FACT SHEET

April 2005

Groundwater Extraction at the Administration Area Plume

National Aeronautics and Space Administration (NASA) Crows Landing Flight Facility (former Naval Auxiliary Landing Field, Crows Landing)

The purpose of this Fact Sheet is to provide an update on the groundwater extraction activities near a source area at the Administration Area Plume (the Plume) at the NASA Crows Landing Flight Facility (the Facility), formerly known as the Naval Auxiliary Landing Field (NALF), Crows Landing in Stanislaus County, California. The Plume is located within Installation Restoration Program (IRP) Site 17 (Plate 1), and the depth to groundwater is approximately 60 feet.

A former dry well, a cobble-filled pit where waste liquids may have been disposed while the airfield was operational, is a suspected source of groundwater contamination in the Administration Area Plume. The former dry well is located in the southern section of the Plume.

Plate 1. Administration Area Plume Location
(Keyhole Pro Photography 2000-2004)

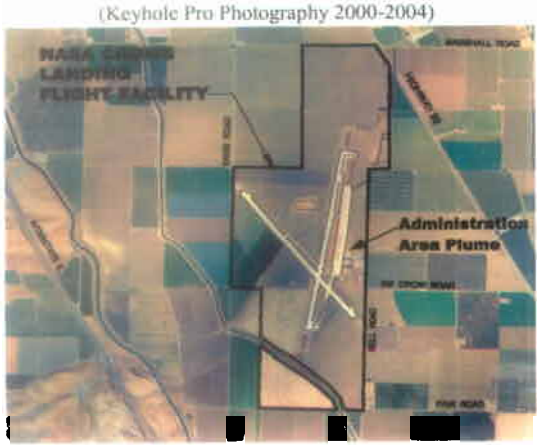
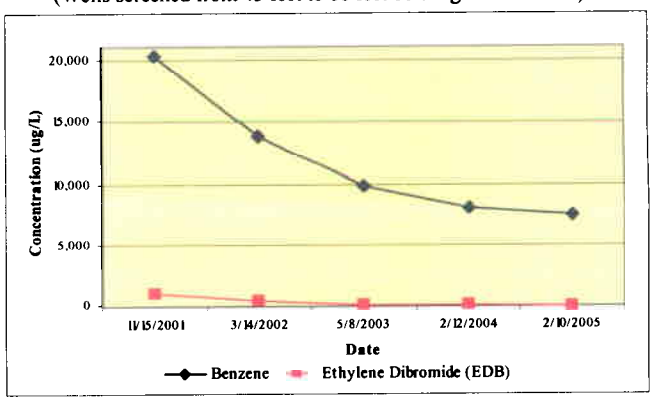


Plate 2. Groundwater Extraction System
(U.S. Navy photograph)

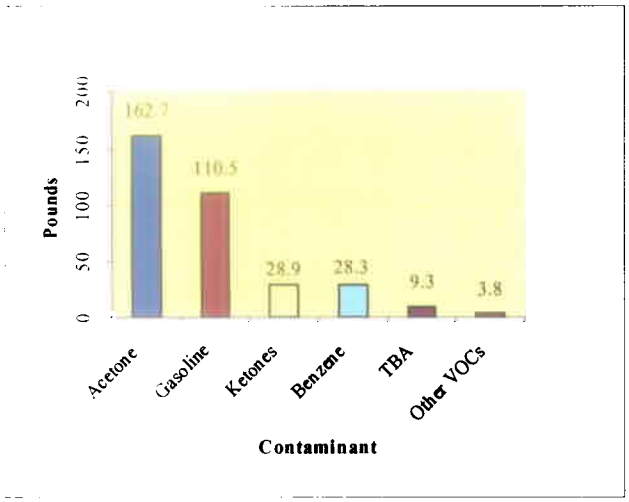
The highest concentrations of acetone, benzene, 1,2-dichloroethane, ethylene dibromide (EDB), methyl ethyl ketone (MEK), petroleum hydrocarbons, and tert-butyl alcohol (TBA) have been detected in groundwater samples that were collected near the former dry well. Concentrations of contaminants have decreased significantly since groundwater extraction began in November 2000. Chart 1 shows concentrations of benzene and EDB since 2001.

Chart 1. Benzene and Ethylene Dibromide Concentration November 2001 to February 2005, CL1-MW-12S
(Wells screened from 43 feet to 68 feet below ground surface)



The Navy began aquifer testing activities near the source area of the Plume in November 2000. Between November 2000 and February 2005 approximately 350,000 gallons of groundwater and 340 pounds of contaminants have been extracted from the site. The mass of each compound removed is shown in Chart 2.

Chart 2. Contaminant Mass Removed
November 2000 through February 2005



Explanation of Contaminant Abbreviations in Chart 2: Ketones include methyl ethyl ketone and methyl isobutyl ketone. TBA is tert-butyl alcohol. Other volatile organic carbons (VOCs) include ethylene dibromide, ethylbenzene, toluene, xylenes and 1,2-dichloroethane.

Extracted groundwater is transported to an off-site treatment and disposal facility.

Historical Background

The former NALF Crows Landing was commissioned in May 1943 and has served primarily as an auxiliary airfield for operations from Naval Air Station, Moffett Field. The Navy closed the facility in 1994 using the Base Realignment and Closure (BRAC) process and it was transferred to NASA on July 1, 1994. In October 1999, NASA was authorized by legislative act of the 106th Congress of the United States of America to transfer the facility to Stanislaus County.

The Navy is responsible for the restoration of contaminated sites that were the result of historical Navy operations at the facility. The Navy is the lead agency for the implementation of the installation restoration program. The California Department of Toxic Substances Control; the California Regional Water Quality Control Board, Central Valley Region; and the California Integrated Waste Management Board provide regulatory oversight.

Opportunities for Community Involvement

The Navy provides periodic updates to the community through Fact Sheets. The Fact Sheets are available for viewing on the Navy's Environmental web site at the following address: http://www.efdsw.navfac.navy.mil/Environmental/CrowsLanding.htm#facts

Administrative Record

Selected recent Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Administrative Record documents are available at the Information Repository at the Stanislaus County Library, Patterson Branch in Patterson, CA (Telephone Number: (209) 892-6473).

All remedial investigation reports, underground storage tank reports, and other documentation pertaining to the Navy's environmental restoration program are maintained in the CERCLA Administrative Record at Southwest Division, Naval Facilities Engineering Command in San Diego. For assistance with the CERCLA Administrative Record files or requests for copies of documents contained within the CERCLA Administrative Record files, please contact the records manager, Ms. Diane Silva, at (619) 532-3676.

For More Information

For more information pertaining to the Navy's environmental restoration program projects at the Facility, please contact Mr. Michael Bloom or Ms. Michelle Hurst:

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