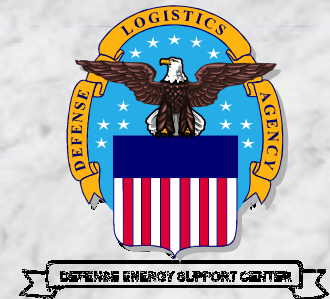


# *Norwalk Tank Farm Update*

*Defense Energy Support Center-  
Americas West  
Norwalk Tank Farm  
Restoration Advisory Board*

*April 24, 2008*



# Presentation Overview

- General Site Activities
- Thermal Oxidizer System Evaluation
- Remediation System Upgrade Summary
- Remediation System Performance Update
- 1<sup>st</sup> Quarter 2008 Sentry Groundwater Monitoring Results
- Planned Activities

# General Site Activities

- 4<sup>th</sup> Quarter 2007 Groundwater Discharge Monitoring Report for NPDES Permit Submitted (April 14)
- Absorbent sock monitoring and change out
- Sections of PVC pipe and connections were repaired
- AQMD inspection of thermal oxidizer (TO) system
- Groundwater treatment system optimization:
  - Streamlined PLC design
  - Equipment and system reconfiguration
  - Two new filtration units (MYCELX) purchased
  - Second activated carbon vessel purchased

# Thermal Oxidizer System Evaluation

- Thermal oxidizer (TO) equipment was shut off on February 25, 2008 for the following reasons:
  - allow site to reach equilibrium then conduct respiration testing to assess site conditions and test for rebound of contaminants in the vadose zone,
  - time for a change in remediation technology,
  - equipment may be past its shelf life in order to meet permit discharge requirements.
- Once testing has been completed and evaluation will be conducted to establish the optimal treatment technology for vapors.

# Remediation System Upgrade Summary

- Installed transmitter and receivers for remote control of GW-14 and GW-15
- Installed level sensors for the sump and surge tank
- Air stripper cap was replaced
- Installed new PLC panel



# Remediation System Upgrade Summary (continued)

- Changed out the 1.5 HP pump for the 3 HP pump
- Installed flow check valves at carbon vessels and flow switch at filters
- Installed 2 new filtration units
- Installed new carbon vessel



# Remediation System Performance Update

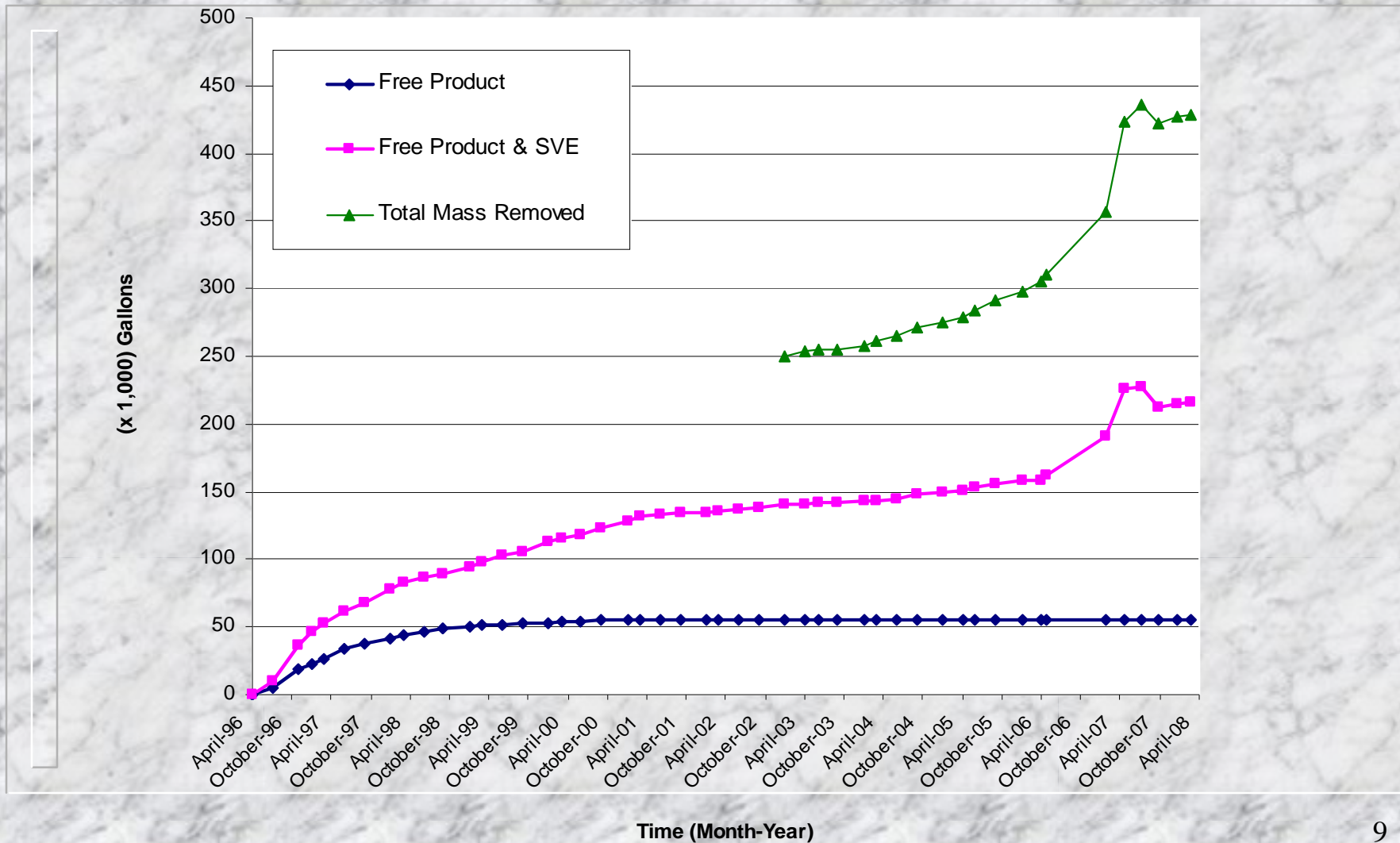
- System Performance since April 1996 through March 2008
  - Total Hydrocarbons Mass Removed: 428,707 gallons.
    - Approx. 215,860 gallons recycled and destroyed
    - Estimated 212,850 gallons of hydrocarbons destroyed due to enhanced biodegradation
  - 42.2 M gallons of water treated

