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

Air Monitoring Summary Report
March 1 to March 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

May 2022

DCN: GLBN-0005-F5271-0023

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Prepared for:

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

Prepared by:

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

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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*

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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 March 1st through March 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 March 1st, 2nd, 3rd, 7th, 8th, 9th, 10th, 14th, 15th, 16th, 17th, 21st, 22nd, 23rd, 24th, 25th, 28th, 29th, 30th and 31st 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, DMW25) and two PDRs are placed in downwind perimeter locations (DMW8, DMW9, DMW14, DMW15, DMW26, DMW27). The wind direction for this reporting period was predominately northern compared to previous periods and the dust monitoring locations were adjusted accordingly for this shift.

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 from the South direction at 1-9 miles/hour with gusts up to 15 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 7-10 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 March 22nd PDR readings were observed above project screening criteria, however, the delta between the upwind and downwind monitors remained below action levels. On this day 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 [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 March 2022 did not exceed the project-specific screening criteria presented in **Table 2-2**.

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

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

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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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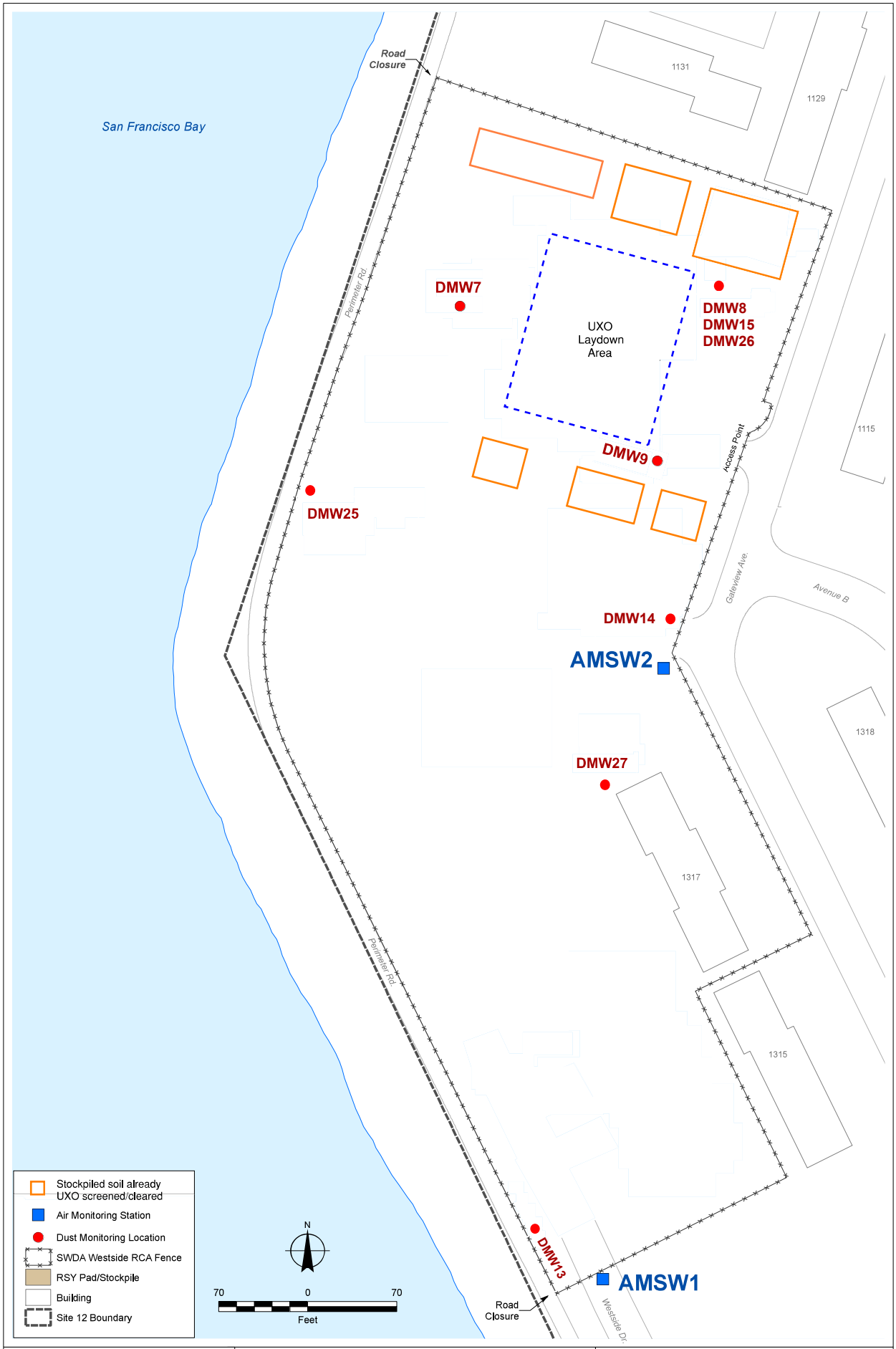
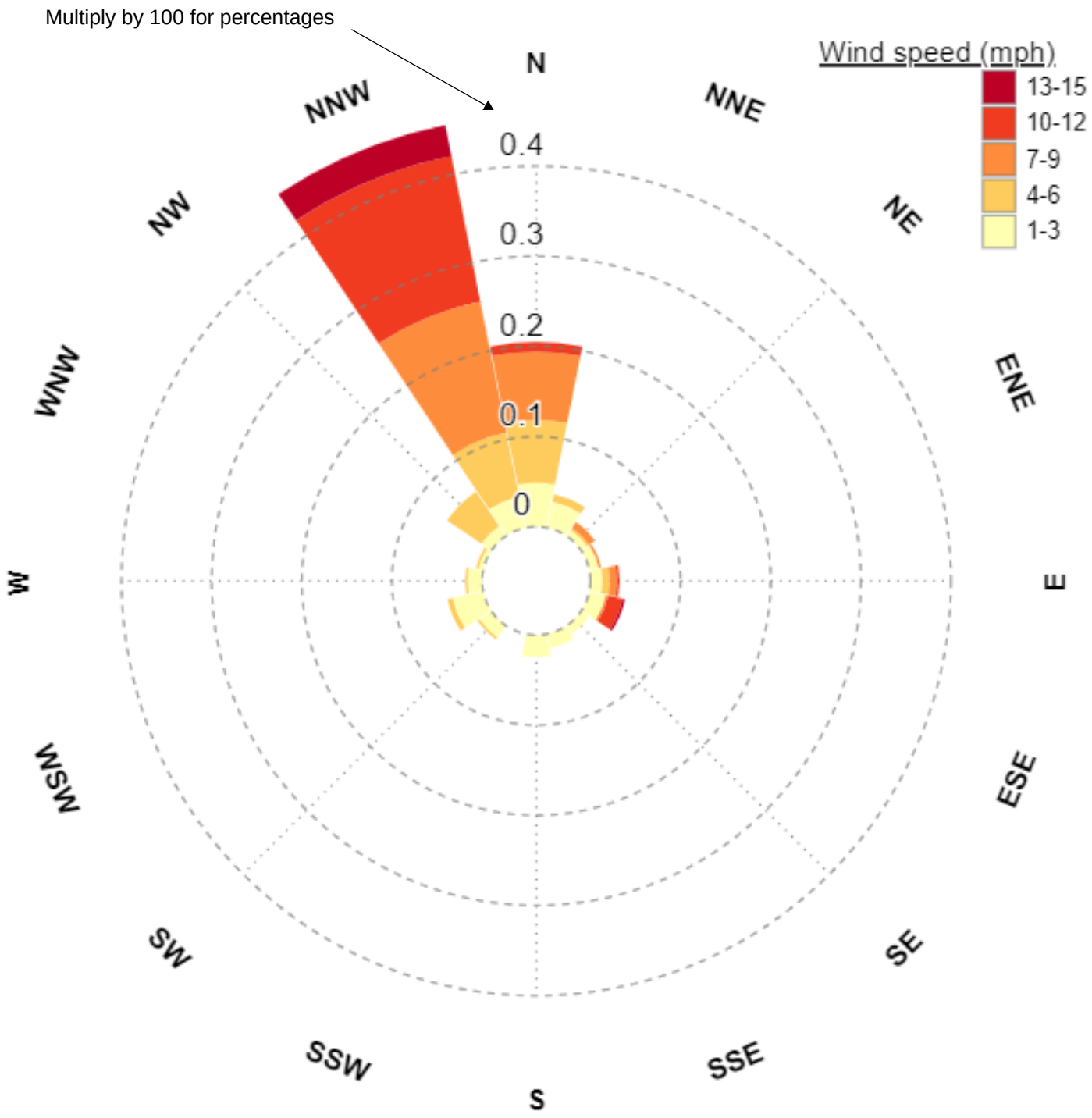


