



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

## **Air Monitoring Summary Report**

**June 1 to June 30, 2021**

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



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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 <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         | <i>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</i> |

## 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 June 1<sup>st</sup> through June 30<sup>th</sup>, 2021 and compares the results with the established action levels included in the Work Plan (Gilbane, 2021). During this reporting period, the Site 12 air monitoring stations (AMSW1 and AMSW2) operated on June 2<sup>nd</sup>, 3<sup>rd</sup>, 4<sup>th</sup>, 5<sup>th</sup>, 8<sup>th</sup>, 9<sup>th</sup>, 10<sup>th</sup>, 11<sup>th</sup>, 12<sup>th</sup>, 15<sup>th</sup>, 16<sup>th</sup>, 17<sup>th</sup>, 18<sup>th</sup>, 19<sup>th</sup>, 22<sup>nd</sup>, 23<sup>rd</sup>, 24<sup>th</sup>, 25<sup>th</sup>, 26<sup>th</sup>, 29<sup>th</sup> and 30<sup>th</sup>, for earth-moving tasks involving potentially contaminated soil (see discussion of generator failure on June 19<sup>th</sup> in **Section 5.0**).

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) and two PDRs are placed in downwind perimeter locations (DMW8 and DMW9). 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 3**, generally depict the wind blowing East-North-East at 10-15 miles/hour with gusts up to 18 miles/hour. Detailed weather data is not reported in this document but can be provided upon request.

### 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**. Air Monitoring locations were moved after samples were collected on June 15<sup>th</sup> to better encompass the site and be more representative of onsite activities. The new operating air monitoring locations are shown on **Figure 2**. The locations of the air monitoring stations are determined based on the prevailing wind direction (typically from the southwest) and are modified as needed. A weather station is erected to monitor the wind direction.

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.

### **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 PM<sub>10</sub>, 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 PM<sub>10</sub> 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 and Air Monitoring Data

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 ( $\mu\text{g}/\text{m}^3$ ) 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.

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**.

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**.

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

| Method | Monitoring Location                                    | Monitoring Frequency <sup>a</sup> | Action Level <sup>b</sup>                        | Action  |
|--------|--|-----------------------------------|--|---|
| PDR    | Near Workers' Breathing Zones (typically on equipment) | Periodically <sup>c</sup>         | <2.0 mg/m <sup>3</sup><br>>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><br>>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.

- <sup>a</sup> 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.
- <sup>b</sup> 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.
- <sup>c</sup> 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**

| <b>Chemicals of Concern</b> | <b>Project Screening Criteria<br/>(Threshold Limit Value)<br/><math>\mu\text{g}/\text{m}^3</math></b> | <b>Basis</b>   |
|-----------------------------|---|--|
| 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 <sup>a</sup>           | 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:**

- <sup>a</sup> 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.
- <sup>b</sup> BAP(Eq) action level will be ~55  $\text{mg}/\text{m}^3$  for all excavations
- <sup>c</sup> 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                              |
| $\text{mg}/\text{m}^3$   | milligrams per cubic meter                             |
| PCBs                     | polychlorinated biphenyls                              |
| PM10                     | particulate matter smaller than 10 microns in diameter |
| Ra-226                   | radium-226   |
| TSP                      | total suspended particulates                           |
| $\mu\text{g}/\text{m}^3$ | micrograms per cubic meter                             |

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## 5.0 Air 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.

PDR summary results are presented in **Attachment 1**. Weather information (including ambient pressure and temperature data) and high-volume air monitoring sample results are presented in Attachment 2. Weather information was collected from the weather station at Building 572, Avenue M, Treasure Island, San Francisco, California. Radiological air monitoring results are presented in **Attachment 3**.

On Friday June 18, 2021, Gilbane conducted regular earth moving activities and air media samples were inserted on June 18, 2021, however, when collected on Saturday June 19, 2021, the air monitoring stations at AMSW1 weren't running. The GFCI had tripped which shutdown the samplers. Since the equipment malfunctioned and the minimum air sampling period was not achieved, no samples from June 19, 2021 were sent to the laboratory for analysis. In future, field personnel will periodically check air monitoring stations to ensure minimum runtimes are met.

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

TSP analytical results from June 2021 are presented in **Table 2**. An exceedance was observed specifically with the TSP sample placed on June 17<sup>th</sup> and collected on June 18<sup>th</sup>. The appropriate parties were notified when the contractor received these results. Additional dust control measures have been implemented such as the addition of a water truck onsite to help dust mitigation.

There were no exceedances recorded for the PDR results on the corresponding dust monitoring days in June 2021. There was an observed PDR reading of 0.053 mg/m<sup>3</sup> on June 4<sup>th</sup>, however, the delta between the upwind and downwind monitors was below project action levels during the reporting period. The field PDR data sheets are found in **Attachment 1**.

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

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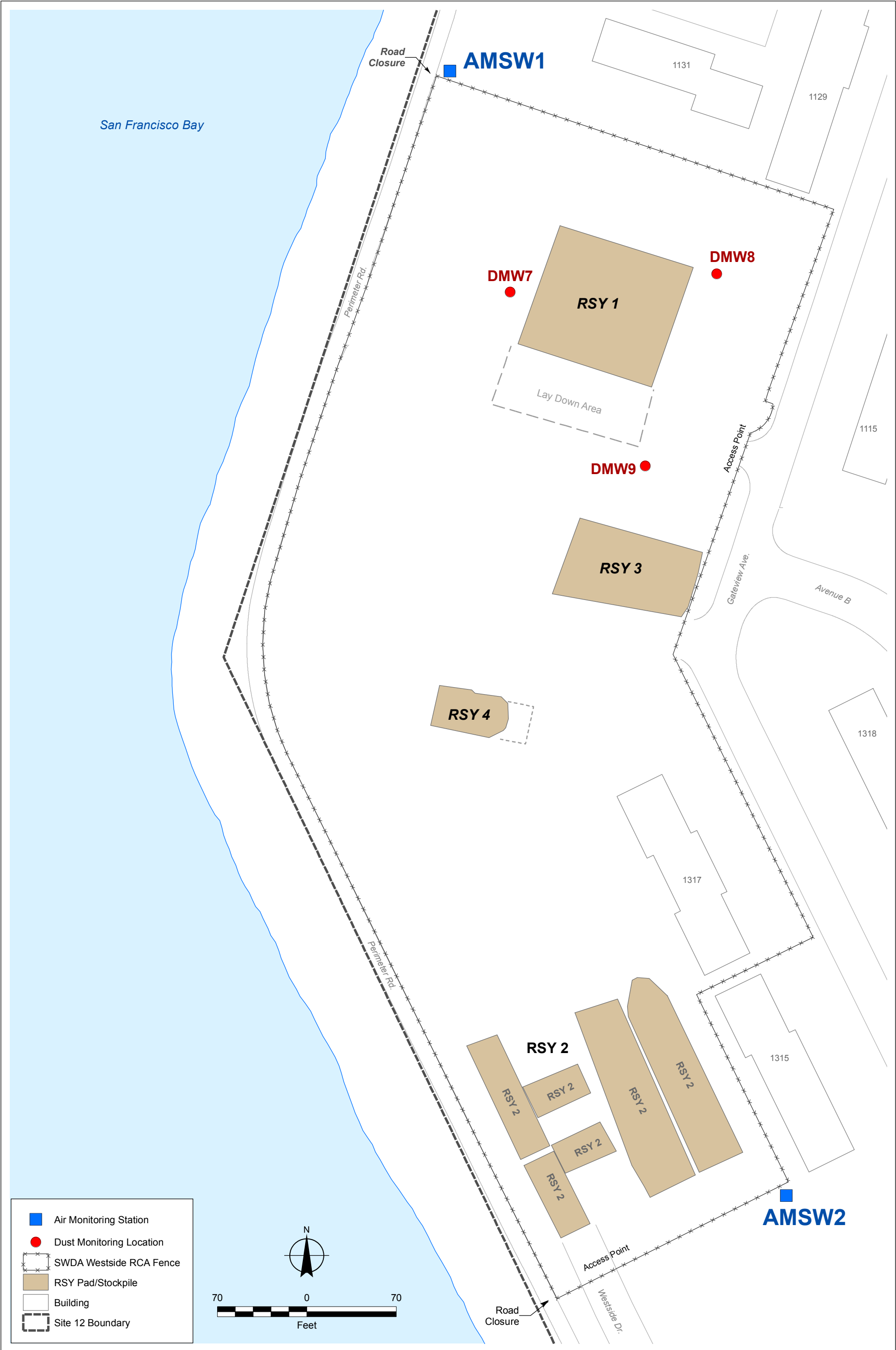
## 6.0 References

- Gilbane, 2016. *Radiological Procedure PR-RP-150 Radiological Survey and Sampling*. January.
- Gilbane, 2021. *Phase IV Non-Time Critical Removal Action Work Plan, Solid Waste Disposal Area Westside, Installation Restoration Site 12, Former Naval Station Treasure Island, San Francisco, California*. March.
- Gilbane, 2021. *Phase IV Non-Time Critical Removal Action Work Plan, Air Monitoring Plan, Solid Waste Disposal Area Westside, Installation Restoration Site 12, Former Naval Station Treasure Island, San Francisco, California*. March.
- Gilbane, 2021. *Phase IV Non-Time Critical Removal Action Work Plan, Dust Control Plan, Solid Waste Disposal Area Westside, Installation Restoration Site 12, Former Naval Station Treasure Island, San Francisco, California*. March.
- HERO, 2018. *Dust Action Levels for Installation Restoration Site 12, Former Naval Station Treasure Island, San Francisco, California*. September.

