

Norwalk Tank Farm Update

*Presented to the Norwalk Tank Farm
Restoration Advisory Board*

January 26, 2006

Presentation Overview

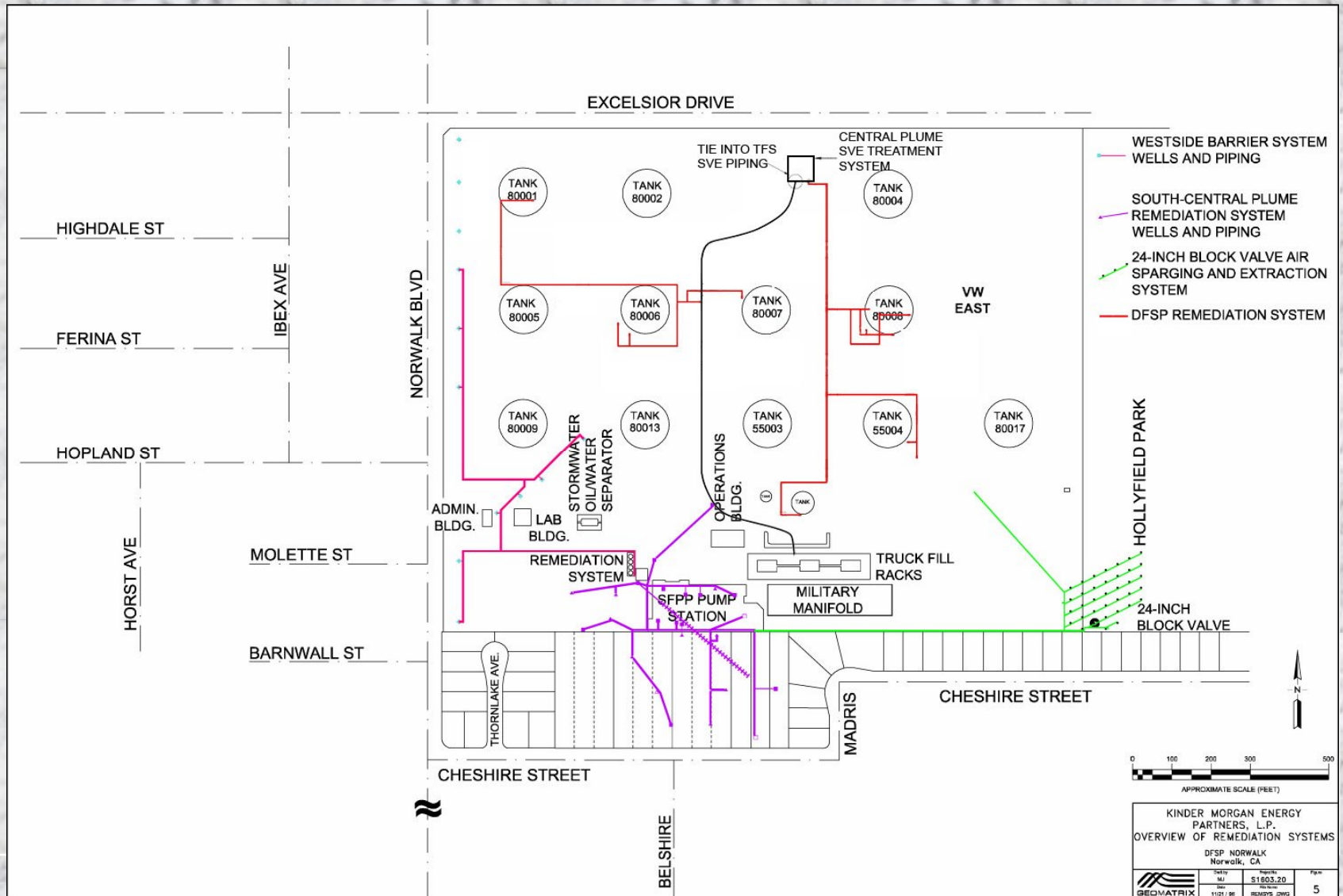
Topics to be Covered

- HHRA Update
- Remediation Operations Update
- Eastern Area Update

HHRA Update

- Draft work plan submitted to the RWQCB and OCCS for review on July 15, 2005.
- Extended deadline for receiving OCCS and RWQCB comments to draft work plan to August 22, 2005.
- Met with RWQCB on October 14, 2005 to discuss scope of work for HHRA.
