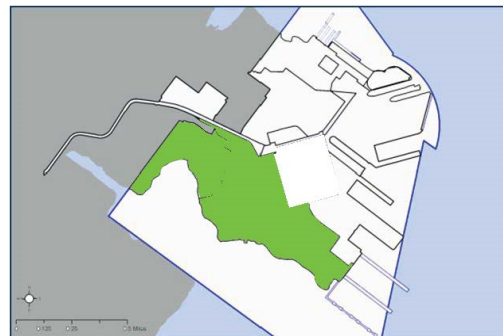




WHAT'S IN THE AIR: Parcel E

A Summary of Air and Dust Monitoring During Environmental Cleanup at Hunters Point Naval Shipyard

September 5—November 9, 2023



Location of Parcel E 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



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San Francisco Department of Public Health

www.sfdph.org

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City of San Francisco Department of Public Health Asthma Task Force

www.sfgov.org/asthma



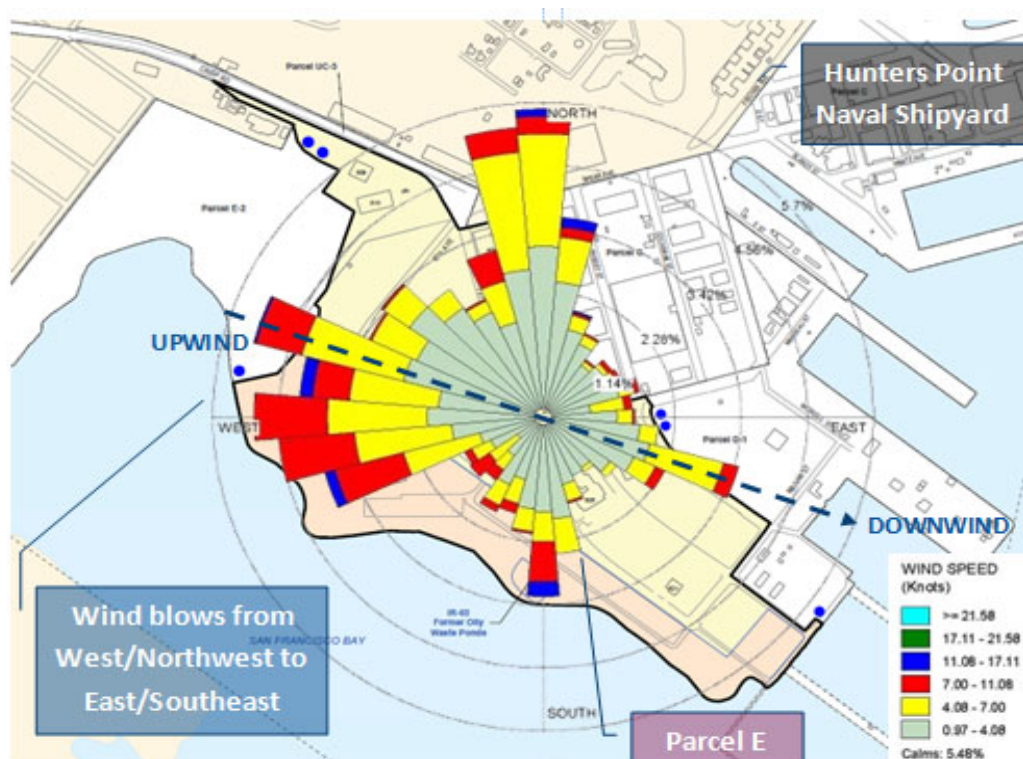
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Overview