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## FIGURES

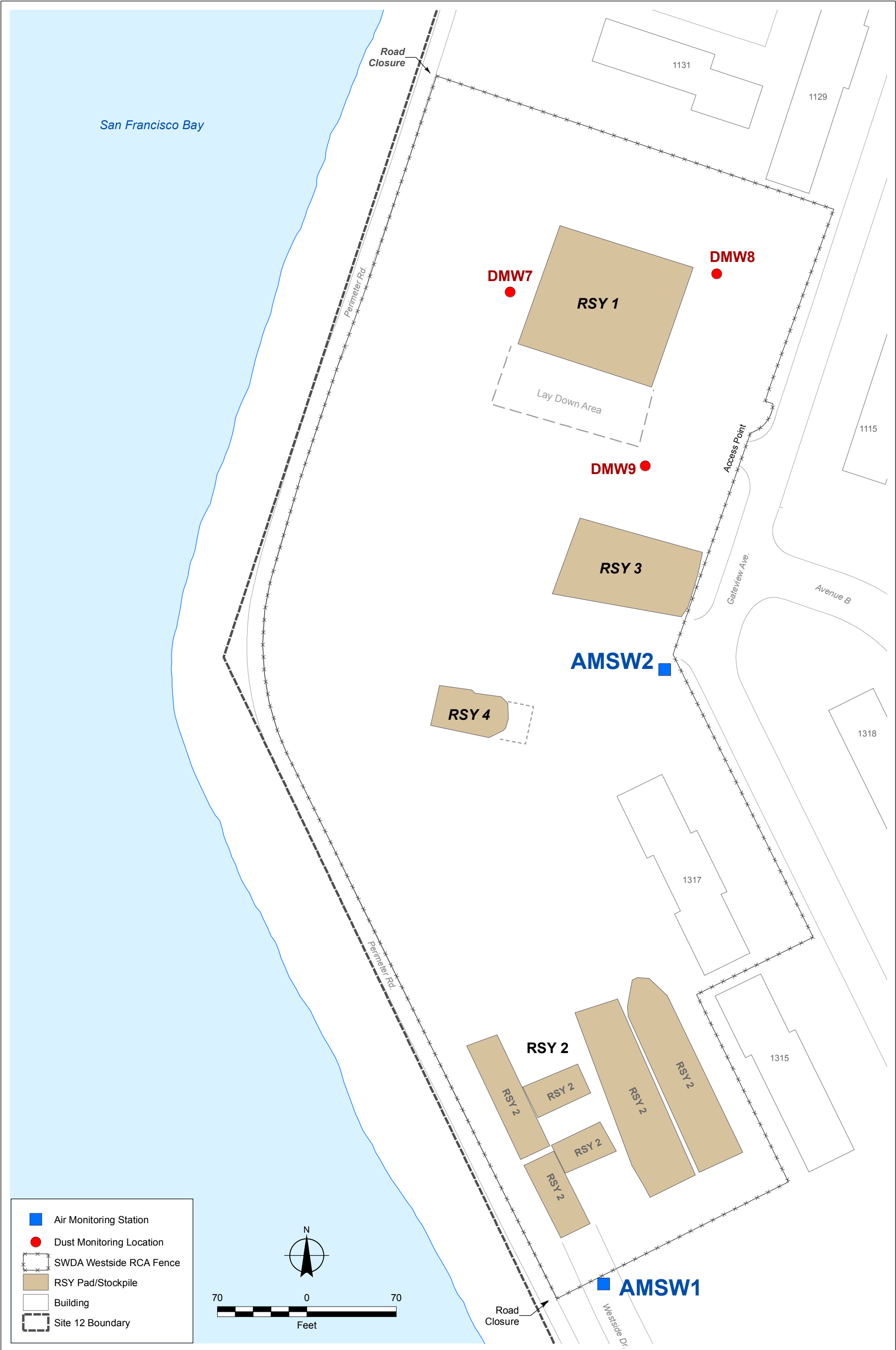
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**Air Monitoring Report**  
**Phase IV Non-Time Critical Removal Action**  
Solid Waste Disposal Area Westside, IR Site 12  
Former Naval Station Treasure Island  
San Francisco, CA

**Figure 1**  
Air and Dust Monitoring Locations  
IR Site 12 SWDA Westside

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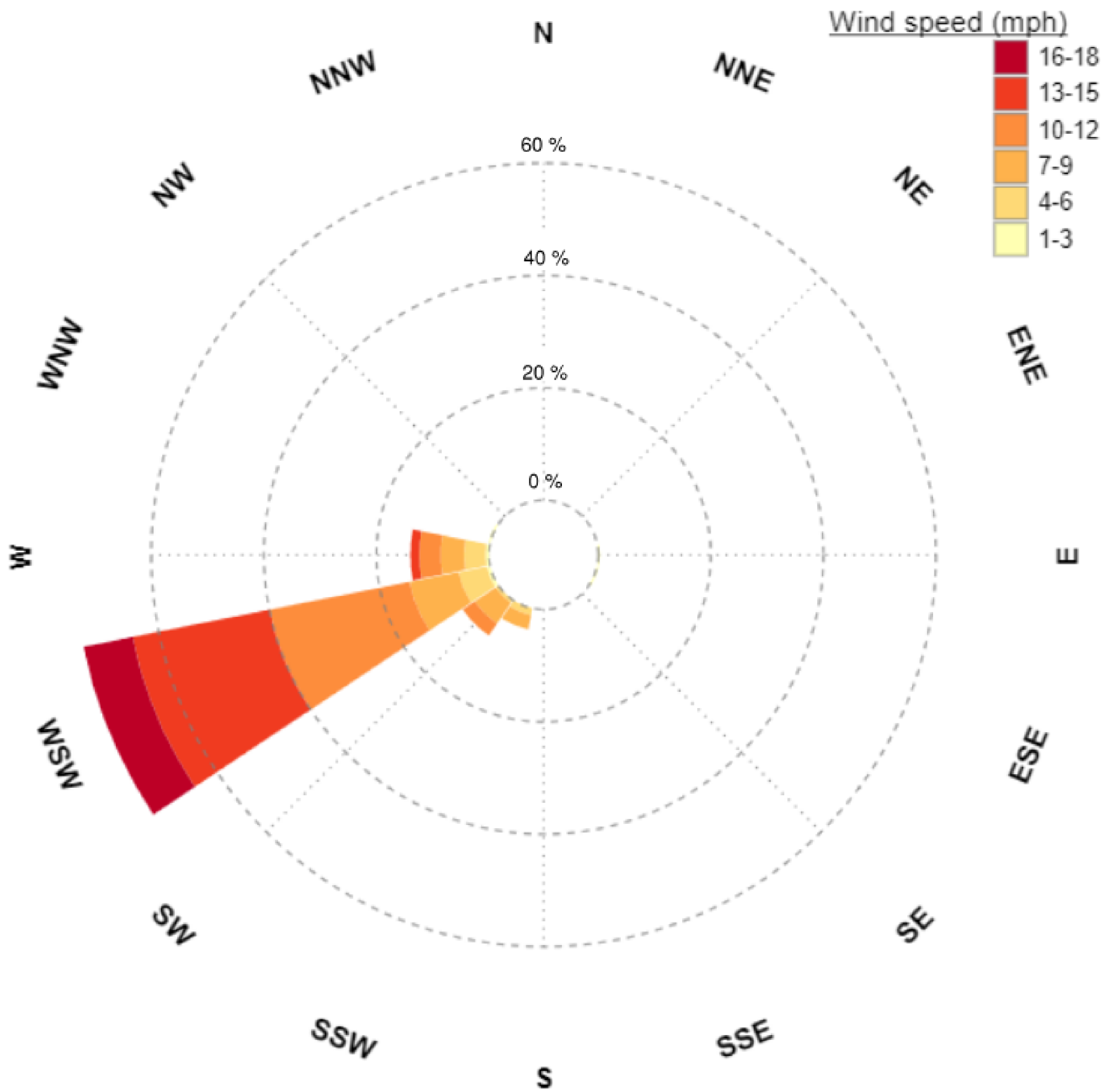


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Solid Waste Disposal Area Westside, IR Site 12  
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**Figure 2**  
Dust and Relocated Air Monitoring Locations  
IR Site 12 SWDA Westside

