

Norwalk Tank Farm Update

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

January 26, 2006



Presentation Overview

Topics to be Covered

- Central plume remediation system update
- General site activities
- Semiannual monitoring event

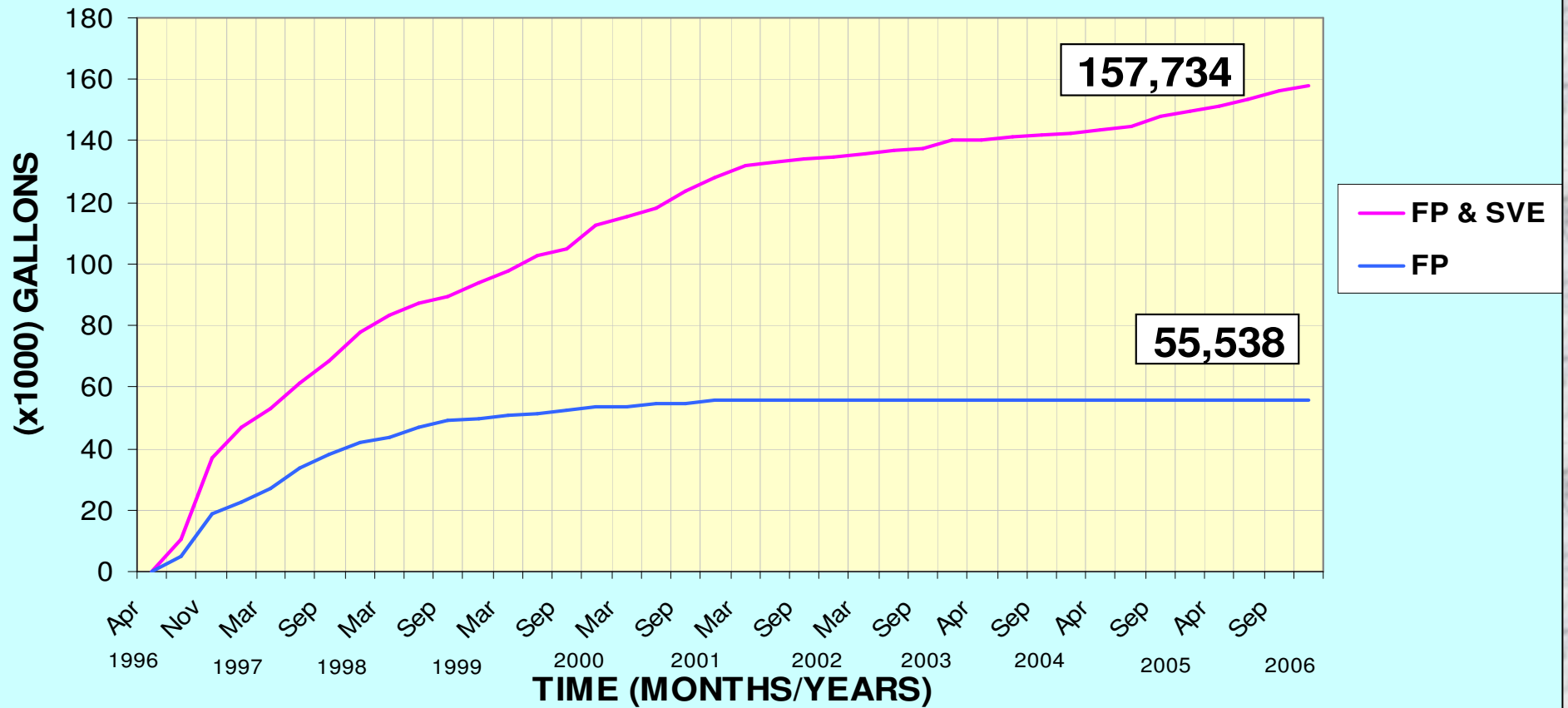
Central Plume Remediation

- System Performance Fourth Quarter 2005
 - ❖ Total Hydrocarbons Removed: 5,866 gallons
 - Approx. 1,292 gallons recycled and destroyed
 - 0 gallons of free product recovered
 - 0.00 gallons of dissolved-phase hydrocarbons recovered
 - 1,292 gallons of volatile hydrocarbons recovered through soil vapor extraction (SVE)
 - Estimated 4,575 gallons of hydrocarbons destroyed due to enhanced biodegradation
 - ❖ 0 gallons of water treated

Central Plume Remediation

- System Performance since April 1996
 - ❖ Total Hydrocarbons Mass Removed:
297,937 gallons
 - Approx. 157,734 gallons recycled and destroyed
 - 55,538 gallons of free product recovered
 - 1,397 gallons of dissolved-phase hydrocarbons recovered
 - 100,799 gallons of volatile hydrocarbons recovered through SVE
 - Estimated 140,203 gallons of hydrocarbons destroyed due to enhanced biodegradation
 - ❖ 42.2 M gallons of water treated