- Final work plan submitted to the RWQCB on January 24, 2006.
- The HHRA will be implemented upon the RWQCB's approval of the work plan.
- Residents will be notified in writing prior to beginning field work.

Map of Current Remediation Systems



Soil Vapor Extraction System

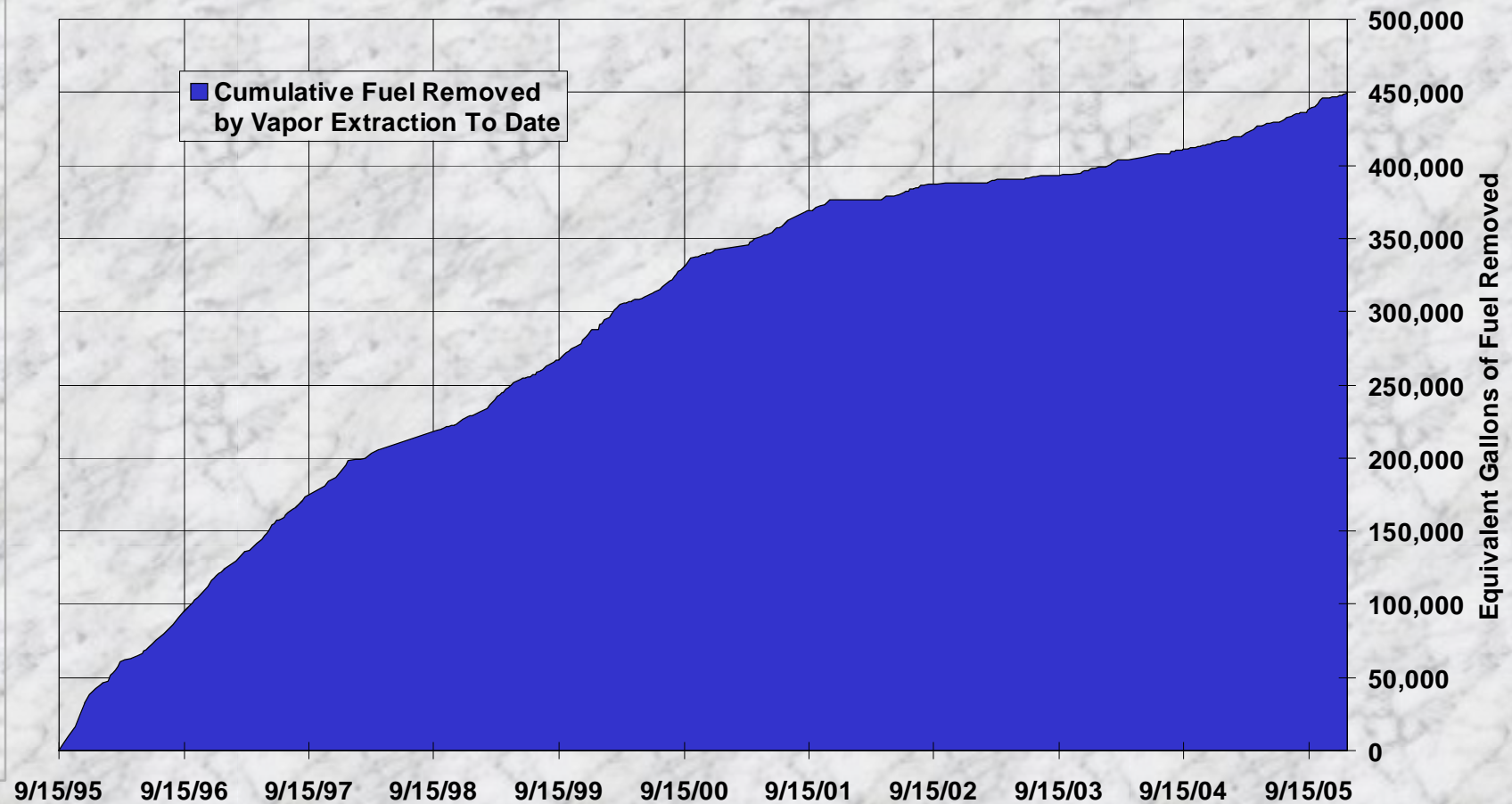
- 17 onsite and 6 off-site vapor extraction wells in the South-Central Plume area.
- 2 vapor extraction wells in the Southeastern 24-Inch Block Valve area.

