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

Air Monitoring Summary Report
September 1 to September 30, 2021

Phase IV Non-Time Critical Removal Action, Solid Waste Disposal Area Westside, Installation Restoration Site 12
Former Naval Station Treasure Island
San Francisco, CA
November 2021

DCN: GLBN-0005-F5271-0017

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Prepared for:

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

Prepared by:

Gilbane Federal
1655 Grant Street, Suite 1200
Concord, California 94520
Contract Number: N62473-17-D-0005; Task Order No. N62473-18-F5271

Table of Contents

List of Figures

List of Tables

List of Attachments

Acronyms and Abbreviations

AMP	Air Monitoring Plan
BAAQMD	Bay Area Air Quality Management District
BAP(Eq)	benzo(a)pyrene equivalency
cfm	cubic feet per minute
CFR	Code of Federal Regulations
DAC	derived air concentration
DCP	Dust Control Plan
DTSC	Department of Toxic Substances Control
Gilbane	Gilbane Federal
HERO	Human and Ecological Risk Office
IR	Installation Restoration
mg/m^3	milligram per cubic meter
Navy	U.S. Department of the Navy
PAH	polycyclic aromatic hydrocarbon
PCB	polychlorinated biphenyl
PDR	personal data-logging real-time aerosol monitor
PM10	particulate matter less than 10 microns in diameter
PUF	polyurethane foam
Ra-226	radium-226
TCDD	2,3,7,8-tetrachlorodibenzo-p-dioxin
TLV	threshold limit value
TSP	total suspended particulates
$\mu g/m^3$	microgram per cubic meter
USEPA	United States Environmental Protection Agency
Work Plan	*Final Work Plan, Phase IV Non-Time Critical Removal Action, Solid Waste Disposal Area Westside, Installation Restoration Site 12, Former Naval Station Treasure Island, San Francisco, California*

1.0 Introduction

This Air Monitoring Report was prepared by Gilbane Federal (Gilbane) as requested by the United States Department of the Navy (Navy) under the Radiological Multiple Award Contract (RADMAC II) N62473-12-D-D005, Contract Task Order N6247317F5271. Gilbane is performing dust and air monitoring at Former Naval Station Treasure Island in accordance with the Final Dust Control Plan (DCP) and Air Monitoring Plan (AMP), included as appendices to *Phase IV Non-Time Critical Removal Action Work Plan, Solid Waste Disposal Area Westside, Installation Restoration Site 12, Former Naval Station Treasure Island, San Francisco, California* (Work Plan; Gilbane, 2021).

The DCP describes best management practices and procedures to be implemented to minimize dust generation during work activities. Dust monitoring is conducted to ensure that these procedures are effective. Dust monitoring is also conducted to verify that the working environment meets occupational health and safety standards and that workers are safe. The AMP outlines the requirements for prevention of exposure for construction workers to dust and potential airborne chemicals of concern from the work area. The AMP also establishes the conservative project action levels for dust at the work area boundary to protect residents.

This summary report describes the following:

- Dust and air monitoring sampling locations – **Section 2.0**,
- Dust and air monitoring sample collection and analytical methods – **Section 3.0**,
- Dust and air monitoring data – **Section 4.0**, and,
- Dust and air monitoring results – **Section 5.0**.

This summary report presents the dust and air monitoring test results at Installation Restoration (IR) Site 12 from September 1st through September 30th , 2021 and compares the results with the established action levels included in the Work Plan (Gilbane, 2021). During this reporting period, the Site 12 air monitoring stations (AMSW1 and AMSW2) operated on September, 1st, 2nd, 3rd,, 7th, 8th, 9th ,13th, 14th, 15th, 16th, 17th, 20th, 21st, 22nd, 23rd, 24th, 27th, 28th, 29th and 30th for earth-moving tasks involving potentially contaminated soil.

During the reporting period, personal data-logging real-time aerosol monitoring (PDR) dust data was collected. Air samples were collected and analyzed for lead, polychlorinated biphenyls (PCBs), polycyclic aromatic hydrocarbons (PAHs), dioxin [2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD)], total suspended particulates (TSP), and particulate matter less than 10 microns in diameter (PM10). In addition, air samples were analyzed for radiological gross alpha and beta levels.

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2.0 Monitoring Site Locations

2.1 Dust Monitoring

During earthmoving activities, several PDR stations are set up to monitor real-time airborne dust concentrations. The purpose of the PDR stations is to act as a first line of defense in protecting workers' health, and ultimately the public's health, during field activities. PDR stations are situated immediately adjacent to the current work area locations most likely to generate the greatest volume of airborne dust and are adjusted as necessary due to changes in wind direction and/or work location. Real-time dust monitoring ensures dust levels remain below action levels during fieldwork operations.

The general locations for dust monitors in IR Site 12 are shown on **Figure 1**. Specific locations of each PDR are described in the individual PDR daily data files. Field forms from each location are presented in **Attachment 1** of this report. During earth moving activities at IR Site 12 (i.e., transportation of excavated soil to the radiological screening yard, excavation, and backfilling), one PDR serves as the upwind (background) location (DMW7, DMW16) and two PDRs are placed in downwind perimeter locations (DMW8, DMW9, DMW17, DMW18).

2.2 Air Monitoring

Air monitoring samples collected using high volume samplers are collected to identify and quantify airborne contaminants and to confirm the results recorded during dust (PDR) monitoring. Air monitoring stations are mobilized to collect air monitoring samples upwind and downwind of work areas. General locations of the IR Site 12 air monitoring stations are shown on **Figure 1**. The locations of the air monitoring stations are determined based on the prevailing wind direction (typically from the southwest) and are modified as needed.

Weather forecasts including wind direction are checked daily with a weather station located at Building 572. The weather station records temperature, pressure, wind speed and direction, etc., every 30 minutes, 24 hours per day. Wind speed is also monitored near the work site during soil excavation and handling to ensure that work is stopped if sustained winds over 25 miles per hour are encountered. No work stoppages due to sustained wind speed exceedances were required during this reporting period. Wind speed and direction data gathered during work hours for this reporting period, presented on a wind rose diagram in **Figure 2**, generally depict the wind blowing East-North-East at 5-12 miles/hour with gusts up to 17 miles/hour. Detailed weather data is not reported in this document but can be provided upon request.

High volume air monitoring stations remain stationary while sampling is being conducted; however, locations may be adjusted when the wind direction changes and when overall excavation work areas change from one site to another. Each upwind and

downwind high-volume monitoring station includes separate monitoring systems for the following:

- TSP - collected daily
- PM10 - collected daily
- Lead - collected daily
- PAHs, PCBs, and dioxin - collected on alternating days

2.3 Radiological Air Monitoring

Radiological air samplers are positioned adjacent to excavation work activities for radiologically impacted soil at one upwind and one downwind location during earthmoving activities associated with radiologically impacted soil. The radiological air samplers may be co-located with PDRs or the high-volume samplers.

3.0 Sampling and Analytical Methods

Dust and air samples are collected during earthmoving activities. However, during precipitation events, the dust and air monitoring units may not be operable. An attempt will be made to collect samples and readings regardless of the weather. If dust or air monitors are found to be malfunctioning or nonfunctional, earthmoving activities will stop until monitors can be repaired or replaced. The Site Health and Safety Officer is responsible for monitoring the air and dust monitoring sampling equipment. In rare cases, due to ancillary equipment malfunction such as generator failure during the night, a sample may be collected that represents a period of less than 24 hours. If this situation occurs, a note is added to the sample result data tables indicating why the full sampling period was not achieved. The field team has continued running the air monitoring stations for work onsite, however, has initiated collecting the samples once intrusive activities have wrapped up for the final workday of each week resulting in a sampling period less than 24 hours.

3.1 Dust Samples

The PDR is a high sensitivity photometric monitor with a light-scattering sensing configuration that has been optimized for the measurement of the respirable fraction of airborne dust, smoke, fumes, and mists. PDRs are used to evaluate real-time monitoring of airborne dust concentrations, to determine if there is a need for additional dust control or personal protection.

3.2 Air Samples

Air samples were sampled in accordance with the United States Environmental Protection Agency (USEPA) reference sampling method for PM10, described in 40 Code of Federal Regulations (CFR) 50, Subpart J. Each sample was collected on a filter over an approximately 24-hour period; the filter was then weighed to determine the amount of PM10 collected.

TSP samples were collected with a high-volume (39 to 60 cubic feet per minute [cfm]) air sampler in accordance with USEPA's reference sampling method for TSP, described in Title 40 CFR, Part 50, Subpart B. Each sample was collected on a filter over an approximately 24-hour period; the filter was then weighed to determine the amount of TSP collected. Once the filter weight was determined, the sample was analyzed for lead in accordance with USEPA Method 6020 using inductively coupled mass spectrometry.

Air samples for PCBs, PAHs, and dioxin are collected and analyzed in accordance with USEPA Methods TO-4A, TO-13, TO-9A, respectively, using TISCH polyurethane (PUF) samplers. The filter media collected from the air samplers is submitted to the analytical laboratory for appropriate analysis.

PCB, PAH, and dioxin samples are collected on alternating days at the downwind and

upwind stations during earthmoving activities.

3.3 Radiological Air Samples

Radiological air monitoring is also conducted upwind and downwind on days of earthmoving activities. Radiological samples are collected with a LV-1 low volume air sampler. Air filters are counted on site 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 (often but incorrectly refer to as a derived air concentration [DAC] which applies only to occupational exposures) limit specified in Table 2 of Appendix B to 10 CFR 20. The effluent concentration is the 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.

4.0 Dust Monitoring Results

If dust (PDR) monitoring equipment alarms, the source of exceedance will be determined by evaluating both upwind and downwind dust (PDR) sample locations. If the difference between upwind and downwind concentrations is greater than the action level for a sustained period of 15 minutes, then earthmoving activities will be halted until dust control measures are implemented. These may include, but are not limited to, adding water to the work area during earth moving tasks, evaluation of alternate work procedures or equipment, and/or cessation of the activity that is creating the dust until the PDR readings are below the screening criteria.

Dust monitoring action levels that are implemented on a real-time basis are listed in **Table 1**. PDR data are collected and reviewed each day by the Site Health and Safety Manager. PDR data are included in **Attachment 1**.

On September 2nd and 23rd, PDR readings were observed above project screening criteria, however, the delta between the upwind and downwind monitors remained below action levels. The field team documented smoky conditions from nearby wildfires on September 2nd and a thick low hanging marine layer/fog on September 23rd.