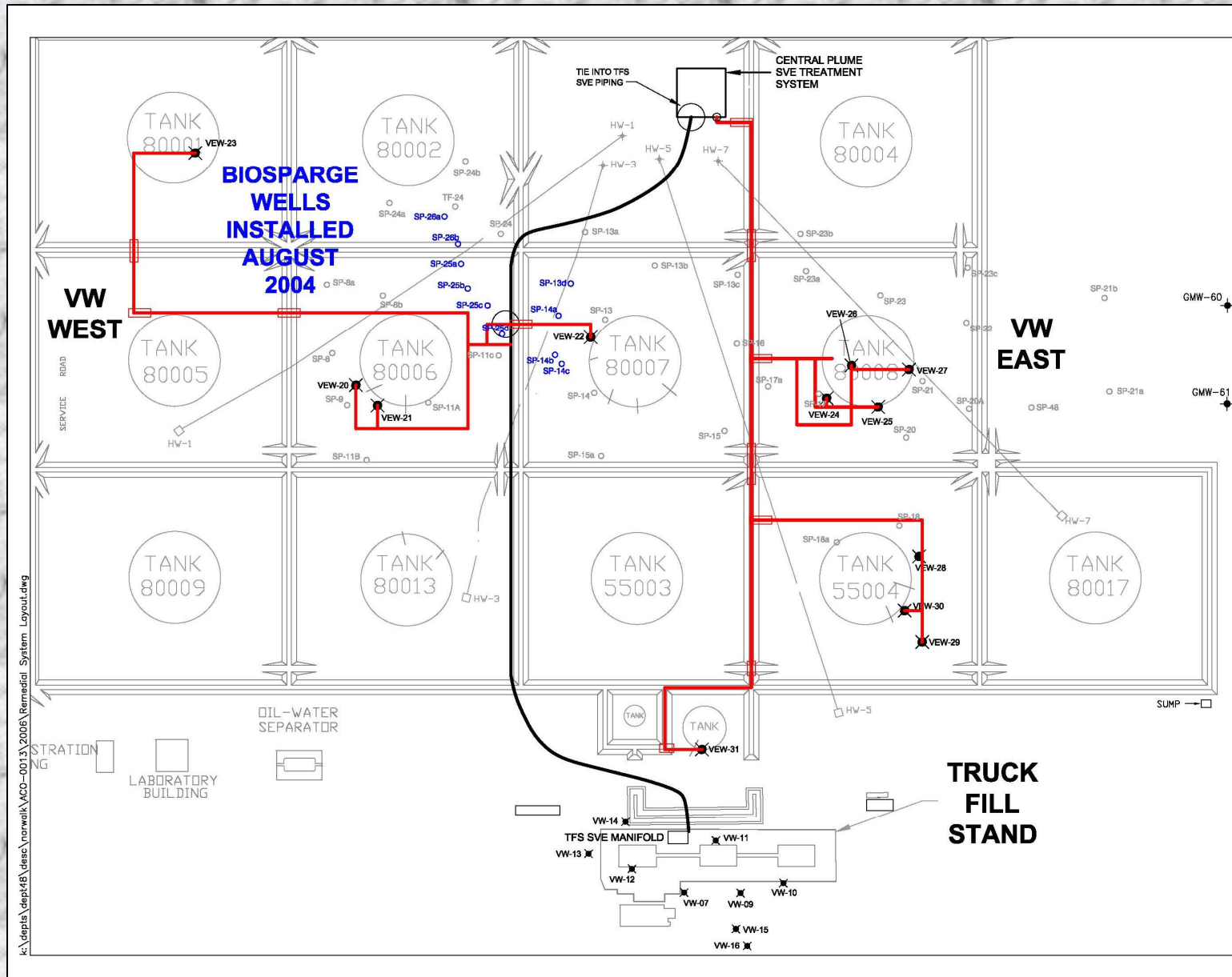
HYDROCARBONS & FREE PRODUCT--CENTRAL PLUME



Remediation Optimization

- Continued soil remediation through SVE.
 - ❖ SVE removed ~700 gallons within tank farm and water tank
 - ❖ SVE removed > 500 gallons from truck fill stand (TFS)
 - ❖ Biodegradation removed > 4,500 gallons
- Continued operation of biosparging wells
- Working to update DFSP groundwater treatment system PLC controls to allow continued extraction from Total Fluid (TF) wells

Layout of DESC Remedial Systems



General Site Activities

- Powerline area demolition and tank removal
 - ❖ Two sheds, a 500-gallon UST, and associated piping have been removed from the site
 - ❖ TPH as fuel products was detected in the soil sample from beneath the tank at a concentration of 330 mg/kg, which is below the site cleanup goal for TPH (1,000 mg/kg) as established by the RWQCB
 - ❖ BTEX and MTBE and other fuel oxygenates were not detected in the soil sample
 - ❖ Tank was in-tact and generally in good condition
 - ❖ Excavated area was backfilled per the approval of the Department of Public Works (DPW)
 - ❖ Closure report has been submitted to the DPW and RWQCB for final approval