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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 <sup>1</sup><br>(mg/m <sup>3</sup> ) | Average <sup>1</sup><br>(mg/m <sup>3</sup> ) | Delta Between Upwind<br>and Downwind Stations<br>(mg/m <sup>3</sup> ) | Below action level?<br>(0.050 mg/m <sup>3</sup> )<br>(Yes/No) |
|---------------|---------|-----------|--|--|---|---|
| DMW7          | Site 12 | 6/1/2021  | 0.042  | 0.013  | NA  | Yes   |
| DMW8          | Site 12 |           | 0.019  | 0.015  | 0.002   | Yes   |
| DMW9          | Site 12 |           | 0.018  | 0.014  | 0.001   | Yes   |
| DMW7          | Site 12 | 6/2/2021  | 0.020  | 0.014  | NA  | Yes   |
| DMW8          | Site 12 |           | 0.023  | 0.016  | 0.002   | Yes   |
| DMW9          | Site 12 |           | 0.029  | 0.018  | 0.004   | Yes   |
| DMW7          | Site 12 | 6/3/2021  | 0.024  | 0.012  | NA  | Yes   |
| DMW8          | Site 12 |           | 0.025  | 0.012  | 0.000   | Yes   |
| DMW9          | Site 12 |           | 0.022  | 0.010  | -0.002  | Yes   |
| DMW7          | Site 12 | 6/4/2021  | 0.025  | 0.018  | NA  | Yes   |
| DMW8          | Site 12 |           | 0.053  | 0.025  | 0.007   | Yes   |
| DMW9          | Site 12 |           | 0.033  | 0.017  | -0.001  | Yes   |
| DMW7          | Site 12 | 6/7/2021  | 0.019  | 0.017  | NA  | Yes   |
| DMW8          | Site 12 |           | 0.049  | 0.025  | 0.008   | Yes   |
| DMW9          | Site 12 |           | 0.045  | 0.030  | 0.013   | Yes   |
| DMW7          | Site 12 | 6/8/2021  | 0.015  | 0.010  | NA  | Yes   |
| DMW8          | Site 12 |           | 0.023  | 0.015  | 0.005   | Yes   |
| DMW9          | Site 12 |           | 0.048  | 0.016  | 0.006   | Yes   |
| DMW7          | Site 12 | 6/9/2021  | 0.009  | 0.007  | NA  | Yes   |
| DMW8          | Site 12 |           | 0.025  | 0.012  | 0.005   | Yes   |
| DMW9          | Site 12 |           | 0.039  | 0.010  | 0.003   | Yes   |
| DMW7          | Site 12 | 6/10/2021 | 0.009  | 0.006  | NA  | Yes   |
| DMW8          | Site 12 |           | 0.016  | 0.005  | -0.001  | Yes   |
| DMW9          | Site 12 |           | 0.011  | 0.005  | -0.001  | Yes   |
| DMW7          | Site 12 | 6/11/2021 | 0.008  | 0.005  | NA  | Yes   |
| DMW8          | Site 12 |           | 0.025  | 0.005  | 0.000   | Yes   |
| DMW9          | Site 12 |           | 0.037  | 0.008  | 0.003   | Yes   |
| DMW7          | Site 12 | 6/14/2021 | 0.013  | 0.008  | NA  | Yes   |
| DMW8          | Site 12 |           | 0.010  | 0.006  | -0.002  | Yes   |
| DMW9          | Site 12 |           | 0.014  | 0.007  | -0.001  | Yes   |
| DMW7          | Site 12 | 6/15/2021 | 0.018  | 0.013  | NA  | Yes   |
| DMW8          | Site 12 |           | 0.044  | 0.015  | 0.002   | Yes   |
| DMW9          | Site 12 |           | 0.032  | 0.015  | 0.002   | Yes   |
| DMW7          | Site 12 | 6/16/2021 | 0.036  | 0.026  | NA  | Yes   |
| DMW8          | Site 12 |           | 0.038  | 0.020  | -0.006  | Yes   |
| DMW9          | Site 12 |           | 0.037  | 0.024  | -0.002  | Yes   |
| DMW7          | Site 12 | 6/17/2021 | 0.043  | 0.035  | NA  | Yes   |
| DMW8          | Site 12 |           | 0.044  | 0.032  | -0.003  | Yes   |
| DMW9          | Site 12 |           | 0.047  | 0.036  | 0.001   | Yes   |
| DMW7          | Site 12 | 6/18/2021 | 0.044  | 0.036  | NA  | Yes   |
| DMW8          | Site 12 |           | 0.047  | 0.039  | 0.003   | Yes   |
| DMW9          | Site 12 |           | 0.043  | 0.038  | 0.002   | Yes   |
| DMW7          | Site 12 | 6/21/2021 | 0.016  | 0.010  | NA  | Yes   |
| DMW8          | Site 12 |           | 0.015  | 0.009  | -0.001  | Yes   |
| DMW9          | Site 12 |           | 0.019  | 0.013  | 0.003   | Yes   |
| DMW7          | Site 12 | 6/22/2021 | 0.009  | 0.006  | NA  | Yes   |
| DMW8          | Site 12 |           | 0.018  | 0.007  | 0.001   | Yes   |
| DMW9          | Site 12 |           | 0.007  | 0.005  | -0.001  | Yes   |
| DMW7          | Site 12 | 6/23/2021 | 0.006  | 0.005  | NA  | Yes   |
| DMW8          | Site 12 |           | 0.033  | 0.009  | 0.004   | Yes   |
| DMW9          | Site 12 |           | 0.008  | 0.004  | -0.001  | Yes   |
| DMW7          | Site 12 | 6/24/2021 | 0.008  | 0.005  | NA  | Yes   |
| DMW8          | Site 12 |           | 0.036  | 0.015  | 0.010   | Yes   |
| DMW9          | Site 12 |           | 0.019  | 0.005  | 0.000   | Yes   |
| DMW7          | Site 12 | 6/25/2021 | 0.008  | 0.005  | NA  | Yes   |
| DMW8          | Site 12 |           | 0.019  | 0.007  | 0.002   | Yes   |
| DMW9          | Site 12 |           | 0.012  | 0.005  | 0.000   | Yes   |
| DMW7          | Site 12 | 6/28/2021 | 0.015  | 0.008  | NA  | Yes   |
| DMW8          | Site 12 |           | 0.041  | 0.012  | 0.004   | Yes   |
| DMW9          | Site 12 |           | 0.010  | 0.006  | -0.002  | Yes   |
| DMW7          | Site 12 | 6/29/2021 | 0.020  | 0.010  | NA  | Yes   |
| DMW8          | Site 12 |           | 0.030  | 0.009  | -0.001  | Yes   |
| DMW9          | Site 12 |           | 0.017  | 0.009  | -0.001  | Yes   |
| DMW7          | Site 12 | 6/30/2021 | 0.023  | 0.012  | NA  | Yes   |
| DMW8          | Site 12 |           | 0.023  | 0.010  | -0.002  | Yes   |
| DMW9          | Site 12 |           | 0.040  | 0.016  | 0.004   | Yes   |

**Notes:****bold** = results above screening criteriamg/m<sup>3</sup> = milligrams per cubic meter

NA = not applicable

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





















































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**ATTACHMENT 2**  
**SUMMARY OF AIR MONITORING AND**  
**AIR SAMPLING RESULTS**  
**(Provided on CD)**

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**Table 2-1: Ambient Pressure and Temperature Monitoring Results**

| Sample Date | Ambient Pressure<br>(inches of Hg) | Ambient Temperature<br>(°F) | Ambient Temperature<br>(°K) |
|-------------|------------------------------------|-----------------------------|-----------------------------|
| 06/02/2021  | 29.90                              | 54.07                       | 285.41                      |
| 06/03/2021  | 29.84                              | 54.47                       | 285.63                      |
| 06/04/2021  | 29.84                              | 56.81                       | 286.93                      |
| 06/05/2021  | 29.9                               | 56.52                       | 286.77                      |
| 06/08/2021  | 29.89                              | 55.58                       | 286.25                      |
| 06/09/2021  | 30.05                              | 55.20                       | 286.04                      |
| 06/10/2021  | 30.16                              | 55.64                       | 286.28                      |
| 06/11/2021  | 30.10                              | 56.84                       | 286.95                      |
| 06/12/2021  | 29.99                              | 60.47                       | 288.97                      |
| 06/15/2021  | 30.03                              | 59.05                       | 288.18                      |
| 06/16/2021  | 29.98                              | 62.87                       | 290.30                      |
| 06/17/2021  | 29.82                              | 63.25                       | 290.51                      |
| 06/18/2021  | 29.70                              | 61.89                       | 289.76                      |
| 06/22/2021  | 29.88                              | 61.23                       | 289.39                      |
| 06/23/2021  | 29.86                              | 60.78                       | 289.14                      |
| 06/24/2021  | 29.94                              | 60.75                       | 289.12                      |
| 06/25/2021  | 29.98                              | 58.14                       | 287.67                      |
| 06/26/2021  | 29.91                              | 58.49                       | 287.87                      |
| 06/29/2021  | 29.77                              | 58.59                       | 287.92                      |
| 06/30/2021  | 29.78                              | 59.84                       | 288.62                      |

