 L	1000 ug			60400 ug	37 ug/M3
Lead	40 CFR Part 50 Appendix G	06/06/23	1619490 L	14 ug			< 14 ug	< 0.009 ug/M3
Manganese	40 CFR Part 50 Appendix G	06/06/23	1619490 L	98 ug			< 98 ug	< 0.061 ug/M3

<b>Lab ID:</b> B152025013	<b>Sample ID:</b> PM030923-14	MSC02	<b>Media:</b> 8X10 PREWEIGHED GLASS	<b>Sample Date:</b> 5/25/2023 7:10:00 AM
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Analyte	Method	Analysis Date	Volume	Reporting Limit	Front	Rear	Total	Concentration
PM10 Particulates	40CFR50 App.J	06/05/23	1631310 L	1000 ug			39900 ug	24 ug/M3

<b>Lab ID:</b> B152025014	<b>Sample ID:</b> TSP030923-15	MSC02	<b>Media:</b> 8X10 PREWEIGHED GLASS	<b>Sample Date:</b> 5/25/2023 7:10:00 AM
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Analyte	Method	Analysis Date	Volume	Reporting Limit	Front	Rear	Total	Concentration
Total Suspended Particulates	40CFR50 App.B	06/05/23	1737640 L	1000 ug			59300 ug	34 ug/M3
Lead	40 CFR Part 50 Appendix G	06/06/23	1737640 L	14 ug			< 14 ug	< 0.008 ug/M3
Manganese	40 CFR Part 50 Appendix G	06/06/23	1737640 L	98 ug			< 98 ug	< 0.056 ug/M3

<b>Lab ID:</b> B152025015	<b>Sample ID:</b> PM030923-16	MSC01	<b>Media:</b> 8X10 PREWEIGHED GLASS	<b>Sample Date:</b> 5/25/2023 2:38:00 PM
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Analyte	Method	Analysis Date	Volume	Reporting Limit	Front	Rear	Total	Concentration
PM10 Particulates	40CFR50 App.J	06/05/23	532950 L	1000 ug			6400 ug	12 ug/M3



**Final Report**

<b>Lab ID:</b> B152025016	<b>Sample ID:</b> TSP030923-17	MSC01	<b>Media:</b> 8X10 PREWEIGHED GLASS	<b>Sample Date:</b> 5/25/2023 2:38:00 PM
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Analyte	Method	Analysis Date	Volume	Reporting Limit	Front	Rear	Total	Concentration
Total Suspended Particulates	40CFR50 App.B	06/05/23	534210 L	1000 ug			14300 ug	27 ug/M3
Lead	40 CFR Part 50 Appendix G	06/06/23	534210 L	14 ug			< 14 ug	< 0.026 ug/M3
Manganese	40 CFR Part 50 Appendix G	06/06/23	534210 L	98 ug			< 98 ug	< 0.183 ug/M3

<b>Lab ID:</b> B152025017	<b>Sample ID:</b> PM030923-18	MSC02	<b>Media:</b> 8X10 PREWEIGHED GLASS	<b>Sample Date:</b> 5/25/2023 2:55:00 PM
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Analyte	Method	Analysis Date	Volume	Reporting Limit	Front	Rear	Total	Concentration
PM10 Particulates	40CFR50 App.J	06/05/23	520740 L	1000 ug			10200 ug	20 ug/M3

<b>Lab ID:</b> B152025018	<b>Sample ID:</b> TSP030923-19	MSC02	<b>Media:</b> 8X10 PREWEIGHED GLASS	<b>Sample Date:</b> 5/25/2023 2:55:00 PM
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Analyte	Method	Analysis Date	Volume	Reporting Limit	Front	Rear	Total	Concentration
Total Suspended Particulates	40CFR50 App.B	06/05/23	553950 L	1000 ug			19600 ug	35 ug/M3
Lead	40 CFR Part 50 Appendix G	06/06/23	553950 L	14 ug			< 14 ug	< 0.025 ug/M3
Manganese	40 CFR Part 50 Appendix G	06/06/23	553950 L	98 ug			< 98 ug	< 0.177 ug/M3



Built Environment Testing  
Analytics

Eurofins Analytics, LLC  
10329 Stony Run Lane  
Ashland, Va 23005  
Phone: (804) 365-3000 Fax: (804) 365-3002  
AIHA LAP, LLC Accreditation ID 100531

## Final Report

### General Laboratory Comments

Abbreviations:

ug = micrograms; mg=milligrams; g = grams, ppm=parts per million (volume), ppb = parts per billion (volume), mg/M3=milligrams per cubic meter of air, ug/M3=micrograms per cubic meter of air; Min=minutes, Qual=Qualifiers

**CHAIN-OF-CUSTODY  
RECORD**

Gilbane Federal  
1501 W Fountainhead Parkway, Suite 550, Tempe, Arizona 85282

COC # **053023AIRC**



Project Name: Hunters Point Shipyard, Parcel C Removal Site Evaluation	Laboratory: EUROFINS BUILT ENVIRONMENT TESTING ANALYTICS, ASHLAND, VA	Event: Parcel C Air Monitoring
Project Number: J310000600	POC: [Redacted]	
WBS Code: J310000600	Ship to: 10329 Stony Run Lane, Ashland, VA 23005	

Comments:	Analytical Test Method	CAAIR - Air PM10	N0500 - Air TSP	SW6010B - Air Pb Mn	[Redacted]	[Redacted]	[Redacted]	[Redacted]	[Redacted]	[Redacted]	[Redacted]	Code	Matrix
												A	Air
Equipment:	[Redacted]	[Redacted]	[Redacted]	[Redacted]	[Redacted]	[Redacted]	[Redacted]	[Redacted]	[Redacted]	[Redacted]	[Redacted]	Code	Container/Preservative
												1	1x 250-mL Plastic, 4 Degrees C
												1	1x Envelope, None

Event: Parcel C Air Monitoring															
Sample ID	Matrix	Date	Time	Samp Init.						Location ID	Sample Type	Depth (ft bgs)		Cooler	Comments
												Top	Bottom		
1	PM030323-08	AQ	05/22/2023	0800	[Redacted]	X				FIELDQC	FB1	0.00	0.00	1	
2	TSP030323-09	AQ	05/22/2023	0800	[Redacted]		X	X		FIELDQC	FB2	0.00	0.00	1	
3	PM030323-10	A	05/23/2023	0735	[Redacted]	X				MSC01	N1	0.00	0.00	1	VOLUME (M3):
4	TSP030323-11	A	05/23/2023	0735	[Redacted]		X	X		MSC01	N1	0.00	0.00	1	VOLUME (M3):
5	PM030923-06	A	05/23/2023	0711	[Redacted]	X				MSC02	N1	0.00	0.00	1	VOLUME (M3):
6	TSP030323-07	A	05/23/2023	0711	[Redacted]		X	X		MSC02	N1	0.00	0.00	1	VOLUME (M3):

Turnaround Time: 5 days

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time	Shipping Date / Carrier / Airbill Number
[Redacted]	5/30/23	1400	Fedex	5/30/23	1400	Shipping Date: 5/30/2023 / FEDEX / 7721 6429 1528
			[Redacted]	6/1/23	11:55	Received by Laboratory: (Signature, Date, Time) & condition
						[Redacted] 6/1/23 Custody 11:55 Seals Intact



**CHAIN-OF-CUSTODY  
RECORD**

Gilbane Federal  
 1501 W Fountainhead Parkway, Suite 550, Tempe, Arizona 85282

COC # 053023AIRC



Project Name: Hunters Point Shipyard, Parcel C Removal Site Evaluation	Laboratory: EUROFIN'S BUILT ENVIRONMENT TESTING ANALYTICS, ASHLAND, VA	Event: Parcel C Air Monitoring
Project Number: J310000600	POC: [Redacted]	
WBS Code: J310000600	Ship to: 10329 Stony Run Lane, Ashland, VA 23005	

Comments:	Analytical Test Method	CAAIR - Air PM10	N0500 - Air TSP	SW6010B - Air Pb Mn	[Redacted]	[Redacted]	[Redacted]	[Redacted]	[Redacted]	[Redacted]	[Redacted]	Code	Matrix
												A	Air
Equipment:	[Redacted]	[Redacted]	[Redacted]	[Redacted]	[Redacted]	[Redacted]	[Redacted]	[Redacted]	[Redacted]	[Redacted]	[Redacted]	Code	Container/Preservative
												1	1x 250-mL Plastic, 4 Degrees C
												1	1x Envelope, None

Event: Parcel C Air Monitoring													1	1	1										
Sample ID	Matrix	Date	Time	Samp Init.									Location ID	Sample Type	Depth (ft bgs)		Top - Bottom	Cooler	Comments						
1	PM030923-08	A	05/24/2023	0720	[Redacted]	X							MSC01	N1	0.00	0.00		1	VOLUME (M3):						
2	TSP030923-09	A	05/24/2023	0720	[Redacted]		X	X					MSC01	N1	0.00	0.00		1	VOLUME (M3):						
3	PM030923-10	A	05/24/2023	0701	[Redacted]	X							MSC02	N1	0.00	0.00		1	VOLUME (M3):						
4	TSP030923-11	A	05/24/2023	0701	[Redacted]		X	X					MSC02	N1	0.00	0.00		1	VOLUME (M3):						

