



Motorola 52nd Street Superfund Site-OU2 Effectiveness Report

CIG Meeting November 10, 2011



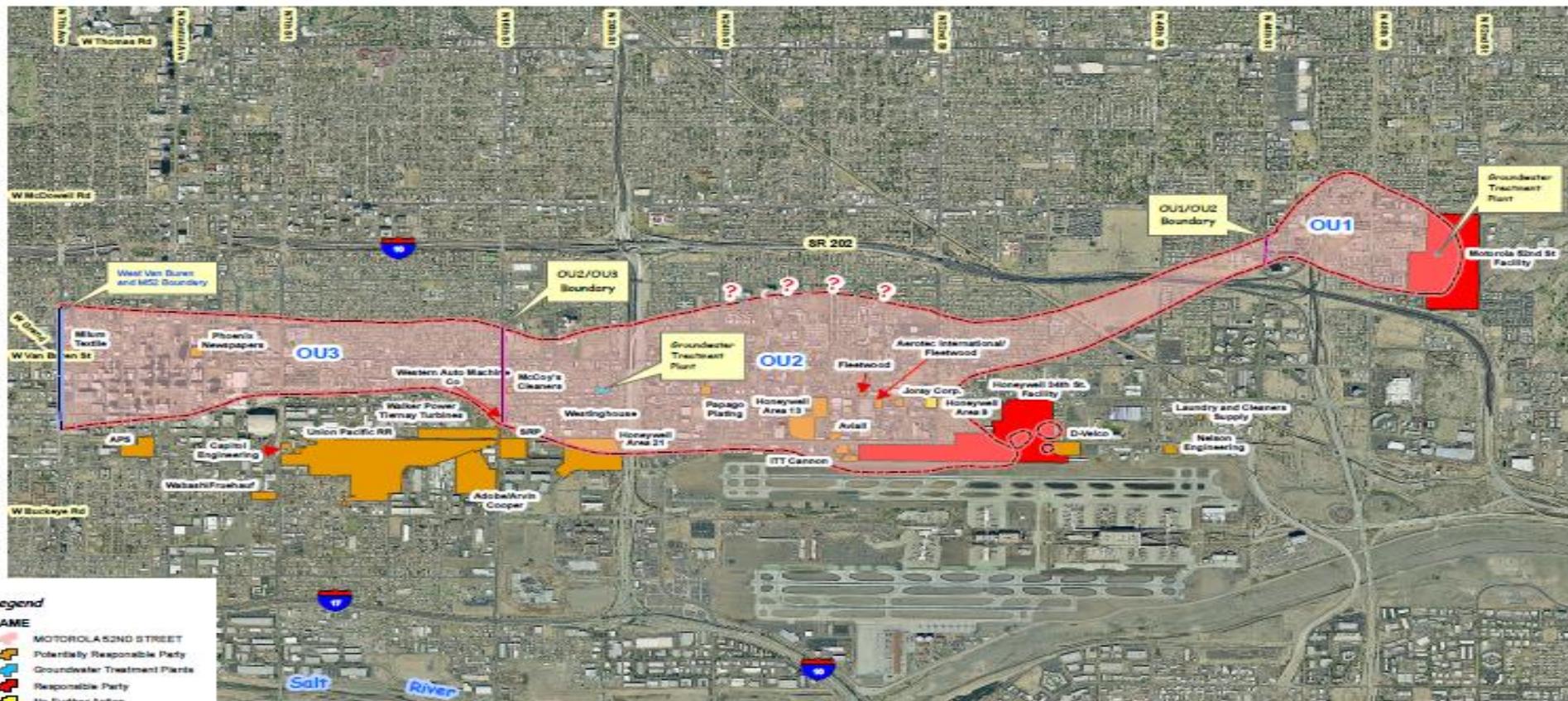
**Arizona Department of
Environmental Quality**



**U.S. Environmental
Protection Agency, Region 9**

Site-Wide Map

MOTOROLA 52ND STREET SUPERFUND SITE PHOENIX, ARIZONA



- Legend**
- NAME
 - MOTOROLA 52ND STREET
 - Potentially Responsible Party
 - Groundwater Treatment Plants
 - Responsible Party
 - No Further Action

Contour represents area of volatile organic compounds in alluvial and bedrock groundwater that exceed the Aquifer Water Quality Standards.