NAVFAC Naval Facilities Engineering Command	**Air Monitoring Report** **Phase IV Non-Time Critical Removal Action** Solid Waste Disposal Area Westside, IR Site 12 Former Naval Station Treasure Island San Francisco, CA	**Figure 1** Dust and Air Monitoring Locations IR Site 12 SWDA Westside

G:\ArcGIS\Navy\Treasure_Island\PROJECTS\Site12_SWDA_RA\AMR_2021_2\Figure_01_Air_Dust_Locs_2021AMR_4.mxd 7/13/2021 Gilbane



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 Monitoring Results

DustTrak Unit	IR Site	Date	Maximum[1] (mg/m^3)	Average[1] (mg/m^3)	Delta Between Upwind and Downwind Stations (mg/m^3)	Below action level? (0.050 mg/m^3) (Yes/No)
DMW7	Site 12	3/1/2022	0.022	0.013	NA	Yes
DMW8	Site 12		0.030	0.015	0.002	Yes
DMW9	Site 12		0.024	0.013	0.000	Yes
DMW13	Site 12	3/2/2022	0.046	0.032	NA	Yes
DMW14	Site 12		0.050	0.034	0.002	Yes
DMW15	Site 12		0.045	0.032	0.000	Yes
DMW7	Site 12		0.010	0.007	NA	Yes
DMW8	Site 12		0.032	0.014	0.007	Yes
DMW9	Site 12		0.021	0.008	0.001	Yes
DMW7	Site 12	3/3/2022	0.013	0.010	NA	Yes
DMW8	Site 12		0.013	0.010	0.000	Yes
DMW9	Site 12		0.013	0.010	0.000	Yes
DMW7	Site 12	3/7/2022	0.016	0.009	NA	Yes
DMW8	Site 12		0.017	0.010	0.001	Yes
DMW9	Site 12		0.015	0.008	-0.001	Yes
DMW7	Site 12	3/8/2022	0.036	0.020	NA	Yes
DMW8	Site 12		0.033	0.020	0.000	Yes
DMW9	Site 12		0.037	0.019	-0.001	Yes
DMW7	Site 12	3/9/2022	0.036	0.031	NA	Yes
DMW8	Site 12		0.037	0.031	0.000	Yes
DMW9	Site 12		0.035	0.031	0.000	Yes
DMW13	Site 12		0.025	0.023	NA	Yes
DMW14	Site 12		0.033	0.024	0.001	Yes
DMW15	Site 12		0.043	0.026	0.003	Yes
DMW7	Site 12	3/10/2022	0.010	0.005	NA	Yes
DMW8	Site 12		0.018	0.005	0.000	Yes
DMW9	Site 12		0.018	0.004	-0.001	Yes
DMW7	Site 12	3/14/2022	0.032	0.020	NA	Yes
DMW8	Site 12		0.035	0.021	0.001	Yes
DMW9	Site 12		0.046	0.027	0.007	Yes
DMW7	Site 12	3/15/2022	0.030	0.009	NA	Yes
DMW8	Site 12		0.028	0.009	0.000	Yes
DMW9	Site 12		0.025	0.009	0.000	Yes
DMW7	Site 12	3/16/2022	0.030	0.019	NA	Yes
DMW8	Site 12		0.045	0.023	0.004	Yes
DMW9	Site 12		0.030	0.019	0.000	Yes
DMW13	Site 12	3/17/2022	0.019	0.017	NA	Yes
DMW14	Site 12		0.038	0.022	0.005	Yes
DMW15	Site 12		0.030	0.017	0.000	Yes
DMW7	Site 12		0.032	0.023	NA	Yes
DMW8	Site 12		0.029	0.021	-0.002	Yes
DMW9	Site 12		0.030	0.022	-0.001	Yes
DMW7	Site 12	3/21/2022	0.037	0.021	NA	Yes
DMW8	Site 12		0.048	0.023	0.002	Yes
DMW9	Site 12		0.037	0.020	-0.001	Yes
DMW25	Site 12	3/22/2022	0.042	0.023	NA	Yes
DMW26	Site 12		**0.068**	0.027	0.004	Yes
DMW27	Site 12		**0.054**	0.026	0.003	Yes
DMW25	Site 12	3/23/2022	0.020	0.011	NA	Yes
DMW26	Site 12		0.023	0.013	0.002	Yes
DMW27	Site 12		0.033	0.018	0.007	Yes
DMW25	Site 12	3/24/2022	0.040	0.016	NA	Yes
DMW26	Site 12		0.039	0.015	-0.001	Yes
DMW27	Site 12		0.036	0.016	0.000	Yes
DMW7	Site 12	3/25/2022	0.018	0.008	NA	Yes
DMW8	Site 12		0.030	0.010	0.002	Yes
DMW9	Site 12		0.014	0.009	0.001	Yes
DMW13	Site 12	3/28/2022	0.015	0.009	NA	Yes
DMW14	Site 12		0.015	0.009	0.000	Yes
DMW15	Site 12		0.021	0.011	0.002	Yes
DMW25	Site 12	3/29/2022	0.016	0.011	NA	Yes
DMW26	Site 12		0.020	0.012	0.001	Yes
DMW27	Site 12		0.015	0.012	0.001	Yes
DMW25	Site 12	3/30/2022	0.020	0.014	NA	Yes
DMW26	Site 12		0.023	0.015	0.001	Yes
DMW27	Site 12		0.019	0.015	0.001	Yes
DMW25	Site 12	3/31/2022	0.039	0.023	NA	Yes
DMW26	Site 12		0.043	0.026	0.003	Yes
DMW27	Site 12		0.049	0.027	0.004	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 3/1/22