**Notes:**

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

°F = Degrees Fahrenheit

Hg = mercury

°K = Degrees Kelvin

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

| Location ID        | Sampling Period (Hours) | Sample Date | Particulate Matter Less Than 10 Microns in Diameter (ug/m <sup>3</sup> ) | Delta between Downwind and Upwind Stations (ug/m <sup>3</sup> ) | PM10 Exceedance? (Yes/No) |
|--------------------|-------------------------|-------------|--|---|---------------------------|
| Screening Criteria |                         |             |  |   | 50                        |
| AMSW1              | 22.89                   | 06/02/2021  | 15   | NA  | NA                        |
|                    | 24.2                    | 06/03/2021  | 8.3  | NA  | NA                        |
|                    | 22.18                   | 06/04/2021  | 20   | NA  | NA                        |
|                    | 24.12                   | 06/05/2021  | 30   | NA  | NA                        |
|                    | 23.89                   | 06/08/2021  | 28   | NA  | NA                        |
|                    | 23.79                   | 06/09/2021  | 16   | NA  | NA                        |
|                    | 23.28                   | 06/10/2021  | 10   | NA  | NA                        |
|                    | 24.06                   | 06/11/2021  | 9.7  | NA  | NA                        |
|                    | 24.01                   | 06/12/2021  | 9.3  | NA  | NA                        |
|                    | 23.05                   | 06/15/2021  | 10   | NA  | NA                        |
|                    | 23.28                   | 06/16/2021  | 22   | NA  | NA                        |
|                    | 21.23                   | 06/17/2021  | 32   | NA  | NA                        |
|                    | 23.56                   | 06/18/2021  | 38   | NA  | NA                        |
|                    | 23.94                   | 06/22/2021  | 6.6  | NA  | NA                        |
|                    | 23.7                    | 06/23/2021  | 5.4  | NA  | NA                        |
|                    | 22.22                   | 06/24/2021  | 4.3  | NA  | NA                        |
|                    | 23.57                   | 06/25/2021  | 5  | NA  | NA                        |
|                    | 23.41                   | 06/26/2021  | 5.2  | NA  | NA                        |
|                    | 23.54                   | 06/29/2021  | 8.8  | NA  | NA                        |
|                    | 22.22                   | 06/30/2021  | 14   | NA  | NA                        |
| AMSW2              | 22.95                   | 06/02/2021  | 6.5  | -8.5  | No                        |
|                    | 24.26                   | 06/03/2021  | 4.5  | -3.8  | No                        |
|                    | 23.88                   | 06/04/2021  | 14   | -6  | No                        |
|                    | 23.91                   | 06/05/2021  | 26   | -4  | No                        |
|                    | 23.97                   | 06/08/2021  | 17   | -11   | No                        |
|                    | 22.66                   | 06/09/2021  | 7.5  | -8.5  | No                        |
|                    | 23.55                   | 06/10/2021  | 6.5  | -3.5  | No                        |
|                    | 24.15                   | 06/11/2021  | X  | NA  | NA                        |
|                    | 23.17                   | 06/12/2021  | 4.5  | -4.8  | No                        |
|                    | 23.04                   | 06/15/2021  | 6.3  | -3.7  | No                        |
|                    | 23.51                   | 06/16/2021  | 27   | 5   | No                        |
|                    | 23.49                   | 06/17/2021  | 35   | 3   | No                        |
|                    | 23.59                   | 06/18/2021  | 48   | 10  | No                        |
|                    | 23.95                   | 06/22/2021  | 9  | 2.4   | No                        |
|                    | 23.57                   | 06/23/2021  | 7  | 1.6   | No                        |
|                    | 23.68                   | 06/24/2021  | 8.6  | 4.3   | No                        |
|                    | 23.4                    | 06/25/2021  | 17   | 12  | No                        |
|                    | 23.55                   | 06/26/2021  | 7.9  | 2.7   | No                        |
|                    | 23.17                   | 06/29/2021  | 7.8  | -1  | No                        |
|                    | 22.45                   | 06/30/2021  | 13   | -1  | No                        |

**Notes:**

ug/m3 = micrograms per cubic meter

NA = Not applicable

PM10 = particulate matter less then 10 microns in diameter

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

| Location ID        | Sampling Period (Hours) | Sample Date | Total Suspended Particulate (ug/m <sup>3</sup> ) | Delta Between Downwind and Upwind Stations (ug/m <sup>3</sup> ) | TSP Exceedance? (Yes/No) |
|--------------------|-------------------------|-------------|--|---|--------------------------|
| Screening Criteria |                         |             |  |   | 50                       |
| AMSW1              | 22.9                    | 06/02/2021  | 20.5349  | No  | NA                       |
|                    | 24.19                   | 06/03/2021  | 14.4909  | No  | NA                       |
|                    | 23.88                   | 06/04/2021  | 27.4942  | No  | NA                       |
|                    | 24.11                   | 06/05/2021  | 40.1383  | No  | NA                       |
|                    | 23.89                   | 06/08/2021  | 44.8366  | No  | NA                       |
|                    | 23.79                   | 06/09/2021  | 24.139   | No  | NA                       |
|                    | 23.25                   | 06/10/2021  | 19.4008  | No  | NA                       |
|                    | 24.06                   | 06/11/2021  | 18.9054  | No  | NA                       |
|                    | 24.00                   | 06/12/2021  | 16.5247  | No  | NA                       |
|                    | 23.05                   | 06/15/2021  | 21.8754  | No  | NA                       |
|                    | 22.6                    | 06/16/2021  | 38.4173  | No  | NA                       |
|                    | 20.81                   | 06/17/2021  | 45.448   | No  | NA                       |
|                    | 23.58                   | 06/18/2021  | 49.0798  | No  | NA                       |
|                    | 23.95                   | 06/22/2021  | 12.8582  | No  | NA                       |
|                    | 23.69                   | 06/23/2021  | 12.0883  | No  | NA                       |
|                    | 22.24                   | 06/24/2021  | 7.2044   | No  | NA                       |
|                    | 23.58                   | 06/25/2021  | 11.0333  | No  | NA                       |
|                    | 23.41                   | 06/26/2021  | 11.113   | No  | NA                       |
|                    | 23.56                   | 06/29/2021  | 15.4059  | No  | NA                       |
|                    | 22.23                   | 06/30/2021  | 20.7042  | No  | NA                       |
| AMSW2              | 22.97                   | 06/02/2021  | 11.2839  | -9.251  | No                       |
|                    | 24.28                   | 06/03/2021  | 8.642  | -5.8489   | No                       |
|                    | 23.89                   | 06/04/2021  | 22.6352  | -4.859  | No                       |
|                    | 23.94                   | 06/05/2021  | 43.5035  | 3.3652  | No                       |
|                    | 23.98                   | 06/08/2021  | 28.0736  | -16.763   | No                       |
|                    | 22.66                   | 06/09/2021  | 14.952   | -9.187  | No                       |
|                    | 21.86                   | 06/10/2021  | 11.5937  | -7.8071   | No                       |
|                    | 24.16                   | 06/11/2021  | 10.7168  | -8.1886   | No                       |
|                    | 23.17                   | 06/12/2021  | 10.0698  | -6.4549   | No                       |
|                    | 22.5                    | 06/15/2021  | 12.563   | -9.3124   | No                       |
|                    | 23.51                   | 06/16/2021  | 62.0927  | 23.6754   | No                       |
|                    | 23.36                   | 06/17/2021  | 69.2641  | 23.8161   | No                       |
|                    | 23.56                   | 06/18/2021  | 116.533  | <b>67.4532</b>  | Yes                      |
|                    | 23.95                   | 06/22/2021  | 29.7233  | 16.8651   | No                       |
|                    | 23.56                   | 06/23/2021  | 27.0074  | 14.9191   | No                       |
|                    | 23.68                   | 06/24/2021  | 28.7433  | 21.5389   | No                       |
|                    | 23.38                   | 06/25/2021  | 27.0074  | 15.9741   | No                       |
|                    | 23.57                   | 06/26/2021  | 44.011   | 32.898  | No                       |
|                    | 23.15                   | 06/29/2021  | 32.3424  | 16.9365   | No                       |
|                    | 22.46                   | 06/30/2021  | 23.3104  | 2.6062  | No                       |

**Notes:**

J = estimated value

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

NA = Not applicable

TSP = total suspended particulate

**bold** = results above screening criteria

\* = generator/sampler malfunction

**Table 2-4: Lead by EPA 6020 Monitoring Results**

| Location ID        | Sampling Period (Hours) | Sample Date | Lead (ug/m <sup>3</sup> ) | Lead Exceedance? (Yes/No) |
|--------------------|-------------------------|-------------|---------------------------|---------------------------|
| Screening Criteria |                         |             |                           | <b>1,575</b>              |
| AMSW1              | 22.89                   | 06/02/2021  | 0.00029 J                 | No                        |
|                    | 24.2                    | 06/03/2021  | 0.00028 J                 | No                        |
|                    | 22.18                   | 06/04/2021  | 0.00057 J                 | No                        |
|                    | 24.12                   | 06/05/2021  | 0.00084                   | No                        |
|                    | 23.89                   | 06/08/2021  | 0.00039 J                 | No                        |
|                    | 23.79                   | 06/09/2021  | 0.00048 J                 | No                        |
|                    | 23.28                   | 06/10/2021  | 0.00039 J                 | No                        |
|                    | 24.06                   | 06/11/2021  | 0.00027 J                 | No                        |
|                    | 24.01                   | 06/12/2021  | 0.00024 J                 | No                        |
|                    | 23.05                   | 06/15/2021  | 0.00014 J                 | No                        |
|                    | 23.28                   | 06/16/2021  | 0.00046 J                 | No                        |
|                    | 21.23                   | 06/17/2021  | 0.00047 J                 | No                        |
|                    | 23.56                   | 06/18/2021  | 0.00052 J                 | No                        |
|                    | 23.94                   | 06/22/2021  | 0.00038 J                 | No                        |
|                    | 23.7                    | 06/23/2021  | 0.00057 J                 | No                        |
|                    | 22.22                   | 06/24/2021  | 0.00044 J                 | No                        |
|                    | 23.57                   | 06/25/2021  | 0.00032 J                 | No                        |
|                    | 23.41                   | 06/26/2021  | 0.00043 J                 | No                        |
|                    | 23.54                   | 06/29/2021  | 0.00045 J                 | No                        |
|                    | 22.22                   | 06/30/2021  | 0.0003 J                  | No                        |
| AMSW2              | 22.95                   | 06/02/2021  | 0.00025 J                 | No                        |
|                    | 24.26                   | 06/03/2021  | 0.00045 J                 | No                        |
|                    | 23.88                   | 06/04/2021  | 0.00044 J                 | No                        |
|                    | 23.91                   | 06/05/2021  | 0.00092                   | No                        |
|                    | 23.97                   | 06/08/2021  | 0.00048 J                 | No                        |
|                    | 22.66                   | 06/09/2021  | 0.00068 J                 | No                        |
|                    | 23.55                   | 06/10/2021  | 0.00036 J                 | No                        |
|                    | 24.15                   | 06/11/2021  | 0.00027 J                 | No                        |
|                    | 23.17                   | 06/12/2021  | 0.00049 J                 | No                        |
|                    | 23.04                   | 06/15/2021  | 0.00028 J                 | No                        |
|                    | 23.51                   | 06/16/2021  | 0.0018                    | No                        |
|                    | 23.49                   | 06/17/2021  | 0.0015                    | No                        |
|                    | 23.59                   | 06/18/2021  | 0.0041                    | No                        |
|                    | 23.95                   | 06/22/2021  | 0.0014                    | No                        |
|                    | 23.57                   | 06/23/2021  | 0.0013                    | No                        |
|                    | 23.68                   | 06/24/2021  | 0.002                     | No                        |
|                    | 23.4                    | 06/25/2021  | 0.0035                    | No                        |
|                    | 23.55                   | 06/26/2021  | 0.0017                    | No                        |
|                    | 23.17                   | 06/29/2021  | 0.00077                   | No                        |
|                    | 22.45                   | 06/30/2021  | 0.00036 J                 | No                        |

