

EPA's Review of Air Monitoring Data at Hunters Point Naval Shipyard

In November 2024, the U.S. Navy found plutonium-239 (Pu-239) in an air filter sample taken from Parcel C of the Hunters Point Naval Shipyard site. Pu-239 is an identified radionuclide of concern for this site. The sample result was above the site's action level for Pu-239. EPA scientists reviewed the data. EPA's National Analytical Radiation Environmental Laboratory (NAREL) found that the detection was very likely caused by a laboratory error and is *not* from the site.

What does it mean to exceed an action level?

An action level is a pre-set, health-protective threshold for a contaminant in air, soil or water which triggers review if exceeded. At Hunters Point, these thresholds are intentionally set conservatively to protect on-site workers and nearby residents. Even if a contaminant at Hunters Point is at an action level, people will be safe if exposed 24/7 for one year or longer. Exceeding an action level means a test result is higher than that threshold. It doesn't automatically mean there is an immediate health risk, but it prompts follow-up, such as more sampling, a review of work practices or changes to the cleanup, if needed.



An **action level** is like a car's backup sensor:

it beeps before you hit anything. It is an early warning that you may be getting too close, so you can slow down or adjust. It may prompt you to take action, but it doesn't mean there is damage. Likewise, action levels are set well below levels that could cause immediate harm. Action levels are set to alert you, so you can prevent problems.

How did the Navy and EPA respond to the elevated detection?

November 2024

A Navy contractor sends air filter samples from the site to the laboratory for testing. As part of the shipping process, the samples are scanned on-site and do not show elevated levels of radioactivity.

November 2024 to March 2025

The laboratory receives the samples and analyzes them for radionuclides. The laboratory sends the results to the Navy's contractor.

March 2025

The Navy receives the air monitoring results from their contractor. The results show that one sample exceeded the action level for Pu-239.

April 2025 to October 2025

The Navy reviews the test results and contacts the laboratory. The Navy's laboratory accreditation program performs an audit of the laboratory's processes. The laboratory reanalyzes the sample and Pu-239 is not detected.

October 2025

The Navy shares the laboratory results and evaluations with EPA, the Department of Toxic Substances Control (DTSC) and the Regional Water Quality Control Board (RWQCB).

November 2025

EPA asks experts from NAREL to review the laboratory's data and work practices. NAREL meets with the Navy's Radiological Affairs Support Office (RASO) to discuss the results of their review.

January 2026

Based on NAREL's review, EPA and the Navy conclude that the sample result was likely caused by a laboratory error.

