

Norwalk Tank Farm Update

***Presented to the Norwalk Tank Farm
Restoration Advisory Board***

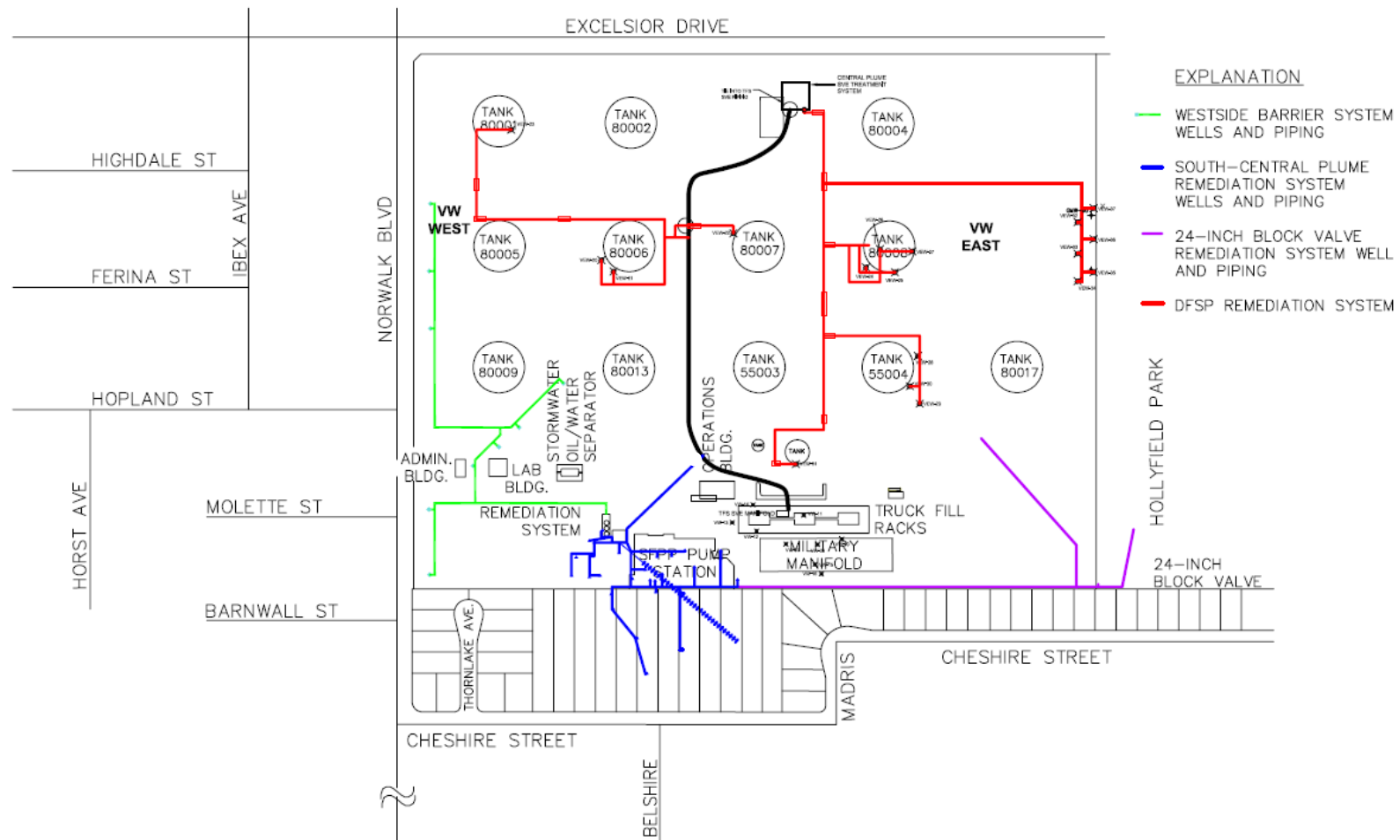
April 30, 2009

Presentation Overview

Topics to be Covered

- Remediation Operations Update
- First Quarter 2009 Sentry Event
- Additional Assessment Update
- Preliminary Conceptual Site Model Update

Map of Remediation Systems



Soil Vapor Extraction System

- 24 on-site 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 680 gallons equivalent of fuel removed from soil and destroyed by catalytic oxidation during first quarter 2009, four times more than during fourth quarter 2008.
- Approximately 453,900 gallons equivalent of fuel removed from soil and destroyed by catalytic and thermal oxidation since September 1995.
- Approximately 65,500 hours of operation since September 1995.