# Remediation System Performance Update (continued)

- Detailed breakdown of the 215,860 gallons that has been recycled and destroyed:
  - 55,560 gallons of free product recovered and recycled (including absorbent sock recovery)
  - 1,400 gallons of dissolved-phase hydrocarbons recovered and treated through onsite treatment system
  - 158,900 gallons of volatile hydrocarbons recovered through SVE and treated through onsite treatment system



# Remediation System Update – Hydrocarbon Mass Removal



# 1<sup>st</sup> Quarter 2008 Sentry Groundwater Monitoring Results

- 55 wells gauged
- 9 wells sampled (EXP-3, GMW-47, GMW-57, GMW-58, GMW-59, GMW-60, GMW-61, GMW-62, and MW-14)
- Lateral extent and concentrations of the dissolved-phase plumes were similar to those detected during the previous quarter
- TPH was not detected in the Exposition Aquifer (EXP-3)

# 1<sup>st</sup> Quarter 2008 Sentry GWM Summary of Groundwater Results

Well	TPHg	TPHfp	Benzene	Toluene	Ethylbenzene	Xylenes	1,2-DCA	MTBE
EXP-3	< 100	< 100	< 0.50	< 0.50	< 0.50	< 1	< 0.50	< 0.50
GMW-47	< 100	<b>290</b>	<b>1.7</b>	< 0.50	< 0.50	< 1	< 0.50	< 0.50
GMW-57	<b>150</b>	<b>720</b>	<b>4</b>	< 0.50	< 0.50	< 1	< 0.50	< 0.50
GMW-58	<b>1100</b>	<b>5000</b>	<b>270</b>	< 1.0	<b>1.8</b>	<b>6.4</b>	< 1.0	< 1.0
GMW-59	<b>3200</b>	<b>3900</b>	<b>490</b>	< 2.5	<b>3.8</b>	< 5	< 2.5	<b>2.7</b>
GMW-60	<b>1700</b>	<b>290</b>	<b>270</b>	<b>0.8</b>	<b>65</b>	<b>47.9</b>	< 0.50	< 0.50
GMW-61	<b>2600</b>	<b>890</b>	<b>330</b>	<b>8.6</b>	<b>70</b>	<b>363</b>	< 2.5	< 2.5
GMW-62	<b>4100</b>	<b>1400</b>	<b>2100</b>	<b>190</b>	<b>450</b>	<b>610</b>	< 5.0	< 5.0
MW-14	<b>180</b>	<b>1400</b>	< 0.50	< 0.50	< 0.50	< 1	<b>0.86</b>	<b>5.2</b>
MW-14 Dup	<b>200</b>	<b>1200</b>	< 0.50	< 0.50	< 0.50	< 1	<b>0.78</b>	<b>5.1</b>

Wells sampled on February 7, 2008.

# Planned Activities

- Semiannual groundwater monitoring event (April 14-19)
- Weed abatement (began April 22)
- Groundwater treatment system start-up evaluation and testing (began April 21)
- Eastern boundary aquifer testing and monitoring
- Vapor respiration testing and evaluation
- Additional groundwater investigation at Holifield Park to include additional monitoring wells along the school (pending regulatory approval)

# Discussion