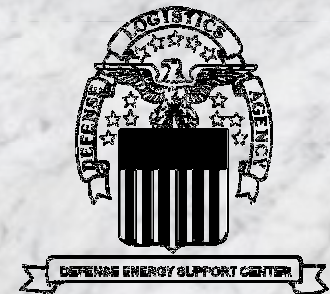


# *Norwalk Tank Farm Update*

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

*January 27, 2005*



# Presentation Overview

## Topics to be Covered

- Central plume remediation system update
- Tank farm remedial activities
- Semi-annual monitoring event

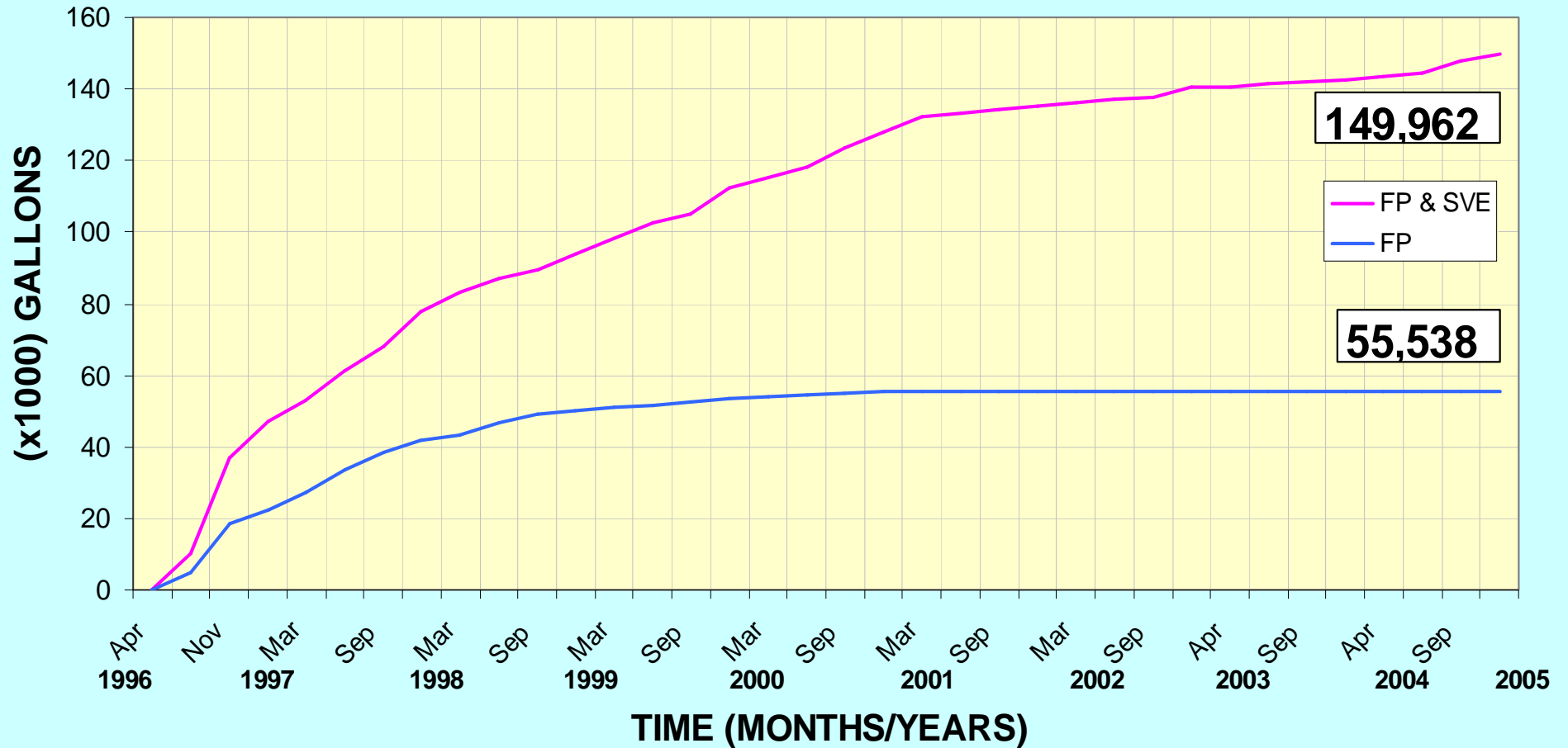
# Central Plume Remediation

- System Performance Fourth Quarter 2004
  - Total Hydrocarbons Mass Removed:  
3,464 gallons
    - Approx. 2,039 gallons recycled and destroyed
      - 2 gallons of free product recovered from PZ-3
      - 2,037 gallons of volatile hydrocarbons recovered through soil vapor extraction
      - 0 gallons of dissolved phase hydrocarbons recovered
    - Estimated 1,425 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:  
275,014 gallons
    - Approx. 149,962 gallons recycled and destroyed
      - 55,538 gallons of free product recovered
      - 93,026 gallons of volatile hydrocarbons recovered through soil vapor extraction
      - 1,397.1 gallons of dissolved phase hydrocarbons recovered
    - Estimated 125,052 gallons of hydrocarbons destroyed due to enhanced biodegradation
  - 42.2 M gallons of water treated

