

# FACT SHEET

## Remedial Action at IR Site 26, Western Hangar Zone Former Naval Air Station Alameda



Alameda, California

July 2008

### PROJECT CONTACTS

*If you have any questions or concerns about environmental activities, please feel free to contact any of the project representatives:*

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### INTRODUCTION

The Navy is proceeding with the selected remedial action for groundwater at Installation Restoration (IR) Site 26, the Western Hangar Zone, Alameda Point, Alameda, California. This fact sheet describes the scope of the remedial action being conducted to reduce human exposure to volatile organic compounds (VOCs) that are present in groundwater southeast of Building 20.

The Navy is conducting environmental actions at IR Site 26 in accordance with the National Contingency Plan (NCP) and the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA). After completing a remedial investigation, the Navy conducted a feasibility study in 2006 to evaluate potential remedial alternatives for IR Site 26 and prepared a Record of Decision (ROD) to document the selected remedy for the site. The selected remedy consists of in situ chemical oxidation (ISCO), in situ bioremediation (ISB), and short-term institutional controls.

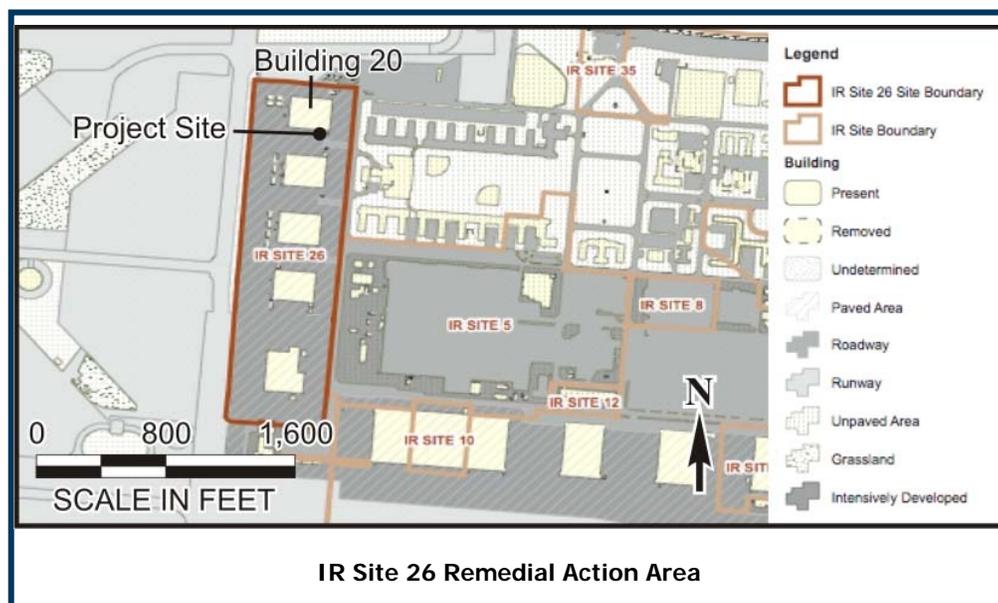
### SITE HISTORY

Naval Air Station (NAS) Alameda was an active military installation from the 1930s to the 1990s. It primarily provided facilities and support for fleet aviation activities. IR Site 26 is located in

### Regulatory Agencies Concur on Cleanup Plan

The Navy and its cleanup partners, the U.S. Environmental Protection Agency, the California Department of Toxic Substances Control, and the San Francisco Bay Regional Water Quality Control Board, concurred with the selected remedy presented in the Record of Decision, which was finalized in August 2006.

the central portion of Alameda Point. It consists of four former aircraft hangers (Buildings 20 through 23), a paint and finishing building (Building 24), and several ancillary buildings. Throughout the history of the NAS, IR Site 26 was used for a variety of naval activities including aircraft parking, fueling, maintenance, washdown, and other support activities. A washdown area (WD 020), southeast of Building 20, was historically used for aircraft cleaning and included an associated oil-water separator (OWS-020). Groundwater in this area has been impacted with VOCs, which may have resulted from the release of chemicals during aircraft washdown activities.



