

Norwalk Tank Farm Update

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

July 30, 2009



Presentation Overview

- General Site Activities
- Remediation System Update
- Holifield Park Update
- Planned Activities

General Site Activities

- Weekly System Inspections
- System Performance & Compliance Sampling – April 14, 30; May 6, 13, 28; June 4, 30
- Groundwater Treatment System (GWTS) Granular Activated Carbon (GAC) Change Outs – Both (2) vessels completed on July 15
- NPDES Discharge Monitoring Report (DMR) – Submitted May 11th for Q1 2009
- First Semiannual 2009 Groundwater Monitoring – W3 of April

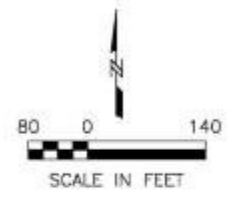
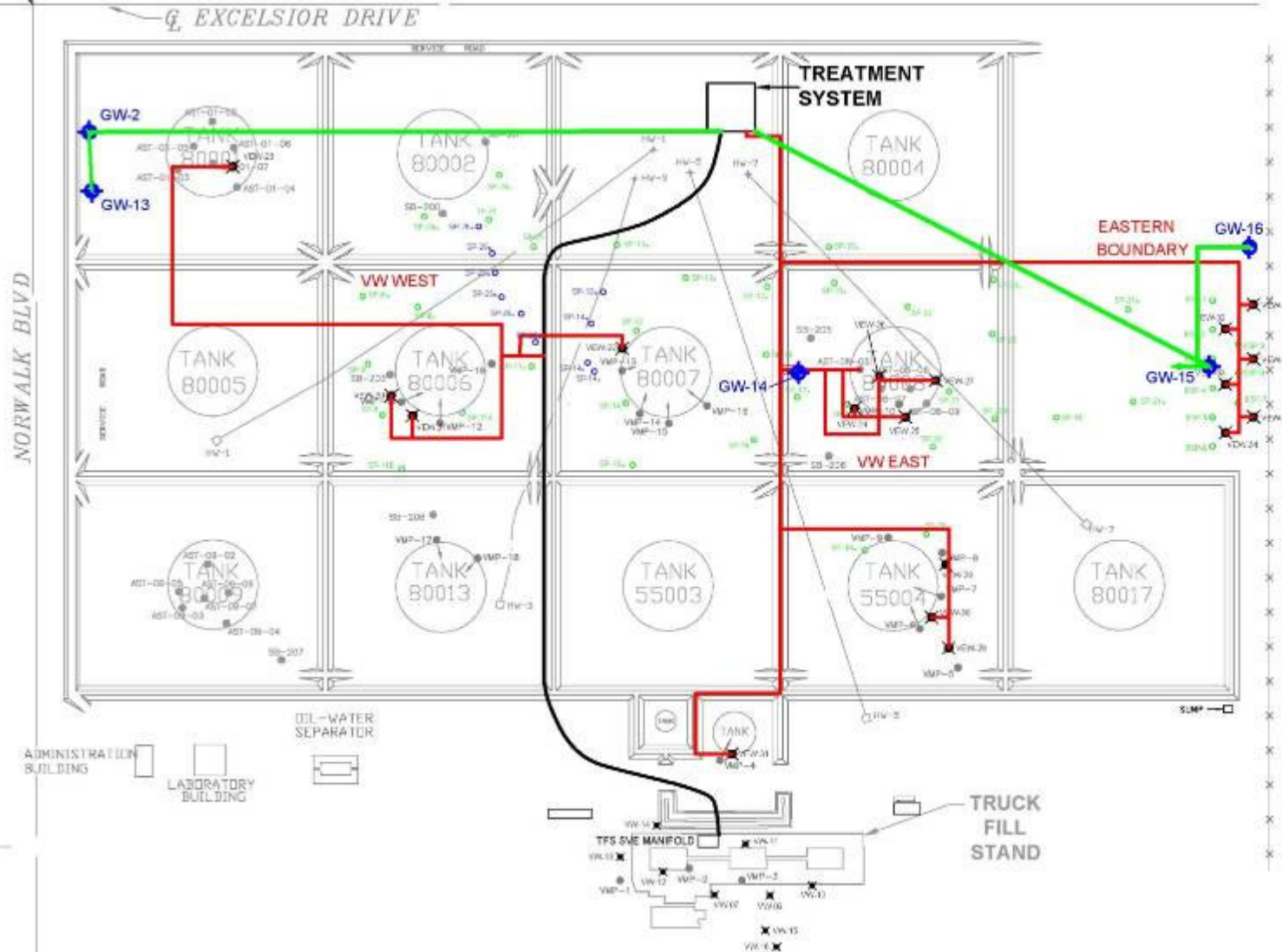
Remediation System Update