Photos of Powerine Area Demolition and Tank Removal

- Before Demolition



UST

Photos of Powerine Area Demolition and Tank Removal

- After demolition, tank removal, and backfill



UST in-place prior to removal

Former UST location

General Site Activities

- Working to finalize agreement with City of Norwalk to access Holifield Park
- An off-site well (PO-7) to the east of the site was sampled for groundwater and no analytes were detected, including TPH and volatiles (Method 8260B)
- Shrub clearance at and around the front entrance to the site was conducted

Photos of Shrub Clearance

- 1a. North side of gate – before clearing



Photos of Shrub Clearance

- 1b. North side of gate – after clearing



South side of gate –
after clearing



Photos of Shrub Clearance

- 2a. South side of entrance – before clearing



Photos of Shrub Clearance

- 2b. South side of entrance – after clearing



Photos of Shrub Clearance

- 3a. South side of entrance near street—before clearing



Photos of Shrub Clearance

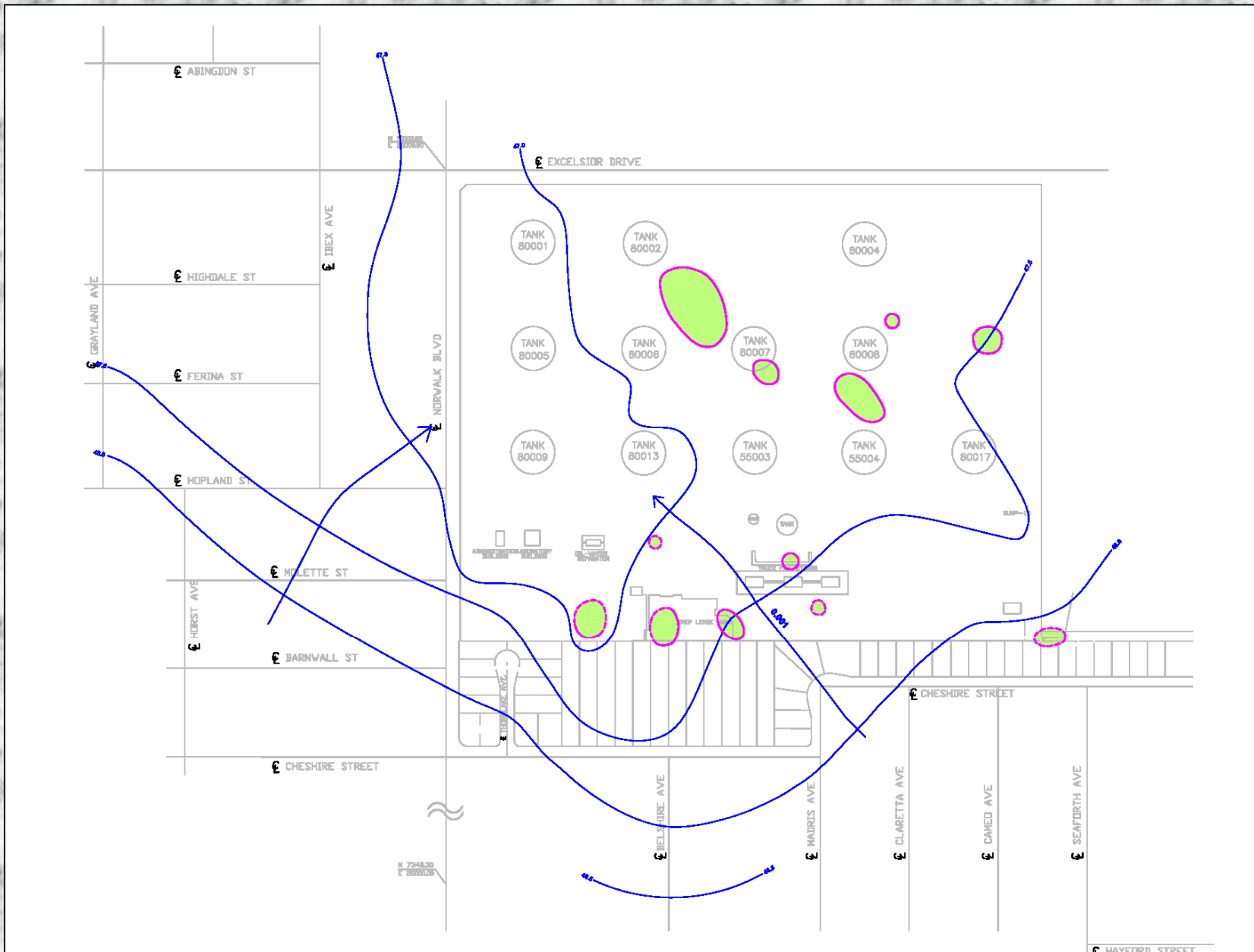
- 3b. South side of entrance near street—after clearing