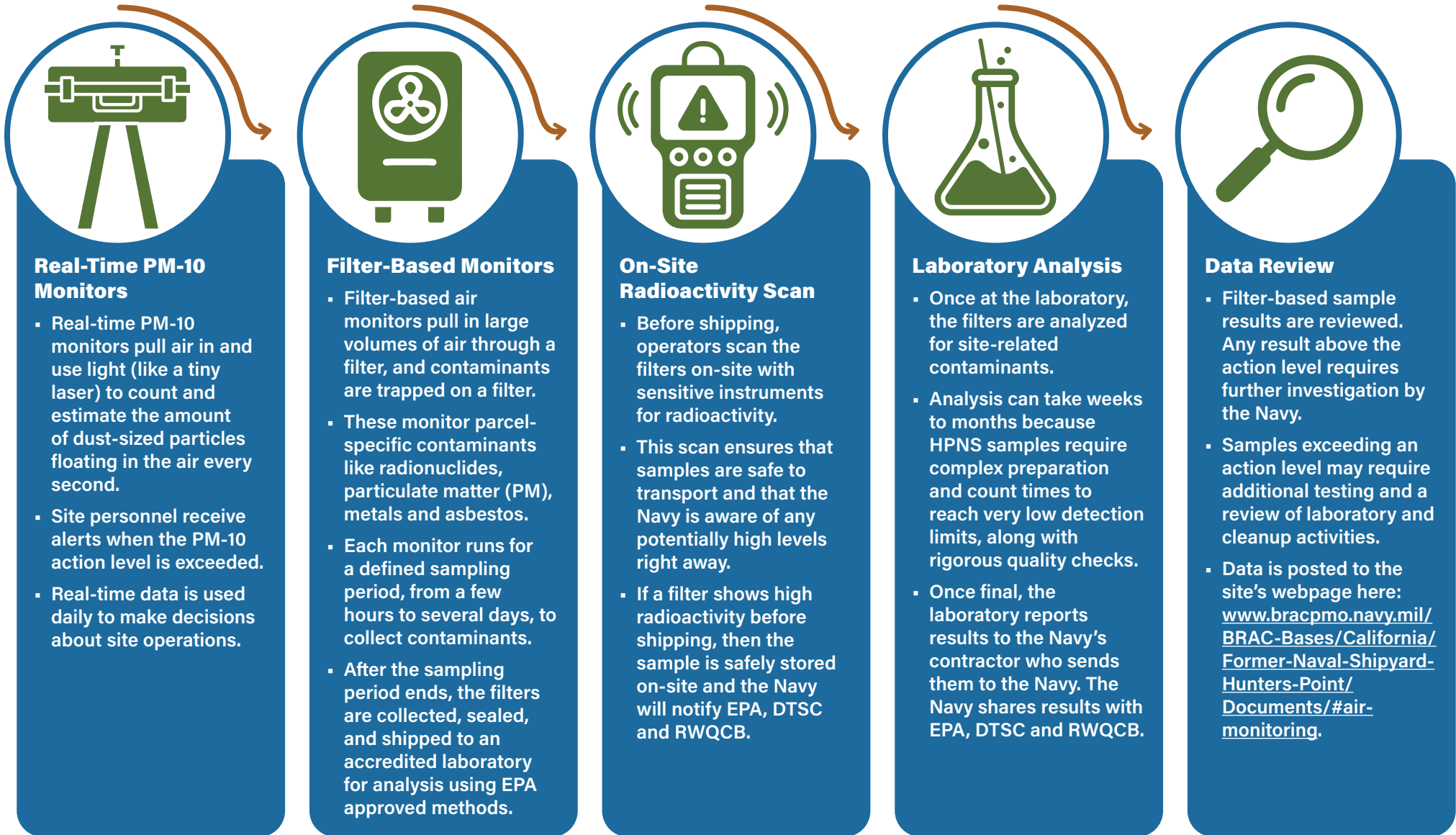
Under the site's Federal Facilities Agreement, the Navy is the lead agency responsible for the investigation and cleanup of the Hunters Point Naval Shipyard site. EPA is the lead regulatory agency and works with DTSC and RWQCB to ensure the Navy complies with regulations and follows guidance, as appropriate. Since this event, the Navy, EPA and DTSC have developed notification protocols that have improved communication.

What caused the high result?

Both RASO and NAREL concluded that laboratory contamination is the likely cause for the Pu-239 result for the following reasons:

- **All air filter samples were scanned for radioactivity before being sent to the laboratory and none showed elevated readings.** The reported Pu-239 result was well within the range that field equipment measures, so if present, this result would have been detected before leaving the site. No scans showed elevated radioactivity, indicating that the contamination happened after the sample left the site.
- **Contamination was detected on field blanks.** A "field blank" is a clean, contaminant-free sample that is handled exactly like the site samples but without exposure to site air. When field blanks are positive at the lab, it points to contamination during handling or lab analysis, not from the site location.
- **Issues with laboratory practices.** RASO and NAREL identified problems with how the laboratory prepared samples and read instrument results. This led to skewed analyses and calculations which, in turn, led to biased results.

Each Hunters Point parcel has upwind and downwind air monitoring stations. Each monitoring station has two types of air monitoring equipment: monitors that collect samples on filters that are sent to a laboratory for further analysis, and real-time PM-10 monitors that count and report dust in the air continuously. The timeline below shows the steps in the typical air monitoring process at the Hunters Point Naval Shipyard site.



The air filter sample collected in November 2024 did not show high levels of radioactivity before it was shipped. If the Pu-239 level from the laboratory's report truly matched on-site conditions, the on-site check would have alerted workers right away.

For more information, please contact:

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