NEWS LETTER

DEFENSE ENERGY SUPPORT CENTER

No. 15 **Summer 2004**

Information for Norwalk Neighbors

THREE TANKS CUT OPEN TO PROVIDE DIRECT ACCESS TO IMPACTED SOIL

as Part of Program to Enhance Cleanup of Tank Farm

Environmental cleanup of soil and groundwater continues at the ***former Defense Fuel Support Point (DFSP) Norwalk****, also known as the Tank Farm, located at 15306 Norwalk Boulevard in Norwalk, California. Chemicals of concern at the site include total petroleum hydrocarbons (TPH), 1,2-dichloroethane (1,2-DCA), benzene, and methyl tertiary-butyl ether (MTBE).* ***The California Regional Water Quality Control Board (RWQCB) is the state regulatory agency overseeing the cleanup.*** *This newsletter is one in a series of notices distributed semiannually to update the community on the Tank Farm cleanup progress.*

The Defense Energy Support Center (DESC) is continuing cleanup of the soil at the Tank Farm, which was formerly used to store and transport military fuels. As mentioned in our January 2004 fact sheet, DESC's environmental contractor, Parsons, evaluated the cleanup system in the central area and made several recommendations for improvement. One of those recommendations was to conduct soil vapor extraction directly beneath the tanks. This recommendation was based on results of a soil investigation that was completed in April 2002.

In 2003, an Economic Cost Analysis was conducted to evaluate ways to cleanup the soil beneath the tanks. The report concluded that treating the soil with the tanks remaining in place was the best alternative. Two options analyzed included sampling from around the outside of the tanks or cutting openings in the tanks to allow for direct access sampling. Cutting open the tanks was determined to be the most feasible option. This is now possible since the tanks are empty and no longer in use.

Cutting Open Tanks. A large shear cuts into the first of three tanks.

Three tanks were selected (see map on Page 3) that are believed to have the most impacted shallow soil below them, based on the 2002 soil investigation. Cutting of the tanks began in April 2004. A tractor-like vehicle with a large hydraulic shear was used to cut access holes in the sides of the three tanks. The initial cut into each tank was difficult because the tank walls are flexible. Then the tank walls had to be cut into small pieces, which was a slow process since the metal is thick. Each tank took about one week to cut. This work was loud and may have caused temporary disturbances to our nearby neighbors. An opening of about 15 to 24 feet wide and about 40 feet high was cut into each tank wall. The floating roofs in each tank were also removed. The metal debris was cleared, loaded onto trucks and hauled offsite.

After the tanks were cut open, a workplan was submitted to the RWQCB for review. The workplan outlined DESC's plan to investigate and implement cleanup activities beneath the tanks.

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PHYTOREMEDIATION MONITORING AND EVALUATION

Kinder Morgan Energy Partners, L.P. (KMEP) operates fuel distribution pipelines that travel through an easement on the southern edge of the Tank Farm property. In 1999, KMEP planted 80 poplar trees in the southwestern portion of the Tank Farm (see map on Page 3). The trees were planted 8 to 10 feet apart in an approximately 10,000 square foot area. The trees were planned to act as a natural groundwater extraction and treatment system known as phytoremediation. Once the roots reach groundwater, they should take in dissolved hydrocarbon constituents from the groundwater. The trees would then naturally break down the hydrocarbon constituents.

The trees are also expected to enhance biodegradation of chemicals beneath the site. They would deliver nutrients and oxygen to naturally occurring microorganisms in the soil. The microorganisms would then consume hydrocarbons as a source of food. Biodegradation has been successful in other areas of the Tank Farm where air sparge wells are being used to supply the necessary oxygen to the microorganisms.

As reported in our Summer 1999 newsletter, the roots were expected to reach the groundwater beneath the Tank Farm in three to five years. An inspection in 2003 found some of the trees stunted or stressed, which may have been due to poor soil conditions, lack of water, or water hardness. KMEP performed water quality testing and re-irrigated the trees. However, many trees were doing well without watering, so KMEP believed the tree roots had reached the groundwater.

These poplar trees, planted in the southwest area in 1999, may help cleanup the Tank Farm.

In July 2004, KMEP installed transducers into two monitoring wells in the phytoremediation area. The transducers are used to gauge fluctuations in groundwater levels. The roots are expected to extract more groundwater during the day than at night. Therefore, if the transducers show a slight depression in the groundwater levels during the day, it can then be concluded that the poplar roots have reached the groundwater and may be starting to intake chemicals.

