Will the landfill be safe for reuse?

The proposed remedy at the landfill includes an engineered cap, soil cover, and rock revetment along the shoreline. This proposed remedy is summarized in the Navy's Proposed Plan (included in this mailer) and will break the pathway to any contamination left beneath the ground. This action will protect humans and the environment for future reuse of the landfill site. The current projected reuse of the landfill and immediately surrounding area is open space, including a park and Bay Trail.

Where can I get more information about the landfill and Parcel E-2 cleanup at Hunters Point Naval Shipyard?

Information is available on the Navy's Hunters Point Naval Shipyard website: **www.bracpmo.navy.mil.**

Click 'Prior BRAC' at bottom of page, and then select 'Former NSY Hunters Point' from the 'Prior BRAC Installations', then scroll down and select 'View/Hide all Documents', then select 'Parcel E-2 Landfill' from the menu.

Information is also available at:

City of San Francisco Main Library

Government Information Center, 5th Floor
100 Larkin Street
San Francisco, CA 94102
(415) 557-4500

Hours of Operation:
Monday: 10:00 a.m. to 6:00 p.m.
Tuesday through Thursday: 9:00 a.m. to 8:00 p.m.
Friday: 12:00 p.m. to 6:00 p.m.
Saturday: 10:00 a.m. to 6:00 p.m.
Sunday: 12:00 p.m. to 5:00 p.m.

Hunters Point Naval Shipyard Site Trailer
(Adjacent to the security entrance to the Shipyard)

690 Hudson Avenue
San Francisco, CA 94102

Hours of Operation:
Monday - Friday: 8:00 a.m. to 5:00 p.m.

You can also contact:

Mr. Keith Forman

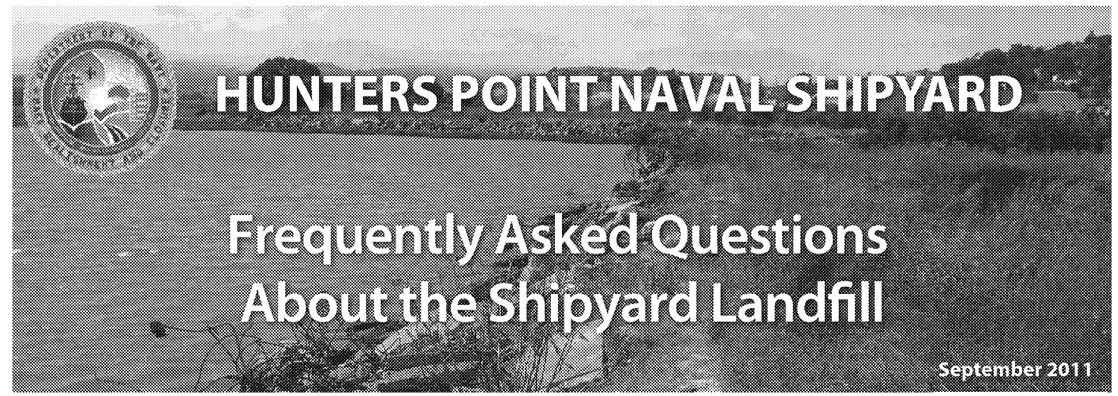
Navy Base Realignment and Closure Environmental Coordinator
1455 Frazee Road, Suite 900, San Diego, CA 92108-4310
Local telephone number: (415) 308-1458
Fax number: (619) 532-0995
E-mail: keith.s.forman@navy.mil

Or

Matt Robinson

Community Involvement Manager
Telephone: (415) 295-4645
Information Line: (415) 295-4742
E-mail: Info@sfhpns.com

The complete Administrative Record for Hunters Point Naval Shipyard is maintained at the Naval Facilities Engineering Command (NAVFAC) offices in San Diego, California. Because of the volume of documents required for the Administrative Record, all documents may not be in the local Information Repository. However, a copy of the complete Administrative Record index and documents are available for public review at the Information Repository located at the San Francisco Main Public Library.



HUNTERS POINT NAVAL SHIPYARD

Frequently Asked Questions About the Shipyard Landfill

September 2011

The community has many questions about the landfill at Parcel E-2 at Hunters Point Naval Shipyard. Below is a list of frequently asked questions, and answers to those questions based on what the Navy has learned from numerous investigations and cleanups conducted over the years.

What do we know about what's in the landfill?

The Navy has thoroughly studied the landfill, including reviewing historical records and collecting hundreds of samples. The Navy has done a large number of investigations at the site, including digging test pits, drilling boreholes to take samples from below the ground, using radiation detectors over the entire surface and sampling the water from under the landfill. Based on this work, the Navy knows that municipal trash, construction debris, soil, and shipyard industrial waste were buried in the landfill.

