



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

**AIR MONITORING SUMMARY REPORT
FOR PARCEL E REMEDIAL ACTION
PHASE 2**

HUNTERS POINT NAVAL SHIPYARD, SAN
FRANCISCO, CALIFORNIA

December 1st, 2019 through January 31st, 2020

Approved for public release; distribution is unlimited

DCN: GLBN-0005-4332-0035



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**HUNTERS POINT NAVAL SHIPYARD, SAN
FRANCISCO, CALIFORNIA**

December 1st, 2019 through January 31st, 2020

Prepared for:



**Department of the Navy
Naval Facilities Engineering Command Southwest
BRAC PMO West
33000 Nixie Way, Bldg, 50
San Diego, CA 92147**

Prepared by:



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

**Contract Number: N62473-17-D-0005; Task Order No. N6247317F4332
DCN: GLBN-0005-4332-0035**

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Acronyms and Abbreviations

AMSR	<i>Air Monitoring Summary Report</i>
Cal/OSHA.....	<i>California Occupational Safety and Health Administration</i>
Cfm.....	<i>cubic feet per minute</i>
CFR.....	<i>Code of Federal Regulations</i>
CTO.....	<i>Contract Task Order</i>
DMCP.....	<i>Dust Monitoring and Control Plan</i>
EPA.....	<i>United States Environmental Protection Agency</i>
fiber/cm3.....	<i>fiber per cubic centimeter</i>
Gilbane.....	<i>Gilbane Federal</i>
HPNS.....	<i>Hunters Point Naval Shipyard</i>
L/min.....	<i>liters per minute</i>
mg/m3.....	<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>
PDR.....	<i>personal data-logging real-time</i>
PEL.....	<i>permissible exposure limit</i>
PM10.....	<i>particulate matter less than 10 microns in diameter</i>
TSP.....	<i>total suspended particulates</i>
TWA.....	<i>time-weighted average</i>
µg/m3.....	<i>micrograms per cubic meter</i>

1.0 Introduction

This Air Monitoring Summary Report (AMSR) was prepared by Gilbane Federal (Gilbane) as requested by the United States Department of the Navy (Navy) under Radiological Environmental Multiple Award Contract N62473-17-D-0005, Contract Task Order (CTO) N6247317F4332. Gilbane is performing air monitoring at Hunters Point Naval Shipyard (HPNS) in accordance with the Final Dust Monitoring and Control Plan (DMCP), included as Appendix E to *Final Remedial Action Work Plan, Parcel E Remedial Action Phase 2, Hunters Point Naval Shipyard, San Francisco, California* (RAWP; Gilbane, 2019). The DMCP describes the procedures that minimize dust during work activities and requires air monitoring to ensure these procedures are effective. The DMCP helps prevent exposure of residents and construction crews to potential airborne chemicals of concern, and dust from the work area.

This summary report describes the following:

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

This AMSR summarizes the air monitoring activities conducted by Gilbane at HPNS from December 1st, 2019 through January 31st, 2020 and compares the results with the established action levels presented in the DMCP (Appendix E of the RAWP [Gilbane, 2019]).

2.0 Monitoring Site Locations

Air monitoring stations were deployed at one upwind and one downwind location from the work area whenever active soil handling operations were in progress. Based on past meteorological data, the prevalent wind direction at HPNS was from the west or west-southwest. The locations of Parcel E 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. Atmospheric parameters were checked daily at www.dateandtime.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 (Copper, Lead, and Manganese)
4. Radiological air samplers.

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 a period of less than 24 hours.

3.2 PM10

Air samples were sampled in accordance with the U.S. Environmental Protection Agency (EPA) reference sampling method for PM10, described in 40 CFR 50, Subpart J. Each sample was collected on a filter over an approximately 8 to 24-hour period (depending on the duration of the work activity). The filter was then weighed to determine the amount of PM10 collected.

3.3 TSP, Copper, 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 Title 40 Code of Federal Regulations (CFR), Part 50, Subpart B. Each sample was collected on a filter over an approximately 8 to 24-hour period (depending on the duration of the work activity). The filter was then weighed to determine the amount of TSP collected. Once the filter weight was determined, the sample was analyzed for copper and manganese in accordance with one of the IO-3 methods identified in Compendium of Methods for the Determination of Inorganic Compounds in Ambient Air (EPA, 1999), and for lead in accordance with a modified EPA Method 12.

3.4 Radionuclides of Concern

Radiological air samples were collected with a LV-1 low-volume air sampler. Air filters are 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, 2016).

The radiological air sample is counted on a Low Background Protean WPC-9950 and analyzed for gross alpha and beta activity. The calculated airborne concentration in microcuries is 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 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 air monitoring 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, accuracy, calibration, and quality assurance.

4.0 Air Monitoring Action Levels

Analytical data from air monitoring samples were compared with the threshold criteria listed in Table 4-1 reproduced from Table 1 of the approved DMCP (Appendix E of the RAWP [Gilbane, 2019]).

Table 4-1: Air Monitoring Threshold Criteria

Test Parameter	Threshold Criterion	Threshold Criteria Reference
Asbestos	0.1 fiber/cm ³	Cal/OSHA PEL
PM10	5,000 ug/m ³	Cal/OSHA PEL
TSP	0.5 mg/m ³	Basewide HPNS Level selected to minimize overall permissible dust release from sites
Copper	1.0 mg/m ³	Cal/OSHA PEL
Lead	0.050 mg/m ³	Cal/OSHA PEL
Manganese	0.200 mg/m ³	Cal/OSHA PEL
Radiological	10% of Effluent Concentration Values	Occupational and public air concentration limits for ROCs are published in 10 Code of Federal Regulations Part 20, Appendix B.

Notes:

^a = Cal/OSHA PEL for particulates not otherwise regulated (respirator) used for PM10.

ug/m³ = micrograms per cubic meter

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

fiber/cm³ = fiber per cubic centimeter

HPNS = Hunters Point Naval Shipyard

mg/m³ = milligrams per cubic meter

PEL = permissible exposure limit

PM10 = particulate matter less than 10 microns in diameter

TSP = total suspended particulates

5.0 Air Monitoring Results

Weather information (including ambient pressure and temperature data) is presented in the table included as Attachment 1. Data was collected from upwind Station 1 in Parcel D-1 and downwind Station 2 in Parcel E from January 8th through January 9th, 2020, during which Gilbane was grubbing Parcel E. Samples were not collected during periods of site inactivity, rain events, and/or while site work was limited to non-earth moving tasks. Air samples were not run on December 1st through December 19th, 2019 since there were no earth-moving tasks during that time. Due to the Christmas Holiday, there was no site activity the following weeks, starting on December 23rd, 2019 through January 3rd, 2020. In addition, air samples were not run on January 6th, January 9th through January 27th, 2020 since no earth moving tasks were being performed during that time.