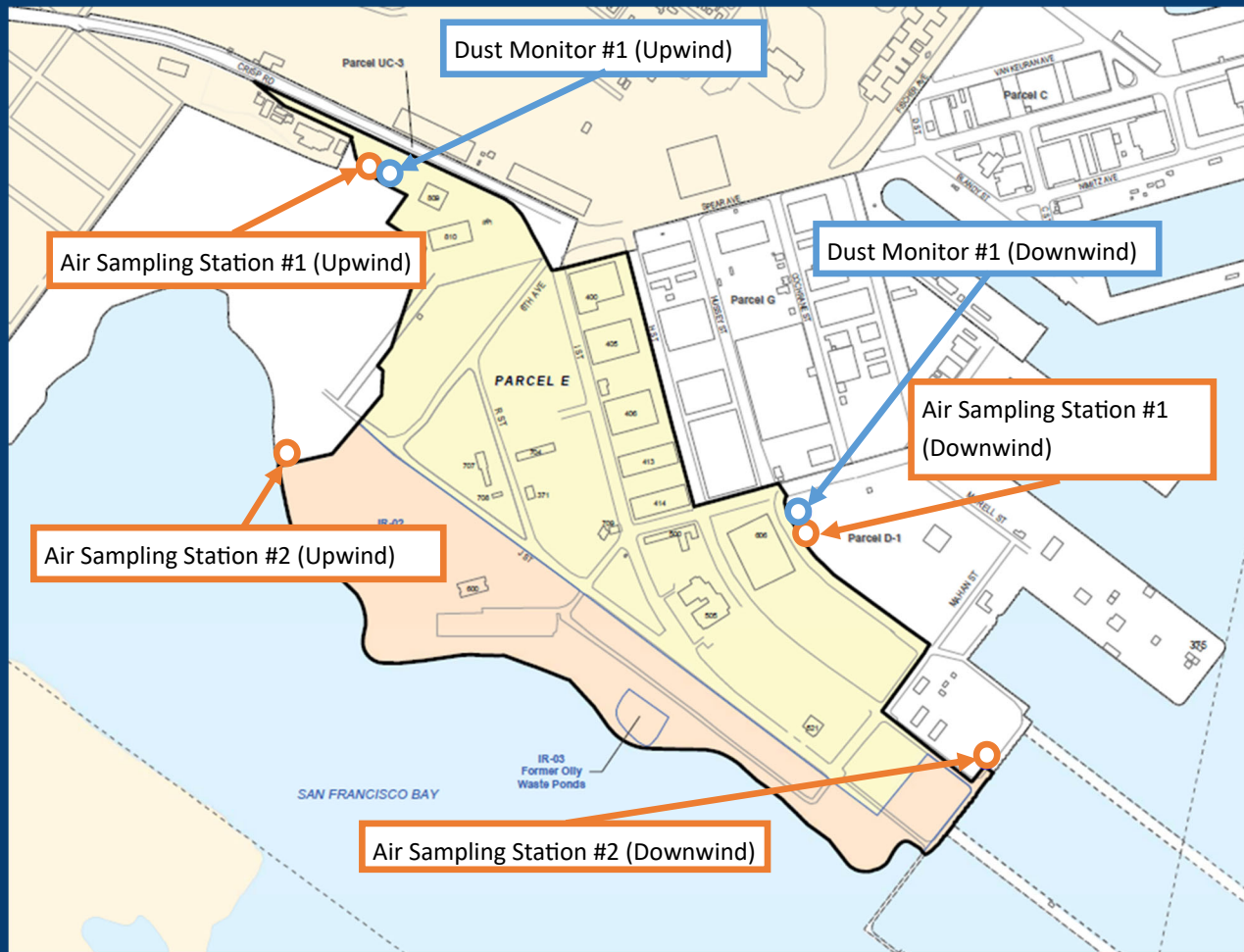
The Navy performs air quality monitoring during environmental cleanup field work at Hunters Point Naval Shipyard (HPNS) for on-site worker safety and protection of the surrounding community. At Parcel E, air quality monitoring includes real-time dust monitoring and filter-based air sampling. In general, 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 E dust and air sampling data from September 5 through November 9, 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.



