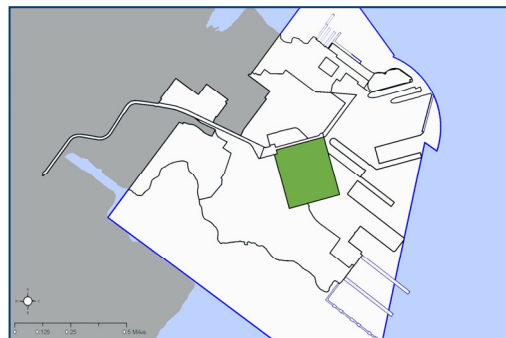




WHAT'S IN THE AIR: Parcel G

A Summary of Air and Dust Monitoring
During Environmental Cleanup at
Hunters Point Naval Shipyard
October 2—December 14, 2023



Location of Parcel G at HPNS

Dust is a common air pollutant generated by many different sources and activities. It occurs naturally all around us and may be worsened by activities like construction, excess buildup of dirt on roadways, and weather conditions.

At HPNS, the Navy performs dust monitoring in real-time, giving the Navy results of current conditions as they are happening.

The Navy also collects air samples on filters. They are sent to an off-site laboratory for chemical analysis. It takes several weeks to get air sample results back from the laboratory.

RESOURCES FOR MORE INFORMATION ON DUST

United States Environmental
Protection Agency

www.epa.gov/air/



scan to link



California Environmental Protection
Agency Air Resources Board

www.arb.ca.gov

scan to link

Bay Area Air Quality
Management District

www.baaqmd.gov



scan to link



San Francisco Department of

Public Health

www.sfdph.org

scan to link

City of San Francisco Department
of Public Health Asthma Task Force

www.sfgov.org/asthma



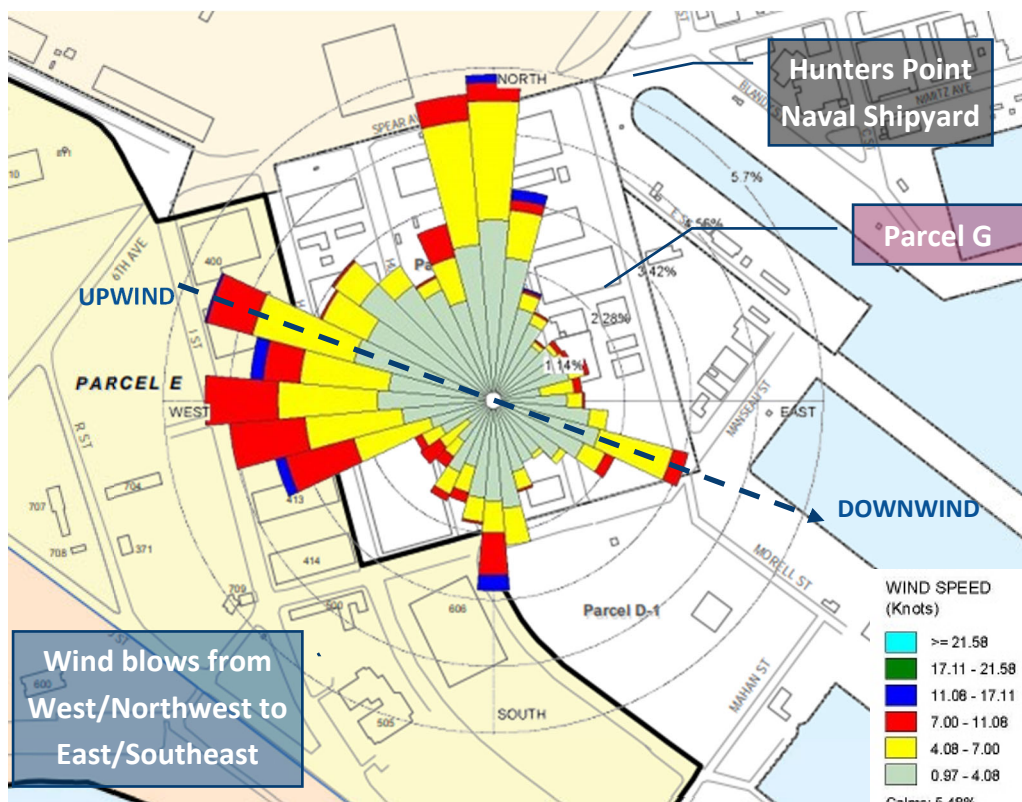
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Overview