## HYDROCARBONS & FREE PRODUCT-CENTRAL PLUME



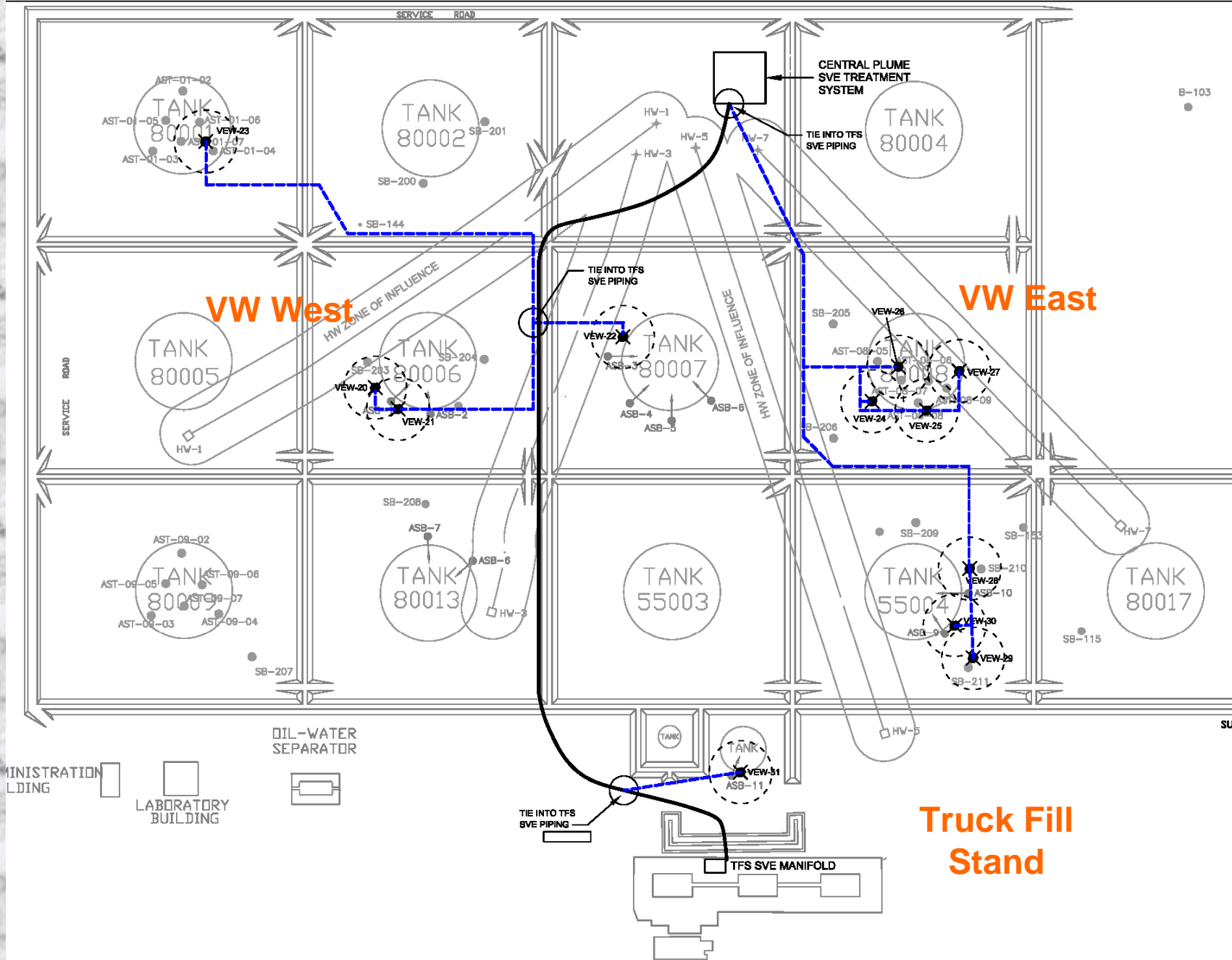
# Tank Farm Remedial Activities

- October: vapor extracted from former truck fill stand (TFS)—area with highest concentrations
- November: VES system off for:
  - Groundwater monitoring
  - Making connections to 12 new vertical vapor extraction wells (VEWs)--grouped as VW East and VW West
- Late November-December
  - VW East and VW West commenced operation on November 18, 2004

