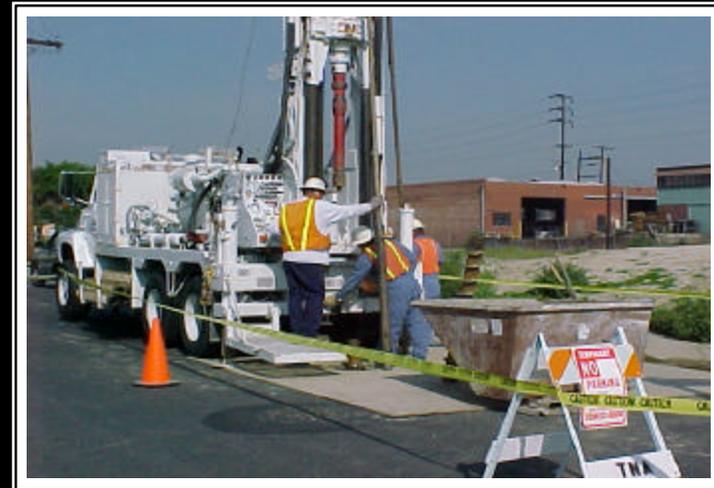




PEMACO SUPERFUND SITE

FIELD INVESTIGATION WINTER/SPRING 2001





Pemaco Superfund Site

Summary of groundwater and soil investigations

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PEMACO SUPERFUND SITE

Site History

- Plant operated as a chemical blending facility at 5050 Slauson Avenue from 1940s until 1991
- hazardous chemicals stored onsite in 31 underground storage tanks, 6 aboveground tanks, over 400 drums



Site History (continued)

- Chemicals included alcohols, xylene, toluene, acetone, and other compounds
- EPA conducted Expanded Site Inspection in May 1997
- Floating product consisting of petroleum hydrocarbons and 12 volatile organic compounds recovered from perched groundwater



Site History (continued)

- EPA conducted emergency removal from August 1997 until April 1998
 - excavated 30 underground storage tanks
 - demolished onsite structures
 - installed thermal oxidation until to destroy underground soil vapors generated by soils surrounding the underground tanks



Site History (continued)

- EPA listed site on National Priority list on January 19, 1999
- EPA removed thermal oxidation from site during March 1999
- EPA started field investigations February 2001