The Navy took over 300 samples of soil within the landfill (from soil borings, excavation holes where PCB removal was being conducted, groundwater monitoring wells, and test pits). The results of these samples show low levels of contamination, with lead, PCBs and chemicals related to asphalt, being the most common.

Most of the samples show levels of contamination within EPA's acceptable risk range. The worst areas were in the PCB Hotspot Area, which the Navy is currently excavating (Figure 1).

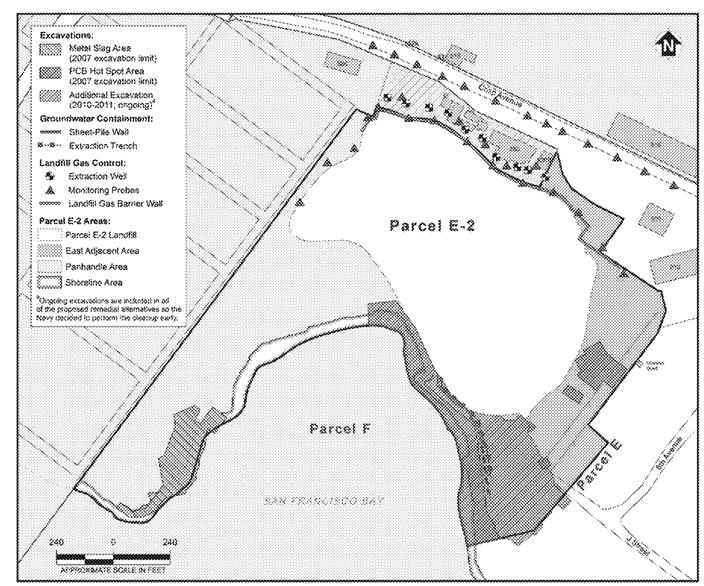


Figure 1 – Parcel E-2 Cleanup Areas

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Who is making decisions about the landfill?

The Navy doesn't make cleanup decisions alone. The landfill project at Hunters Point Naval Shipyard involves the Navy, the U.S. EPA, California EPA (also called the Department of Toxic Substances Control), the San Francisco Regional Water Quality Control Board, and other regulatory agencies. In the Proposed Plan, the Navy is announcing what it believes is the best way forward for the landfill. However, the Navy must work with the environmental regulators and the City of San Francisco every step of the way. The cleanup process only moves forward once the Navy and the regulators are in agreement.

Further, the voice of the community plays a significant role. Telling the Navy and regulators your views and opinions can help shape the final decision. The Navy wants to hear from you!

Is there radioactive waste in the landfill?

The Navy has found glow-in-the-dark dials and markers during several excavations. These devices were painted with radium, which is a radioactive material that is no longer used. The Navy has excavated the two areas most likely to have such devices, though there may be more scattered throughout the landfill. The radiation levels are low in these devices and do not pose any risk if they remain underground.

From the late 1940s through the late 1960s, the Navy conducted experiments on the health effects of radiation on animals, and some of those animals may have been buried in the landfill. However, any animals buried in the landfill were not radioactive since the radiation levels they were exposed to were low (similar to those of an x-ray). Any animals that were radioactively contaminated were disposed of at licensed off-site disposal facilities or drummed and disposed of at sea.

Sandblast waste from cleaning ships used during weapons testing in the South Pacific may also have been disposed of at the landfill. However, historic records suggest that waste with the highest levels of radioactivity was controlled and not disposed of at the landfill.

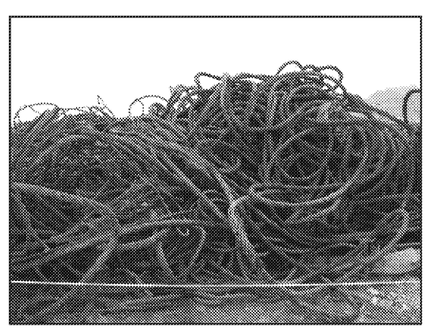
What about toxic chemicals?

The results of the sampling described on Page 1 show that while there are industrial wastes in the landfill, the amounts and concentrations are not that high, except for a few specific hotspots. The Navy has sampled over 200 groundwater locations and did not find any plumes of chemicals in the groundwater. In addition, the soil borings and test pits found mostly wood, glass, cement, metal and paper. The most highly contaminated areas were the Metal Slag area and the PCB Hotspot. The Navy found over 100 buried metal drums filled with oil and tarry waste in the PCB Hotspot Area. The Navy excavated both areas and removed the drums. The Navy is currently extending the excavations in the PCB Hotspot to remove more contamination, including lead contaminated soil in an area where batteries were disposed (see photo to the right).