- Groundwater extracted and treated:
 - 955,020 gallons in Q2 2009
 - 45.9 million gallons, since April 1996
- Soil vapor extraction system (SVES) – Remained Out of Operation; Redesigned SVES and prepared AQMD permit modification package
- System Performance – Since April 1996 through December 2008
 - Total Hydrocarbons Mass Removed: 428,722 gallons
 - Approx. 215,870 gallons recycled and destroyed
 - Estimated 212,851 gallons of hydrocarbons destroyed due to enhanced biodegradation

Remediation System Update - GWTS Operations Summary

- Elevated tert-butyl alcohol (TBA) concentration (14 $\mu\text{g/L}$) was detected at discharge sample on June 30th (limit is 12 $\mu\text{g/L}$) resulting in system shut down and GAC change out. Per permit requirements, RWQCB general permitting department was notified and an accelerated sampling schedule will be followed in order to be in compliance.
- System **On** from March 31 through June 30 except for the following periods when it was **Off**:
 - Apr 14 – Apr 29: Quarterly Groundwater Monitoring
 - May 15 – May 26: System off pending confirmation of lab results
 - Jun 4 – Jun 8: Following filter replacement
 - Jun 16 – Jun 23: System off awaiting filter replacement

Remediation System Update - System Layout



- LEGEND**
- VW-27 ✖ VAPOR EXTRACTION WELL
 - GW-13 ✖ GROUNDWATER EXTRACTION WELL
 - ESP-1 □ DEFENSE POINTS
 - SP-25a □ SPARKER POINTS INSTALLED IN AUGUST 2008
 - SP-6a □ TOTAL FILLS AND SPARKER POINTS
 - TFS SVE HDPE PIPING
 - TANK FARM SVE PVC PIPING
 - GROUNDWATER EXTRACTION SYSTEM PIPING



ABOVE GROUND STORAGE TANKS
DEFENSE FUEL SUPPLY POINT
NORWALK, CALIFORNIA

REMEDIATION SYSTEM LAYOUT

Holifield Park Update

- Holifield Park Groundwater Remedial System Design Supplemental Work Plan – submitted May 26th
- RWQCB approval of the Holifield Park Work Plan – received June 11th
- June 15 – July 10 conducted field work

Holifield Park Update - Supplemental Investigation

- Supplemental investigation tasks included:
 - June 15th – geophysical survey conducted
 - July 6 & 7 – wells GMW-65 (4-inch diameter monitoring well), GW-16 (6-inch diameter groundwater extraction well), and GW-16p (1-inch diameter piezometer) were drilled, sampled, and installed
 - Soil was analyzed by a lab for TPH as gasoline, TPH as JP-5, and VOCs from GW-16 at 30, 35, 40, 45, and 55 feet. All results were non detect.
 - July 10 – GMW-65 and GW-16 were developed

Holifield Park Update – Field Work Photos



GMW-65 Drilling Set Up



GW-16 Auger

Holifield Park Update – Field Work Photos (continued)