Summary of Air Sampling Data (September—November 2023)



Map of air sampling and dust monitoring locations at Parcel E

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 graphs on Page 3. The first graph shows real-time concentrations and are compared to action levels established by the Navy, EPA, and DTSC. The second graph reflects site-related real-time upwind concentrations subtracted by downwind concentrations. 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

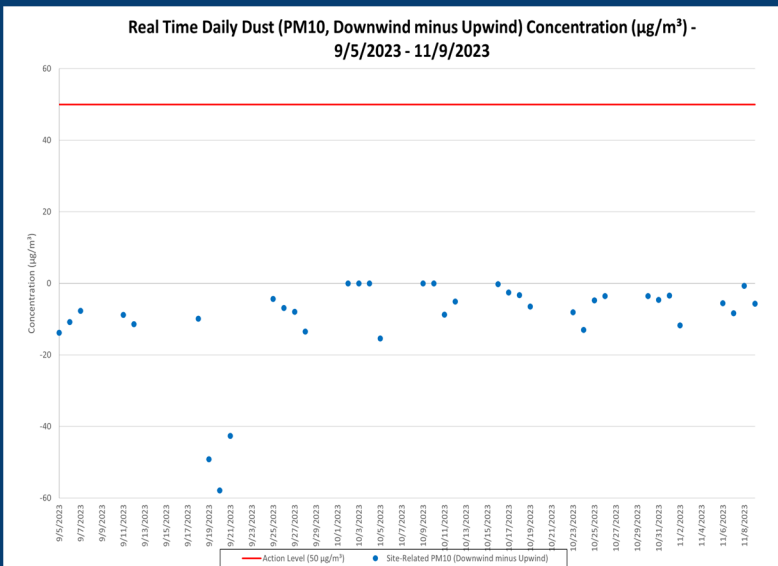
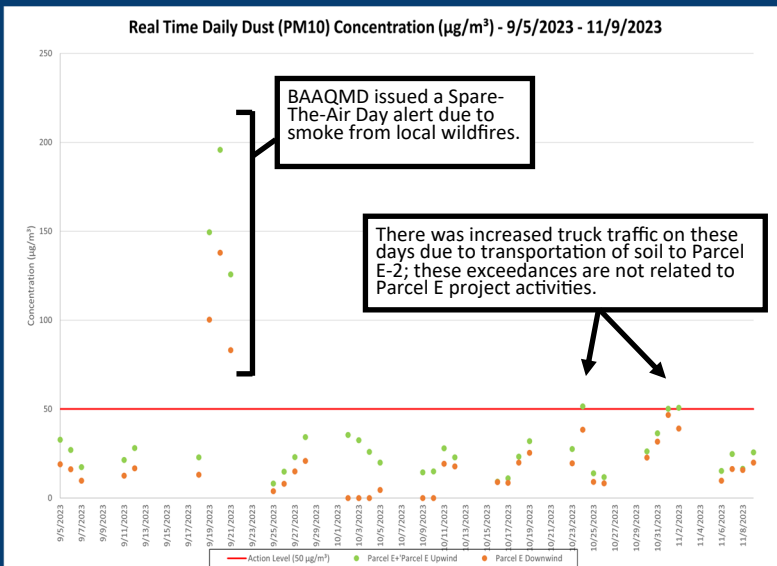
You may also request a copy of an HPNS report by sending an email to info@sfhpn.com