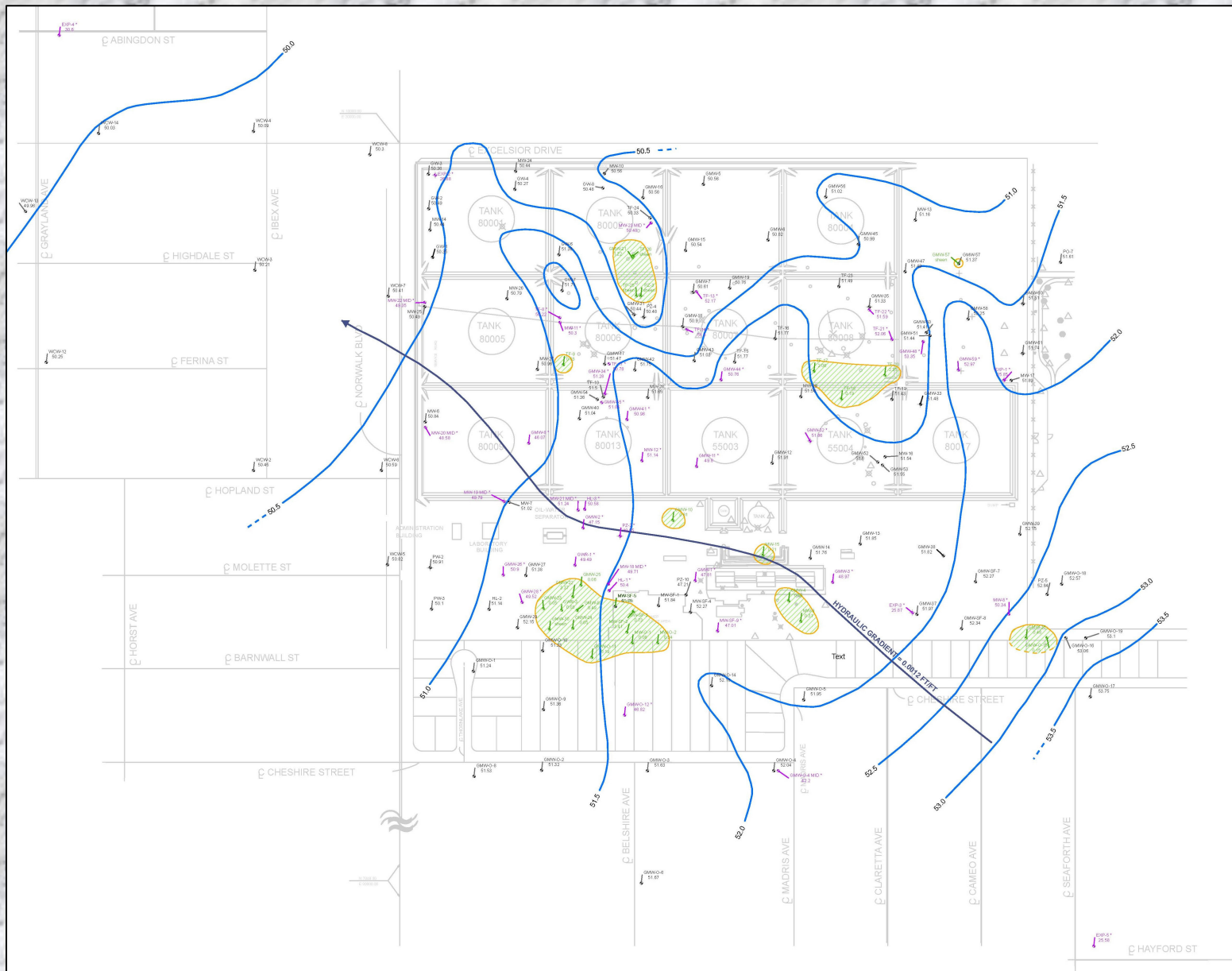
Groundwater Monitoring

- Sentry event conducted August 1 through 4, 2005
- Semiannual event conducted October 31, 2005 through November, 2005

