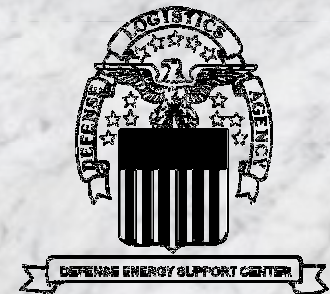


Norwalk Tank Farm Update

*Defense Energy Support Center-
Los Angeles
Presented to the Norwalk Tank Farm
Restoration Advisory Board*

January 27, 2000





November 1999 Sampling and Monitoring Event

11 Sentry Wells

- August 1999; GMW-0-5 contained BTEX, otherwise sample chemical concentrations similar to previous events
- November 1999; MW-19 (MID) contained FP, benzene and MTBE, otherwise sample chemical concentrations similar to previous events

5 Exposition Aquifer Wells

- October 1999; ND for TPH, BTEX, 1,2-DCA and MTBE
- November 1999; ND for TPH, BTEX and MTBE except for EXP-4 which contained MTBE (may be attributable to lab contamination)

Water and Free Product

- Levels measured in 148 on- and off-site monitoring wells
- 23 wells contained free product ranging from 0.01 to 8.1 feet in thickness

3 Free-Product Plumes Remain

- Liquid hydrocarbon thicknesses in northern area product wells decreased an average of 0.43 feet
- Liquid hydrocarbon thicknesses in southern area product wells decreased an average of 1.04 feet
- Eastern and northern boundaries of southern product plume have receded since May 1999
- No free product in southeast (24" valve) area

Groundwater Gradient

- 0.002 ft/ft in northwest direction in eastern portion of the site
- 0.003 ft/ft in northeast direction in west and southwest of the site
- Groundwater elevation dropped 0.76 feet since May 1999

99 Wells Sampled (Nov 1999)

- TPH-g detected in 27 wells: dissolved phase similar to May 1999, but extends further northwest and northeast, but not as far south
- Benzene detected in 26 wells
 - Northern dissolved phase plume does not extend as far west and north, but extends further southwest and northeast
 - Southwestern benzene plume does not extend as far north, northwest, west, south and east

99 Wells Sampled (Cont.)

- Southeastern benzene plume does not extend as far northwest or southwest
- 1,2-DCA was detected in 15 monitoring wells
 - Same general area as previous events but extends further southwest, west and north
- MTBE was detected in 34 wells
 - Western plume extends further southwest, northwest and east but not as far north
 - Southeast plume does not extend as far southwest but extends further north

Central Plume Remediation

- System performance since April 1996
 - Approx. 111,000 gallons recovered and destroyed
 - 53,100 free product recovered
 - 56,900 soil vapor extraction
 - Approx. 87,000 gallons biodegraded
 - 21M gallons of water treated
 - 735 gallons of dissolved phase recovered
- Biosparge system started Jan 19, 2000

HYDROCARBONS & FREE PRODUCT - CENTRAL PLUME