# Tank Farm VEW Connections



# Layout of New DESC Vapor Extraction Systems

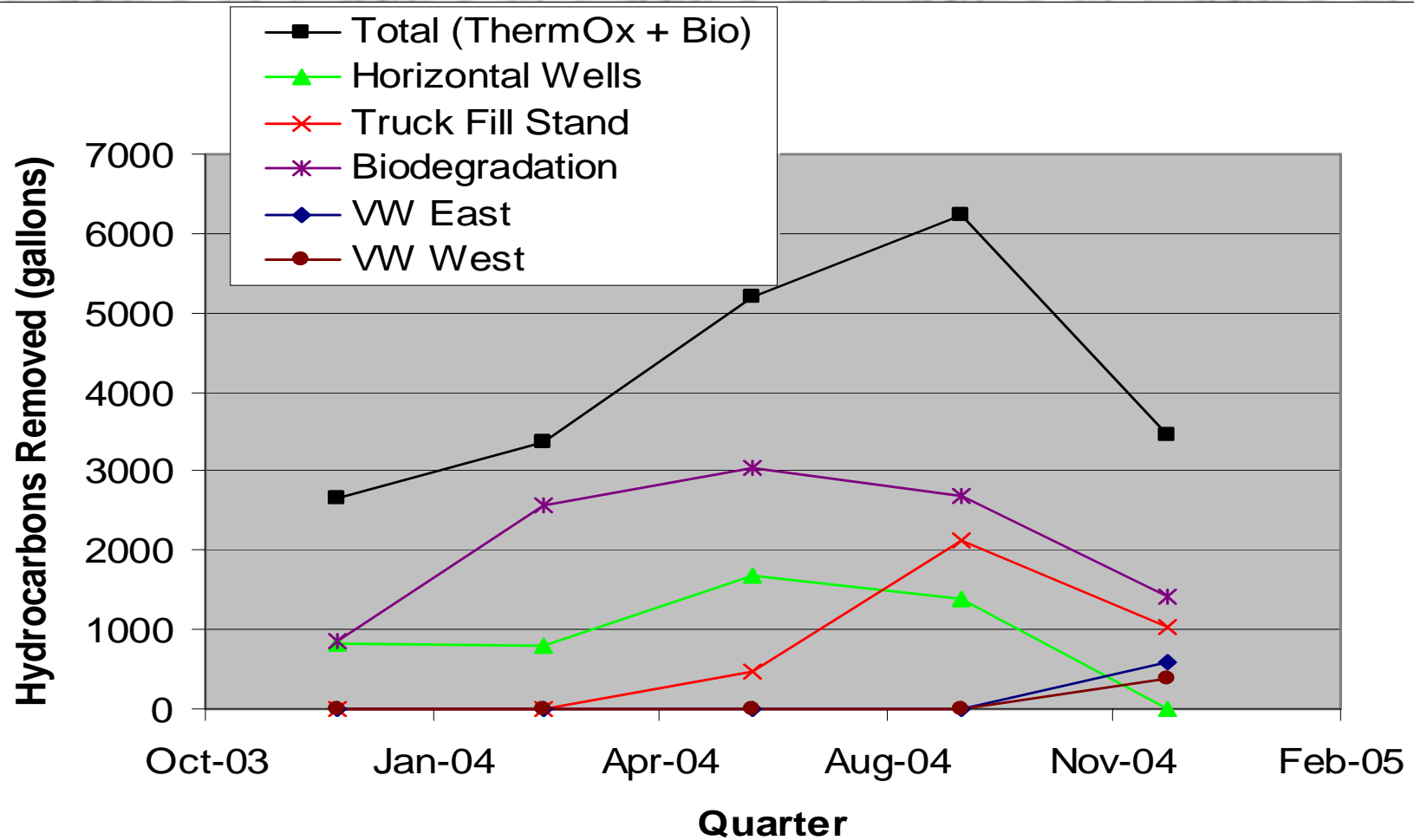




# Tank Farm Remedial Activities—Mass Removed

- Mass extracted during 4<sup>th</sup> Quarter 2004—  
2,037 gallons
  - TFS (Oct-Dec): 1,046 gallons
  - VW East (Nov/Dec only): 605 gallons
  - VW West (Nov/Dec only): 386 gallons
- TFS, VW East, and VW West will continue extraction during next quarter
- Expanded biosparge system start up is planned—February 2005