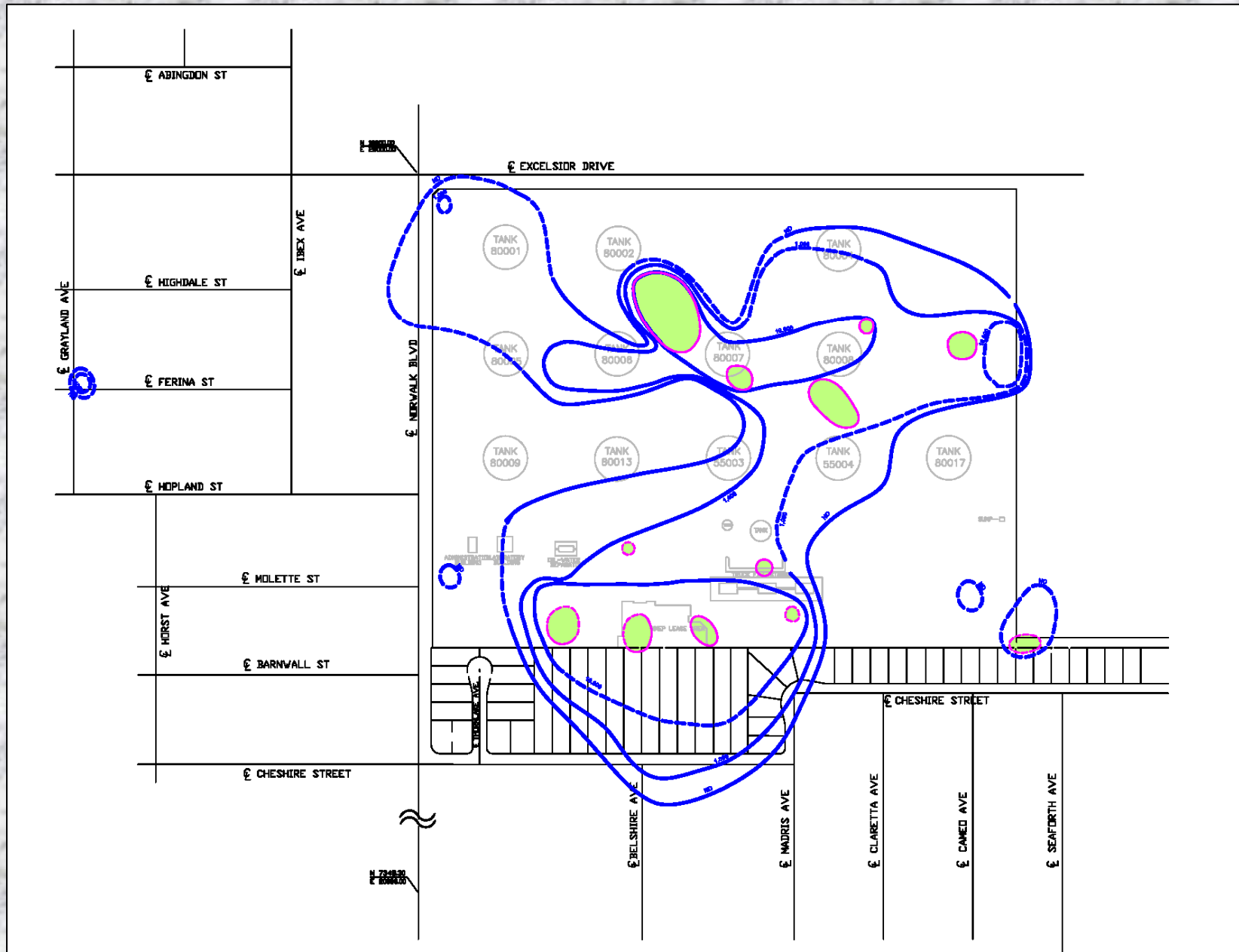
Groundwater Equipotential Map and Limits of Measurable Liquid-Phase Hydrocarbons November 2004