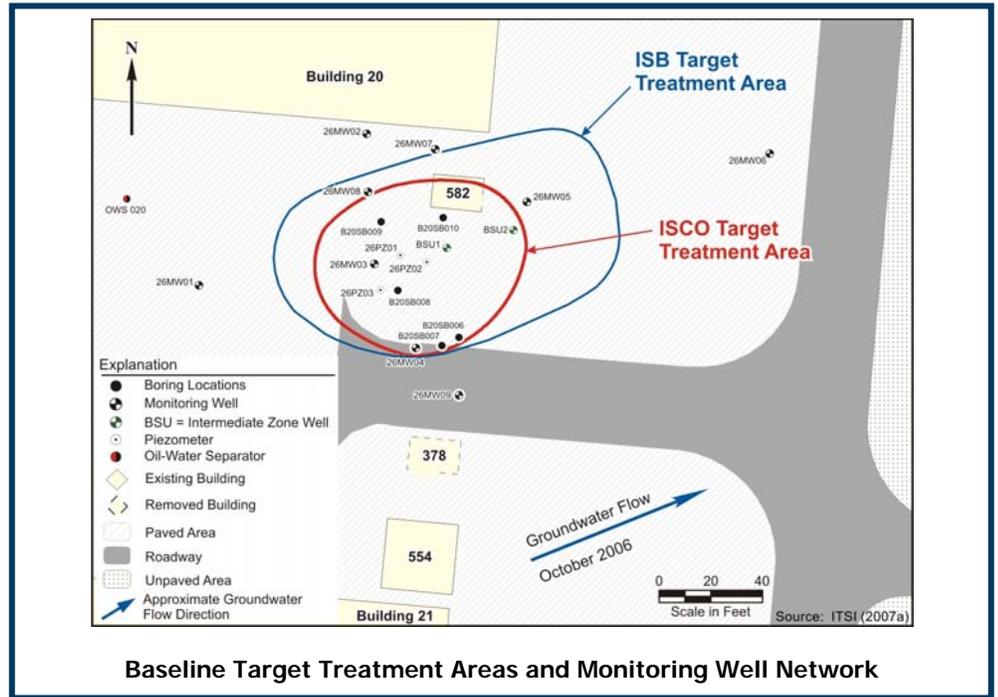
IR Site 26 Remedial Action Area

## INVESTIGATION RESULTS

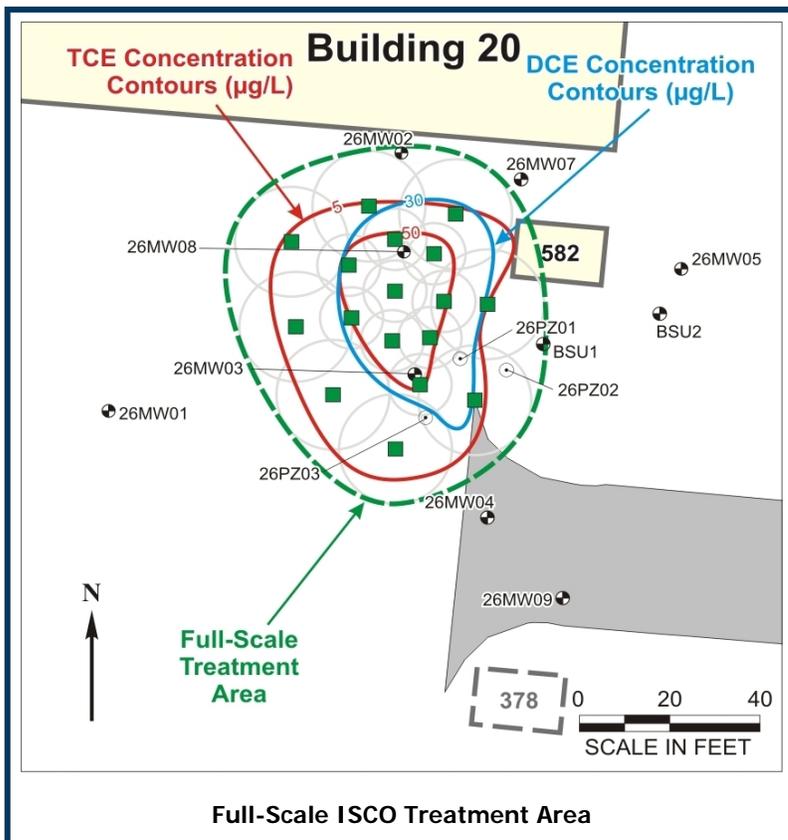
Results of investigations at IR Site 26 have verified that the current conditions southeast of Building 20 pose a potential risk to human health through inhalation of vapors in indoor air that originate from VOCs in groundwater. VOCs including trichloroethene (TCE), cis-1,2-dichloroethene (DCE), and vinyl chloride (VC) were detected in the first water bearing zone (at 2 to 6 feet below ground surface) above both the risk value and reference conditions for human health. The VOC groundwater plume is approximately 100 by 200 feet and has migrated towards the northeast, which is in the general direction of groundwater flow.

