

Former NAS Alameda Environmental Tour

July 12, 2014 – 12:30 to 2:30pm



- Tour Meeting Location – 12:30pm
- ① Tour Stop Location/Order

Stop 1: Site 1
Stop 2: Site 2

Stop 3: Site 13
Stop 4: Site 6

Stop 5: Building 400



Fact Sheet

IR Site 1

Alameda Point



Community Tour

July 2014

History:

In the late 1800's the Alameda Mole, was located along the northern edge of Site 1, serving as a transit port for the Southern Pacific railroad and ferries. Site 1 was used by the Navy as the principal disposal area for all waste generated at the former Naval Air Station Alameda between 1943 and 1956 and finally the runway was extended over the disposal area in the late 1950's.

Environmental Concerns:

- Disposal area
- Burn area waste
- Pistol and skeet range
- Aircraft parts storage and maintenance

Contaminants:

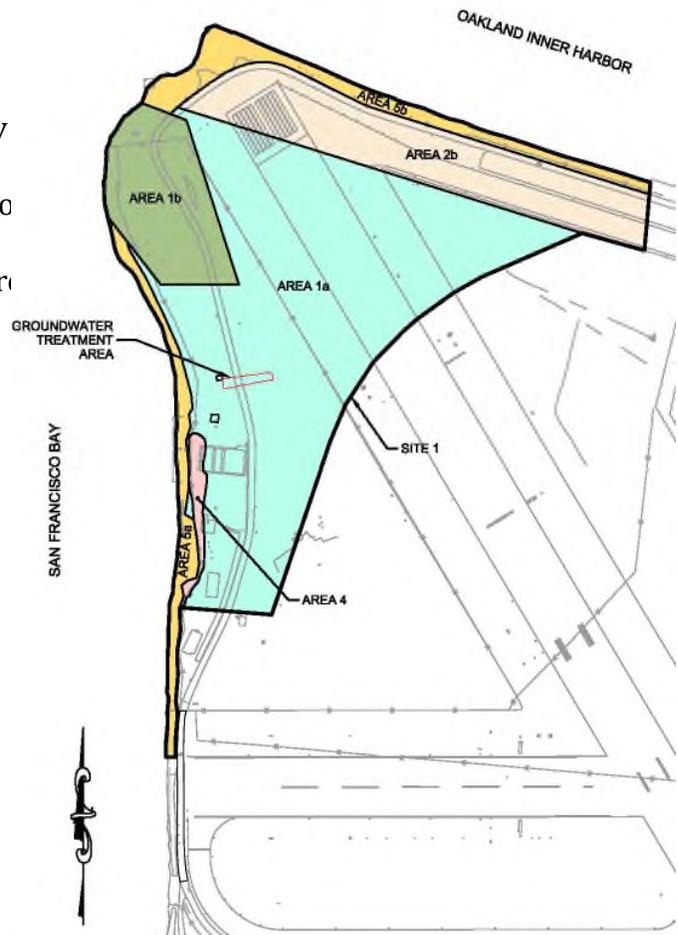
- Solvents
- Petroleum and oil
- Polychlorinated biphenyls (PCBs)
- Metals
- Radionuclides

Cleanup Approach:

- Treatment of groundwater
- Installation of a soil cover
- Removal of radiological contaminants
- Shoreline stability
- Wetland mitigation

Schedule:

- Active groundwater treatment is expected to be complete in 2015
- Remedial Action for Soil: July 2014 - June 2015





Fact Sheet

Operable Unit 4A - IR Site 2 Alameda Point



Community Tour

July 2014

LANDFILL CORRECTIVE ACTION BY CAPPING AND MONITORED NATURAL ATTENUATION

History:

Site 2 was known as the West Beach Landfill and was the principal disposal area for waste generated at the former Naval Air Station Alameda between 1956 and 1978. The landfill received approximately 1.6 million tons of base waste during its operational period.

Environmental Concerns:

Potential sources of contamination in soil and groundwater at IR Site 2 include general household waste and several industrial process wastes, including, but not limited to, asbestos, pesticides, sandblasting grit, waste oils and solvents, painting and plating wastes, ordnance, low-level radioactive waste, and medical waste.

Cleanup:

The protective actions include:

- Scanning the surface and removing radiological material detected above 2X background readings
- Installing a soil cover to isolate buried waste and a animal intrusion layer to deter burrowing
- Wetlands restoration
- Deed restrictions and other controls to preserve the integrity of the protections in the future





Fact Sheet Operable Unit 1 - IR Site 6 Alameda Point



Community Tour

July 2014

History:

IR Site 6 includes Building 41 which was constructed before 1945 and housed the ***Aircraft Intermediate Maintenance Department***. Seaplanes and other Naval aviation were repaired and maintained here during WWII.

Environmental Concerns:

Chlorinated solvents are present in shallow groundwater. Solvent compounds include trichloroethene, dichloroethene, and vinyl chloride. In accordance with the Record of Decision, *in-situ chemical oxidation* (ISCO) was implemented in 2010. Remediation goals have not been met, and as a result, bioremediation is the next phase of treatment. The ***treatment "footprint"*** is approximately 41,000 square feet to a depth of 11 feet below the ground.



Cleanup:

Bioremediation is the process of helping indigenous bacteria populations grow so that they degrade contamination. Bioremediation will be enhanced at Site 6 by adding a carbon source (lecithin) which will ferment and provide hydrogen. The hydrogen will serve as an energy source and help indigenous bacteria degrade chlorinated solvents. Additionally, specially engineered bacteria called ***dehalococcoides*** are also added to the groundwater because they are the ***only bacteria on Earth*** proven to degrade vinyl chloride into ethene, carbon dioxide, and water. Adding bacteria has been shown to speed up degradation and ensure a more complete cleanup.

Green & Sustainable Design Approach:

Bioremediation enhances natural processes which remediate contaminants. A series of injection and extraction wells will be used to extract site groundwater into a large mixing tank, amend the groundwater with lecithin and ***dehalococcoides*** bacteria, and inject the amended site groundwater back into the treatment zone. This approach essentially recycles site groundwater; using no outside water.



Fact Sheet IR Site 13 Alameda Point



Community Tour

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History:

Historically, the Pacific Coast Oil Works Company petroleum refinery operated within Site 13 from 1879 to 1903. Building 397 was constructed in 1958 and used an aircraft overhaul plant and engine test facility.

Environmental Concerns:

- Benzene and ethylbenzene in shallow groundwater 5 to 15 feet below ground surface

Cleanup:

- Treatment of groundwater using bioremediation
- Bioventing wells facilitate delivery of oxygen to treatment zone
- Groundwater monitoring

Schedule:

Remedial Action for Groundwater expected to be complete in 2016