**Notes:**

J = indicates an estimated value

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

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

| Location ID                     | Sampling Period (Hours) | Sample Date | BAP(Eq) Exceed-ance? (Yes/No) | BAP(Eq) | 2-Methyl-naph-thalene (ug/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                           | 23.88                   | 06/04/2021  | No                            | 0       | 0.0011 J                      | 0.00051 J             | < 0.00061               | 0.00066            | < 0.00061                   | < 0.00061               | < 0.00061                      | < 0.00061                     | < 0.00061                      | < 0.00061        | < 0.00061                      | 0.0011                | 0.0012           | < 0.00061                         | 0.0023               | 0.0048                | 0.00063        |
|                                 | 23.79                   | 06/09/2021  | No                            | 0       | 0.00076 J                     | < 0.00059             | < 0.00059               | < 0.00059          | < 0.00059                   | < 0.00059               | < 0.00059                      | < 0.00059                     | < 0.00059                      | < 0.00059        | < 0.00059                      | 0.00028 J             | 0.00036 J        | < 0.00059                         | 0.0012               | 0.0013                | < 0.00059      |
|                                 | 24                      | 06/12/2021  | No                            | 0       | 0.0011 J                      | 0.00063               | < 0.00061               | 0.00055 J          | < 0.00061                   | < 0.00061               | < 0.00061                      | < 0.00061                     | < 0.00061                      | < 0.00061        | < 0.00061                      | 0.0011                | 0.0013           | < 0.00061                         | 0.0023               | 0.0048                | 0.00065        |
|                                 | 21.02                   | 06/17/2021  | No                            | 0       | 0.001 J                       | 0.00042 J             | < 0.00068               | < 0.00068          | < 0.00068                   | < 0.00068               | < 0.00068                      | < 0.00068                     | < 0.00068                      | < 0.00068        | < 0.00068                      | 0.00062 J             | 0.00033 J        | < 0.00068                         | 0.0024               | 0.00096               | 0.00043 J      |
|                                 | 23.94                   | 06/22/2021  | No                            | 0       | < 0.0011                      | < 0.00055             | < 0.00055               | < 0.00055          | < 0.00055                   | < 0.00055               | < 0.00055                      | < 0.00055                     | < 0.00055                      | < 0.00055        | < 0.00055                      | 0.00033 J             | < 0.00055        | < 0.00055                         | 0.0012               | 0.00045 J             | < 0.00055      |
|                                 | 23.59                   | 06/25/2021  | No                            | 0       | < 0.0011                      | < 0.00053             | < 0.00053               | < 0.00053          | < 0.00053                   | < 0.00053               | < 0.00053                      | < 0.00053                     | < 0.00053                      | < 0.00053        | < 0.00053                      | < 0.00053             | < 0.00053        | < 0.00053                         | < 0.0011             | 0.00027 J             | < 0.00053      |
| AMSW2                           | 22.23                   | 06/30/2021  | No                            | 0       | < 0.0012                      | < 0.00062             | < 0.00062               | < 0.00062          | < 0.00062                   | < 0.00062               | < 0.00062                      | < 0.00062                     | < 0.00062                      | < 0.00062        | < 0.00062                      | < 0.00062             | < 0.00062        | < 0.00062                         | 0.0009 J             | 0.00033 J             | < 0.00062      |
|                                 | 23.88                   | 06/04/2021  | No                            | 0       | 0.00078 J                     | < 0.00073             | < 0.00073               | < 0.00073          | < 0.00073                   | < 0.00073               | < 0.00073                      | < 0.00073                     | < 0.00073                      | < 0.00073        | < 0.00073                      | < 0.00073             | < 0.00073        | < 0.00073                         | 0.002                | 0.00072 J             | < 0.00073      |
|                                 | 22.66                   | 06/09/2021  | No                            | 0       | < 0.0015                      | < 0.00076             | < 0.00076               | < 0.00076          | < 0.00076                   | < 0.00076               | < 0.00076                      | < 0.00076                     | < 0.00076                      | < 0.00076        | < 0.00076                      | < 0.00076             | < 0.00076        | < 0.00076                         | 0.00077 J            | 0.00036 J             | < 0.00076      |
|                                 | 23.17                   | 06/12/2021  | No                            | 0       | 0.00088 J                     | 0.00035 J             | < 0.00075               | < 0.00075          | < 0.00075                   | < 0.00075               | < 0.00075                      | < 0.00075                     | < 0.00075                      | < 0.00075        | < 0.00075                      | 0.00035 J             | < 0.00075        | < 0.00075                         | 0.002                | 0.00072 J             | < 0.00075      |
|                                 | 23.46                   | 06/17/2021  | No                            | 0       | 0.00088 J                     | 0.00043 J             | < 0.00051               | 0.00026 J          | < 0.00051                   | < 0.00051               | < 0.00051                      | < 0.00051                     | < 0.00051                      | < 0.00051        | < 0.00051                      | 0.00059               | 0.00061          | < 0.00051                         | 0.0022               | 0.0023                | 0.00038 J      |
|                                 | 23.92                   | 06/22/2021  | No                            | 0       | 0.0005 J                      | 0.00034 J             | < 0.00046               | 0.00039 J          | < 0.00046                   | < 0.00046               | < 0.00046                      | < 0.00046                     | < 0.00046                      | < 0.00046        | < 0.00046                      | 0.00072               | 0.00082          | < 0.00046                         | 0.001                | 0.0034                | 0.00045 J      |
|                                 | 23.37                   | 06/25/2021  | No                            | 0       | < 0.00089                     | 0.00022 J             | < 0.00045               | < 0.00045          | < 0.00045                   | < 0.00045               | < 0.00045                      | < 0.00045                     | < 0.00045                      | < 0.00045        | < 0.00045                      | 0.00033 J             | 0.0003 J         | < 0.00045                         | 0.00048 J            | 0.0012                | 0.00022 J      |
|                                 | 22.48                   | 06/30/2021  | No                            | 0       | 0.00056 J                     | 0.00028 J             | < 0.00048               | 0.00049            | < 0.00048                   | < 0.00048               | < 0.00048                      | < 0.00048                     | < 0.00048                      | < 0.00048        | < 0.00048                      | 0.001                 | 0.00074          | < 0.00048                         | 0.00088 J            | 0.0038                | 0.00063        |

Notes:

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

< = nondetected less than associated reporting limit

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

| Location ID        | Sampling Period (Hours) | Sample Date | Total PCB Exceedance? (Yes/No) | Total PCB | PCB-1016 (Aroclor 1016) (ug/m <sup>3</sup> ) | PCB-1221 (Aroclor 1221) (ug/m <sup>3</sup> ) | PCB-1232 (Aroclor 1232) (ug/m <sup>3</sup> ) | PCB-1242 (Aroclor 1242) (ug/m <sup>3</sup> ) | PCB-1248 (Aroclor 1248) (ug/m <sup>3</sup> ) | PCB-1254 (Aroclor 1254) (ug/m <sup>3</sup> ) | PCB-1260 (Aroclor 1260) (ug/m <sup>3</sup> ) |
|--------------------|-------------------------|-------------|--------------------------------|-----------|--|--|--|--|--|--|--|
| Screening Criteria |                         |             |                                | NE        |  |  |  |  |  |  |  |
| AMSW1              | 24.18                   | 06/03/2021  | NA                             | 0         | < 0.00089                                    | < 0.00089                                    | < 0.00089                                    | < 0.00089                                    | < 0.00089                                    | < 0.00089                                    | < 0.00089                                    |
|                    | 23.88                   | 06/08/2021  | NA                             | 0         | < 0.0009                                     | < 0.0009                                     | < 0.0009                                     | < 0.0009                                     | < 0.0009                                     | < 0.0009                                     | < 0.0009                                     |
|                    | 24.05                   | 06/11/2021  | NA                             | 0         | < 0.00081                                    | < 0.00081                                    | < 0.00081                                    | < 0.00081                                    | < 0.00081                                    | < 0.00081                                    | < 0.00081                                    |
|                    | 22.94                   | 06/16/2021  | NA                             | 0         | < 0.00083                                    | < 0.00083                                    | < 0.00083                                    | < 0.00083                                    | < 0.00083                                    | < 0.00083                                    | < 0.00083                                    |
|                    | 22.23                   | 06/24/2021  | NA                             | 0         | < 0.000083                                   | < 0.000083                                   | < 0.000083                                   | < 0.000083                                   | < 0.000083                                   | < 0.000083                                   | < 0.000083                                   |
|                    | 23.55                   | 06/29/2021  | NA                             | 0         | < 0.00079                                    | < 0.00079                                    | < 0.00079                                    | < 0.00079                                    | < 0.00079                                    | < 0.00079                                    | < 0.00079                                    |
| AMSW2              | 24.27                   | 06/03/2021  | NA                             | 0         | < 0.0011                                     | < 0.0011                                     | < 0.0011                                     | < 0.0011                                     | < 0.0011                                     | < 0.0011                                     | < 0.0011                                     |
|                    | 23.97                   | 06/08/2021  | NA                             | 0         | < 0.001                                      | < 0.001                                      | < 0.001                                      | < 0.001                                      | < 0.001                                      | < 0.001                                      | < 0.001                                      |
|                    | 24.15                   | 06/11/2021  | NA                             | 0         | < 0.001                                      | < 0.001                                      | < 0.001                                      | < 0.001                                      | < 0.001                                      | < 0.001                                      | < 0.001                                      |
|                    | 23.46                   | 06/16/2021  | NA                             | 0         | < 0.00067                                    | < 0.00067                                    | < 0.00067                                    | < 0.00067                                    | < 0.00067                                    | < 0.00067                                    | < 0.00067                                    |
|                    | 23.68                   | 06/24/2021  | NA                             | 0         | < 0.00065                                    | < 0.00065                                    | < 0.00065                                    | < 0.00065                                    | < 0.00065                                    | < 0.00065                                    | < 0.00065                                    |
|                    | 23.13                   | 06/29/2021  | NA                             | 0         | < 0.00072                                    | < 0.00072                                    | < 0.00072                                    | < 0.00072                                    | < 0.00072                                    | < 0.00072                                    | < 0.00072                                    |

**Notes:**

NA = Not applicable

NE = None established

PCB = polychlorinated biphenyl

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

< = nondetected less than associated reporting limit

\* = sampler/generator malfunction

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

| Location ID        | Sampling Period (Hours) | Sample Date | 2,3,7,8-Tetrachlorodibenzo-p-dioxin (ug/m <sup>3</sup> ) | Dioxin Exceedance? (Yes/No)        |
|--------------------|-------------------------|-------------|--|------------------------------------|
| Screening Criteria |                         |             |  | <b>10,000,000 ug/m<sup>3</sup></b> |
| AMSW1              | 22.91                   | 06/02/2021  | < 0.00000002   | No                                 |
|                    | 24.08                   | 06/05/2021  | < 0.00000002   | No                                 |
|                    | 23.24                   | 06/10/2021  | < 0.00000002   | No                                 |
|                    | 23.04                   | 06/15/2021  | < 0.00000002   | No                                 |
|                    | 23.57                   | 06/18/2021  | < 0.00000002   | No                                 |
|                    | 23.69                   | 06/23/2021  | < 0.00000002   | No                                 |
|                    | 23.42                   | 06/26/2021  | < 0.00000002   | No                                 |
| AMSW2              | 22.96                   | 06/02/2021  | < 0.00000003   | No                                 |
|                    | 23.93                   | 06/05/2021  | < 0.00000003   | No                                 |
|                    | 22.7                    | 06/10/2021  | < 0.00000003   | No                                 |
|                    | 22.77                   | 06/15/2021  | < 0.00000003   | No                                 |
|                    | 23.57                   | 06/18/2021  | < 0.00000002   | No                                 |
|                    | 23.56                   | 06/23/2021  | < 0.00000002   | No                                 |
|                    | 23.59                   | 06/26/2021  | < 0.00000002   | No                                 |

**Notes:**

J = estimated value

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

< = nondetected less than associated reporting limit



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

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## AIR SAMPLING EQUIPMENT

| Project Information  |                        |  |              |                                       |                        |                               |              | Effective as of: 7/8/2021             |       |                               |      |
|--|------------------------|--|--------------|---------------------------------------|------------------------|-------------------------------|--------------|---------------------------------------|-------|-------------------------------|------|
| Contract / Task Order Number:<br>N62473-17-D-0005  |                        | Project Title / Location:<br>IR Site 12 RD/RA, Treasure Island, SF, CA |              |                                       |                        |                               |              | Gilbane Project Number:<br>J310000800 |       |                               |      |
| Perimeter/Effluent Air Sampling Equipment  |                        |  |              | Breathing Zone Air Sampling Equipment |                        |                               |              |                                       |       |                               |      |
| Equip Number   | Air Sampler Make/Model | Serial Number  | Cal Due Date | Equip Number                          | Air Sampler Make/Model | Serial Number                 | Cal Due Date |                                       |       |                               |      |
| PE01   | LV-1                   | 4532   | 5/20/21      | BZ01                                  |                        |                               |              |                                       |       |                               |      |
| PE02   | LV-1                   | 4360   | 5/20/21      | BZ02                                  |                        |                               |              |                                       |       |                               |      |
| PE03   | LV-1                   | 4352   | 4/20/22      | BZ03                                  |                        |                               |              |                                       |       |                               |      |
| PE04   | LV-1                   | 4300   | 4/20/22      | BZ04                                  |                        |                               |              |                                       |       |                               |      |
| PE05   |                        |  |              | BZ05                                  |                        |                               |              |                                       |       |                               |      |
| PE06   |                        |  |              | BZ06                                  |                        |                               |              |                                       |       |                               |      |
| PE07   |                        |  |              | BZ07                                  |                        |                               |              |                                       |       |                               |      |
| PE08   |                        |  |              | BZ08                                  |                        |                               |              |                                       |       |                               |      |
| PE09   |                        |  |              | BZ09                                  |                        |                               |              |                                       |       |                               |      |
| PE10   |                        |  |              | BZ10                                  |                        |                               |              |                                       |       |                               |      |
| PE11   |                        |  |              | BZ11                                  |                        |                               |              |                                       |       |                               |      |
| PE12   |                        |  |              | BZ12                                  |                        |                               |              |                                       |       |                               |      |
| PE13   |                        |  |              | BZ13                                  |                        |                               |              |                                       |       |                               |      |
| PE14   |                        |  |              | BZ14                                  |                        |                               |              |                                       |       |                               |      |
| PE15   |                        |  |              | BZ15                                  |                        |                               |              |                                       |       |                               |      |
| PE16   |                        |  |              | BZ16                                  |                        |                               |              |                                       |       |                               |      |
| PE17   |                        |  |              | BZ17                                  |                        |                               |              |                                       |       |                               |      |
| PE18   |                        |  |              | BZ18                                  |                        |                               |              |                                       |       |                               |      |
| PE19   |                        |  |              | BZ19                                  |                        |                               |              |                                       |       |                               |      |
| PE20   |                        |  |              | BZ20                                  |                        |                               |              |                                       |       |                               |      |
| Sample Counting Instruments  |                        |  |              |                                       |                        |                               |              |                                       |       |                               |      |
| Inst Number  | Model Number           | Serial Number  | Cal Due Date | Count Time (min)                      |                        | Background (cpm) <sup>a</sup> |              | Abs Ct Eff (cnts/dis) <sup>b</sup>    |       | MDC (dpm/sample) <sup>c</sup> |      |
|  |                        |  |              | 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  |                        |  |              |                                       |                        |                               |              |                                       |       |                               |      |
| C  |                        |  |              |                                       |                        |                               |              |                                       |       |                               |      |
| D  |                        |  |              |                                       |                        |                               |              |                                       |       |                               |      |
| E  |                        |  |              |                                       |                        |                               |              |                                       |       |                               |      |
| <b>Notes</b>   |                        |  |              |                                       |                        |                               |              |                                       |       |                               |      |
| <sup>a</sup> background values obtained from instrument set-up worksheet   |                        |  |              |                                       |                        |                               |              |                                       |       |                               |      |
| <sup>b</sup> absolute counting efficiency = $4\pi$ efficiency calculated as ratio of measured count rate and contained activity [total dpm] of source (see IN-RP-141, <i>Alpha/Beta Scaler Instrument Set-Up and Operation</i> ) |                        |  |              |                                       |                        |                               |              |                                       |       |                               |      |
| <sup>c</sup> MDC calculated using the Stapleton approximation (see IN-RP-141, <i>Alpha/Beta Scaler Instrument Set-Up and Operation</i> )   |                        |  |              |                                       |                        |                               |              |                                       |       |                               |      |