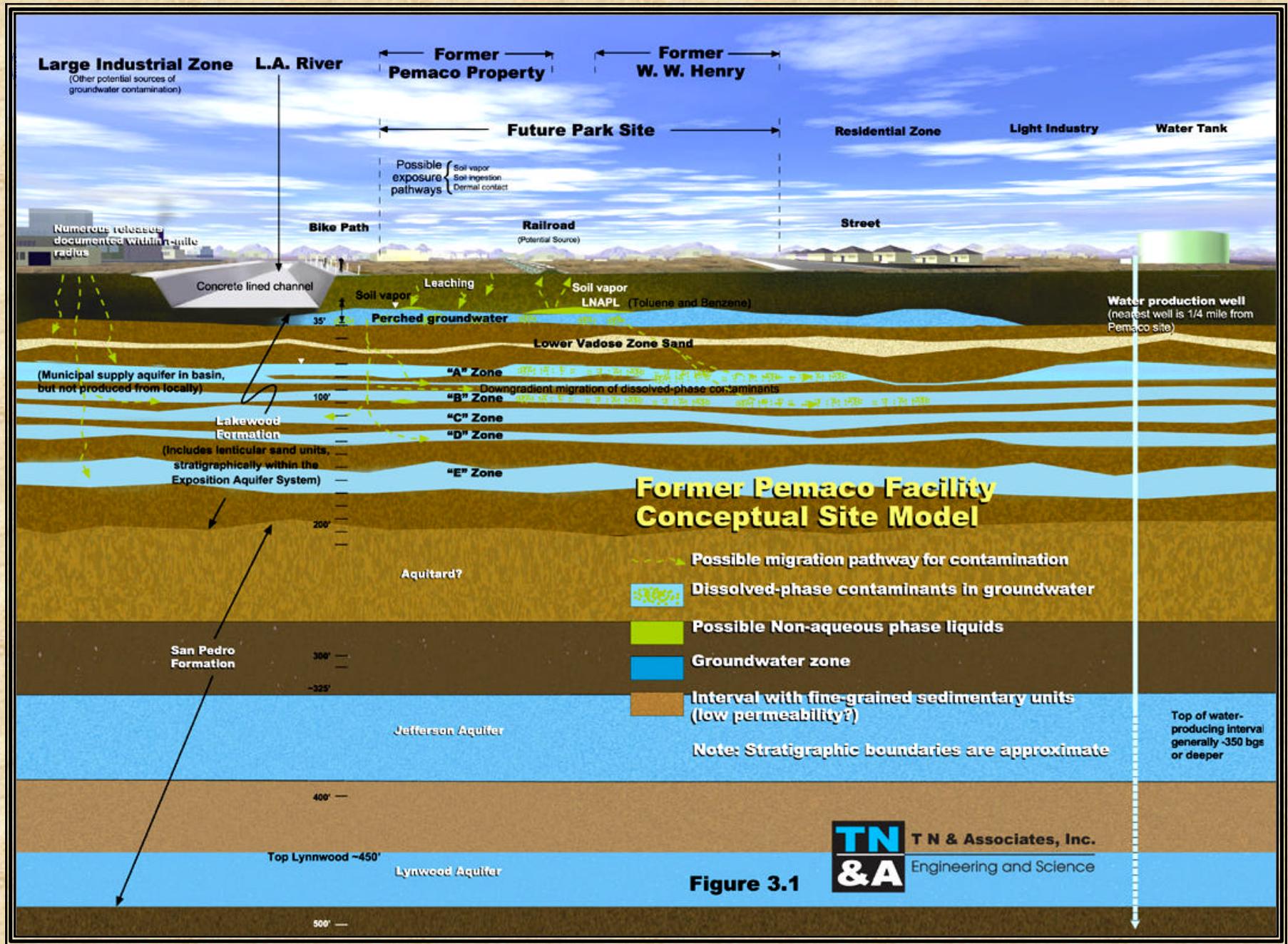


Figure 3.1



SUMMARY OF FIELD WORK

Soil Vapor

- collected Soil vapor samples from 60 locations to determine extent of contamination in soil vapor at 5 feet below ground surface



COLLECTING A SOIL VAPOR SAMPLE



SUMMARY OF FIELD WORK

Soil Samples

- collected 153 soil samples onsite and offsite from 83 locations (0.5-2.5 bgs)
- collected 36 soil samples from 9 locations at 35'-65' feet bgs
- collected 153 soil samples from 54 locations at 10'-35' bgs



EXAMPLE OF A SOIL SAMPLE OR "CORE"



**SAMPLING ALONG THE RAIL TRACKS BETWEEN THE PEMACO
SITE AND THE FORMER W.W. HENRY PROPERTY**



SUMMARY OF FIELD WORK

Perched Zone (30'-35' feet bgs)

- Installed 33 Hydropunch locations to screen extent of contamination in the groundwater
- Installed 16 perched groundwater monitoring wells



USING A “DIRECT-PUSH” RIG TO OBTAIN SOIL, SOIL VAPOR AND GROUNDWATER SAMPLES



SUMMARY OF FIELD WORK

Lakewood Formation 70'- 90' feet bgs

- Collected screening groundwater samples from 15 locations
- installed 17 groundwater monitoring wells
- installed one lower Lakewood formation monitoring wells (165' - 175' feet bgs)



**PREPARING A LOCATION ON 59TH STREET TO INSTALL A
GROUNDWATER MONITORING WELL**



DRILLING WITH A HOLLOW STEM AUGER RIG TO INSTALL A GROUNDWATER MONITORING WELL



**DRILLING WITH A MUD ROTARY RIG ALONG ALAMO STREET TO
INSTALL A GROUNDWATER MONITORING WELL**



COLLECTING A GROUNDWATER SAMPLE FROM A MONITORING WELL



SITE CONTAMINATION

SOIL VAPOR 5 FEET BGS

- 56 LOCATIONS
 - TCE, PCE, DCE, VINYL CHLORIDE



SITE CONTAMINATION

Perched Groundwater
(30'-35' feet bgs)