Turnaround Time: 5 days

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time	Shipping Date / Carrier / Airbill Number
[Redacted]	5/30/23	1400	Fedex	5/30/23	1400	Shipping Date: 5/30/2023 / FEDEX / 7721 6429 1528
			[Redacted]	6/1/23	11:55	
						Received by Laboratory: (Signature, Date, Time) & condition
						[Redacted] 6/1/23 Custody Seals Intact 11:55

**CHAIN-OF-CUSTODY  
RECORD**

Gilbane Federal  
1501 W Fountainhead Parkway, Suite 550, Tempe, Arizona 85282

COC # 053023AIRC



Project Name: Hunters Point Shipyard, Parcel C Removal Site Evaluation	Laboratory: EUROFINS BUILT ENVIRONMENT TESTING ANALYTICS, ASHLAND, VA	Event: Parcel C Air Monitoring
Project Number: J310000600	POC:	
WBS Code: J310000600	Ship to: 10329 Stony Run Lane, Ashland, VA 23005	

Comments:	Analytical Test Method	CAAIR - Air PM10	N0500 - Air TSP	SW6010B - Air Pb Mn	Code	Matrix
					A	Air
Equipment:					Code	Container/Preservative
					1	1x 250-mL Plastic, 4 Degrees C
					1	1x Envelope, None

Event: Parcel C Air Monitoring																				
Sample ID	Matrix	Date	Time	Samp Init.	X	X	X	X	X	X	X	X	X	X	Location ID	Sample Type	Depth (ft bgs)		Cooler	Comments
																	Top	Bottom		
1	PM030923-12	A	05/25/2023	0655											MSC01	N1	0.00	0.00	1	VOLUME (M3):
2	TSP030923-13	A	05/25/2023	0655		X	X								MSC01	N1	0.00	0.00	1	VOLUME (M3):
3	PM030923-14	A	05/25/2023	0710		X									MSC02	N1	0.00	0.00	1	VOLUME (M3):
4	TSP030923-15	A	05/25/2023	0710		X	X								MSC02	N1	0.00	0.00	1	VOLUME (M3):

Turnaround Time: 5 days

LS  
5/30/23

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time	Shipping Date / Carrier / Airbill Number
	5/30/23	1400	Fedex	5/30/23	1400	Shipping Date: 5/30/2023 / FEDEX / 7721 6429 1528
				6/1/23	11:55	
						Received by Laboratory: (Signature, Date, Time) & condition
						6/1/23 Custody 11:55 Seals Intact



**CHAIN-OF-CUSTODY  
RECORD**

Gilbane Federal  
1501 W Fountainhead Parkway, Suite 550, Tempe, Arizona 85282

COC # █ 053023AIRC



Project Name: Hunters Point Shipyard, Parcel C Removal Site Evaluation	Laboratory: EUROFINS BUILT ENVIRONMENT TESTING ANALYTICS, ASHLAND, VA	Event: Parcel C Air Monitoring
Project Number: J310000600	POC: █	
WBS Code: J310000600	Ship to: 10329 Stony Run Lane, Ashland, VA 23005	

Comments:	Analytical Test Method	CAAIR - Air PM10	N0500 - Air TSP	SW6010B - Air Pb Mn	█	5/30/23	Code	Matrix
							A	Air
Equipment:							Code	Container/Preservative
	1	1x 250-mL Plastic, 4 Degrees C						
							1	1x Envelope, None

Event: Parcel C Air Monitoring															
Sample ID	Matrix	Date	Time	Samp Init.							Location ID	Sample Type	Depth (ft bgs) Top - Bottom	Cooler	Comments
1	PM030923-16	A	05/25/2023	1438	█	X					MSC01	N1	0.00   0.00	1	VOLUME (M3):
2	TSP030923-17	A	05/25/2023	1438	█		X	X			MSC01	N1	0.00   0.00	1	VOLUME (M3):
3	PM030923-18	A	05/25/2023	1455	█	X					MSC02	N1	0.00   0.00	1	VOLUME (M3):
4	TSP030323-19	A	05/25/2023	1455	█		X	X			MSC02	N1	0.00   0.00	1	VOLUME (M3):

Turnaround Time: 5 days

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time	Shipping Date / Carrier / Airbill Number
█	5/30/23	1400	Fedex	5/30/23	1400	Shipping Date: 5/30/2023 / FEDEX / 7721 6429 1528
			█	6/1/23	11:55	Received by Laboratory: (Signature, Date, Time) & condition
						6/1/23 Custody 11:55 Seals Intact

CHAIN-OF-CUSTODY RECORD

COC # [REDACTED] 053023AIRC



Project Name: Hunters Point Shipyard, Parcel C Removal Site Evaluation	Event: Parcel C Air Monitoring
Project Number: J310000600	
WBS Code: J310000600	

	Sample ID	Matrix	Date	Time	Comments
1	PM030323-08	AQ	05/23/2023	0800	
2	TSP030323-09	AQ	05/23/2023	0800	
3	PM030323-10	A	05/23/2023	0735	VOLUME (M3): 1704.60
4	TSP030323-11	A	05/23/2023	0735	VOLUME (M3): 1709.17
5	PM030923-06	A	05/23/2023	0711	VOLUME (M3): 1623.00
6	TSP030323-07	A	05/23/2023	0711	VOLUME (M3): 1721.41
7	PM030923-08	A	05/24/2023	0720	VOLUME (M3): 1581.93
8	TSP030923-09	A	05/24/2023	0720	VOLUME (M3): 1580.87
9	PM030923-10	A	05/24/2023	0701	VOLUME (M3): 1612.80
10	TSP030923-11	A	05/24/2023	0701	VOLUME (M3): 1709.30
11	PM030923-12	A	05/25/2023	0655	VOLUME (M3): 1568.80
12	TSP030923-13	A	05/25/2023	0655	VOLUME (M3): 1619.49
13	PM030923-14	A	05/25/2023	0710	VOLUME (M3): 1631.31
14	TSP030923-15	A	05/25/2023	0710	VOLUME (M3): 1737.64
15	PM030923-16	A	05/25/2023	1438	VOLUME (M3): 532.95
16	TSP030923-17	A	05/25/2023	1438	VOLUME (M3): 534.21
17	PM030923-18	A	05/25/2023	1455	VOLUME (M3): 520.74
18	TSP030923-19	A	05/25/2023	1455	VOLUME (M3): 553.95

<b>Sample ID</b>	<b>Cubic Meter</b>	<b>Volume (L)</b>
PM030323-10	1704.6	1704600
TSP030323-11	1709.17	1709170
PM030923-06	1623	1623000
TSP030323-07	1721.41	1721410
PM030923-08	1581.93	1581930
TSP030923-09	1580.87	1580870
PM030923-10	1612.8	1612800
TSP030923-11	1709.3	1709300
PM030923-12	1568.8	1568800
TSP030923-13	1619.49	1619490
PM030923-14	1631.31	1631310
TSP030923-15	1737.64	1737640
PM030923-16	532.95	532950
TSP030923-17	534.21	534210
PM030923-18	520.74	520740
TSP030923-19	553.95	553950
		0
		0
		0

**CHAIN-OF-CUSTODY  
RECORD**

Gilbane Federal

1501 W Fountainhead Parkway, Suite 550, Tempe, Arizona 85282

COC # [REDACTED] 053023AIRC



B152025

Project Name: Hunters Point Shipyard, Parcel C Removal Site Evaluation	Laboratory: EUROFINS BUILT ENVIRONMENT TESTING ANALYTICS, ASHLAND, VA	Event: Parcel C Air Monitoring
Project Number: J31000600	POC: <span style="background-color: black; color: black;">[REDACTED]</span>	
WBS Code: J31000600	Ship to: 10329 Stony Run Lane, Ashland, VA 23005	

Comments:	Analytical Test Method CAAIR - Air PM10 N0500 - Air TSP SW6010B - Air Pb Mn	Code	Matrix
		A	Air
Equipment:		AQ	Air Quality Control Matrix
		Code	Container/Preservative
		1	1x 250-mL Plastic, 4 Degrees C
		1	1x Envelope, None

Event: Parcel C Air Monitoring														
Sample ID	Matrix	Date	Time	Samp Init.					Location ID	Sample Type	Depth (ft bgs)		Cooler	Comments
											Top	Bottom		
1	PM030323-08	AQ	05/22/2023	0800	X				FIELDQC	FB1	0.00	0.00	1	
2	TSP030323-09	AQ	05/22/2023	0800		X	X		FIELDQC	FB2	0.00	0.00	1	
3	PM030323-10	A	05/23/2023	0735	X				MSC01	N1	0.00	0.00	1	VOLUME (M3):
4	TSP030323-11	A	05/23/2023	0735		X	X		MSC01	N1	0.00	0.00	1	VOLUME (M3):
5	PM030923-06	A	05/23/2023	0711	X				MSC02	N1	0.00	0.00	1	VOLUME (M3):
6	<del>TSP030323-07</del> TSP030923-07	A	05/23/2023	0711		X	X		MSC02	N1	0.00	0.00	1	VOLUME (M3):

Turnaround Time: 5 days

6/1/23

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time	Shipping Date / Carrier / Airbill Number
<span style="background-color: black; color: black;">[REDACTED]</span>	5/30/23	1400	Fedex	5/30/23	1400	Shipping Date: 5/30/2023 / FEDEX / 7721 6429 1528
			<span style="background-color: black; color: black;">[REDACTED]</span>	6/1/23	11:55	Received by Laboratory: (Signature, Date, Time) & condition
						6/1/23 Custody 11:55 Seals Intact