? = Insufficient Data

WASTE PROGRAMS DIVISION
GIS and Data Management Unit
Map produced by Arizona Department of Environmental Quality (ADEQ), GIS and Data Management Unit, 15 Summers
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Project\2010\MS2-2010\520scow.mxd



Site boundaries depicted on the site map represent ADEQ's interpretation of data available at the time the map was constructed. The map is intended to provide the public with basic information as to the estimated geographic extent of known contamination as of the date of map production. The actual extent of contamination may be different. Therefore, the geographic boundaries for this site may change in the future as new information becomes available.

OU2 Treatment System at 20th Street and Washington



Purpose

Purpose of Annual Effectiveness Report

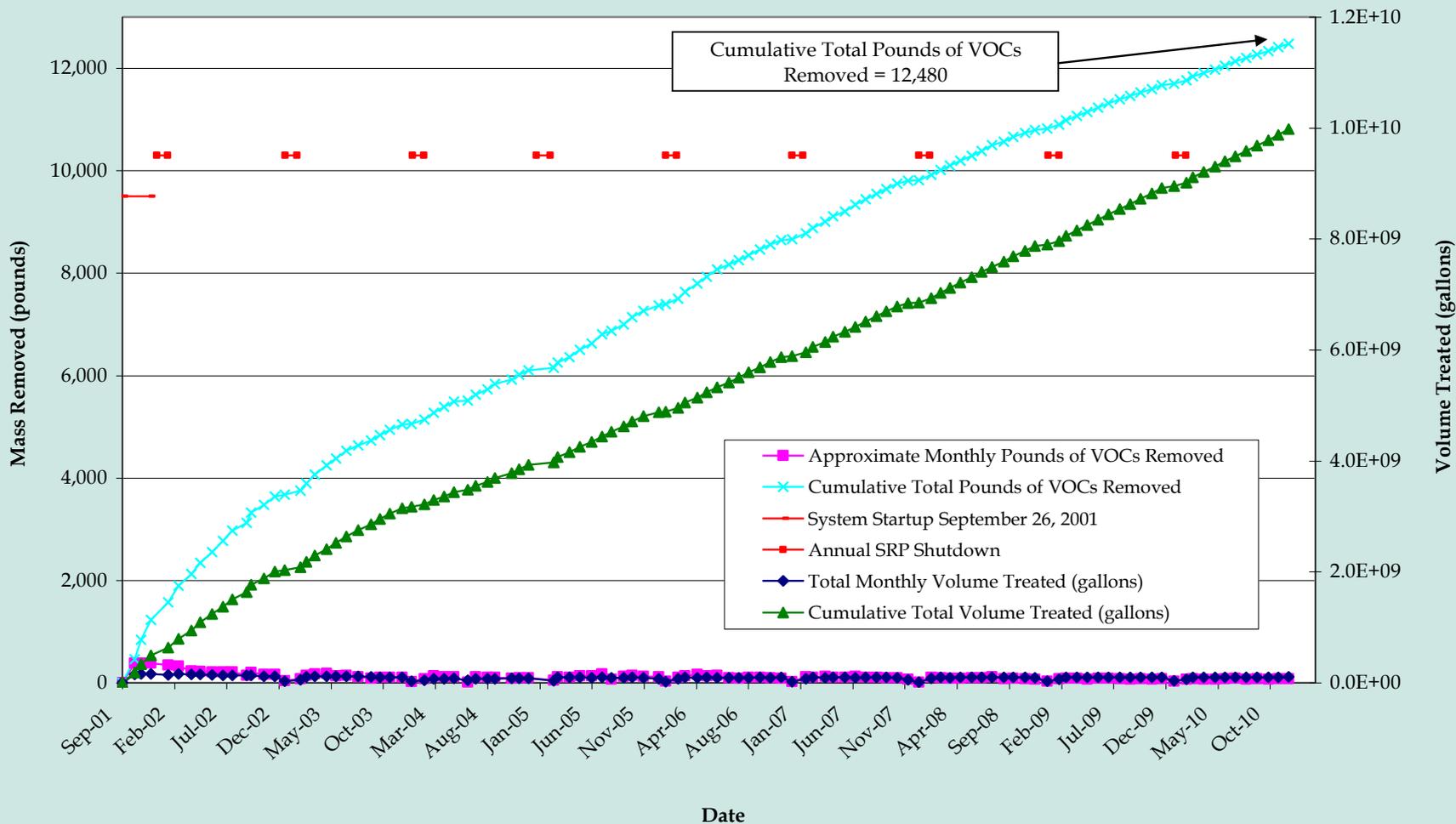
- Evaluate Effectiveness compared to Baseline 2001 and 2006 conditions
- Show Containment of north-south width and depth of plume at I-10 and 20th Street
- Reduce volatile organic compounds (VOCs) concentrations in groundwater