Construction and remediation activities conducted between December 1st, 2019 through January 31st, 2020, did not result in the exceedance of the established threshold criteria, as described in detail below.

Asbestos results from December 1, 2019 to January 31, 2020 did not exceed the project-specific screening criteria presented in Table 4-1. The results are presented as Attachment 2.

PM10 results from December 1, 2019 to January 31, 2020 did not exceed the project-specific screening criteria presented in Table 4-1. The results are presented as Attachment 3.

TSP, lead, manganese, and copper results from December 1, 2019 to January 31, 2020 did not exceed the project-specific screening criteria presented in Table 4-1. The results are presented as Attachment 4.

Radiological air sampling results from December 1, 2019 to January 31, 2020 did not exceed the project-specific screening criteria presented in Table 4-1. The results are presented as Attachment 5.

Analytical laboratory reports are included as Attachment 6.

6.0 References

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

United States Environmental Protection Agency (EPA), 1998. Quality Assurance Handbook for Air Pollution Measurement Systems, Volume II: Ambient Air Specific Methods.

Gilbane Federal, 2014. Final Remedial Action Work Plan, Parcel E Remedial Action, Phase 2, Hunters Point Naval Shipyard, San Francisco, California. October

FIGURES

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G:\ArcGIS\Navy\HPS\PROJECTS\Parcel_E\Air_Monitor_Stations.mxd 2/24/2020 azhuk, Gilbane



Parcel E
Hunters Point Naval Shipyard
San Francisco, California

Figure 2-1
Air Monitoring Stations

ATTACHMENTS

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ATTACHMENT 1

AMBIENT PRESSURE AND TEMPERATURE MONITORING RESULTS

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Attachment 1
Ambient Pressure and Temperature Monitoring Result
Remedial Action Parcel E, Phase 2
Hunters Point Naval Shipyard, San Francisco, California



Date	Ambient Pressure (in Hg)	Ambient Temperature (°F)
1/8/2020	30.19	48.0
1/9/2020	30.12	47.0
1/30/2020	30.19	48.8
1/30/2020	30.30	57.1

Note:

°F = degree Fahrenheit

in Hg = inches of mercury

ATTACHMENT 2

ASBESTOS MONITORING RESULTS

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Attachment 2
 Asbestos Monitoring Results
 Remedial Action Parcel E, Phase 2
 Hunters Point Naval Shipyard, San Francisco, California



Sample, Date and Station Information			Sampler Run Information		Asbestos Fibers		
Sample ID	Sample Start Date ¹	Monitoring Station	Duration of Run (min)	Total Air Volume Monitored (m ³)	Asbestos (fibers)	Conc Asbestos (fibers/cm ³)	Exceedance (Yes/No)
MSE01A-010720	1/7/2020	1A	309	618	13.0	0.010	No
MSE02A-010720	1/7/2020	2	281	562	20.5	0.018	No
MSE01A-010820	1/8/2020	1A	437	874	15.5	0.009	No
MSE02A-010820	1/8/2020	2	408	816	18.0	0.011	No
MSE01A-012920	1/29/2020	1A	567	1134	18.5	0.008	No
MSE02-012920	1/29/2020	2	602	1204	12	0.005	No
MSE01A-013020	1/30/2020	1A	612	1224	12.5	0.005	No
MSE02-013020	1/30/2020	2	598	1196	17.0	0.007	No

Notes:

Samples analyzed by A&B Labs

Sample locations are shown on Figure 2-1

min = minutes

m³ = cubic meters

fibers/cm³ = fibers per cubic centimeter

ATTACHMENT 3

PM10 MONITORING RESULTS

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Sample, Date and Station Information			Sampler Run Information	PM10s			
Sample ID	Monitoring Station	Sample Start Date ¹	Total Air Volume Monitored (m ³)	Total Mass (mg)	Concentration in Air (mg/m ³)	Concentration in Air (ug/m ³)	Exceedance (Yes/No)
Q0374090-MSE01A	1A	1/7/2020	1488.27	7.2	0.0048	4.8	No
Q0374084-MSE02	2	1/7/2020	1376.13	11	0.0080	8.0	No
Q0374079-MSE01A	1A	1/8/2020	1538.17	6.6	0.0043	4.3	No
Q0374078-MSE02	2	1/8/2020	1550.06	13	0.0085	8.5	No
Q0374080-MSE01A	1A	1/30/2020	1576.87	12	0.0077	7.7	No
Q0374081-MSE02	2	1/30/2020	1580.85	12	0.0077	7.7	No
Q0388649-MSE01A	1A	1/30/2020	426.59	ND	<0.0023	<2.3	No
Q0388651-MSE02	2	1/30/2020	379.30	140	0.38	380	No

Notes:

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

Samples analyzed by ALS Environmental

Sample locations are shown on Figure 2-1

min = minutes

m³ = cubic meters

mg = milligrams

mg/m³ = milligrams per cubic meter

PM₁₀-particulate matter smaller than 10 microns in diameter

ug/m³ = micrograms per cubic meter

< = below detection limit

ATTACHMENT 4
TSP, COPPER, LEAD, AND MANGANESE MONITORING RESULTS

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Sample, Date and Station Information			Sampler Run Information	Total Suspended Particulates			Copper			Lead			Manganese		
Sample ID	Monitoring Station	Sample Start Date ¹	Total Air Volume Monitored (m ³)	Total Mass (mg)	Concentration in Air (mg/m ³)	Exceedance (Yes/No)	Result (ug)	Concentration in Air (mg/m ³)	Exceedance (Yes/No)	Result (ug)	Concentration in Air (mg/m ³)	Exceedance (Yes/No)	Result (ug)	Concentration in Air (mg/m ³)	Exceedance (Yes/No)
9764188-MSE01A	1A	1/7/2020	1579.67	30	0.019	No	1,200	0.00079	No	ND	<0.000016	No	ND	<0.000016	No
9764187-MSE02	2	1/7/2020	1409.09	20	0.014	No	170	0.00012	No	ND	<0.000018	No	ND	<0.000018	No
9764186-MSE01A	1A	1/8/2020	1635.91	28	0.017	No	1,100	0.00065	No	ND	<0.000015	No	ND	<0.000015	No
9764185-MSE02	2	1/8/2020	1597.72	14	0.0087	No	130	0.000081	No	ND	<0.000016	No	ND	<0.000016	No
9764181-MSE01A	1A	1/30/2020	1670.75	3.8	0.0023	No	240	0.00014	No	ND	<0.000015	No	ND	<0.000015	No
9764182-MSE02	2	1/30/2020	1607.13	3.5	0.0022	No	570	0.00035	No	ND	<0.000016	No	ND	<0.000016	No
9764193-MSE01A	1A	1/30/2020	455.04	2.0	0.0044	No	39	0.000087	No	ND	<0.000055	No	ND	<0.000055	No
9764194-MSE02	2	1/30/2020	382.58	21	0.054	No	41	0.00011	No	ND	<0.000065	No	ND	<0.000065	No