- Historical investigations found the following:
 - Vinyl chloride
 - tetrachloroethene (PCE)
 - trichloroethene (TCE)
 - 1,1,1-trichloroethane (TCA)
 - 1,1 dichloroethenes(1,1 DCE)
 - 1,2 dichloroethenes 1,2 DCE



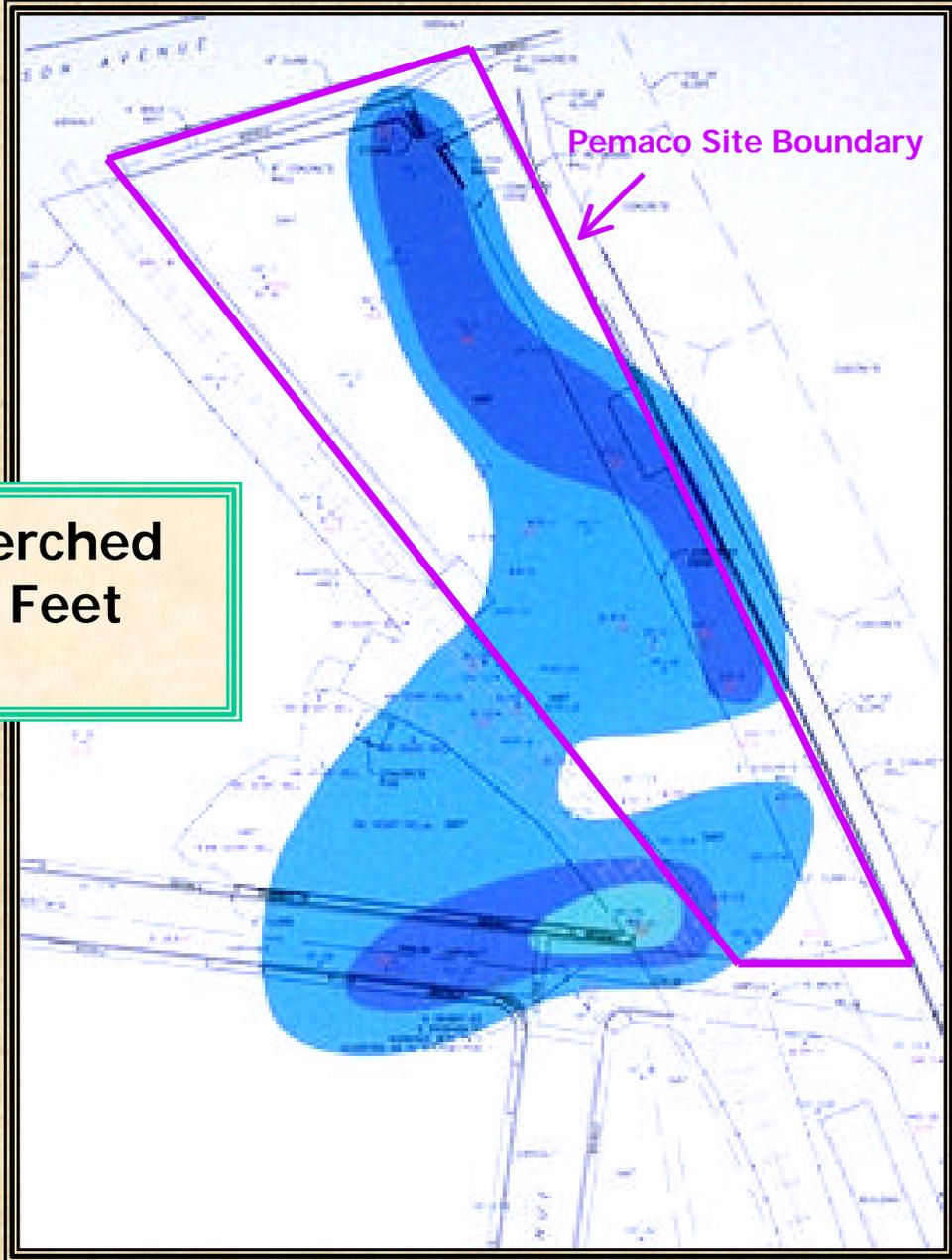
