

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

# **Air Monitoring Summary Report**

# January 1 to January 31, 2022

Phase IV Non-Time Critical Removal Action, Solid Waste Disposal Area Westside, Installation Restoration Site 12 Former Naval Station Treasure Island San Francisco, CA April 2022

DCN: GLBN-0005-F5271-0021



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

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DCN: GLBN-0005-F5271-0021

#### 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

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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 Federal

HERO Human and Ecological Risk Office

IR Installation Restoration

mg/m<sup>3</sup> 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

μg/m<sup>3</sup> 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 January 1st through January 31st, 2022 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 January, 24th, 25th, 26th, 27th, and 28th for earth-moving tasks involving potentially contaminated soil. The air monitoring stations were shut down for the remainder of the month as operationally the crew was receiving clean import backfill soil and not performing earth-moving tasks involving potentially contaminated soil. Dust monitoring using the PDR stations continued through the duration of the month while the field team acquired clean import soil and began grading.

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.

Air Monitoring Summary Report #11
Phase IV NTCRA, SWDA Westside, Installation Restoration Site 12
Former Naval Station Treasure Island, San Francisco, California

1.0 Introduction

## 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 (DMW19, DMW22, DMW25) and two PDRs are placed in downwind perimeter locations (DMW20, DMW21, DMW23, DMW24, DMW26, DMW27).

#### 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 3-6 miles/hour with gusts up to 12 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. All AMS samplers run approximately 24 hours before the sample is collected however per FCR04 the final set of samples for the week will be collected on the last workday of the week once intrusive activities have finished for the day. These samples will have a runtime of 8-10 hours to cover the full work shift which meets the minimum 4-hour runtime required for lab analysis. Two sets of samples will be sent to the lab for examination on that final workday of the week. The results will be adjusted for the reduced runtime and fully comparable against project screening criteria.

#### 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 January 6<sup>th</sup>, 10<sup>th</sup>, 12<sup>th</sup>, 13<sup>th</sup>, 17<sup>th</sup>, 19<sup>th</sup>, 20<sup>th</sup>, 24<sup>th</sup>, 25<sup>th</sup>, 26<sup>th</sup>, 27<sup>th</sup>, 28<sup>th</sup>, and 31<sup>st</sup> 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 the days mentioned above, elevated or high readings were noted during setup before any intrusive activities had begun. In conclusion, field work continued as field activities were not generating visible dust and onsite atmospheric conditions generated elevated PDR data.

**Table 1: Dust Monitoring Project Action Levels** 

Method	Monitoring Location	Monitoring Frequency <sup>a</sup>	Action Level b	Action
PDR	Near Workers' Breathing Zones (typically on equipment)	Periodically <sup>c</sup>	<2.0 mg/m <sup>3</sup> >2.0 mg/m <sup>3</sup>	<2.0 mg/m <sup>3</sup> 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 <sup>3</sup> .
	Job Site Perimeter	Continuously	<1.0 mg/m <sup>3</sup> >1.0 mg/m <sup>3</sup>	Continue work. STOP work, apply water or other dust suppression methods until levels decrease below 1.0 mg/m <sup>3</sup>

#### Notes:

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

- 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<sup>3</sup> 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 <sup>3</sup>	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		
PCBsa	NA	TI Site 12 Dust Action Level		
Dioxin <sup>a</sup>	1E+07	TI Site 12 Chronic Dust Action Level		
Radiological (Ra-226)	10% of DAC <sup>c</sup>	Occupational and public air concentration limits for Ra-226 published in 10 Code of Federal Regulations Part 20.		

#### Notes:

- 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<sup>3</sup> 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<sup>3</sup> 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<sup>3</sup> micrograms per cubic meter

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4.0 Dust and Air Monitoring Methods

### 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/m³) 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 January 2022 did not exceed the project-specific screening criteria presented in **Table 2-2**.

TSP analytical results from January 2022 did not exceed project-specific screening criteria presented in **Table 2-3**.

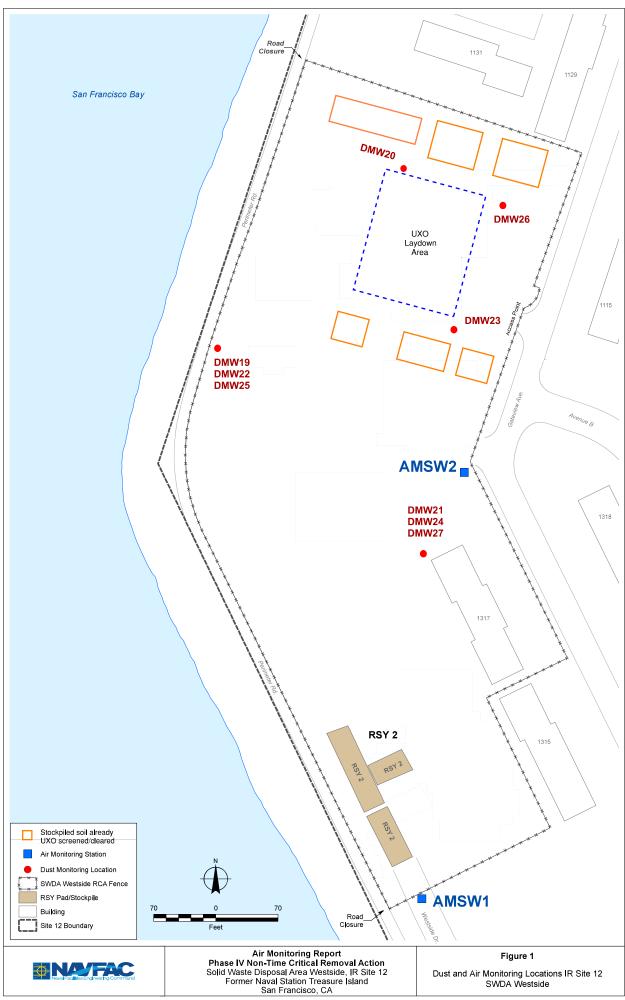
Metals (lead), PAHs, total PCBs, and dioxin analytical results from January 2022, did not exceed the project-specific screening criteria presented in **Table 2-4** through **Table 2-7**.