Soil Vapor Extraction System Operations Summary

- Approximately 5,100 gallons equivalent of fuel removed from soil and destroyed by thermal oxidation since the October 2005 RAB meeting.
- Approximately 449,200 gallons equivalent of fuel removed from soil and destroyed by thermal oxidation since September 1995.
- Approximately 49,900 hours of operation since September 1995.

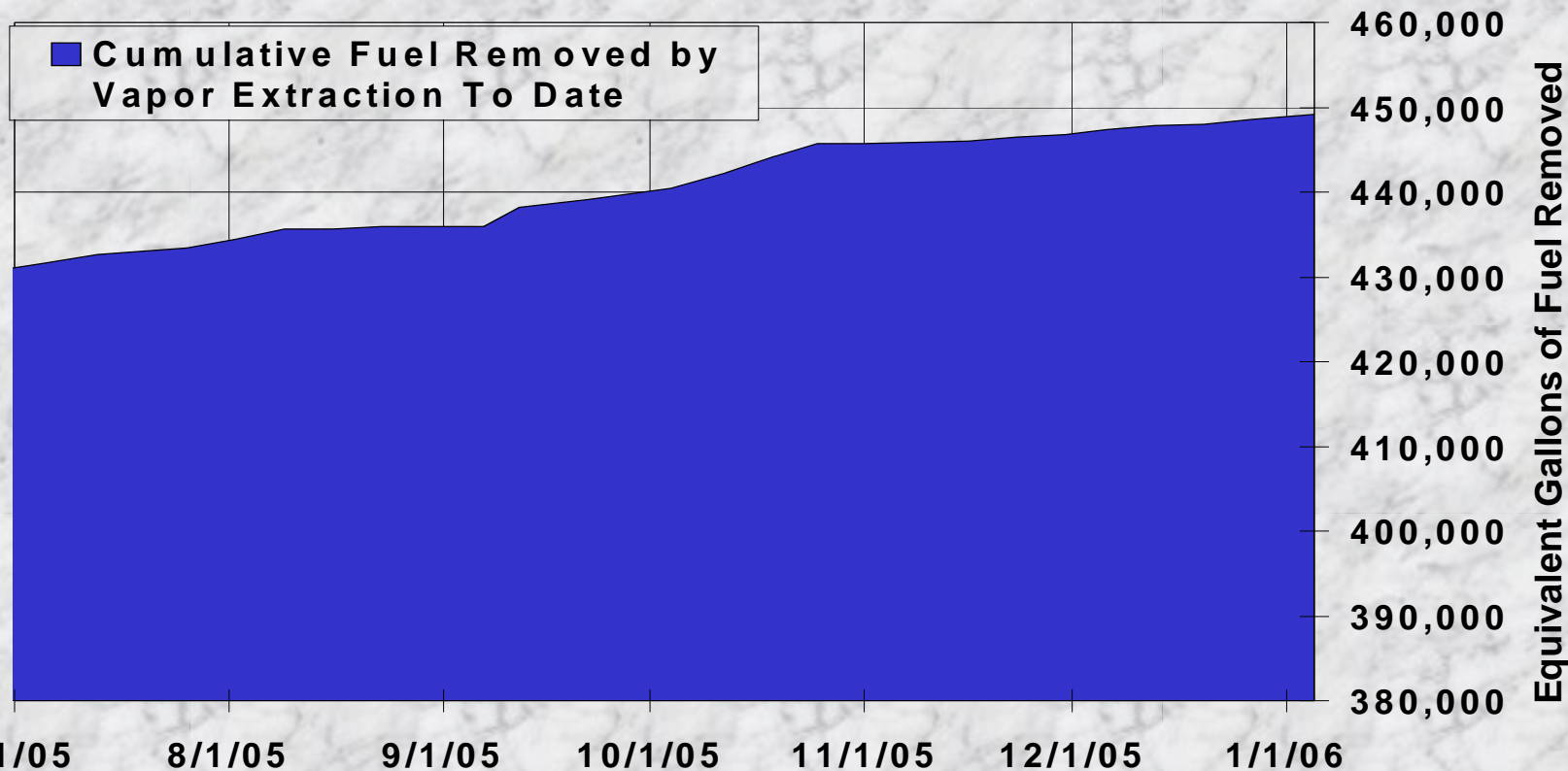
Soil Vapor Extraction System Operations Summary