SITE CONTAMINATION

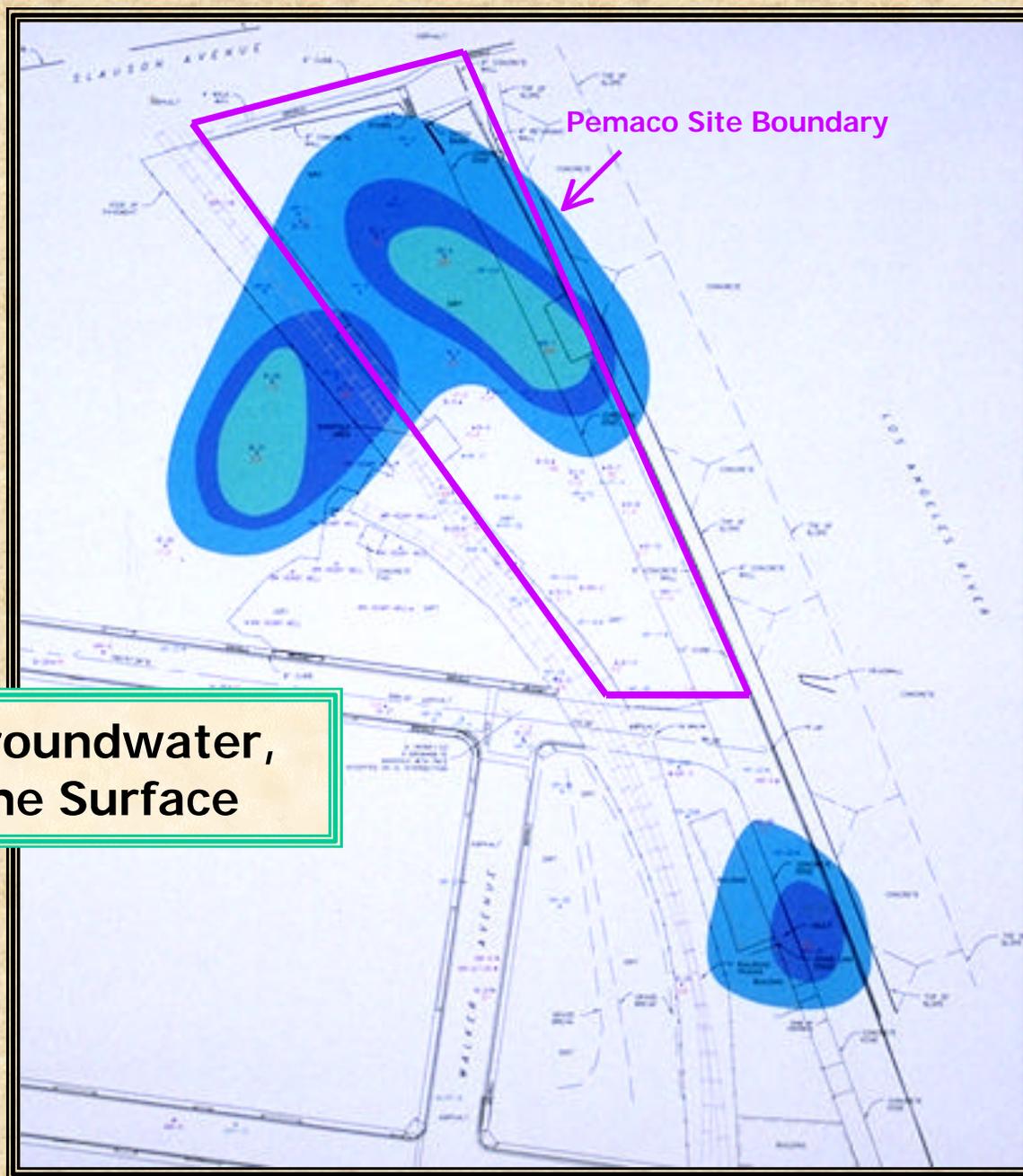
Groundwater

- Benzene, toluene, vinyl chloride, TCE, DCE, DCA, xylenes and many other chemicals
- following maps show groundwater plumes for vinyl chloride, trichloroethylene (TCE) and benzene