The Navy performs air quality monitoring during environmental cleanup field work at Hunters Point Naval Shipyard (HPNS) for on-site worker safety and protection of the surrounding community. At Parcel G, air quality monitoring includes real-time dust monitoring and filter-based air sampling. In general, air monitors are running when work is being performed. Air monitors may not operate during rain, equipment maintenance, or when workers are not on-site. This fact sheet provides a summary of Parcel G dust and air sampling data from October 2 through December 14, 2023.

Tracking Dust During Fieldwork

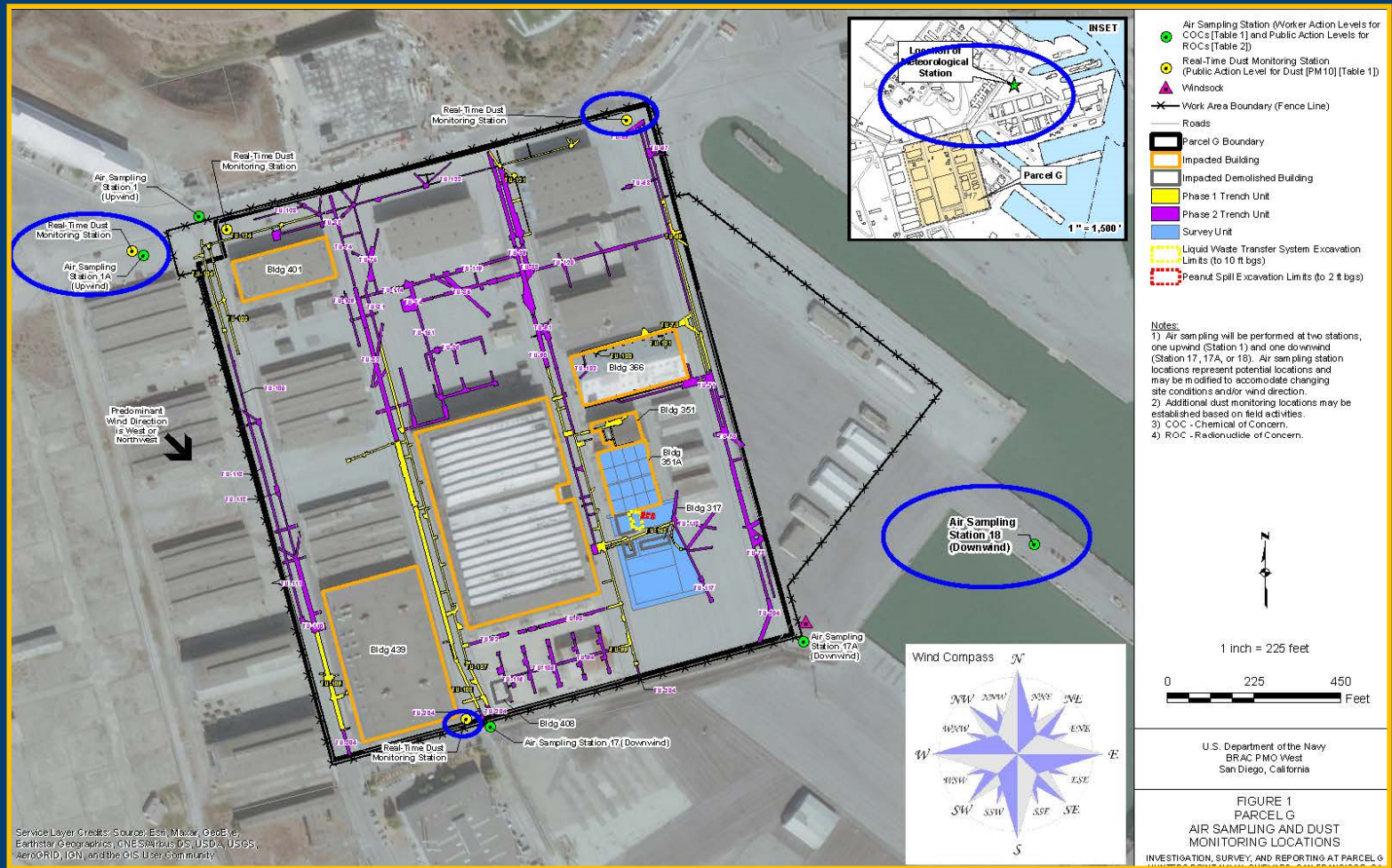
The Navy uses a “wind rose” to visualize wind direction and speed over a period of time. It provides information on how field work at HPNS may affect the community. The image below maps hourly wind data. It shows that most high-speed winds (blue/red/yellow) were from the West/Northwest, blowing across HPNS towards the San Francisco Bay. Speed and duration of winds from other directions did not have a significant impact on HPNS fieldwork.