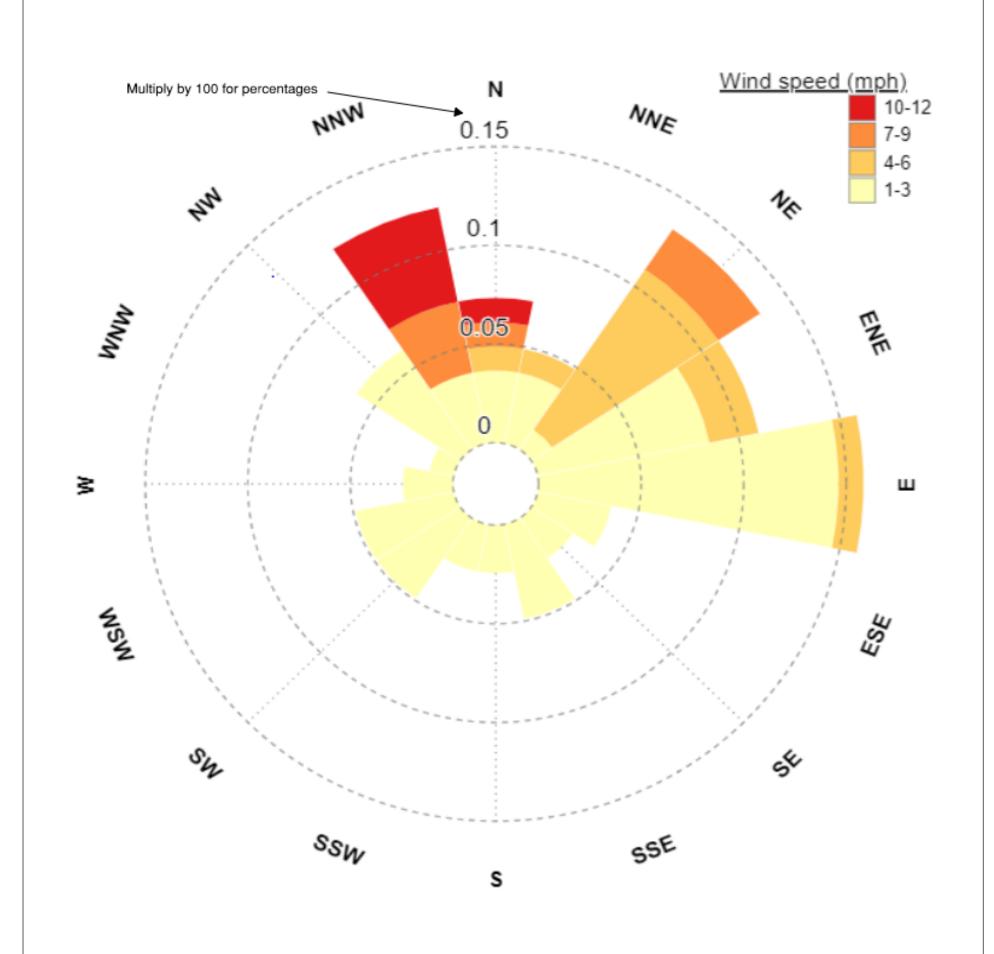
On January 25<sup>th</sup>, 2022 the field team documented a generator malfunction at the upwind AMSW2 air sampler. The downwind generator turned off after business hours due to an undetermined origin shutting off the AMS stations overnight. The generator was turned back on when field personnel arrived onsite the next morning and the stations operated according to design. The sample media runtime ran greater than the four-hour minimum so the samples were sent for analysis. The lab results were adjusted for the smaller runtime which makes the data representative.

#### 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.

# **FIGURES**







Wind Rose IR Site 12 SWDA Westside

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

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

DustTrak Unit	IR Site	Date	Maximum <sup>1</sup> (mg/m³)	Average <sup>1</sup> (mg/m³)	Delta Between Upwind and Downwind Stations (mg/m³)	Below action level? (0.050 mg/m³) (Yes/No)
DMW19	Site 12		0.033	0.010	NA	Yes
DMW20	Site 12	1/3/2022	0.029	0.017	0.007	Yes
DMW21	Site 12		0.025	0.009	-0.001	Yes
DMW19	Site 12		0.016	0.012	NA NA	Yes
DMW20	Site 12	1/4/2022	0.018	0.013	0.001	Yes
DMW21	Site 12	., .,	0.016	0.012	0.000	Yes
DMW19	Site 12		0.032	0.015	NA	Yes
DMW20	Site 12	1/5/2022	0.029	0.016	0.001	Yes
DMW21	Site 12	17072022	0.027	0.015	0.000	Yes
DMW19	Site 12		0.055	0.036	NA	Yes
DMW20	Site 12	1/6/2022	0.063	0.042	0.006	Yes
DMW21	Site 12	1/0/2022	0.052	0.034	-0.002	Yes
DMW19	Site 12		0.032	0.012	-0.002 NA	Yes
DMW20	Site 12	1/7/2022	0.019	0.012	-0.003	Yes
DMW21	Site 12	1///2022	0.017	0.009	-0.005	
						Yes
DMW19	Site 12	1/10/2022	0.053	0.024	NA 0.006	Yes
DMW20 DMW21	Site 12 Site 12	1/10/2022	0.070	0.030	0.006	Yes
			0.064	0.033	0.009	Yes
DMW19	Site 12	4/44/0000	0.043	0.029	NA 0.007	Yes
DMW20	Site 12	1/11/2022	0.049	0.036	0.007	Yes
DMW21	Site 12		0.048	0.032	0.003	Yes
DMW19	Site 12		0.094	0.078	NA	Yes
DMW20	Site 12	1/12/2022	0.122	0.092	0.014	Yes
DMW21	Site 12		0.103	0.092	0.014	Yes
DMW19	Site 12		0.124	0.094	NA	Yes
DMW20	Site 12	1/13/2022	0.146	0.117	0.023	Yes
DMW21	Site 12		0.129	0.103	0.009	Yes
DMW19	Site 12		0.020	0.017	NA	Yes
DMW20	Site 12	1/14/2022	0.023	0.019	0.002	Yes
DMW21	Site 12		0.033	0.023	0.006	Yes
DMW19	Site 12		0.057	0.030	NA	Yes
DMW20	Site 12	1/17/2022	0.057	0.032	0.002	Yes
DMW21	Site 12		0.069	0.036	0.006	Yes
DMW19	Site 12		0.032	0.020	NA	Yes
DMW20	Site 12	1/18/2022	0.035	0.021	0.001	Yes
DMW21	Site 12		0.039	0.022	0.002	Yes
DMW19	Site 12		0.085	0.055	NA NA	Yes
DMW20	Site 12	1/19/2022	0.089	0.060	0.005	Yes
DMW21	Site 12	.,,,,,,,,,,,,	0.094	0.059	0.004	Yes
DMW19	Site 12		0.052	0.038	NA NA	Yes
DMW20	Site 12	1/20/2022	0.057	0.043	0.005	Yes
DMW21	Site 12	1,20,2022	0.065	0.044	0.005	Yes
DMW19	Site 12		0.057	0.044	NA	Yes
DMW20	Site 12	1/24/2022	0.060	0.009	-0.002	Yes
DMW20	Site 12	112412022	0.060	0.009	0.001	Yes
DMW21	Site 12		0.060	0.012	0.001 NA	
DMW23	Site 12	1/25/2022	0.101	0.050	0.007	Yes Yes
DMW24	Site 12	1/23/2022	0.109	0.057	0.007	Yes
DMW22	Site 12		0.108	0.058	0.008 NA	
DMW23	Site 12	1/26/2022	0.092	0.072	0.006	Yes Yes
DMW24	Site 12	1/20/2022	0.092	0.078	0.006	Yes
DMW22	Site 12		0.107	0.086	0.014 NA	Yes
	Site 12	1/27/2022				
DMW23 DMW24		1/2//2022	0.097	0.062	0.000	Yes
DMW22	Site 12 Site 12		0.100 0.072	0.073 0.052	0.011 NA	Yes Yes
DMW23		1/28/2022	0.072	0.052	0.002	Yes
DMW24	Site 12 Site 12	1/28/2022	0.063	0.054	0.002	Yes
DMW25	Site 12		0.067	0.036	0.004 NA	Yes
		1/21/2022				
DMW26 DMW27	Site 12 Site 12	1/31/2022	0.072 0.075	0.026 0.029	0.002 0.005	Yes Yes
Notes:	Site 12		0.075	0.029	0.005	162