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

Logged by Logan Schwing

Weather 46°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
0900	DMW7	UW UXO Screening op.	0.022	1280	mob/setup.
↓	DMW8	DW	0.027	0534	
↓	DMW9	DW	0.023	2341	
1450	DMW7		0.009		team on break
↓	DMW8		0.011		
↓	DMW9		0.008		
1715	DMW7		0.012		op finished.
↓	DMW8		0.014		
↓	DMW9		0.014		
		LSS	3/1/22		

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AIR MONITORING LOG

Client Name NAVFAC Date 3/2/22

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

Logged by Logan Schwing

Weather 46°F - 61°F. Cloudy. 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	DMW13	•UW hauling RSY2 Soil to pad 1 to be uxo screened	0.036	0534	•Setup/mob.
↓	DMW14	•DW	0.038	~~0534~~ ~~1280~~ 2341	•readings somewhat high for no work. ☆ Fog
↓	DMW15	•DW ↓	0.033	1280	
1250	DMW13		0.009	0534	•Lunch
↓	DMW14		0.007	2341	
↓	DMW15		0.009	1280	
1305	DMW7	•UW uxo screening @ laydown area 1	0.007	0534	•Monitors moved. hauling operations complete.
↓	DMW8	•DW	0.010	1280	
↓	DMW9	•DW ↓	0.008	2341	
1710	DMW7		0.011		•tasks wrapping up for today
↓	DMW8		0.0.009		
↓	DMW9		0.0.012		

LS 3/2/22

Gilbane

AIR MONITORING LOG

Client Name NAVFAC Date 3/3/22

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

Logged by Logan Schuring

Weather 46°F-55°F. cloudy. Early afternoon 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
0800	DMW7	•UW UXO screening screening of.	0.007	1280	•mobilize / setup.
↓	DMW8	•DW	0.011	0534	
↓	DMW9	•DW	0.006	2341	
1350	DMW7		0.009		•mid-day.
↓	DMW6		0.014		
↓	DMW9		0.010		
1710	DMW7		0.011		•op finishing for today.
↓	DMW8		0.008		
↓	DMW9		0.013		
		LSS 3/3/22			

Gilbane

AIR MONITORING LOG

Client Name NAVFAC Date 3/7/22

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

Logged by Logan Schwing

Weather 42°F - 66°F. Sunny.

Instrument Type: Dust Trak II

Calibration Standards Used Factory Calibrated

Time	Dust Monitoring Station Number	Location	Instrument Reading (mg/m3)	Unit Number	Activities, Remarks
0800	DMW7	UW UXO screening OP @	0.015	1280	OP prep/setup
↓	DMW8	DW Pad 1 laydown.	0.015	0534	
↓	DMW9	DW ↓	0.017	2341	
1500	DMW7		0.012		Recon on break.
↓	DMW8		0.010		Firing distance not implemented
↓	DMW9		0.013		
1710	DMW7		0.015		Tasks wrapping up for today.
↓	DMW8		0.013		
↓	DMW9		0.016		
			LGS 3/7/22		

Gilbane

AIR MONITORING LOG

Client Name NAVFAC Date 3/8/22

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

Logged by Logan Schwing

Weather 46°F-65°F. Somewhat Sunny.

Instrument Type: Dust Trak II

Calibration Standards Used Factory Calibrated

Time	Dust Monitoring Station Number	Location	Instrument Reading (mg/m3)	Unit Number	Activities, Remarks
0800	DMW7	DW UXO Screening	0.016	1280	Setup
↓	DMW8	DW	0.015	0534	
↓	DMW9	DW	0.013	2341	
1500	DMW7		0.021		Team on break.
↓	DMW8		0.029		
↓	DMW9		0.019		
1710	DMW7		0.017		Op wrapping up.
↓	DMW8		0.022		
↓	DMW9		0.020		

LS 3/8/22

Gilbane

AIR MONITORING LOG

Client Name NAVFAC Date 3/9/22

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

Logged by Logan Schwing

Weather 48°F-63°F. Sunny & Slight haze all day.

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 / Scrapping up lot that has been screened	0.033	1280	• mob / setup.
↓	DMW6	•DW	0.033	0534	• readings high for no work ongoing. • haze in air causing HIGHER readings than normal for no over ting happening.
↓	DMW4	•DW	0.034	2341	
1130	DMW7		0.025		• dust monitors are going to move to incorporate hauling RST 2 soil to pad 1 / 4 down.
↓	DMW6		0.026		
↓	DMW4		0.028		
1505	DMW13		0.023	1280	• new positions to incorporate RST 2 haul.
↓	DMW14		0.025	2341	
↓	DMW15		0.024	0534	
1700	DMW13		0.020		• op wrapping up for day.
↓	DMW14		0.028		• tools equipment back to yard.
↓	DMW15		0.022		

CH 3/9/22

Gilbane

AIR MONITORING LOG

Client Name NAVFAC Date 3/10/22

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

Logged by Logan Schwing

Weather 41°F - 62°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
0900	DMW7	TOW UXO Screening op @ Quad Maddox	0.004	1280	• mobilize.
↓	DMW8	"DW	0.006	0534	
↓	DMW4	"DW	0.006	2341	
1255	DMW7		0.002		• Team on lunch
↓	DMW8		0.004		• non-intrusive
↓	DMW4		0.006		
1710	DMW7		0.005		• op wrapping up for today.
↓	DMW8		0.007		• Secure site.
↓	DMW4		0.005		

LSS 3/10/22

Gilbane

AIR MONITORING LOG

Client Name NAVFAC Date 3/14/22

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

Logged by Logan Schwing

Weather 48°F - 64°F (Cloudy).

Instrument Type: Dust Trak II

Calibration Standards Used Factory Calibrated

Time	Dust Monitoring Station Number	Location	Instrument Reading (mg/m3)	Unit Number	Activities, Remarks
0800	DMW7	· DW UXO Screening op	0.031	↑	· prep/setup.
↓	DMW8	· DW ↓	0.032	↑	readings slightly high even no work ongoing.
↓	DMW9	· DW ↓	0.031	↑	
1235	DMW7		0.017	1280	· team started lunch.
↓	DMW8		0.020	2341	· non-intrusive
↓	DMW9		0.017	0534	
1710	DMW7		0.016	↓	· op finished for today.
↓	DMW8		0.018	↓	
↓	DMW9		0.019	↓	

LS 3/14/22

Gilbane

AIR MONITORING LOG

Client Name NAVFAC

Date 3/15/22

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

Logged by Logan Schwing

Weather 45°F-60°F. cloudy, AM 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
0800	DMW7	DW UXO screening op	0.004	1280	prep/setup.
↓	DMW8	DW ↓	0.005	0534	
↓	DMW9	DW ↓	0.005	2341	
1500	DMW7		0.007		on break non-intrusive.
↓	DMW8		0.006		
↓	DMW9		0.010		
1715	DMW7		0.009		demob
↓	DMW8		0.006		cleanup.
↓	DMW9		0.008		site security.

LSS 3/15/22

Gilbane

AIR MONITORING LOG

Client Name NAVFAC　　Date 3/16/22

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

Logged by Logan Schwing

Weather 48°F-60°F. Sunny.