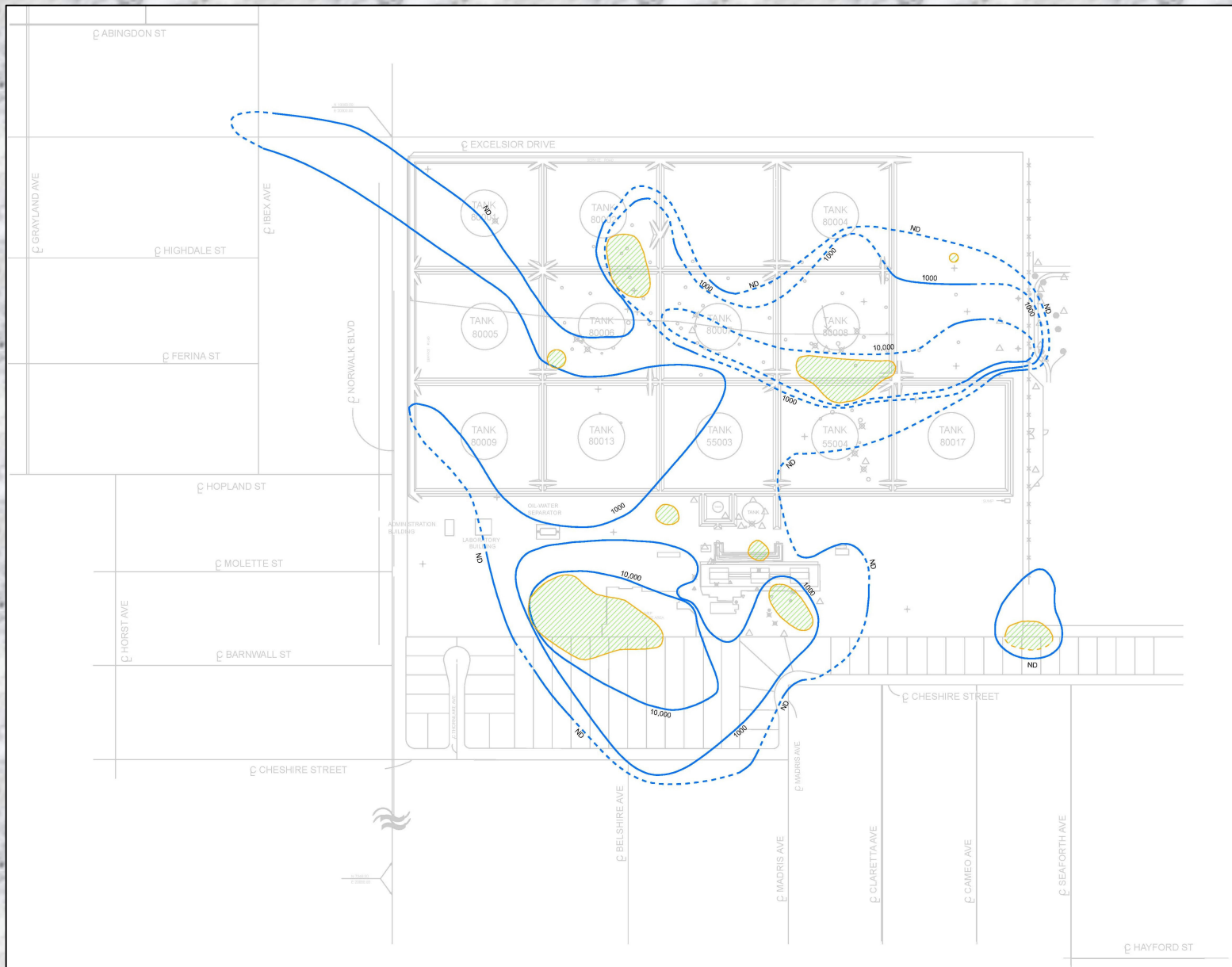
Groundwater Equipotential Map and Limits of Measurable Liquid-Phase Hydrocarbons October/November 2005