**bold** = results above screening criteria mg/m³ = milligrams per cubic meter NA = not applicable

<sup>&</sup>lt;sup>1</sup> Maximum and average dust readings from daily PDR data downloads. Data are available upon request.



# AIR MONITORING LOG Client Name NAVFAC Date 1/3/2022 Project No. J310000800 SWDA Westside, Site 12, Treasure Island Page 1 of 1

Weather Slightly cloudy, hazy 45-55°F

Instrument Type: Dust Trak II

Calibratio	Calibration Standards Used Factory Calibrated						
Time	Dust Monitoring Station Number	Location	Instrument Reading (mg/m3)	Unit Number	Activities, Remarks		
0800	Dmw19	Westside Davin wind Davin wind	0.018	0562	site set up		
	Dm W20	Davi wind wectside	0.021	2341			
V	pmw21	Downwind West side	0.020	2281			
1300	DMW19		0.005		Moving import		
	DMW20		0.013				
1	DMW21		0.006				
1500	DMW19		0.003		Moving in port		
	DMW20		0.011				
V	DMW21		0.010				
					A22		
				A.			
				1/3	12022		



		NITORING L				1/4/2:	
Client Name NAVFAC Date							
	Project N	lo <u>. J310000</u> 80	00 SWDA Westside, Sit	e 12, Treasure	e Island Pa	igeof	
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	weather.	494	- 55 F. Moudy	4111 19117	14.01		_
	Instrume Calibratic	nt Type: <u>Dus</u>	t Trak II Jsed <u>Factory Calibrate</u>				_
Γ	Cambratic	Dust	Jseu_ <u>Factory Calibrated</u>	<u> </u>			ī.
	Time	Monitoring	1	Instrument	Unit	Activities,	
	Time	Station	Location	Reading (mg/m3)	Number	Remarks	
-		Number	A CALLERY				
-	0800	DMW19	Spread of	0.008	0562	oopsetop.	
-		DMW20	Din Import fill	0.010	2281	mobilize.	
-		DMW21	· Du Drufy & ful for	0.011	2341		
Ľ	1315	DMW19	,	0.012		· ream accepting	01.17
L		DMW20		0.014			
L		DWMSI		0.011			
L	1500	DMW19		0.013		operation wrappin	y up for today
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# AIR MONITORING LOG

Client Name NAVFAC	Date	1/5/27
Project No. J310000800 SWDA Westside, Site 12, Treas		Page 1 of 1
Logged by Logan Echwing		
Weather 49°F-55°F, cloudy, AM	Sowe	Fog
Instrument Type: _Dust Trak I!		
Calibration Standards Used Factory Calibrated		

Calibratio	n Standards U	Jsed Factory Calibrated	1			
Time	Dust Monitoring Station Number	Location	Instrument Reading (mg/m3)	Unit Number	Activities, Remarks	
0800	DMWIG	grading of	0.023	0562	· mobilize.	
	DMW20		0.027	2281		
	DWMSI	·DW	0.029	2341		4
1300	DMW19		0.011		· mid-day dust	eadings
	DMW20		0.012			
	DMW21		0.012			
1500	DAW19		0.002		of finishing for to	ilas
	DMUVZO		0.005			
-	MW21		0.003			
		-				
		5	/			
			5/			
			127			



#### Project No. J310000800 SWDA Westside, Site 12, Treasure Island Page of Logged by Schwing Weather **AIR MONITORING LOG** Logged by Legan Schwing Weather 50°F-54°t. Cloud'. Foggy K Hazy. Instrument Type: Dust Trak II Calibration Standards Used Factory Calibrated Dust Instrument Monitoring Unit Activities, Time Location Reading Station Number Remarks (mg/m3)Number the day as we dreadings to feet any dist has moved to gl Haze carrings for the contract of the contract of the contract of the generator of these high readings. K grading il 0800 0562 DMWIG 0.052 DMWIZO · Dw 0.056 2251 DMWZI (DW 0.057 2341 1230 PIWMO 0.029 · readings have come down ab. x DMWZo 0.035 15WMG 0.030 'cl wraffing of for the day PIWMG 1500 0.017 DMW20 0.017 15WMG 0.020



The state of the s	Control of the second					
	NITORING L				11-1-0	
Client Name NAVFAC Date 1721						
Project N	o <u>. J31000080</u>	00 SWDA Westside, Site	e 12, Treasur	<u>e Island</u> Pa	ageof	
Logged b	y	gan schwing	1 4 /			
Weather		-53°F. Cloud	y. 1.94+	rain.		=/4
	nt Type: <u>Dus</u>					_
Calibratio	Dust	Jsed <u>Factory Calibrated</u>		T	T	7
Time	Monitoring Station	Location	Instrument Reading	Unit Number	Activities, Remarks	
	Number		(mg/m3)		_	
0900	DMW19	grading op.	0.019	0562	: mobilize.	
	DMW20	· Dw Impert fill	0.021	2281		
-	DUMMSI	DW trufort fill	0.015	2341	× ×	
1245	DMW19		0.009	ļ,	omid-day ve	ading s.
	DMW20		0.010	0.010	17/22	
<b>+</b>	DMW21		0.012			
1500	DMW19		0.010		, of finishing	for tuday,
	DMW20		0.012			
-	DMWZI		0.015			1
						1
						1
						1
						[
						]
						1
		(55)	/			-
4 4	2			/		]
	. ,		17/			
				-2		1
						8 =
						12



# **AIR MONITORING LOG**

Client Name NAVFAC	Date	1/10/22
Project No. J310000800 SWDA Westside, Site 12, Tre-	asure Island	Page of
Logged by Logan schwing		
Weather 145°F-57°F. Sunny.		
Instrument Type: Dust Trak II		

