



Information for Norwalk Neighbors

FUEL STORAGE ENDS AT TANK FARM

Military Ceases Operations in Norwalk After 50 Years

The last shipment of jet fuel was transported out of the Defense Fuel Support Point (DFSP) Norwalk in February 2001, bringing an end to the military's use of the facility for strategic fuel storage and transfer after 50 years. The final facility closure is scheduled to take place in August.

"First and foremost, I would like to thank the City and community, especially the people who came to the meetings, month after month, to insure all the issues were addressed," said Lt Col Edward Wilson, Commander of Defense Energy Support Center (DESC) Los Angeles. "It has been a genuine pleasure working with everyone. The closure of the Tank

Farm was made possible by a cooperative effort among DESC, Kinder Morgan, the Restoration Advisory Board, the City Council, and the Office of Congresswoman Napolitano."

The move was made possible by DESC's agreement with Kinder Morgan Energy Partners to move their fuel storage and transfer operations to Kinder Morgan's Watson Station facility in Carson. The construction of a new pipeline in Norwalk and three new tanks at Watson Station helped facilitate the move.

DESC has been preparing the Tank Farm for site closure. The tanks were cleaned, using vacuum trucks to remove the final remnants of fuel and water. DESC's pipelines were drained, cleaned and packed with nitrogen to place them out of service in accordance with state laws. Kinder Morgan will continue to transport fuel with its pipelines. Kinder Morgan will remove some of their aboveground facilities, such as the main line pumps and the prover, a device



Pipeline Cleaning. Equipment was attached on the main lines to launch cleaning devices (called "pigs"). All DESC lines have been emptied and cleaned.

that measures the quantity of fuel that runs through the pipelines.

Once the facility is closed, it will be held in caretaker status until it is transferred. Routine maintenance and security will be provided during this time. DESC and Kinder Morgan will continue to be responsible for the environmental cleanup. The cleanup is expected to continue for another 8 to 10 years.

The U.S. Air Force, the property owner, has asked the General Services Administration to help expedite the lengthy property transfer process. The process will be conducted concurrently with the cleanup. It has not been determined when and to whom the property will be transferred. ■



ENVIRONMENTAL CLEANUP: HOW DOES IT WORK?

What's in the Ground

After buried oily waste was discovered at the Tank Farm in the 1980s, environmental scientists began studying the site. They discovered petroleum hydrocarbons, or fuel products, and other chemicals including 1,2-DCA and MTBE had been released and were present at depths of 20 to 40 feet underground.

The chemicals penetrated the subsurface and formed "plumes" beneath the site. Plumes are dissolved chemicals in the soil or in naturally occurring groundwater. Plumes of liquid "free product" have also formed, where the fuel floats on top of the groundwater. Movement of the groundwater through the subsurface has caused some of the plumes to spread offsite from the Tank Farm.

No drinking water sources are affected to date. Health studies have been conducted to determine that the chemicals underlying the site do not pose a threat to public health.

How it Gets Cleaned Up

After thorough studies to determine the shape and size of the plumes, treatment systems were constructed starting in 1995 to remove the chemicals. DESC installed cleanup equipment in the central area, and Kinder Morgan

installed cleanup equipment in the southern area of the site.

"Remediation" or cleanup technologies currently in use include:

- Air Sparging
- Vapor Extraction
- Groundwater Pumping
- Phytoremediation

How the Systems Work

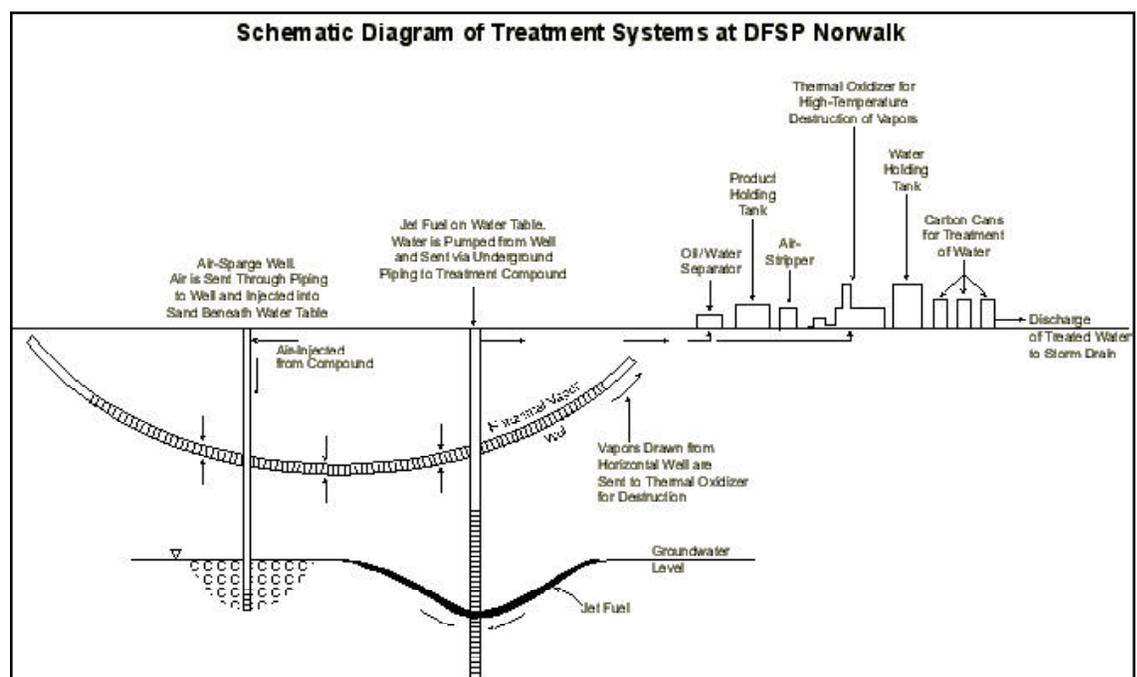
Air Sparging. An air compressor is used to inject air into the groundwater about 5 to 10 feet below the groundwater level. This helps to volatilize, or turn into vapors, the chemicals that are dissolved in the groundwater. It also provides oxygen for the growth of bacteria. The bacteria eat the dissolved hydrocarbons, breaking them down into nonhazardous components. This process is called biodegradation. The system is continually monitored to maximize operation.

Vapor Extraction. Fuel vapors are removed from the soil by

applying a vacuum which extracts them out through a series of underground horizontal wells. The vacuum removes vapors from the free product and removes hydrocarbon vapors created during the air sparge process. The vapors are sent via piping to the treatment unit where they are destroyed in a thermal oxidizer that burns them at a high temperature (above 1400 degrees). The clean treated vapors are then safely released to the air.

Groundwater pumping.

Groundwater recovery wells that reach down into the plumes are used to remove groundwater and free product. This water/product stream is pumped to an oil/water separator. The free product is separated and is pumped to a holding tank for later disposal. The water is then pumped through an air stripper. The air stripper helps separate some of the vapors from the water. The vapors from this water are then sent to the thermal oxidizer for destruction.



The water from the air-stripper is then pumped to a large holding tank. This water is then pumped through aqueous carbon vessels for treatment. The carbon acts like a sponge for hydrocarbons and removes them from the water. The clean treated water is then discharged to the storm drain.

Phytoremediation.

Phytoremediation uses trees to act as a natural pump and treat system to remove hydrocarbons from the groundwater. In 1999, Kinder Morgan planted 80 poplar trees in the southwest area. The root systems permit direct uptake of contaminants and enhance biodegradation by delivering nutrients and oxygen to naturally-occurring micro-organisms within the soil which, in turn, consume the hydrocarbons as a source of food.

Who Oversees the Cleanup

The California Regional Water Quality Control Board is a state regulatory agency overseeing the environmental cleanup at the Tank Farm. The Board approves cleanup plans prior to implementation and reviews progress reports. They set safe discharge limits and monitor the systems to ensure compliance. The Board's Project Manager is Ana Townsend, who also participates takes part in the Restoration Advisory Board. ■



Tank Closure. External motor-operated valves have been removed and electrical wiring disconnected at each fuel storage tank.

TANK FARM HISTORY

- 1920s: Construction
- 1951: U.S. Air Force purchases facility from private oil companies
- 1956: Santa Fe Pacific Pipelines (now Kinder Morgan) begins operations on 2½-acre portion on southern boundary
- 1968: Defense Logistics Agency assumes operational control; managed by Defense Fuel Supply Center (now Defense Energy Support Center)
- 1985: Buried oily waste discovered
- 1986-1995: Environmental investigations conducted to determine nature and extent of fuel releases
- 1995: Restoration Advisory Board (RAB) established
- 1995-1996: Full-scale cleanup begins
- 1998: New pipeline project and facility closure proposed
- 2001: Tank Farm closes

TANK FARM BACKGROUND

The DFSP Norwalk is a 50-acre fuel tank farm located at 15306 Norwalk Boulevard. It contains 12 aboveground presently empty storage tanks that once held approximately 36 million gallons. The fuel terminal was used to store and distribute jet fuel to military installations in the western United States. At peak operation, it had an annual throughput (the total input and output amounts) of 330,000,000 gallons.

Kinder Morgan operates a pump station along the southern edge of the facility. Kinder Morgan is the primary pipeline company for distribution of commercial and military fuels in the western United States. Products such as gasoline, diesel, and aviation fuels produced at local refineries are pumped into the pipeline system for distribution. ■

FOR MORE INFORMATION . . .

If you have any questions, comments, would like copies of previous newsletters, or want to be added or deleted from the mailing list, please contact one of the representatives listed below:

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<p>Information Repository Norwalk Regional Library County of Los Angeles Public Library Reference Section 12350 Imperial Highway Norwalk, CA 90650 (562) 868-0775 Hours: M, Tu, W, : 10:00 a.m. to 8:00 p.m. Th, F: 10:00 a.m. to 6:00 p.m. Sa: 10:00 a.m. to 5:00 p.m. Closed Sundays and Holidays.</p>	<p>Tim Whyte Public Involvement Specialist URS Corporation 2020 East First Street, Suite 400 Santa Ana, CA 92705-4032 (714) 835-6886 (714) 667-7147 FAX tim_whyte@urscorp.com</p>	<p>Si quiere una copia de este boletín en español, por favor llame al (714) 835-6886.</p>

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**Norwalk Tank Farm
 Restoration Advisory
 Board Meeting:
 Thursday, August 2,
 2001, 6:30 p.m. Arts
 & Sports Complex.**