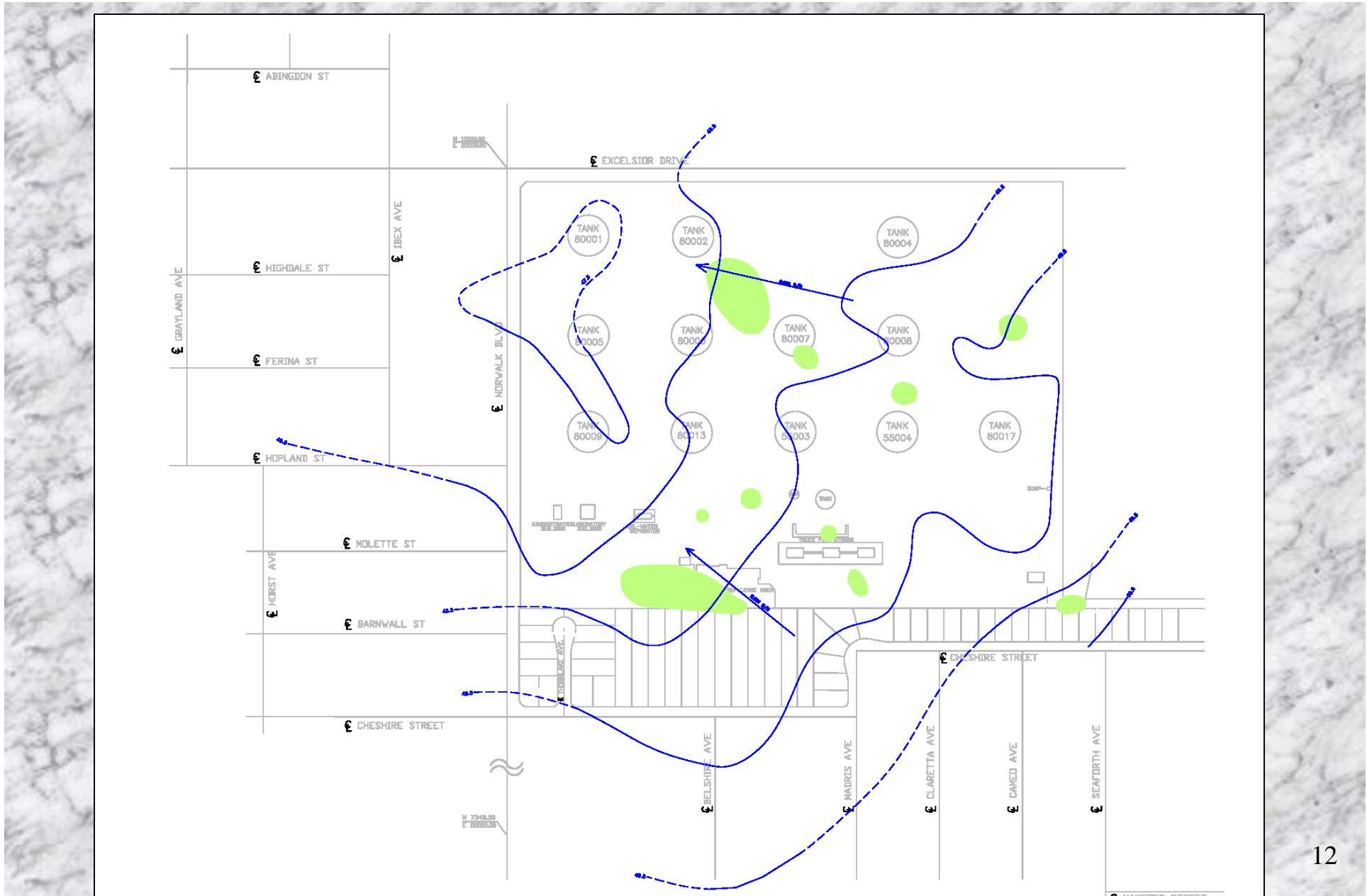
# SVE Hydrocarbon Removal



# Groundwater Monitoring

- Sentry event conducted July 2004
- Semiannual event in November 2004