Cumulative Fuel Removed by Vapor Extraction To Date



Soil Vapor Extraction System Operations Summary

Cumulative Fuel Removed by Vapor Extraction - Past Six Months



Soil Vapor Extraction System Repairs



Soil Vapor Extraction System Repairs

- Thermal oxidizer stack knocked over by strong winds during early January 2006.
- South-central and southeastern systems are currently off.
- West Side Barrier System continues to operate.

Soil Vapor Extraction System Repairs

- Repair options and interim remedial measures currently being evaluated.
 - 1) Manufacturer to provide time estimate for repair of existing unit (in process).
 - 2) Reconfigure total fluids extraction system to operate independently of SVE system.
 - 3) Install vapor-phase carbon vessels after air stripper.
 - 4) Install additional liquid-phase carbon vessels.
 - 5) Install temporary soil vapor extraction unit.

Groundwater/Product Extraction System

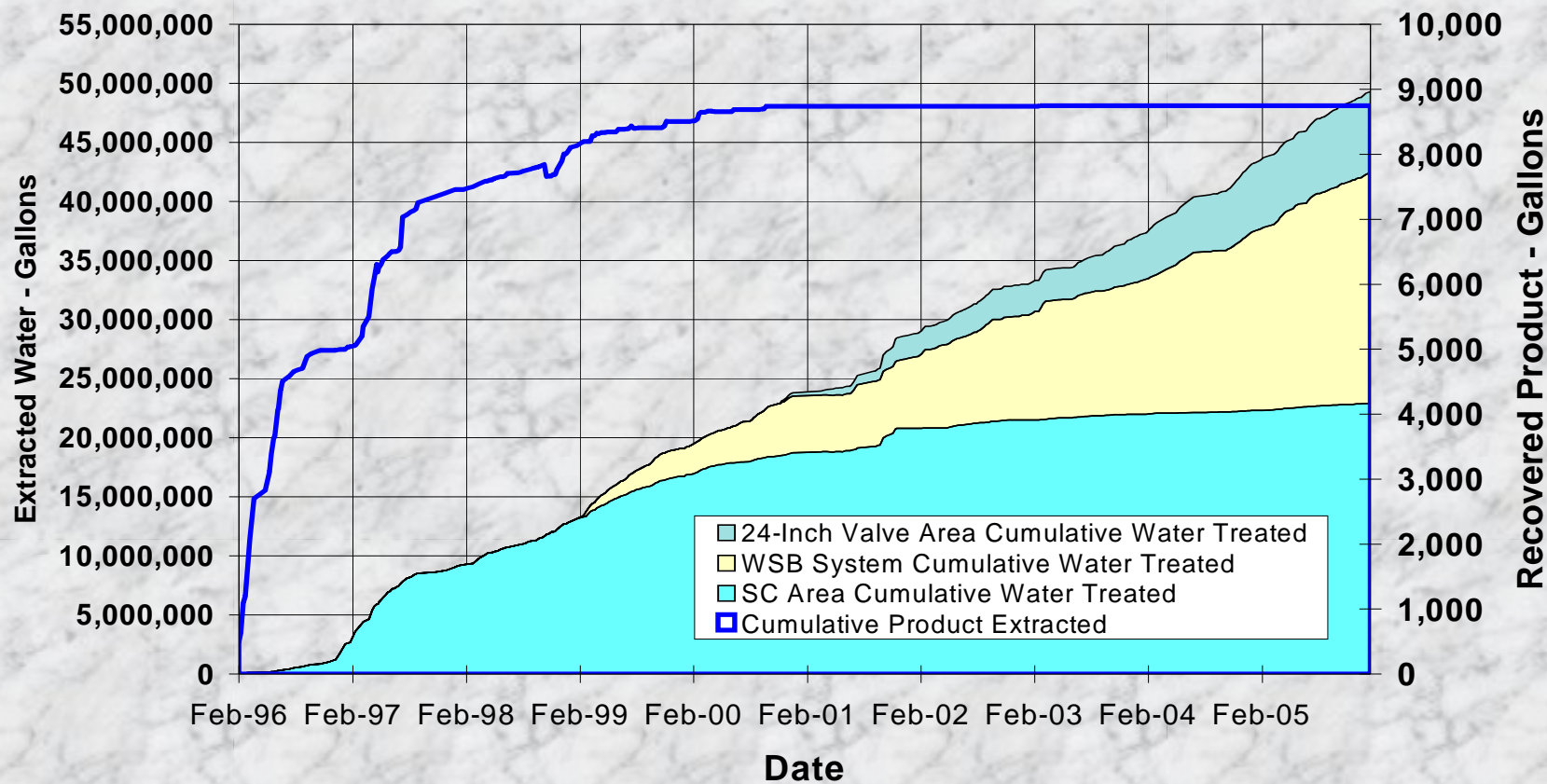
- 8 groundwater extraction wells in the West Side Barrier area
- 3 total fluids (product and groundwater) extraction wells and 5 groundwater extraction wells in the South-Central Plume area
- 2 total fluids (product and groundwater) extraction wells and 1 groundwater extraction well in the Southeastern 24-Inch Block Valve area

Groundwater/Product Extraction System Operations Summary

- Total groundwater extracted since October 2005 RAB meeting:
 - South-Central Plume area: 125,500 gallons
 - Southeastern 24-Inch Valve area: 140,000 gallons
 - West Side Barrier area: 836,700 gallons
- Total groundwater extracted since September 1995:
 - South-Central Plume area: 22.9 million gallons
 - Southeastern 24-Inch Valve area: 6.8 million gallons
 - West Side Barrier area: 19.5 million gallons
 - Total groundwater extracted: 49.3 million gallons
 - 8,745 gallons free product removed