Notes:

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

Samples analyzed by ALS Environmental

Sample locations are shown on Figure 2-1

mg = milligrams

mg/m³ = milligrams per cubic meter

< = below detection limit

m³ = cubic meters

ug = micrograms

ATTACHMENT 5
RADIOLOGICAL AIR MONITORING RESULTS

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AIR SAMPLE RESULTS - PUBLIC EXPOSURE MONITORING

Project Information									Effluent Air Concentration				Sampling Period				Color Codes					
Contract / Task Order Number: N62473-17-D-0005 / F4332			Project Title / Location: Parcel E RA HPNS, SF, CA			Gilbane Project Number: J310000400				Alpha	Beta	Air samples collected between December 1, 2019 and January 31, 2020				Value < MDC < 72 hr decay time		Value < 0.1 x Effluent Conc Value > 0.1 x Effluent Conc				
Information effective as of: 2/23/2020									Effluent Conc (µCi/ml)	9.E-13	6.E-12	Data reviewed				Value > Effluent Conc						
Sample Collection									Count Information				Sample Results				Initials					
Sample Number	Sample Type	Sample Location	Equip No	Ave Flow Rate (lpm)	Start Day Time	End Date Time	Elapsed Time (min)	Volume (ml)	Inst No	Count Date	Time (min)	Counting Units	Gross Activity		Net dpm		Activity (µCi/ml)		Effluent Conc (%)		Count Tech	Data Reviewer
													Alpha	Beta	Alpha	Beta	Alpha	Beta	Alpha	Beta		
AS-0013	Perimeter	MSE01A	PE01	70	1/7/20 10:10	1/7/20 15:00	290	2.0E+07	A	2/10/20	1	cpm	0.300	3.150	0.8	6.2	1.7E-14	1.4E-13	1.9%	2.3%	DVT	CB
AS-0014	Perimeter	MSE02	PE02	60	1/7/20 10:00	1/7/20 15:05	305	1.8E+07	A	2/10/20	1	cpm	0.000	3.600	0.0	7.5	0.0E+00	1.8E-13	0.0%	3.1%	DVT	CB
AS-0015	Perimeter	MSE01A	PE01	70	1/8/20 7:30	1/8/20 15:20	470	3.3E+07	A	2/10/20	1	cpm	0.100	4.150	0.3	9.0	3.5E-15	1.2E-13	0.4%	2.1%	DVT	CB
AS-0016	Perimeter	MSE02	PE02	60	1/8/20 7:25	1/8/20 15:15	470	2.8E+07	A	2/10/20	1	cpm	0.300	3.950	0.8	8.4	1.2E-14	1.3E-13	1.4%	2.2%	DVT	CB
AS-0019	Perimeter	MSE01A	PE01	70	1/29/20 7:20	1/29/20 14:15	415	2.9E+07	A	2/10/20	1	cpm	0.300	3.300	0.8	6.6	1.2E-14	1.0E-13	1.3%	1.7%	DVT	CB
AS-0020	Perimeter	MSE02	PE02	60	1/29/20 7:15	1/29/20 14:30	435	2.6E+07	A	2/10/20	1	cpm	0.100	3.450	0.3	7.1	4.4E-15	1.2E-13	0.5%	2.0%	DVT	CB
AS-0021	Perimeter	MSE01A	PE01	70	1/30/20 7:20	1/30/20 14:10	410	2.9E+07	A	2/10/20	1	cpm	0.300	4.300	0.8	9.4	1.2E-14	1.5E-13	1.3%	2.5%	DVT	CB
AS-0022	Perimeter	MSE02	PE02	60	1/30/20 7:10	1/30/20 14:20	430	2.6E+07	A	2/10/20	1	cpm	0.200	4.400	0.5	9.7	8.9E-15	1.7E-13	1.0%	2.8%	DVT	CB

ATTACHMENT 6
LABORATORY REPORTS

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22-Jan-2020

Kristen Carlyon
Gilbane Company
2730 Shadelands Drive
Walnut Creek, CA 94598

Tel: (925) 946-3220
Fax: (925) 946-3292

Re: J310000400 HPNS Parcel E Phase 2

Work Order: **2001383**

Dear Kristen,

ALS Environmental received 8 samples on 14-Jan-2020 10:15 AM for the analyses presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental and for only the analyses requested.

QC sample results for this data met laboratory specifications. Any exceptions are noted in the Case Narrative, or noted with qualifiers in the report or QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained from ALS Laboratory Group. Samples will be disposed in 30 days unless storage arrangements are made.

The total number of pages in this report is 10.

If you have any questions regarding this report, please feel free to contact me.

Sincerely,

Rob Nieman

Electronically approved by: Rob Nieman

Rob Nieman
Project Manager

ADDRESS 4388 Glendale Milford Rd Cincinnati, OH 45242- | PHONE (513) 733-5336 | FAX (513) 733-5347

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Environmental 

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RIGHT SOLUTIONS RIGHT PARTNER

GLBN-0005-4332-0035

Client: Gilbane Company
Project: J310000400 HPNS Parcel E Phase 2
Work Order: 2001383

Work Order Sample Summary

<u>Lab Samp ID</u>	<u>Client Sample ID</u>	<u>Matrix</u>	<u>Tag Number</u>	<u>Collection Date</u>	<u>Date Received</u>	<u>Hold</u>
2001383-01	Q0374090-MSE01A	Air		1/8/2020 08:14	1/14/2020 10:15	<input type="checkbox"/>
2001383-02	9764188-MSE01A	Air		1/8/2020 08:14	1/14/2020 10:15	<input type="checkbox"/>
2001383-03	Q0374084-MSE02	Air		1/8/2020 08:30	1/14/2020 10:15	<input type="checkbox"/>
2001383-04	9764187-MSE02	Air		1/8/2020 08:30	1/14/2020 10:15	<input type="checkbox"/>
2001383-05	Q0374079-MSE01A	Air		1/9/2020 08:30	1/14/2020 10:15	<input type="checkbox"/>
2001383-06	9764186-MSE01A	Air		1/9/2020 08:30	1/14/2020 10:15	<input type="checkbox"/>
2001383-07	Q0374078-MSE02	Air		1/9/2020 08:42	1/14/2020 10:15	<input type="checkbox"/>
2001383-08	9764185-MSE02	Air		1/9/2020 08:42	1/14/2020 10:15	<input type="checkbox"/>

Client: Gilbane Company
Project: J310000400 HPNS Parcel E Phase 2
Work Order: 2001383

Case Narrative

The sample condition upon receipt was acceptable except where noted.