Soil Vapor Extraction System Operations Summary

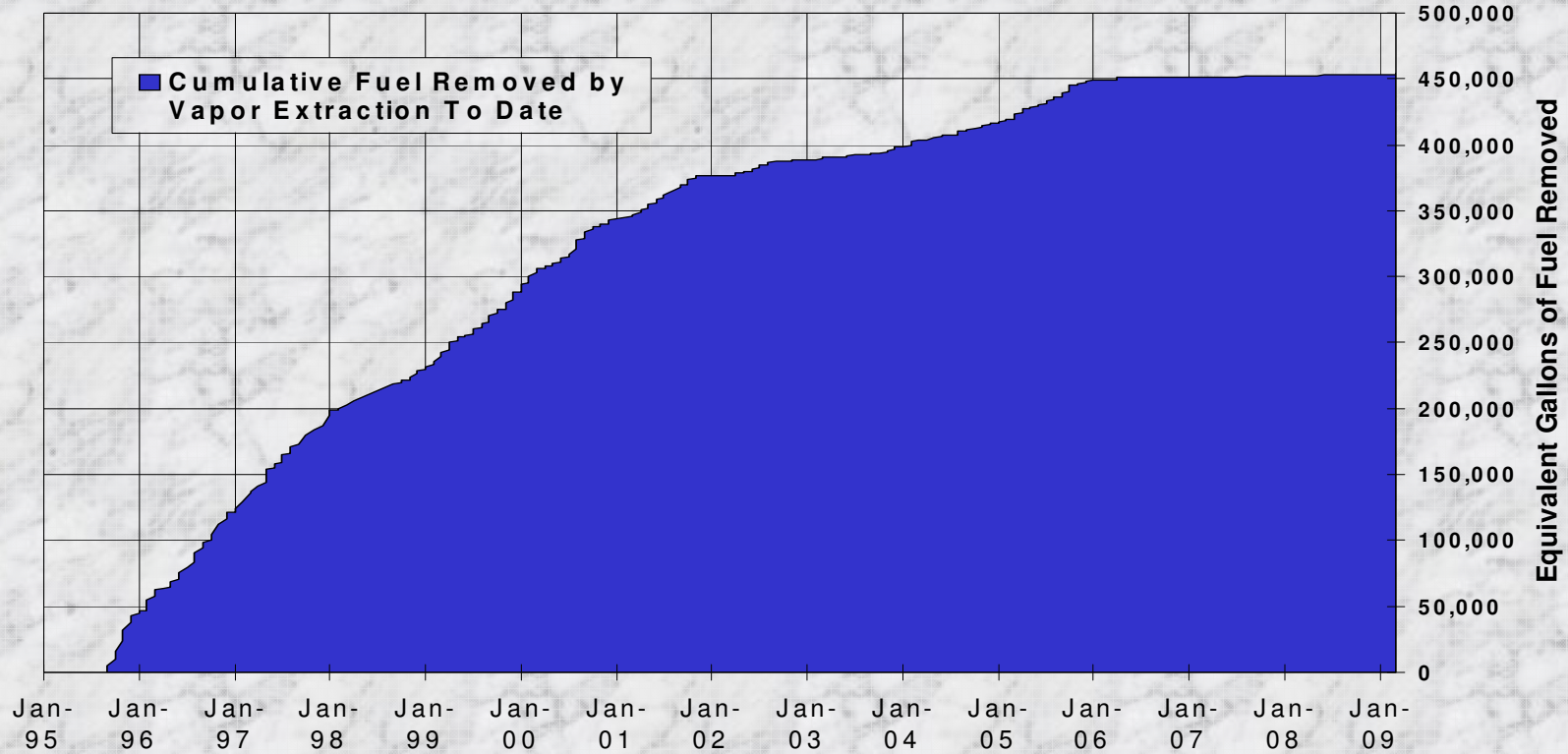
- The SVE system operated continuously during first quarter 2009 with the following exceptions:
 - SVE rebound testing starting on November 26, 2008 continued through January 20, 2009.
 - SVE system was shut down for approximately 8 days for replacement of the blower motor.
 - SVE system was shut down for approximately 5 days due to malfunctioning water level sensors. Water level sensors were replaced.
 - SVE system was shut down for approximately 3 days due to electrical disruptions. Breakers were reset in electrical room and a fuse was replaced within the SVE electrical box.
 - SVE system shut down due to unknown reasons for approximately 4 days.
- Percent operation for first quarter 2009: 60%
- Percent operation excluding planned shutdown period for rebound testing: 75%