Instrument Type: Dust Trak II

Calibration Standards Used Factory Calibrated

Time	Dust Monitoring Station Number	Location	Instrument Reading (mg/m3)	Unit Number	Activities, Remarks
0800	DMW7	•UW UXO screening of pushing up pile	0.031	1280	•mob •prep.
↓	DMW8	•DW ↓	0.032	0534	•slight fog.
↓	DMW9	•DW ↓	0.031	2341	•readings elevated with no work ongoing.
1105	DMW7		0.019		•post Demo
↓	DMW8		0.021		
↓	DMW9		0.022		
1710	DMW7		0.015		•site security
↓	DMW8		0.020		•op finishing
↓	DMW9		0.015		

LSS 3/16/22

Gilbane

AIR MONITORING LOG

Client Name NAVFAC Date 3/17/22

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

Logged by Logan Schwing

Weather 46°F-55°F. cloudy.

Instrument Type: Dust Trak II

Calibration Standards Used Factory Calibrated

Time	Dust Monitoring Station Number	Location	Instrument Reading (mg/m3)	Unit Number	Activities, Remarks
0800	DMW13	•UW hauling RSP 2 soil to Pad 1 laydown	0.028	1280	•mobilize
↓	DMW14	•DW	0.022	2341	•prepare for tasks.
↓	DMW15	•DW	0.026	0534	
1305	DMW13		0.017		•Lunch.
↓	DMW14		0.015		
↓	DMW15		0.017		
1315	DMW7	•UXO Screening/work on Pad 1 laydown.	0.018	1280	•move dustraks to intersection UXO screening
↓	DMW8	•DW	0.017	0534	
↓	DMW9	•DW	0.018	2341	
1710	DMW7		0.014		
↓	DMW8		0.020		•op wrapping up for day.
↓	DMW9		0.014		

LSS 3/17/22

Gilbane

AIR MONITORING LOG

Client Name NAVFAC Date 3/21/22

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

Logged by Logan Schwing

Weather 46°F - 62°F. Sunny.

Instrument Type: Dust Trak II

Calibration Standards Used Factory Calibrated

Time	Dust Monitoring Station Number	Location	Instrument Reading (mg/m3)	Unit Number	Activities, Remarks
0800	DMW7	• UW 120 Screening Lot #46	0.034	1280	LS 3/21/22 ~~UW~~ • mobilize.
↓	DMW8	• DW ↓	0.035	0534	
↓	DMW9	• DW ↓	0.035	2341	
1350	DMW7		0.017		• mid day.
↓	DMW8		0.022		
↓	DMW9		0.018		
1710	DMW7		0.019		• EOP wrapping up for today.
↓	DMW8		0.024		
↓	DMW9		0.018		

LS 3/21/22

Gilbane

AIR MONITORING LOG

Client Name NAVFAC Date 3/22/22

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

Logged by Logan Schwing

Weather 49°F - 75°F. Sunny. slight early AM 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
0900	DMW25	•UW UXO screening of / scrapping up material	0.039	1280	•mobilize to setup.
↓	DMW26	•DW in Rad screening Area.	0.042	0534	•reading somewhat high for no work happening.
↓	DMW27	•DW ↓	0.040	2341	•Continue work.
1520	DMW25		0.017		•check monitors
↓	DMW26		0.020		
↓	DMW27		0.018		
1715	DMW25		0.016		•op wrapping up for today.
↓	DMW26		0.015		
↓	DMW27		0.018		

Gilbane

AIR MONITORING LOG

Client Name NAVFAC

Date 3/23/22

Project No. J310000800 SWDA Westside, Site 12, Treasure Island

Page 1 of 1

Logged by Logan Schwing

Weather 48°F-55°F, Cloudy

Instrument Type: Dust Trak II

Calibration Standards Used Factory Calibrated

Time	Dust Monitoring Station Number	Location	Instrument Reading (mg/m3)	Unit Number	Activities, Remarks
0800	DMW25	• UW UXO Screening @ Pad 1 (laydown)	0.004	1280	• mobilize.
↓	DMW26	• DW Scrapping of material @ Rad Screening area	0.005	0534	
↓	DMW27	• DW ↓	0.004	2341	
1515	DMW25		0.013		• middle of day readings.
↓	DMW26		0.018		
↓	DMW27		0.015		
1715	DMW25		0.011		• of wrapping up today.
↓	DMW26		0.015		• secure site.
↓	DMW27		0.011		

LSS 3/23/22

Gilbane

AIR MONITORING LOG

Client Name NAVFAC Date 3/24/22

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

Logged by Logan Schwing

Weather 46°F - 55°F. cloudy.

Instrument Type: Dust Trak II

Calibration Standards Used Factory Calibrated

Time	Dust Monitoring Station Number	Location	Instrument Reading (mg/m3)	Unit Number	Activities, Remarks
0800	DMW25	• UW UXO Screening / Rad Screening	LS 3/24/22 ~~0.2~~ 0.026	1280	• mob. to site / prep
↓	DMW26	• DW Area work.	0.022	0534	
↓	DMW27	• DW ↓	0.031	2341	
1515	DMW25		0.010		• mid-day check.
↓	DMW26		0.011		
↓	DMW27		0.004		
1710	DMW25		0.009		• EOD wrapping up for today.
↓	DMW26		0.015		
↓	DMW27		0.013		

LS 3/24/22

Gilbane

AIR MONITORING LOG

Client Name NAVFAC Date 3/25/22

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

Logged by Logan Schwing

Weather 44°F-57°F. cloudy.

Instrument Type: Dust Trak II

Calibration Standards Used Factory Calibrated

Time	Dust Monitoring Station Number	Location	Instrument Reading (mg/m3)	Unit Number	Activities, Remarks
0800	DMW7	•DW UXO screening of @ pad 7	0.004	1280	• prep/setup/mobilize.
↓	DMW8	•DW laydown.	0.004	2341	
↓	DMW9	•DW	0.006	0534	
1350	DMW7		0.008		•second set of readings.
↓	DMW8		0.011		
↓	DMW9		0.009		
1715	DMW7		0.010		• wrapping up for today.
↓	DMW8		0.014		
↓	DMW9		0.011		

LS 3/25/22

Gilbane

AIR MONITORING LOG

Client Name NAVFAC Date 3/28/22

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

Logged by TGR

Weather Rain 52 - 59 °F

Instrument Type: Dust Trak II

Calibration Standards Used Factory Calibrated

Time	Dust Monitoring Station Number	Location	Instrument Reading (mg/m3)	Unit Number	Activities, Remarks
0800	DMW13	upwind UXO Lot 47	0.016	1280	Prep for UXO Lot 47 move.
↓	DMW14	down wind UXO Lot 47	0.023	2341	
↓	DMW15	down wind UXO Lot 47	0.020	0534	
1100	DMW13		0.005		Load RSY2 material to laydown Lot 47
↓	DMW14		0.006		
↓	DMW15		0.009		
1500	DMW13		0.010		Load RSY2 material to laydown Lot 47
↓	DMW14		0.014		
↓	DMW15		0.015		

TR

3/28/22

Gilbane

AIR MONITORING LOG

Client Name NAVFAC Date 3/29/22

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

Logged by Logan Schwing

Weather 49°F - 60°F. Cloudy.