Results relate only to the items tested and are not blank corrected unless indicated.

ALS is an EPA recognized NLLAP laboratory for lead paint, soil, and dust wipe analyses under its AIHA-LAP accreditation.

Client: Gilbane Company
Project: J310000400 HPNS Parcel E Phase 2

Work Order: 2001383

Analytical Results

Lab ID: 2001383-01A
Client Sample ID: Q0374090-MSE01A

Collection Date: 1/8/2020 8:14:00 AM
Matrix: AIR

Analyses

PM : PM10 40CFR 50 APPDIX J		Method: PM10	Air Volume (L): 1488270	Analyst: CS
Date Analyzed: 1/15/2020		Reporting Limit		
	mg/sample	mg/sample	mg/m3	
Particulate as PM10	7.2	1.0	0.0048	

Lab ID: 2001383-02A
Client Sample ID: 9764188-MSE01A

Collection Date: 1/8/2020 8:14:00 AM
Matrix: AIR

Analyses

TSP 40 CFR 50 APPDX B		Method: TSP	Air Volume (L): 1579670	Analyst: CS
Date Analyzed: 1/15/2020		Reporting Limit		
	mg/sample	mg/sample	mg/m3	
Total suspended particulate	30	1.0	0.019	

METALS BY EPA METHOD 12 MOD.		Method: E12	Air Volume (L): 1579670	Analyst: SRL
Date Analyzed: 1/21/2020 17:42		Reporting Limit		
	µg/sample	µg/sample	mg/m3	
Copper	1,200	25	0.00079	
Lead	ND	25	<0.000016	
Manganese	ND	25	<0.000016	

Lab ID: 2001383-03A
Client Sample ID: Q0374084-MSE02

Collection Date: 1/8/2020 8:30:00 AM
Matrix: AIR

Analyses

PM : PM10 40CFR 50 APPDIX J		Method: PM10	Air Volume (L): 1376130	Analyst: CS
Date Analyzed: 1/15/2020		Reporting Limit		
	mg/sample	mg/sample	mg/m3	
Particulate as PM10	11	1.0	0.0080	

Note:

ALS Environmental

Date: 22-Jan-20

Client: Gilbane Company
Project: J310000400 HPNS Parcel E Phase 2

Work Order: 2001383

Analytical Results

Lab ID: 2001383-04A
Client Sample ID: 9764187-MSE02

Collection Date: 1/8/2020 8:30:00 AM
Matrix: AIR

Analyses

TSP 40 CFR 50 APPDX B		Method: TSP	Air Volume (L): 1409090	Analyst: CS
Date Analyzed: 1/15/2020		Reporting Limit		
	mg/sample	mg/sample	mg/m3	
Total suspended particulate	20	1.0	0.014	

METALS BY EPA METHOD 12 MOD.		Method: E12	Air Volume (L): 1409090	Analyst: SRL
Date Analyzed: 1/21/2020 17:46		Reporting Limit		
	µg/sample	µg/sample	mg/m3	
Copper	170	25	0.00012	
Lead	ND	25	<0.000018	
Manganese	ND	25	<0.000018	

Lab ID: 2001383-05A
Client Sample ID: Q0374079-MSE01A

Collection Date: 1/9/2020 8:30:00 AM
Matrix: AIR

Analyses

PM : PM10 40CFR 50 APPDIX J		Method: PM10	Air Volume (L): 1538170	Analyst: CS
Date Analyzed: 1/15/2020		Reporting Limit		
	mg/sample	mg/sample	mg/m3	
Particulate as PM10	6.6	1.0	0.0043	

Lab ID: 2001383-06A
Client Sample ID: 9764186-MSE01A

Collection Date: 1/9/2020 8:30:00 AM
Matrix: AIR

Analyses

TSP 40 CFR 50 APPDX B		Method: TSP	Air Volume (L): 1635910	Analyst: CS
Date Analyzed: 1/15/2020		Reporting Limit		
	mg/sample	mg/sample	mg/m3	
Total suspended particulate	28	1.0	0.017	

METALS BY EPA METHOD 12 MOD.		Method: E12	Air Volume (L): 1635910	Analyst: SRL
Date Analyzed: 1/21/2020 17:57		Reporting Limit		
	µg/sample	µg/sample	mg/m3	
Copper	1,100	25	0.00065	
Lead	ND	25	<0.000015	
Manganese	ND	25	<0.000015	

Note:

Client: Gilbane Company
Project: J310000400 HPNS Parcel E Phase 2

Work Order: 2001383

Analytical Results

Lab ID: 2001383-07A
Client Sample ID: Q0374078-MSE02

Collection Date: 1/9/2020 8:42:00 AM
Matrix: AIR

Analyses

PM : PM10 40CFR 50 APPDIX J		Method: PM10	Air Volume (L): 1550060	Analyst: CS
Date Analyzed: 1/15/2020				
	mg/sample	Reporting Limit mg/sample	mg/m3	
Particulate as PM10	13	1.0	0.0085	

Lab ID: 2001383-08A
Client Sample ID: 9764185-MSE02

Collection Date: 1/9/2020 8:42:00 AM
Matrix: AIR

Analyses

TSP 40 CFR 50 APPDX B		Method: TSP	Air Volume (L): 1597720	Analyst: CS
Date Analyzed: 1/15/2020				
	mg/sample	Reporting Limit mg/sample	mg/m3	
Total suspended particulate	14	1.0	0.0087	