Wind Rose Diagram, 10/01/2023 – 12/31/2023

Ref: General Wind Rose Frequency Counts by Wind Direction for October through December 2023

Summary of Air Sampling Data (May—September 2023)



Map of air sampling and dust monitoring locations at Parcel G

Real-time Dust Monitoring at HPNS

The Navy collects data for dust using real-time monitors (see map, above). Daily concentrations of dust (measured as PM10) for the current period are provided in the graph on Page 3. The dust results reflect the real-time concentrations and are compared to action levels established by the Navy, EPA, and DTSC. External factors that are unrelated to HPNS construction activities (e.g. smog, weather, fires, or other construction in the area) are considered in the evaluation of dust results at HPNS.

Laboratory-confirmed Results at HPNS

High- and low-volume air samplers measure dust and other contaminants of concern (COCs) at HPNS. Analysis of the raw data from air sample filters at an offsite laboratory typically takes about 2 months.

A Navy review of lab analysis and other external factors, determined that dust levels at HPNS during the current period were within approved limits. EPA and DTSC reviewed the Navy's findings.

For more information on air sampling at HPNS, visit the "Air Monitoring" section of the Documents page of the Navy's website at www.bracpmo.navy.mil/hpns

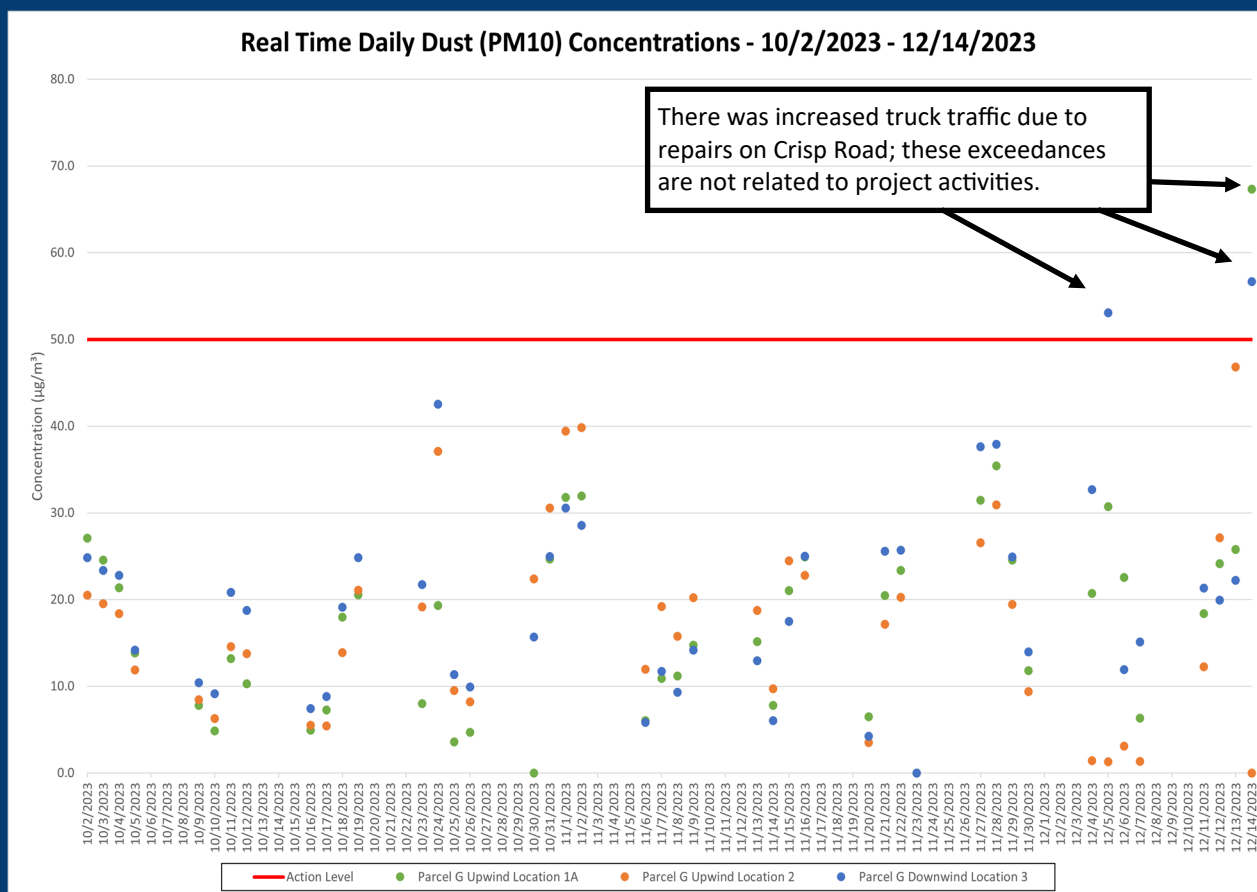
You may also request a copy of an HPNS report by sending an email to info@sfhpn.com