**CHAIN-OF-CUSTODY  
RECORD**

Gilbane Federal  
1501 W Fountainhead Parkway, Suite 550, Tempe, Arizona 85282

COC # 053023AIRC



Project Name: Hunters Point Shipyard, Parcel C Removal Site Evaluation	Laboratory: EUROFINS BUILT ENVIRONMENT TESTING ANALYTICS, ASHLAND, VA	Event: Parcel C Air Monitoring
Project Number: J31000600	POC:	
WBS Code: J31000600	Ship to: 10329 Stony Run Lane, Ashland, VA 23005	

Comments:	Analytical Test Method CAAIR - Air PM10 N0500 - Air TSP SW6010B - Air Pb Mn	Code	Matrix
		A	Air
Equipment:		Code	Container/Preservative
		1	1x 250-mL. Plastic, 4 Degrees C
		1	1x Envelope, None

Event: Parcel C Air Monitoring						1	1	1											
Sample ID	Matrix	Date	Time	Samp Init.						Location ID	Sample Type	Depth (ft bgs) Top - Bottom		Cooler	Comments				
1	PM030923-08	A	05/24/2023	0720		X				MSC01	N1	0.00	0.00	1	VOLUME (M3):				
2	TSP030923-09	A	05/24/2023	0720			X	X		MSC01	N1	0.00	0.00	1	VOLUME (M3):				
3	PM030923-10	A	05/24/2023	0701		X				MSC02	N1	0.00	0.00	1	VOLUME (M3):				
4	TSP030923-11	A	05/24/2023	0701			X	X		MSC02	N1	0.00	0.00	1	VOLUME (M3):				

Turnaround Time: 5 days

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time	Shipping Date / Carrier / Airbill Number
	5/30/23	1400	Fedex	5/30/23	1400	Shipping Date: 5/30/2023 / FEDEX / 7721 6429 1528
				6/1/23	11:55	Received by Laboratory: (Signature, Date, Time) & condition
						6/1/23 Custody 11:55 Seals Intact

**CHAIN-OF-CUSTODY  
RECORD**

Gilbane Federal

1501 W Fountainhead Parkway, Suite 550, Tempe, Arizona 85282

COC # 053023AIRC



Project Name: Hunters Point Shipyard, Parcel C Removal Site Evaluation	Laboratory: EUROFINS BUILT ENVIRONMENT TESTING ANALYTICS, ASHLAND, VA	Event: Parcel C Air Monitoring
Project Number: J310000600	POC:	
WBS Code: J310000600	Ship to: 10329 Stony Run Lane, Ashland, VA 23005	

Comments:	Analytical Test Method	Code	Matrix
		A	Air
Equipment:	CAAIR - Air PM10 N0500 - Air TSP SW6010B - Air Pb Mn	Code	Container/Preservative
		1	1x 250-mL Plastic, 4 Degrees C
		1	1x Envelope, None

Event: Parcel C Air Monitoring													
Sample ID	Matrix	Date	Time	Samp Init.				Location ID	Sample Type	Depth (ft bgs)	Cooler	Comments	
										Top - Bottom			
1	PM030923-12	A	05/25/2023	0655	X			MSC01	N1	0.00	0.00	1	VOLUME (M3):
2	TSP030923-13	A	05/25/2023	0655		X	X	MSC01	N1	0.00	0.00	1	VOLUME (M3):
3	PM030923-14	A	05/25/2023	0710	X			MSC02	N1	0.00	0.00	1	VOLUME (M3):
4	TSP030923-15	A	05/25/2023	0710		X	X	MSC02	N1	0.00	0.00	1	VOLUME (M3):

Turnaround Time: 5 days

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time	Shipping Date / Carrier / Airbill Number
	5/30/23	1400	Fedex	5/30/23	1400	Shipping Date: 5/30/2023 / FEDEX / 7721 6429 1528
				6/1/23	11:55	Received by Laboratory: (Signature, Date, Time) & condition
						6/1/23 Custody 11:55 Seals Intact

**CHAIN-OF-CUSTODY  
RECORD**

Gilbane Federal  
1501 W Fountainhead Parkway, Suite 550, Tempe, Arizona 85282

COC # 053023AIRC



Project Name: Hunters Point Shipyard, Parcel C Removal Site Evaluation	Laboratory: EUROFINS BUILT ENVIRONMENT TESTING ANALYTICS, ASHLAND, VA	Event: Parcel C Air Monitoring
Project Number: J310000600	POC	
WBS Code: J310000600	Ship to: 10329 Stony Run Lane, Ashland, VA 23005	

Comments:	Analytical Test Method	CAAIR - Air PM10	N0500 - Air TSP	SW6010B - Air Pb Mn	Code	Matrix
					A	Air
Equipment:					Code	Container/Preservative
					1	1x 250-mL Plastic, 4 Degrees C
					1	1x Envelope, None

Event: Parcel C Air Monitoring													
					1	1	1						
Sample ID	Matrix	Date	Time	Samp Init.				Location ID	Sample Type	Depth (ft bgs)		Cooler	Comments
1	PM030923-16	05/25/2023	1438		X			MSC01	N1	0.00	0.00	1	VOLUME (M3):
2	TSP030923-17	05/25/2023	1438			X	X	MSC01	N1	0.00	0.00	1	VOLUME (M3):
3	PM030923-18	05/25/2023	1455		X			MSC02	N1	0.00	0.00	1	VOLUME (M3):
4	TSP030323-19	05/25/2023	1455			X	X	MSC02	N1	0.00	0.00	1	VOLUME (M3):
Turnaround Time: 5 days													

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time	Shipping Date / Carrier / Airbill Number
	5/30/23	1400	Fedex	5/30/23	1400	Shipping Date: 5/30/2023 / FEDEX / 7721 6429 1528
				6/1/23	11:55	Received by Laboratory: (Signature, Date, Time) & condition
						6/1/23 Custody 11:55 Seals Intact

CHAIN-OF-CUSTODY RECORD

COC # [REDACTED] 053023AIRC



Project Name: Hunters Point Shipyard, Parcel C Removal Site Evaluation	Event: Parcel C Air Monitoring
Project Number: J310000600	
WBS Code: J310000600	

	Sample ID	Matrix	Date	Time	Comments
1	PM030323-08	AQ	05/23/2023	0800	
2	TSP030323-09	AQ	05/23/2023	0800	
3	PM030323-10	A	05/23/2023	0735	VOLUME (M3): 1704.60
4	TSP030323-11	A	05/23/2023	0735	VOLUME (M3): 1709.17
5	PM030923-06	A	05/23/2023	0711	VOLUME (M3): 1623.00
6	<del>TSP030323-07</del> TSP030923-07	A	05/23/2023	0711	VOLUME (M3): 1721.41
7	PM030923-08	A	05/24/2023	0720	VOLUME (M3): 1581.93
8	TSP030923-09	A	05/24/2023	0720	VOLUME (M3): 1580.87
9	PM030923-10	A	05/24/2023	0701	VOLUME (M3): 1612.80
10	TSP030923-11	A	05/24/2023	0701	VOLUME (M3): 1709.30
11	PM030923-12	A	05/25/2023	0655	VOLUME (M3): 1568.80
12	TSP030923-13	A	05/25/2023	0655	VOLUME (M3): 1619.49
13	PM030923-14	A	05/25/2023	0710	VOLUME (M3): 1631.31
14	TSP030923-15	A	05/25/2023	0710	VOLUME (M3): 1737.64
15	PM030923-16	A	05/25/2023	1438	VOLUME (M3): 532.95
16	TSP030923-17	A	05/25/2023	1438	VOLUME (M3): 534.21
17	PM030923-18	A	05/25/2023	1455	VOLUME (M3): 520.74
18	TSP030923-19	A	05/25/2023	1455	VOLUME (M3): 553.95

6/1/23  
25



11/23

Sample ID	Cubic Meter	Volume (L)
PM030323-10	1704.6	1704600
TSP030323-11	1709.17	1709170
PM030923-06	1623	1623000
<del>TSP030323-07</del> TSP030923-07	1721.41	1721410
PM030923-08	1581.93	1581930
TSP030923-09	1580.87	1580870
PM030923-10	1612.8	1612800
TSP030923-11	1709.3	1709300
PM030923-12	1568.8	1568800
TSP030923-13	1619.49	1619490
PM030923-14	1631.31	1631310
TSP030923-15	1737.64	1737640
PM030923-16	532.95	532950
TSP030923-17	534.21	534210
PM030923-18	520.74	520740
TSP030923-19	553.95	553950
		0
		0
		0

From: [REDACTED]  
Sent: Thursday, June 1, 2023 5:02 PM  
To: [REDACTED]  
Cc: [REDACTED]  
Subject: RE: COC discrepancy

You don't often get email from [ktomgee@ges-ais.com](mailto:ktomgee@ges-ais.com). [Learn why this is important](#)

EXTERNAL EMAIL\*

[REDACTED]

Attached is the revised COC. Please let me know if you have any questions or concerns. Thank you.

[REDACTED]

Environmental Scientist

[REDACTED]

[GES-AIS.COM](mailto:ktomgee@ges-ais.com)



From: [REDACTED]  
Sent: Thursday, June 1, 2023 1:21 PM  
To: [REDACTED]  
Cc: [REDACTED]  
Subject: Re: COC discrepancy

**⚠ CAUTION: EXTERNAL SENDER** *This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.*

[REDACTED]

I just wanted to add that the samples are being held in receiving pending a resolution.