Soil Vapor Extraction Rebound Testing

- The SVE system was restarted on January 20, 2009 based on VOC concentration rebounding in several SVE wells.
- An increase in influent vapor VOC concentrations was observed following the rebound test and resulted in increased mass removal relative to recent previous quarters.
- The SVE system was shut down on April 17, 2009 for another round of SVE rebound testing. VOC concentrations will be monitored and the SVE system will be restarted after VOC concentrations rebound.
- Additional SVE rebound tests will be performed when VOC concentrations decrease and remain low.

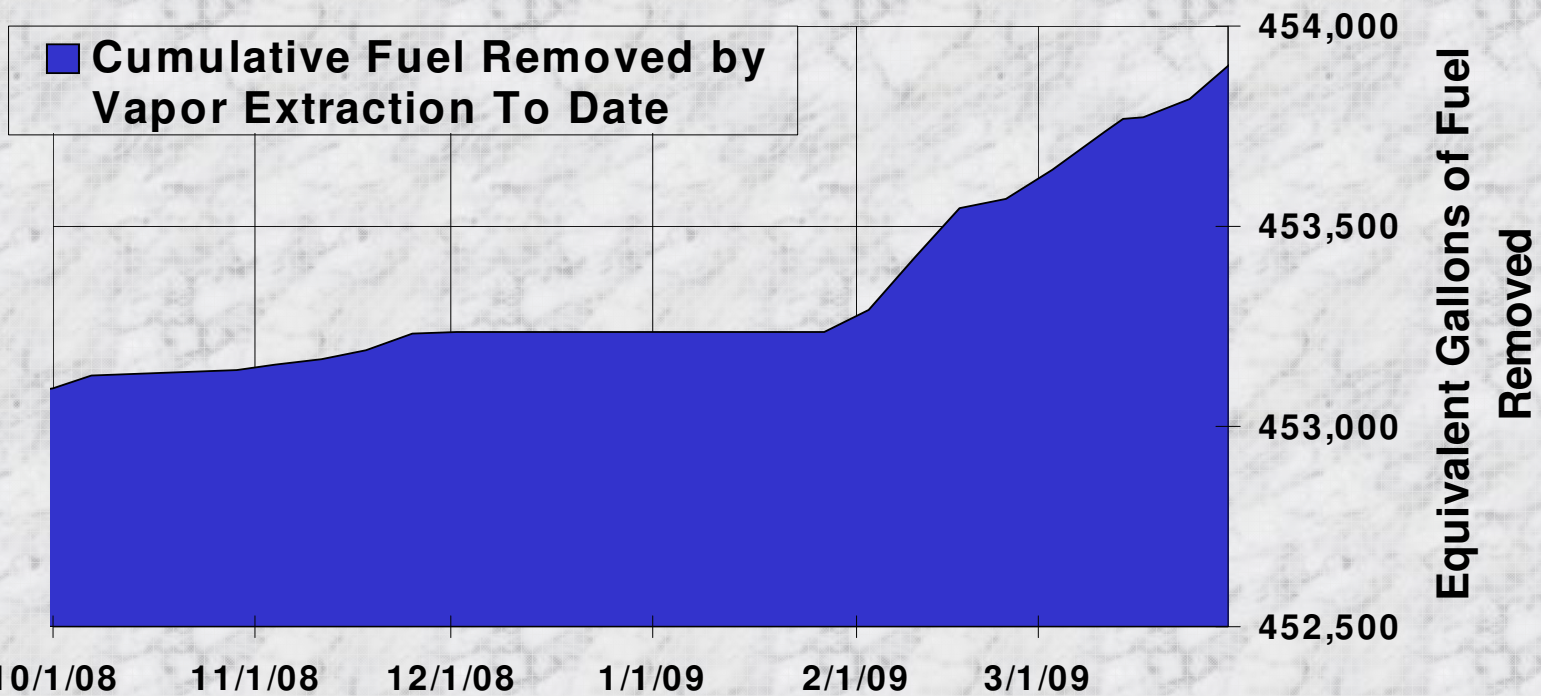
Soil Vapor Extraction System Operations Summary

Cumulative Fuel Removed by Vapor Extraction To Date



Soil Vapor Extraction System Operations Summary

Cumulative Fuel Removed by Vapor Extraction - Past Six Months



Groundwater/Product Extraction System

- 18 total fluids (product and groundwater) extraction wells and 2 groundwater extraction wells in the South-Central Plume area
- 2 total fluids (product and groundwater) extraction wells in the Southeastern 24-Inch Block Valve area
- Operation of the West Side Barrier system was discontinued in August 2008.

