

# Community

## Environmental Newsletter

April 2007  
Volume 1, Issue 1

Naval Base Point Loma, San Diego, CA



*"This newsletter is the first in a series intended to keep the local Point Loma community informed on environmental matters at Naval Base Point Loma and the Defense Fuel Support Point (DFSP). The U.S. Navy is committed to providing responsible environmental stewardship for this Installation and for our adjoining neighbors."*

CAPT Mark D. Patton  
Commanding Officer  
Naval Base Point Loma

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## Defense Fuel Support Point (DFSP) Point Loma

The Defense Fuel Support Point (DFSP) Point Loma is the primary fuel storage and dispensing facility on the West Coast. The DFSP is the fuel hub of the Southwestern United States and the eastern Pacific, and provides mission-critical fuel and lubricating oils to support operations of the United States Navy, U.S. Department of Homeland Security, and other Federal agencies. The DFSP is a strategic U.S. Department of Defense (DOD) asset,



providing more than 42 million gallons of fuel and lubricating oil storage capability to "Fuel the Fleet" and aircraft on the West Coast.

The DFSP Point Loma was first established as a U.S.

Navy coaling station in 1901. As the U.S. Navy changed from coal to liquid fuels, the facility was modified and expanded to store and dispense the required fuel products.

The first bulk fuel storage tank at DFSP Point Loma was constructed in 1919; between 1932 and 1939, the riveted steel aboveground fuel storage tanks were constructed and placed into service.

(See "History" on Page 2)

## Environmental Investigations

In 1995, groundwater monitoring wells were installed at Naval Base Point Loma (NBPL) to monitor groundwater between the DFSP Point Loma Fuel Depot and San Diego Bay. In 2000, free product (fuel) was found in one of the wells. After reporting the release to the San Diego County Department of Environmental Health, the U.S. Department of Defense (DOD) began an investigation to find which

tank or tanks had leaked and the cause of the leak(s). While the investigations were ongoing, the DOD installed a temporary recovery system to begin removing the fuel and slowing the fuel's migration to the Bay. The California Regional Water Quality Control Board (RWQCB), took over as the regulatory oversight in 2002. The RWQCB and DOD developed a comprehensive approach to investigate several tank

sites at once while realizing a cost savings in the investigation process. All the investigations have been performed following a work plan approved by the DOD and RWQCB.

Between 2000 and 2007, 68 groundwater monitoring and recovery wells (including 6 wells located off NBPL property), 3 piezometers, 59 exploratory borings, and 19 vapor probes have been installed.

(See "Investigations" on Page 2)





*"During World War II, the DOD installed concrete 'splinter' walls around the aboveground tanks to protect them from bomb shrapnel."*

## History (continued from Page 1)

The underground storage tanks were added to the facility between 1932 and 1954. During World War II, the DOD installed concrete "splinter" walls around the aboveground tanks to protect them from bomb shrapnel. The piping for the tanks was covered with soil excavated from the "Moat", a large, lined spill containment basin on the DFSP, to protect the piping from aerial attack.

The facility has operated continuously since the early 1900s. Plans are currently being prepared to upgrade the DFSP Point Loma facility by replacing the aging tanks and infrastructure with new, DOD-standard bulk storage tanks, piping, and support facilities. The replacement project is well along in the design stage, and construction is expected to start in early 2008.

## Investigations (continued from Page 1)

Soil, air, and groundwater samples were collected and tested in certified laboratories. Samples of the fuel found in the wells were tested to see what type of fuel was present to better locate the possible source. Soil-gas samples were collected from shallow and deep sample probes to determine if any chemicals were migrating from the fuel plume to the ground surface. Two types of aquifer tests were