Calibration Standards Used\_Factory Calibrated

Calibra	tion Standards U	Jsed_Factory Calibrated	b			
Time	Number	Location	Instrument Reading (mg/m3)	Unit Number	Activities, Remarks	
0400	DMW19	on Import fill for and ing of	0.026	1280	mobilize	
	DMWZO	6 DW	0.023	2341		
1	DWM51	· DW	0.026	2281		
1300			0.015		import fill	
1	PMW20		0.019			
V	DMW21		0.014			
1445			0.008		Import fill	
	Dmulc		800.0			
	DMW21		0.007			
			72			
		199.			1	
				1/10	22	
				/ /		
		-				
					1	



	MITORING L				1 12-22
	ame <u>NAVFAC</u>			Date/_	11/2022
Project N	lo <u>. J31000080</u>	00 SWDA Westside, Sit	e 12, Treasure	e Island Pa	ge/_of(_
Logged b	оу	Jon			
	Sunn		o F		
	nt Type: <u>Dus</u>	LITAKII			
Calibration	on Standards U	Jsed Factory Calibrated	1,2ero	cal iv	roffice
1	Dust		Instrument		
Time	Monitoring	Location	Reading	Unit	Activities,
	Station Number		(mg/m3)	Number	Remarks
6711		upwind			Cat 100 for
0745	Dmw19	import till	0.024		set up for mout
-	DMWZO	downwind out		2281	
4	DMWZI	import fill	0.025	2341	
1115	Dmw19		0.023		import fill
-	Dmw20		0.026		
V	Dm W21		0.025		
1450	Dmw19		0.020		import fill
	DMW20		0.023		
V	DMWZI		0.026		
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				1/11	12022
				/	

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All agent &		-	
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		100 100 1	100

#### AIR MONITORING LOG Client Name NAVFAC Project / No. T.I. Westside Phase IV NTCRA / J310000800 Logged by Weather 45 - 6/0F Smoggy-misty, Slightly Sunny Instrument Type: Dust Trak II Calibration Standards Used Factory Calibrated Zero Cal in of Dust Instrument Monitoring Unit Activities Time Location Reading Station Number Remarks (mg/m3) Number Set up before import fill. Air 15 extremely upwing import 0800 Dmw19 0.092 1280 Dmw20 down wind 2281 0.100 misty-smagg DMW21 2341 Rezero meter in the freld DMW19 Rendings Still DMWZD 0.089 DMWZ Dmw19 fill material but high readings aren't from field activities. 0.076 DMW20 0,100 DMWZI DMW19 0.080 high reading 0.090 DMW20 DMWZL 0.091 Smoggy/misty Dmw19 Dmw20 Not from field DMW 21 activities.



#### AIR MONITORING LOG Client Name NAVFAC Project / No. T.I. Westside Phase IV NTCRA / J310000800 Weather Instrument Type: Dust Trak II , Zevo Calibration Standards Used Factory Calibrated Dust Instrument Monitoring Unit Activities Time Location Reading Station Number Remarks (mg/m3) Number upwind of Before Import 0755 pmw19 0.121. 1280 import fill alown wind import fill DMW20 2341 downwind import fill DMW21 2281 Pield Still 0820 Dmw19 0.079 0.084 Dmw20 Dinwel 0.085 Import fill Dmw19 1300 0,040 0.047 Dmu120 DMWZI 0.046 Import fill 1445 0.027 Dmw19 0.029 DMW20 0.032 DMW21



AIR MO	NITORING L	.OG			,	
Client Na	me NAVFAC			Date/	14/22	
Project N	lo <u>. J3100008</u> 0	00 SWDA Westside, Site	e 12, Treasure	e Island Pa	ge of	
Logged b	by Loga	n Schwing F-60°F. Partly			9	
Weather	440	F-60°F Partly	cloudy.			
	nt Type: <u>Dus</u>					•
Calibration	n Standards l	Jsed Factory Calibrated	<u></u>			_
Time	Dust Monitoring Station Number	Location	Instrument Reading (mg/m3)	Unit Number	Activities, Remarks	
0800	DAW19	grading of	0.015	1280	cmobilize	]
	DAW 20	·DW	0.016	2281		]
7	DMW21	· DW	0.020	2341		
1230	DMW19		0,011		· mid-day need.	eg 5
	DMW20		0.013			21
	PWMSI		0.017			
1500	DMW19		0.013		· of wraffing of f	or week.
	DMW20		0.015			
	DMW21		0.015			
		455	/			
			11/			
			1//22			
			00			
					8	



Client Name NAVFAC  Project No. J310000800 SWDA Westside, Site 12, Treasure Island Page of Logged by Loggen Schwing Weather Hg F GO F, Partly Cloudy. Am haze Fog I ght drizz R Instrument Type: Dust Trak II  Calibration Standards Used Factory Calibrated  Time Nonitoring Station Number Reading (mg/m3)  Number Remarks  DNW 20 DM Infort Fill 0.048 1280 Fog Haze causing plausted resulting and work has be provided for the product of the produc	
Project No. J310000800 SWDA Westside, Site 12, Treasure Island Page of Logged by Cown G Weather Go F. Partly Cloudy. AM Laze Fag 1, 9ht drizz R Instrument Type: Dust Trak II  Calibration Standards Used Factory Calibrated    Dust Monitoring Station Number   Location Reading (mg/m3)   Unit Number   Remarks	
Weather Go F, Partly Cloudy. AM haze Fog , I ght drizz R Instrument Type: Dust Trak II  Calibration Standards Used Factory Calibrated  Time Dust Monitoring Station Number Reading (mg/m3) Unit Number Remarks  Dust Monitoring Station Number Remarks  Distrument Reading (mg/m3) Unit Number Remarks  Dawl 20 Dawl Fill 0.048 1280 Fog Haze causing plansfed are bother and works has be predicted from the predicted for the predicted	
Calibration Standards Used Factory Calibrated  Time Dust Monitoring Station Number Location Reading (mg/m3)  Number Remarks  DMW 20 DW Imfort Lill 0.047 2281 Conxinux work as False former, Causing and Market Fill 0.047 2281 Conxinux work as False former, Causing and Conxinux work as False former, Causing and Causing and Conxinux work as False former, Causing and C	
Calibration Standards Used Factory Calibrated  Time Dust Monitoring Station Number Location Reading (mg/m3)  Number Remarks  DMW 20 DW Imfort Lill 0.047 2281 Conxinux work as False former, Causing and Market Fill 0.047 2281 Conxinux work as False former, Causing and Conxinux work as False former, Causing and Causing and Conxinux work as False former, Causing and C	
Time Dust Monitoring Station Number Location Reading (mg/m3) Unit Number Remarks  0800 DMW19 DW Import fill 0.048 1280 For Have causing plenated are bounded for the surface of the surfac	
Time Monitoring Station Number Location Reading (mg/m3) Unit Number Remarks  0800 DMW 9 UW Funfort fill 0.048 1280 For Haze causing planeted or hoter and work has been bounded for the product of the positive of the positiv	
Number (mg/m3) Number Remarks	
DMW21 DW DWGG + till do 0.053 2341	,
DMW21 DW DWGG + till do 0.053 2341	adings
DMW21 DW DWG + till do 0.053 234/	5.49
1230 DMW 19 0.017 mid-day readings. Fog has dissipated not be have found down quite	ad:uc s
DMW20 0.019 have Court down quite	1.4.
1 MW21 0.020	
1500 January 1500 0.018 OP finishing for bulay.	
) MW20 0.0/9	
DMW21 0.021	
////	
1/22	