Instrument Type: Dust Trak II

Calibration Standards Used Factory Calibrated

Time	Dust Monitoring Station Number	Location	Instrument Reading (mg/m3)	Unit Number	Activities, Remarks
0800	DMW25	• UW OXO screening / Rad screening /	0.014	1280	• op finishing up
↓	DMW26	• DW Import fill	0.014	2341	
↓	DMW27	• DW ↓	0.014	0534	
1315	DMW25		0.009		• Mid-day.
↓	DMW26		0.013		
↓	DMW27		0.016		
1710	DMW25		0.008		• tasks wrapping for today.
↓	DMW26		0.006		
↓	DMW27		0.009		

LSS 3/29/22

Gilbane

AIR MONITORING LOG

Client Name NAVFAC Date 3/30/22

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

Logged by Logan Schwing

Weather 48°F-57°F. Cloudy.

Instrument Type: Dust Trak II

Calibration Standards Used Factory Calibrated

Time	Dust Monitoring Station Number	Location	Instrument Reading (mg/m3)	Unit Number	Activities, Remarks
0600	DMW25	•DW Exp Screening of Rad Screening area left/Import.	0.020	1280	• prep/setup.
↓	DMW26	•DW	0.021	2341	
↓	DMW27	•DW ↓	0.020	0534	
1150	DMW25		0.020		• before lunch.
↓	DMW26		0.023		
↓	DMW27		0.024		
1510	DMW25		0.023		• team on break.
↓	DMW26		0.025		• non-intrusive.
↓	DMW27		0.029		
1715	DMW25		0.031		• tasks finishing for today.
↓	DMW26		0.026		
↓	DMW27		0.024		
		LS 3/30/22			

Gilbane

AIR MONITORING LOG

Client Name NAVFAC Date 3/31/22

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

Logged by TOR

Weather Sunny 60 - 50° F

Instrument Type: Dust Trak II

Calibration Standards Used Factory Calibrated, zeroed in office

Time	Dust Monitoring Station Number	Location	Instrument Reading (mg/m3)	Unit Number	Activities, Remarks
0740	DMW25	up wind screen Lot 47	0.027	1280	UXO tailgate. Lot 47 clear.
↓	DMW26	Down wind screen	0.033	2341	
↓	DMW27	Dawn wind	0.025	0534	
1130	DMW25		0.019		UXO clear Lot 47 & stock-
↓	DMW26		0.021		pile RSA for T&D.
↓	DMW27		0.034		
1500	DMW25		0.027		
↓	DMW26		0.028		
↓	DMW27		0.029		

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)
03/01/2022	30.24	54.90	285.87
03/02/2022	30.15	52.84	284.73
03/03/2022	30.00	52.15	284.34
03/03/2022	29.91	52.64	284.62
03/08/2022	30.26	54.82	285.83
03/09/2022	30.08	54.40	285.59
03/10/2022	30.00	53.70	285.21
03/10/2022	30.13	59.47	288.41
03/15/2022	30.26	55.90	286.43
03/16/2022	30.24	52.75	284.68
03/17/2022	30.18	52.59	284.59
03/17/2022	30.18	54.15	285.46
03/22/2022	30.17	57.90	287.54
03/23/2022	30.14	55.84	286.39
03/24/2022	30.13	52.54	284.56
03/25/2022	30.08	49.42	282.83
03/25/2022	30.08	51.50	283.98
03/29/2022	29.85	53.26	284.96
03/30/2022	30.11	52.54	284.56
03/31/2022	30.07	52.75	284.68

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

Note: Air monitoring stations shutdown on days when import of clean soil was the only site activity

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	24.47	03/01/2022	15	NA	NA
	22.37	03/02/2022	8.8	NA	NA
	21.01	03/03/2022	7.4	NA	NA
	7.94	03/03/2022	0.92	NA	NA
	22.75	03/08/2022	16	NA	NA
	23.08	03/09/2022	28	NA	NA
	21.64	03/10/2022	22	NA	NA
	8.19	03/10/2022	15	NA	NA
	22.98	03/15/2022	14	NA	NA
	23.58	03/16/2022	15	NA	NA
	19.71	03/17/2022	24	NA	NA
	7.39	03/17/2022	23	NA	NA
	24.16	03/22/2022	36	NA	NA
	23.34	03/23/2022	17	NA	NA
	22.63	03/24/2022	19	NA	NA
	21.17	03/25/2022	6.8	NA	NA
	7.95	03/25/2022	12	NA	NA
	24.93	03/29/2022	12	NA	NA
	23.35	03/30/2022	14	NA	NA
	22.52	03/31/2022	23	NA	NA
AMSW2	24.49	03/01/2022	17	2	No
	23.3	03/02/2022	9.8	1	No
	21.41	03/03/2022	11	3.6	No
	8.01	03/03/2022	1.6	0.68	No
	23.14	03/08/2022	19	3	No
	23.84	03/09/2022	31	3	No
	21.79	03/10/2022	29	7	No
	8.24	03/10/2022	19	4	No
	20.39	03/15/2022	18	4	No
	20.88	03/16/2022	17	2	No
	20.03	03/17/2022	29	5	No
	6.89	03/17/2022	38	15	No
	24.06	03/22/2022	43	7	No
	23.92	03/23/2022	18	1	No
	23.01	03/24/2022	27	8	No
	21.54	03/25/2022	20	13.2	No
	8.03	03/25/2022	10	-2	No
	24.8	03/29/2022	13	1	No
	23.79	03/30/2022	18	4	No
	23.7	03/31/2022	37	14	No

Notes:

ug/m3 = micrograms per cubic meter

NA = Not applicable

PM10 = particulate matter less then 10 microns in diameter

* = generator/sampler malfunction

bold = result above screening criteria

Note: Air monitoring stations shutdown on days when import of clean soil was the only site activity

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	24.49	03/01/2022	23.2523	NA	NA
	22.37	03/02/2022	16.5163	NA	NA
	21	03/03/2022	13.5905	NA	NA
	7.92	03/03/2022	5.2359	NA	NA
	22.77	03/08/2022	28.4925	NA	NA
	23.06	03/09/2022	42.1941	NA	NA
	21.62	03/10/2022	41.7013	NA	NA
	8.17	03/10/2022	31.7893	NA	NA
	22.9	03/15/2022	19.2203	NA	NA
	23.59	03/16/2022	26.2909	NA	NA
	19.69	03/17/2022	36.3544	NA	NA
	7.36	03/17/2022	32.8669	NA	NA
	24.18	03/22/2022	51.4391	NA	NA
	23.35	03/23/2022	26.8125	NA	NA
	22.63	03/24/2022	27.3879	NA	NA
	21.19	03/25/2022	16.7592	NA	NA
	7.93	03/25/2022	18.1596	NA	NA
	24.94	03/29/2022	17.0359	NA	NA
	23.33	03/30/2022	20.3405	NA	NA
	22.53	03/31/2022	37.7771	NA	NA
AMSW2	24.5	03/01/2022	24.7999	1.5476	No
	23.29	03/02/2022	18.4216	1.9053	No
	21.42	03/03/2022	31.8698	18.2793	No
	8.04	03/03/2022	8.9432	3.7073	No
	23.14	03/08/2022	31.0021	2.5096	No
	23.84	03/09/2022	43.8787	1.6846	No
	21.81	03/10/2022	50.105	8.4037	No
	8.27	03/10/2022	33.1269	1.3376	No
	20.41	03/15/2022	22.5064	3.2861	No
	20.89	03/16/2022	26.3767	0.0858	No
	20.06	03/17/2022	39.0185	2.6641	No
	6.89	03/17/2022	62.6405	29.7736	No
	24.06	03/22/2022	56.54	5.1009	No
	23.92	03/23/2022	27.646	0.8335	No
	23.03	03/24/2022	45.126	17.7381	No
	21.58	03/25/2022	59.7385	42.9793	No
	8.04	03/25/2022	20.1735	2.0139	No
	24.82	03/29/2022	17.6096	0.5737	No
	23.8	03/30/2022	36.048	15.7075	No
	23.74	03/31/2022	62.2881	24.511	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