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**AIR SAMPLE RESULTS - PUBLIC EXPOSURE MONITORING**

| Project Information                               |             |   |          |                                       |                |               |                    |             |      | Effluent Air Concentration |            |                |                           | Sampling Period   |                              |                              |            | Color Codes                 |  |  |  |
|---|-------------|---|----------|---------------------------------------|----------------|---------------|--------------------|-------------|------|----------------------------|------------|----------------|---------------------------|---|------------------------------|------------------------------|------------|-----------------------------|--|--|--|
| Contract / Task Order Number:<br>N62473-17-D-0005 |             | Project Title / Location:<br>IR Site 12 RD/IRA, Treasure Island, SF, CA |          | Gilbane Project Number:<br>J310000800 |                |               |                    |             |      | Radionuclide               |            | Alpha          | Beta                      | Air samples collected<br>between March 22, 2021<br>and July 1, 2021 |                              | Value < MDC                  |            | Value < 0.1 x Effluent Conc |  |  |  |
|   |             |   |          |                                       |                |               |                    |             |      | Effluent Conc (µCi/ml)     |            | 9.E-13         | 6.E-12                    |   |                              | < 72 hr decay time           |            | Value > 0.1 x Effluent Conc |  |  |  |
| Information effective as of: 7/8/2021             |             |   |          |                                       |                |               |                    |             |      |                            |            |                |                           |   |                              | 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 | Count Date                 | Time (min) | Counting Units | Gross Activity Alpha Beta | Net dpm Alpha Beta  | Activity (µCi/ml) Alpha Beta | Effluent Conc (%) Alpha Beta | Count Tech | Data Reviewer               |  |  |  |
| AS-0095   | Perimeter   | Upwind  | PE03     | 60                                    | 6/12/21 7:35   | 6/12/21 17:18 | 583                | 3.5E+07     | A    | 6/8/21                     | 1          | cpm            | 0.10 2.80                 | 0.3 4.8   | 3.7E-15 6.2E-14              | 0.4% 1.0%                    | IH         | CB                          |  |  |  |
| AS-0096   | Perimeter   | Downwind  | PE04     | 60                                    | 6/12/21 7:30   | 6/12/21 17:11 | 581                | 3.5E+07     | A    | 6/8/21                     | 1          | cpm            | 0.05 3.35                 | 0.1 6.3   | 1.8E-15 8.2E-14              | 0.2% 1.4%                    | IH         | CB                          |  |  |  |
| AS-0097   | Perimeter   | Upwind  | PE03     | 60                                    | 6/22/21 7:05   | 6/22/21 17:23 | 618                | 3.7E+07     | A    | 6/8/21                     | 1          | cpm            | 0.15 2.90                 | 0.4 5.1   | 5.2E-15 6.2E-14              | 0.6% 1.0%                    | IH         | CB                          |  |  |  |
| AS-0098   | Perimeter   | Downwind  | PE04     | 60                                    | 6/22/21 7:15   | 6/22/21 17:31 | 616                | 3.7E+07     | A    | 6/8/21                     | 1          | cpm            | 0.00 4.40                 | 0.0 9.3   | 0.0E+00 1.1E-13              | 0.0% 1.9%                    | IH         | CB                          |  |  |  |
| AS-0099   | Perimeter   | Upwind  | PE03     | 60                                    | 6/3/21 7:30    | 6/3/21 17:38  | 608                | 3.6E+07     | A    | 6/8/21                     | 1          | cpm            | 0.15 3.55                 | 0.4 6.9   | 5.3E-15 8.5E-14              | 0.6% 1.4%                    | IH         | CB                          |  |  |  |
| AS-0100   | Perimeter   | Downwind  | PE04     | 60                                    | 6/3/21 7:30    | 6/3/21 17:05  | 575                | 3.4E+07     | A    | 6/8/21                     | 1          | cpm            | 0.10 3.80                 | 0.3 7.6   | 3.7E-15 9.9E-14              | 0.4% 1.7%                    | IH         | CB                          |  |  |  |
| AS-0101   | Perimeter   | Upwind  | PE03     | 60                                    | 6/4/21 7:25    | 6/4/21 17:21  | 596                | 3.6E+07     | A    | 6/8/21                     | 1          | cpm            | 0.10 4.75                 | 0.3 10.3  | 3.6E-15 1.3E-13              | 0.4% 2.2%                    | IH         | CB                          |  |  |  |
| AS-0102   | Perimeter   | Downwind  | PE04     | 60                                    | 6/4/21 7:30    | 6/4/21 17:10  | 580                | 3.5E+07     | A    | 6/8/21                     | 1          | cpm            | 0.10 4.20                 | 0.3 8.7   | 3.7E-15 1.1E-13              | 0.4% 1.9%                    | IH         | CB                          |  |  |  |
| AS-0103   | Perimeter   | Upwind  | PE03     | 60                                    | 6/7/21 7:23    | 6/7/21 17:15  | 592                | 3.6E+07     | A    | 6/15/21                    | 1          | cpm            | 0.10 4.60                 | 0.3 9.9   | 3.6E-15 1.3E-13              | 0.4% 2.1%                    | IH         | CB                          |  |  |  |
| AS-0104   | Perimeter   | Downwind  | PE04     | 60                                    | 6/7/21 7:30    | 6/7/21 17:21  | 591                | 3.5E+07     | A    | 6/15/21                    | 1          | cpm            | 0.10 3.65                 | 0.3 7.2   | 3.6E-15 9.1E-14              | 0.4% 1.5%                    | IH         | CB                          |  |  |  |
| AS-0105   | Perimeter   | Upwind  | PE03     | 60                                    | 6/8/21 7:07    | 6/8/21 17:31  | 624                | 3.7E+07     | A    | 6/15/21                    | 1          | cpm            | 0.20 3.60                 | 0.6 7.0   | 6.8E-15 8.5E-14              | 0.8% 1.4%                    | IH         | CB                          |  |  |  |
| AS-0106   | Perimeter   | Downwind  | PE04     | 60                                    | 6/8/21 7:10    | 6/8/21 17:17  | 607                | 3.6E+07     | A    | 6/15/21                    | 1          | cpm            | 0.20 3.20                 | 0.6 5.9   | 7.0E-15 7.3E-14              | 0.8% 1.2%                    | IH         | CB                          |  |  |  |
| AS-0107   | Perimeter   | Upwind  | PE03     | 60                                    | 6/9/21 6:25    | 6/9/21 17:08  | 643                | 3.9E+07     | A    | 6/15/21                    | 1          | cpm            | 0.10 4.75                 | 0.3 10.3  | 3.3E-15 1.2E-13              | 0.4% 2.0%                    | IH         | CB                          |  |  |  |
| AS-0108   | Perimeter   | Downwind  | PE04     | 60                                    | 6/9/21 6:30    | 6/9/21 17:05  | 635                | 3.8E+07     | A    | 6/15/21                    | 1          | cpm            | 0.10 4.60                 | 0.3 9.9   | 3.4E-15 1.2E-13              | 0.4% 1.9%                    | IH         | CB                          |  |  |  |
| AS-0109   | Perimeter   | Upwind  | PE03     | 60                                    | 6/10/21 6:30   | 6/10/21 17:15 | 645                | 3.9E+07     | A    | 6/15/21                    | 1          | cpm            | 0.20 4.50                 | 0.6 9.6   | 6.6E-15 1.1E-13              | 0.7% 1.9%                    | IH         | CB                          |  |  |  |
| AS-0110   | Perimeter   | Downwind  | PE04     | 60                                    | 6/10/21 6:45   | 6/10/21 17:21 | 636                | 3.8E+07     | A    | 6/15/21                    | 1          | cpm            | 0.15 3.75                 | 0.4 7.5   | 5.0E-15 8.8E-14              | 0.6% 1.5%                    | IH         | CB                          |  |  |  |
| AS-0111   | Perimeter   | Upwind  | PE03     | 60                                    | 6/11/21 7:20   | 6/11/21 17:25 | 605                | 3.6E+07     | A    | 6/15/21                    | 1          | cpm            | 0.05 3.10                 | 0.1 5.6   | 1.8E-15 7.0E-14              | 0.2% 1.2%                    | IH         | CB                          |  |  |  |
| AS-0112   | Perimeter   | Downwind  | PE04     | 60                                    | 6/11/21 7:15   | 6/11/21 17:11 | 596                | 3.6E+07     | A    | 6/15/21                    | 1          | cpm            | 0.35 3.75                 | 1.0 7.5   | 1.3E-14 9.4E-14              | 1.4% 1.6%                    | IH         | CB                          |  |  |  |
| AS-0113   | Perimeter   | Upwind  | PE03     | 60                                    | 6/14/21 6:30   | 6/14/21 17:11 | 641                | 3.8E+07     | A    | 6/22/21                    | 1          | cpm            | 0.20 3.25                 | 0.6 6.1   | 6.7E-15 7.1E-14              | 0.7% 1.2%                    | IH         | CB                          |  |  |  |
| AS-0114   | Perimeter   | Downwind  | PE04     | 60                                    | 6/14/21 6:40   | 6/14/21 17:18 | 638                | 3.8E+07     | A    | 6/22/21                    | 1          | cpm            | 0.00 4.15                 | 0.0 8.6   | 0.0E+00 1.0E-13              | 0.0% 1.7%                    | IH         | CB                          |  |  |  |