AIR MO	NITORING L	. <u>OG</u>			1/10/102	
	me <u>NAVFAC</u>			Date	1/18/22	
Project N	lo <u>. J3100008</u>	00 SWDA Westside, Site	e 12. Treasure	e Island Pa	agel_of	
	$\frac{1}{5}$ $\frac{1}$	ian Schwing				
Weather		=-46°F. Partly	V Cloudy.			_
	nt Type: <u>Dus</u>					_
Calibratio		Jsed <u>Factory Calibrated</u>	<u></u>			=
Time	Dust Monitoring Station Number	Location	Instrument Reading (mg/m3)	Unit Number	Activities, Remarks	
0800	DMW19	grading of.	0-026	1280	·site setup	,
	DMWZO	DW Import of!	0.024	234/	· prepare for truc	t5
	DMW21	· DW furfort fill &	0.027	2281		
1245	DMW19		0.013		· mid-day reading	5
	DMW20		0.013			
	DMWZI		0.015			
1500	Dmw19		0.010		eop wrapping up for	tou
	DUMSO		0.010			
	DMW21		0.011			
			,			
		100				
		22	1/			1).
			1/18/			la .
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	And the second second second					
AIR MO	NITORING L	.OG		}	110/02	
	me <u>NAVFAC</u>				119/22	
		00 SWDA Westside, Site	e 12, Treasure	e Island Pa	geof	
Logged b		an Ehwing			1 1 1	
Weather_			y Heavy	Fog in	AM. Cloudy	-
	nt Type: <u>Dus</u>					_
Calibratic		Jsed <u>Factory Calibrated</u>	I		T	ā
Time	Dust Monitoring Station Number	Location	Instrument Reading (mg/m3)	Unit Number	Activities, Remarks	
0800	DNW19	*UW grading 1 whi	0.055	1280	· readings above action heavy fog I marine	1. mits dut to 19xel at the islan
	DMWZO	·DM grading/ Finfort	0.056	2341	rfalse positive due to ronxinue work as penerating visible	FOG. WOSK isn't
	DMWZ	· Dw grading I Trupost	0.053	2281		1
1330	DWMIA		0.046		"mid-day readings	
	DMW 20		0.048		readings still e No v. sible o Fog lingering.	ust,
1	DWM51		0.046		· Fog lingering.	
1500	DMW19		0.017		of wrapping up for	today.
	DMW20		0.019			
	DWM51		0.015			
		•				
		555	1			
			19/2			
			~~~	-		
						l



	NITORING L		-	\ \f	120102		
Client Name NAVFAC Date 120 22  Project No. J310000800 SWDA Westside, Site 12, Treasure Island Page of 1							
Loggod	Project No. J310000800 SWDA Westside, Site 12, Treasure Island Page of Logged by Logan Schwing Weather 45°F - 57°F, M.5+", Fog.						
Weather		4505-5-0	- 10 54	Es Es			
		1) F 3 /	F. 101.51	1. 10g ·			
	nt Type: <u>Dust</u>	L ITAK II				-	
Calibratio		Jsed <u>Factory Calibrated</u>	<u>d</u>				
Time	Dust Monitoring Station Number	Location	Instrument Reading (mg/m3)	Unit Number	Activities, Remarks		
0800	DMW19	ou Durat Lill	0.023	1280	could affect vera	l. ng 5 Hg.	
$\Box$	DMW20	DW Import Fill grading of	0.024	2341	1 .		
	DMW21	·DW Importfill	0.026	2281	OUT deusy A	seyul gproseny	
1315	Daw19	, ,	0.055		oreadings high from	ucres us	
	DAWZO		0.056		oreadings highfrom huze 5till ousite, Heew still settling	Fog His AN	
1 4	DMWZI		0.054				
1560	DMW19		0.038		· Lastreading,		
	DMW20		0.045		reading & Still	elcroted,	
	DMW21		0.041		· recolings still	1-V.X. 25	
7	-0:				2 190, 00	Fog lingering.	
				<u> </u>			
		16		/			
			> //	1	`		
			1/4	1/-			
				162			



#### AIR MONITORING LOG Project No. J310000800 SWDA Westside, Site 12, Treasure Island Page \ of \ Logged by \ \ \logged \text{Schwing} Logged by Logan schwing Weather 45°F-57°F. Cloudy thick AM Fog / Haze lingering through afternoon. Calibration Standards Used Factory Calibrated Dust Instrument Monitoring Unit Activities. Time Location Reading Station Number Remarks (mg/m3)Number : UN Dufort fill t othick reg Causing elevated readings before any with his begun no dust being generated DMW19 0.071 1280 0800 DMWZD DW 0.067 2341 · Begin work, Fog giving false positive. DMW21 0.068 'DW 2281 · elevised reading as of now due 1340 DMW19 0.047 to Fog. DMWZO 0.053 -delta onder acx on level. DMW21 0.053 · no work as of now and 1515 0.039 DMW19 recedings quite elevated. DMWZO 0.045 Heavy equipment is parked D/11W21 0,041



AIR MO	NITORING L	OG				
Client Na	me NAVFAC	00 SWDA Westside, Site		Date (	125/22	
Project N	o. J31000080	00 SWDA Westside, Site	= 12. Treasure	Island Pa	ge ) of (	
Logged b	y Log.	an Schwing			90	
Weather_	449	-53°F. Partly	cloudy.	Heavy	Feg.	
Instrumer	nt Type: <u>Dus</u> t	Trak II				
Calibratio	n Standards l	Jsed Factory Calibrated	<u> </u>			_
Time	Dust Monitoring Station Number	Location	Instrument Reading (mg/m3)	Unit Number	Activities, Remarks	
0800	DMW22	material by pad I laydou to the Rad screening	m 0.044	1280	· Henry For Causing before any w	high readings
	DMW23	to the Rad screening	0.046	2281		1
1	DMW24	'DW I	0.043	2341	· work will consin	on level.
1240	DMW22		0.088		athick Fog has go	Hen warsp
~	DMW23		0.090		limit due to	above ecx. En
1	DMW24		0.097		elevated levely finite due to delta well below . Continue wort.	action linit
1515	DMWZZ		0.016		-of finishing for	Loday.
	DMW23		0.017	-	readings have	and down
1	DMWZY		0.014		gonp.	as fog 15
					3	
			1	,		
			25 1	100	(	
				( 6)	2 0	
				/	66	



AIR WO	NITORING L	<u>od</u>		. 1	- / 1 -	
Client Na	me <u>NAVFAC</u>	00 SWDA Westside, Site		Date/	26122	