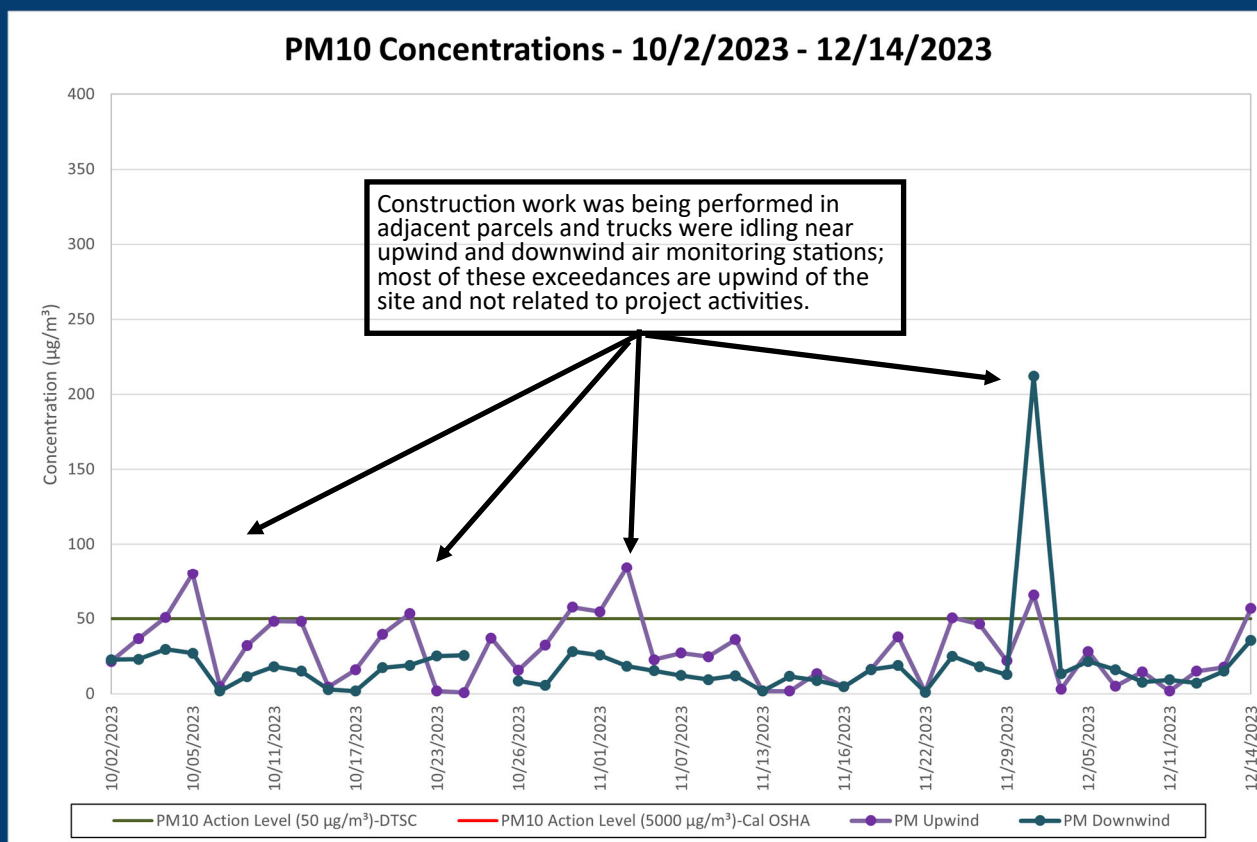
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Navy's website