Thank you,

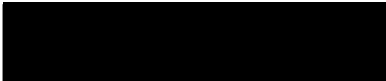


Client Services Manager

Eurofins Built Environment Testing Analytics

10329 Stony Run Lane

Ashland, VA 23005



Follow Us! [Facebook](#) | [LinkedIn](#)

**From:** [Redacted]  
**Sent:** Thursday, June 1, 2023 4:04 PM  
**To:** [Redacted]  
**Subject:** RE: COC discrepancy

You don't often get email from [Redacted]  
**EXTERNAL EMAIL\***

Thank you [REDACTED] Will confirm which is correct and make sure we get back to you and if need be, send an amended COC.

Thanks again  
[REDACTED]

From: [REDACTED]  
Sent: Thursday, June 1, 2023 12:52 PM

[REDACTED]

**Subject:** RE: COC discrepancy

**⚠ CAUTION: EXTERNAL SENDER** *This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.*

[REDACTED]

Yes! So sorry. You are correct- the COC is marked as TSP030323-07, and the sample is TSP030923-07. Thanks!

[REDACTED]

Project Manager

Eurofins Built Environment Testing Analytics

10329 Stony Run Lane

Ashland, VA 23005

[REDACTED]

Follow Us! Facebook | LinkedIn

From: [REDACTED]

Sent: Thursday, June 1, 2023 3:48 PM

Subject: RE: COC discrepancy

You don't often get email from [REDACTED]

EXTERNAL EMAIL\*

Good afternoon,

Sample TSP0323-07 is marked as such on the chain-I don't see any sample on the COC with TSP0323-07 (there is TSP030323-07 on the COC though)

but the sample itself is marked as TSP030923-07-Can you confirm this is how it's marked (and not marked as TSP030323-07)?

Thank you

[REDACTED]  
Chemist II

GES | MBE  
[REDACTED]

GES-AIS.COM

From: [REDACTED]

Sent: Thursday, June 1, 2023 12:33 PM

**Subject:** COC discrepancy

**⚠ CAUTION: EXTERNAL SENDER** *This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.*

Hello,

Our receiving department noticed an error on a COC while logging samples today. Sample TSP0323-07 is marked as such on the chain, but the sample itself is marked as TSP030923-07. Do you mind sending a revised COC when you get a chance? Thanks so much!

[REDACTED]  
Project Manager

Eurofins Built Environment Testing Analytics

10329 Stony Run Lane

Ashland, VA 23005

[REDACTED]  
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## Level 2 QA/QC Summary Report

Work Order #: B152025

Report Date: 6/7/2023

**Batch ID:** ICP230605E      Analysis Date: 6/6/2023

**Media::** 8X10PW GFF      Preparation Date 6/5/2023

### Blank Spike Results

QC ID	QC Type	Parameter	Percent Recovery				RPD	Limit
			LCS	LCSD	Acceptance			
LCS ICP23	BLKSPK	Lead	112	114	75-125	1.0	25	
LCS ICP23	BLKSPK	Manganese	97	99	75-125	1.0	25	

### Method Blank Results

QC ID	QC Type	Parameter	Result	RL	Units
LMB ICP2	LMB	Lead	< 14	14	ug
LMB ICP2	LMB	Manganese	< 98	98	ug






Built Environment Testing  
Analytics

Eurofins Analytics, LLC  
10329 Stony Run Lane  
Ashland, Va 23005  
Phone: (804) 365-3000 Fax: (804) 365-3002  
AIHA LAP, LLC Accreditation ID 100531

June 16, 2023

  
AIS-GES, LLC  
1501 W. FOUNTAINHEAD PKWY,  
#550  
TEMPE, AZ 85282

**Laboratory Workorder ID: B158040**

Client Project ID: J310000600 PARCEL C HUNTERS PT  
Received: June 7, 2023  
Reported: June 13, 2023  
Amended: June 15, 2023

Attached are the results we obtained on the analysis of your samples submitted to Analytics. Any Chains-of-Custody associated by this sample group are enclosed. Air concentrations are calculated as a convenience to the client and the overall accuracy of this result depends on both the accuracy of the air volume and the amount found by analysis. Theoretical air volumes for passive monitors are calculated using the sampling time submitted and the manufacture's listed sampling rate for each compound. Results provided in this report relate only to the items tested.

For blanks and non-detects the results indicated with a '<' value represents the reporting limit for the analysis. Unless otherwise noted results are not corrected for blank values.

Unless the signature of the appropriate manager(s) appears on this report, this report should be considered PRELIMINARY and is subject to change.

We appreciate your confidence in allowing Analytics to be your testing laboratory. Any questions regarding this report can be addressed by calling our customer services department at (800) 888-8061.

  
Technical Director

Enclosures



**Final Report**

AIS-GES, LLC  
1501 W. FOUNTAINHEAD PKWY,  
#550  
TEMPE, AZ 85282

Customer: PARCELC1  
Attention: XXXXXXXXXX  
PO Number J310000600

Date Received: 06/07/23  
Client Project ID J310000600 PARCEL C  
HUNTERS PT

Lab ID: B158040001	Sample ID: PM031223-50	FIELDQC	Media: 8X10 PREWEIGHED GLASS	Sample Date: 5/31/2023 8:00:00 AM
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Analyte	Method	Analysis Date	Volume	Reporting Limit	Front	Rear	Total	Concentration
PM10 Particulates	40CFR50 App.J	06/08/23	0 L	1000 ug			39500 ug	--

Lab ID: B158040002	Sample ID: TSP032123-01	FIELDQC	Media: 8X10 PREWEIGHED GLASS	Sample Date: 5/31/2023 8:00:00 AM
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Analyte	Method	Analysis Date	Volume	Reporting Limit	Front	Rear	Total	Concentration
Total Suspended Particulates	40CFR50 App.B	06/08/23	0 L	1000 ug			1400 ug	--
Lead	40 CFR Part 50 Appendix G	06/09/23	0 L	14 ug			< 14 ug	--
Manganese	40 CFR Part 50 Appendix G	06/09/23	0 L	98 ug			< 98 ug	--

Lab ID: B158040003	Sample ID: PM031223-32	MSC01	Media: 8X10 PREWEIGHED GLASS	Sample Date: 5/31/2023 6:50:00 AM
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Analyte	Method	Analysis Date	Volume	Reporting Limit	Front	Rear	Total	Concentration
PM10 Particulates	40CFR50 App.J	06/08/23	1649150 L	1000 ug			12900 ug	8 ug/M3



Final Report

Lab ID:	B158040004	Sample ID:	TSP031223-33	MSC01	Media:	8X10 PREWEIGHED GLASS	Sample Date:	5/31/2023 6:50:00 AM
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Analyte	Method	Analysis Date	Volume	Reporting Limit	Front	Rear	Total	Concentration
Total Suspended Particulates	40CFR50 App.B	06/08/23	1642060 L	1000 ug			40200 ug	24 ug/M3
Lead	40 CFR Part 50 Appendix G	06/09/23	1642060 L	14 ug			< 14 ug	< 0.009 ug/M3
Manganese	40 CFR Part 50 Appendix G	06/09/23	1642060 L	98 ug			< 98 ug	< 0.06 ug/M3

Lab ID:	B158040005	Sample ID:	PM031223-34	MSC02	Media:	8X10 PREWEIGHED GLASS	Sample Date:	5/31/2023 7:05:00 AM
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Analyte	Method	Analysis Date	Volume	Reporting Limit	Front	Rear	Total	Concentration
PM10 Particulates	40CFR50 App.J	06/08/23	1622040 L	1000 ug			13200 ug	8 ug/M3

Lab ID:	B158040006	Sample ID:	TSP031223-35	MSC02	Media:	8X10 PREWEIGHED GLASS	Sample Date:	5/31/2023 7:05:00 AM
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Analyte	Method	Analysis Date	Volume	Reporting Limit	Front	Rear	Total	Concentration
Total Suspended Particulates	40CFR50 App.B	06/08/23	1716150 L	1000 ug			28700 ug	17 ug/M3
Lead	40 CFR Part 50 Appendix G	06/09/23	1716150 L	14 ug			< 14 ug	< 0.008 ug/M3
Manganese	40 CFR Part 50 Appendix G	06/09/23	1716150 L	98 ug			< 98 ug	< 0.057 ug/M3

Lab ID:	B158040007	Sample ID:	PM031223-36	MSC01	Media:	8X10 PREWEIGHED GLASS	Sample Date:	6/1/2023 6:58:00 AM
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Analyte	Method	Analysis Date	Volume	Reporting Limit	Front	Rear	Total	Concentration
PM10 Particulates	40CFR50 App.J	06/08/23	1666710 L	1000 ug			37100 ug	22 ug/M3



**Final Report**

<b>Lab ID:</b> B158040008	<b>Sample ID:</b> TSP031223-37	MSC01	<b>Media:</b> 8X10 PREWEIGHED GLASS	<b>Sample Date:</b> 6/1/2023 6:58:00 AM
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Analyte	Method	Analysis Date	Volume	Reporting Limit	Front	Rear	Total	Concentration
Total Suspended Particulates	40CFR50 App.B	06/08/23	1666800 L	1000 ug			83200 ug	50 ug/M3
Lead	40 CFR Part 50 Appendix G	06/09/23	1666800 L	14 ug			< 14 ug	< 0.008 ug/M3
Manganese	40 CFR Part 50 Appendix G	06/09/23	1666800 L	98 ug			< 98 ug	< 0.059 ug/M3