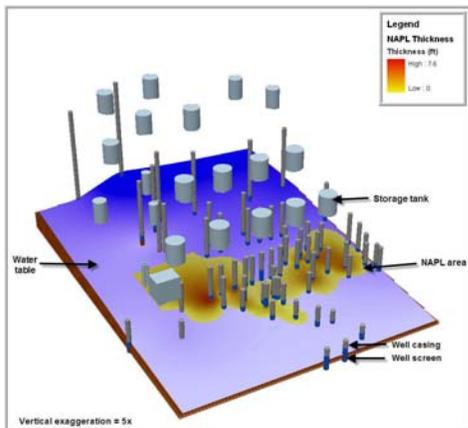
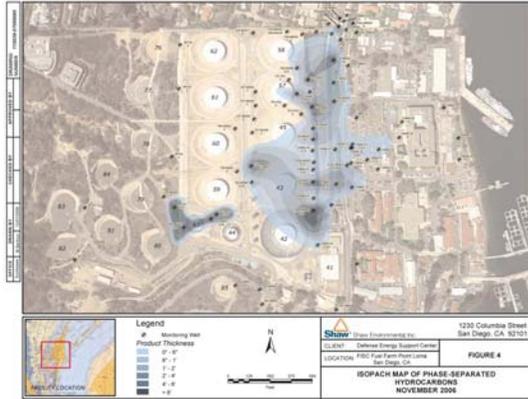
completed to calculate the velocity of groundwater through the soil. Geophysical surveys, including seismic refraction and electrical resistivity, were completed to aid in plotting the geology beneath the northern and eastern sides of the DFSP Point Loma Fuel Depot.

After the fuel was discovered on the groundwater, three interim (temporary) product

recovery systems were installed in monitoring wells to control migration of the fuel product. A passive skimmer also has been installed in an off-site observation well to improve cleanup at the facility. The plume has been contained using the temporary recovery systems, and the DOD is in the process of designing a permanent recovery system to be constructed by the end of 2007.



## Results To Date



The results of the comprehensive investigation performed by the DOD show the following:

- The fuel moves from the point of the leak directly downward in the soil until it reaches the water table. Then the fuel moves along the water table as long as enough fuel is present to be a driving force. Therefore, most of the fuel is located at least 40 feet below the ground surface and in most cases it is deeper than 40 feet.

- With the exception of one property on the northern boundary of DFSP Point Loma, the fuel plume is confined entirely to NBPL property.

- The fuel has not migrated to San Diego Bay and a line of sentry wells are in position to detect movement in that direction.

- A depression in the water table has been created near Rosecrans Street, which has halted the migration of the fuel plume.

- The plume is made up of marine diesel fuel and jet fuel. Both of these fuels are not very volatile and do not contain most of the hazardous chemicals commonly found in fuels such as gasoline. The chemicals that are present are in low concentration.

- The primary risk to the environment, migration of fuel to San Diego Bay, is being addressed by operating a pumping system to remove fuel and groundwater near and within the fuel depot.

A human health risk assessment was completed to look at the risk to residents and site workers from contact with the soils, blowing dust, and soil vapors. The results of the risk assessment indicate no known health threat to workers at DFSP Point Loma fuel depot or nearby residents. For the residents located near DFSP Point Loma, the *ELCR* is two-in-one hundred million, well below a recognized cancer risk range of between one-in-one million and one-in-ten thousand.

## What is ELCR?

Cancer risk is expressed as an increased probability of developing cancer as a result of lifetime exposure. The excess lifetime cancer risk, or *ELCR*, is a calculation

to assess the cancer risk resulting from exposures to environmental contaminants. The *ELCR* is the lifetime average daily dose (averaged over a

lifetime of 70 years) time a cancer slope factor. An *ELCR* of  $1 \times 10^{-6}$  means that an exposed individual may have an added one-in-one million chance of

developing cancer greater than an unexposed individual.

# Cleaning Up DFSP Point Loma

To select the most appropriate approach for cleaning up the site, a Corrective Action Plan (CAP) was prepared. The CAP identifies existing and potential receptors, proposes site-specific cleanup goals, presents study on which cleanup methods are most feasible, and proposes a remedial plan that is most suitable for DFSP Point Loma. The CAP was provided to the RWQCB in December 2006 and is under review.