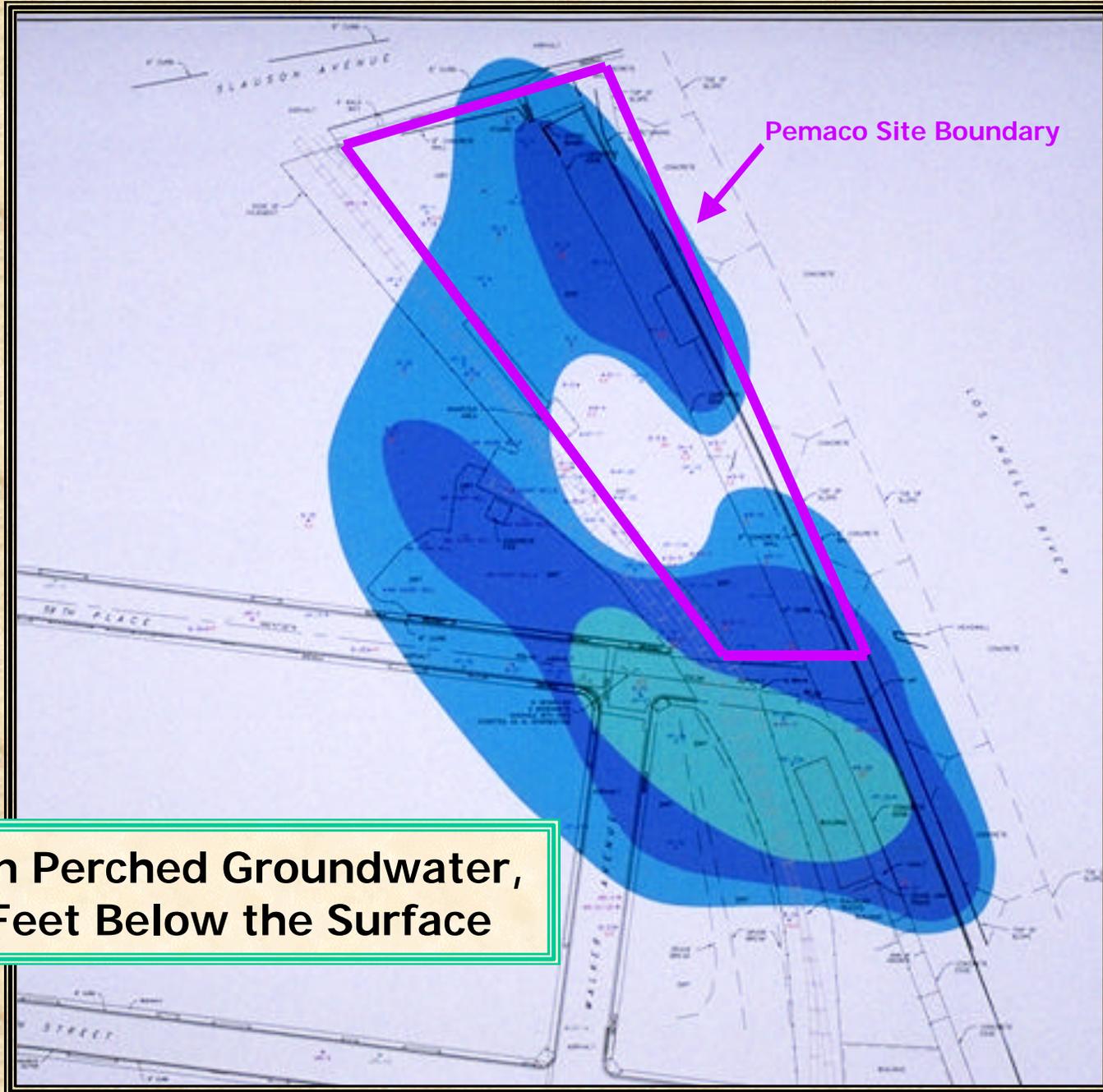


**Vinyl Chloride in Perched
Groundwater, ~30 Feet
Below the Surface**