Contaminants Removed

- OU2 Treatment System at 20th Street and Van Buren
 - 1.1 Billion gallons of water treated in 2010
 - Approximately 812 pounds of VOCs removed in 2010
 - 9.98 Billion gallons of water treated since start-up in 2001
 - Estimated total over 12,480 pounds of VOC's removed since start-up in 2001

VOCs Removed

VOC MASS REMOVED TRENDING
52ND STREET SUPERFUND SITE, OU2 AREA
PHOENIX, ARIZONA



2010 Groundwater Elevations

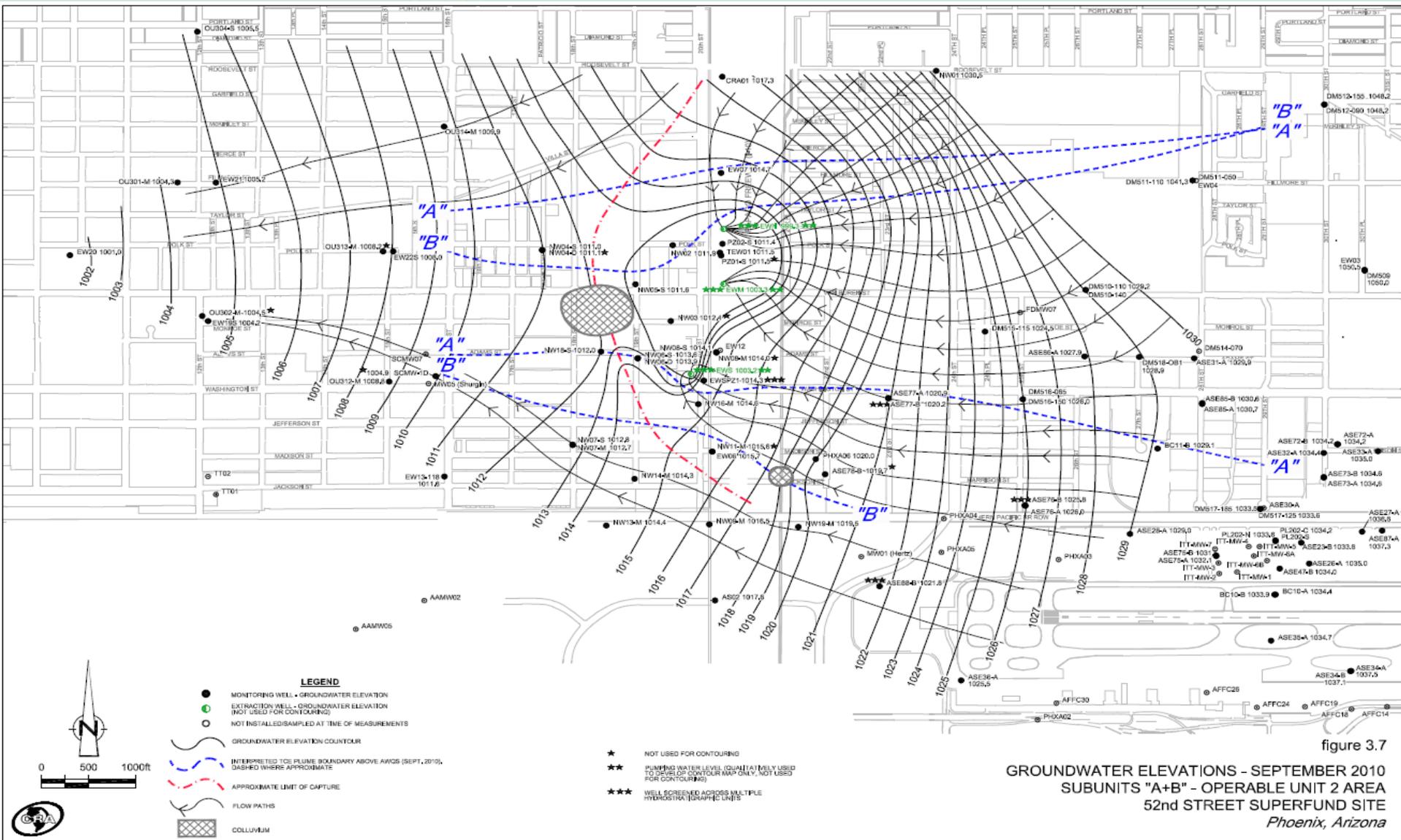


figure 3.7

GROUNDWATER ELEVATIONS - SEPTEMBER 2010
 SUBUNITS "A+B" - OPERABLE UNIT 2 AREA
 52nd STREET SUPERFUND SITE
 Phoenix, Arizona