Note: Air monitoring stations shutdown on days when import of clean soil was the only site activity

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	24.47	03/01/2022	0.0018	No
	22.37	03/02/2022	0.00064 J	No
	21.01	03/03/2022	0.00063 J	No
	7.94	03/03/2022	0.0018 J	No
	22.75	03/08/2022	0.0019	No
	23.08	03/09/2022	0.0026	No
	21.64	03/10/2022	0.0019	No
	8.19	03/10/2022	0.0022	No
	22.98	03/15/2022	0.00077	No
	23.58	03/16/2022	0.00066 J	No
	19.71	03/17/2022	0.001	No
	7.39	03/17/2022	0.0022 J	No
	24.16	03/22/2022	0.0016	No
	23.34	03/23/2022	0.00086	No
	22.63	03/24/2022	0.001	No
	21.17	03/25/2022	0.00038 J	No
	7.95	03/25/2022	0.0036	No
	24.93	03/29/2022	0.00087	No
	23.35	03/30/2022	0.00085	No
	22.52	03/31/2022	0.00036 J	No
AMSW2	24.49	03/01/2022	0.0014	No
	23.3	03/02/2022	0.00055 J	No
	21.41	03/03/2022	0.002	No
	8.01	03/03/2022	0.0014 J	No
	23.14	03/08/2022	0.0037	No
	23.84	03/09/2022	0.0041	No
	21.79	03/10/2022	0.0032	No
	8.24	03/10/2022	0.0025	No
	20.39	03/15/2022	0.00095	No
	20.88	03/16/2022	0.00045 J	No
	20.03	03/17/2022	0.00078 J	No
	6.89	03/17/2022	0.0074	No
	24.06	03/22/2022	0.0021	No
	23.92	03/23/2022	0.0016	No
	23.01	03/24/2022	0.0034	No
	21.54	03/25/2022	0.0056	No
	8.03	03/25/2022	0.0028	No
	24.8	03/29/2022	0.00083	No
	23.79	03/30/2022	0.0019	No
	23.7	03/31/2022	0.004	No

Notes:

J = indicates an estimated value

ug/m^3 = micrograms per cubic meter

* = generator/sampler malfunction

bold = results above screening criteria

Note: Air monitoring stations shutdown on days when import of clean soil was the only site activity

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	20.94	03/03/2022	No	0	0.0017	0.0003 J	< 0.00064	< 0.00064	< 0.00064	< 0.00064	< 0.00064	< 0.00064	< 0.00064	< 0.00064	< 0.00064	< 0.00064	< 0.00064	0.00026 J	< 0.00064	0.0046	0.00057 J	< 0.00064
	23	03/09/2022	No	0	0.0047	0.00081	< 0.00059	< 0.00059	< 0.00059	< 0.00059	< 0.00059	< 0.00059	< 0.00059	< 0.00059	< 0.00059	< 0.00059	0.00027 J	0.00062	< 0.00059	0.013	0.00097	0.00023 J
	22.92	03/15/2022	No	0	0.0021	0.00043 J	< 0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006	0.00041 J	< 0.0006	0.0063	0.0007	< 0.0006
	7.31	03/17/2022	No	0	< 0.0038 UJ	< 0.0019	< 0.0019 UJ	< 0.0019 UJ	< 0.0019 UJ	< 0.0019 UJ	< 0.0019 UJ	< 0.0019 UJ	< 0.0019	< 0.0019 UJ	< 0.0019 UJ	< 0.0019 UJ	< 0.0019	< 0.0019 UJ	0.011 J	< 0.0019	< 0.0019 UJ
	22.56	03/24/2022	No	0	0.0012	< 0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006	0.003	0.00039 J	< 0.0006
	24.95	03/29/2022	No	0	0.0016	0.00029 J	< 0.00055	< 0.00055	< 0.00055	< 0.00055	< 0.00055	< 0.00055	< 0.00055	< 0.00055	< 0.00055	< 0.00055	< 0.00055	0.00029 J	< 0.00055	0.0043	0.00054 J	< 0.00055
AMSW2	21.4	03/03/2022	No	0	0.0015	0.00033 J	< 0.00053	< 0.00053	< 0.00053	< 0.00053	< 0.00053	< 0.00053	< 0.00053	< 0.00053	< 0.00053	< 0.00053	0.00032 J	0.00036 J	< 0.00053	0.0032	0.0012	0.00022 J
	23.83	03/09/2022	No	0	0.0012	0.00028 J	< 0.00048	< 0.00048	< 0.00048	< 0.00048	< 0.00048	< 0.00048	< 0.00048	< 0.00048	< 0.00048	< 0.00048	0.00037 J	0.00036 J	< 0.00048	0.0033	0.0013	0.00024 J
	20.38	03/15/2022	No	0	0.0014	0.00031 J	< 0.00059	< 0.00059	< 0.00059	< 0.00059	< 0.00059	< 0.00059	< 0.00059	< 0.00059	< 0.00059	< 0.00059	0.00052 J	0.00048 J	< 0.00059	0.0044	0.0019	0.0003 J
	6.9	03/17/2022	No	0	0.0019 J	< 0.0018	< 0.0018 UJ	< 0.0018 UJ	< 0.0018 UJ	< 0.0018 UJ	< 0.0018 UJ	< 0.0018 UJ	< 0.0018	< 0.0018 UJ	< 0.0018 UJ	< 0.0018 UJ	< 0.0018	< 0.0018 UJ	0.011 J	0.0015 J	< 0.0018 UJ
	23.02	03/24/2022	No	0	0.0011	0.00026 J	< 0.00056	< 0.00056	< 0.00056	< 0.00056	< 0.00056	< 0.00056	< 0.00056	< 0.00056	< 0.00056	< 0.00056	0.00033 J	0.0003 J	< 0.00056	0.0031	0.0011	< 0.00056
	24.79	03/29/2022	No	0	0.00088 J	0.00025 J	< 0.00048	< 0.00048	< 0.00048	< 0.00048	< 0.00048	< 0.00048	< 0.00048	< 0.00048	< 0.00048	< 0.00048	0.00045 J	0.0004 J	< 0.00048	0.0028	0.0017	0.00027 J

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

UJ = Nondetected at an estimated reporting limit

ug/m3 = micrograms per cubic meter

bold = results above screening criteria

Note: Air monitoring stations shutdown on days when import of clean soil was the only site activity