METALS BY EPA METHOD 12 MOD.		Method: E12	Air Volume (L): 1597720	Analyst: SRL
Date Analyzed: 1/21/2020 18:01				
	µg/sample	Reporting Limit µg/sample	mg/m3	
Copper	130	25	0.000081	
Lead	ND	25	<0.000016	
Manganese	ND	25	<0.000016	

Note:

Client: Gilbane Company
Work Order: 2001383
Project: J310000400 HPNS Parcel E Phase 2

QC BATCH REPORT

Batch ID: **R173946** Instrument ID **BAL2** Method: **TSP**

DUP	Sample ID: 2001383-02a dup			Units: mg/sample		Analysis Date: 1/15/2020				
Client ID: 9764188-MSE01A	Run ID: BAL2_200115A			SeqNo: 2171162		Prep Date:		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Total suspended particulate	30.14	1.0	0	0	0		30.13	0.0332		

The following samples were analyzed in this batch:

2001383-02a	2001383-04a	2001383-06a
2001383-08a		

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Gilbane Company
 Work Order: 2001383
 Project: J310000400 HPNS Parcel E Phase 2

QC BATCH REPORT

Batch ID: **64395** Instrument ID **ICP1** Method: **E12**

MBLK		Sample ID: MBLK-64395-64395			Units: µg/sample		Analysis Date: 1/21/2020 05:23 PM			
Client ID:		Run ID: ICP1_200121B			SeqNo: 2175748		Prep Date: 1/17/2020		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Copper	ND	25								
Lead	ND	25								
Manganese	ND	25								

LCS		Sample ID: LCS-64395-64395			Units: µg/sample		Analysis Date: 1/21/2020 05:27 PM			
Client ID:		Run ID: ICP1_200121B			SeqNo: 2175749		Prep Date: 1/17/2020		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Copper	425.1	25	450	0	94.5	75-125	0			
Lead	446.5	25	450	0	99.2	75-125	0			
Manganese	447.6	25	450	0	99.5	75-125	0			

LCSD		Sample ID: LCSD-64395-64395			Units: µg/sample		Analysis Date: 1/21/2020 05:38 PM			
Client ID:		Run ID: ICP1_200121B			SeqNo: 2175750		Prep Date: 1/17/2020		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Copper	429.9	25	450	0	95.5	75-125	425.1	1.14	20	
Lead	448.9	25	450	0	99.8	75-125	446.5	0.533	20	
Manganese	450.9	25	450	0	100	75-125	447.6	0.741	20	

MS		Sample ID: 2001383-04A MS			Units: µg/sample		Analysis Date: 1/21/2020 05:50 PM			
Client ID: 9764187-MSE02		Run ID: ICP1_200121B			SeqNo: 2175753		Prep Date: 1/17/2020		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Copper	607	25	450	175	96	75-125	0			
Lead	473.4	25	450	6.7	104	75-125	0			
Manganese	459	25	450	4.408	101	75-125	0			

MSD		Sample ID: 2001383-04A MSD			Units: µg/sample		Analysis Date: 1/21/2020 05:53 PM			
Client ID: 9764187-MSE02		Run ID: ICP1_200121B			SeqNo: 2175754		Prep Date: 1/17/2020		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Copper	602.1	25	450	175	94.9	75-125	607	0.819	20	
Lead	475.6	25	450	6.7	104	75-125	473.4	0.474	20	
Manganese	455.4	25	450	4.408	100	75-125	459	0.787	20	

The following samples were analyzed in this batch:

2001383-02A	2001383-04A	2001383-06A
2001383-08A		

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Gilbane Company
Project: J310000400 HPNS Parcel E Phase 2
WorkOrder: 2001383

**QUALIFIERS,
ACRONYMS, UNITS**

<u>Qualifier</u>	<u>Description</u>
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL

<u>Acronym</u>	<u>Description</u>
DUP	Method Duplicate
E	EPA Method
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitation Limit
SDL	Sample Detection Limit
SW	SW-846 Method

<u>Units Reported</u>	<u>Description</u>
µg/sample	
mg/sample	

Sample Receipt Checklist

Client Name: GILBANE-WALNUTCREEK

Date/Time Received: 14-Jan-20 10:15

Work Order: 2001383

Received by: SNH

Checklist completed by Rob Nieman 17-Jan-20
eSignature Date

Reviewed by: Rob Nieman 17-Jan-20
eSignature Date

Matrices:

Carrier name: FedEx

Shipping container/cooler in good condition? Yes No Not Present

Custody seals intact on shipping container/cooler? Yes No Not Present

Custody seals intact on sample bottles? Yes No Not Present

Chain of custody present? Yes No

Chain of custody signed when relinquished and received? Yes No

Chain of custody agrees with sample labels? Yes No

Samples in proper container/bottle? Yes No

Sample containers intact? Yes No

Sufficient sample volume for indicated test? Yes No

All samples received within holding time? Yes No

Container/Temp Blank temperature in compliance? Yes No

Temperature(s)/Thermometer(s):

Cooler(s)/Kit(s):

Water - VOA vials have zero headspace? Yes No No VOA vials submitted

Water - pH acceptable upon receipt? Yes No N/A

pH adjusted? Yes No N/A

pH adjusted by:

Login Notes:

Client Contacted:

Date Contacted:

Person Contacted:

Contacted By:

Regarding:

Comments:

CorrectiveAction:

2001383

014568



Local Address: _____

Chain-Of-Custody

Project Name and Number: HPNS Parcel E PHASE II RA J310000400 Laboratory Name: ALS Environmental

Date: 13 JAN 2020

Project Manager: Brent Womack (925) 250-8027

Address: 4388 Grandale Milford Contact Name: Stella Harris

Page: 1 of 1

Site Location: Hunters Point Naval Shipyard SF, CA

Blue Ash OH 45242 Phone: (415) 328-0006

Sample I.D.	Date	Time	Sample Depth (top)	Sample Depth (bottom)	No. of Containers	Sample Matrix	Analysis:			Special Instructions/Comments
							PM10	TSP	ELZ w, mn, pb	
							Preservative:			
							Container Type:			
							<u>NO2</u>			
							<u>FILTER</u>			
<u>Q0374090 - MSE01A</u>	<u>1/8/2020</u>	<u>0814</u>	<u>NA</u>	<u>NA</u>	<u>1</u>	<u>AA</u>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<u>Total Flow: 1488.27 m³</u>
<u>9764188 - MSE01A</u>	<u>1/8/20</u>	<u>0814</u>					<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<u>" " 1579.67 m³</u>
<u>Q0374084 - MSE02</u>	<u>1/8/20</u>	<u>0830</u>					<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<u>" " 1376.13 m³</u>
<u>9764187 - MSE02</u>	<u>1/8/20</u>	<u>0830</u>					<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<u>" " 1409.09 m³</u>
<u>Q0374079 - MSE01A</u>	<u>1/9/20</u>	<u>0830</u>					<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<u>" " 1538.17 m³</u>
<u>9764186 - MSE01A</u>	<u>1/9/20</u>	<u>0830</u>					<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<u>" " 1635.91 m³</u>
<u>Q0374078 - MSE02</u>	<u>1/9/20</u>	<u>0842</u>					<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<u>" " 1550.06 m³</u>
<u>9764185 - MSE02</u>	<u>1/9/20</u>	<u>0842</u>					<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<u>" " 1597.72 m³</u>
	<u>NOT USED</u>	<u>1/13/20</u>								