Project N	o <u>. J31000080</u>	00 SWDA Westside, Site	e 12, Treasure	<u>Island</u> Pa	ge <u>\</u> of <u>\</u>	
Logged b	y Log	an schwing				. / M
Weather_		42°F-57°F, M	lorning Fo	9/ Haze	. Sunny after tog	burned off.
Instrumer	nt Type: _Dust	t Trak II			<i>J</i>	•
Calibratio	n Standards U	Jsed Factory Calibrated	1			_
	Dust					Ī
Thus .	Monitoring		Instrument	Unit	Activities,	
Time	Station	Location	Reading	Number	Remarks	
· ·	Number		(mg/m3)			,
24.00	DMW22	ouw grading boilding	0.057	1280	· Fog Causing ele above action	nted readings
0800	DIMOCE	Rad survey avegs/			above acxic	1.14.45
		havling material to Dutto rad Survey area's.	0.055	2341	*delta below K	1
	DMW24	Dw .	0.054	2281		
1310	DMW22		0.075		*Fog Still in teef working	Bay
	DMW23		0.080		teef working	
4	DMW24		0.086			
1515	DMW22	A Val	0.088		· foglhaze sti	11 hasn't
=	DMW23		0.086		dissipated	
	DMW24	"	0.083			
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Client Na	me <u>NAVFAC</u>			Date	127/22	
Project N	lo <u>. J31000080</u>	SWDA Westside, Site	e 12, Treasure	e Island Pa	ge_\_of	
Logged b	у	100 ,SWDA Westside, Site			·	
Weather	44°	F-66F. Fog1	Haze, 9	unny,	A	3
Instrume	nt Type: _Dust	t Trak II				1
Calibration	on Standards U	Jsed Factory Calibrated	1			_
1	Dust		Instrument			]
Time	Monitoring	Location	Reading	Unit	Activities,	
	Station	2004.1011	(mg/m3)	Number	Remarks	
	Number	10 12 Ideas Pad	- `	_	The Explanation	10 mlines
0400	SUMM	Screening area!	0.677	1280	thick for Couring	Trevel before
	DMW23	screening fad  Screening area    having use screened  Dw material to	0.081	2341	a Begin west.	begun.
1	DIMUZY	DW They	0.081	2281		
1145	DWM55		0.067	!	thich haze st.	Preading 5
	DMW23		0.065		thich haze st.	11 in 199/ Ears
	DWM54		0.080			l .
1515	DMW2Z		0.020		· reading 5 have 50 to Fig diss.	Dr. ded due
	DMW23		0.020		To Fig 9.55%	raxing,
	DMWZY		0.021			
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	ıme <u>NAVFAC</u>			Date	28 27	
Project N	lo <u>. J3100008</u> 0	00 SWDA Westside, Site	e 12, Treasure	e Island Pa	age ) of )	
Logged b	by	Jav Tehring				
Weather		440F. 60°F. Pair	1/4 Cloud	x. Morvi	ing haze.	
	nt Type: <u>Dus</u> t	t Trak II				_
Calibratio	n Standards U	Jsed Factory Calibrated	<u> </u>			
	Dust		Instrument			7
Time	Monitoring	Location	Instrument Reading	Unit	Activities,	
	Station		(mg/m3)	Number	Remarks	
07/-	Number	Land Iding Paid				to Constitution
0750	DW1 55	screening fail	0.048	1280	indius high	EXPS GOLD
	DMW23	DW trunspersing so.	0.047	2281	* Fuglhize prose	ist.
4	DMW24	*5W ]	0.043	2341		
1245	DMW22		0,049		· Foglhaze Still	'
	DMW23		0.058		edelta below at	non levels.
<b>.</b>	DMWZLI		0.059			1 .
1515	DMWZZ		0.065		of finishing f	r Loday.
	DMW23		0.075		· reading 5 54.11	Elevated the
	DMW24		0.071		ereacting 5 54.11 work has wrated activities ongoin	HELL UP. NO
	2, 100		0.011			troipment.
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				77	/	1
					72	-



Client Name NAVFAC	Date    31/2-2
Project No. J310000800 SWDA Westside, Site 12, Treasu	ure Island Page 7 of
Logged by	
Weather 45°F.63°F Fog Huze in AM	<b>\</b>
Instrument Type: _Dust Trak II	

Calibration	n Standards I	Jsed <u>F</u>	actory Calibrated	d			•
Time	Dust Monitoring Station Number	_	Location	Instrument Reading (mg/m3)	Unit Number	Activities, Remarks	
0400	DMW25	· UW	hereling soil to	0.050	1280	Try Carring elec	uted
	DMW26	DW	91461.	0.053	2281	18149 below a	CX- 607 ( 22 - )
•	DMW27	·DW		0.052	234/		
1340	DHW25			0.013		· dust levels ha	re come don
	DMW26			0.012			
	DMW27			0.011			
1520	DMW25			0,016		of finishing for for	lay.
	DMW26			0.015			
*	DMWZ7			0.012			
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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** 

		<u>-</u>	
Sample Date	Ambient Pressure (inches of Hg)	Ambient Temperature (°F)	Ambient Temperature (°K)
1/25/2022	30.10	50.53	283.44
1/26/2022	30.09	48.58	282.36
1/27/2022	30.17	51.70	284.09
1/28/2022	30.25	53.40	285.04
1/28/2022	30.29	57.23	287.17

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

Hg = mercury

°K = Degrees Kelvin

<sup>°</sup>F = Degrees Fahrenheit

**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/m³)	Delta between Downwind and Upwind Stations (ug/m³)	PM10 Exceedance? (Yes/No)
		Screening	Criteria		50
	23.67	01/25/2022	27	NA	NA
	24.25	01/26/2022	19	NA	NA
AMSW1	22.32	01/27/2022	36	NA	NA
	22.14	01/28/2022	23	NA	NA
	6.61	01/28/2022	32	NA	NA
	9.88*	01/25/2022	38	11	No
	24.45	01/26/2022	25	6	No
AMSW2	22.54	01/27/2022	42	6	No
	22.88	01/28/2022	28	5	No
	6.27	01/28/2022	38	6	No

ug/m3 = micrograms per cubic meter

NA = Not applicable

PM10 = particulate matter less then 10 microns in diameter

**bold** = result above screening criteria

<sup>\* =</sup> generator/sampler malfunction

**Table 2-3: Total Suspended Particulates Monitoring Results** 

Location ID	Sampling Period (Hours)	Sample Date	Total Suspended Particulate (ug/m³)	Delta Between Downwind and Upwind Stations (ug/m³)	TSP Exceedance? (Yes/No)
		Screening Criteria			50
	23.70	01/25/2022	38.4325	NA	NA
	24.26	01/26/2022	29.6448	NA	NA
AMSW1	22.32	01/27/2022	51.0853	NA	NA
	22.16	01/28/2022	36.7508	NA	NA
	6.59	01/28/2022	61.55	NA	NA
	9.91*	01/25/2022	63.8339	25.4014	No
	24.46	01/26/2022	35.4306	5.7858	No
AMSW2	22.55	01/27/2022	55.3399	4.2546	No
	22.9	01/28/2022	42.2495	5.4987	No
	6.32	01/28/2022	55.9483	-5.6017	No

J = estimated value

ug/m³ = micrograms per cubic meter

NA = Not applicable

TSP = total suspended particulate

**bold** = results above screening criteria

<sup>\* =</sup> generator/sampler malfunction

Table 2-4: Lead by EPA 6020 Monitoring Results

Location ID	Sampling Period (Hours)	Sample Date	Lead (ug/m³)	Lead Exceedance? (Yes/No)
	Screenin	g Criteria		1,575
	23.67	01/25/2022	0.0032	No
	24.25	01/26/2022	0.0026	No
AMSW1	22.32	01/27/2022	0.0034	No
	22.14	01/28/2022	0.003	No
	6.61	01/28/2022	0.0051	No
	9.88*	01/25/2022	0.0061	No
	24.45	01/26/2022	0.0027	No
AMSW2	22.54	01/27/2022	0.0037	No
	22.88	01/28/2022	0.0041	No
	6.27	01/28/2022	0.0067	No

J = indicates an estimated value ug/m³ = micrograms per cubic meter

**bold** = results above screening criteria

<sup>\* =</sup> generator/sampler malfunction

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/m³)	Acenaph- thene (ug/m³)	Acenaph- thylene (ug/m³)	Anthracene (ug/m³)	Benzo(a) anthracene (ug/m³)	Benzo(a) pyrene (ug/m³)	Benzo(b) fluoran- thene (ug/m³)	Benzo(g,h,i) perylene (ug/m³)	Benzo(k) fluoran- thene (ug/m³)	Chrysene (ug/m³)	Dibenz(a,h)anth racene (ug/m³)	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 <sup>1</sup>		55,330	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
AMSW1	24.27	01/26/2022	No	0	0.0036	0.00043 J	< 0.00053	< 0.00053	< 0.00053	< 0.00053	< 0.00053	< 0.00053	< 0.00053	< 0.00053	< 0.00053	0.00026 J	0.00044 J	< 0.00053	0.0086	0.0007	< 0.00053
	6.53	01/28/2022	No	0	0.0078	0.0011 J	< 0.0021	< 0.0021	< 0.0021	< 0.0021	< 0.0021	< 0.0021	< 0.0021	< 0.0021	< 0.0021	< 0.0021	0.001 J	< 0.0021	0.018	0.0012 J	< 0.0021
AMSW2	24.45	01/26/2022	No	0	0.0032	0.00039 J	< 0.00047	0.00023 J	< 0.00047	< 0.00047	< 0.00047	< 0.00047	< 0.00047	< 0.00047	< 0.00047	0.00051	0.00061	< 0.00047	0.0074	0.0022	0.00034 J
	6.23	01/28/2022	No	0	0.0063	0.00085 J	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	0.00094 J	0.0013 J	< 0.002	0.015	0.0037	< 0.002

<sup>1</sup> 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/m³ = micrograms per cubic meter

**bold** = results above screening criteria

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/m³)	PCB-1221 (Aroclor 1221) (ug/m³)	PCB-1232 (Aroclor 1232) (ug/m³)	(Aroclor 1232) (Aroclor 1242)		PCB-1254 (Aroclor 1254) (ug/m³)		
	Screer	ing Criteria		NE								
AMSW1	22.33	01/27/2022	NA	0	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	
AMSW2	22.55	01/27/2022	NA	0	< 0.00071	< 0.00071	< 0.00071	< 0.00071	< 0.00071	< 0.00071	< 0.00071	

NA = Not applicable

NE = None established

PCB = polychlorinated biphenyl

ug/m³ = 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	Dioxin Exceedance? (Yes/No)	
	5	Screening Criteria	a	10,000,000 ug/m³
AMSW1	23.71	01/25/2022	< 0.0000002	No
AIVISVVI	22.16	01/28/2022	< 0.0000002	No
AMSW2	9.86*	01/25/2022	< 0.0000004	No
AIVIOVVZ	22.86	01/28/2022	< 0.0000002	No

J = estimated value

ug/m<sup>3</sup> = micrograms per cubic meter

< = nondetected less than associated reporting limit

**bold** = results above screening criteria

<sup>\* =</sup> generator / sampler malfunction

## ATTACHMENT 3 RADIOLOGICAL AIR MONITORING RESULTS (Provided on CD)

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#### **AIR SAMPLING EQUIPMENT**

<b>CIID</b>	alle						Air	COAMI	LING	EQUIP	IAITIAI
					Project In	formation	1	Effe	ctive as of:	17 Mar 20	22
Contract / Number:	Task Orde	er	Project Tit	tle / Locatio	on:				Gilbane P	roject Num	ıber:
N62	473-17-D-0	0005		IR Site 12	RD/RA, Tr	easure Isla	J310000800				
P	erimeter/E	ffluent Air	r Sampling	Equipme	nt	[	Breathing	Zone Air	Sampling	Equipmen	ıt
Equip	i	Air Sample	;r	Serial	Cal Due	Equip		Air Sample	r	Serial	Cal Due
Number	<u> </u>	Make/Mode	el	Number	Date	Number		Make/Mode	elle	Number	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					
						ing Instrun					
Inst	Model	Serial	Cal Due		ime (min)		<del> </del>			MDC (dpn	
Number	Number	Number	Date	Bkgrd	Source	Alpha	Beta	Alpha	Beta	Alpha	Beta
Α	Protean	615068	9/15/21	1	1	0.0	1.1	0.352	0.355	15.4	29.0
В	Protean	9085100		1	1	0.0	1.2	0.356	0.352	15.2	29.9
С	Protean	9085100	10/1/22	1	1	0.0	1.2	0.359	0.355	15.1	29.6
D											
Е											

#### Notes

<sup>&</sup>lt;sup>a</sup> background values obtained from instrument set-up worksheet