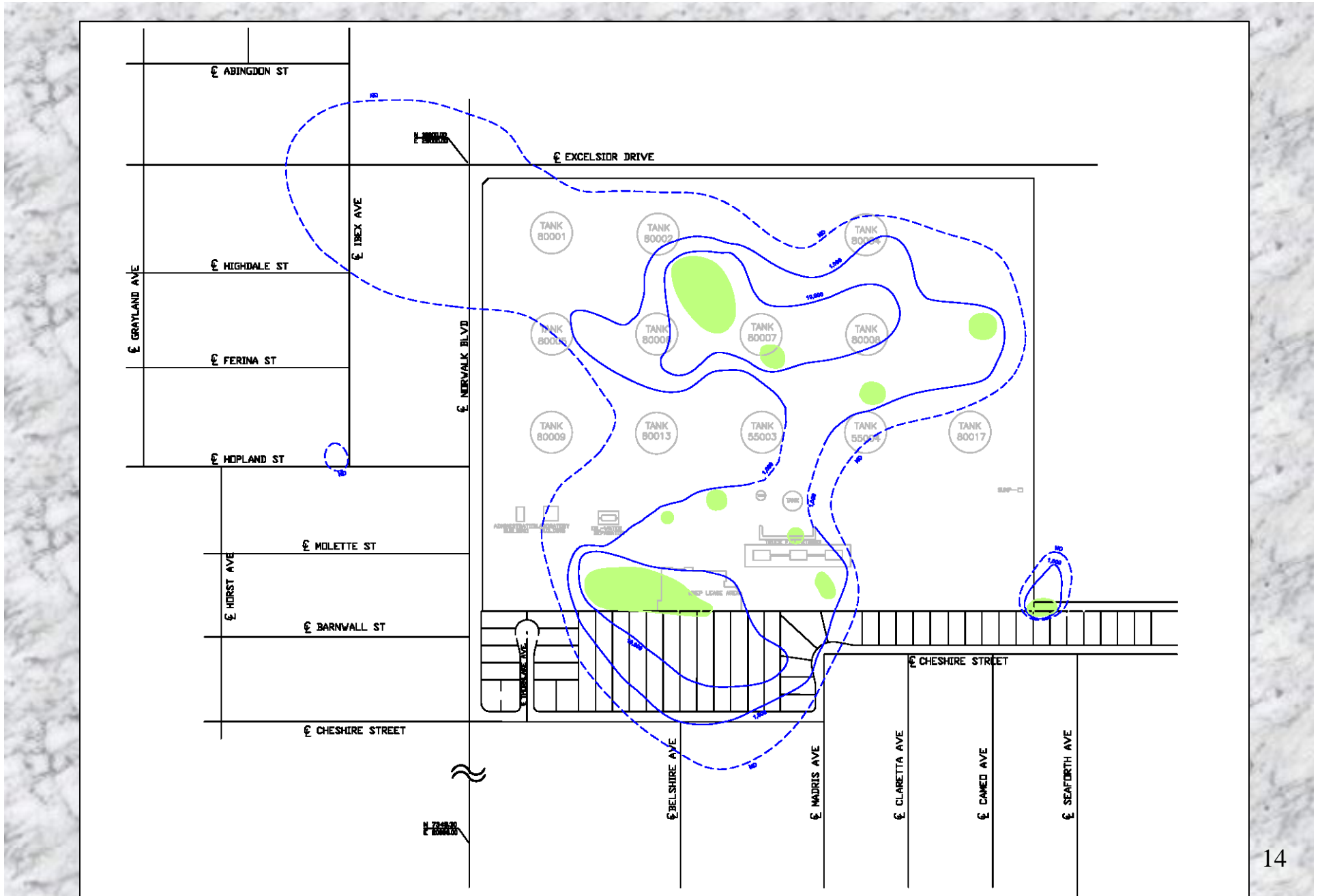
# Groundwater Equipotential Map and Limits of Measurable Liquid-Phase Hydrocarbons Oct 2003



