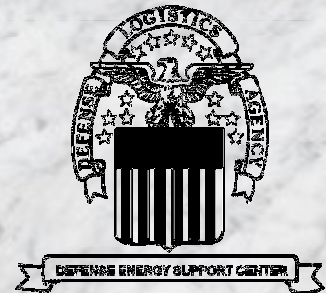


# *Norwalk Tank Farm Update*

*Defense Energy Support Center-  
Los Angeles  
Presented to the Norwalk Tank Farm  
Restoration Advisory Board*

*July 29, 1999*



# Presentation Overview

## Topics to be Covered

- Pipeline(s) Release Assessment
- Central Plume Remediation

# Pipeline(s) Release Assessment

- Soil Impacted
  - Approx. 6500 CY
  - 25 Feet Below Surface
- TPH Concentrations
  - 1860 PPM @ 25 Feet BGS
  - No Free (Floating) Product

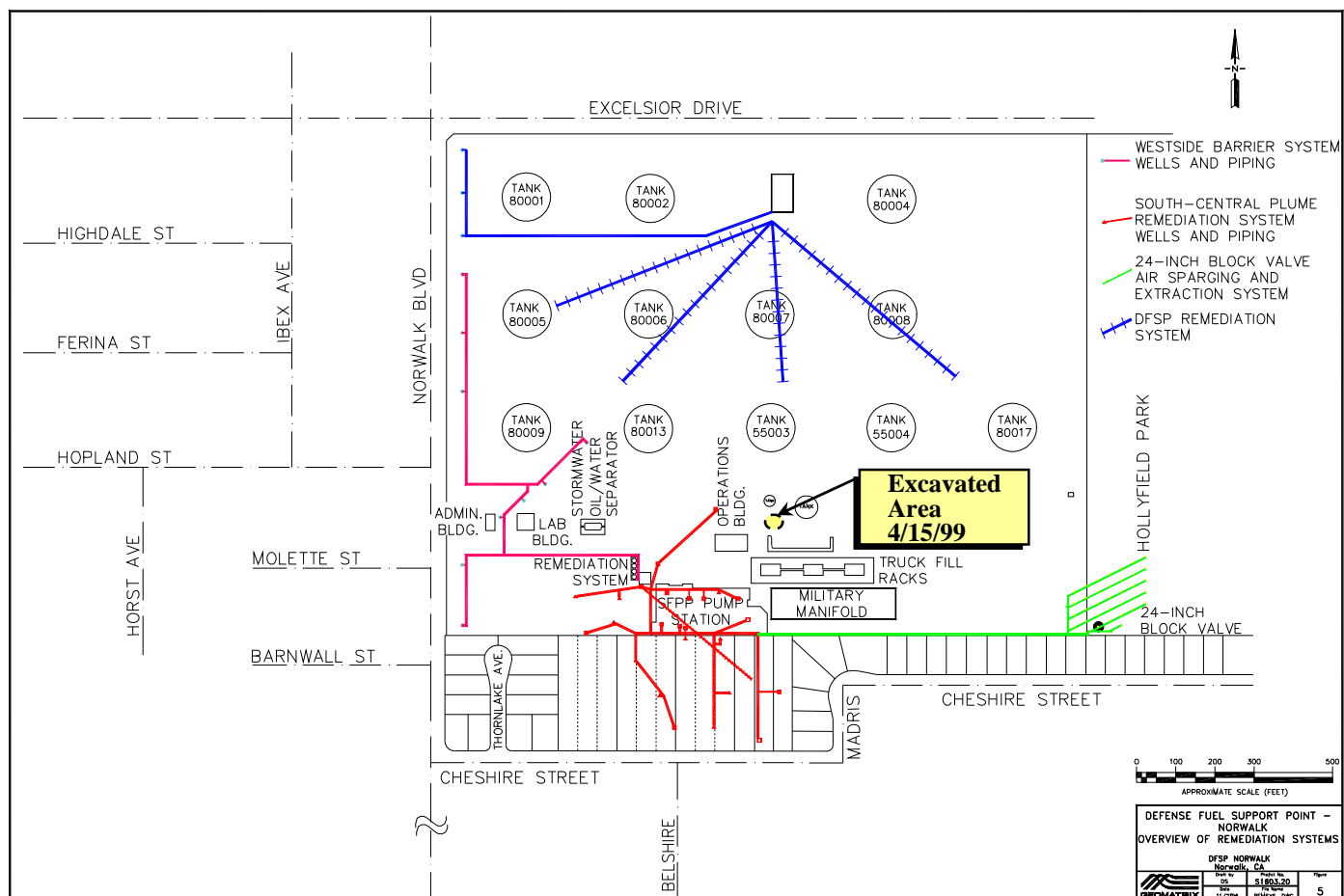
# Pipeline(s) Release Assessment

- Benzene Concentrations
  - 0.005 PPM to 5 PPM @ 10 Feet BGS
  - None Detected Below 20 Feet BGS
- No 1,2-DCA Detected
- No MTBE Detected

# Pipeline(s) Release Assessment

- Recommendations
  - No Further Action Until DFSP Closes
  - Remove Tank and Surrounding Piping;  
Excavate Impacted Soil, Biotreat On Site or  
Treat in Thermal Unit

# Pipeline(s) Release Assessment



# Central Plume Remediation

- System Performance Since April 1996
  - Approx. 102,500 Gallons Recovered and Destroyed
  - Approx. 84,000 Gallons Biodegraded
  - 18.4M Gallons of Water Treated
  - 515 Gallons of Dissolved Phase Recovered
  - Approx. 200,000 Gallons Remain in Subsurface

# Central Plume Remediation

- System Enhancement
  - Four Horizontal Vapor Extraction Wells Rehabilitated
  - Product Recovery Pumps Modified
  - Pumps and Piping Changed Within Treatment Compound
  - Implement 16 Bio-Sparging Wells to Enhance In-situ Bioremediation (Inject Air Below Groundwater to Strip Product Trapped Below Groundwater Surface)



## HYDROCARBONS & FREE PRODUCT - CENTRAL PLUME