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	24.5	03/01/2022	NA	0	< 0.00074	< 0.00074	< 0.00074	< 0.00074	< 0.00074	< 0.00074	< 0.00074
	7.87	03/03/2022	NA	0	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025
	21.55	03/10/2022	NA	0	< 0.00089	< 0.00089	< 0.00089	< 0.00089	< 0.00089	< 0.00089	< 0.00089
	23.52	03/16/2022	NA	0	< 0.00082	< 0.00082	< 0.00082	< 0.00082	< 0.00082	< 0.00082	< 0.00082
	24.18	03/22/2022	NA	0	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008
	21.14	03/25/2022	NA	0	< 0.00086	< 0.00086	< 0.00086	< 0.00086	< 0.00086	< 0.00086	< 0.00086
	23.28	03/30/2022	NA	0	< 0.00077	< 0.00077	< 0.00077	< 0.00077	< 0.00077	< 0.00077	< 0.00077
AMSW2	24.51	03/01/2022	NA	0	< 0.00062	< 0.00062	< 0.00062	< 0.00062	< 0.00062	< 0.00062	< 0.00062
	7.98	03/03/2022	NA	0	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
	21.09	03/10/2022	NA	0	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008	< 0.0008
	20.88	03/16/2022	NA	0	< 0.00082	< 0.00082	< 0.00082	< 0.00082	< 0.00082	< 0.00082	< 0.00082
	24.07	03/22/2022	NA	0	< 0.00075	< 0.00075	< 0.00075	< 0.00075	< 0.00075	< 0.00075	< 0.00075
	21.51	03/25/2022	NA	0	< 0.00078	< 0.00078	< 0.00078	< 0.00078	< 0.00078	< 0.00078	< 0.00078
	23.8	03/30/2022	NA	0	< 0.0007	< 0.0007	< 0.0007	< 0.0007	< 0.0007	< 0.0007	< 0.0007

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

Note: Air monitoring stations shutdown on days when import of clean soil was the only site activity

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	22.31	03/02/2022	< 0.00000002	No
	22.78	03/08/2022	< 0.00000002	No
	8.11	03/10/2022	< 0.00000007	No
	19.63	03/17/2022	< 0.00000003 UJ	No
	23.29	03/23/2022	< 0.00000002	No
	7.88	03/25/2022	< 0.00000006	No
	22.47	03/31/2022	< 0.00000002	No
AMSW2	23.31	03/02/2022	< 0.00000002	No
	23.15	03/08/2022	< 0.00000002	No
	8.21	03/10/2022	< 0.00000006	No
	20	03/17/2022	< 0.00000002 UJ	No
	23.92	03/23/2022	< 0.00000002	No
	8.04	03/25/2022	< 0.00000005	No
	23.66	03/31/2022	< 0.00000002	No

Notes:

J = estimated value

UJ = Nondetected at an estimated reporting limit

ug/m^3 = micrograms per cubic meter

< = nondetected less than associated reporting limit

bold = results above screening criteria

* = generator / sampler malfunction

Note: Air monitoring stations shutdown on days when import of clean soil was the only site activity

ATTACHMENT 3
RADIOLOGICAL AIR MONITORING RESULTS
(Provided on CD)

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Gilbane

AIR SAMPLING EQUIPMENT

Project Information Effective as of: 07 May 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	LV-1	4299	6/9/22	BZ05			
PE06	LV-1	4313	6/9/22	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: 07 May 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 20 Apr 2022