<sup>&</sup>lt;sup>b</sup> 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*)

<sup>&</sup>lt;sup>c</sup> MDC calculated using the Stapleton approximation (see IN-RP-141, Alpha/Beta Scaler Instrument Set-Up and Operation)



#### AIR SAMPLE RESULTS - PUBLIC EXPOSURE MONITORING

Gilba	ane												,	AIR SA	MPLE	RESUL	TS - PI	DRFIC	EXPO	SUKE	MONII	ORING
			P	roject Inforn	nation					Effluent	t Air Con	centration		Sa	mpling Per	riod	Color Codes					
Contract /	Task Order N		tle / Locati			Gilbane Project N	Number:					Alpha	Beta	Air samples collected		ected	٧	alue < MD0	;		< 0.1 x Efflu	
N6:	2473-17-D-00	05 IR Site	12 RD/R	A, Treasure I	sland, SF, CA	J3	10000800					Ra-226	Sr-90	between 22 Mar 2021		21	< 72 hr decay time				Value > 0.1 x Effluent Conc	
	Information effective as of: 17 Mar 2022						Effluent Conc (µCi/ml)			9.E-13	6.E-12	and	31 Jan 202	22	Data reviewed			Value > Effluent Conc				
	Sample Collection								Count	Informatio	n				Sample			Initials				
Sample	Sample	Sample	Equip	Ave Flow	Start	End	Elapsed	Volume	Inst	Count	Time	Counting	Gross	Activity	Net	dpm	Activity	(µCi/ml)	*Effluent	Conc (%)	Count	Data
Number	Type	Location	No	Rate (Ipm)	Day Time	Date Time	Time (min)	(ml)	No	Date	(min)	Units	Alpha	Beta	Alpha	Beta	Alpha	Beta	Alpha	Beta	Tech	Reviewe
AS-0343	Perimeter	Upwind	PE03	60	1/24/22 7:45	1/24/22 15:20	455	2.7E+07	С	2/4/22	1	cpm	0.10	5.05	0.3	10.8	4.6E-15	1.8E-13	0.5%	3.0%	DB	CB
AS-0344	Perimeter	Downwind	PE04	60	1/24/22 7:50	1/24/22 15:10	440	2.6E+07	С	2/4/22	1	cpm	0.30	5.65	0.8	12.5	1.4E-14	2.1E-13	1.6%	3.6%	DB	CB
AS-0345	Perimeter	Upwind	PE03	60	1/25/22 6:10	1/25/22 15:20	550	3.3E+07	С	2/4/22	1	cpm	0.20	4.35	0.6	8.9	7.6E-15	1.2E-13	0.8%	2.0%	DB	CB
AS-0346	Perimeter	Downwind	PE04	60	1/25/22 6:15	1/25/22 15:15	540	3.2E+07	С	2/4/22	1	cpm	0.05	4.25	0.1	8.6	1.9E-15	1.2E-13	0.2%	2.0%	DB	CB
AS-0347	Perimeter	Upwind	PE03	60	1/26/22 6:10	1/26/22 15:25	555	3.3E+07	С	2/4/22	1	cpm	0.15	4.95	0.4	10.6	5.7E-15	1.4E-13	0.6%	2.4%	DB	CB
AS-0348	Perimeter	Downwind	PE04	60	1/26/22 6:15	1/26/22 15:20	545	3.3E+07	С	2/4/22	1	cpm	0.25	4.40	0.7	9.0	9.6E-15	1.2E-13	1.1%	2.1%	DB	CB
AS-0349	Perimeter	Upwind	PE03	60	1/27/22 6:35	1/27/22 15:20	525	3.2E+07	С	2/4/22	1	cpm	0.25	4.75	0.7	10.0	1.0E-14	1.4E-13	1.1%	2.4%	DB	CB
AS-0350	Perimeter	Downwind	PE04	60	1/27/22 6:40	1/27/22 15:15	515	3.1E+07	С	2/4/22	1	cpm	0.25	5.20	0.7	11.3	1.0E-14	1.6E-13	1.1%	2.7%	DB	CB
AS-0351	Perimeter	Upwind	PE03	60	1/28/22 6:15	1/28/22 15:10	535	3.2E+07	С	2/4/22	1	cpm	0.30	5.65	0.8	12.5	1.2E-14	1.8E-13	1.3%	2.9%	DB	CB
AS-0352	Perimeter	Downwind	PE04	60	1/28/22 6:20	1/28/22 15:15	535	3.2E+07	С	2/4/22	1	cpm	0.25	5.55	0.7	12.3	9.8E-15	1.7E-13	1.1%	2.9%	DB	CB
AS-0353	Perimeter	Upwind	PE03	60	1/31/22 6:15	1/31/22 15:05	530	3.2E+07	С	2/16/22	1	cpm	0.10	5.10	0.3	11.0	3.9E-15	1.6E-13	0.4%	2.6%	DB	CB
AS-0354	Perimeter	Downwind	PE04	60	1/31/22 6:20	1/31/22 15:10	530	3.2E+07	С	2/16/22	1	cpm	0.35	4.60	1.0	9.6	1.4E-14	1.4E-13	1.5%	2.3%	DB	CB
AS-0355	Perimeter	Upwind										cpm			#N/A	#N/A	#N/A	#N/A				
AS-0356	Perimeter	Downwind										cpm			#N/A	#N/A	#N/A	#N/A				
AS-0357	Perimeter	Upwind										cpm			#N/A	#N/A	#N/A	#N/A				
AS-0358	Perimeter	Downwind										cpm			#N/A	#N/A	#N/A	#N/A				
AS-0359	Perimeter	Upwind										cpm			#N/A	#N/A	#N/A	#N/A				
AS-0360	Perimeter	Downwind										cpm			#N/A	#N/A	#N/A	#N/A				
AS-0361	Perimeter	Upwind										cpm			#N/A	#N/A	#N/A	#N/A				
AS-0362	Perimeter	Downwind										cpm			#N/A	#N/A	#N/A	#N/A				
AS-0363	Perimeter	Upwind										cpm			#N/A	#N/A	#N/A	#N/A				
AS-0364	Perimeter	Downwind										cpm			#N/A	#N/A	#N/A	#N/A				
AS-0365	Perimeter	Upwind										cpm			#N/A	#N/A	#N/A	#N/A				
AS-0366	Perimeter	Downwind										cpm			#N/A	#N/A	#N/A	#N/A				
AS-0367	Perimeter	Upwind										cpm			#N/A	#N/A	#N/A	#N/A				
AS-0368	Perimeter	Downwind										cpm			#N/A	#N/A	#N/A	#N/A				
AS-0369	Perimeter	Upwind										cpm			#N/A	#N/A	#N/A	#N/A				
AS-0370	Perimeter	Downwind										cpm			#N/A	#N/A	#N/A	#N/A				
AS-0371	Perimeter	Upwind										cpm			#N/A	#N/A	#N/A	#N/A				
AS-0372	Perimeter	Downwind										cpm			#N/A	#N/A	#N/A	#N/A				
AS-0373	Perimeter	Upwind										cpm			#N/A	#N/A	#N/A	#N/A				
												cpm			#N/A	#N/A	#N/A	#N/A				

CFM to LPM Converter	Sample	Counting
1 cfm = 28.316846592 lpm	Types	Units
Enter cfm: 2.1	Perimeter	cnts
Ipm: 60.0	Effluent	cpm
·		

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

		Column 1
Alpha-Emitting	Retention	Air
Radionuclide	Class	(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)

		Column 1
Beta-Emitting	Retention	Air
Radionuclide	Class	(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)

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

<sup>\*</sup> Effluent concentration is a regulatory number from the NRC considered protective of the public

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