## CLEANUP ACTION

The selected remedy consists of ISCO, ISB, and short-term institutional controls. The objective of the remedial action is to prevent exposure to VOCs in indoor air, which may volatilize from groundwater. The selected remedy entails ISCO to rapidly break down source contaminants followed by ISB to accelerate the natural microbiological processes that will further decrease the residual VOC concentrations. During remedial action, short-term institutional controls will be implemented to limit human exposure. Groundwater sampling will be performed after implementing each phase of the remedy to confirm remediation goals have been achieved.



A pilot-scale ISCO test using Fenton's reagent, a powerful oxidant, was performed to assess the effectiveness of the process at reducing contaminant mass at the site and to evaluate injection parameters including injection pressure, injection flow rate, reagent volumes, and effective radius of influence. Groundwater sampling, performed two and eight weeks after completing pilot-scale ISCO injections, indicated that ISCO had reduced the concentration of VOCs at the site and that full-scale ISCO will be required to treat the remaining VOCs.



The full-scale ISCO and ISB treatment areas cover approximately 2,400 and 8,500 ft<sup>2</sup>, respectively. The full-scale ISCO application will be performed in the area just south of Building 20 and will consist of injections in 18 points, targeting concentrations of DCE above 30 parts per billion (ppb) and TCE above 5 ppb. After completing the ISCO phase of the remedy, results from post-application sampling will be discussed with the regulatory agencies and used to optimize and refine the design treatment area for ISB. The remedy will be discussed with the regulatory agencies before it is finalized and implemented at the site. The remediation goals are 5 ppb for TCE, 6 ppb for DCE, and 0.5 ppb for VC.

## TRAFFIC IMPACTS

The remedial actions will not have an impact on the existing traffic conditions in the area.

## PROJECT SCHEDULE

The anticipated time to complete the field activities associated with the remedial action at IR Site 26 is approximately 18 months. Full-scale application of ISCO is scheduled to begin in July, 2008. The ISB phase of the remedy is scheduled to begin early 2009. It will include one year of site monitoring to ensure compliance with remediation goals.

# ***INSIDE...***

## **Remedial Action Update for Installation Restoration Program Site 26 Western Hangar Zone**

### **FOR MORE INFORMATION**

Documents that detail activities associated with this remedial action, including the remedial design and remedial action workplan, are available at the following locations:

Alameda Main Public Library  
(Historic Alameda High School)  
2220-A Central Avenue  
Alameda, California

Alameda Point, Former NAS Alameda  
950 West Mall Square, Suite 240  
Alameda, California

This fact sheet is prepared in accordance with the NCP, 40 CFR 300.435(c)(3).

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