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-0391	Perimeter	Upwind	PE03	60	3/1/22 5:40	3/1/22 16:45	665	4.0E+07	C	3/8/22	1	cpm	0.25	5.25	0.7	11.4	7.9E-15	1.3E-13	0.9%	2.1%	DB	CB
AS-0392	Perimeter	Downwind	PE04	60	3/1/22 5:45	3/1/22 16:40	655	3.9E+07	C	3/8/22	1	cpm	0.35	4.35	1.0	8.9	1.1E-14	1.0E-13	1.2%	1.7%	DB	CB
AS-0393	Perimeter	Upwind	PE03	60	3/2/22 5:40	3/2/22 16:40	660	4.0E+07	C	3/8/22	1	cpm	0.55	4.00	1.5	7.9	1.7E-14	9.0E-14	1.9%	1.5%	DB	CB
AS-0394	Perimeter	Downwind	PE04	60	3/2/22 5:45	3/2/22 16:45	660	4.0E+07	C	3/8/22	1	cpm	0.30	4.20	0.8	8.5	9.5E-15	9.6E-14	1.1%	1.6%	DB	CB
AS-0395	Perimeter	Upwind	PE03	60	3/3/22 5:40	3/3/22 16:35	655	3.9E+07	C	3/8/22	1	cpm	0.10	4.20	0.3	8.5	3.2E-15	9.7E-14	0.4%	1.6%	DB	CB
AS-0396	Perimeter	Downwind	PE04	60	3/3/22 5:45	3/3/22 16:35	650	3.9E+07	C	3/8/22	1	cpm	0.35	5.10	1.0	11.0	1.1E-14	1.3E-13	1.3%	2.1%	DB	CB
AS-0397	Perimeter	Upwind	PE03	60	3/7/22 6:00	3/7/22 16:45	645	3.9E+07	C	3/17/22	1	cpm	0.25	4.75	0.7	10.0	8.1E-15	1.2E-13	0.9%	1.9%	DB	CB
AS-0398	Perimeter	Downwind	PE04	60	3/7/22 6:05	3/7/22 16:50	645	3.9E+07	C	3/17/22	1	cpm	0.15	4.95	0.4	10.6	4.9E-15	1.2E-13	0.5%	2.0%	DB	CB
AS-0399	Perimeter	Upwind	PE03	60	3/8/22 5:15	3/8/22 17:05	710	4.3E+07	C	3/17/22	1	cpm	0.25	4.55	0.7	9.4	7.4E-15	1.0E-13	0.8%	1.7%	DB	CB
AS-0400	Perimeter	Downwind	PE04	60	3/8/22 5:20	3/8/22 17:00	700	4.2E+07	C	3/17/22	1	cpm	0.05	5.40	0.1	11.8	1.5E-15	1.3E-13	0.2%	2.1%	DB	CB
AS-0401	Perimeter	Upwind	PE03	60	3/9/22 5:00	3/9/22 16:50	710	4.3E+07	C	3/17/22	1	cpm	0.20	5.35	0.6	11.7	5.9E-15	1.2E-13	0.7%	2.1%	DB	CB
AS-0402	Perimeter	Downwind	PE04	60	3/9/22 5:05	3/9/22 16:55	710	4.3E+07	C	3/17/22	1	cpm	0.50	5.15	1.4	11.1	1.5E-14	1.2E-13	1.6%	2.0%	DB	CB
AS-0403	Perimeter	Upwind	PE03	60	3/10/22 5:20	3/10/22 16:40	680	4.1E+07	C	3/17/22	1	cpm	0.20	5.40	0.6	11.8	6.2E-15	1.3E-13	0.7%	2.2%	DB	CB
AS-0404	Perimeter	Downwind	PE04	60	3/10/22 5:25	3/10/22 16:45	680	4.1E+07	C	3/17/22	1	cpm	0.05	4.20	0.1	8.5	1.5E-15	9.3E-14	0.2%	1.6%	DB	CB
AS-405	Perimeter	Upwind	PE03	60	3/14/22 5:15	3/14/22 16:40	685	4.1E+07	C	4/29/22	1	cpm	0.20	6.00	0.6	13.5	6.1E-15	1.5E-13	0.7%	2.5%	DB	CB
AS-406	Perimeter	Downwind	PE04	60	3/14/22 5:20	3/14/22 16:35	675	4.1E+07	C	4/29/22	1	cpm	0.30	5.80	0.8	13.0	9.3E-15	1.4E-13	1.0%	2.4%	DB	CB
AS-407	Perimeter	Upwind	PE03	60	3/15/22 5:10	3/15/22 17:05	715	4.3E+07	C	4/29/22	1	cpm	0.85	4.65	2.4	9.7	2.5E-14	1.0E-13	2.8%	1.7%	DB	CB
AS-408	Perimeter	Downwind	PE04	60	3/15/22 5:15	3/15/22 11:20	365	2.2E+07	C	4/29/22	1	cpm	0.25	4.60	0.7	9.6	1.4E-14	2.0E-13	1.6%	3.3%	DB	CB
AS-409	Perimeter	Upwind	PE03	60	3/16/22 5:10	3/16/22 17:05	715	4.3E+07	C	4/29/22	1	cpm	0.25	3.70	0.7	7.0	7.3E-15	7.4E-14	0.8%	1.2%	DB	CB
AS-410	Perimeter	Downwind	PE04	60	3/16/22 5:20	3/16/22 17:00	700	4.2E+07	C	4/29/22	1	cpm	0.35	4.25	1.0	8.6	1.0E-14	9.2E-14	1.2%	1.5%	DB	CB
AS-411	Perimeter	Upwind	PE03	60	3/17/22 5:30	3/17/22 17:00	690	4.1E+07	C	4/29/22	1	cpm	0.30	3.60	0.8	6.8	9.1E-15	7.4E-14	1.0%	1.2%	DB	CB
AS-412	Perimeter	Downwind	PE04	60	3/17/22 5:35	3/17/22 17:05	690	4.1E+07	C	4/29/22	1	cpm	0.30	4.00	0.8	7.9	9.1E-15	8.6E-14	1.0%	1.4%	DB	CB
AS-413	Perimeter	Upwind	PE03	60	3/21/22 5:10	3/21/22 17:05	715	4.3E+07	C	4/29/22	1	cpm	0.45	4.80	1.3	10.1	1.3E-14	1.1E-13	1.5%	1.8%	DB	CB
AS-414	Perimeter	Downwind	PE04	60	3/21/22 5:20	3/21/22 17:00	700	4.2E+07	C	4/29/22	1	cpm	0.25	4.40	0.7	9.0	7.5E-15	9.7E-14	0.8%	1.6%	DB	CB
AS-415	Perimeter	Upwind	PE03	60	3/22/22 5:10	3/22/22 17:05	715	4.3E+07	C	4/29/22	1	cpm	0.20	5.55	0.6	12.3	5.8E-15	1.3E-13	0.6%	2.1%	DB	CB
AS-416	Perimeter	Downwind	PE04	60	3/22/22 5:05	3/22/22 17:00	715	4.3E+07	C	4/29/22	1	cpm	0.10	4.65	0.3	9.7	2.9E-15	1.0E-13	0.3%	1.7%	DB	CB
AS-417	Perimeter	Upwind	PE03	60	3/23/22 5:05	3/23/22 17:20	735	4.4E+07	C	4/29/22	1	cpm	0.35	4.65	1.0	9.7	1.0E-14	9.9E-14	1.1%	1.7%	DB	CB
AS-418	Perimeter	Downwind	PE04	60	3/23/22 5:00	3/23/22 17:15	735	4.4E+07	C	4/29/22	1	cpm	0.25	3.75	0.7	7.2	7.1E-15	7.3E-14	0.8%	1.2%	DB	CB
AS-419	Perimeter	Upwind	PE03	60	3/24/22 5:05	3/24/22 17:00	715	4.3E+07	C	4/29/22	1	cpm	0.25	4.75	0.7	10.0	7.3E-15	1.1E-13	0.8%	1.8%	DB	CB
AS-420	Perimeter	Downwind	PE04	60	3/24/22 5:10	3/24/22 17:05	715	4.3E+07	C	4/29/22	1	cpm	0.20	4.00	0.6	7.9	5.8E-15	8.3E-14	0.6%	1.4%	DB	CB
AS-421	Perimeter	Upwind	PE03	60	3/25/22 5:00	3/25/22 17:25	745	4.5E+07	C	4/29/22	1	cpm	0.55	4.95	1.5	10.6	1.5E-14	1.1E-13	1.7%	1.8%	DB	CB
AS-422	Perimeter	Downwind	PE04	60	3/25/22 5:05	3/25/22 17:15	730	4.4E+07	C	4/29/22	1	cpm	0.35	4.60	1.0	9.6	1.0E-14	9.8E-14	1.1%	1.6%	DB	CB
AS-423	Perimeter	Upwind	PE03	60	3/28/22 5:20	3/28/22 17:25	725	4.4E+07	C	4/29/22	1	cpm	0.50	4.95	1.4	10.6	1.4E-14	1.1E-13	1.6%	1.8%	DB	CB
AS-424	Perimeter	Downwind	PE04	60	3/28/22 5:25	3/28/22 17:20	715	4.3E+07	C	4/29/22	1	cpm	0.10	4.60	0.3	9.6	2.9E-15	1.0E-13	0.3%	1.7%	DB	CB
AS-425	Perimeter	Upwind	PE03	60	3/29/22 5:00	3/29/22 17:20	740	4.4E+07	C	4/29/22	1	cpm	0.40	4.20	1.1	8.5	1.1E-14	8.6E-14	1.3%	1.4%	DB	CB
AS-426	Perimeter	Downwind	PE04	60	3/29/22 5:05	3/29/22 17:15	730	4.4E+07	C	4/29/22	1	cpm	0.40	3.60	1.1	6.8	1.1E-14	7.0E-14	1.3%	1.2%	DB	CB
AS-427	Perimeter	Upwind	PE03	60	3/30/22 4:30	3/30/22 17:10	760	4.6E+07	C	4/29/22	1	cpm	0.30	4.70	0.8	9.9	8.3E-15	9.7E-14	0.9%	1.6%	DB	CB
AS-428	Perimeter	Downwind	PE04	60	3/30/22 4:35	3/30/22 17:05	750	4.5E+07	C	4/29/22	1	cpm	0.25	5.25	0.7	11.4	7.0E-15	1.1E-13	0.8%	1.9%	DB	CB
AS-429	Perimeter	Upwind	PE03	60	3/31/22 5:20	3/31/22 17:30	730	4.4E+07	C	4/29/22	1	cpm	0.35	4.60	1.0	9.6	1.0E-14	9.8E-14	1.1%	1.6%	DB	CB
AS-430	Perimeter	Downwind	PE04	60	3/31/22 5:25	3/31/22 17:35	730	4.4E+07	C	4/29/22	1	cpm	0.10	4.50	0.3	9.3	2.9E-15	9.6E-14	0.3%	1.6%	DB	CB

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

Sample Types
Perimeter
Effluent

Counting Units
cnts
cpm

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

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

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

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

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