Table 1: Dust Monitoring Project Action Levels

Method	Monitoring Location	Monitoring Frequency [a]	Action Level [b]	Action
PDR	Near Workers' Breathing Zones (typically on equipment)	Periodically [c]	<2.0 mg/m^3 >2.0 mg/m^3	<2.0 mg/m^3 continue work in Level D. Increase dust control (i.e., apply water or other suppression method) and/or upgrade to Level C if concentrations >2.0 mg/m^3.
	Job Site Perimeter	Continuously	<1.0 mg/m^3 >1.0 mg/m^3	Continue work. STOP work, apply water or other dust suppression methods until levels decrease below 1.0 mg/m^3

Notes:

Only the Health and Safety Manager is authorized to downgrade levels of personal protective equipment.

a Frequency of air monitoring may be adjusted by the project Certified Industrial Hygienist after sufficient characterization of site contaminants has been completed, tasks have been modified, or site controls have proven effective.

b Five readings exceeding the action level in any 15-minute period or a sustained reading exceeding the action level for five minutes will trigger a response. Action levels represent airborne particulate concentrations in excess of background particulate concentrations.

c PDR will be monitored a minimum of three times a day.

< less than

> greater than

mg/m^3 milligrams per cubic meter

PDR personal data-logging real-time aerosol monitor

Table 2: Air Monitoring Project Screening Criteria

Chemicals of Concern	Project Screening Criteria (Threshold Limit Value) µg/m^3	Basis
Lead	1,575	TI Site 12 Subchronic Dust Action Level
TSP	50	TI Site 12 Dust Action Level
PM10	50	BAAQMD Ambient Air Quality Standard
BAP(Eq)	55,330	TI Site 12 Chronic Dust Action Level
PCBs[a]	NA	TI Site 12 Dust Action Level
Dioxin[a]	1E+07	TI Site 12 Chronic Dust Action Level
Radiological (Ra-226)	10% of DAC[c]	Occupational and public air concentration limits for Ra-226 published in 10 Code of Federal Regulations Part 20.

Notes:

a The dust action level was increased by a factor of 10 to account for the short-term duration of the project relative to the lifetime assumptions incorporated into the toxicity criteria and exposure assumption.

b BAP(Eq) action level will be ~55 mg/m^3 for all excavations

c Public air concentration limits are commonly referred to as DAC, but are actually Effluent Concentrations from Table 2 for 10 CFR Part 20.

BAAQMD	Bay Area Air Quality Management District
BAP(Eq)	benzo(a)pyrene equivalency
DAC	derived air concentration
mg/m^3	milligrams per cubic meter
PCBs	polychlorinated biphenyls
PM10	particulate matter smaller than 10 microns in diameter
Ra-226	radium-226
TSP	total suspended particulates
µg/m^3	micrograms per cubic meter

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5.0 Air Monitoring Results

The Human and Ecological Risk Office (HERO) at the request of the California Department of Toxic Substances Control (DTSC) developed dust action levels for community air monitoring for IR Site 12. Sub-chronic and chronic dust action levels as PM10 were calculated for lead, dioxin, benzo(a)pyrene (BAP) equivalency (Eq) by PAHs analysis, and PCBs. As presented in the document *Dust Action Levels for Installation Restoration Site 12, Former Naval Station Treasure Island, San Francisco, California* (HERO, 2018), the action levels were calculated using the maximum chemicals of concern soil concentrations at IR Site 12.

Based on HERO's recommendations, a PM10 dust action level of 50 microgram per cubic meter (ug/m^3) will be implemented for all excavation areas at IR Site 12. TSP is expected to be further controlled based on the limit employed for PM10, in accordance with guidance provided by the San Francisco Bay Area Air Quality Management District (BAAQMD), which estimates that PM10 makes up approximately 55 percent of TSP. If it is apparent that project activities are the cause of exceedances, additional control measures will be considered and implemented.

Analytical results from air monitoring samples are compared with the project screening criteria (threshold limit values [TLV]) listed in **Table 2**. Air monitoring results are included in **Attachment 2**. Weather information (including ambient pressure and temperature data) and high-volume air monitoring sample results are presented in Attachment 2. Weather information was collected from the weather station at Building 572, Avenue M, Treasure Island, San Francisco, California. Radiological air monitoring results are presented in **Attachment 3**.

On September 30th, 2021 AMSW2 samples were collected and the field team noticed downwind air monitoring filters were loaded with dark black particulate. On September 29th a new generator was brought to the AMSW2 area to replace the old one. Unbeknownst to the field crew, the new generator exhaust was located on the opposite side and situated adjacent to the air monitoring filters. Field personnel concluded the exhaust fumes from the generator was the reasoning behind the media loading with black particulate. AMSW2 samples were not sent to the laboratory for analysis. The generator has since been repositioned and the problem mitigated.

PM10 analytical results from September 2021 did not exceed the project-specific screening criteria presented in **Table 2-2**.

TSP analytical results from September 2021 are presented in **Table 2-3**. The following details any exceedances that occurred during the September reporting period and the appropriate mitigation measures taken:

A one-day exceedance of the TSP screening criteria was recorded on September 24th at 151.23 ug/m3. The associated PM10 reading (38.9 ug/m3) and downwind PDR

monitors (-0.001/-0.001) were also below project limits. The appropriate parties were notified when the contractor received these results and the field crew continues to maintain persistent dust control measures.

Metals (lead), PAHs, total PCBs, and dioxin analytical results from September 2021, did not exceed the project-specific screening criteria presented in **Table 2**.

6.0 References

Gilbane, 2016. *Radiological Procedure PR-RP-150 Radiological Survey and Sampling*. January.

Gilbane, 2021. *Phase IV Non-Time Critical Removal Action Work Plan, Solid Waste Disposal Area Westside, Installation Restoration Site 12, Former Naval Station Treasure Island, San Francisco, California*. March.

Gilbane, 2021. *Phase IV Non-Time Critical Removal Action Work Plan, Air Monitoring Plan, Solid Waste Disposal Area Westside, Installation Restoration Site 12, Former Naval Station Treasure Island, San Francisco, California*. March.

Gilbane, 2021. *Phase IV Non-Time Critical Removal Action Work Plan, Dust Control Plan, Solid Waste Disposal Area Westside, Installation Restoration Site 12, Former Naval Station Treasure Island, San Francisco, California*. March.

HERO, 2018. *Dust Action Levels for Installation Restoration Site 12, Former Naval Station Treasure Island, San Francisco, California. September*.

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FIGURES

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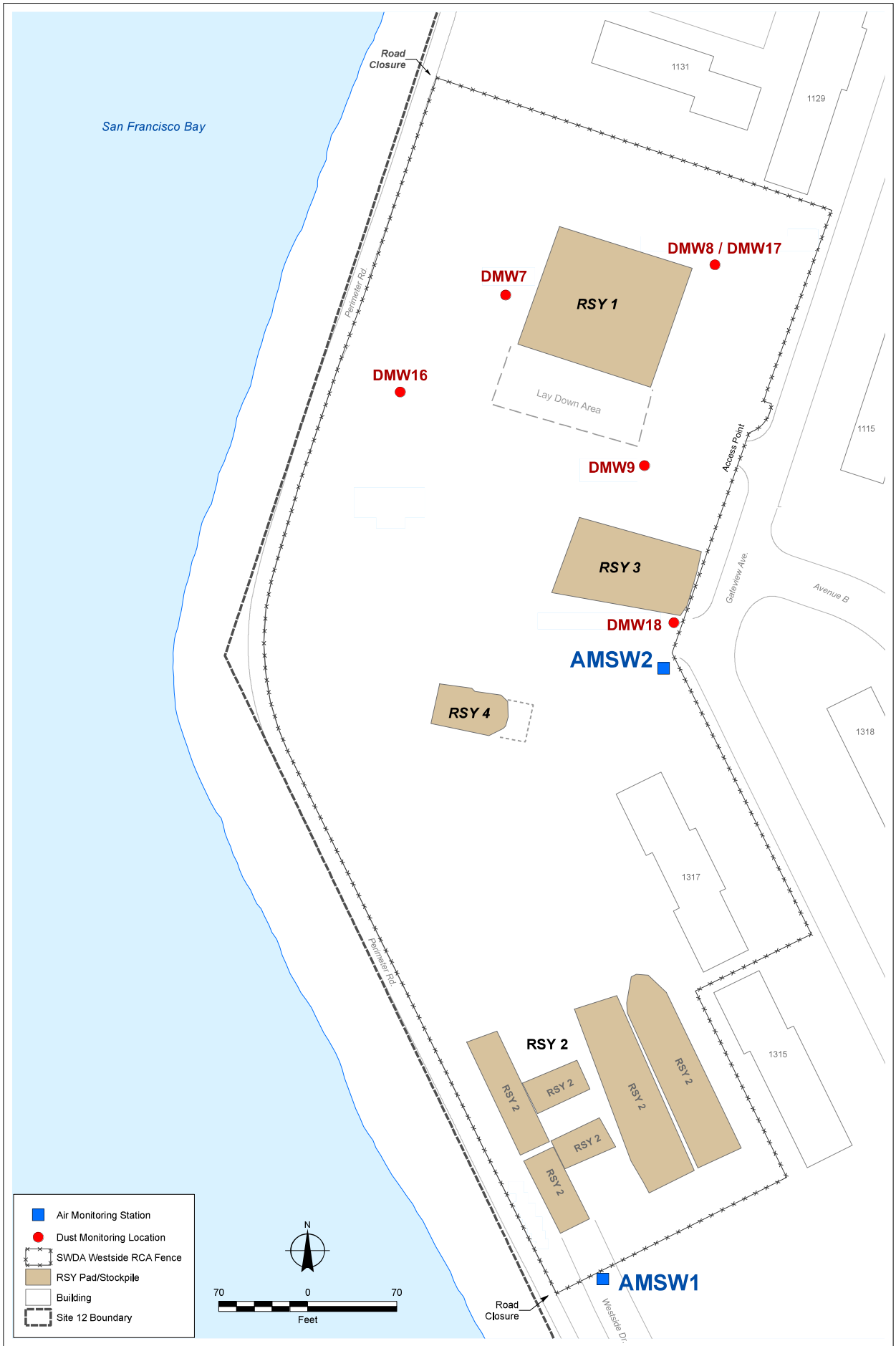

Air Monitoring Report
Phase IV Non-Time Critical Removal Action
Solid Waste Disposal Area Westside, IR Site 12
Former Naval Station Treasure Island
San Francisco, CA

Figure 1

Dust and Air Monitoring Locations IR Site 12
SWDA Westside

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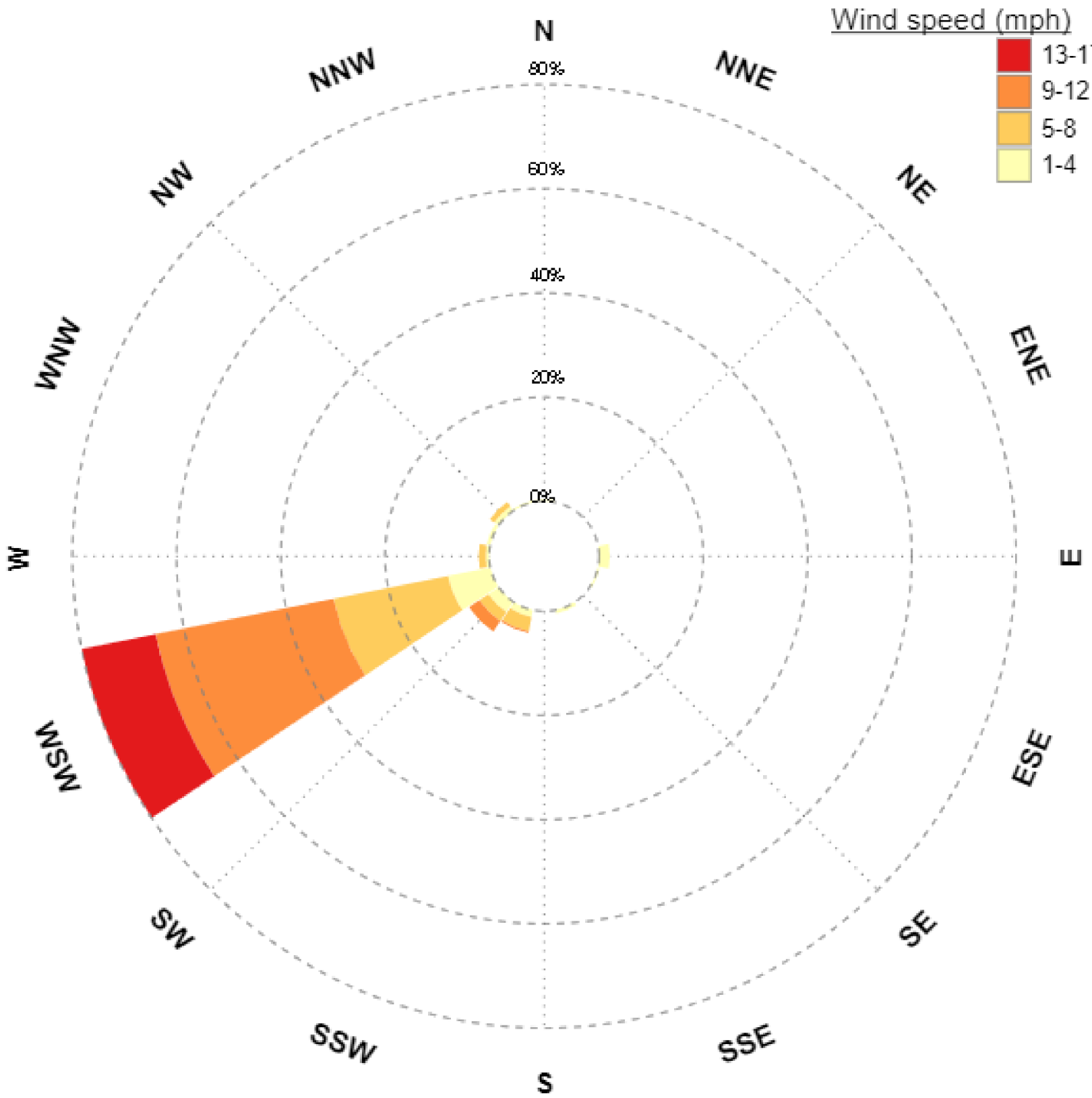

Air Monitoring Report
Phase IV Non-Time Critical Removal Action
Solid Waste Disposal Area Westside, IR Site 12
Former Naval Station Treasure Island
San Francisco, CA

Figure 2

Wind Rose
IR Site 12 SWDA Westside

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ATTACHMENT 1
PDR SUMMARY TABLE AND FIELD FORMS
(Provided on CD)

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Gilbane

AIR MONITORING LOG

Client Name NAVFAC Date 9/1/21

Project No. J310000300 Page 1 of 1

Logged by Logan Schwing

Weather 54°F - 63°F, cloudy.

Instrument Type: Dust Trak II

Calibration Standards Used Factory Calibrated

Time	Dust Monitoring Station Number	Location	Instrument Reading (mg/m3)	Unit Number	Activities, Remarks
0800	DMW16	•UW hauling RSY3 Soil to pad 1	0.027	2845	•non intrusive prep/setup
↓	DMW17	•DW hauling RSY3 Soil to pad 1	0.030	2726	
↓	DMW18	•DW hauling RSY3 Soil to pad 1	0.031	2341	
1300	DMW16	↓	0.024		•team on lunch
↓	DMW17	↓	0.032		
↓	DMW18	↓	0.030		
1315	DMW7	•Handscreening RSY3 Soil @pad 1 UW	0.024	2845	•dust monitors moved for hand screening op.
↓	DMW8	•Handscreening RSY3 Soil @pad 1 DW	0.026	2726	
↓	DMW9	•Handscreening RSY3 Soil @pad 1 BW	0.025	2341	
1706	DMW7	↓	0.026		•op wrapping
↓	DMW8	↓	0.033		
↓	DMW9	↓	0.029		
		LSS			
			9/1/21		

Gilbane

AIR MONITORING LOG

Client Name NAVFAC

Date 9/2/2021

Project No. J310000~~800~~ 800

Page 1 of 1

Logged by TR

Weather foggy, cloudy, smokey. 56-67°F

Instrument Type: Dust Trak II

Calibration Standards Used Factory Calibrated

Time	Dust Monitoring Station Number	Location	Instrument Reading (mg/m3)	Unit Number	Activities, Remarks
0810	DMW7	upwind RSY Lot #28	0.040	2845	NO UXO work yet.
↓	DMW8	Downwind Lot #28	0.039	2341	
↓	DMW9	Downwind Lot #28	0.041	2726	
1130	DMW7	UP Wind Lot #28	0.046		UXO clear Lot # 28
↓	DMW8	DW Lot #28	0.042		
↓	DMW9	DW # 28	0.041		
1500	DMW7	UW # 28	0.049		
↓	DMW8	DW # 28.	0.045		
↓	DMW9	Down wind	0.038		

TR

9/2/21

AIR MONITORING LOG

Client Name: NAVFAC
Project No: ~~[illegible]~~ J310000800
Logged by: TGR
Weather: 58 - 73 °F clear slightly smokey
Instrument Type: Dust Trak II
Calibration Standards Used: Factory Calibrated

Date: 9/7/2021
Page 1 of 1

Time	Dust Monitoring Station Number	Location	Instrument Reading (mg/m3)	Unit Number	Activities Remarks
0812	DMW7	Upwind RSY3 Lot 28	0.032	2845	Spray water on RSY3 Lot #28.
↓	DMW8	Down wind	0.034	2726	Dust control before UXO
↓	DMW9	Down wind	0.035	2341	clearing
1300	DMW7	UW	0.032		Stop UXO work lunch &
↓	DMW8	DW	0.039		porta potty
↓	DMW9	DW	0.040		Windy 15 MPH
1500	DMW7	UW	0.041		UXO clear
↓	DMW8	DW	0.046		RSY pad 3 Lot
↓	DMW9	DW	0.042		#28

TGR 9/7/2021

Gilbane

AIR MONITORING LOG

Client Name NAVFAC

Date 9/8/2021

Project No. ~~J310000300~~ J310000800

Page 1 of 1

Logged by TR

Weather Sunny 62-72 °F

Instrument Type: Dust Trak II

Calibration Standards Used Factory Calibrated

Time	Dust Monitoring Station Number	Location	Instrument Reading (mg/m3)	Unit Number	Activities Remarks
0800	DMW7	Upwind	0.040	2845	UXO clear RSY pad 3
↓	DMW8	Down wind	0.032	2341	
↓	DMW9	Down wind	0.039	2726	
1130	DMW7		0.036		
↓	DMW8		0.035		
↓	DMW9		0.039		
1600	DMW7		0.041		
↓	DMW8		0.043		
↓	DMW9		0.040		

TR 9/8/21

Gilbane

AIR MONITORING LOG

Client Name NAVFAC Date 9/9/2021

Project / No. T.I. Westside Phase IV NTCRA / J310000800 Page 1 of 1

Logged by TGH

Weather Slightly cloudy 58 - 68°F

Instrument Type: Dust Trak II

Calibration Standards Used Factory Calibrated

Time	Dust Monitoring Station Number	Location	Instrument Reading (mg/m3)	Unit Number	Activities, Remarks
0900	DMW7	Upwind	0.019	2845	UXO clear RSY pad 3
↓	DMW8	Downwind	0.014	2726	Lot #28
↓	DMW9	Downwind	0.015	2341	
1240	DMW7		0.013		
↓	DMW8		0.017		
↓	DMW9		0.019		
1615	DMW7		0.019		
↓	DMW8		0.015		
↓	DMW9		0.015		

TGH 9/9/2021

Gilbane

AIR MONITORING LOG

Client Name NAVFAC Date 9/10/21

Project No. J310000800 SWDA Westside, Site 12, Treasure Island Page 1 of 1

Logged by Logan Schwing

Weather 54°F - 60°F. Morning drizzle. Fog. Cloudy.

Instrument Type: Dust Trak II

Calibration Standards Used Factory Calibrated

Time	Dust Monitoring Station Number	Location	Instrument Reading (mg/m3)	Unit Number	Activities, Remarks
0800	DMW7	DW UXO clearing RSV 3 soil @ Pad 1	0.006	2845	non-intrusive, site prep/setup
↓	DMW8	DW UXO clearing RSV 3 soil @ Pad 1	0.007	2726	
↓	DMW9	DW UXO clearing RSV 3 soil @ Pad 1	0.009	2341	
1300	DMW7		0.018		
↓	DMW8		0.016		
↓	DMW9		0.015		
1700	DMW7		0.022		
↓	DMW8		0.026		
↓	DMW9		0.021		
		Logs			

Gilbane

AIR MONITORING LOG

Client Name NAVFAC Date 9/13/2021

Project No. J310000800 SWDA Westside, Site 12, Treasure Island Page 1 of 1

Logged by Tom

Weather 56 - 71 °F clear, slight fog

Instrument Type: Dust Trak II

Calibration Standards Used Factory Calibrated

Time	Dust Monitoring Station Number	Location	Instrument Reading (mg/m3)	Unit Number	Activities, Remarks
0805	DMW7	upwind of UXO clear pad	0.045	2845	NO UXO clearing.
↓	DMW8	down wind of UXO clear pad	0.042	2341	
↓	DMW9	down wind UXO clear pad	0.042	2726	
1245	DMW7		0.034		UXO clearing RS4.3 Lot # 28
↓	DMW8		0.036		
↓	DMW9		0.030		
1630	DMW7		0.039		
↓	DMW8		0.036		
↓	DMW9		0.033		

TR

9/13/21

Gilbane

AIR MONITORING LOG

Client Name NAVFAC Date 9/14/21

Project No. J310000800 SWDA Westside, Site 12, Treasure Island Page 1 of 1

Logged by Logan Schwing

Weather 51°F-62°F. Morning Fog/Clouds.

Instrument Type: Dust Trak II

Calibration Standards Used Factory Calibrated

Time	Dust Monitoring Station Number	Location	Instrument Reading (mg/m3)	Unit Number	Activities, Remarks
0800	DMW16	• UW screening pad II pad screen newly built	0.017	2845	• Team setup/prep.
↓	DMW17	pad by AMSW2 • DW	0.018	2341	• Prepare 2 pad II drive over pad by AMSW2 new pad built.
↓	DMW18	• DW	0.020	2726	
1345	DMW16		0.038		• Team finished with Lot #28 and stockpiling soil.
↓	DMW17		0.039		• Frag distance not implemented
↓	DMW18		0.035		
1700	DMW16		0.029		• Op wrapping up for day.
↓	DMW17		0.035		
↓	DMW18		0.036		

9/14/21 ES

Gilbane

AIR MONITORING LOG

Client Name NAVFAC Date 9/15/21

Project No. J310000800 SWDA Westside, Site 12, Treasure Island Page 1 of 1

Logged by Logan Schwing

Weather 53°F-60°F cloudy. Fog. Low hanging marine layer.

Instrument Type: Dust Trak II

Calibration Standards Used Factory Calibrated

Time	Dust Monitoring Station Number	Location	Instrument Reading (mg/m3)	Unit Number	Activities, Remarks
0800	DMW7	•DW Scanning @Pad1	0.039	2845	•elevated readings for no work going on as of now.
↓	DMW8	•DW Scanning @Pad1	0.041	2341	
↓	DMW9	•DW Scanning @Pad1	0.037	2726	
1250	DMW7		0.038		•Team on lunch.
↓	DMW8		0.037		
↓	DMW9		0.039		
1700	DMW7		0.037		•EOP finishing for day.
↓	DMW8		0.040		
↓	DMW9		0.041		

LSS 9/15/21

Gilbane

AIR MONITORING LOG

Client Name NAVFAC Date 9/16/21

Project No. J310000800 SWDA Westside, Site 12, Treasure Island Page 1 of 1

Logged by Logan Schwing

Weather 53°F-57°F. Cloudy.

Instrument Type: Dust Trak II

Calibration Standards Used Factory Calibrated

Time	Dust Monitoring Station Number	Location	Instrument Reading (mg/m3)	Unit Number	Activities, Remarks
0800	DMW16	• UW hauling R&Y 3 Soil to pad 1	0.029	2845	• non-intrusive
↓	DMW17	• DW hauling R&Y 3 Soil to pad 1	0.028	2341	
↓	DMW18	• DW hauling R&Y 3 Soil to pad 1	0.028	2726	
1250	DMW16		0.027		• Lunch
↓	DMW17		0.042		
↓	DMW18		0.040		
1700	DMW16		0.028		• op finishing for today.
↓	DMW17		0.029		
↓	DMW18		0.021		

LSS 9/16/21

Gilbane

AIR MONITORING LOG

Client Name NAVFAC Date 9/17/21

Project No. J310000800 SWDA Westside, Site 12, Treasure Island Page 1 of 1

Logged by Logan Schwing

Weather 51°F - 60°F. Morning Clouds / Fog.

Instrument Type: Dust Trak II

Calibration Standards Used Factory Calibrated

Time	Dust Monitoring Station Number	Location	Instrument Reading (mg/m3)	Unit Number	Activities, Remarks
0800	DMW7	• DW UXO Screening @ pad 1	0.034	2845	• Site prep
↓	DMW8	• DW UXO Screening @ pad 1	0.040	2341	• commence intrusive.
↓	DMW9	• DW UXO Screening @ pad 1	0.038	2726	
1330	DMW7		0.030		• Lunch.
↓	DMW8		0.029		• Frag distance doesn't apply.
↓	DMW9		0.035		
1700	DMW7		0.029		• EOD wrapping up for day.
↓	DMW8		0.033		
↓	DMW9		0.033		

LSS 9/17/21

Gilbane

AIR MONITORING LOG

Client Name NAVFAC Date 9/20/21

Project No. J310000800 SWDA Westside, Site 12, Treasure Island Page 1 of 1

Logged by Logan Schwing

Weather 53°F - 78°F. Sunny.

Instrument Type: Dust Trak II

Calibration Standards Used Factory Calibrated

Time	Dust Monitoring Station Number	Location	Instrument Reading (mg/m3)	Unit Number	Activities, Remarks
0800	DMW7	UW UXO Scanning @ pad 1	0.012	2845	setup/prep
↓	DMW8	DW	0.014	2341	
↓	DMW9	DW	0.010	2726	
1300	DMW7		0.015		Lunch
↓	DMW8		0.016		
↓	DMW9		0.020		
1700	DMW7		0.015		wrapping up for today.
↓	DMW8		0.019		
↓	DMW9		0.018		

LS 9/20/21

Gilbane

AIR MONITORING LOG

Client Name NAVFAC Date 9/21/21

Project No. J310000800 SWDA Westside, Site 12, Treasure Island Page 1 of 1

Logged by Logan Schwing

Weather 57°F-80°F. Sunny Warm

Instrument Type: Dust Trak II

Calibration Standards Used Factory Calibrated

Time	Dust Monitoring Station Number	Location	Instrument Reading (mg/m3)	Unit Number	Activities, Remarks
0800	DMW7	•UW UXO screening op.	0.015	2845	• Site setup prep
↓	DMW8	•DW UXO screening op.	0.016	2341	
↓	DMW9	•DW UXO screening op.	0.018	2726	
1230	DMW7		0.025		• Lunch
↓	DMW8		0.025		
↓	DMW9		0.022		
1700	DMW7		0.020		• Op wrapping up.
↓	DMW8		0.026		
↓	DMW9		0.025		
		LSS	9/21/21		

Gilbane

AIR MONITORING LOG

Client Name NAVFAC Date 9/22/21

Project / No. T.I. Westside Phase IV NTCRA / J310000800 Page 1 of 1

Logged by TR

Weather Sunny 57-69°F

Instrument Type: Dust Trak II

Calibration Standards Used Factory Calibrated

Time	Dust Monitoring Station Number	Location	Instrument Reading (mg/m3)	Unit Number	Activities, Remarks
0900	DMW7	upwind	0.006	2845	UXO clear RS43 Lot 30
↓	DMW8	Down wind	0.009	2726	
↓	DMW9	Downwind	0.010	2341	
1200	DMW7		0.008		
↓	DMW8		0.008		
↓	DMW9		6.015		
1600	DMW7		0.026		
↓	DMW8		0.023		
↓	DMW9		0.028		

TR 9/22/21

Gilbane

AIR MONITORING LOG

Client Name NAVFAC Date 9/23/21

Project No. J310000800 SWDA Westside, Site 12, Treasure Island Page 1 of 1

Logged by Logan Schwing

Weather 50-65°F. partly cloudy. Heavy morning Fog

Instrument Type: Dust Trak II

Calibration Standards Used Factory Calibrated

Time	Dust Monitoring Station Number	Location	Instrument Reading (mg/m3)	Unit Number	Activities, Remarks
0800	DMW7	-DW UXO screening @ pad 1	0.030	2845	-Heavy morning layer and fog this morning.
↓	DMW8	-DW UXO screening @ pad 1	0.031	2341	
↓	DMW9	-DW UXO screening @ pad 1	0.034	2226	@9am lights were flashing due to heavy fog.
1250	DMW7		0.032		-dust was being generated as team is just hand scanning material. work continues.
↓	DMW8		0.029		No Concern
↓	DMW9		0.027		
1700	DMW7		0.027		
↓	DMW8		0.034		-DW wrapping up.
↓	DMW9		0.036		

LSS 9/23/21

Gilbane

AIR MONITORING LOG

Client Name NAVFAC Date 9/24/21

Project / No. T.I. Westside Phase IV NTCRA / J310000800 Page 1 of 1

Logged by TOR

Weather 56 - 70 °F Sunny

Instrument Type: Dust Trak II

Calibration Standards Used Factory Calibrated

Time	Dust Monitoring Station Number	Location	Instrument Reading (mg/m3)	Unit Number	Activities, Remarks
0800	DMW7	Upwind of UXO clear pad	0.008	2845	watering down piles.
↓	DMW8	Downwind of UXO clear pad	0.012	2341	
↓	DMW9	Downwind of UXO clearpad.	0.010	2726	
1330	DMW7		0.014		UXO clear pile
↓	DMW8		0.020		
↓	DMW9		0.016		
1600	DMW7		0.024		
↓	DMW8		0.036		
↓	DMW9		0.030		

TR 9/24/21

Gilbane

AIR MONITORING LOG

Client Name NAVFAC Date 9/27/2021

Project / No. T.I. Westside Phase IV NTCRA / J310000800 Page 1 of 1

Logged by TON

Weather Cloudy, fog morning wet conditions 56-65°F

Instrument Type: Dust Trak II

Calibration Standards Used Factory Calibrated

Time	Dust Monitoring Station Number	Location	Instrument Reading (mg/m3)	Unit Number	Activities, Remarks
0745	DMW7	Upwind Lot 31	0.002	2845	UXO clear RS4 pad 3
↓	DMW8	Downwind Lot 31	0.001	2341	
↓	DMW9	Downwind Lot 31	0.001	2726	
1320	DMW7		0.004		
↓	DMW8		0.001		
↓	DMW9		0.003		
1520	DMW7		0.006		
↓	DMW8		0.002		
↓	DMW9		0.004		
				TR	
				9/27/21	

Gilbane

AIR MONITORING LOG

Client Name NAVFAC Date 9/28/21

Project No. J310000800 SWDA Westside, Site 12, Treasure Island Page 1 of 1

Logged by Logan Schwing

Weather 53°F - 71°F. Sunny

Instrument Type: Dust Trak II

Calibration Standards Used Factory Calibrated

Time	Dust Monitoring Station Number	Location	Instrument Reading (mg/m3)	Unit Number	Activities, Remarks
0750	DMW7	•DW UXO Screening Pad 1	0.006	2845	•Site Prep.
↓	DMW8	•DW UXO Screening Pad 1	0.010	2341	
↓	DMW9	•DW UXO Screening Pad 1	0.018	2726	
1300	DMW7		0.010		•Lunch
↓	DMW8		0.017		
↓	DMW9		0.014		
1700	DMW7		0.011		•EOF finishing for day.
↓	DMW8		0.020		
↓	DMW9		0.013		

LS 9/28/21

Gilbane

AIR MONITORING LOG

Client Name NAVFAC Date 9/29/21

Project No. J310000800 SWDA Westside, Site 12, Treasure Island Page 1 of 1

Logged by Logan Schwing

Weather 52°F-71°F. Sunny.

Instrument Type: Dust Trak II

Calibration Standards Used Factory Calibrated

Time	Dust Monitoring Station Number	Location	Instrument Reading (mg/m3)	Unit Number	Activities, Remarks
0800	DMW7	• DW UXO Screening @ pad 1	0.029	2845	• Site Setup
↓	DMW8	• DW UXO Screening @ pad 1	0.031	2341	
↓	DMW9	• DW UXO Screening @ pad 1	0.030	2726	
1500	DMW7		0.014		• Team on break.
↓	DMW8		0.020		• non-intrusive
↓	DMW9		0.016		
1700	DMW7		0.017		• Op winding up.
↓	DMW8		0.028		
↓	DMW9		0.023		

LS 9/29/21

Gilbane

AIR MONITORING LOG

Client Name NAVFAC Date 9/30/21

Project No. J310000800 SWDA Westside, Site 12, Treasure Island Page 1 of 1

Logged by Logan Schwing

Weather 53°F - 77 F. Sunny

Instrument Type: Dust Trak II

Calibration Standards Used Factory Calibrated

Time	Dust Monitoring Station Number	Location	Instrument Reading (mg/m3)	Unit Number	Activities, Remarks
0800	DMW7	• DW Pad / UXO screening	0.026	2845	• Site setup/prep.
↓	DMW8	• DW Pad / UXO screening	0.026	2726	
↓	DMW9	• DW Pad / UXO screening	0.028	2341	
1245	DMW7		0.032		• Team on lunch.
↓	DMW8		0.023		
↓	DMW9		0.016		
1700	DMW7		0.024		• Op wrapping up for day. • reading collected from dust upload.
↓	DMW8		0.025		
↓	DMW9		0.030		

LS 9/30/21

Table 1-1: Personal Data-Logging Real-Time (PDR) Aerosol Monitoring Results

DustTrak Unit	IR Site	Date	Maximum[1] (mg/m^3)	Average[1] (mg/m^3)	Delta Between Upwind and Downwind Stations (mg/m^3)	Below action level? (0.050 mg/m^3) (Yes/No)
DMW7	Site 12	9/1/2021	0.034	0.026	NA	Yes
DMW8	Site 12		0.040	0.033	0.007	Yes
DMW9	Site 12		0.030	0.023	-0.003	Yes
DMW16	Site 12		0.033	0.026	NA	Yes
DMW17	Site 12		0.042	0.036	0.010	Yes
DMW18	Site 12		0.036	0.028	0.002	Yes
DMW7	Site 12	9/2/2021	0.050	0.044	NA	Yes
DMW8	Site 12		0.061	0.046	0.002	Yes
DMW9	Site 12		0.058	0.043	-0.001	Yes
DMW7	Site 12	9/7/2021	0.042	0.033	NA	Yes
DMW8	Site 12		0.033	0.027	-0.006	Yes
DMW9	Site 12		0.046	0.032	-0.001	Yes
DMW7	Site 12	9/8/2021	0.035	0.022	NA	Yes
DMW8	Site 12		0.036	0.021	-0.001	Yes
DMW9	Site 12		0.031	0.019	-0.003	Yes
DMW7	Site 12	9/9/2021	0.024	0.019	NA	Yes
DMW8	Site 12		0.021	0.016	-0.003	Yes
DMW9	Site 12		0.024	0.017	-0.002	Yes
DMW7	Site 12	9/10/2021	0.015	0.009	NA	Yes
DMW8	Site 12		0.012	0.006	-0.003	Yes
DMW9	Site 12		0.011	0.007	-0.002	Yes
DMW7	Site 12	9/13/2021	0.043	0.036	NA	Yes
DMW8	Site 12		0.045	0.036	0.000	Yes
DMW9	Site 12		0.040	0.032	-0.004	Yes
DMW16	Site 12	9/14/2021	0.045	0.028	NA	Yes
DMW17	Site 12		0.048	0.028	0.000	Yes
DMW18	Site 12		0.036	0.024	-0.004	Yes
DMW7	Site 12	9/15/2021	0.047	0.043	NA	Yes
DMW8	Site 12		0.047	0.042	-0.001	Yes
DMW9	Site 12		0.042	0.035	-0.008	Yes
DMW16	Site 12	9/16/2021	0.032	0.027	NA	Yes
DMW17	Site 12		0.048	0.029	0.002	Yes
DMW18	Site 12		0.029	0.023	-0.004	Yes
DMW7	Site 12	9/17/2021	0.042	0.037	NA	Yes
DMW8	Site 12		0.047	0.039	0.002	Yes
DMW9	Site 12		0.035	0.031	-0.006	Yes
DMW7	Site 12	9/20/2021	0.029	0.019	NA	Yes
DMW8	Site 12		0.022	0.013	-0.006	Yes
DMW9	Site 12		0.043	0.016	-0.003	Yes
DMW7	Site 12	9/21/2021	0.035	0.021	NA	Yes
DMW8	Site 12		0.030	0.02	-0.001	Yes
DMW9	Site 12		0.029	0.018	-0.003	Yes
DMW7	Site 12	9/22/2021	0.028	0.012	NA	Yes
DMW8	Site 12		0.022	0.009	-0.003	Yes
DMW9	Site 12		0.027	0.012	0.000	Yes
DMW7	Site 12	9/23/2021	0.057	0.040	NA	Yes
DMW8	Site 12		0.056	0.040	0.000	Yes
DMW9	Site 12		0.051	0.035	-0.005	Yes
DMW7	Site 12	9/24/2021	0.027	0.014	NA	Yes
DMW8	Site 12		0.023	0.013	-0.001	Yes
DMW9	Site 12		0.021	0.013	-0.001	Yes
DMW7	Site 12	9/27/2021	0.006	0.004	NA	Yes
DMW8	Site 12		0.002	0.002	-0.002	Yes
DMW9	Site 12		0.005	0.003	-0.001	Yes
DMW7	Site 12	9/28/2021	0.022	0.013	NA	Yes
DMW8	Site 12		0.022	0.012	-0.001	Yes
DMW9	Site 12		0.019	0.011	-0.002	Yes
DMW7	Site 12	9/29/2021	0.032	0.019	NA	Yes
DMW8	Site 12		0.036	0.024	0.005	Yes
DMW9	Site 12		0.032	0.020	0.001	Yes
DMW7	Site 12	9/30/2021	0.036	0.024	NA	Yes
DMW8	Site 12		0.026	0.020	-0.004	Yes
DMW9	Site 12		0.033	0.017	-0.007	Yes

Notes:
bold = results above screening criteria
mg/m^3 = milligrams per cubic meter
NA = not applicable
[1] Maximum and average dust readings from daily PDR data downloads. Data are available upon request.

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ATTACHMENT 2

SUMMARY OF AIR MONITORING AND AIR SAMPLING RESULTS

(Provided on CD)

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Table 2-1: Ambient Pressure and Temperature Monitoring Results

Sample Date	Ambient Pressure (inches of Hg)	Ambient Temperature (°F)	Ambient Temperature (°K)
9/1/2021	29.71	59.86	288.63
9/2/2021	29.83	59.31	288.32
9/2/2021	29.90	59.95	288.68
9/8/2021	29.88	62.19	289.92
9/9/2021	29.82	61.71	289.66
9/10/2021	29.83	60.38	288.92
9/10/2021	29.95	59.78	288.58
9/14/2021	29.82	59.45	288.40
9/15/2021	29.86	58.07	287.63
9/16/2021	29.83	58.01	287.60
9/17/2021	29.83	57.30	287.21
9/17/2021	29.85	58.19	287.70
9/21/2021	29.93	69.78	294.14
9/22/2021	30.04	63.98	290.92
9/23/2021	29.96	57.68	287.42
9/24/2021	29.89	58.13	287.67
9/24/2021	29.89	55.11	285.99
9/28/2021	30.03	60.20	288.82
9/29/2021	29.96	61.87	289.74
9/30/2021	29.96	62.04	289.84

Notes:

Weather data collected from weather station at Building 572, Avenue M, Treasure Island, San Francisco, CA

°F = Degrees Fahrenheit

Hg = mercury

°K = Degrees Kelvin

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Table 2-2: Particulate Matter Smaller than Ten Microns (PM10)

Location ID	Sampling Period (Hours)	Sample Date	Particulate Matter Less Than 10 Microns in Diameter (ug/m^3)	Delta between Downwind and Upwind Stations (ug/m^3)	PM10 Exceedance? (Yes/No)
Screening Criteria					**50**
AMSW1	23.65	09/01/2021	29	NA	NA
	22.83	09/02/2021	30	NA	NA
	7.55	09/02/2021	25	NA	NA
	24.71	09/08/2021	16	NA	NA
	22.3	09/09/2021	19	NA	NA
	22.82	09/10/2021	13	NA	NA
	7.94	09/10/2021	6.6	NA	NA
	24.16	09/14/2021	29	NA	NA
	24.45	09/15/2021	22	NA	NA
	23.95	09/16/2021	19	NA	NA
	21.29	09/17/2021	23	NA	NA
	7.77	09/17/2021	25	NA	NA
	23.68	09/21/2021	18	NA	NA
	22.56	09/22/2021	16	NA	NA
	23.8	09/23/2021	12	NA	NA
	20.8	09/24/2021	12	NA	NA
	7.68	09/24/2021	7.1	NA	NA
	24.19	09/28/2021	6	NA	NA
	23.76	09/29/2021	24	NA	NA
	23.49	09/30/2021	25	NA	NA
AMSW2	23.62	09/01/2021	38	9	No
	22.92	09/02/2021	40	10	No
	7.46	09/02/2021	35	10	No
	24.64	09/08/2021	33	17	No
	22.21	09/09/2021	52 J	33 J	No
	22.85	09/10/2021	17	4	No
	7.71	09/10/2021	9.7	3.1	No
	24.1	09/14/2021	39	10	No
	24.54	09/15/2021	34	12	No
	24.3	09/16/2021	25	6	No
	21.4	09/17/2021	30	7	No
	7.77	09/17/2021	34	9	No
	24.08	09/21/2021	25	7	No
	23.24	09/22/2021	21	5	No
	23.8	09/23/2021	19	7	No
	21.36	09/24/2021	18	6	No
	7.83	09/24/2021	46	38.9	No
	24.67	09/28/2021	9	3	No
	24.11	09/29/2021	30	6	No

Notes:

ug/m3 = micrograms per cubic meter

NA = Not applicable

PM10 = particulate matter less then 10 microns in diameter

* = generator/sampler malfunction

Table 2-3: Total Suspended Particulates Monitoring Results

Location ID	Sampling Period (Hours)	Sample Date	Total Suspended Particulate (ug/m^3)	Delta Between Downwind and Upwind Stations (ug/m^3)	TSP Exceedance? (Yes/No)
Screening Criteria					**50**
AMSW1	23.67	09/01/2021	39.8904	NA	NA
	22.83	09/02/2021	45.3725	NA	NA
	7.55	09/02/2021	44.6756	NA	NA
	24.72	09/08/2021	26.0911	NA	NA
	22.3	09/09/2021	28.8845	NA	NA
	22.83	09/10/2021	20.8222	NA	NA
	7.94	09/10/2021	15.311	NA	NA
	24.13	09/14/2021	48.3266	NA	NA
	24.45	09/15/2021	33.5024	NA	NA
	23.95	09/16/2021	29.2357	NA	NA
	21.21	09/17/2021	33.9562	NA	NA
	7.76	09/17/2021	38.1115	NA	NA
	23.7	09/21/2021	34.3674	NA	NA
	22.53	09/22/2021	30.4152	NA	NA
	23.81	09/23/2021	22.22	NA	NA
	20.8	09/24/2021	18.0778	NA	NA
	7.7	09/24/2021	6.9691	NA	NA
	24.2	09/28/2021	11.7821	NA	NA
	23.77	09/29/2021	43.0228	NA	NA
	23.5	09/30/2021	39.2581	NA	NA
AMSW2	23.62	09/01/2021	45.5748	5.6844	No
	22.9	09/02/2021	62.8644	17.4919	No
	7.45	09/02/2021	59.3855	14.7099	No
	24.65	09/08/2021	69.925	43.8339	No
	22.22	09/09/2021	43.104 J	14.2195 J	No
	22.85	09/10/2021	25.2448	4.4226	No
	7.79	09/10/2021	10.7772	-4.5338	No
	24.12	09/14/2021	49.9637	1.6371	No
	24.54	09/15/2021	53.2014	19.699	No
	24.29	09/16/2021	37.5312	8.2955	No
	21.42	09/17/2021	45.9893	12.0331	No
	7.76	09/17/2021	51.7648	13.6533	No
	24.09	09/21/2021	31.1098	-3.2576	No
	23.21	09/22/2021	45.4327	15.0175	No
	23.82	09/23/2021	39.0497	16.8297	No
	21.36	09/24/2021	48.0158	29.938	No
	7.83	09/24/2021	158.2035	**151.2344**	Yes
	24.69	09/28/2021	10.9178	-0.8643	No
	24.12	09/29/2021	44.3222	1.2994	No

Notes:

J = estimated value

ug/m^3 = micrograms per cubic meter

NA = Not applicable

TSP = total suspended particulate

bold = results above screening criteria

Table 2-4: Lead by EPA 6020 Monitoring Results

Location ID	Sampling Period (Hours)	Sample Date	Lead (ug/m^3)	Lead Exceedance? (Yes/No)
Screening Criteria				**1,575**
AMSW1	23.65	09/01/2021	0.00058 J	No
	22.83	09/02/2021	0.00061 J	No
	7.55	09/02/2021	0.00097 J	No
	24.71	09/08/2021	0.00079	No
	22.3	09/09/2021	0.00096	No
	22.82	09/10/2021	0.00068 J	No
	7.94	09/10/2021	0.0034	No
	24.16	09/14/2021	0.00072 J	No
	24.45	09/15/2021	0.00069 J	No
	23.95	09/16/2021	0.0008	No
	21.29	09/17/2021	0.00061 J	No
	7.77	09/17/2021	0.0023	No
	23.68	09/21/2021	0.0017	No
	22.56	09/22/2021	0.0005 J	No
	23.8	09/23/2021	0.00075	No
	20.8	09/24/2021	0.0006 J	No
	7.68	09/24/2021	0.0012 J	No
	24.19	09/28/2021	0.00044 J	No
	23.76	09/29/2021	0.0015	No
	23.49	09/30/2021	0.0016	No
AMSW2	23.62	09/01/2021	0.0017	No
	22.92	09/02/2021	0.0026	No
	7.46	09/02/2021	0.0023 J	No
	24.64	09/08/2021	0.0055	No
	22.21	09/09/2021	0.017	No
	22.85	09/10/2021	0.0018	No
	7.71	09/10/2021	0.0035	No
	24.1	09/14/2021	0.0024	No
	24.54	09/15/2021	0.0046	No
	24.3	09/16/2021	0.003	No
	21.4	09/17/2021	0.002	No
	7.77	09/17/2021	0.0052	No
	24.08	09/21/2021	0.0032	No
	23.24	09/22/2021	0.0026	No
	23.8	09/23/2021	0.0022	No
	21.36	09/24/2021	0.0033	No
	7.83	09/24/2021	0.0092	No
	24.67	09/28/2021	0.00096	No
	24.11	09/29/2021	0.0021	No

Notes:

J = indicates an estimated value

ug/m^3 = micrograms per cubic meter

* = generator/sampler malfunction

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Table 2-5: Polycyclic Aromatic Hydrocarbons by TO-13 Monitoring Results

Location ID	Sampling Period (Hours)	Sample Date	BAP(Eq) Exceed-ance? (Yes/No)	BAP(Eq)	2-Methyl-naph-thalene (ug/m^3)	Acenaph-thene (ug/m^3)	Acenaph-thylene (ug/m^3)	Anthracene (ug/m^3)	Benzo(a) anthracene (ug/m^3)	Benzo(a) pyrene (ug/m^3)	Benzo(b) fluoran-thene (ug/m^3)	Benzo(g,h,i) perylene (ug/m^3)	Benzo(k) fluoran-thene (ug/m^3)	Chrysene (ug/m^3)	Dibenz(a,h)anth racene (ug/m^3)	Fluoran-thene (ug/m3)	Fluorene (ug/m3)	Indeno (1,2,3-c,d) pyrene (ug/m3)	Naph-thalene (ug/m3)	Phenan-threne (ug/m3)	Pyrene (ug/m3)
Screening Criteria[1]				**55,330**	**NE**	**NE**	**NE**	**NE**	**NE**	**NE**	**NE**	**NE**	**NE**	**NE**	**NE**	**NE**	**NE**	**NE**	**NE**	**NE**	**NE**
AMSW1	23.71	09/01/2021	No	0	0.00058 J	0.00041 J	< 0.00055	< 0.00055	< 0.00055	< 0.00055	< 0.00055	< 0.00055	< 0.00055	< 0.00055	< 0.00055	< 0.00055	0.00023 J	< 0.00055	0.0011	0.00042 J	< 0.00055
	24.73	09/08/2021	No	0	0.001 J	0.00037 J	< 0.00055	< 0.00055	< 0.00055	< 0.00055	< 0.00055	< 0.00055	< 0.00055	< 0.00055	< 0.00055	0.00047 J	0.00027 J	< 0.00055	0.0024	0.00065	0.00032 J
	8.16	09/10/2021	No	0	< 0.0032	< 0.0016	< 0.0016	< 0.0016	< 0.0016	< 0.0016	< 0.0016	< 0.0016	< 0.0016	< 0.0016	< 0.0016	< 0.0016	< 0.0016	< 0.0016	< 0.0032	< 0.0016	< 0.0016
	23.97	09/16/2021	No	0	< 0.0011	0.00025 J	< 0.00054	< 0.00054	< 0.00054	< 0.00054	< 0.00054	< 0.00054	< 0.00054	< 0.00054	< 0.00054	< 0.00054	< 0.00054	< 0.00054	0.001 J	0.00031 J	< 0.00054
	23.71	09/21/2021	No	0	0.0039	0.0011	< 0.00057	< 0.00057	< 0.00057	< 0.00057	< 0.00057	< 0.00057	< 0.00057	< 0.00057	< 0.00057	0.00091	0.00081	< 0.00057	0.008	0.0016	0.00061
	20.82	09/24/2021	No	0	0.0012 J	0.00033 J	< 0.00063	< 0.00063	< 0.00063	< 0.00063	< 0.00063	< 0.00063	< 0.00063	< 0.00063	< 0.00063	0.00027 J	0.00027 J	< 0.00063	0.0028	0.00055 J	< 0.00063
	23.7	09/29/2021	No	0	0.0031	0.00071	< 0.00058	< 0.00058	< 0.00058	< 0.00058	< 0.00058	< 0.00058	< 0.00058	< 0.00058	< 0.00058	0.0004 J	0.00042 J	< 0.00058	0.0082	0.00084	0.00029 J
AMSW2	23.61	09/01/2021	No	0	< 0.00095	< 0.00048	< 0.00048	< 0.00048	< 0.00048	< 0.00048	< 0.00048	< 0.00048	< 0.00048	< 0.00048	< 0.00048	0.00025 J	0.00019 J	< 0.00048	0.00086 J	0.00074	< 0.00048
	22.55	09/08/2021	No	0	0.00095 J	0.00052	< 0.00051	0.00094	< 0.00051	< 0.00051	< 0.00051	< 0.00051	< 0.00051	< 0.00051	< 0.00051	0.0018	0.0014	< 0.00051	0.0026	0.0071	0.0011
	7.62	09/10/2021	No	0	< 0.003	< 0.0015	< 0.0015	< 0.0015	< 0.0015	< 0.0015	< 0.0015	< 0.0015	< 0.0015	< 0.0015	< 0.0015	< 0.0015	< 0.0015	< 0.0015	< 0.003	0.0016	< 0.0015
	24.32	09/16/2021	No	0	< 0.00093	< 0.00047	< 0.00047	< 0.00047	< 0.00047	< 0.00047	< 0.00047	< 0.00047	< 0.00047	< 0.00047	< 0.00047	0.00028 J	0.0002 J	< 0.00047	0.00081 J	0.00087	< 0.00047
	24.09	09/21/2021	No	0	0.0043	0.00099	< 0.00046	0.0012	< 0.00046	< 0.00046	< 0.00046	< 0.00046	< 0.00046	< 0.00046	< 0.00046	0.003	0.0021	< 0.00046	0.008	0.011	0.0018
	21.35	09/24/2021	No	0	0.00063 J	0.00023 J	< 0.00055	< 0.00055	< 0.00055	< 0.00055	< 0.00055	< 0.00055	< 0.00055	< 0.00055	< 0.00055	0.00026 J	0.00023 J	< 0.00055	0.0019	0.00082	< 0.00055
	24.1	09/29/2021	No	0	0.0028	0.0006	< 0.00052	0.00083	< 0.00052	< 0.00052	< 0.00052	< 0.00052	< 0.00052	< 0.00052	< 0.00052	0.0018	0.0011	< 0.00052	0.008	0.0056	0.0011

Notes:

[1] The dust action level was adjusted by a factor of 10 to account for the short-term duration of the project.