Summary of Dust and Air Sampling Data (October — December 2023)

Real-time Dust Monitoring at Parcel G



Laboratory Analysis of Air Monitoring Results at Parcel G



Summary of Air Sampling Data (October 2—December 14 2023)

Contaminants of Concern (COCs)

The Navy tests for several COCs at HPNS. These COCs are present in soil from both natural sources and historic shipyard activities. For the safety of shipyard neighbors, the Navy monitors air for COCs upwind and downwind of active construction sites. As with dust, COCs are collected on filters over 24 hours and sent to an offsite laboratory for analysis. Results of air monitoring for four identified COCs at HPNS for the current period are provided below. COCs include asbestos, lead, manganese, PM10, and total suspended particulates (TSP). Results from lab analyses are shown in the table below. They are compared to action levels defined in Navy Work Plans as approved by EPA and DTSC.

Radionuclides of Concern (ROCs)

A radionuclide is an atom (element) with an unstable nucleus (core). The Navy tests for ROCs at Parcel G. These ROCs are present in soil due to minerals in the Earth, nuclear fallout, and historical shipyard activities. To ensure the safety of shipyard neighbors, the Navy monitors air for ROCs upwind and downwind of active construction sites. Air samples are collected on filters over 24 hours. The air sample filters are sent to an offsite laboratory for analysis.

Graphs of air monitoring lab analysis results for six identified ROCs at HPNS for the current period are provided on Page 6. These include cesium-137, plutonium-239, radium-226, strontium-90, thorium-232, and uranium-235. Results from lab analyses are shown. They are compared to action levels defined in Navy Work Plans as approved by EPA and DTSC. No exceedances in ROCs in air were reported at HPNS during this reporting period.

| Contaminant of Concern | Unit | Action Level | Highest Measured Result during Reporting Period | Action Level Exceedance? |
|--|--------------------------|-----------------------|---|--------------------------|
| PM10 (by air sampling laboratory analysis) | $\mu\text{g}/\text{m}^3$ | 5,000 ^a | 212 | No |
| | $\mu\text{g}/\text{m}^3$ | 50 ^b | | Yes (see graph) |
| TSP | $\mu\text{g}/\text{m}^3$ | 500 | 114 | No |
| Lead | $\mu\text{g}/\text{m}^3$ | 0.15 ^c | 0.041 | No |
| | $\mu\text{g}/\text{m}^3$ | 50 | | |
| Manganese | $\mu\text{g}/\text{m}^3$ | 200 | 0.063 | No |
| Asbestos | fibers/cm ³ | 0.1 | | No |
| Cesium-137 | $\mu\text{Ci}/\text{mL}$ | 4.0×10^{-11} | 1.5×10^{-14} | No |
| Plutonium-239 | $\mu\text{Ci}/\text{mL}$ | 4.0×10^{-15} | 1.5×10^{-16} | No |
| Radium-226 | $\mu\text{Ci}/\text{mL}$ | 1.8×10^{-13} | 4.2×10^{-15} | No |
| Strontium-90 | $\mu\text{Ci}/\text{mL}$ | 1.2×10^{-12} | 1.6×10^{-14} | No |
| Thorium-232 | $\mu\text{Ci}/\text{mL}$ | 1.2×10^{-15} | 4.8×10^{-16} | No |
| Uranium-235 | $\mu\text{Ci}/\text{mL}$ | 6.0×10^{-13} | 1.3×10^{-16} | No |

Table Notes:

^a California Occupational Safety and Health Administration permissible exposure limit for particulates not otherwise regulated (respiratory) used for PM10.