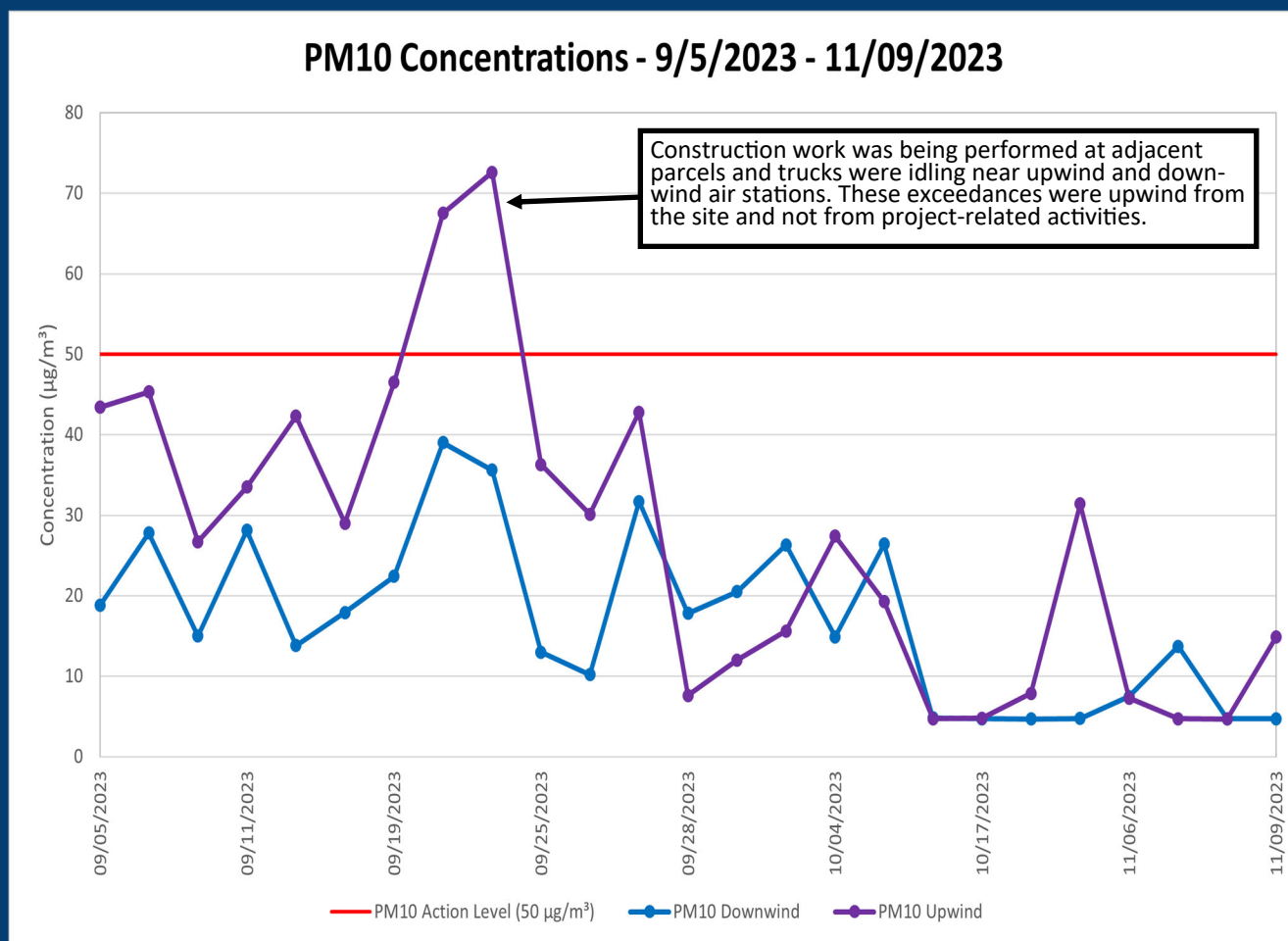
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Navy's website

Summary of Dust and Air Sampling Data (September—November 2023)

Real-time Dust Monitoring at Parcel E



Laboratory Analysis of Air Monitoring Results at Parcel E



Summary of Air Sampling Data (September—November 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 presented in the table below. They are compared to action levels defined in Navy Work Plans as approved by EPA and DTSC. There were exceedances for PM10 in air during this reporting period (see graph on Page 3).