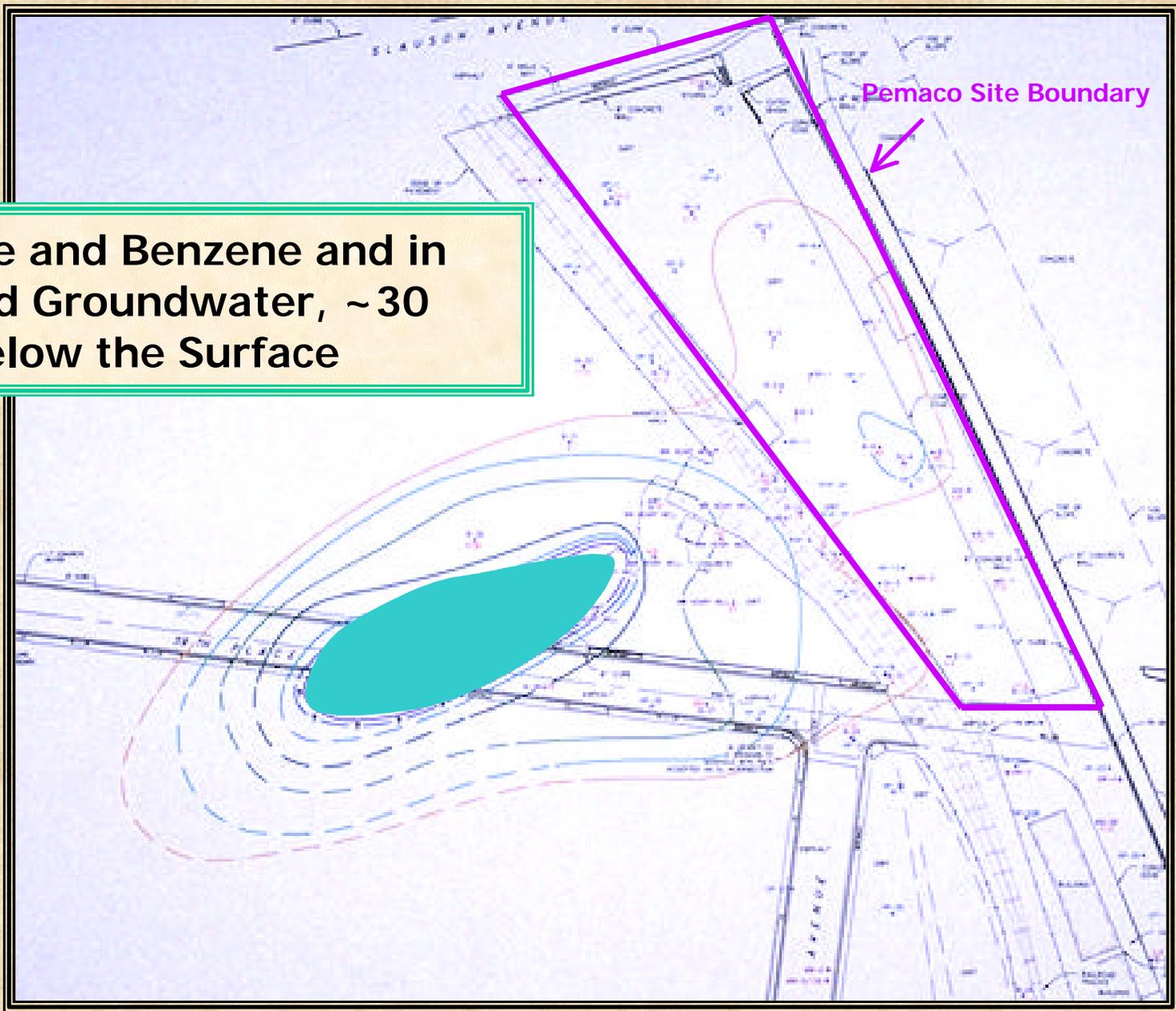
**PCE in Perched Groundwater,
~ 30 Feet Below the Surface**