<b>Lab ID:</b> B158040009	<b>Sample ID:</b> PM031223-38	MSC02	<b>Media:</b> 8X10 PREWEIGHED GLASS	<b>Sample Date:</b> 6/1/2023 7:14:00 AM
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Analyte	Method	Analysis Date	Volume	Reporting Limit	Front	Rear	Total	Concentration
PM10 Particulates	40CFR50 App.J	06/08/23	1604780 L	1000 ug			47400 ug	30 ug/M3

<b>Lab ID:</b> B158040010	<b>Sample ID:</b> TSP031223-39	MSC02	<b>Media:</b> 8X10 PREWEIGHED GLASS	<b>Sample Date:</b> 6/1/2023 7:14:00 AM
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Analyte	Method	Analysis Date	Volume	Reporting Limit	Front	Rear	Total	Concentration
Total Suspended Particulates	40CFR50 App.B	06/08/23	1733270 L	1000 ug			97900 ug	56 ug/M3
Lead	40 CFR Part 50 Appendix G	06/09/23	1733270 L	14 ug			< 14 ug	< 0.008 ug/M3
Manganese	40 CFR Part 50 Appendix G	06/09/23	1733270 L	98 ug			< 98 ug	< 0.057 ug/M3

<b>Lab ID:</b> B158040011	<b>Sample ID:</b> PM031223-40	MSC01	<b>Media:</b> 8X10 PREWEIGHED GLASS	<b>Sample Date:</b> 6/1/2023 3:18:00 PM
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Analyte	Method	Analysis Date	Volume	Reporting Limit	Front	Rear	Total	Concentration
PM10 Particulates	40CFR50 App.J	06/08/23	572700 L	1000 ug			14400 ug	25 ug/M3



**Final Report**

<b>Lab ID:</b> B158040012	<b>Sample ID:</b> TSP031223-41	MSC01	<b>Media:</b> 8X10 PREWEIGHED GLASS	<b>Sample Date:</b> 6/1/2023 3:18:00 PM
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Analyte	Method	Analysis Date	Volume	Reporting Limit	Front	Rear	Total	Concentration
Total Suspended Particulates	40CFR50 App.B	06/08/23	575360 L	1000 ug			30200 ug	52 ug/M3
Lead	40 CFR Part 50 Appendix G	06/09/23	575360 L	14 ug			< 14 ug	< 0.024 ug/M3
Manganese	40 CFR Part 50 Appendix G	06/09/23	575360 L	98 ug			< 98 ug	< 0.17 ug/M3

<b>Lab ID:</b> B158040013	<b>Sample ID:</b> PM031223-42	MSC02	<b>Media:</b> 8X10 PREWEIGHED GLASS	<b>Sample Date:</b> 6/1/2023 3:26:00 PM
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Analyte	Method	Analysis Date	Volume	Reporting Limit	Front	Rear	Total	Concentration
PM10 Particulates	40CFR50 App.J	06/08/23	551700 L	1000 ug			15900 ug	29 ug/M3

<b>Lab ID:</b> B158040014	<b>Sample ID:</b> TSP031223-43	MSC02	<b>Media:</b> 8X10 PREWEIGHED GLASS	<b>Sample Date:</b> 6/1/2023 3:26:00 PM
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Analyte	Method	Analysis Date	Volume	Reporting Limit	Front	Rear	Total	Concentration
Total Suspended Particulates	40CFR50 App.B	06/08/23	585890 L	1000 ug			31200 ug	53 ug/M3
Lead	40 CFR Part 50 Appendix G	06/09/23	585890 L	14 ug			< 14 ug	< 0.024 ug/M3
Manganese	40 CFR Part 50 Appendix G	06/09/23	585890 L	98 ug			< 98 ug	< 0.167 ug/M3

Field blank(-001)showed no visible loading yet yielded a large weight gain nonetheless.Investigation identified no discrepancies in testing,indicating an error was made in manual entry of pre-weight into database.

This report was amended on 6/15/2023 to add comments regarding the large weight gain reported for field blank sample -001.



Built Environment Testing  
Analytics

Eurofins Analytics, LLC  
10329 Stony Run Lane  
Ashland, Va 23005  
Phone: (804) 365-3000 Fax: (804) 365-3002  
AIHA LAP, LLC Accreditation ID 100531

## Final Report

### General Laboratory Comments

Abbreviations:

ug = micrograms; mg=milligrams; g = grams, ppm=parts per million (volume), ppb = parts per billion (volume), mg/M3=milligrams per cubic meter of air, ug/M3=micrograms per cubic meter of air; Min=minutes, Qual=Qualifiers

**CHAIN-OF-CUSTODY  
RECORD**

Gilbane Federal  
1501 W Fountainhead Parkway, Suite 550, Tempe, Arizona 85282

COC # 060623AIRC



Project Name: Hunters Point Shipyard, Parcel C Removal Site Evaluation	Laboratory: EUROFINS BUILT ENVIRONMENT TESTING ANALYTICS, ASHLAND, VA	Event: Parcel C Air Monitoring
Project Number: J310000600	POC:	
WBS Code: J310000600	Ship to: 10329 Stony Run Lane, Ashland, VA 23005	

Comments:	Analytical Test Method CAAIR - Air PM10 N0500 - Air TSP SW6010B - Air Pb Mn	Code	Matrix	Page 1 of 3
		A	Air	
AQ	Air Quality Control Matrix			
Equipment:		Code	Container/Preservative	
		1	1x 250-mL Plastic, 4 Degrees C	
		1	1x Envelope, None	

Event: Parcel C Air Monitoring															
Sample ID	Matrix	Date	Time	Samp Init.						Location ID	Sample Type	Depth (ft bgs) Top - Bottom	Cooler	Comments	
1	PM031223-50	AQ	05/31/2023	0800		X				FIELDQC	FB1	0.00	0.00	1	
2	TSP032123-01	AQ	05/31/2023	0800			X	X		FIELDQC	FB1	0.00	0.00	1	
3	PM031223-32	A	05/31/2023	0650		X				MSC01	N1	0.00	0.00	1	
4	TSP031223-33	A	05/31/2023	0650			X	X		MSC01	N1	0.00	0.00	1	
5	PM031223-34	A	05/31/2023	0705		X				MSC02	N1	0.00	0.00	1	
6	TSP031223-35	A	05/31/2023	0705			X	X		MSC02	N1	0.00	0.00	1	

Turnaround Time: NA

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time	Shipping Date / Carrier / Airbill Number
	6/6/23	1400	Fedex	6/6/23	1400	Shipping Date: 6/6/2023 / FEDEX / 7722 5277 8486
				6/7/23	13:18	Received by: (Signature, Date, Time) & condition 6/7/23 Custody Seals 13:18 Intact



**CHAIN-OF-CUSTODY  
RECORD**

Gilbane Federal  
 1501 W Fountainhead Parkway, Suite 550, Tempe, Arizona 85282

COC # 060623AIRC



Project Name: Hunters Point Shipyard, Parcel C Removal Site Evaluation	Laboratory: EUROFINS BUILT ENVIRONMENT TESTING ANALYTICS, ASHLAND, VA	Event: Parcel C Air Monitoring
Project Number: J310000600	POC:	
WBS Code: J310000600	Ship to: 10329 Stony Run Lane, Ashland, VA 23005	

Comments:	Analytical Test Method CAAIR - Air PM10 N0500 - Air TSP SW6010B - Air Pb Mn	Code	Matrix
		A	Air
Equipment:		Code	Container/Preservative
		1	1x 250-mL Plastic, 4 Degrees C
		1	1x Envelope, None

Page 2 of 3

Event: Parcel C Air Monitoring											1	1	1								
Sample ID	Matrix	Date	Time	Samp Init.							Location ID	Sample Type	Depth (ft bgs) Top - Bottom		Cooler	Comments					
1	PM031223-36	A	06/01/2023	0658	X						MSC01	N1	0.00	0.00	1						
2	TSP031223-37	A	06/01/2023	0658		X	X				MSC01	N1	0.00	0.00	1						
3	PM031223-38	A	06/01/2023	0714	X						MSC02	N1	0.00	0.00	1						
4	TSP031223-39	A	06/01/2023	0714		X	X				MSC02	N1	0.00	0.00	1						

Turnaround Time: 5 days

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time	Shipping Date / Carrier / Airbill Number
	6/6/23	1400	Fedex	6/6/23	1400	Shipping Date: 6/6/2023 / FEDEX / 7722 5277 8486
				6/7/23	13:18	Received by: (Signature, Date, Time) & condition
						6/7/23 Custody 13:18 Seals Intact



**CHAIN-OF-CUSTODY  
RECORD**

Gilbane Federal  
1501 W Fountainhead Parkway, Suite 550, Tempe, Arizona 85282

COC # 060623AIRC



Project Name: Hunters Point Shipyard, Parcel C Removal Site Evaluation	Laboratory: EUROFINS BUILT ENVIRONMENT TESTING ANALYTICS, ASHLAND, VA	Event: Parcel C Air Monitoring
Project Number: J310000600	POC: [Redacted]	
WBS Code: J310000600	Ship to: 10329 Stony Run Lane, Ashland, VA 23005	

Comments:	Analytical Test Method	CAAIR - Air PM10	N0500 - Air TSP	SW6010B - Air Pb Mn	[Redacted]	[Redacted]	[Redacted]	[Redacted]	[Redacted]	[Redacted]	[Redacted]	Code	Matrix	Page 3 of 3
												A	Air	
Equipment:	[Redacted]	[Redacted]	[Redacted]	[Redacted]	[Redacted]	[Redacted]	[Redacted]	[Redacted]	[Redacted]	[Redacted]	[Redacted]	Code	Container/Preservative	
												1	1x 250-mL Plastic, 4 Degrees C	
												1	1x Envelope, None	