In addition, KMEP performed groundwater monitoring of wells located in the vicinity of the phytoremediation area during April 2004 and July 2004 to monitor water quality, seasonal effects, and effects of phytoremediation on enhanced biodegradation. Results may be ready to discuss at the October Restoration Advisory Board (RAB) meeting. ■

TANKS CUT OPEN... *continued from Page 1*

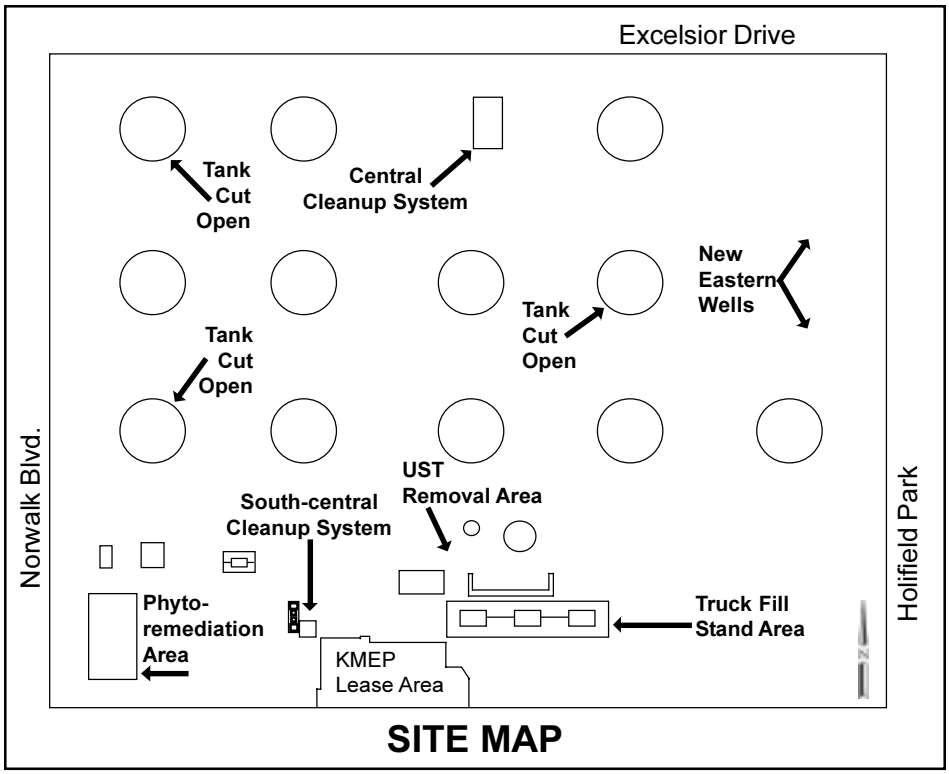
RWQCB approved the plan in June 2004. Implementation of the plan began in July 2004. The plan calls for driving a drill rig into the tanks through the new access holes and drilling through the concrete tank bottoms to collect soil samples. Slant borings will be used to collect soil samples underneath the tanks that did not have access holes cut into them.

The plan also includes installing vapor extraction wells beneath the three tanks. Vapor extraction, which has been in use at the Tank Farm for many years, works like a vacuum to remove fuel vapors present in the soil from previous releases. Once the drilling and the well installations are complete, DESC will install equipment to connect the new vapor extraction wells into the existing central treatment system. Then once the new wells are turned on, the vapors extracted from underneath the tanks will be sent to the treatment system via pipelines. The vapors will be destroyed in a thermal oxidizer that burns them at a high temperature. The treated vapors are then safely released into the atmosphere. ■

CLEANUP STARTED IN FORMER TRUCK FILL STAND AREA

As discussed in our Summer 2002 newsletter, an investigation was conducted to evaluate soil conditions at the former Truck Fill Stand Area (see map). This area is located towards the south-central area of the Tank Farm. It was used until about 1992 for loading and unloading of fuel from transport trucks. The investigation found a limited amount of residual fuel in the soil.

DESC recently completed the installation of a vapor extraction system in this area. It included five soil borings, six new vapor extraction wells, and connection of two existing vapor extraction wells. The wells were connected to the central treatment system using HDPE pipe. The extracted vapors are treated in the thermal oxidizer. Extraction started in April 2004. Initial measurements indicate elevated vapor levels, as expected from the previous soil investigations. As the new wells continue to operate, the vapor levels extracted should decrease over time.



SITE MAP

Other Activities

- In April 2004, DESC installed two new groundwater monitoring wells on the eastern boundary of the Tank Farm (see map). The new wells were requested by the RWQCB to help fully characterize conditions in that area.

- KMEP recently installed two new groundwater recovery pumps in an offsite property on Cheshire Street, south of the Tank Farm. The pumps will extract impacted groundwater and transport it to the southern area remediation system for treatment.

- The old thermal oxidizer located near the Truck Fill Stand Area was removed.

- A 500-gallon underground storage tank (UST) located between the thermal oxidizer and the Truck Fill Stand Area was removed (see map). The tank was formerly used during truck fill operations.

- DESC and KMEP recently completed the latest Semiannual Groundwater Monitoring Event. Groundwater was sampled at locations throughout the site and at offsite locations. Results will be discussed at the Restoration Advisory Board (RAB) meeting to be held on July 29, 2004, at 6:30 PM in the Norwalk Arts & Sports Complex. ■


Completed Access Hole. The access holes cut into the tanks are large enough to drive a drill rig through to conduct soil sampling.

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Norwalk Tank Farm Restoration Advisory Board Meeting: Thursday, July 29, 2004, 6:30 p.m., Arts & Sports Complex.

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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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