**TCE in Perched Groundwater,
~ 30 Feet Below the Surface**

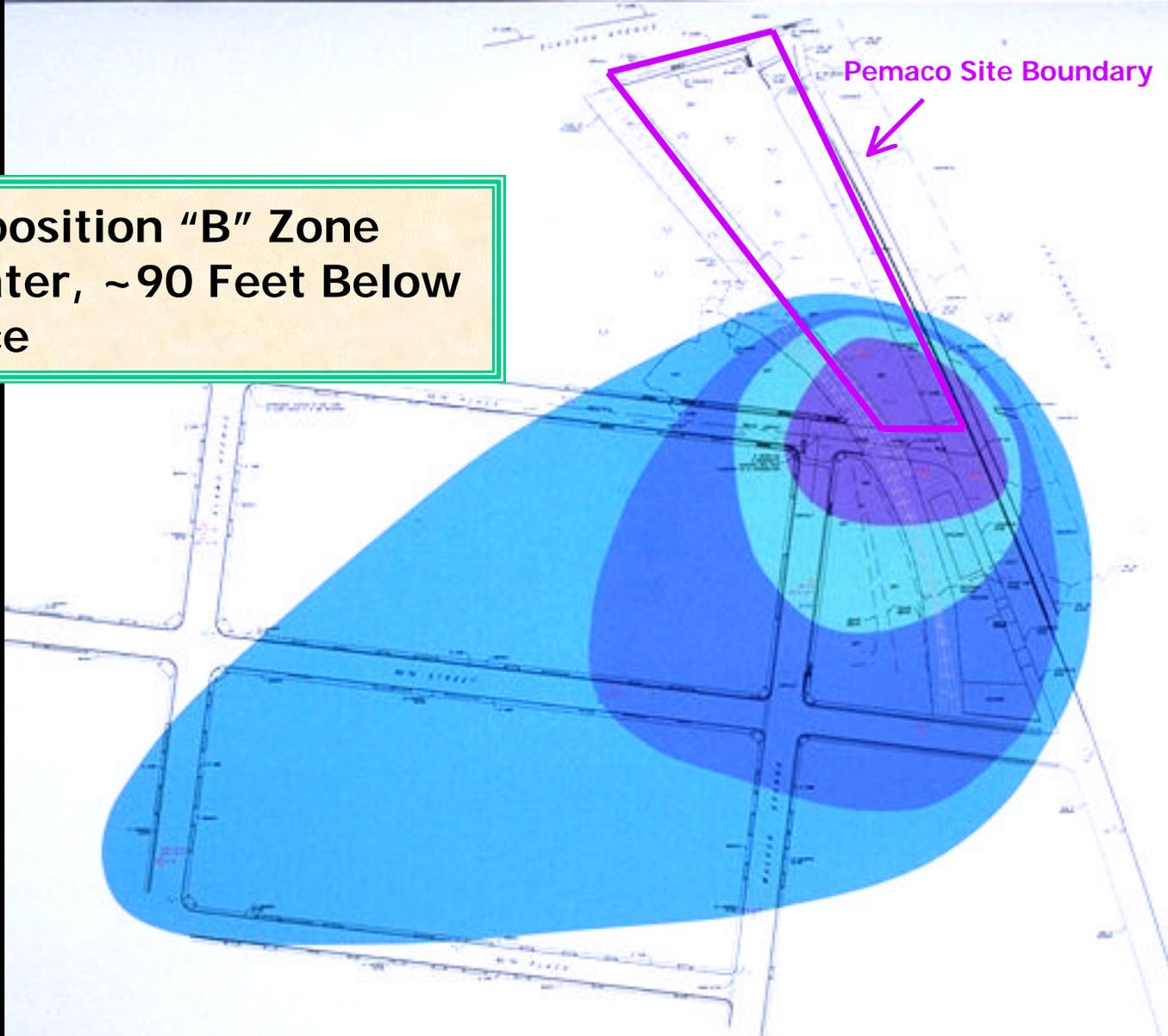


Toluene and Benzene and in Perched Groundwater, ~30 Feet Below the Surface





**TCE in Exposition "B" Zone
Groundwater, ~90 Feet Below
the Surface**





**DEVELOPING A GROUNDWATER MONITORING WELL
ALONG WALKER AVENUE**



**COLLECTING A SAMPLE OF
“FREE PRODUCT” FROM A
GROUNDWATER
MONITORING WELL ALONG
THE RAIL TRACKS**



NEXT STEPS

- Quarterly groundwater sampling
September 2001
- EPA review of innovative cleanup technologies
- Fill Data gaps
 - extent of acetone contamination
 - pump tests on groundwater aquifer



NEXT STEPS

- Installation of pilot scale treatment system
- Finalize and publish Remedial Investigation Report
- Finalize Feasibility Study
 - will summarize treatment technologies