^b The California Department of Toxic Substances Control Human and Ecological Risk Office action level is based on the CSAAQS (California State Ambient Air Quality Standard). The CSAAQS is designed to protect the general public from airborne particulates generated in the urban, suburban, and rural environments. The CSAAQS is not meant to be applied to general project-specific construction actions and related air quality. Rather, the standard is used to attain city- or regional-wide ambient air quality goals for the benefit of the general public. The current CSAAQS for PM10 is 50 $\mu\text{g}/\text{m}^3$ average per 24-hour day. The City and County of San Francisco is currently a non-attainment area for the CSAAQS for PM10.

^c Federal lead NAAQS (National Ambient Air Quality Standard) action level.

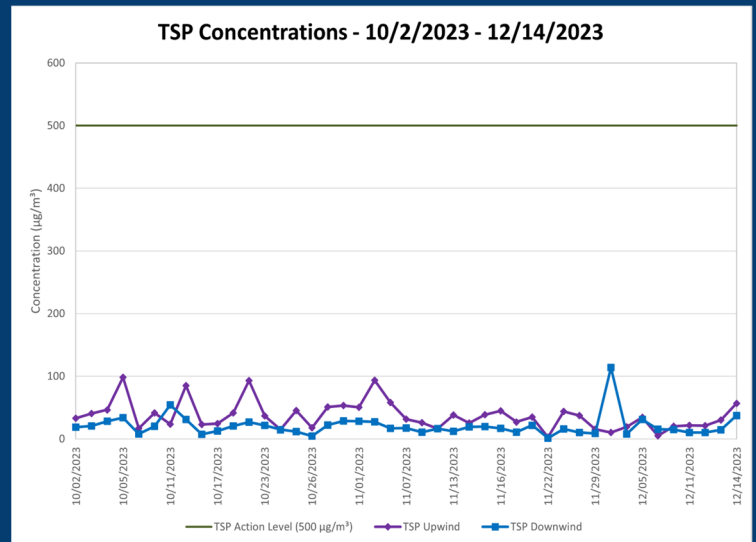
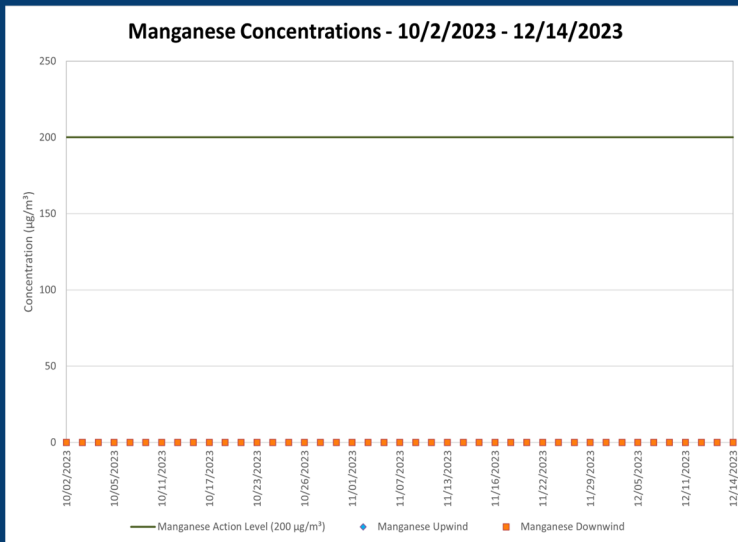
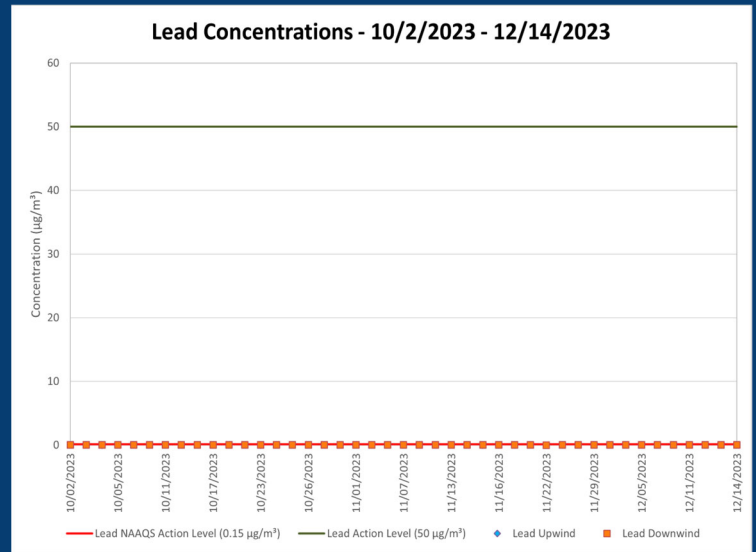
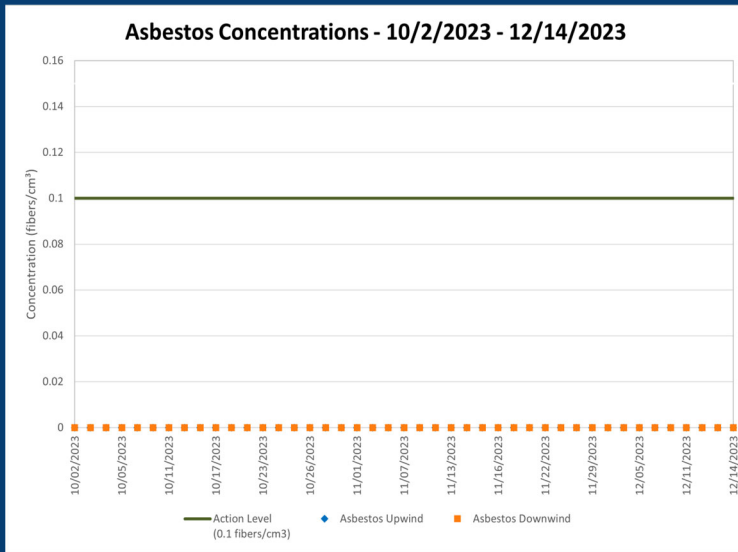
Summary of Quarterly Air Sampling Data: Contaminants of Concern