Groundwater/Product Extraction System Operations Summary

- Total groundwater extracted during first quarter 2009:
 - South-Central Plume area: 2,482,000 gallons
 - Southeastern 24-Inch Valve area: 216,000 gallons
 - West Side Barrier area: 0 gallons
- Total groundwater extracted since September 1995:
 - South-Central Plume area: 34.5 million gallons
 - Southeastern 24-Inch Valve area: 9.1 million gallons
 - West Side Barrier area: 26.9 million gallons
 - Total groundwater extracted: 70.5 million gallons
 - 8,917 gallons free product removed*

* The total volume of free product removed is estimated based on measurements of free product accumulation in the product holding tank and measurements of free product removed manually from individual wells. This estimate does not account for free product that is removed via total fluids extraction and becomes emulsified in the relatively larger volume of groundwater extracted.

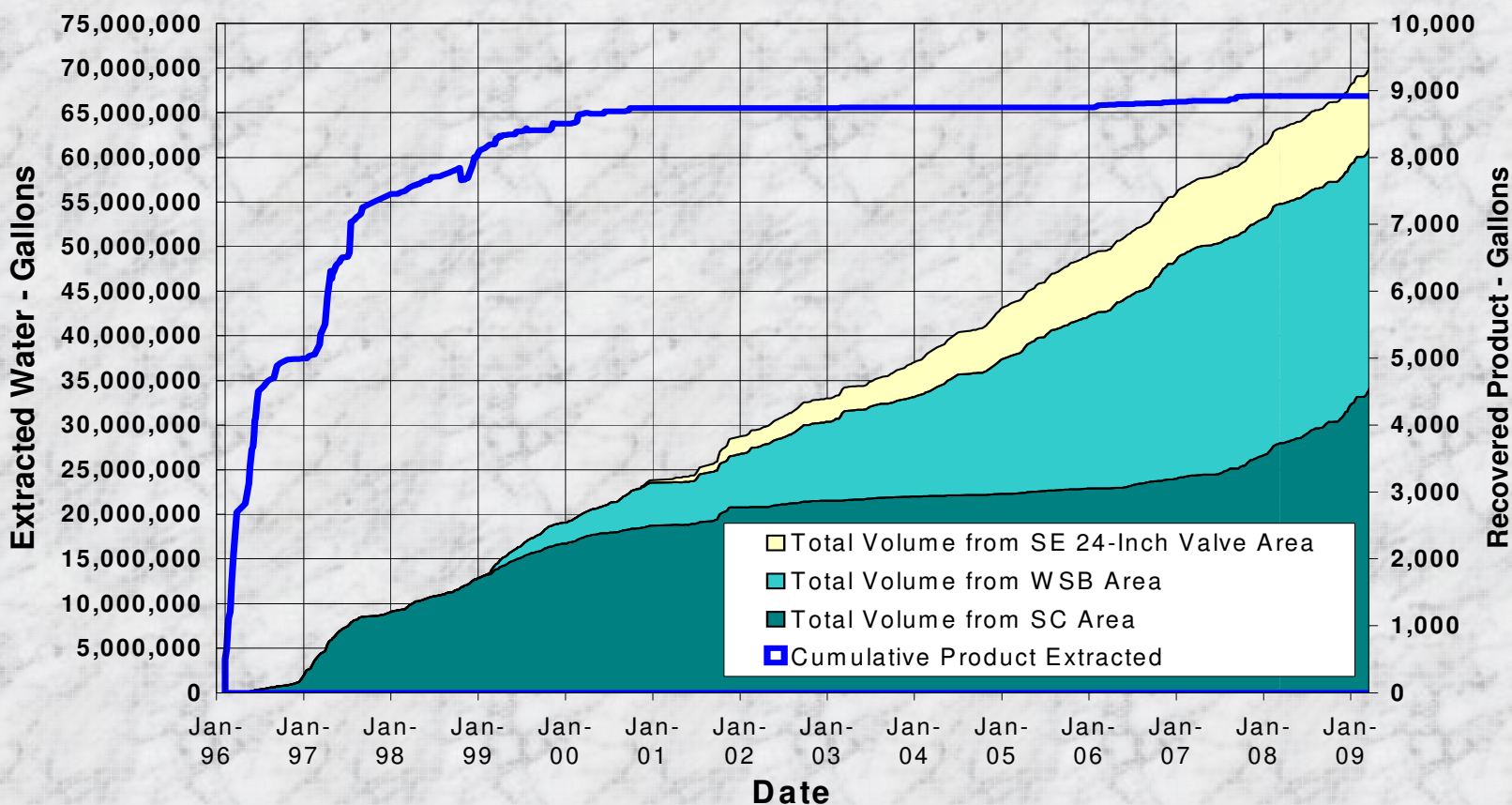
Groundwater/Product Extraction System Operations Summary