Radionuclides of Concern (ROCs)

A radionuclide is an atom (element) with an unstable nucleus (core). The Navy samples for ROCs at Parcel E. 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 the air for ROCs upwind and downwind of active construction sites. Air samples are collected on filters over 24 hours. The air filters are measured onsite for alpha and beta radionuclide activity. Graphs on air monitoring results for three identified ROCs at Parcel E for the current period are provided on page 6. Results from the air samples are shown below. They are compared to action levels defined in Navy Work Plans as approved by EPA and DTSC. There were no exceedances of radionuclides in air at Parcel E 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	72.6	No
	$\mu\text{g}/\text{m}^3$	50 ^b		Yes (see graph)
TSP	$\mu\text{g}/\text{m}^3$	500	136	No
Lead	$\mu\text{g}/\text{m}^3$	0.15 ^c	0.062	No
	$\mu\text{g}/\text{m}^3$	50		
Manganese	$\mu\text{g}/\text{m}^3$	200	0.131	No
Asbestos	fibers/cm ³	0.1	0.0039	No
Cesium-137	$\mu\text{Ci}/\text{mL}$	5.3×10^{-10}	1.01×10^{-12}	No
Radium-226	$\mu\text{Ci}/\text{mL}$	2.4×10^{-12}	8.52×10^{-14}	No
Strontium-90	$\mu\text{Ci}/\text{mL}$	1.6×10^{-11}	1.01×10^{-12}	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.