Event: Parcel C Air Monitoring															
Sample ID	Matrix	Date	Time	Samp Init.						Location ID	Sample Type	Depth (ft bgs)		Cooler	Comments
												Top	Bottom		
1	PM031223-40	A	06/01/2023	1518	[Redacted]	X				MSC01	N1	0.00	0.00	1	[Redacted]
2	TSP031223-41	A	06/01/2023	1518	[Redacted]		X	X		MSC01	N1	0.00	0.00	1	[Redacted]
3	PM031223-42	A	06/01/2023	1526	[Redacted]	X				MSC02	N1	0.00	0.00	1	[Redacted]
4	TSP031223-43	A	06/01/2023	1526	[Redacted]		X	X		MSC02	N1	0.00	0.00	1	[Redacted]

Turnaround Time: 5 days

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time	Shipping Date / Carrier / Airbill Number
[Redacted]	6/6/23	1400	Fedex	6/6/23	1400	Shipping Date: 6/6/2023 / FEDEX / 7722 5277 8486
[Redacted]			[Redacted]	6/7/23	13:18	
[Redacted]			[Redacted]			(Signature, Date, Time) & condition
[Redacted]			[Redacted]			6/7/23 Custody 13:18 Seals Intact

**CHAIN-OF-CUSTODY RECORD**

Gilbane Federal

**COC # 060623AIRC**

1501 W Fountainhead Parkway,  
Suite 550, Tempe, Arizona 85282

<b>Project Name: Hunters Point Shipyard, Parcel C Removal Site Evaluation</b>					
<b>Project Number: J310000600</b>					
<b>WBS Code: J310000600</b>					
	Sample ID	Matrix	Date	Time	Comments
1	PM031223-50	AQ	05/31/2023	0800	
2	TSP032123-01	AQ	05/31/2023	0800	
3	PM031223-32	A	05/31/2023	0650	VOLUME (M3): 1649.15
4	TSP031223-33	A	05/31/2023	0650	VOLUME (M3): 1642.06
5	PM031223-34	A	05/31/2023	0705	VOLUME (M3): 1622.04
6	TSP031223-35	A	05/31/2023	0705	VOLUME (M3): 1716.15
7	PM031223-36	A	06/01/2023	0658	VOLUME (M3): 1666.71
8	TSP031223-37	A	06/01/2023	0658	VOLUME (M3): 1666.80
9	PM031223-38	A	06/01/2023	0714	VOLUME (M3): 1604.78
10	TSP031223-39	A	06/01/2023	0714	VOLUME (M3): 1733.27
11	PM031223-40	A	06/01/2023	1518	VOLUME (M3): 572.70
12	TSP031223-41	A	06/01/2023	1518	VOLUME (M3): 575.36
13	PM031223-42	A	06/01/2023	1526	VOLUME (M3): 551.70
14	TSP031223-43	A	06/01/2023	1526	VOLUME (M3): 585.89

Relinquished by: *(Signature)*

Date

Time

Received by: *(Signature)*

airvolumes

Date

Time

Shipping Date: / /

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





## Level 2 QA/QC Summary Report

Work Order #: B158040

Report Date: 6/16/2023

**Batch ID:** ICP230609A      Analysis Date: 6/9/2023

**Media::** 8X10PW GFF      Preparation Date 6/9/2023

### Blank Spike Results

QC ID	QC Type	Parameter	Percent Recovery			RPD	Limit
			LCS	LCSD	Acceptance		
LCS ICP23	BLKSPK	Lead	94	92	75-125	1.0	25
LCS ICP23	BLKSPK	Manganese	89	87	75-125	1.0	25

### Method Blank Results


QC ID	QC Type	Parameter	Result	RL	Units
LMB ICP2	LMB	Lead	< 14	14	ug
LMB ICP2	LMB	Manganese	< 98	98	ug



Built Environment Testing  
Analytics

Eurofins Analytics, LLC  
10329 Stony Run Lane  
Ashland, Va 23005  
Phone: (804) 365-3000 Fax: (804) 365-3002  
AIHA LAP, LLC Accreditation ID 100531

June 20, 2023

  
AIS-GES, LLC  
1501 W. FOUNTAINHEAD PKWY,  
#550  
TEMPE, AZ 85282

**Laboratory Workorder ID: B165059**

Client Project ID: J310000600 PARCEL C HUNTERS PT

Received: June 14, 2023

Reported: June 20, 2023

Attached are the results we obtained on the analysis of your samples submitted to Analytics. Any Chains-of-Custody associated by this sample group are enclosed. Air concentrations are calculated as a convenience to the client and the overall accuracy of this result depends on both the accuracy of the air volume and the amount found by analysis. Theoretical air volumes for passive monitors are calculated using the sampling time submitted and the manufacture's listed sampling rate for each compound. Results provided in this report relate only to the items tested.

For blanks and non-detects the results indicated with a '<' value represents the reporting limit for the analysis. Unless otherwise noted results are not corrected for blank values.

Unless the signature of the appropriate manager(s) appears on this report, this report should be considered PRELIMINARY and is subject to change.

We appreciate your confidence in allowing Analytics to be your testing laboratory. Any questions regarding this report can be addressed by calling our customer services department at (800) 888-8061.

  
  
Technical Director

Enclosures



**Final Report**

AIS-GES, LLC  
1501 W. FOUNTAINHEAD PKWY,  
#550  
TEMPE, AZ 85282

Customer: PARCELC1  
Attention: XXXXXXXXXX  
PO Number J310000600

Date Received: 06/14/23  
Client Project ID J310000600 PARCEL C  
HUNTERS PT

Lab ID: B165059001	Sample ID: PM032123-12	FIELDQC	Media: 8X10 PREWEIGHED GLASS	Sample Date: 6/5/2023 8:00:00 AM
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Analyte	Method	Analysis Date	Volume	Reporting Limit	Front	Rear	Total	Concentration
PM10 Particulates	40CFR50 App.J	06/15/23	0 L	1000 ug			1500 ug	--

Lab ID: B165059002	Sample ID: TSP032123-13	FIELDQC	Media: 8X10 PREWEIGHED GLASS	Sample Date: 6/5/2023 8:00:00 AM
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Analyte	Method	Analysis Date	Volume	Reporting Limit	Front	Rear	Total	Concentration
Total Suspended Particulates	40CFR50 App.B	06/15/23	0 L	1000 ug			1300 ug	--
Lead	40 CFR Part 50 Appendix G	06/19/23	0 L	14 ug			< 14 ug	--
Manganese	40 CFR Part 50 Appendix G	06/19/23	0 L	98 ug			< 98 ug	--

Lab ID: B165059003	Sample ID: PM032123-14	MSC01	Media: 8X10 PREWEIGHED GLASS	Sample Date: 6/6/2023 7:02:00 AM
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Analyte	Method	Analysis Date	Volume	Reporting Limit	Front	Rear	Total	Concentration
PM10 Particulates	40CFR50 App.J	06/15/23	1644600 L	1000 ug			16700 ug	10 ug/M3





**Final Report**

<b>Lab ID:</b> B165059004	<b>Sample ID:</b> TSP032123-15	MSC01	<b>Media:</b> 8X10 PREWEIGHED GLASS	<b>Sample Date:</b> 6/6/2023 7:02:00 AM
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Analyte	Method	Analysis Date	Volume	Reporting Limit	Front	Rear	Total	Concentration
Total Suspended Particulates	40CFR50 App.B	06/15/23	1650140 L	1000 ug			38400 ug	23 ug/M3
Lead	40 CFR Part 50 Appendix G	06/20/23	1650140 L	14 ug			< 14 ug	< 0.008 ug/M3
Manganese	40 CFR Part 50 Appendix G	06/20/23	1650140 L	98 ug			< 98 ug	< 0.059 ug/M3

<b>Lab ID:</b> B165059005	<b>Sample ID:</b> PM032123-16	MSC02	<b>Media:</b> 8X10 PREWEIGHED GLASS	<b>Sample Date:</b> 6/6/2023 7:16:00 AM
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Analyte	Method	Analysis Date	Volume	Reporting Limit	Front	Rear	Total	Concentration
PM10 Particulates	40CFR50 App.J	06/15/23	1631900 L	1000 ug			21600 ug	13 ug/M3

<b>Lab ID:</b> B165059006	<b>Sample ID:</b> TSP032123-17	MSC02	<b>Media:</b> 8X10 PREWEIGHED GLASS	<b>Sample Date:</b> 6/6/2023 7:16:00 AM
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Analyte	Method	Analysis Date	Volume	Reporting Limit	Front	Rear	Total	Concentration
Total Suspended Particulates	40CFR50 App.B	06/15/23	913800 L	1000 ug			37900 ug	41 ug/M3
Lead	40 CFR Part 50 Appendix G	06/20/23	913800 L	14 ug			< 14 ug	< 0.015 ug/M3
Manganese	40 CFR Part 50 Appendix G	06/20/23	913800 L	98 ug			< 98 ug	< 0.107 ug/M3