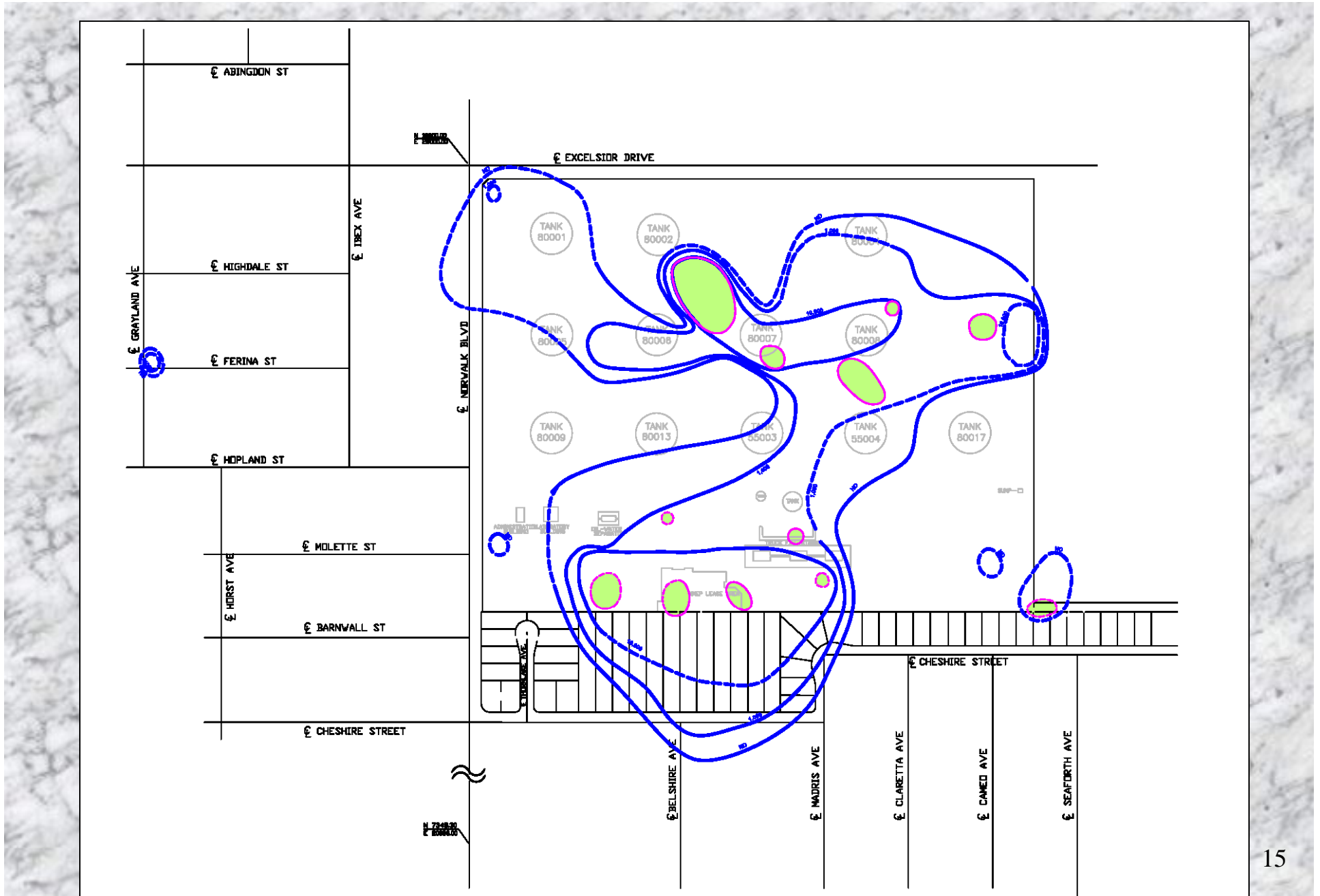
# Groundwater Equipotential Map and Limits of Measurable Liquid-Phase Hydrocarbons Nov 2004