Sampled By: K.R. Leonard
 Signature: [Signature]
 Special Instructions: _____
 Send Results to: Kcarlyon@gilbane.com
(w/fax #) ktom@gilbane.com
 Turnaround Time: STANDARD

Sampler: Kenneth R. Leonard
 Relinquished By/Affiliation: [Signature]
 Date: 1/13/20 Time: 1600

Courier/Airbill No.: FEDEX 7774 2938 9974
 Received By/Affiliation: [Signature]
 Date: 1/13/20 Time: 1600
 GLBN-0005-4332-0035



12-Feb-2020

Kristen Carlyon
Gilbane Company
2730 Shadelands Drive
Walnut Creek, CA 94598

Tel: (925) 946-3220
Fax: (925) 946-3292

Re: HPNS Parcel E Phase II 1310000400

Work Order: **2002098**

Dear Kristen,

ALS Environmental received 12 samples on 05-Feb-2020 09:30 AM for the analyses presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental and for only the analyses requested.

QC sample results for this data met laboratory specifications. Any exceptions are noted in the Case Narrative, or noted with qualifiers in the report or QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained from ALS Laboratory Group. Samples will be disposed in 30 days unless storage arrangements are made.

The total number of pages in this report is 14.

If you have any questions regarding this report, please feel free to contact me.

Sincerely,

Rob Nieman

Electronically approved by: Rob Nieman

Rob Nieman
Project Manager

ADDRESS 4388 Glendale Milford Rd Cincinnati, OH 45242- | PHONE (513) 733-5336 | FAX (513) 733-5347

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Environmental 

www.alsglobal.com

RIGHT SOLUTIONS RIGHT PARTNER

GLBN-0005-4332-0035

Client: Gilbane Company
Project: HPNS Parcel E Phase II 1310000400
Work Order: 2002098

Work Order Sample Summary

<u>Lab Samp ID</u>	<u>Client Sample ID</u>	<u>Matrix</u>	<u>Tag Number</u>	<u>Collection Date</u>	<u>Date Received</u>	<u>Hold</u>
2002098-01	Q0374080-MSE01A	Air		1/30/2020 08:00	2/5/2020 09:30	<input type="checkbox"/>
2002098-02	Q0374081-MSE02	Air		1/30/2020 08:15	2/5/2020 09:30	<input type="checkbox"/>
2002098-03	Q0388649-MSE01A	Air		1/30/2020 14:10	2/5/2020 09:30	<input type="checkbox"/>
2002098-04	Q0388651-MSE02	Air		1/30/2020 14:15	2/5/2020 09:30	<input type="checkbox"/>
2002098-05	Q0388650-MSE01A	Air		2/4/2020 07:57	2/5/2020 09:30	<input type="checkbox"/>
2002098-06	Q0388652-MSE02	Air		2/4/2020 08:22	2/5/2020 09:30	<input type="checkbox"/>
2002098-07	9764181-MSE01A	Air		1/30/2020 07:50	2/5/2020 09:30	<input type="checkbox"/>
2002098-08	9764182-MSE02	Air		1/30/2020 08:13	2/5/2020 09:30	<input type="checkbox"/>
2002098-09	9764193-MSE01A	Air		1/30/2020 14:10	2/5/2020 09:30	<input type="checkbox"/>
2002098-10	9764194-MSE02	Air		1/30/2020 14:15	2/5/2020 09:30	<input type="checkbox"/>
2002098-11	9764196-MSE01A	Air		2/4/2020 07:57	2/5/2020 09:30	<input type="checkbox"/>
2002098-12	9764195-MSE02	Air		2/4/2020 08:22	2/5/2020 09:30	<input type="checkbox"/>

Client: Gilbane Company
Project: HPNS Parcel E Phase II 1310000400
Work Order: 2002098

Case Narrative

The sample condition upon receipt was acceptable except where noted.

Results relate only to the items tested and are not blank corrected unless indicated.

ALS is an EPA recognized NLLAP laboratory for lead paint, soil, and dust wipe analyses under its AIHA-LAP accreditation.

ALS Environmental

Date: 12-Feb-20

Client: Gilbane Company
Project: HPNS Parcel E Phase II 1310000400

Work Order: 2002098

Analytical Results

Lab ID: 2002098-01A
Client Sample ID: Q0374080-MSE01A

Collection Date: 1/30/2020 8:00:00 AM
Matrix: AIR

Analyses

PM : PM10 40CFR 50 APPDIX J	Method: PM10		Air Volume (L): 1576870	Analyst: CS
Date Analyzed: 2/7/2020	mg/sample	Reporting Limit mg/sample	mg/m3	
Particulate as PM10	12	1.0	0.0077	

Lab ID: 2002098-02A
Client Sample ID: Q0374081-MSE02

Collection Date: 1/30/2020 8:15:00 AM
Matrix: AIR

Analyses

PM : PM10 40CFR 50 APPDIX J	Method: PM10		Air Volume (L): 1580850	Analyst: CS
Date Analyzed: 2/7/2020	mg/sample	Reporting Limit mg/sample	mg/m3	
Particulate as PM10	12	1.0	0.0077	

Lab ID: 2002098-03A
Client Sample ID: Q0388649-MSE01A

Collection Date: 1/30/2020 2:10:00 PM
Matrix: AIR

Analyses

PM : PM10 40CFR 50 APPDIX J	Method: PM10		Air Volume (L): 426590	Analyst: CS
Date Analyzed: 2/7/2020	mg/sample	Reporting Limit mg/sample	mg/m3	
Particulate as PM10	ND	1.0	<0.0023	