Groundwater/Product Extraction System Operations Summary

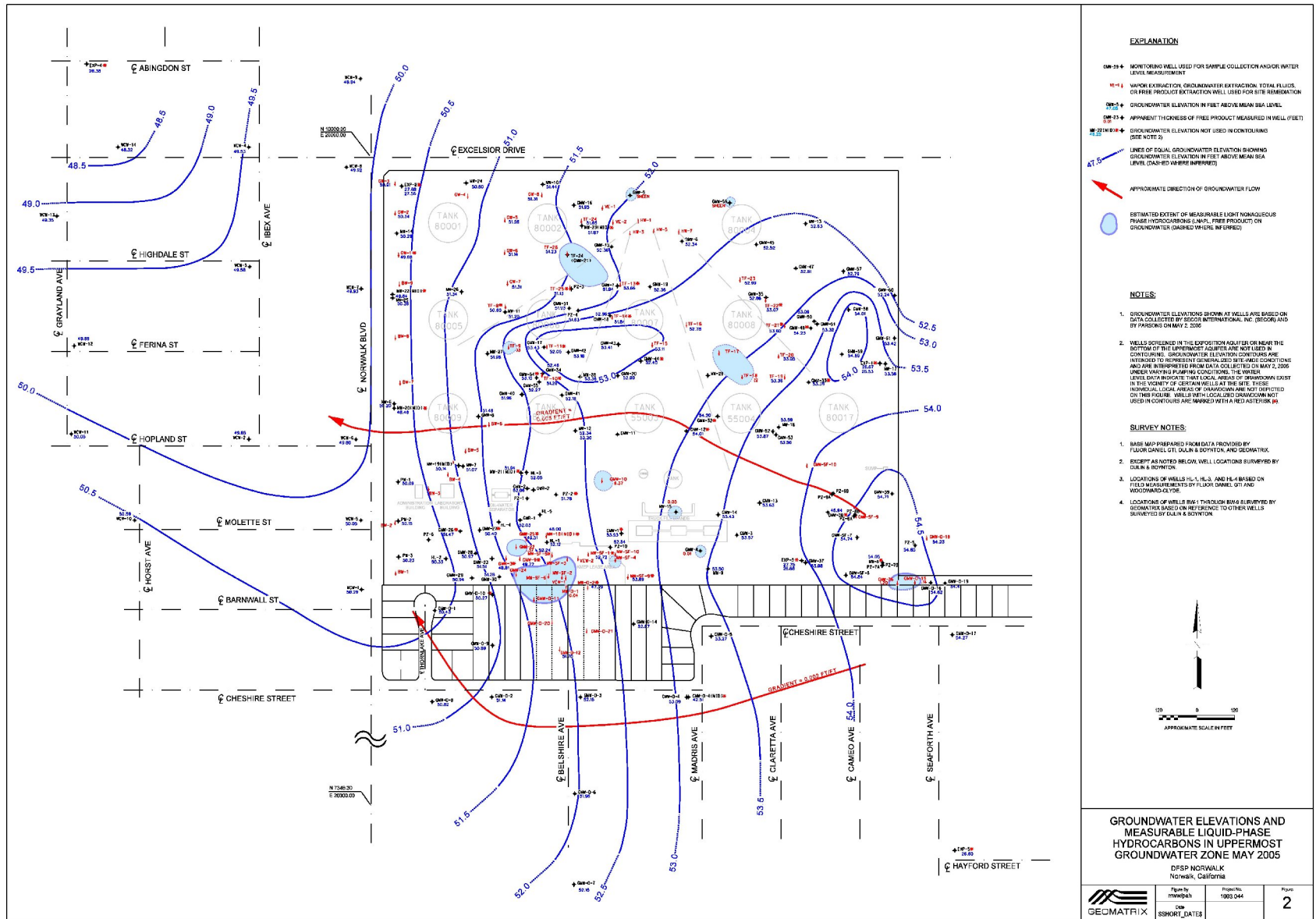
Produced Extracted and Water Treated Summary



Groundwater Conditions in South-Central and Southeastern Areas

- Free product changes.
- TPH concentrations increased in GMW-O-3; however concentrations of primary constituents of concern remain similar or non-detect.
- MTBE was detected in PZ-5 (southeastern area) at 2100 ppb. Cross-gradient well GWM-O-18 contained 1.4 ppb of MTBE. Overall, groundwater conditions in the southeastern area continue to improve: benzene was not detected in this area during November 2005 and the dissolved MTBE plume continues to decrease.