- The groundwater/product extraction system operated continuously during first quarter 2009 with the following exceptions:
 - The system was shut down during February 2009 to evaluate selenium concentrations in individual extraction wells (approximately 34 days).
 - High water level alarm in transfer tank (approximately 4 days).
- Percent operation for first quarter 2009: 59%
- Percent operation excluding planned shutdown period for selenium evaluation: approximately 85%*

*The first quarter sentry event occurred during selenium evaluation.

Groundwater/Product Extraction System Operations Summary

Summary of Product Extracted and Water Treated



Planned Remediation Activities

- Continue TFE and GWE in the South-Central and Southeastern areas.
- Continue to monitor concentrations of dissolved 1,2-DCA and MTBE in western area.
- Continue routine system inspections.
- Continue data collection for monitoring and evaluation of remediation systems.
- Continue adjustments to remediation wells to optimize remediation.
- Continue SVE rebound tests as appropriate. Another round of SVE rebound testing is currently in progress.

First Quarter 2009

Sentry Monitoring Event

- During first quarter 2009, the RWQCB approved low-flow purging and sampling methods and requested analysis of fuel oxygenates using EPA Method 8260B for future groundwater samples.
- 15 wells sampled, including 4 Exposition wells.
- Groundwater elevations have generally decreased in the uppermost aquifer and increased in the Exposition aquifer beneath the site since October 2008.
- No VOCs, TPHg, or TPHfp detected in Exposition wells.
- In the southern off-site area, VOCs, TPHg, and TPHfp were not detected in wells GMW-O-1, GMW-O-2, GMW-O-3.
- In the southeastern block valve area, free product was detected in GMW-36 and GMW-O-15 where it has been detected in recent previous events (likely due to lower groundwater levels).

First Quarter 2009 Sentry Monitoring Event

- Wells MW-SF-1 and MW-SF-4 near intermediate 24-inch block valve area were monitored voluntarily by KMEP during the sentry event. No free product was detected in the intermediate block valve area.
- In western off-site area, 1,2-DCA and MTBE were detected in only one well (WCW-7) at concentrations below RBCA levels.
- Per RWQCB's request, TBA was added to the analyte list for all groundwater samples collected during this event. TBA, a breakdown product of MTBE, was detected in the southeastern area in wells GMW-39 and PZ-5, where MTBE has been detected.

Additional Assessment Update

- In a letter dated November 26, 2008, the RWQCB commented on the report titled “Additional Off-Site Assessment Report, Off-Site 24-Inch Block Valve Area” dated August 28, 2008.
- The RWQCB questioned the presence or continuity of an aquitard in the vicinity of the block valve and requested a work plan for further vertical delineation of contaminants in that area.
- The work plan was submitted to the RWQCB on January 26, 2009.

Preliminary Conceptual Site Model Update

- In a letter dated November 26, 2008, the RWQCB requested KMEP to work jointly with DESC to develop a conceptual site model (CSM).
- A Preliminary CSM was developed and included the following tasks:
 - Scoping and Database Review and Update
 - Development of Preliminary Conceptual Lithologic Model
 - Development of Preliminary Contaminant Distribution Models
 - Preparation of the Preliminary CSM Report
- The Preliminary CSM report was submitted to the RWQCB on February 13, 2009.