Lab ID: 2002098-04A
Client Sample ID: Q0388651-MSE02

Collection Date: 1/30/2020 2:15:00 PM
Matrix: AIR

Analyses

PM : PM10 40CFR 50 APPDIX J	Method: PM10		Air Volume (L): 379300	Analyst: CS
Date Analyzed: 2/7/2020	mg/sample	Reporting Limit mg/sample	mg/m3	
Particulate as PM10	140	1.0	0.38	

Note:

Client: Gilbane Company
Project: HPNS Parcel E Phase II 1310000400

Work Order: 2002098

Analytical Results

Lab ID: 2002098-05A
Client Sample ID: Q0388650-MSE01A

Collection Date: 2/4/2020 7:57:00 AM
Matrix: AIR

Analyses

PM : PM10 40CFR 50 APPDIX J		Method: PM10	Air Volume (L): 800210	Analyst: CS
Date Analyzed: 2/7/2020		Reporting Limit		
	mg/sample	mg/sample	mg/m3	
Particulate as PM10	ND	1.0	<0.0012	

Lab ID: 2002098-06A
Client Sample ID: Q0388652-MSE02

Collection Date: 2/4/2020 8:22:00 AM
Matrix: AIR

Analyses

PM : PM10 40CFR 50 APPDIX J		Method: PM10	Air Volume (L): 1627430	Analyst: CS
Date Analyzed: 2/7/2020		Reporting Limit		
	mg/sample	mg/sample	mg/m3	
Particulate as PM10	1.4	1.0	0.00086	

Lab ID: 2002098-07A
Client Sample ID: 9764181-MSE01A

Collection Date: 1/30/2020 7:50:00 AM
Matrix: AIR

Analyses

TSP 40 CFR 50 APPDIX B		Method: TSP	Air Volume (L): 1670750	Analyst: CS
Date Analyzed: 2/7/2020		Reporting Limit		
	mg/sample	mg/sample	mg/m3	
Total suspended particulate	3.8	1.0	0.0023	

METALS BY EPA METHOD 12 MOD.		Method: E12	Air Volume (L): 1670750	Analyst: AZ
Date Analyzed: 2/10/2020 19:14		Reporting Limit		
	µg/sample	µg/sample	mg/m3	
Copper	240	25	0.00014	
Lead	ND	25	<0.000015	
Manganese	ND	25	<0.000015	

Note:

Client: Gilbane Company
Project: HPNS Parcel E Phase II 1310000400

Work Order: 2002098

Analytical Results

Lab ID: 2002098-08A
Client Sample ID: 9764182-MSE02

Collection Date: 1/30/2020 8:13:00 AM
Matrix: AIR

Analyses

TSP 40 CFR 50 APPDX B		Method: TSP	Air Volume (L): 1607130	Analyst: CS
Date Analyzed: 2/7/2020		Reporting Limit		
	mg/sample	mg/sample	mg/m3	
Total suspended particulate	3.5	1.0	0.0022	

METALS BY EPA METHOD 12 MOD.		Method: E12	Air Volume (L): 1607130	Analyst: AZ
Date Analyzed: 2/10/2020 19:19		Reporting Limit		
	µg/sample	µg/sample	mg/m3	
Copper	570	25	0.00035	
Lead	ND	25	<0.000016	
Manganese	ND	25	<0.000016	

Lab ID: 2002098-09A
Client Sample ID: 9764193-MSE01A

Collection Date: 1/30/2020 2:10:00 PM
Matrix: AIR

Analyses

TSP 40 CFR 50 APPDX B		Method: TSP	Air Volume (L): 455040	Analyst: CS
Date Analyzed: 2/7/2020		Reporting Limit		
	mg/sample	mg/sample	mg/m3	
Total suspended particulate	2.0	1.0	0.0044	

METALS BY EPA METHOD 12 MOD.		Method: E12	Air Volume (L): 455040	Analyst: AZ
Date Analyzed: 2/10/2020 19:23		Reporting Limit		
	µg/sample	µg/sample	mg/m3	
Copper	39	25	0.000087	
Lead	ND	25	<0.000055	
Manganese	ND	25	<0.000055	

Note:

Client: Gilbane Company
Project: HPNS Parcel E Phase II 1310000400

Work Order: 2002098

Analytical Results

Lab ID: 2002098-10A
Client Sample ID: 9764194-MSE02

Collection Date: 1/30/2020 2:15:00 PM
Matrix: AIR

Analyses

TSP 40 CFR 50 APPDX B		Method: TSP	Air Volume (L): 382580	Analyst: CS
Date Analyzed: 2/7/2020		Reporting Limit		
	mg/sample	mg/sample	mg/m3	
Total suspended particulate	21	1.0	0.054	

METALS BY EPA METHOD 12 MOD.		Method: E12	Air Volume (L): 382580	Analyst: AZ
Date Analyzed: 2/10/2020 19:43		Reporting Limit		
	µg/sample	µg/sample	mg/m3	
Copper	41	25	0.00011	
Lead	ND	25	<0.000065	
Manganese	ND	25	<0.000065	

Lab ID: 2002098-11A
Client Sample ID: 9764196-MSE01A

Collection Date: 2/4/2020 7:57:00 AM
Matrix: AIR

Analyses

TSP 40 CFR 50 APPDX B		Method: TSP	Air Volume (L): 1720960	Analyst: CS
Date Analyzed: 2/7/2020		Reporting Limit		
	mg/sample	mg/sample	mg/m3	
Total suspended particulate	45	1.0	0.026	

METALS BY EPA METHOD 12 MOD.		Method: E12	Air Volume (L): 1720960	Analyst: AZ
Date Analyzed: 2/10/2020 19:48		Reporting Limit		
	µg/sample	µg/sample	mg/m3	
Copper	460	25	0.00027	
Lead	ND	25	<0.000015	
Manganese	ND	25	<0.000015	

Note:

Client: Gilbane Company
Project: HPNS Parcel E Phase II 1310000400

Work Order: 2002098

Analytical Results

Lab ID: 2002098-12A
Client Sample ID: 9764195-MSE02

Collection Date: 2/4/2020 8:22:00 AM
Matrix: AIR

Analyses

TSP 40 CFR 50 APPDX B		Method: TSP		Air Volume (L): 1650220	Analyst: CS
Date Analyzed: 2/7/2020		Reporting Limit			
	mg/sample	mg/sample		mg/m3	
Total suspended particulate	42	1.0		0.025	