Groundwater Conditions



EXPLANATION

- DM-01 - MONITORING WELL USED FOR SAMPLE COLLECTION AND/OR WATER LEVEL MEASUREMENT
- VE-1 - VAPOR EXTRACTION GROUNDWATER EXTRACTION TOTAL FLUIDS OR FREE PRODUCT EXTRACTION WELL USED FOR SITE REMEDIATION
- DM-02 - GROUNDWATER ELEVATION IN FEET ABOVE MEAN SEA LEVEL
- DM-03 - APPARENT THICKNESS OF FREE PRODUCT MEASURED IN WELL (FEET)
- DM-04 - GROUNDWATER ELEVATION NOT USED IN CONTOURING (SEE NOTE 3)
- DM-05 - LINE OF EQUAL GROUNDWATER ELEVATION SHOWING GROUNDWATER ELEVATION IN FEET ABOVE MEAN SEA LEVEL (DASHED WHERE INFERRED)
- DM-06 - APPROXIMATE DIRECTION OF GROUNDWATER FLOW
- DM-07 - ESTIMATED EXTENT OF MEASURABLE LIGHT NONAQUEOUS PHASE HYDROCARBON PLUME, FREE PRODUCT OR GROUNDWATER (DASHED WHERE INFERRED)

NOTES:

1. GROUNDWATER ELEVATIONS SHOWN AT WELLS ARE BASED ON DATA COLLECTED BY SECON INTERNATIONAL, INC. GROUNDWATER BY PARSONS ON MAY 2, 2006
2. WELLS SCREENED IN THE EXPOSITION ADAPTER OR NEAR THE BOTTOM OF THE UPPERMOST ADAPTER ARE NOT USED IN CONTOURING. GROUNDWATER ELEVATION CONTOURS ARE INTENDED TO REPRESENT GENERAL GROUNDWATER CONDITIONS AND ARE INTERPRETED FROM DATA COLLECTED ON MAY 2, 2006 UNDER VAPOR EXTRACTION CONDITIONS. THE WELLS SCREENED DATA INDICATE THAT LOCAL AREAS OF GROUNDWATER EXIST IN THE VICINITY OF CERTAIN WELLS AT THE SITE. THESE INDIVIDUAL LOCAL AREAS OF GROUNDWATER ARE NOT DEPICTED ON THIS FIGURE. WELLS WITH LOCAL GROUNDWATER NOT USED IN CONTOURS ARE MARKED WITH A RED ASTERISK (*)

SURVEY NOTES:

1. BASE MAP PREPARED FROM DATA PROVIDED BY FLUOR DANIEL, GTI, DALIN & BOYNTON, AND GEOMETRIX.
2. EXCEPT AS NOTED BELOW, WELLS LOCATIONS SURVEYED BY DALIN & BOYNTON.
3. LOCATIONS OF WELLS HL-1, HL-2, AND HL-4 BASED ON FIELD MEASUREMENTS BY FLUOR DANIEL, GTI AND WOODWARD-CLOVE.
4. LOCATIONS OF WELLS BWH-1 THROUGH BWH-6 SURVEYED BY GEOMETRIX BASED ON REFERENCE TO OTHER WELLS SURVEYED BY DALIN & BOYNTON.

GROUNDWATER ELEVATIONS AND MEASURABLE LIQUID-PHASE HYDROCARBONS IN UPPERMOST GROUNDWATER ZONE MAY 2005

DFSP NORWALK
Norwalk, California



Form No. 1000-044	Page No. 2
DATE	DATE

Eastern Boundary Area Update

- KMEP and DESC are jointly conducting the next phase of investigation.
- Parsons prepared a work plan on behalf of KMEP and DESC to jointly conduct additional assessment east of the site. Objective: to delineate dissolved plume in eastern part of the site.
- The work plan was approved by the RWQCB on August 30, 2005.