| AS-0115   | Perimeter   | Upwind  | PE03     | 60                                    | 6/15/21 9:30   | 6/15/21 17:35 | 485                | 2.9E+07     | A    | 6/22/21                    | 1          | cpm            | 0.00 3.70                 | 0.0 7.3   | 0.0E+00 1.1E-13              | 0.0% 1.9%                    | IH         | CB                          |  |  |  |
| AS-0116   | Perimeter   | Downwind  | PE04     | 60                                    | 6/15/21 9:25   | 6/15/21 17:35 | 490                | 2.9E+07     | A    | 6/22/21                    | 1          | cpm            | 0.15 4.85                 | 0.4 10.6  | 6.5E-15 1.6E-13              | 0.7% 2.7%                    | IH         | CB                          |  |  |  |
| AS-0117   | Perimeter   | Upwind  | PE03     | 60                                    | 6/16/21 7:30   | 6/16/21 17:10 | 580                | 3.5E+07     | A    | 6/22/21                    | 1          | cpm            | 0.10 3.65                 | 0.3 7.2   | 3.7E-15 9.3E-14              | 0.4% 1.5%                    | IH         | CB                          |  |  |  |
| AS-0118   | Perimeter   | Downwind  | PE04     | 60                                    | 6/16/21 7:25   | 6/16/21 17:13 | 588                | 3.5E+07     | A    | 6/22/21                    | 1          | cpm            | 0.05 4.70                 | 0.1 10.1  | 1.8E-15 1.3E-13              | 0.2% 2.2%                    | IH         | CB                          |  |  |  |
| AS-0119   | Perimeter   | Upwind  | PE03     | 60                                    | 6/17/21 7:25   | 6/17/21 17:18 | 593                | 3.6E+07     | A    | 6/22/21                    | 1          | cpm            | 0.10 3.80                 | 0.3 7.6   | 3.6E-15 9.6E-14              | 0.4% 1.6%                    | IH         | CB                          |  |  |  |
| AS-0120   | Perimeter   | Downwind  | PE04     | 60                                    | 6/17/21 7:30   | 6/17/21 17:21 | 591                | 3.5E+07     | A    | 6/22/21                    | 1          | cpm            | 0.10 3.35                 | 0.3 6.3   | 3.6E-15 8.1E-14              | 0.4% 1.3%                    | IH         | CB                          |  |  |  |
| AS-0121   | Perimeter   | Upwind  | PE03     | 60                                    | 6/18/21 6:40   | 6/18/21 16:47 | 607                | 3.6E+07     | A    | 6/22/21                    | 1          | cpm            | 0.20 3.45                 | 0.6 6.6   | 7.0E-15 8.2E-14              | 0.8% 1.4%                    | IH         | CB                          |  |  |  |
| AS-0122   | Perimeter   | Downwind  | PE04     | 60                                    | 6/18/21 6:30   | 6/18/21 16:50 | 620                | 3.7E+07     | A    | 6/22/21                    | 1          | cpm            | 0.25 3.40                 | 0.7 6.5   | 8.6E-15 7.8E-14              | 1.0% 1.3%                    | IH         | CB                          |  |  |  |
| AS-0123   | Perimeter   | Upwind  | PE03     | 60                                    | 6/21/21 9:13   | 6/21/21 17:21 | 488                | 2.9E+07     | A    | 6/29/21                    | 1          | cpm            | 0.15 4.20                 | 0.4 8.7   | 6.6E-15 1.3E-13              | 0.7% 2.2%                    | IH         | CB                          |  |  |  |
| AS-0124   | Perimeter   | Downwind  | PE04     | 60                                    | 6/21/21 9:00   | 6/21/21 17:17 | 497                | 3.0E+07     | A    | 6/29/21                    | 1          | cpm            | 0.35 4.45                 | 1.0 9.4   | 1.5E-14 1.4E-13              | 1.7% 2.4%                    | IH         | CB                          |  |  |  |
| AS-0125   | Perimeter   | Upwind  | PE03     | 60                                    | 6/22/21 7:27   | 6/22/21 17:10 | 583                | 3.5E+07     | A    | 6/29/21                    | 1          | cpm            | 0.05 3.10                 | 0.1 5.6   | 1.8E-15 7.3E-14              | 0.2% 1.2%                    | IH         | CB                          |  |  |  |
| AS-0126   | Perimeter   | Downwind  | PE04     | 60                                    | 6/22/21 7:30   | 6/22/21 17:19 | 589                | 3.5E+07     | A    | 6/29/21                    | 1          | cpm            | 0.10 4.25                 | 0.3 8.9   | 3.6E-15 1.1E-13              | 0.4% 1.9%                    | IH         | CB                          |  |  |  |
| AS-0127   | Perimeter   | Upwind  | PE03     | 60                                    | 6/23/21 7:23   | 6/23/21 17:17 | 594                | 3.6E+07     | A    | 6/29/21                    | 1          | cpm            | 0.10 3.65                 | 0.3 7.2   | 3.6E-15 9.1E-14              | 0.4% 1.5%                    | IH         | CB                          |  |  |  |
| AS-0128   | Perimeter   | Downwind  | PE04     | 60                                    | 6/23/21 7:30   | 6/23/21 17:11 | 581                | 3.5E+07     | A    | 6/29/21                    | 1          | cpm            | 0.15 4.25                 | 0.4 8.9   | 5.5E-15 1.1E-13              | 0.6% 1.9%                    | IH         | CB                          |  |  |  |
| AS-0129   | Perimeter   | Upwind  | PE03     | 60                                    | 6/24/21 7:30   | 6/24/21 17:31 | 601                | 3.6E+07     | A    | 6/29/21                    | 1          | cpm            | 0.05 3.45                 | 0.1 6.6   | 1.8E-15 8.3E-14              | 0.2% 1.4%                    | IH         | CB                          |  |  |  |
| AS-0130   | Perimeter   | Downwind  | PE04     | 60                                    | 6/24/21 7:11   | 6/24/21 17:21 | 610                | 3.7E+07     | A    | 6/29/21                    | 1          | cpm            | 0.25 4.35                 | 0.7 9.2   | 8.7E-15 1.1E-13              | 1.0% 1.9%                    | IH         | CB                          |  |  |  |
| AS-0131   | Perimeter   | Upwind  | PE03     | 60                                    | 6/25/21 6:32   | 6/25/21 17:12 | 640                | 3.8E+07     | A    | 6/29/21                    | 1          | cpm            | 0.15 3.85                 | 0.4 7.7   | 5.0E-15 9.1E-14              | 0.6% 1.5%                    | IH         | CB                          |  |  |  |
| AS-0132   | Perimeter   | Downwind  | PE04     | 60                                    | 6/25/21 6:25   | 6/25/21 17:07 | 642                | 3.9E+07     | A    | 6/29/21                    | 1          | cpm            | 0.20 4.25                 | 0.6 8.9   | 6.6E-15 1.0E-13              | 0.7% 1.7%                    | IH         | CB                          |  |  |  |
| AS-0133   | Perimeter   | Upwind  | PE03     | 60                                    | 6/28/21 9:40   | 6/28/21 17:23 | 463                | 2.8E+07     | A    | 7/7/21                     | 1          | cpm            | 0.15 4.05                 | 0.4 8.3   | 6.9E-15 1.3E-13              | 0.8% 2.2%                    | IH         | CB                          |  |  |  |
| AS-0134   | Perimeter   | Downwind  | PE04     | 60                                    | 6/28/21 9:43   | 6/28/21 17:29 | 466                | 2.8E+07     | A    | 7/7/21                     | 1          | cpm            | 0.20 4.00                 | 0.6 8.2   | 9.2E-15 1.3E-13              | 1.0% 2.2%                    | IH         | CB                          |  |  |  |
| AS-0135   | Perimeter   | Upwind  | PE03     | 60                                    | 6/29/21 7:30   | 6/29/21 17:31 | 601                | 3.6E+07     | A    | 7/7/21                     | 1          | cpm            | 0.00 3.80                 | 0.0 7.6   | 0.0E+00 9.5E-14              | 0.0% 1.6%                    | IH         | CB                          |  |  |  |
| AS-0136   | Perimeter   | Downwind  | PE04     | 60                                    | 6/29/21 7:38   | 6/29/21 17:35 | 597                | 3.6E+07     | A    | 7/7/21                     | 1          | cpm            | 0.10 4.05                 | 0.3 8.3   | 3.6E-15 1.0E-13              | 0.4% 1.7%                    | IH         | CB                          |  |  |  |
| AS-0137   | Perimeter   | Upwind  | PE03     | 60                                    | 6/30/21 7:30   | 6/30/21 17:05 | 575                | 3.4E+07     | A    | 7/7/21                     | 1          | cpm            | 0.05 2.95                 | 0.1 5.2   | 1.9E-15 6.8E-14              | 0.2% 1.1%                    | IH         | CB                          |  |  |  |
| AS-0138   | Perimeter   | Downwind  | PE04     | 60                                    | 6/30/21 7:27   | 6/30/21 17:11 | 584                | 3.5E+07     | A    | 7/7/21                     | 1          | cpm            | 0.10 3.55                 | 0.3 6.9   | 3.7E-15 8.9E-14              | 0.4% 1.5%                    | IH         | CB                          |  |  |  |

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

| Sample    | Types |
|-----------|-------|
| Perimeter |       |
| Effluent  |       |

| Counting  | Units |
|-----------|-------|
| Perimeter | cnts  |
| Effluent  | cpm   |

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

| Column 1                    |                 |              |
|-----------------------------|-----------------|--------------|
| Alpha-Emitting Radionuclide | Retention Class | 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       |

| Column 1                   |                 |              |
|----------------------------|-----------------|--------------|
| Beta-Emitting Radionuclide | Retention Class | 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       |

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

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

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