<b>Lab ID:</b> B165059007	<b>Sample ID:</b> PM032123-18	MSC01	<b>Media:</b> 8X10 PREWEIGHED GLASS	<b>Sample Date:</b> 6/7/2023 6:57:00 AM
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Analyte	Method	Analysis Date	Volume	Reporting Limit	Front	Rear	Total	Concentration
PM10 Particulates	40CFR50 App.J	06/15/23	1645890 L	1000 ug			10900 ug	7 ug/M3



**Final Report**

<b>Lab ID:</b> B165059008	<b>Sample ID:</b> TSP032123-19	MSC01	<b>Media:</b> 8X10 PREWEIGHED GLASS	<b>Sample Date:</b> 6/7/2023 6:57:00 AM
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Analyte	Method	Analysis Date	Volume	Reporting Limit	Front	Rear	Total	Concentration
Total Suspended Particulates	40CFR50 App.B	06/15/23	1645120 L	1000 ug			27600 ug	17 ug/M3
Lead	40 CFR Part 50 Appendix G	06/20/23	1645120 L	14 ug			< 14 ug	< 0.009 ug/M3
Manganese	40 CFR Part 50 Appendix G	06/20/23	1645120 L	98 ug			< 98 ug	< 0.06 ug/M3

<b>Lab ID:</b> B165059009	<b>Sample ID:</b> PM032123-20	MSC02	<b>Media:</b> 8X10 PREWEIGHED GLASS	<b>Sample Date:</b> 6/7/2023 7:10:00 AM
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Analyte	Method	Analysis Date	Volume	Reporting Limit	Front	Rear	Total	Concentration
PM10 Particulates	40CFR50 App.J	06/15/23	1614850 L	1000 ug			14100 ug	9 ug/M3

<b>Lab ID:</b> B165059010	<b>Sample ID:</b> TSP032123-21	MSC02	<b>Media:</b> 8X10 PREWEIGHED GLASS	<b>Sample Date:</b> 6/7/2023 7:10:00 AM
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Analyte	Method	Analysis Date	Volume	Reporting Limit	Front	Rear	Total	Concentration
Total Suspended Particulates	40CFR50 App.B	06/15/23	1718750 L	1000 ug			29100 ug	17 ug/M3
Lead	40 CFR Part 50 Appendix G	06/20/23	1718750 L	14 ug			< 14 ug	< 0.008 ug/M3
Manganese	40 CFR Part 50 Appendix G	06/20/23	1718750 L	98 ug			< 98 ug	< 0.057 ug/M3

<b>Lab ID:</b> B165059011	<b>Sample ID:</b> PM032123-22	MSC01	<b>Media:</b> 8X10 PREWEIGHED GLASS	<b>Sample Date:</b> 6/8/2023 7:14:00 AM
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Analyte	Method	Analysis Date	Volume	Reporting Limit	Front	Rear	Total	Concentration
PM10 Particulates	40CFR50 App.J	06/15/23	1672940 L	1000 ug			16600 ug	10 ug/M3





**Final Report**

<b>Lab ID:</b> B165059012	<b>Sample ID:</b> TSP032123-23	MSC01	<b>Media:</b> 8X10 PREWEIGHED GLASS	<b>Sample Date:</b> 6/8/2023 7:14:00 AM
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Analyte	Method	Analysis Date	Volume	Reporting Limit	Front	Rear	Total	Concentration
Total Suspended Particulates	40CFR50 App.B	06/15/23	1669410 L	1000 ug			58400 ug	35 ug/M3
Lead	40 CFR Part 50 Appendix G	06/20/23	1669410 L	14 ug			< 14 ug	< 0.008 ug/M3
Manganese	40 CFR Part 50 Appendix G	06/20/23	1669410 L	98 ug			< 98 ug	< 0.059 ug/M3

<b>Lab ID:</b> B165059013	<b>Sample ID:</b> PM032123-24	MSC02	<b>Media:</b> 8X10 PREWEIGHED GLASS	<b>Sample Date:</b> 6/8/2023 7:26:00 AM
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Analyte	Method	Analysis Date	Volume	Reporting Limit	Front	Rear	Total	Concentration
PM10 Particulates	40CFR50 App.J	06/15/23	1642620 L	1000 ug			17000 ug	10 ug/M3

<b>Lab ID:</b> B165059014	<b>Sample ID:</b> TSP032123-25	MSC02	<b>Media:</b> 8X10 PREWEIGHED GLASS	<b>Sample Date:</b> 6/8/2023 7:26:00 AM
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Analyte	Method	Analysis Date	Volume	Reporting Limit	Front	Rear	Total	Concentration
Total Suspended Particulates	40CFR50 App.B	06/15/23	1742990 L	1000 ug			36400 ug	21 ug/M3
Lead	40 CFR Part 50 Appendix G	06/20/23	1742990 L	14 ug			< 14 ug	< 0.008 ug/M3
Manganese	40 CFR Part 50 Appendix G	06/20/23	1742990 L	98 ug			< 98 ug	< 0.056 ug/M3

<b>Lab ID:</b> B165059015	<b>Sample ID:</b> PM032123-26	MSC01	<b>Media:</b> 8X10 PREWEIGHED GLASS	<b>Sample Date:</b> 6/8/2023 2:11:00 PM
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Analyte	Method	Analysis Date	Volume	Reporting Limit	Front	Rear	Total	Concentration
PM10 Particulates	40CFR50 App.J	06/15/23	370510 L	1000 ug			4700 ug	13 ug/M3



**Final Report**

<b>Lab ID:</b> B165059016	<b>Sample ID:</b> TSP032123-27	MSC01	<b>Media:</b> 8X10 PREWEIGHED GLASS	<b>Sample Date:</b> 6/8/2023 2:11:00 PM
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Analyte	Method	Analysis Date	Volume	Reporting Limit	Front	Rear	Total	Concentration
Total Suspended Particulates	40CFR50 App.B	06/15/23	368370 L	1000 ug			10400 ug	28 ug/M3
Lead	40 CFR Part 50 Appendix G	06/20/23	368370 L	14 ug			< 14 ug	< 0.038 ug/M3
Manganese	40 CFR Part 50 Appendix G	06/20/23	368370 L	98 ug			< 98 ug	< 0.266 ug/M3

<b>Lab ID:</b> B165059017	<b>Sample ID:</b> PM032123-28	MSC02	<b>Media:</b> 8X10 PREWEIGHED GLASS	<b>Sample Date:</b> 6/8/2023 2:12:00 PM
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Analyte	Method	Analysis Date	Volume	Reporting Limit	Front	Rear	Total	Concentration
PM10 Particulates	40CFR50 App.J	06/15/23	457560 L	1000 ug			6100 ug	13 ug/M3

<b>Lab ID:</b> B165059018	<b>Sample ID:</b> TSP032123-29	MSC02	<b>Media:</b> 8X10 PREWEIGHED GLASS	<b>Sample Date:</b> 6/8/2023 2:12:00 PM
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Analyte	Method	Analysis Date	Volume	Reporting Limit	Front	Rear	Total	Concentration
Total Suspended Particulates	40CFR50 App.B	06/15/23	481500 L	1000 ug			14000 ug	29 ug/M3
Lead	40 CFR Part 50 Appendix G	06/20/23	481500 L	14 ug			< 14 ug	< 0.029 ug/M3
Manganese	40 CFR Part 50 Appendix G	06/20/23	481500 L	98 ug			< 98 ug	< 0.204 ug/M3



Built Environment Testing  
Analytics

Eurofins Analytics, LLC  
10329 Stony Run Lane  
Ashland, Va 23005  
Phone: (804) 365-3000 Fax: (804) 365-3002  
AIHA LAP, LLC Accreditation ID 100531

## Final Report

### General Laboratory Comments

#### Abbreviations:

ug = micrograms; mg=milligrams; g = grams, ppm=parts per million (volume), ppb = parts per billion (volume), mg/M3=milligrams per cubic meter of air, ug/M3=micrograms per cubic meter of air; Min=minutes, Qual=Qualifiers

**CHAIN-OF-CUSTODY  
RECORD**

Gilbane Federal  
1501 W Fountainhead Parkway, Suite 550, Tempe, Arizona 85282

COC # [REDACTED] 061323AIRC



B165059

Project Name: Hunters Point Shipyard, Parcel C Removal Site Evaluation	Laboratory: EUROFINS BUILT ENVIRONMENT TESTING ANALYTICS, ASHLAND, VA	Event: Parcel C Air Monitoring
Project Number: J310000600	POC <span style="background-color: black; color: black;">[REDACTED]</span>	
WBS Code: J310000600	Ship to: 10329 Stony Run Lane, Ashland, VA 23005	

Comments:	Analytical Test Method	CAAIR - Air PM10	N0500 - Air TSP	SW6010B - Air Pb Mn	<span style="background-color: black; color: black;">[REDACTED]</span>	<del>6/13/23</del>	Code	Matrix
							A	Air
Equipment:							AQ	Air Quality Control Matrix
							Code	Container/Preservative
							1	1x 250-mL Plastic, 4 Degrees C
							1	1x Envelope, None