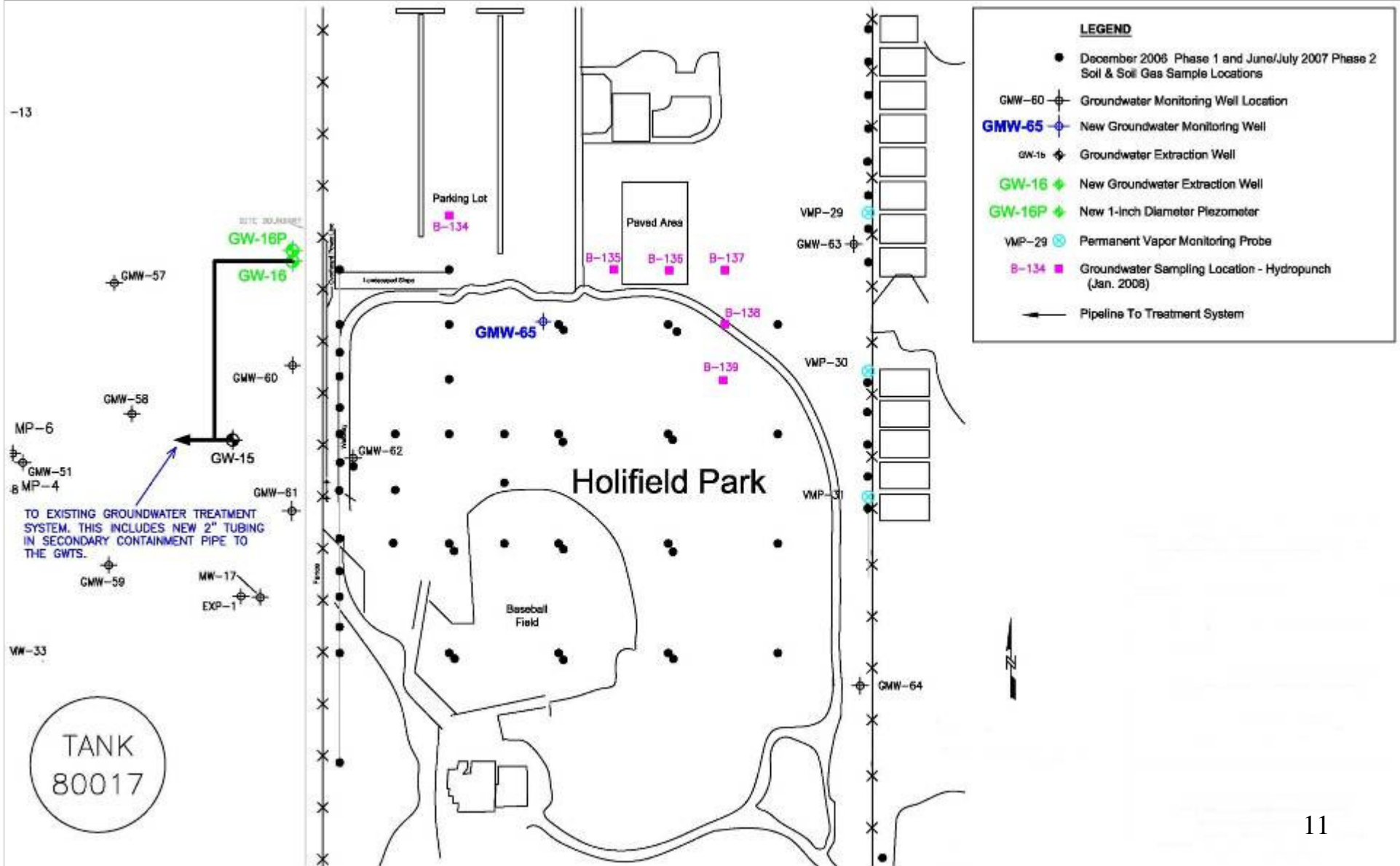


GW-16 Surface Completion



GW-16 Well Development

Holifield Park Update – System Expansion Layout



Holifield Park Update – System Expansion 3Q Activities

- Groundwater from GMW-65 was sampled during July monitoring event and results will be reported in the 3Q sentry event letter report
- Groundwater extraction from GW-16 began on July 22nd following the 3Q monitoring event
- Summary well installation and system expansion report for eastern area will be submitted to RWQCB

Planned Activities for Next Quarter

- Continue weekly system inspections, required sampling, evaluation, and optimization
- Conduct weekly sampling of GWTS effluent for TBA
- Conduct 3Q groundwater monitoring event
- Conduct weed abatement – began July 22nd
- Prepare and submit NPDES DMR for Q2 2009
- Startup of expanded groundwater extraction system at the eastern area – July 22nd
- Prepare and submit well installation report for eastern area

Planned Activities for Next Quarter

(continued)

- Installation of new equipment for the upgraded groundwater extraction and soil vapor extraction systems
- Submit Supplemental Investigation Work Plan for Truck Fill Station, Water Tank, and Northeast Settling Pond Areas (submitted July 16) and begin procurement and mobilization for field effort
- Submit AQMD permit modification package for upgraded GWTS and SVES (submitted July 24)
- Begin procurement of all upgraded system equipment and installation

Discussion