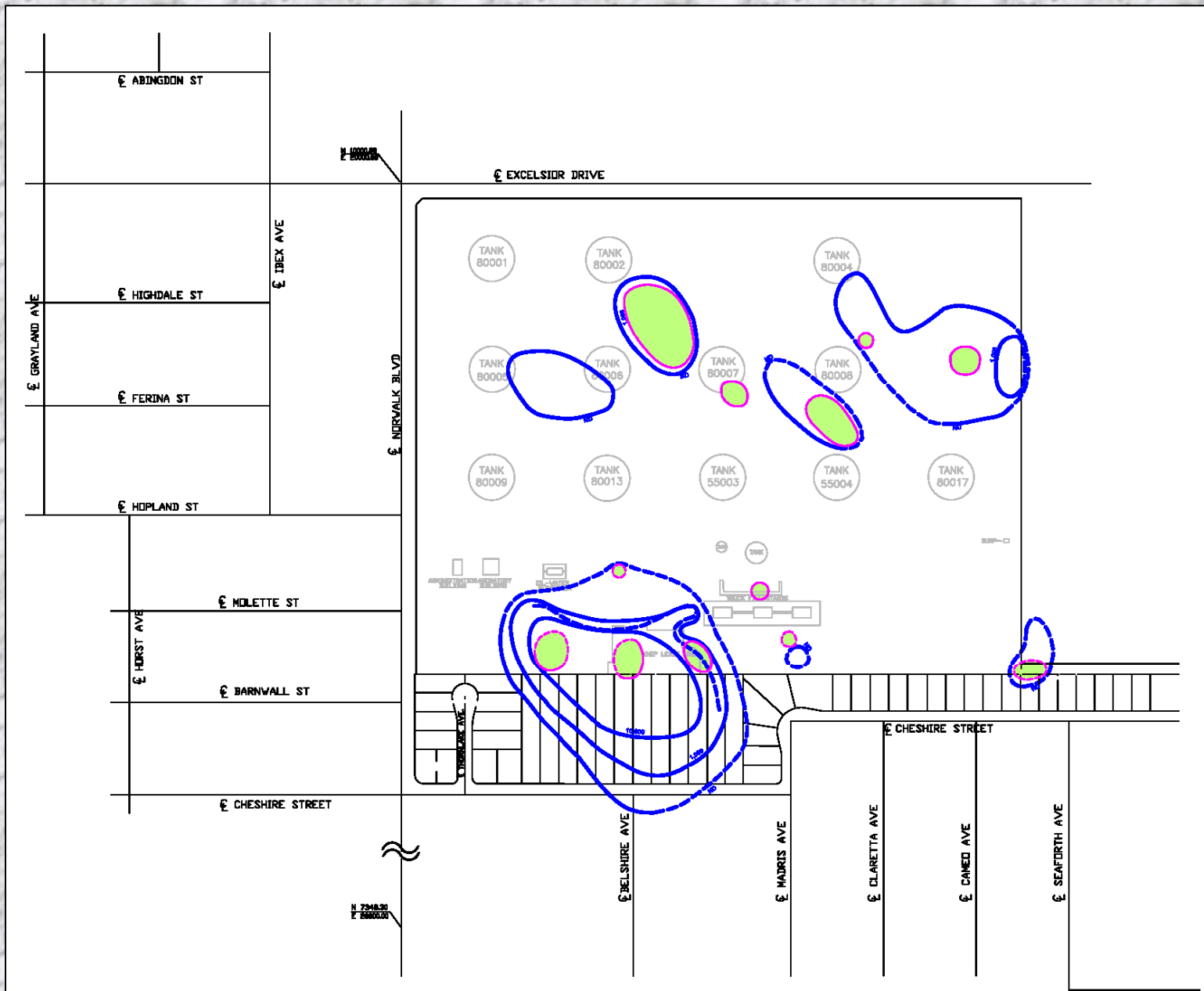
TPH Isoconcentration Map November 2004



TPH Isoconcentration Map November 2005



Benzene Isoconcentration Map November 2004



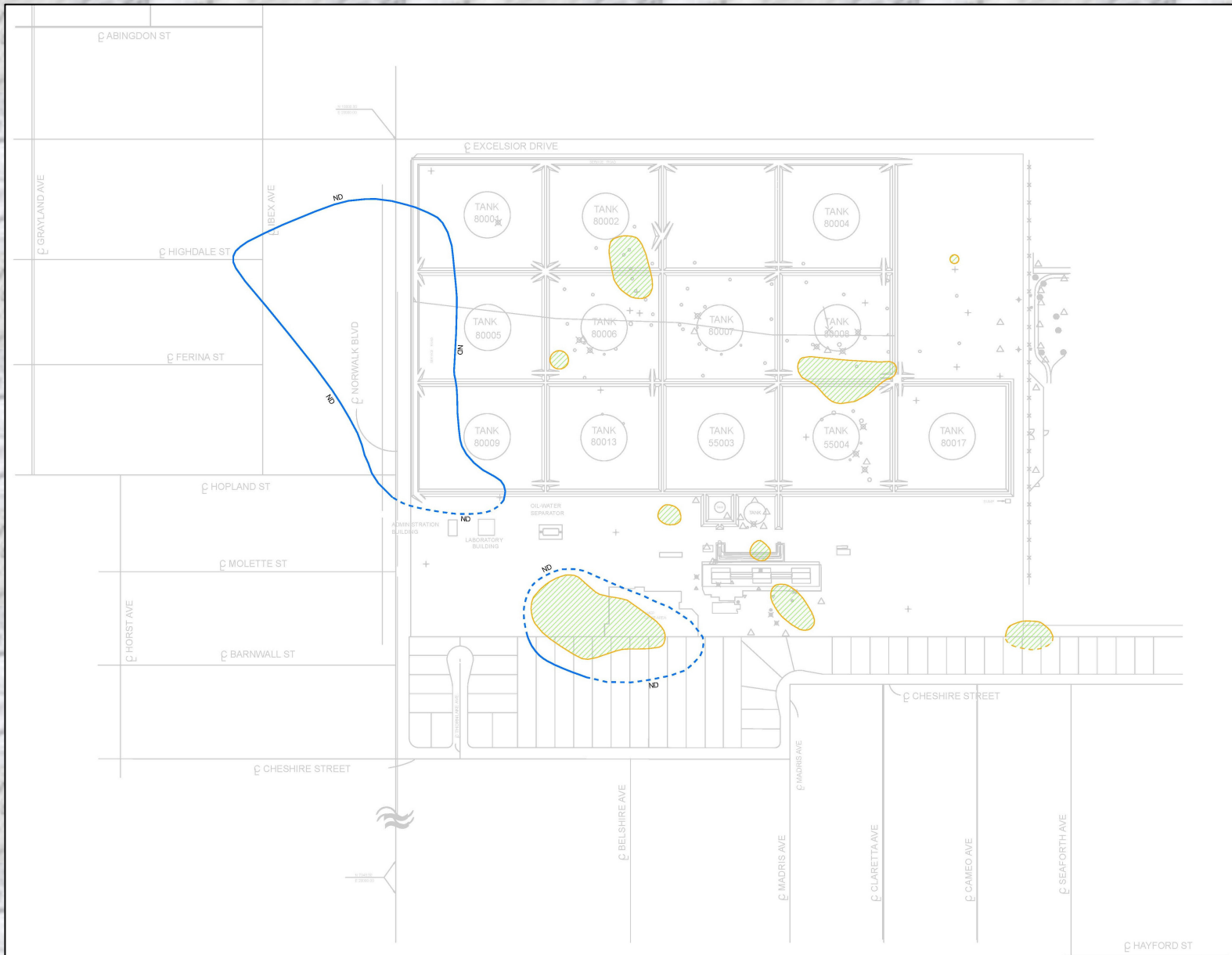
Benzene Isoconcentration Map November 2005