The CAP describes the selected preferred alternatives for removing the fuel, and remediating (cleaning up) fuel compounds that will be remaining after the free product has been

removed. The alternative for cleanup evaluated to select the most appropriate actions available for each type of contamination (free product, residual, dissolved into water, and vapor in soil). These alternative methods were then combined into potential strategies and compared against one another to select the most appropriate strategy.

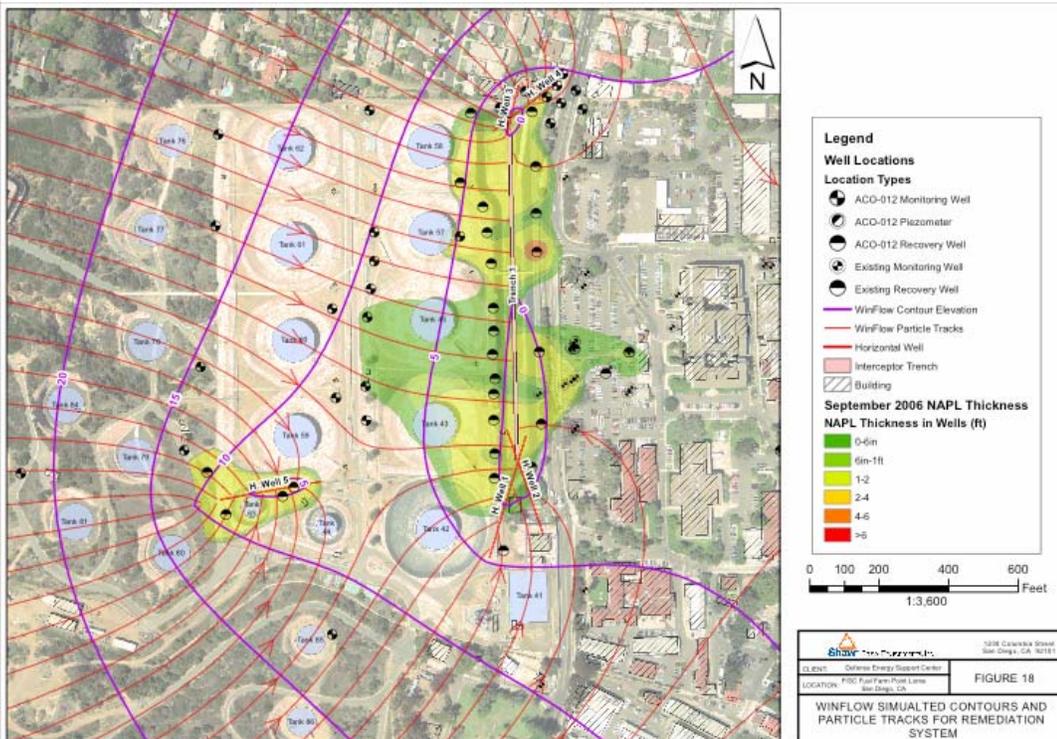
For the DFSP Point Loma site, the selected strategy is:

- Continue the existing fuel recovery effort (removing groundwater and fuel and groundwater monitoring) as long as feasible.
- Install a deep collection trench with horizontal wells

at each end to remove fuel deep underground to the extent possible. Fuel and water removed from the ground will be sent to the DFSP Point Loma fuel oil reclamation plant for processing.

- Coordinate with the planned tank replacement project.
- Monitor sentry wells during site cleanup to ensure no product moving to San Diego Bay.
- Monitor vapor probes across the site and at the northern boundary.

Should the completion criteria for this cleanup strategy not be met, contingency responses will be implemented.