The Navy tests for several COCs* at HPNS to ensure public health. These COCs are present in soil from both natural sources and historic shipyard activities. To ensure the safety of shipyard neighbors, the Navy monitors air for COCs upwind and downwind of active construction sites. Air samples are collected on filters over 24 hours. The air sample filters are sent to an offsite laboratory for analysis.

Graphs for air monitoring at HPNS during October 2 through December 14, 2023 for four identified COCs are provided below. These include asbestos, lead, manganese, and total suspended particulates (TSP). Results from lab analyses are shown in the graphs below. They are compared to action levels (or remedial goals) defined in Work Plans as approved by regulatory agencies.

No exceedances in COCs in air were reported at HPNS from October 2 through December 14, 2023. Note that in the graphs below, concentrations not detected at or below the reporting limit are graphed as being equal to zero.

For more information on air sampling and radiological cleanup at HPNS, visit www.bracpmo.navy.mil/hpns



*Radionuclides of concern are provided on Page 6 of this summary report.

Summary of Quarterly Air Sampling Data: Radionuclides of Concern

A radionuclide is an atom (element) with an unstable nucleus (core). The Navy tests for ROCs at Parcel G. These ROCs are present in soil due to minerals in the Earth, nuclear fallout, and historical shipyard activities. To ensure the safety of shipyard neighbors, the Navy monitors air for ROCs upwind and downwind of active construction sites. Air samples are collected on filters over 24 hours. The air sample filters are sent to an offsite laboratory for analysis.

Graphs air monitoring at HPNS from October 2 through December 14, 2023 for six identified ROCs are provided below. These include cesium-137, plutonium-239, radium-226, strontium-90, thorium-232, and uranium-235. Results from lab analyses are shown. They are compared to action levels (or remedial goals) defined in Navy Work Plans as approved by EPA and DTSC. No exceedances in ROCs in air were reported at HPNS from October 2 through December 14, 2023. Note that in the graphs below, concentrations not detected at or below the reporting limit are graphed as being equal to zero.