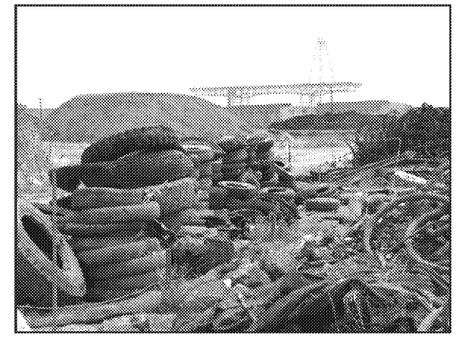
Excavation of soil with lead contamination

What Navy cleanup actions have been completed at the landfill and in Parcel E-2 to date?

- Installed a sheet pile wall and groundwater extraction system in the southeast portion of Parcel E-2 in 1998 to keep PCBs from moving towards the Bay. The system operated until 2005 when the Navy excavated and removed the source of contamination.
- Installed a multi-layer cap over 14.5 acres of the landfill in 2000.
- Installed a landfill gas control and extraction system in 2002.
- Removed debris from the shoreline in 2003, including 81 tons of metal sent to a recycler, 52 dump trucks of non-metal debris, 344 tires and 10 cubic yards of material containing asbestos.



Old cables excavated from PCB Hot Spot shoreline area



Debris excavated from PCB Hot Spot

- Excavated 8,200 cubic yards (600 dump trucks) of soil, metal slag and debris from the Metal Slag area on the Panhandle in 2005-2006. The Navy found 32 radiological devices (glow-in-the-dark dials or markers) in this waste.
- Excavated 44,500 cubic yards (3,100 dump trucks) of soil and sediment containing PCBs, along with 110 buried drums, from the PCB Hotspot Area in 2005-2007.
- Currently excavating another 40,000 cubic yards (about 2,500 dump trucks) of soil from the PCB Hotspot and East Adjacent Area, where the Navy is removing soil with lead contamination from an area where batteries were disposed.

What about gases from the landfill?

The primary gases from landfills, including the one at Hunters Point, are methane and carbon dioxide that come from rotting material. Neither of these is toxic, though methane must be controlled because it is flammable. In addition, there are small amounts of other gases, called non-methane organic compounds. The Navy installed a cap over the landfill in 2000 to trap the gases, which are then captured for monthly testing. The gases are sent through a carbon filter that removes the non-methane organic compounds before venting them to the atmosphere. Navy tests have shown the gases do not pose a risk to the community.

What about dust and risk?

During soil moving, there is a risk of releasing dust that has chemicals and asbestos in it. The Navy follows an approved dust control plan that prevents public exposure to dust during earth-moving activities. Measures include containing soil to prevent contaminated dust from getting into the air. All trucks carrying soil on or off the Shipyard must have covers and truck wheels are washed or brushed off before leaving the Shipyard. The Navy continuously waters down any areas where soil is being moved to keep dust down. In addition, the Navy monitors the air around all of its active cleanup areas. Test results to date show no risk to the community or the workers. Results from dust monitoring can be found on the Navy's website: **www.bracpmo.navy.mil.**

What about earthquakes and liquefaction?

The Navy has done geotechnical testing of the landfill area and found a low likelihood for major soil movement, called liquefaction. Liquefaction and earthquake related effects are well understood in California. CERCLA, the "Superfund" law regulating cleanup at the Shipyard, requires an evaluation of nine criteria, including short and long-term protectiveness for any remedy proposed. Any remedy will be designed to be protective during and after an earthquake. If a landfill cap and revetment wall are chosen as the remedy, they will be designed and constructed with this in mind.

Can contaminants move into the Bay?

The Navy has completed a large amount of sampling in the Bay and did find PCBs at low levels in sediment near the landfill and the mouth of Yosemite Slough. The sources are private companies near Yosemite Slough and the PCB Hotspot along the shoreline of the landfill. The Navy is removing the PCB Hotspot and evaluating methods to dredge or clean contaminated sediments near Yosemite Slough and the landfill. The Navy has thoroughly sampled groundwater flowing underneath the landfill and has not found any groundwater plumes with contamination migrating towards the Bay.

What if there is a rise in sea level?

All Navy remedies at Hunters Point, including those proposed for the landfill, are designed to withstand potential sea level rise. Any capping remedy will have revetments and elevations that will account for significant sea level rise.