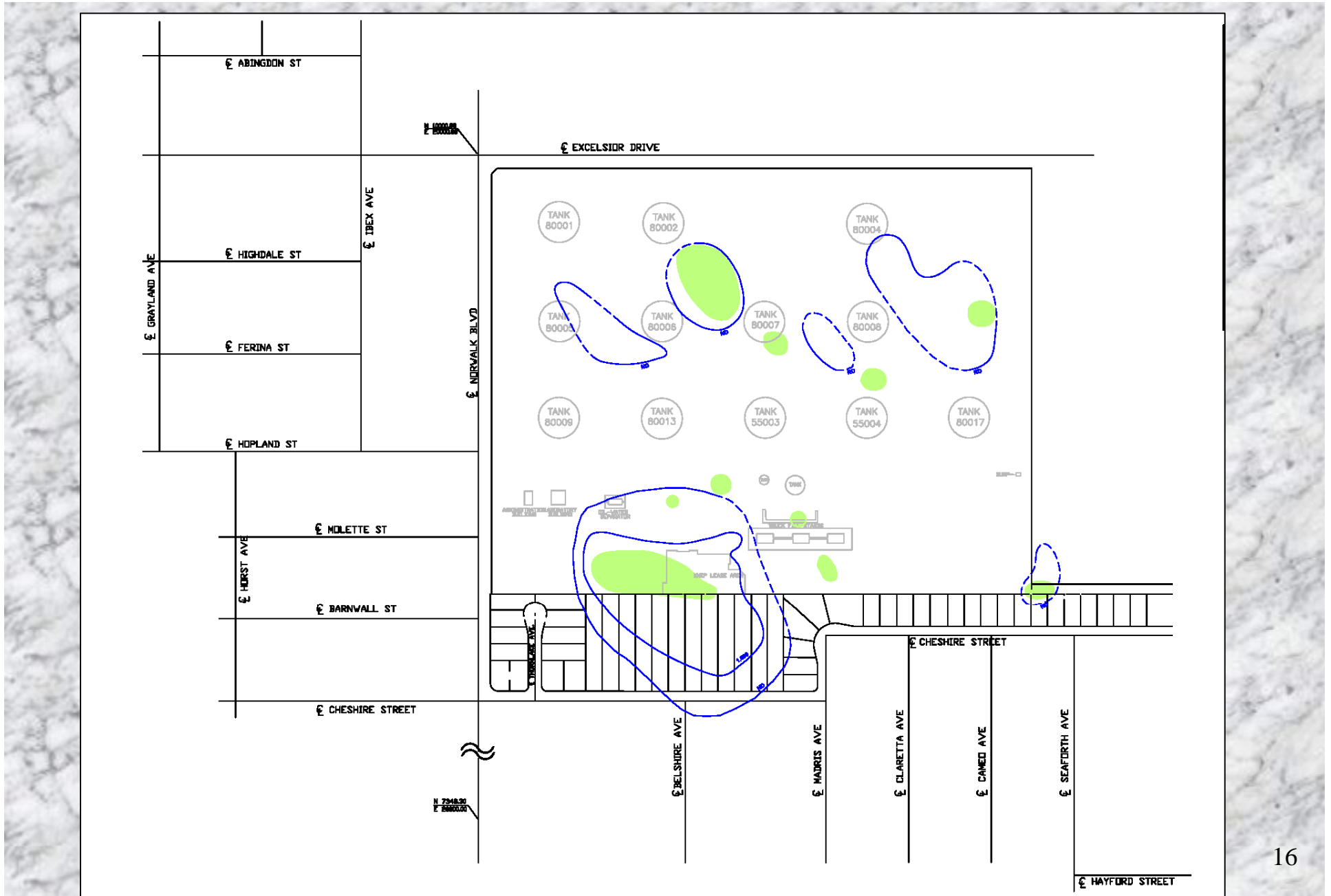
# TPH Isoconcentration Map Oct 2003



# TPH Isoconcentration Map Nov 2004

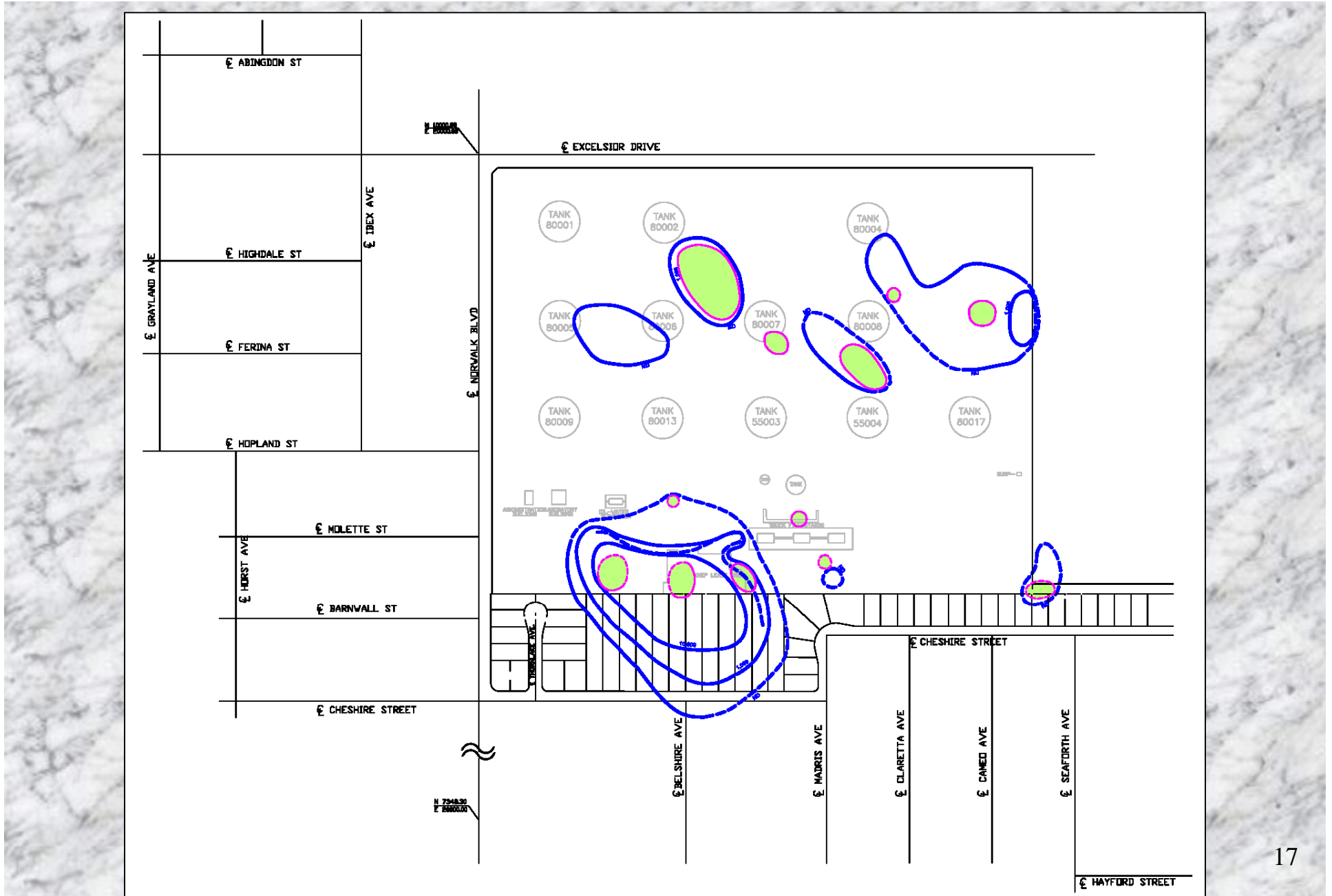


# Benzene Isoconcentration Map Oct 2003





# Benzene Isoconcentration Map Nov 2004



# 1,2-Dichloroethane Isoconcentration Map Oct 2003



# 1,2-Dichloroethane Isoconcentration Map Nov 2004



# MTBE Isoconcentration Map Oct 2003



# MTBE Isoconcentration Map Nov 2004