Event: Parcel C Air Monitoring														
Sample ID	Matrix	Date	Time	Samp Init.					Location ID	Sample Type	Depth (ft bgs)		Cooler	Comments
1	AQ	06/05/2023	0800	<span style="background-color: black; color: black;">[REDACTED]</span>	X				FIELDQC	FB1	0.00	0.00	1	<del>6/13/23</del>
2	AQ	06/05/2023	0800	<span style="background-color: black; color: black;">[REDACTED]</span>		X	X		FIELDQC	FB1	0.00	0.00	1	
3	A	06/06/2023	0702	<span style="background-color: black; color: black;">[REDACTED]</span>	X				MSC01	N1	0.00	0.00	1	
4	A	06/06/2023	0702	<span style="background-color: black; color: black;">[REDACTED]</span>		X	X		MSC01	N1	0.00	0.00	1	
5	A	06/06/2023	0716	<span style="background-color: black; color: black;">[REDACTED]</span>	X				MSC02	N1	0.00	0.00	1	
6	A	06/06/2023	0716	<span style="background-color: black; color: black;">[REDACTED]</span>		X	X		MSC02	N1	0.00	0.00	1	

Turnaround Time: 5 days

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time	Shipping Date / Carrier / Airbill Number
<span style="background-color: black; color: black;">[REDACTED]</span>	6/13/23	1300	Fedex	6/13/23	1300	Shipping Date: 6/13/2023 / FEDEX / 7723 1803 5507
			<span style="background-color: black; color: black;">[REDACTED]</span>	6/14/23	1218	Received by Laboratory: (Signature, Date, Time) & condition
			<span style="background-color: black; color: black;">[REDACTED]</span>	6/14/23	18	Custody Seal Intact <span style="background-color: black; color: black;">[REDACTED]</span>



**CHAIN-OF-CUSTODY  
RECORD**

Gilbane Federal  
 1501 W Fountainhead Parkway, Suite 550, Tempe, Arizona 85282

COC # 061323AIRC



Project Name: Hunters Point Shipyard, Parcel C Removal Site Evaluation	Laboratory: EUROFINS BUILT ENVIRONMENT TESTING ANALYTICS, ASHLAND, VA	Event: Parcel C Air Monitoring
Project Number: J310000600	POC	
WBS Code: J310000600	Ship to: 10329 Stony Run Lane, Ashland, VA 23005	

Comments:	Analytical Test Method	CAAIR - Air PM10	N0500 - Air TSP	SW6010B - Air Pb Mn	6/13/23	Code	Matrix
						A	Air
Equipment:						Code	Container/Preservative
						1	1x 250-mL Plastic, 4 Degrees C
						1	1x Envelope, None

Event: Parcel C Air Monitoring	1	1	1																	
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Sample ID	Matrix	Date	Time	Samp Init.						Location ID	Sample Type	Depth (ft bgs)		Cooler	Comments
												Top	Bottom		
1	PM032123-18	A	06/07/2023	0657		X				MSC01	N1	0.00	0.00	1	
2	TSP032123-19	A	06/07/2023	0657			X	X		MSC01	N1	0.00	0.00	1	
3	PM032123-20	A	06/07/2023	0710		X				MSC02	N1	0.00	0.00	1	
4	TSP032123-21	A	06/07/2023	0710			X	X		MSC02	N1	0.00	0.00	1	

Turnaround Time: 5 days

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time	Shipping Date / Carrier / Airbill Number
	6/13/23	1300	Forlex	6/13/23	1300	Shipping Date: 6/13/2023 / FEDEX / 7723 1803 5507
				6/14/23	1218	Received by Laboratory: (Signature, Date, Time) & condition
						6/14/23 custody seal intact

**CHAIN-OF-CUSTODY  
RECORD**

Gilbane Federal

1501 W Fountainhead Parkway, Suite 550, Tempe, Arizona 85282

COC # 061323AIRC



Project Name: Hunters Point Shipyard, Parcel C Removal Site Evaluation	Laboratory: EUROFINS BUILT ENVIRONMENT TESTING ANALYTICS, ASHLAND, VA	Event: Parcel C Air Monitoring
Project Number: J310000600	POC	
WBS Code: J310000600	Ship to: 10329 Stony Run Lane, Ashland, VA 23005	

Comments:	Analytical Test Method	CAAIR - Air PM10	N0500 - Air TSP	SW6010B - Air Pb Mn	[Redacted]	Code	Matrix
						A	Air
Equipment:						Code	Container/Preservative
						1	1x 250-mL Plastic, 4 Degrees C
						1	1x Envelope, None

Event: Parcel C Air Monitoring														
Sample ID	Matrix	Date	Time	Samp Init.					Location ID	Sample Type	Depth (ft bgs)		Cooler	Comments
1	PM032123-22	A	06/08/2023	0714	[Redacted]	X			MSC01	N1	0.00	0.00	1	
2	TSP032123-23	A	06/08/2023	0714	[Redacted]		X	X	MSC01	N1	0.00	0.00	1	
3	PM032123-24	A	06/08/2023	0726	[Redacted]	X			MSC02	N1	0.00	0.00	1	
4	TSP032123-25	A	06/08/2023	0726	[Redacted]		X	X	MSC02	N1	0.00	0.00	1	
Turnaround Time: 5 days														

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time	Shipping Date / Carrier / Airbill Number
[Redacted]	6/13/23	1300	Fedex	6/13/23	1300	Shipping Date: 6/13/2023 / FEDEX / 7723 1803 5507
			[Redacted]	6/14/23	1218	Received by Laboratory: (Signature, Date, Time) & condition
						@14/23 1218 CUSTODY Seal intact



**CHAIN-OF-CUSTODY  
RECORD**

Gilbane Federal  
1501 W Fountainhead Parkway, Suite 550, Tempe, Arizona 85282

COC # 061323AIRC



Project Name: Hunters Point Shipyard, Parcel C Removal Site Evaluation	Laboratory: EUROFINS BUILT ENVIRONMENT TESTING ANALYTICS, ASHLAND, VA	Event: Parcel C Air Monitoring
Project Number: J310000600	POC:	
WBS Code: J310000600	Ship to: 10329 Stony Run Lane, Ashland, VA 23005	

Comments:	Analytical Test Method	CAAIR - Air PM10	N0500 - Air TSP	SW6010B - Air Pb Mn	6/13/23	Code	Matrix
						A	Air
Equipment:						Code	Container/Preservative
						1	1x 250-mL Plastic, 4 Degrees C
						1	1x Envelope, None

Event: Parcel C Air Monitoring													
Sample ID	Matrix	Date	Time	Samp Init				Location ID	Sample Type	Depth (ft bgs)		Cooler	Comments
1	PM032123-26	A	06/08/2023	1411	X			MSC01	N1	0.00	0.00	1	6/13/23
2	TSP032123-27	A	06/08/2023	1411		X	X	MSC01	N1	0.00	0.00	1	
3	PM032123-28	A	06/08/2023	1412	X			MSC02	N1	0.00	0.00	1	
4	TSP032123-29	A	06/08/2023	1412		X	X	MSC02	N1	0.00	0.00	1	
Turnaround Time: 5 days													

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time	Shipping Date / Carrier / Airbill Number
	6/13/23	1300	Fedex	6/13/23	1300	Shipping Date: 6/13/2023 / FEDEX / 7723 1803 5507
				6/14/27	1218	Received by: (Signature, Date, Time) & condition
						6/14/23 1218 Custody seal intact

**CHAIN-OF-CUSTODY RECORD**

**COC # 061323AIRC**

<b>Project Name: Hunters Point Shipyard, Parcel C Removal Site Evaluation</b>
<b>Project Number: J310000600</b>
<b>WBS Code: J310000600</b>

					Comments
1	PM032123-12	AQ	06/05/2023	0800	
2	TSP032123-13	AQ	06/05/2023	0800	
3	PM032123-14	A	06/06/2023	0702	VOLUME (M3): 1644.60
4	TSP032123-15	A	06/06/2023	0702	VOLUME (M3): 1650.14
5	PM032123-16	A	06/06/2023	0716	VOLUME (M3): 1631.90
6	TSP032123-17	A	06/06/2023	0716	VOLUME (M3): 913.80
7	PM032123-18	A	06/07/2023	0657	VOLUME (M3): 1645.89
8	TSP032123-19	A	06/07/2023	0657	VOLUME (M3): 1645.12
9	PM032123-20	A	06/07/2023	0710	VOLUME (M3): 1614.85
10	TSP032123-21	A	06/07/2023	0710	VOLUME (M3): 1718.75
11	PM032123-22	A	06/08/2023	0714	VOLUME (M3): 1672.94
12	TSP032123-23	A	06/08/2023	0714	VOLUME (M3): 1669.41
13	PM032123-24	A	06/08/2023	0726	VOLUME (M3): 1642.62
14	TSP032123-25	A	06/08/2023	0726	VOLUME (M3): 1742.99
15	PM032123-26	A	06/08/2023	1411	VOLUME (M3): 370.51
16	TSP032123-27	A	06/08/2023	1411	VOLUME (M3): 368.37
17	PM032123-28	A	06/08/2023	1412	VOLUME (M3): 457.56
18	TSP032123-29	A	06/08/2023	1412	VOLUME (M3): 481.50







## Level 2 QA/QC Summary Report

Work Order #: B165059

Report Date: 6/20/2023

**Batch ID:** ICP230615B      Analysis Date: 6/19/2023

**Media::** 8X10PW GFF      Preparation Date 6/15/2023

### Blank Spike Results

QC ID	QC Type	Parameter	Percent Recovery			RPD	Limit
			LCS	LCSD	Acceptance		
LCS ICP2	BLKSPK	Lead	110	112	75-125	1.0	25
LCS ICP2	BLKSPK	Manganese	95	95	75-125	0.0	25

### Method Blank Results

QC ID	QC Type	Parameter	Result	RL	Units
LMB ICP2	LMB	Lead	< 14	14	ug
LMB ICP2	LMB	Manganese	< 98	98	ug