## The Future of DFSP Point Loma

For the foreseeable future, DFSP Point Loma will continue to be the primary DOD fuel storage and dispensing facility on the West Coast. To meet the needs of the DOD and U.S. Department of Homeland Security, DFSP Point Loma will be upgraded to new, state-of-the-art, 21<sup>st</sup> century bulk-fuel storage tanks, piping, and support facilities. The DOD has

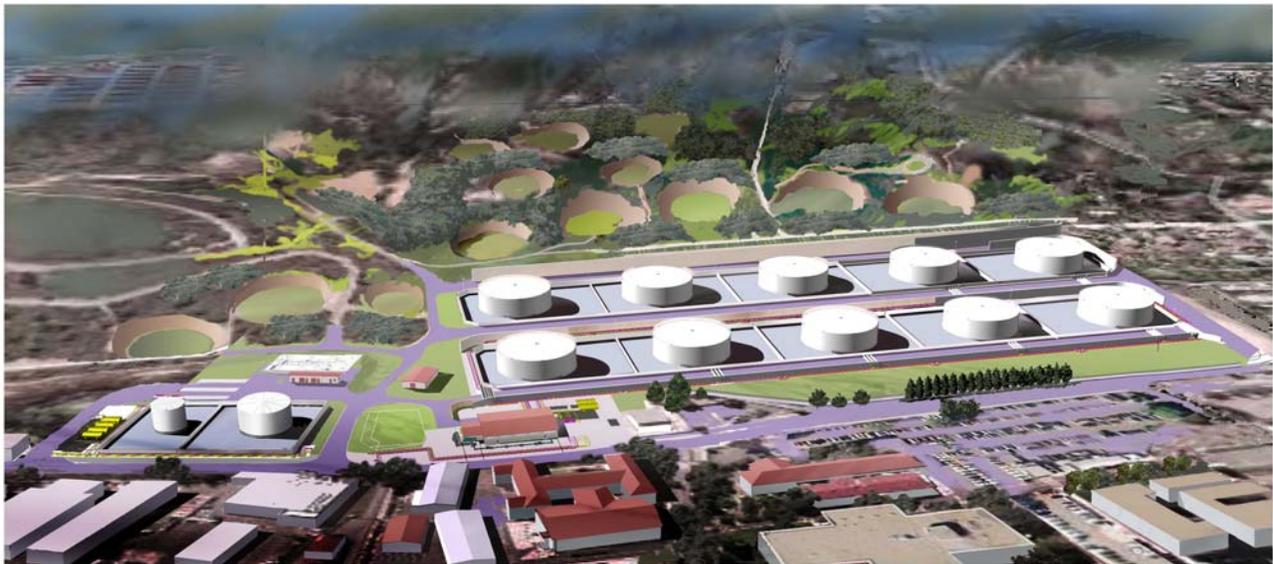
received Congressional backing for this important project, and design plans are currently being prepared. The design takes into account the wellbeing of the adjoining community, worker safety, and efficiency in storing and transferring fuel products. Some of the more important aspects of the project include:

- There will be an overall reduction in the number of fuel tanks at the facility. The design calls for 10 tanks to replace over 40 tanks.
- The tanks will be designed with floating lids, which will reduce odors from the tanks when fuel is moved in and out.
- The tanks will be located farther away from the

northern property line than the current tanks.

- By constructing new tanks, the DOD is working to eliminate future spills and leaks at the facility.

Design of the new facility will be completed by mid-2007 and construction will begin in early 2008.



**FISC POINT LOMA - REPLACE FUEL STORAGE TANK**  
SAN DIEGO, CALIFORNIA



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## Community Outreach

The DOD is committed to keeping the residents of Point Loma and people who work and live at NBPL informed about relevant environmental matters at NBPL and the DFSP Point Loma facility. CAPT Patton, the environmental staff at NBPL, and DESC have hosted several public meetings and

briefings for the community residents and San Diego City and County leadership. These include:

- Townhall meetings in January, April, and December 2006
- Regularly scheduled meetings between the DOD

and the Community Liaison Working Group, which includes representatives of several local organizations.

- Interviews with the local news media.
- Establishing an information repository at the Point Loma Community Library.

## Points of Contact

For additional information, the following points of contact are available:

Naval Base Point Loma – Mr. Jeremiah Glover (619) 553-7177, e-mail [jeremiah.glover@navy.mil](mailto:jeremiah.glover@navy.mil)

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California Regional Water Quality Control Board – Region 9 Ms. Laurie Walsh (858) 467-2970, e-mail [walsh@waterboards.ca.gov](mailto:walsh@waterboards.ca.gov)

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