METALS BY EPA METHOD 12 MOD.		Method: E12		Air Volume (L): 1650220	Analyst: AZ
Date Analyzed: 2/10/2020 19:52		Reporting Limit			
	µg/sample	µg/sample		mg/m3	
Copper	28	25		0.000017	
Lead	ND	25		<0.000015	
Manganese	ND	25		<0.000015	

Note:

Client: Gilbane Company
Work Order: 2002098
Project: HPNS Parcel E Phase II 1310000400

QC BATCH REPORT

Batch ID: **R174684** Instrument ID **BAL2** Method: **TSP**

DUP	Sample ID: 2002098-07a dup			Units: mg/sample		Analysis Date: 2/7/2020				
Client ID: 9764181-MSE01A	Run ID: BAL2_200207A			SeqNo: 2185943		Prep Date:		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Total suspended particulate	3.7	1.0	0	0	0		3.8	2.67		

The following samples were analyzed in this batch:

2002098-07a	2002098-08a	2002098-09a
2002098-10a	2002098-11a	2002098-12a

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Gilbane Company
Work Order: 2002098
Project: HPNS Parcel E Phase II 1310000400

QC BATCH REPORT

Batch ID: **R174686** Instrument ID **BAL2** Method: **PM10**

DUP		Sample ID: 2002098-02a dup			Units: mg/sample		Analysis Date: 2/7/2020			
Client ID: Q0374081-MSE02		Run ID: BAL2_200207B			SeqNo: 2185975		Prep Date:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Particulate as PM10	12.76	1.0	0	0	0		12.18	4.65		

The following samples were analyzed in this batch:

2002098-01a	2002098-02a	2002098-03a
2002098-04a	2002098-05a	2002098-06a

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Gilbane Company
Work Order: 2002098
Project: HPNS Parcel E Phase II 1310000400

QC BATCH REPORT

Batch ID: **64870** Instrument ID **ICP3** Method: **E12**

MBLK		Sample ID: MBLK-64870-64870			Units: µg/sample		Analysis Date: 2/10/2020 07:02 PM			
Client ID:		Run ID: ICP3_200210B			SeqNo: 2188396		Prep Date: 2/10/2020		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Copper	ND	25								
Lead	ND	25								
Manganese	ND	25								

LCS		Sample ID: LCS-64870-64870			Units: µg/sample		Analysis Date: 2/10/2020 07:06 PM			
Client ID:		Run ID: ICP3_200210B			SeqNo: 2188397		Prep Date: 2/10/2020		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Copper	351.8	25	450	0	78.2	75-125	0			
Lead	389.1	25	450	0	86.5	75-125	0			
Manganese	343	25	450	0	76.2	75-125	0			

LCS		Sample ID: LCS-64870-64870			Units: µg/sample		Analysis Date: 2/11/2020 03:50 PM			
Client ID:		Run ID: ICP3_200211A			SeqNo: 2189291		Prep Date: 2/10/2020		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Manganese	478.8	25	450	0	106	75-125	0			

LCSD		Sample ID: LCSD-64870-64870			Units: µg/sample		Analysis Date: 2/10/2020 07:10 PM			
Client ID:		Run ID: ICP3_200210B			SeqNo: 2188398		Prep Date: 2/10/2020		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Copper	340.8	25	450	0	75.7	75-125	351.8	3.17	20	
Lead	381.7	25	450	0	84.8	75-125	389.1	1.91	20	

MS		Sample ID: 2002098-09A MS			Units: µg/sample		Analysis Date: 2/10/2020 07:35 PM			
Client ID: 9764193-MSE01A		Run ID: ICP3_200210B			SeqNo: 2188402		Prep Date: 2/10/2020		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Copper	387.4	25	450	39.37	77.4	75-125	0			
Lead	404.4	25	450	1.372	89.6	75-125	0			
Manganese	349.3	25	450	3.117	76.9	75-125	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Gilbane Company
Work Order: 2002098
Project: HPNS Parcel E Phase II 1310000400

QC BATCH REPORT

Batch ID: **64870** Instrument ID **ICP3** Method: **E12**

MSD		Sample ID: 2002098-09A MSD			Units: µg/sample		Analysis Date: 2/10/2020 07:39 PM			
Client ID: 9764193-MSE01A		Run ID: ICP3_200210B			SeqNo: 2188403		Prep Date: 2/10/2020		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Copper	389.4	25	450	39.37	77.8	75-125	387.4	0.498	20	
Lead	407.7	25	450	1.372	90.3	75-125	404.4	0.798	20	
Manganese	350	25	450	3.117	77.1	75-125	349.3	0.193	20	

The following samples were analyzed in this batch:

2002098-07A	2002098-08A	2002098-09A
2002098-10A	2002098-11A	2002098-12A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Gilbane Company
Project: HPNS Parcel E Phase II 1310000400
WorkOrder: 2002098

**QUALIFIERS,
ACRONYMS, UNITS**

<u>Qualifier</u>	<u>Description</u>
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL

<u>Acronym</u>	<u>Description</u>
DUP	Method Duplicate
E	EPA Method
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitation Limit
SDL	Sample Detection Limit
SW	SW-846 Method

<u>Units Reported</u>	<u>Description</u>
µg/sample	
mg/sample	

Sample Receipt Checklist

Client Name: GILBANE-WALNUTCREEK

Date/Time Received: 05-Feb-20 09:30

Work Order: 2002098

Received by: SNH

Checklist completed by Hannah Ponder 05-Feb-20
eSignature Date

Reviewed by: Rob Nieman 07-Feb-20
eSignature Date

Matrices:

Carrier name: FedEx

Shipping container/cooler in good condition? Yes No Not Present

Custody seals intact on shipping container/cooler? Yes No Not Present

Custody seals intact on sample bottles? Yes No Not Present

Chain of custody present? Yes No

Chain of custody signed when relinquished and received? Yes No

Chain of custody agrees with sample labels? Yes No

Samples in proper container/bottle? Yes No

Sample containers intact? Yes No

Sufficient sample volume for indicated test? Yes No

All samples received within holding time? Yes No

Container/Temp Blank temperature in compliance? Yes No

Temperature(s)/Thermometer(s):

Cooler(s)/Kit(s):

Water - VOA vials have zero headspace? Yes No No VOA vials submitted

Water - pH acceptable upon receipt? Yes No N/A

pH adjusted? Yes No N/A

pH adjusted by:

Login Notes:

Client Contacted:

Date Contacted:

Person Contacted:

Contacted By:

Regarding:

Comments:

CorrectiveAction: