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

Air Monitoring Summary Report
November 1 to November 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
January 2022

DCN: GLBN-0005-F5271-0019

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Prepared for:

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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 November 1st through November 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 November, 1st, 2nd, 3rd, 8th, 9th, 10th, 11th, 12th ,15th, 16th, 17th, 18th, 19th, 22nd, 23rd, 24th, 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, DMW13, DMW16) and two PDRs are placed in downwind perimeter locations (DMW8, DMW9, DMW14, DMW15, 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 between the South and West directions at 5-8 miles/hour with gusts up to 10 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 November 12th, 15th, 18th, 19th, 23rd, 29th, and 30th, PDR readings were observed above project screening criteria, however, the delta between the upwind and downwind monitors remained below action levels. On these days the field team documented foggy, hazy, and or thick low hanging marine layer conditions presented in **Attachment 1**. On all days except November 30th elevated readings were noted during setup before any intrusive activities had begun. On November 30th a thick fog moved in mid-morning causing PDR visible alarm light mechanisms to flash. In conclusion, field work continued on the days discussed above as field activities were not generating visible dust and on-site atmospheric conditions triggered elevated PDR readings.

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**.

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

TSP analytical results from November 2021 did not exceed project-specific screening criteria presented in **Table 2-3**.

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

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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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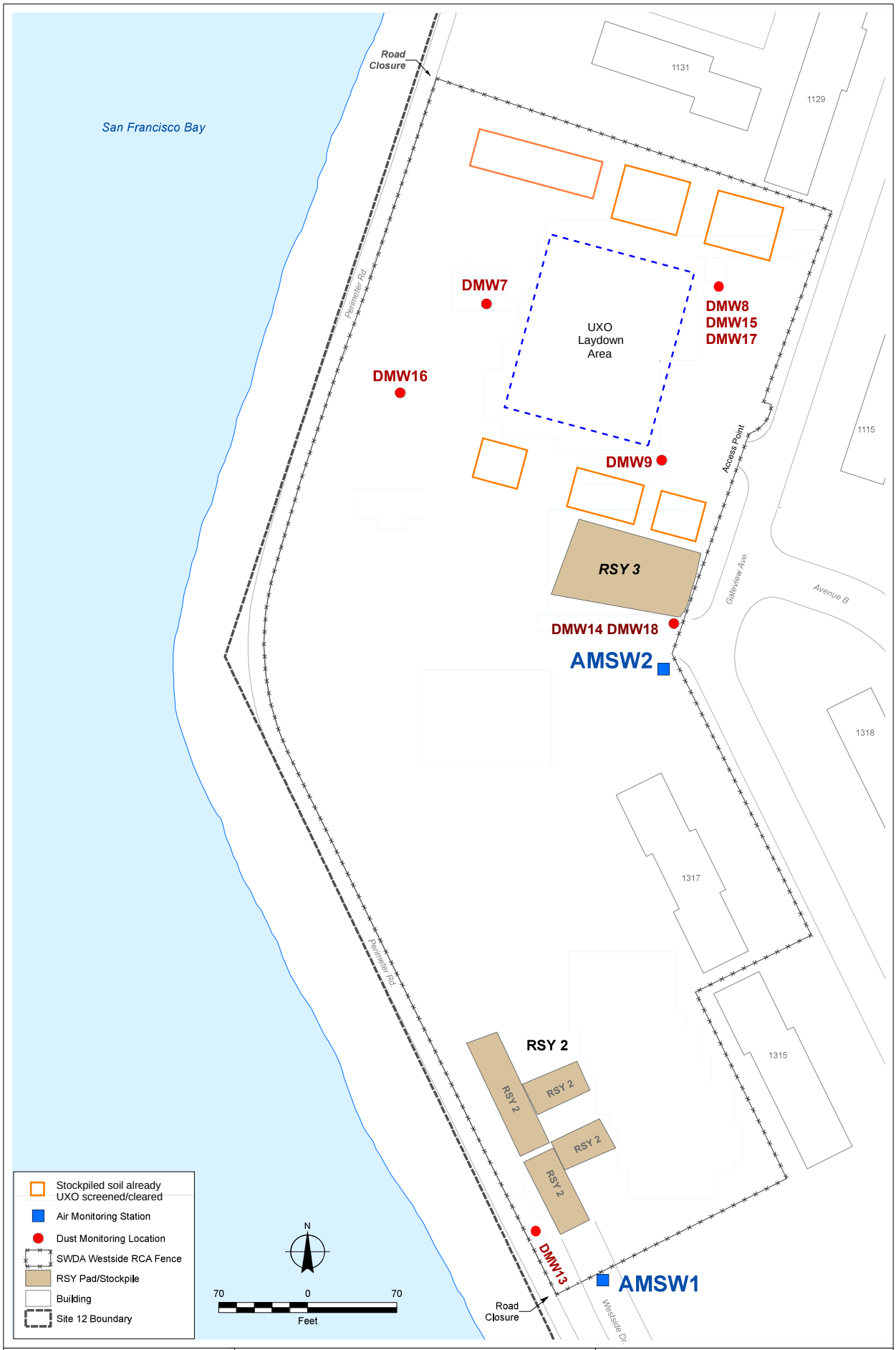

Air Monitoring Report
Phase IV Non-Time Critical Removal Action
Solid Waste Disposal Area Westside, IR Site 12
Former Naval Station Treasure Island
San Francisco, CA

Figure 1

Dust and Air Monitoring Locations IR Site 12
SWDA Westside

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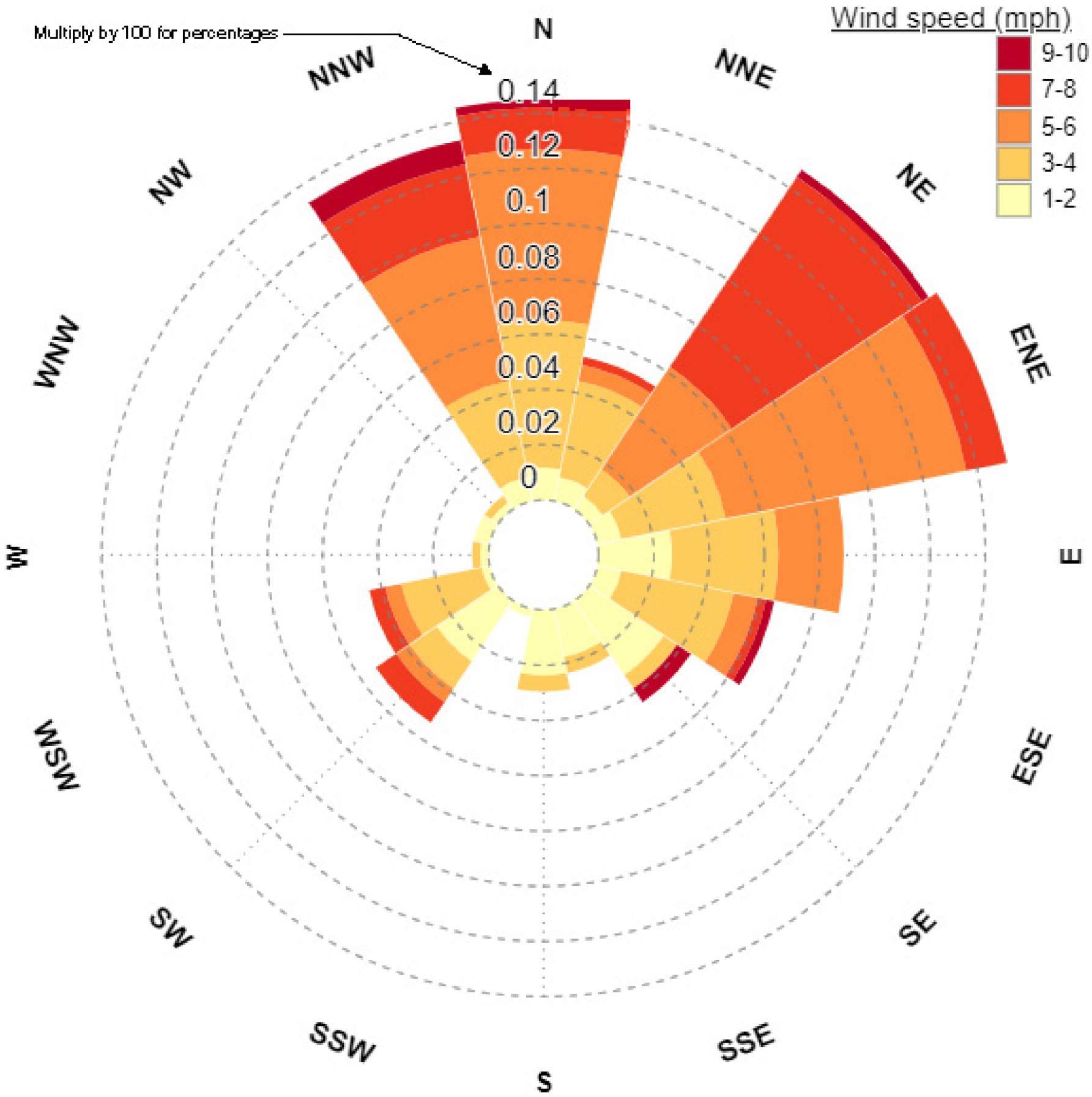

NAVFAC Naval Facilities Engineering Command	**Air Monitoring Report** **Phase IV Non-Time Critical Removal Action** Solid Waste Disposal Area Westside, IR Site 12 Former Naval Station Treasure Island San Francisco, CA	**Figure 2** Wind Rose IR Site 12 SWDA Westside

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

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Table 1-1: Personal Data-Logging Real-Time (PDR) Aerosol Montoring 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	11/1/2021	0.007	0.005	NA	Yes
DMW8	Site 12		0.005	0.003	-0.002	Yes
DMW9	Site 12		0.007	0.004	-0.001	Yes
DMW7	Site 12	11/2/2021	0.035	0.018	NA	Yes
DMW8	Site 12		0.037	0.017	-0.001	Yes
DMW9	Site 12		0.033	0.016	-0.002	Yes
DMW7	Site 12	11/3/2021	0.046	0.031	NA	Yes
DMW8	Site 12		0.048	0.033	0.002	Yes
DMW9	Site 12		0.045	0.029	-0.002	Yes
DMW7	Site 12	11/4/2021	0.026	0.018	NA	Yes
DMW8	Site 12		0.027	0.019	0.001	Yes
DMW9	Site 12		0.034	0.022	0.004	Yes
DMW7	Site 12	11/5/2021	0.021	0.015	NA	Yes
DMW8	Site 12		0.018	0.014	-0.001	Yes
DMW9	Site 12		0.022	0.016	0.001	Yes
DMW7	Site 12	11/8/2021	0.020	0.013	NA	Yes
DMW8	Site 12		0.033	0.013	0.000	Yes
DMW9	Site 12		0.022	0.013	0.000	Yes
DMW7	Site 12	11/9/2021	0.026	0.009	NA	Yes
DMW8	Site 12		0.034	0.009	0.000	Yes
DMW9	Site 12		0.025	0.007	-0.002	Yes
DMW7	Site 12	11/10/2021	0.022	0.012	NA	Yes
DMW8	Site 12		0.022	0.011	-0.001	Yes
DMW9	Site 12		0.019	0.010	-0.002	Yes
DMW16	Site 12	11/11/2021	0.028	0.025	NA	Yes
DMW17	Site 12		0.034	0.024	-0.001	Yes
DMW18	Site 12		0.030	0.024	-0.001	Yes
DMW7	Site 12		0.021	0.020	NA	Yes
DMW8	Site 12		0.035	0.025	0.005	Yes
DMW9	Site 12		0.019	0.018	-0.002	Yes
DMW7	Site 12	11/12/2021	0.069	0.038	NA	Yes
DMW8	Site 12		0.068	0.037	-0.001	Yes
DMW9	Site 12		0.063	0.035	-0.003	Yes
DMW7	Site 12	11/15/2021	0.118	0.091	NA	Yes
DMW8	Site 12		0.106	0.080	-0.011	Yes
DMW9	Site 12		0.116	0.088	-0.003	Yes
DMW7	Site 12	11/16/2021	0.044	0.025	NA	Yes
DMW8	Site 12		0.043	0.025	0.000	Yes
DMW9	Site 12		0.043	0.025	0.000	Yes
DMW16	Site 12	11/17/2021	0.031	0.024	NA	Yes
DMW17	Site 12		0.029	0.022	-0.002	Yes
DMW18	Site 12		0.031	0.021	-0.003	Yes
DMW7	Site 12		0.017	0.012	NA	Yes
DMW8	Site 12		0.044	0.011	-0.001	Yes
DMW9	Site 12		0.018	0.011	-0.001	Yes
DMW7	Site 12	11/18/2021	0.108	0.058	NA	Yes
DMW8	Site 12		0.119	0.063	0.005	Yes
DMW9	Site 12		0.107	0.058	0.000	Yes
DMW7	Site 12	11/19/2021	0.119	0.047	NA	Yes
DMW8	Site 12		0.124	0.046	-0.001	Yes
DMW9	Site 12		0.127	0.047	0.000	Yes
DMW7	Site 12	11/22/2021	0.031	0.019	NA	Yes
DMW8	Site 12		0.029	0.017	-0.002	Yes
DMW9	Site 12		0.029	0.016	-0.003	Yes
DMW16	Site 12	11/23/2021	0.073	0.026	NA	Yes
DMW17	Site 12		0.074	0.028	0.002	Yes
DMW18	Site 12		0.069	0.026	0.000	Yes
DMW16	Site 12	11/24/2021	0.015	0.009	NA	Yes
DMW17	Site 12		0.015	0.008	-0.001	Yes
DMW18	Site 12		0.021	0.010	0.001	Yes
DMW7	Site 12	11/29/2021	0.085	0.058	NA	Yes
DMW8	Site 12		0.092	0.058	0.000	Yes
DMW9	Site 12		0.106	0.057	-0.001	Yes
DMW13	Site 12	11/30/2021	0.059	0.033	NA	Yes
DMW14	Site 12		0.069	0.033	0.000	Yes
DMW15	Site 12		0.058	0.033	0.000	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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AIR MONITORING LOG

Client Name NAVFAC Date 11/1/21

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

Logged by Logan Schwing

Weather 55°F - 62°F, Cloudy. rain.

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	NW UXO screening of @pad 1	0.002	2845	• mobilize • prep
↓	DMW8	SW UXO screening of @pad 1	0.003	2726	
↓	DMW9	SW UXO screening of @pad 1	0.003	2341	
1320	DMW7		0.003		• mid day reading
↓	DMW8		0.004		
↓	DMW9		0.005		
1700	DMW7		0.003		• EOD
↓	DMW8		0.006		• wrapping up for today.
↓	DMW9		0.004		

LS 11/1/21

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AIR MONITORING LOG

Client Name NAVFAC Date 11/2/21

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

Logged by Logan Schwing

Weather 53°F - 66°F. Sunny PM.

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	0.008	2845	mob. to site
↓	DMW8	DW UXO screening @ pad 1	0.016	2341	
↓	DMW9	DW UXO screening @ pad 1	0.014	2726	
1510	DMW7		0.015		Break in afternoon.
↓	DMW8		0.017		
↓	DMW9		0.021		
1700	DMW7		0.020		end wrapping up
↓	DMW8		0.018		
↓	DMW9		0.023		
		SS			
			11/2/21		

Gilbane

AIR MONITORING LOG

Client Name NAVFAC Date 11/3/21

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

Logged by Logan Schwing

Weather 53°F - 67°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 VXO screening op.	0.014	2845	*mobilize
↓	DMW8	DW VXO screening op.	0.016	2341	
↓	DMW9	DW VXO screening op.	0.014	2726	
1350	DMW7		0.031		*
↓	DMW8		0.036		
↓	DMW9		0.038		
1700	DMW7		0.029		*wrapping up for today.
↓	DMW8		0.033		
↓	DMW9		0.032		

LS 11/3/21

AIR MONITORING LOG

Client Name NAVFAC Date 11/4/2021

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

Logged by TOM

Weather 55 - 66 °F

Instrument Type: Dust Trak II

Calibration Standards Used Factory Calibrated, zero cal in am.

Time	Dust Monitoring Station Number	Location	Instrument Reading (mg/m3)	Unit Number	Activities Remarks
0750	DMW7	upwind UXO clearing	0.020	2845	Set up
↓	DMW8	downwind UXO clearing	0.022	2726	
↓	DMW9	downwind UXO clearing	0.025	2341	
1020	DMW7		0.017		Crew on break
↓	DMW8		0.020		
↓	DMW9		0.020		
1600	DMW7		0.026		UXO clear, move Lot 34
↓	DMW8		0.02		
↓	DMW9		0.028		

11/4/21

Gilbane

AIR MONITORING LOG

Client Name NAVFAC Date 11/5/2021

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

Logged by TDR

Weather Sunny 54-64°F

Instrument Type: Dust Trak II

Calibration Standards Used Factory Calibrated, zero cal in am.

Time	Dust Monitoring Station Number	Location	Instrument Reading (mg/m3)	Unit Number	Activities, Remarks
0745	DMW7	upwind UXO Lot 35	0.016	2845	mobilize
↓	DMW8	downwind Lot35	0.020	2726	
↓	DMW9	downwind Lot35	0.016	2341	
1230	DMW7		0.020		lunch.
↓	DMW8		0.017		
↓	DMW9		0.019		
1500	DMW7		0.022		UXO clear Lot 35
↓	DMW8		0.017		
↓	DMW9		0.018		

11/5/21

Gilbane

AIR MONITORING LOG

Client Name NAVFAC Date 11/8/2021

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

Logged by TOR

Weather Sunny 50 - 62 °F

Instrument Type: Dust Trak II

Calibration Standards Used Factory Calibrated, Zero calibrate in am.

Time	Dust Monitoring Station Number	Location	Instrument Reading (mg/m3)	Unit Number	Activities, Remarks
0750	Dmw 7	upwind UXO clear Lot 35	0.019	2845	Setting up for UXO clearing
↓	Dmw 8	downwind UXO clear Lot 35	0.015	2341	
↓	Dmw 9	downwind UXO clear Lot 35	0.020	2726	
1235	Dmw 7		0.014		lunch
↓	Dmw 8		0.018		
↓	Dmw 9		0.013		
1500	Dmw 7		0.019		
↓	Dmw 8		0.015		
↓	Dmw 9		0.020		

11/8/21

Gilbane

AIR MONITORING LOG

Client Name NAVFAC Date 11/9/2021

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

Logged by TGH

Weather Rainy 49 - 62°F

Instrument Type: Dust Trak II

Calibration Standards Used Factory Calibrated, zero cal in am.

Time	Dust Monitoring Station Number	Location	Instrument Reading (mg/m3)	Unit Number	Activities, Remarks
0755	DMW7	upwind UXO clear	0.004	2845	
↓	DMW8	downwind UXO clear	0.007	2341	
↓	DMW9	downwind UXO clear	0.005	2726	
1230	DMW7		0.015		
↓	DMW8		0.019		
↓	DMW9		0.020		
1500	DMW7		0.013		
↓	DMW8		0.010		
↓	DMW9		0.012		

11/9/21

Gilbane

AIR MONITORING LOG

Client Name NAVFAC Date 11/10/21

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

Logged by Logan Schwing

Weather 51°F - 62°F, Sunny PM.

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 of	0.004	2845	-SEXP
↓	DMW8	· DW UXO Screening of	0.004	2726	
↓	DMW9	· DW UXO Screening of	0.003	2341	
1450	DMW7		0.012		· reading taken during break.
↓	DMW8		0.016		
↓	DMW9		0.014		
1700	DMW7		0.014		· wrapping up
↓	DMW8		0.012		
↓	DMW9		0.017		

LS 11/10/21

Gilbane

AIR MONITORING LOG

Client Name NAVFAC Date 11/11/21

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

Logged by Logan Schwing

Weather 50°F - 63°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	DMW16	• DW hauling RSV 3 soil to pad 1	0.028	2845	• mobilize
↓	DMW17	• DW ↓	0.030	2341	
↓	DMW18	• DW ↓	0.028	2726	
1300	DMW16		0.023		• Lunch
↓	DMW17		0.023		
↓	DMW18		0.021		
1500	DMW7	• DW UXO screening @pad 1	0.020	2845	• move dust monitors to pad 1 SOXWP
↓	DMW6	• DW UXO screening @pad 1	0.019	2341	• ream finished laying lot #36
↓	DMW9	• DW UXO screening @pad 1	0.023	2726	
1700	DMW7		0.018		• wrapping up today
↓	DMW6		0.018		
↓	DMW9		0.022		

LSS 11/11/21

Gilbane

AIR MONITORING LOG

Client Name NAVFAC Date 11/12/21

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

Logged by Logan Schwing

Weather 51°F-69°F. AM Fog (heavy). PM sunny with some fog/haze.

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 oxo screening op.	0.048	2845	• mobilize.
↓	DMW8	• DW oxo screening op	0.046	2726	• readings high during setup when no work is going on.
↓	DMW9	• DW oxo screening op.	0.050	2341	• The heavy fog is producing these high readings as no dust has been generated as of yet.
1300	DMW7		0.061		
↓	DMW8		0.068		• Team continued working
↓	DMW9		0.062		• readings still high from thick haze/lingering Fog in Area.
1700	DMW7		0.008		
↓	DMW8		0.011		• No dust. Team is hand scanning oxo material @ pad 1
↓	DMW9		0.009		

LGS 11/12/21

Gilbane

AIR MONITORING LOG

Client Name NAVFAC Date 11/15/21

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

Logged by Tom

Weather Tight fog AM / ~~Sunny~~ PM 55-45°F TR foggy allday

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	upwind UXO clear Lot 36	0.099	2845	set up before field work
↓	DMW8	Down wind UXO clear Lot 36	0.098	2726	very foggy.
↓	DMW9	Down wind UXO clear Lot 36	0.099	2341	rezero meters
~~0945~~ 0940 TR	DMW7		0.068		UXO clear RS Pad 3, but high
↓	DMW8		0.060		dust readings are
↓	DMW9		0.069		from fog. Rezero meters.
1000	DMW7		0.049		Still very foggy.
↓	DMW8		0.043		
↓	DMW9		0.044		
1400	DMW7		0.087		Dust from screening. Apply
↓	DMW8		0.077		water.
↓	DMW9		0.094		
1405	DMW7		0.040		zero dust meter & apply
↓	DMW8		0.036		water to screen pad.
↓	DMW9		0.049		Still very foggy

Gilbane

AIR MONITORING LOG

Client Name NAVFAC Date 11/16/21

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

Logged by Logan Ewing

Weather 52°F 64%. partly cloudy. Fog/Hazy.

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 op @pad 1	0.036	2845	• mobilize.
↓	DMW8	DW UXO screening op @pad 1	0.037	2726	• ~~readings somewhat~~ high for no work as of yet. Fog contributing.
↓	DMW9	DW UXO screening op @pad 1	0.038	2341	
1500	DMW7		0.014		• field team grabbed readings
↓	DMW8		0.017		• Fog dissipated.
↓	DMW9		0.011		
1700	DMW7		0.012		• wrapping up for today.
↓	DMW8		0.018		
↓	DMW9		0.017		

LGS 11/16/21

Gilbane

AIR MONITORING LOG

Client Name NAVFAC Date 11/17/21

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

Logged by Logan Schwing

Weather 51°F-64°F. Partly 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
0806	DMW16	• UW hauling Rpt 3 Soil to Pad 1	0.009	2845	• mobilize.
↓	DMW17	• DW	0.011	2341	
↓	DMW18	• DW	0.011	2726	
1300	DMW16		0.011		• Lunch.
↓	DMW17		0.013		
↓	DMW18		0.014		
1505	DMW7	• UW Pad 1 screening op.	0.014	2845	• dust mon. removed to Pad 1 locations
↓	DMW8	• DW	0.018	2341	• hauling op. complete.
↓	DMW9	• DW	0.014	2726	
1700	DMW7		0.013		• op wrapping up for today.
↓	DMW8		0.020		
↓	DMW9		0.015		

LS 11/17/21

Gilbane

AIR MONITORING LOG

Client Name NAVFAC Date 11/18/21

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

Logged by Logan Schwing

Weather 48°F-57°F. Cloudy. AM heavy fog/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 UXO screening	0.077	2845	• mobilize
↓	DMW8	•DW UXO screening	0.083	2341	• readings ~~above action limit~~ with no work as of yet. Caused by operating dust levels high from fog, giving false positive.
↓	DMW9	•DW UXO screening	0.079	2726	
1200	DMW7		0.033		• Lunch
↓	DMW8		0.038		• readings somewhat decreasing as fog lessens.
↓	DMW9		0.037		
1700	DMW7		0.029		• op finishing for total/
↓	DMW8		0.029		
↓	DMW9		0.033		
					LSS 11/18/21

Gilbane

AIR MONITORING LOG

Client Name NAVFAC Date 11/19/21

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

Logged by Logan Schwing

Weather 51°F-57°F. cloudy. Heavy fog / 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
0900	DMW7	DW UXO Screening of	0.087	2845	mobilize. fog/haze causing elevated readings before any work has begun. Team will work as high readings aren't due to onsite dust generation
↓	DMW8	DW UXO Screening of	0.088	2726	
↓	DMW9	DW UXO Screening of	0.088	2341	
1250	DMW7		0.006		Lunch.
↓	DMW8		0.008		Fog has vanished.
↓	DMW9		0.007		
1700	DMW7		0.008		wrapping up for today.
↓	DMW8		0.009		
↓	DMW9		0.013		
					LLS 11/19/21

Gilbane

AIR MONITORING LOG

Client Name NAVFAC Date 11/22/21

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

Logged by TDR

Weather 52 - 66 °F sunny

Instrument Type: Dust Trak II

Calibration Standards Used Factory Calibrated, zero meters in office

Time	Dust Monitoring Station Number	Location	Instrument Reading (mg/m3)	Unit Number	Activities, Remarks
0750	DMW7	upwind UXO screen pad	0.017	2845	mobilize before UXO clearing
↓	DMW8	downwind UXO screen pad	0.016	2726	
↓	DMW9	downwind UXO screen pad.	0.018	2341	
1000	DMW7		0.020		Break for UXO clearing.
↓	DMW8		0.026		
↓	DMW9		0.030		
1530	DMW7		0.029		UXO clearing RSy pad 3
↓	DMW8		0.024		
↓	DMW9		0.031		

TDR
11/22/21

Gilbane

AIR MONITORING LOG

Client Name NAVFAC Date 11/23/21

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

Logged by Logan Schwing

Weather 48°F - 60°F. partly cloudy. Fog/thick in AM.

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 UXO Screening & Import fill Dumping	0.050	2845	• Thick Fog/moisture causing elevated readings during setup. No intrusive work occurring.
↓	DMW17	• DW UXO Screening & Import fill dumping	0.052	2341	
↓	DMW18	• DW UXO Screening & Import fill Dumping	0.049	2726	• Team will work as Fog is giving false positive.
1300	DMW16		0.016		• Lunch
↓	DMW17		0.021		• readings have come down since Fog has dissipated.
↓	DMW18		0.018		
1706	DMW16		0.014		• Op wrapping up for today
↓	DMW17		0.015		
↓	DMW18		0.019		

CSS 11/23/21

Gilbane

AIR MONITORING LOG

Client Name NAVFAC Date 11/24/21

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

Logged by Logan Schwing

Weather 48°F - 62°F. Sunny. No 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	DMW16	DW UXO Screening of Import hauling	0.010	2845	mobilize
↓	DMW17	DW	0.011	2726	non-intrusive as of now,
↓	DMW18	DW	0.012	2341	
1305	DMW16		0.004		Lunch,
↓	DMW17		0.005		levels look good.
↓	DMW18		0.007		
1500	DMW16		0.006		top wrapping up for holiday weekend.
↓	DMW17		0.009		
↓	DMW18		0.006		

LG 11/24/21

Gilbane

AIR MONITORING LOG

Client Name NAVFAC Date 11/29/21

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

Logged by Logan Schwing

Weather 52°F-63°F. Hewy AM Fog. Afternoon haze lingering

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	WW stockpiling @pad	0.060	2845	•mobilize
↓	DMW8	•DW	0.067	2726	•AM Fog causing high readings with no activities going on. Engine working
↓	DMW9	•DW	0.070	2341	
1300	DMW7		0.058		•elevated readings still, no one is ~~onsite~~. or working. •~~Fog lingering~~
↓	DMW8		0.059		
↓	DMW9		0.058		
1700	DMW7		0.019		•readings have come down •Haze dissipated.
↓	DMW8		0.022		
↓	DMW9		0.020		

LSS 11/29/21

Gilbane

AIR MONITORING LOG

Client Name NAVFAC Date 11/30/21

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

Logged by Logan Schuring

Weather 48°F-69°F. Mid morning thick Fog. Afternoon lingering haze.

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	DMW13	-DW hauling PSY 2 Soil to pad 1	0.024	2845	-mobilize -readings look good
↓	DMW14	-DW hauling PSY 2 Soil to pad 1	0.025	2341	
↓	DMW15	-DW hauling PSY 2 Soil to pad 1	0.021	2726	
1230	DMW13		0.037		*@0930 thick fog has rolled in and team has noted visible light flashing. Team is 4 moving d.t.x. Pad techs are scanning eqv. Pavent / tools / downposting* *Continue work* pad 1.
↓	DMW14		0.039		
↓	DMW15		0.037		
1700	DMW13		0.020		
↓	DMW14		0.024		-readings have come down -wrapping up for today.
↓	DMW15		0.028		

LSS 11/30/21

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)
11/2/2021	30.13	60.34	288.89
11/3/2021	30.21	62.77	290.24
11/4/2021	30.12	61.18	289.36
11/5/2021	30.14	58.50	287.87
11/5/2021	30.10	58.16	287.68
11/9/2021	30.03	55.56	286.24
11/10/2021	30.25	57.84	287.51
11/11/2021	30.30	57.90	287.54
11/12/2021	30.23	59.36	288.35
11/12/2021	30.22	61.79	289.70
11/16/2021	30.12	55.96	286.46
11/17/2021	30.05	56.35	286.68
11/18/2021	30.07	57.12	287.11
11/19/2021	30.12	55.31	286.10
11/19/2021	30.14	56.87	286.97
11/23/2021	30.07	56.46	286.74
11/24/2021	30.10	55.52	286.22
11/24/2021	30.21	60.31	288.88
11/30/2021	30.14	55.30	286.09

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

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	23.69	11/02/2021	6.2	NA	NA
	23.27	11/03/2021	11	NA	NA
	23.66	11/04/2021	14	NA	NA
	21.64	11/05/2021	23	NA	NA
	7.09	11/05/2021	17	NA	NA
	23.29	11/09/2021	12	NA	NA
	23.84	11/10/2021	6.1	NA	NA
	24.02	11/11/2021	15	NA	NA
	21.17	11/12/2021	16	NA	NA
	6.7	11/12/2021	16	NA	NA
	23.6	11/16/2021	19	NA	NA
	23.91	11/17/2021	12	NA	NA
	22.89	11/18/2021	20	NA	NA
	21.57	11/19/2021	21	NA	NA
	7.15	11/19/2021	17	NA	NA
	23.94	11/23/2021	24	NA	NA
	22.34	11/24/2021	15	NA	NA
	5.78	11/24/2021	4.8	NA	NA
	23.52	11/30/2021	16	NA	NA
AMSW2	24.31	11/02/2021	9.3	3.1	No
	23.64	11/03/2021	16	5	No
	24.13	11/04/2021	17	3	No
	22.09	11/05/2021	29	6	No
	7.28	11/05/2021	22	5	No
	23.73	11/09/2021	16	4	No
	24.46	11/10/2021	9.6	3.5	No
	23.93	11/11/2021	20	5	No
	22.03	11/12/2021	19	3	No
	6.94	11/12/2021	20	4	No
	24.15	11/16/2021	21	2	No
	24.06	11/17/2021	15	3	No
	23.6	11/18/2021	14	-6	No
	21.51	11/19/2021	19	-2	No
	7.36	11/19/2021	16	-1	No
	24.41	11/23/2021	25	1	No
	22.7	11/24/2021	19	4	No
	5.83	11/24/2021	9.2	4.4	No
	23.84	11/30/2021	19	3	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	23.7	11/02/2021	14.041	NA	NA
	23.28	11/03/2021	19.3097	NA	NA
	23.67	11/04/2021	25.9184	NA	NA
	21.66	11/05/2021	41.0727	NA	NA
	7.08	11/05/2021	36.0521	NA	NA
	23.3	11/09/2021	9.9158	NA	NA
	22.55	11/10/2021	14.6909	NA	NA
	24.02	11/11/2021	26.487	NA	NA
	21.49	11/12/2021	25.1335	NA	NA
	6.69	11/12/2021	25.9073	NA	NA
	23.59	11/16/2021	27.6936	NA	NA
	23.92	11/17/2021	18.5787	NA	NA
	22.89	11/18/2021	27.6831	NA	NA
	21.58	11/19/2021	31.3718	NA	NA
	7.13	11/19/2021	24.7185	NA	NA
	23.96	11/23/2021	35.072	NA	NA
	22.34	11/24/2021	29.1775	NA	NA
	5.8	11/24/2021	29.3172	NA	NA
	23.53	11/30/2021	26.9253	NA	NA
AMSW2	24.3	11/02/2021	13.8771	-0.1639	No
	23.66	11/03/2021	6.2312	-13.0785	No
	23.94	11/04/2021	26.2318	0.3134	No
	22.08	11/05/2021	43.657	2.5843	No
	7.29	11/05/2021	36.5847	0.5326	No
	23.75	11/09/2021	30.2406	20.3248	No
	24.47	11/10/2021	18.5914	3.9005	No
	23.95	11/11/2021	28.0074	1.5204	No
	22.07	11/12/2021	31.5301	6.3966	No
	6.09	11/12/2021	42.6587	16.7514	No
	24.19	11/16/2021	29.0228	1.3292	No
	24.07	11/17/2021	22.8166	4.2379	No
	23.59	11/18/2021	34.832	7.1489	No
	21.51	11/19/2021	29.2403	-2.1315	No
	7.4	11/19/2021	28.2449	3.5264	No
	24.45	11/23/2021	36.2661	1.1941	No
	22.74	11/24/2021	30.5155	1.338	No
	5.87	11/24/2021	24.0463	-5.2709	No
	23.84	11/30/2021	32.856	5.9307	No

Notes:

J = estimated value

ug/m^3 = micrograms per cubic meter

NA = Not applicable

TSP = total suspended particulate

bold = results above screening criteria

* = generator/sampler malfunction

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	23.69	11/02/2021	0.00051 J	No
	23.27	11/03/2021	0.00084	No
	23.66	11/04/2021	0.00095	No
	21.64	11/05/2021	0.00027 J	No
	7.09	11/05/2021	0.0011 J	No
	23.29	11/09/2021	0.002	No
	23.84	11/10/2021	0.00095	No
	24.02	11/11/2021	0.001	No
	21.17	11/12/2021	0.0012	No
	6.7	11/12/2021	0.0016 J	No
	23.6	11/16/2021	0.0012	No
	23.91	11/17/2021	0.0011	No
	22.89	11/18/2021	0.0027	No
	21.57	11/19/2021	0.0013	No
	7.15	11/19/2021	0.0028	No
	23.94	11/23/2021	0.0029	No
	22.34	11/24/2021	0.0019	No
	5.78	11/24/2021	0.0028 J	No
	23.52	11/30/2021	0.002	No
AMSW2	24.31	11/02/2021	0.0003 J	No
	23.64	11/03/2021	0.00078	No
	24.13	11/04/2021	0.0014	No
	22.09	11/05/2021	0.0007 J	No
	7.28	11/05/2021	0.0016 J	No
	23.73	11/09/2021	0.0027	No
	24.46	11/10/2021	0.0017	No
	23.93	11/11/2021	0.0012	No
	22.03	11/12/2021	0.0019	No
	6.94	11/12/2021	0.0025	No
	24.15	11/16/2021	0.0017	No
	24.06	11/17/2021	0.0017	No
	23.6	11/18/2021	0.0032	No
	21.51	11/19/2021	0.0012	No
	7.36	11/19/2021	0.0019 J	No
	24.41	11/23/2021	0.0034	No
	22.7	11/24/2021	0.0036	No
	5.83	11/24/2021	0.0021 J	No
	23.84	11/30/2021	0.0037	No

Notes:

J = indicates an estimated value

ug/m^3 = micrograms per cubic meter

* = generator/sampler malfunction

bold = results above screening criteria

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	23.28	11/03/2021	No	0	< 0.0011	< 0.00057	< 0.00057	< 0.00057	< 0.00057	< 0.00057	< 0.00057	< 0.00057	< 0.00057	< 0.00057	< 0.00057	< 0.00057	< 0.00057	< 0.00057	< 0.00057	0.00086 J	< 0.00057	< 0.00057
	7.07	11/05/2021	No	0	0.0043	0.0025	< 0.0019	< 0.0019	< 0.0019	< 0.0019	< 0.0019	< 0.0019	< 0.0019	< 0.0019	< 0.0019	< 0.0019	< 0.0019	0.0014 J	< 0.0019	0.0067	0.0023	< 0.0019
	24.03	11/11/2021	No	0	0.0033	0.00069	< 0.00056	< 0.00056	< 0.00056	< 0.00056	< 0.00056	< 0.00056	< 0.00056	< 0.00056	< 0.00056	< 0.00056	0.00049 J	0.00051 J	< 0.00056	0.007	0.0011	0.00031 J
	23.53	11/16/2021	No	0	0.0047	0.00054 J	< 0.00056	< 0.00056	< 0.00056	< 0.00056	< 0.00056	< 0.00056	< 0.00056	< 0.00056	< 0.00056	< 0.00056	0.00041 J	0.00054 J	< 0.00056	0.0093	0.001	0.00029 J
	21.59	11/19/2021	No	0	0.002	0.00034 J	< 0.00057	< 0.00057	< 0.00057	< 0.00057	< 0.00057	< 0.00057	< 0.00057	< 0.00057	< 0.00057	< 0.00057	0.00036 J	0.00039 J	< 0.00057	0.0046	0.00061	0.00023 J
	22.26	11/24/2021	No	0	0.0061	0.00094	< 0.00055	< 0.00055	< 0.00055	< 0.00055	< 0.00055	< 0.00055	< 0.00055	< 0.00055	< 0.00055	< 0.00055	0.00056	0.00066	< 0.00055	0.013	0.0014	0.00041 J
AMSW2	23.63	11/03/2021	No	0	0.0075	0.0007	< 0.00052	0.00032 J	< 0.00052	< 0.00052	< 0.00052	< 0.00052	< 0.00052	< 0.00052	< 0.00052	< 0.00052	0.00082	0.00088	< 0.00052	0.018	0.0031	0.00052
	7.22	11/05/2021	No	0	0.0062	< 0.0017	< 0.0017	< 0.0017	< 0.0017	< 0.0017	< 0.0017	< 0.0017	< 0.0017	< 0.0017	< 0.0017	< 0.0017	< 0.0017	< 0.0017	< 0.0017	0.011	0.002	< 0.0017
	23.95	11/11/2021	No	0	0.0044	0.00052	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	0.00056	0.00067	< 0.0005	0.0064	0.0018	0.00035 J
	24.12	11/16/2021	No	0	0.0042	0.00056	< 0.00051	0.00086	< 0.00051	< 0.00051	< 0.00051	< 0.00051	< 0.00051	< 0.00051	< 0.00051	< 0.00051	0.0016	0.0013	< 0.00051	0.0071	0.0064	0.00095
	21.5	11/19/2021	No	0	0.0018	0.00028 J	< 0.00053	0.00023 J	< 0.00053	< 0.00053	< 0.00053	< 0.00053	< 0.00053	< 0.00053	< 0.00053	< 0.00053	0.00075	0.00055	< 0.00053	0.0035	0.002	0.00046 J
	22.67	11/24/2021	No	0	0.0053	0.00056	< 0.0005	0.00046 J	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	0.0012	0.0008	< 0.0005	0.011	0.0039	0.00069

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

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	23	11/04/2021	NA	0	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008
	23.25	11/09/2021	NA	0	< 0.00075	< 0.00075	< 0.00075	< 0.00075	< 0.00075	< 0.00075	< 0.00075
	21.49	11/12/2021	NA	0	< 0.00088	< 0.00088	< 0.00088	< 0.00088	< 0.00088	< 0.00088	< 0.00088
	23.93	11/17/2021	NA	0	< 0.00073	< 0.00073	< 0.00073	< 0.00073	< 0.00073	< 0.00073	< 0.00073
	7.08	11/19/2021	NA	0	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025
	5.76	11/24/2021	NA	0	< 0.0031	< 0.0031	< 0.0031	< 0.0031	< 0.0031	< 0.0031	< 0.0031
	23.55	11/30/2021	NA	0	< 0.00074	< 0.00074	< 0.00074	< 0.00074	< 0.00074	< 0.00074	< 0.00074
AMSW2	24.32	11/04/2021	NA	0	< 0.00073	< 0.00073	< 0.00073	< 0.00073	< 0.00073	< 0.00073	< 0.00073
	23.71	11/09/2021	NA	0	< 0.00072	< 0.00072	< 0.00072	< 0.00072	< 0.00072	< 0.00072	< 0.00072
	21.99	11/12/2021	NA	0	< 0.00097	< 0.00097	< 0.00097	< 0.00097	< 0.00097	< 0.00097	< 0.00097
	24.07	11/17/2021	NA	0	< 0.00071	< 0.00071	< 0.00071	< 0.00071	< 0.00071	< 0.00071	< 0.00071
	7.33	11/19/2021	NA	0	< 0.0021	< 0.0021	< 0.0021	< 0.0021	< 0.0021	< 0.0021	< 0.0021
	5.8	11/24/2021	NA	0	< 0.0028	< 0.0028	< 0.0028	< 0.0028	< 0.0028	< 0.0028	< 0.0028
	23.83	11/30/2021	NA	0	< 0.00067	< 0.00067	< 0.00067	< 0.00067	< 0.00067	< 0.00067	< 0.00067

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	23.72	11/02/2021	< 0.00000002	No
	21.63	11/05/2021	< 0.00000002	No
	23.86	11/10/2021	< 0.00000002	No
	6.64	11/12/2021	< 0.00000008	No
	22.9	11/18/2021	< 0.00000002	No
	23.9	11/23/2021	< 0.00000002	No
AMSW2	24.32	11/02/2021	< 0.00000002	No
	22.1	11/05/2021	< 0.00000002	No
	24.46	11/10/2021	< 0.00000002	No
	6.96	11/12/2021	< 0.00000007	No
	23.59	11/18/2021	< 0.00000002	No
	24.37	11/23/2021	0 J	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: 05 Jan 2022

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 Number	Model Number	Serial Number	Cal Due Date	Count Time (min)		Background (cpm)[a]		Abs Ct Eff (cnts/dis)[b]		MDC (dpm/sample)[c]	
				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	10/1/22	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)*

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: 05 Jan 2022		

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 10 Dec 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	
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 Alpha	Gross Activity Beta	Net dpm Alpha	Net dpm Beta	Activity (µCi/ml) Alpha	Activity (µCi/ml) Beta	*Effluent Conc (%) Alpha	*Effluent Conc (%) Beta	Count Tech	Data Reviewer
AS-0287	Perimeter	Upwind	PE03	60	11/1/21 7:25	11/1/21 17:30	605	3.6E+07	C	11/9/21	1	cpm	0.20	4.25	0.6	8.6	6.9E-15	1.1E-13	***0.8%***	***1.8%***	*IH*	*CB*
AS-0288	Perimeter	Downwind	PE04	60	11/1/21 7:38	11/1/21 17:39	601	3.6E+07	C	11/9/21	1	cpm	0.10	4.05	0.3	8.0	3.5E-15	1.0E-13	***0.4%***	***1.7%***	*IH*	*CB*
AS-0289	Perimeter	Upwind	PE03	60	11/2/21 7:38	11/2/21 17:20	582	3.5E+07	C	11/9/21	1	cpm	0.15	3.70	0.4	7.0	5.4E-15	9.1E-14	***0.6%***	***1.5%***	*IH*	*CB*
AS-0290	Perimeter	Downwind	PE04	60	11/2/21 7:33	11/2/21 17:15	582	3.5E+07	C	11/9/21	1	cpm	0.20	3.35	0.6	6.1	7.2E-15	7.8E-14	***0.8%***	***1.3%***	*IH*	*CB*
AS-0291	Perimeter	Upwind	PE03	60	11/3/21 7:35	11/3/21 17:15	580	3.5E+07	C	11/9/21	1	cpm	0.20	5.05	0.6	10.8	7.2E-15	1.4E-13	***0.8%***	***2.3%***	*IH*	*CB*
AS-0292	Perimeter	Downwind	PE04	60	11/3/21 7:40	11/3/21 17:21	581	3.5E+07	C	11/9/21	1	cpm	0.15	4.70	0.4	9.9	5.4E-15	1.3E-13	***0.6%***	***2.1%***	*IH*	*CB*
AS-0293	Perimeter	Upwind	PE03	60	11/4/21 7:31	11/4/21 17:30	599	3.6E+07	C	11/9/21	1	cpm	0.05	3.25	0.1	5.8	1.7E-15	7.2E-14	***0.2%***	***1.2%***	*IH*	*CB*
AS-0294	Perimeter	Downwind	PE04	60	11/4/21 7:38	11/4/21 17:38	600	3.6E+07	C	11/9/21	1	cpm	0.10	4.05	0.3	8.0	3.5E-15	1.0E-13	***0.4%***	***1.7%***	*IH*	*CB*
AS-0295	Perimeter	Upwind	PE03	60	11/5/21 7:39	11/5/21 17:20	581	3.5E+07	C	11/9/21	1	cpm	0.45	5.90	1.3	13.2	1.6E-14	1.7E-13	***1.8%***	***2.9%***	*IH*	*CB*
AS-0296	Perimeter	Downwind	PE04	60	11/5/21 7:40	11/5/21 17:25	585	3.5E+07	C	11/9/21	1	cpm	0.05	4.30	0.1	8.7	1.8E-15	1.1E-13	***0.2%***	***1.9%***	*IH*	*CB*
AS-0297	Perimeter	Upwind	PE03	60	11/8/21 7:30	11/8/21 17:00	570	3.4E+07	C	11/16/21	1	cpm	0.30	5.05	0.8	10.8	1.1E-14	1.4E-13	***1.2%***	***2.4%***	*IH*	*CB*
AS-0298	Perimeter	Downwind	PE04	60	11/8/21 7:45	11/8/21 17:07	562	3.4E+07	C	11/16/21	1	cpm	0.05	3.30	0.1	5.9	1.9E-15	7.9E-14	***0.2%***	***1.3%***	*IH*	*CB*
AS-0299	Perimeter	Upwind	PE03	60	11/9/21 7:15	11/9/21 17:01	586	3.5E+07	C	11/16/21	1	cpm	0.15	5.10	0.4	11.0	5.4E-15	1.4E-13	***0.6%***	***2.3%***	*IH*	*CB*
AS-0300	Perimeter	Downwind	PE04	60	11/9/21 7:20	11/9/21 17:05	585	3.5E+07	C	11/16/21	1	cpm	0.05	3.85	0.1	7.5	1.8E-15	9.6E-14	***0.2%***	***1.6%***	*IH*	*CB*
AS-0301	Perimeter	Upwind	PE03	60	11/10/21 7:38	11/10/21 17:30	592	3.6E+07	C	11/16/21	1	cpm	0.20	4.15	0.6	8.3	7.1E-15	1.1E-13	***0.8%***	***1.8%***	*IH*	*CB*
AS-0302	Perimeter	Downwind	PE04	60	11/10/21 7:33	11/10/21 17:25	592	3.6E+07	C	11/16/21	1	cpm	0.15	4.20	0.4	8.5	5.3E-15	1.1E-13	***0.6%***	***1.8%***	*IH*	*CB*
AS-0303	Perimeter	Upwind	PE03	60	11/11/21 7:41	11/11/21 17:28	587	3.5E+07	C	11/16/21	1	cpm	0.15	5.15	0.4	11.1	5.3E-15	1.4E-13	***0.6%***	***2.4%***	*IH*	*CB*
AS-0304	Perimeter	Downwind	PE04	60	11/11/21 7:30	11/11/21 17:30	600	3.6E+07	C	11/16/21	1	cpm	0.15	5.35	0.4	11.7	5.2E-15	1.5E-13	***0.6%***	***2.4%***	*IH*	*CB*
AS-0305	Perimeter	Upwind	PE03	60	11/12/21 7:28	11/12/21 17:30	602	3.6E+07	C	11/16/21	1	cpm	0.25	5.35	0.7	11.7	8.7E-15	1.5E-13	***1.0%***	***2.4%***	*IH*	*CB*
AS-0306	Perimeter	Downwind	PE04	60	11/12/21 7:33	11/12/21 17:38	605	3.6E+07	C	11/16/21	1	cpm	0.15	5.15	0.4	11.1	5.2E-15	1.4E-13	***0.6%***	***2.3%***	*IH*	*CB*
AS-0307	Perimeter	Upwind	PE03	60	11/15/21 7:35	11/15/21 17:35	600	3.6E+07	C	11/23/21	1	cpm	0.05	4.80	0.1	10.1	1.7E-15	1.3E-13	***0.2%***	***2.1%***	*IH*	*CB*
AS-0308	Perimeter	Downwind	PE04	60	11/15/21 7:30	11/15/21 17:30	600	3.6E+07	C	11/23/21	1	cpm	0.20	5.05	0.6	10.8	7.0E-15	1.4E-13	***0.8%***	***2.3%***	*IH*	*CB*
AS-0309	Perimeter	Upwind	PE03	60	11/16/21 7:20	11/16/21 17:15	595	3.6E+07	C	11/23/21	1	cpm	0.10	5.30	0.3	11.5	3.5E-15	1.5E-13	***0.4%***	***2.4%***	*IH*	*CB*
AS-0310	Perimeter	Downwind	PE04	60	11/16/21 7:25	11/16/21 17:20	595	3.6E+07	C	11/23/21	1	cpm	0.20	4.80	0.6	10.1	7.0E-15	1.3E-13	***0.8%***	***2.1%***	*IH*	*CB*
AS-0311	Perimeter	Upwind	PE03	60	11/17/21 7:31	11/17/21 17:28	597	3.6E+07	C	11/23/21	1	cpm	0.25	4.95	0.7	10.6	8.8E-15	1.3E-13	***1.0%***	***2.2%***	*IH*	*CB*
AS-0312	Perimeter	Downwind	PE04	60	11/17/21 7:25	11/17/21 17:15	590	3.5E+07	C	11/23/21	1	cpm	0.00	4.65	0.0	9.7	0.0E+00	1.2E-13	***0.0%***	***2.1%***	*IH*	*CB*
AS-0313	Perimeter	Upwind	PE03	60	11/18/21 7:31	11/18/21 17:30	599	3.6E+07	C	11/23/21	1	cpm	0.30	5.70	0.8	12.7	1.0E-14	1.6E-13	***1.2%***	***2.6%***	*IH*	*CB*
AS-0314	Perimeter	Downwind	PE04	60	11/18/21 7:35	11/18/21 17:38	603	3.6E+07	C	11/23/21	1	cpm	0.05	5.15	0.1	11.1	1.7E-15	1.4E-13	***0.2%***	***2.3%***	*IH*	*CB*
AS-0315	Perimeter	Upwind	PE03	60	11/19/21 7:39	11/19/21 17:17	578	3.5E+07	C	11/23/21	1	cpm	0.30	4.45	0.8	9.2	1.1E-14	1.2E-13	***1.2%***	***2.0%***	*IH*	*CB*
AS-0316	Perimeter	Downwind	PE04	60	11/19/21 7:43	11/19/21 17:20	577	3.5E+07	C	11/23/21	1	cpm	0.15	4.35	0.4	8.9	5.4E-15	1.2E-13	***0.6%***	***1.9%***	*IH*	*CB*
AS-0317	Perimeter	Upwind	PE03	60	11/22/21 7:29	11/22/21 17:30	601	3.6E+07	C	12/10/21	1	cpm	0.25	4.60	0.7	9.6	8.7E-15	1.2E-13	***1.0%***	***2.0%***	*DB*	*CB*
AS-0318	Perimeter	Downwind	PE04	60	11/22/21 7:23	11/22/21 17:38	615	3.7E+07	C	12/10/21	1	cpm	0.35	5.30	1.0	11.5	1.2E-14	1.4E-13	***1.3%***	***2.3%***	*DB*	*CB*
AS-0319	Perimeter	Upwind	PE03	60	11/23/21 7:36	11/23/21 17:25	589	3.5E+07	C	12/10/21	1	cpm	0.00	4.20	0.0	8.5	0.0E+00	1.1E-13	***0.0%***	***1.8%***	*DB*	*CB*
AS-0320	Perimeter	Downwind	PE04	60	11/23/21 7:24	11/23/21 17:30	606	3.6E+07	C	12/10/21	1	cpm	0.15	4.15	0.4	8.3	5.2E-15	1.0E-13	***0.6%***	***1.7%***	*DB*	*CB*
AS-0321	Perimeter	Upwind	PE03	60	11/24/21 7:35	11/24/21 15:30	475	2.9E+07	C	12/10/21	1	cpm	0.15	3.90	0.4	7.6	6.6E-15	1.2E-13	***0.7%***	***2.0%***	*DB*	*CB*
AS-0322	Perimeter	Downwind	PE04	60	11/24/21 7:40	11/24/21 15:35	475	2.8E+07	C	12/10/21	1	cpm	0.15	3.35	0.4	6.1	6.6E-15	9.6E-14	***0.7%***	***1.6%***	*DB*	*CB*
AS-0323	Perimeter	Upwind	PE03	60	11/29/21 7:45	11/29/21 17:30	585	3.5E+07	C	12/10/21	1	cpm	0.20	6.25	0.6	14.2	7.1E-15	1.8E-13	***0.8%***	***3.0%***	*DB*	*CB*
AS-0324	Perimeter	Downwind	PE04	60	11/29/21 7:40	11/29/21 17:25	585	3.5E+07	C	12/10/21	1	cpm	0.10	6.35	0.3	14.5	3.6E-15	1.9E-13	***0.4%***	***3.1%***	*DB*	*CB*
AS-0325	Perimeter	Upwind	PE03	60	11/30/21 7:36	11/30/21 16:48	552	3.3E+07	C	12/10/21	1	cpm	0.15	4.30	0.4	8.7	5.7E-15	1.2E-13	***0.6%***	***2.0%***	*DB*	*CB*
AS-0326	Perimeter	Downwind	PE04	60	11/30/21 7:46	11/30/21 16:50	544	3.3E+07	C	12/10/21	1	cpm	0.15	5.45	0.4	12.0	5.8E-15	1.7E-13	***0.6%***	***2.8%***	*DB*	*CB*

CFM to LPM Converter

1 cfm = 28.316846592 lpm

Enter cfm:	2.1
lpm:	60.0

Sample Types	Counting Units
Perimeter	cnts
Effluent	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