NA = Not applicable

NE = None established

BAP(Eq) = Benzo(a)pyrene equivalency

J = estimated value

ug/m^3 = micrograms per cubic meter

bold = results above screening criteria

< = nondetected less than associated reporting limit

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Table 2-6: Polychlorinated Biphenyls by TO-4A Monitoring Results

Location ID	Sampling Period (Hours)	Sample Date	Total PCB Exceedance? (Yes/No)	Total PCB	PCB-1016 (Aroclor 1016) (ug/m^3)	PCB-1221 (Aroclor 1221) (ug/m^3)	PCB-1232 (Aroclor 1232) (ug/m^3)	PCB-1242 (Aroclor 1242) (ug/m^3)	PCB-1248 (Aroclor 1248) (ug/m^3)	PCB-1254 (Aroclor 1254) (ug/m^3)	PCB-1260 (Aroclor 1260) (ug/m^3)
Screening Criteria				**NE**							
AMSW1	22.85	09/02/2021	NA	0	< 0.00081	< 0.00081	< 0.00081	< 0.00081	< 0.00081	< 0.00081	< 0.00081
	22.32	09/09/2021	NA	0	< 0.00085	< 0.00085	< 0.00085	< 0.00085	< 0.00085	< 0.00085	< 0.00085
	24.11	09/14/2021	NA	0	< 0.00074	< 0.00074	< 0.00074	< 0.00074	< 0.00074	< 0.00074	< 0.00074
	21.21	09/17/2021	NA	0	< 0.00084	< 0.00084	< 0.00084	< 0.00084	< 0.00084	< 0.00084	< 0.00084
	22.47	09/22/2021	NA	0	< 0.00082	< 0.00082	< 0.00082	< 0.00082	< 0.00082	< 0.00082	< 0.00082
	7.7	09/24/2021	NA	0	< 0.0024	< 0.0024	< 0.0024	< 0.0024	< 0.0024	< 0.0024	< 0.0024
	23.51	09/30/2021	NA	0	< 0.00078	< 0.00078	< 0.00078	< 0.00078	< 0.00078	< 0.00078	< 0.00078
AMSW2	22.93	09/02/2021	NA	0	< 0.00069	< 0.00069	< 0.00069	< 0.00069	< 0.00069	< 0.00069	< 0.00069
	22.2	09/09/2021	NA	0	< 0.00073	< 0.00073	< 0.00073	< 0.00073	< 0.00073	< 0.00073	< 0.00073
	24.09	09/14/2021	NA	0	< 0.00066	< 0.00066	< 0.00066	< 0.00066	< 0.00066	< 0.00066	< 0.00066
	21.42	09/17/2021	NA	0	< 0.00075	< 0.00075	< 0.00075	< 0.00075	< 0.00075	< 0.00075	< 0.00075
	23.26	09/22/2021	NA	0	< 0.00069	< 0.00069	< 0.00069	< 0.00069	< 0.00069	< 0.00069	< 0.00069
	7.83	09/24/2021	NA	0	< 0.0021	< 0.0021	< 0.0021	< 0.0021	< 0.0021	< 0.0021	< 0.0021

Notes:

NA = Not applicable

NE = None established

PCB = polychlorinated biphenyl

ug/m^3 = micrograms per cubic meter

< = nondetected less than associated reporting limit

J = estimated value

* = sampler/generator malfunction

Table 2-7: Dioxin as 2,3,7,8-TCDD by TO-9A Monitoring Results

Location ID	Sampling Period (Hours)	Sample Date	2,3,7,8-Tetrachlorodibenzo-p-dioxin (ug/m^3)	Dioxin Exceedance? (Yes/No)
Screening Criteria				**10,000,000 ug/m^3**
AMSW1	7.57	09/02/2021	< 0.00000006	No
	22.83	09/10/2021	< 0.00000002	No
	24.48	09/15/2021	< 0.00000002	No
	7.7	09/17/2021	< 0.00000006	No
	23.81	09/23/2021	< 0.00000002	No
	24.19	09/28/2021	< 0.00000002	No
AMSW2	7.46	09/02/2021	< 0.00000006	No
	22.84	09/10/2021	< 0.00000002	No
	24.53	09/15/2021	< 0.00000002	No
	7.78	09/17/2021	< 0.00000005	No
	23.82	09/23/2021	< 0.00000002	No
	24.64	09/28/2021	< 0.00000002	No

Notes:

J = estimated value

ug/m^3 = micrograms per cubic meter

< = nondetected less than associated reporting limit

bold = results above screening criteria

ATTACHMENT 3
RADIOLOGICAL AIR MONITORING RESULTS
(Provided on CD)

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Gilbane

AIR SAMPLING EQUIPMENT

Project Information Effective as of: 28 Oct 2021

Contract / Task Order Number:	Project Title / Location:	Gilbane Project Number:
N62473-17-D-0005	IR Site 12 RD/RA, Treasure Island, SF, CA	J310000800

Perimeter/Effluent Air Sampling Equipment				Breathing Zone Air Sampling Equipment			
Equip Number	Air Sampler Make/Model	Serial Number	Cal Due Date	Equip Number	Air Sampler Make/Model	Serial Number	Cal Due Date
PE01	LV-1	4532	5/20/21	BZ01			
PE02	LV-1	4360	5/20/21	BZ02			
PE03	LV-1	4352	4/20/22	BZ03			
PE04	LV-1	4300	4/20/22	BZ04			
PE05				BZ05			
PE06				BZ06			
PE07				BZ07			
PE08				BZ08			
PE09				BZ09			
PE10				BZ10			
PE11				BZ11			
PE12				BZ12			
PE13				BZ13			
PE14				BZ14			
PE15				BZ15			
PE16				BZ16			
PE17				BZ17			
PE18				BZ18			
PE19				BZ19			
PE20				BZ20			

Sample Counting Instruments

Inst	Model	Serial	Cal Due	Count Time (min)		Background (cpm)[a]		Abs Ct Eff (cnts/dis)[b]		MDC (dpm/sample)[c]	
Number	Number	Number	Date	Bkgrd	Source	Alpha	Beta	Alpha	Beta	Alpha	Beta
A	Protean	615068	9/15/21	1	1	0.0	1.1	0.352	0.355	15.4	29.0
B	Protean	9085100	10/5/21	1	1	0.0	1.2	0.356	0.352	15.2	29.9
C	Protean	9085100	10/1/21	1	1	0.0	1.2	0.359	0.355	15.1	29.6
D											
E											

Notes

[a] background values obtained from instrument set-up worksheet

[b] absolute counting efficiency = 4π efficiency calculated as ratio of measured count rate and contained activity [total dpm] of source (see IN-RP-141, *Alpha/Beta Scaler Instrument Set-Up and Operation*)

[c] MDC calculated using the Stapleton approximation (see IN-RP-141, *Alpha/Beta Scaler Instrument Set-Up and Operation)*

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Gilbane

AIR SAMPLE RESULTS - PUBLIC EXPOSURE MONITORING

Project Information		
Contract / Task Order Number:	Project Title / Location:	Gilbane Project Number:
N62473-17-D-0005	IR Site 12 RD/RA, Treasure Island, SF, CA	J310000800
Information effective as of: 28 Oct 2021		

Effluent Air Concentration		
	Alpha	Beta
Radionuclide	Ra-226	Sr-90
Effluent Conc (µCi/ml)	9.E-13	6.E-12

Sampling Period
Air samples collected between 22 Mar 2021 and 21 Oct 2021

Color Codes	
Value < MDC	Value < 0.1 x Effluent Conc
< 72 hr decay time	Value > 0.1 x Effluent Conc
Data reviewed	Value > Effluent Conc

Sample Collection									Count Information								Sample Results				Initials	
													Gross Activity		Net dpm		Activity (µCi/ml)		*Effluent Conc (%)			
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	Alpha	Beta	Alpha	Beta	Alpha	Beta	Alpha	Beta	Count Tech	Data Reviewer
AS-0213	Perimeter	Upwind	PE03	60	9/1/21 7:55	9/1/21 17:10	555	3.3E+07	A	9/7/21	1	cpm	0.00	3.75	0.0	7.5	0.0E+00	1.0E-13	0.0%	1.7%	IH	CB
AS-0214	Perimeter	Downwind	PE04	60	9/1/21 7:51	9/1/21 17:05	554	3.3E+07	A	9/7/21	1	cpm	0.15	4.55	0.4	9.7	5.8E-15	1.3E-13	0.6%	2.2%	IH	CB
AS-0215	Perimeter	Upwind	PE03	60	9/2/21 6:51	9/2/21 17:00	609	3.7E+07	A	9/7/21	1	cpm	0.05	3.50	0.1	6.8	1.8E-15	8.3E-14	0.2%	1.4%	IH	CB
AS-0216	Perimeter	Downwind	PE04	60	9/2/21 7:00	9/2/21 16:49	589	3.5E+07	A	9/7/21	1	cpm	0.00	3.20	0.0	5.9	0.0E+00	7.5E-14	0.0%	1.3%	IH	CB
AS-0217	Perimeter	Upwind	PE03	60	9/7/21 6:58	9/7/21 17:05	607	3.6E+07	A	9/14/21	1	cpm	0.05	3.95	0.1	8.0	1.8E-15	9.9E-14	0.2%	1.7%	IH	CB
AS-0218	Perimeter	Downwind	PE04	60	9/7/21 7:10	9/7/21 17:08	598	3.6E+07	A	9/14/21	1	cpm	0.10	4.35	0.3	9.2	3.6E-15	1.1E-13	0.4%	1.9%	IH	CB
AS-0219	Perimeter	Upwind	PE03	60	9/8/21 7:35	9/8/21 17:15	580	3.5E+07	A	9/14/21	1	cpm	0.30	4.70	0.9	10.1	1.1E-14	1.3E-13	1.2%	2.2%	IH	CB
AS-0220	Perimeter	Downwind	PE04	60	9/8/21 7:40	9/8/21 17:20	580	3.5E+07	A	9/14/21	1	cpm	0.05	3.35	0.1	6.3	1.8E-15	8.2E-14	0.2%	1.4%	IH	CB
AS-0221	Perimeter	Upwind	PE03	60	9/9/21 7:38	9/9/21 17:23	585	3.5E+07	A	9/14/21	1	cpm	0.15	3.80	0.4	7.6	5.5E-15	9.8E-14	0.6%	1.6%	IH	CB
AS-0222	Perimeter	Downwind	PE04	60	9/9/21 7:42	9/9/21 17:40	598	3.6E+07	A	9/14/21	1	cpm	0.25	4.55	0.7	9.7	8.9E-15	1.2E-13	1.0%	2.0%	IH	CB
AS-0223	Perimeter	Upwind	PE03	60	9/10/21 7:35	9/10/21 17:05	570	3.4E+07	A	9/14/21	1	cpm	0.05	4.05	0.1	8.3	1.9E-15	1.1E-13	0.2%	1.8%	IH	CB
AS-0224	Perimeter	Downwind	PE04	60	9/10/21 7:41	9/10/21 17:11	570	3.4E+07	A	9/14/21	1	cpm	0.05	3.35	0.1	6.3	1.9E-15	8.3E-14	0.2%	1.4%	IH	CB
AS-0225	Perimeter	Upwind	PE03	60	9/13/21 7:40	9/13/21 17:11	571	3.4E+07	B	9/22/21	1	cpm	0.25	3.10	0.7	5.4	9.2E-15	7.1E-14	1.0%	1.2%	IH	CB
AS-0226	Perimeter	Downwind	PE04	60	9/13/21 7:35	9/13/21 17:08	573	3.4E+07	B	9/22/21	1	cpm	0.15	4.70	0.4	9.9	5.5E-15	1.3E-13	0.6%	2.2%	IH	CB
AS-0227	Perimeter	Upwind	PE03	60	9/14/21 7:32	9/14/21 17:10	578	3.5E+07	B	9/22/21	1	cpm	0.15	4.60	0.4	9.7	5.5E-15	1.3E-13	0.6%	2.1%	IH	CB
AS-0228	Perimeter	Downwind	PE04	60	9/14/21 7:38	9/14/21 17:17	579	3.5E+07	B	9/22/21	1	cpm	0.25	4.85	0.7	10.4	9.1E-15	1.3E-13	1.0%	2.2%	IH	CB
AS-0229	Perimeter	Upwind	PE03	60	9/15/21 7:45	9/15/21 17:17	572	3.4E+07	B	9/22/21	1	cpm	0.05	4.20	0.1	8.5	1.8E-15	1.1E-13	0.2%	1.9%	IH	CB
AS-0230	Perimeter	Downwind	PE04	60	9/15/21 7:30	9/15/21 17:11	581	3.5E+07	B	9/22/21	1	cpm	0.40	4.15	1.1	8.4	1.5E-14	1.1E-13	1.6%	1.8%	IH	CB
AS-0231	Perimeter	Upwind	PE03	60	9/16/21 7:42	9/16/21 17:10	568	3.4E+07	B	9/22/21	1	cpm	0.15	4.55	0.4	9.5	5.6E-15	1.3E-13	0.6%	2.1%	IH	CB
AS-0232	Perimeter	Downwind	PE04	60	9/16/21 7:38	9/16/21 17:14	576	3.5E+07	B	9/22/21	1	cpm	0.10	5.20	0.3	11.4	3.7E-15	1.5E-13	0.4%	2.5%	IH	CB
AS-0233	Perimeter	Upwind	PE03	60	9/17/21 7:31	9/17/21 17:15	584	3.5E+07	B	9/22/21	1	cpm	0.10	3.95	0.3	7.8	3.6E-15	1.0E-13	0.4%	1.7%	IH	CB
AS-0234	Perimeter	Downwind	PE04	60	9/17/21 7:30	9/17/21 17:07	577	3.5E+07	B	9/22/21	1	cpm	0.30	4.40	0.8	9.1	1.1E-14	1.2E-13	1.2%	2.0%	IH	CB
AS-0235	Perimeter	Upwind	PE03	60	9/20/21 7:40	9/20/21 17:15	575	3.4E+07	B	9/28/21	1	cpm	0.20	4.35	0.6	8.9	7.3E-15	1.2E-13	0.8%	1.9%	IH	CB
AS-0236	Perimeter	Downwind	PE04	60	9/20/21 7:37	9/20/21 17:07	570	3.4E+07	B	9/28/21	1	cpm	0.10	3.55	0.3	6.7	3.7E-15	8.8E-14	0.4%	1.5%	IH	CB
AS-0237	Perimeter	Upwind	PE03	60	9/21/21 7:41	9/21/21 17:18	577	3.5E+07	B	9/28/21	1	cpm	0.15	4.20	0.4	8.5	5.5E-15	1.1E-13	0.6%	1.8%	IH	CB
AS-0238	Perimeter	Downwind	PE04	60	9/21/21 7:50	9/21/21 17:20	570	3.4E+07	B	9/28/21	1	cpm	0.10	4.65	0.3	9.8	3.7E-15	1.3E-13	0.4%	2.2%	IH	CB
AS-0239	Perimeter	Upwind	PE03	60	9/22/21 7:00	9/22/21 17:11	611	3.7E+07	B	9/28/21	1	cpm	0.05	3.70	0.1	7.1	1.7E-15	8.7E-14	0.2%	1.5%	IH	CB
AS-0240	Perimeter	Downwind	PE04	60	9/22/21 7:41	9/22/21 17:30	589	3.5E+07	B	9/28/21	1	cpm	0.25	4.35	0.7	8.9	9.0E-15	1.1E-13	1.0%	1.9%	IH	CB
AS-0241	Perimeter	Upwind	PE03	60	9/23/21 7:15	9/23/21 17:10	595	3.6E+07	B	9/28/21	1	cpm	0.00	4.25	0.0	8.7	0.0E+00	1.1E-13	0.0%	1.8%	IH	CB
AS-0242	Perimeter	Downwind	PE04	60	9/23/21 7:00	9/23/21 17:00	600	3.6E+07	B	9/28/21	1	cpm	0.10	4.45	0.3	9.2	3.5E-15	1.2E-13	0.4%	1.9%	IH	CB
AS-0243	Perimeter	Upwind	PE03	60	9/24/21 7:10	9/24/21 17:10	600	3.6E+07	B	9/28/21	1	cpm	0.15	5.10	0.4	11.1	5.3E-15	1.4E-13	0.6%	2.3%	IH	CB
AS-0244	Perimeter	Downwind	PE04	60	9/24/21 7:00	9/24/21 17:00	600	3.6E+07	B	9/28/21	1	cpm	0.05	4.40	0.1	9.1	1.8E-15	1.1E-13	0.2%	1.9%	IH	CB
AS-0245	Perimeter	Upwind	PE03	60	9/27/21 8:15	9/27/21 17:30	555	3.3E+07	C	10/5/21	1	cpm	0.50	5.35	1.4	11.7	1.9E-14	1.6E-13	2.1%	2.6%	IH	CB
AS-0246	Perimeter	Downwind	PE04	60	9/27/21 8:10	9/27/21 17:25	555	3.3E+07	C	10/5/21	1	cpm	0.15	4.65	0.4	9.7	5.7E-15	1.3E-13	0.6%	2.2%	IH	CB
AS-0247	Perimeter	Upwind	PE03	60	9/28/21 7:39	9/28/21 17:15	576	3.5E+07	C	10/5/21	1	cpm	0.30	4.60	0.8	9.6	1.1E-14	1.2E-13	1.2%	2.1%	IH	CB
AS-0248	Perimeter	Downwind	PE04	60	9/28/21 7:45	9/28/21 17:20	575	3.4E+07	C	10/5/21	1	cpm	0.05	4.00	0.1	7.9	1.8E-15	1.0E-13	0.2%	1.7%	IH	CB
AS-0249	Perimeter	Upwind	PE03	60	9/29/21 7:40	9/29/21 17:25	585	3.5E+07	C	10/5/21	1	cpm	0.10	4.15	0.3	8.3	3.6E-15	1.1E-13	0.4%	1.8%	IH	CB
AS-0250	Perimeter	Downwind	PE04	60	9/29/21 7:35	9/29/21 17:15	580	3.5E+07	C	10/5/21	1	cpm	0.15	4.65	0.4	9.7	5.4E-15	1.3E-13	0.6%	2.1%	IH	CB
AS-0251	Perimeter	Upwind	PE03	60	9/30/21 7:30	9/30/21 17:15	585	3.5E+07	C	10/5/21	1	cpm	0.05	4.35	0.1	8.9	1.8E-15	1.1E-13	0.2%	1.9%	IH	CB
AS-0252	Perimeter	Downwind	PE04	60	9/30/21 7:35	9/30/21 17:15	580	3.5E+07	C	10/5/21	1	cpm	0.15	3.90	0.4	7.6	5.4E-15	9.8E-14	0.6%	1.6%	IH	CB

CFM to LPM Converter	
1 cfm = 28.316846592 lpm	
Enter cfm:	2.1
lpm:	60.0

Sample Types
Perimeter
Effluent

Counting Units
cnts
cpm

10 CFR 20 Appendix B Table 2 Effluent Concentrations
(listed in order of most to least restrictive radionuclide)

Alpha-Emitting Radionuclide	Retention Class	Column 1 Air (µCi/ml)
Th-232	W	4.E-15
Pu-239/240	W	2.E-14
Am-241	W	2.E-14
U-233/234	Y	5.E-14
U-235	Y	6.E-14
U-238	Y	6.E-14
Ra-226	W	9.E-13
(TBD)	(TBD)	(TBD)

Beta-Emitting Radionuclide	Retention Class	Column 1 Air (µCi/ml)
Sr-90	Y	6.E-12
Eu-152	W	3.E-11
Eu-154	W	3.E-11
Co-60	Y	5.E-11
Cs-137	D	2.E-10
(TBD)	(TBD)	(TBD)

Color Legend
No exceedance above regulatory criteria
Elevated however no exceedance above regulatory criteria
Exceedance above regulatory criteria

* Effluent concentration is a regulatory number from the NRC considered protective of the public

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