1,2-Dichloroethane Isoconcentration Map November 2004



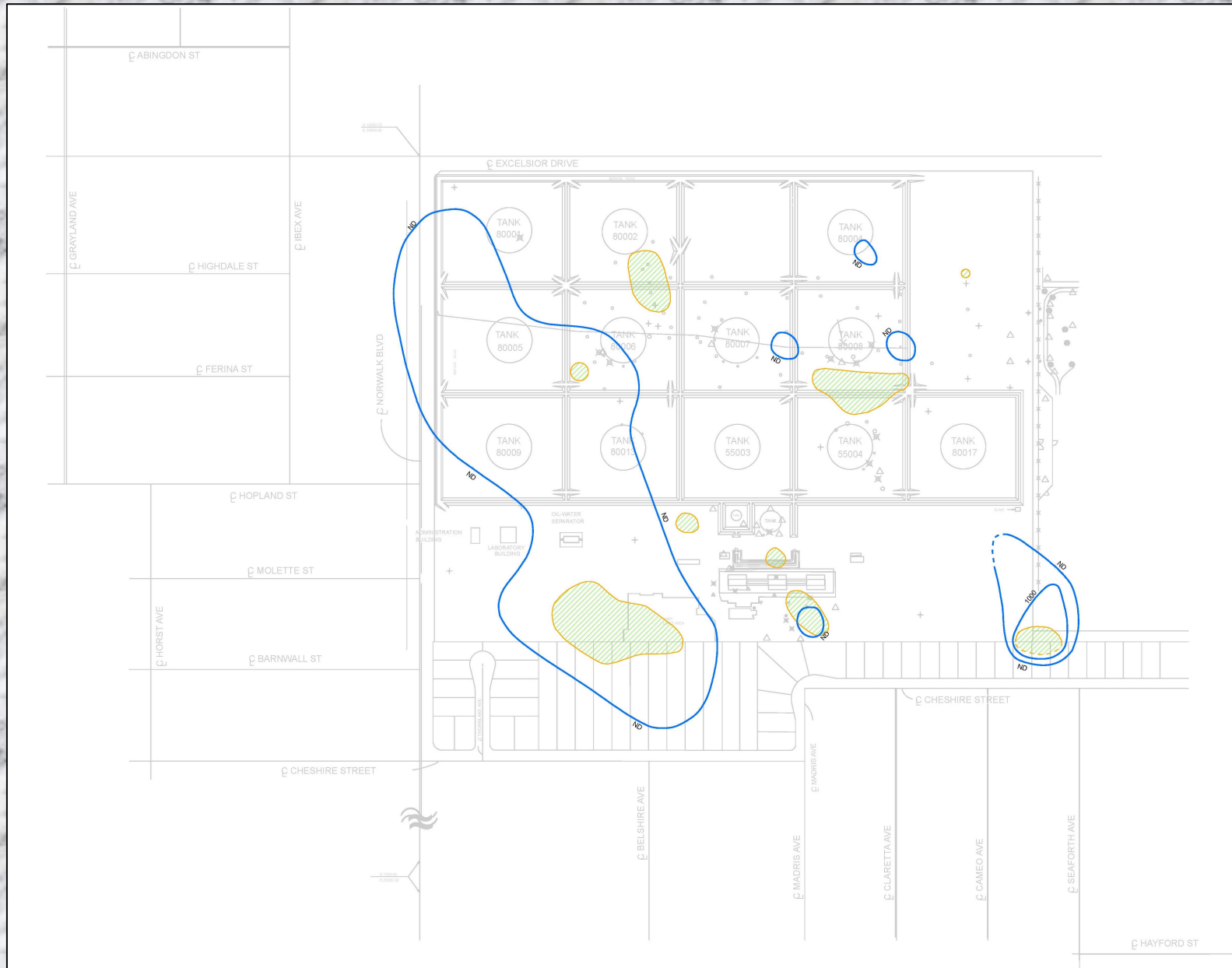
1,2-Dichloroethane Isoconcentration Map November 2005



MTBE Isoconcentration Map November 2004



MTBE Isoconcentration Map November 2005



Discussion