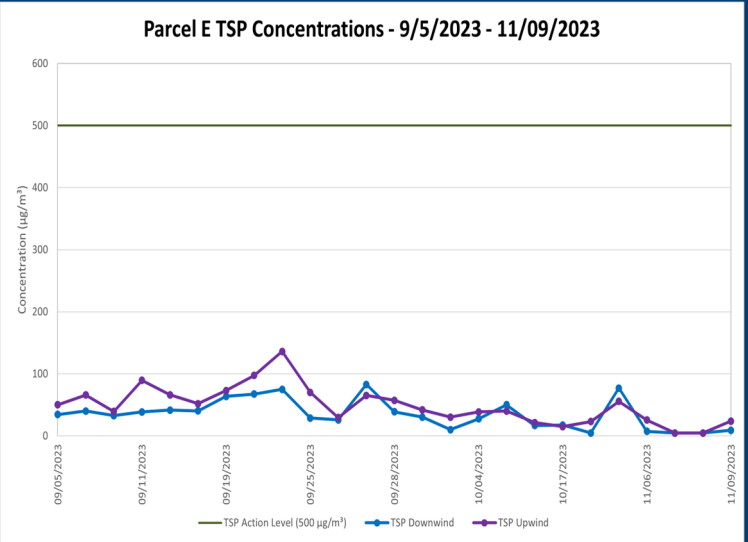
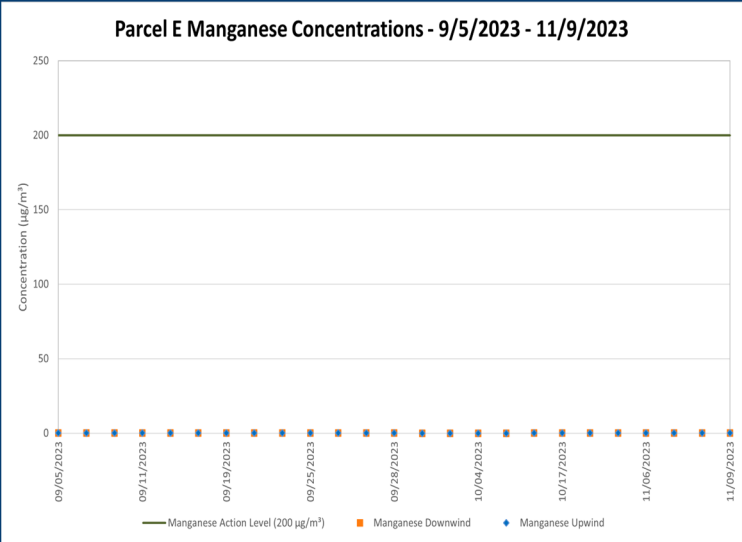
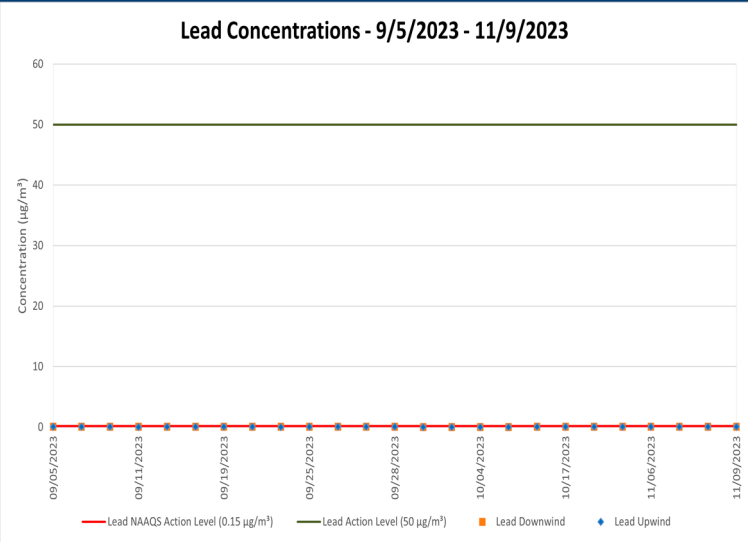
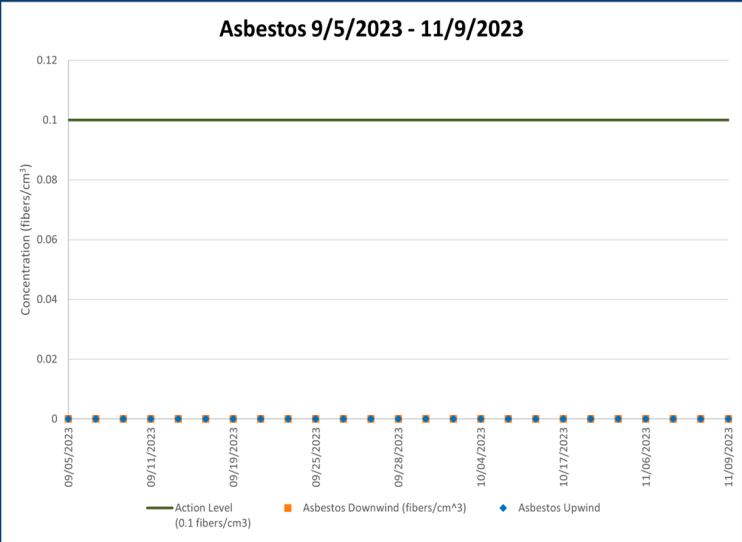
^c Federal lead NAAQS (National Ambient Air Quality Standard) action level.

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 September 5 through November 9, 2023 for four identified COCs are provided below. These include asbestos, lead, manganese, and total suspended particulates (TSP). Results from lab analyses are shown. 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 September 5 through November 9, 2023. Note that in the graphs below, concentrations not detected at or below the reporting limit are graphed as being equal to zero.



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 E. Radionuclides 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 the air for ROCS upwind and downwind of active construction sites. Air samples are collected on filters over 24 hours. The air filters are measured onsite for alpha and beta radionuclide activity. They are compared to action levels defined in Navy Work Plans as approved by EPA and DTSC.

Graphs for air monitoring at HPNS from September 5 through November 9, 2023 for three identified ROCs are provided below. These include cesium-137 and strontium-90 which are counted as beta concentrations and radium-226 which is counted as an alpha concentration. There were no exceedances of ROCs in air at Parcel E during this reporting period. 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