Baseline TCE Subunit A 2001

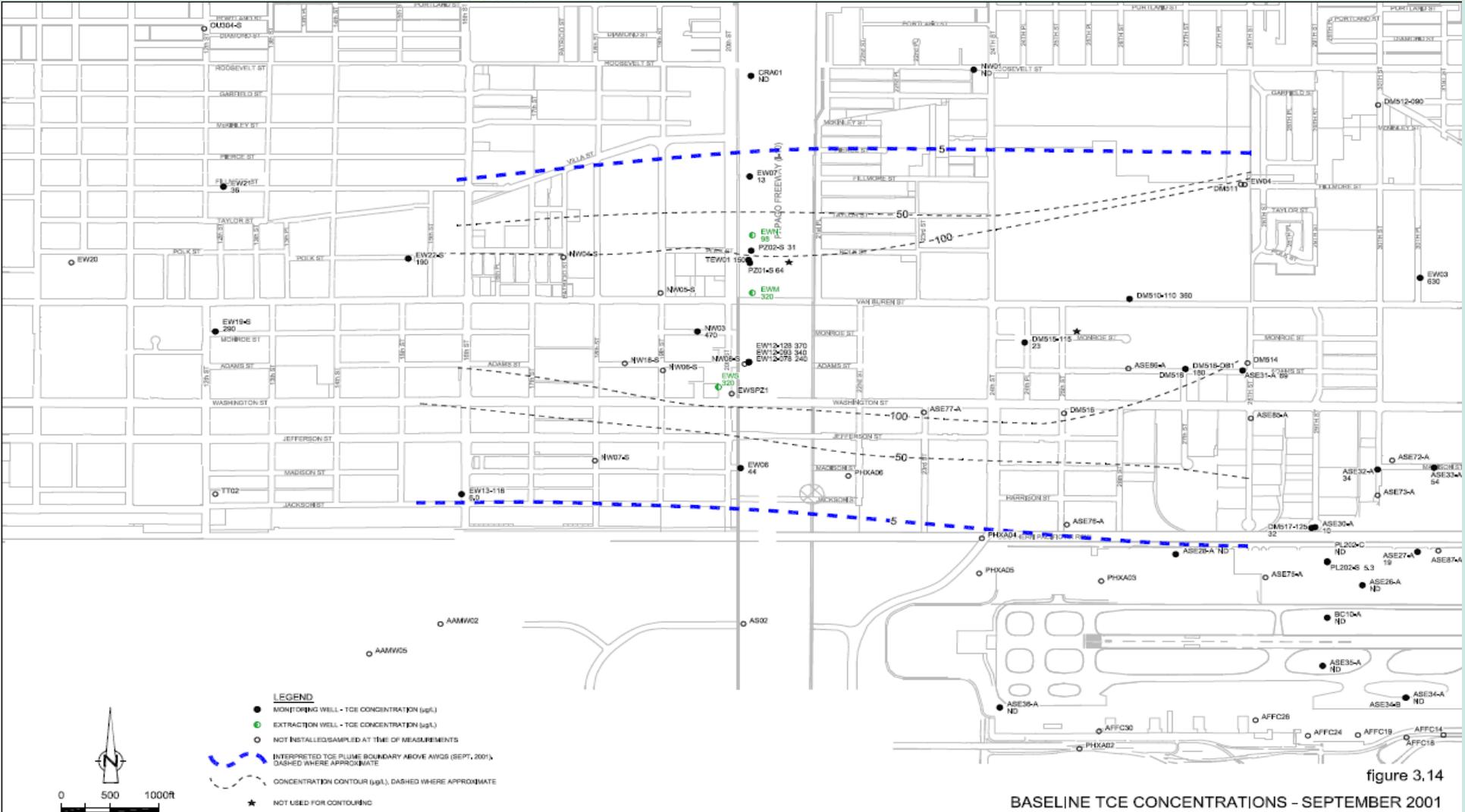
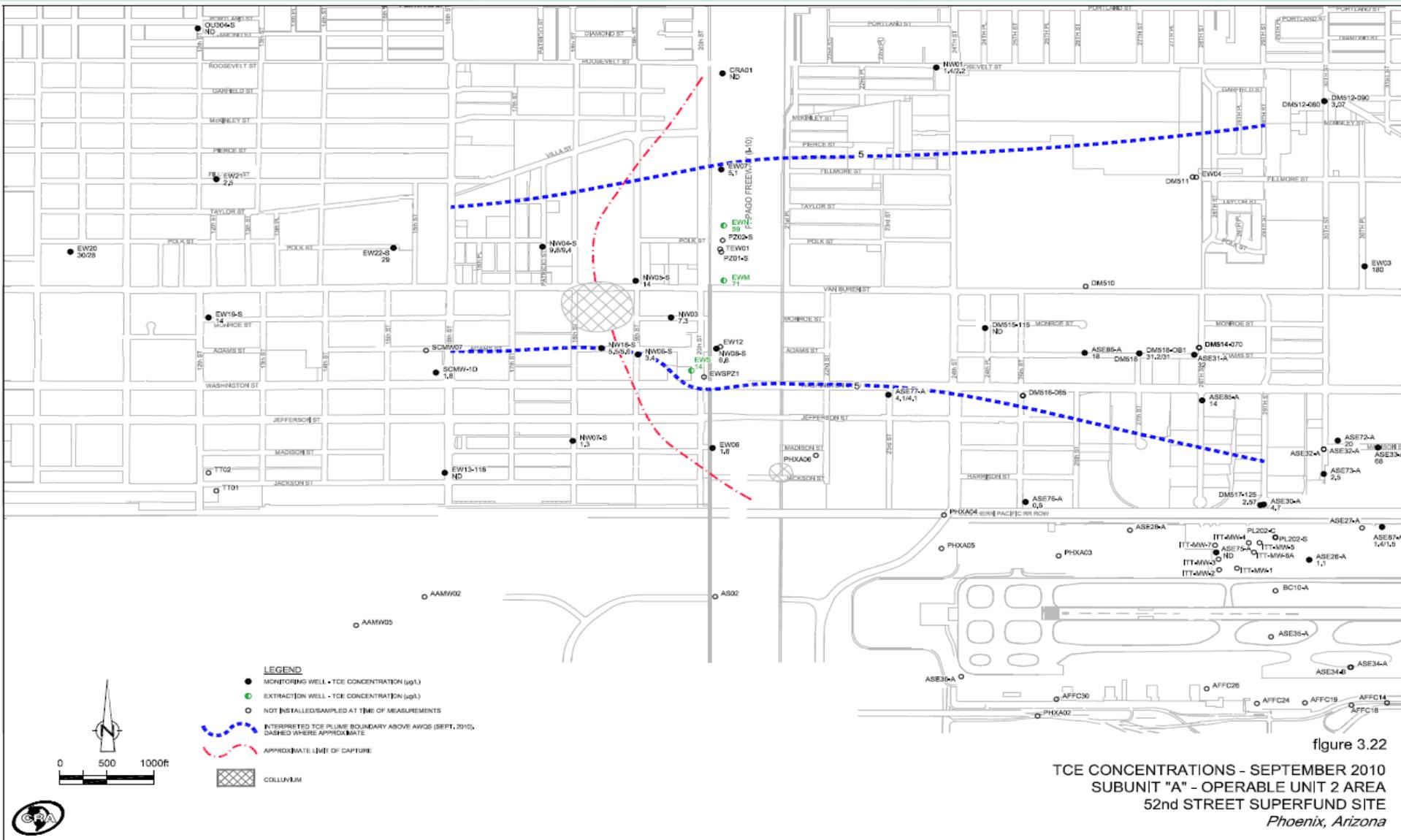


figure 3.14

BASELINE TCE CONCENTRATIONS - SEPTEMBER 2001
SUBUNIT "A" - OPERABLE UNIT 2 AREA
52nd STREET SUPERFUND SITE
Phoenix, Arizona

2010 TCE Subunit A



2010 TCE Subunit B

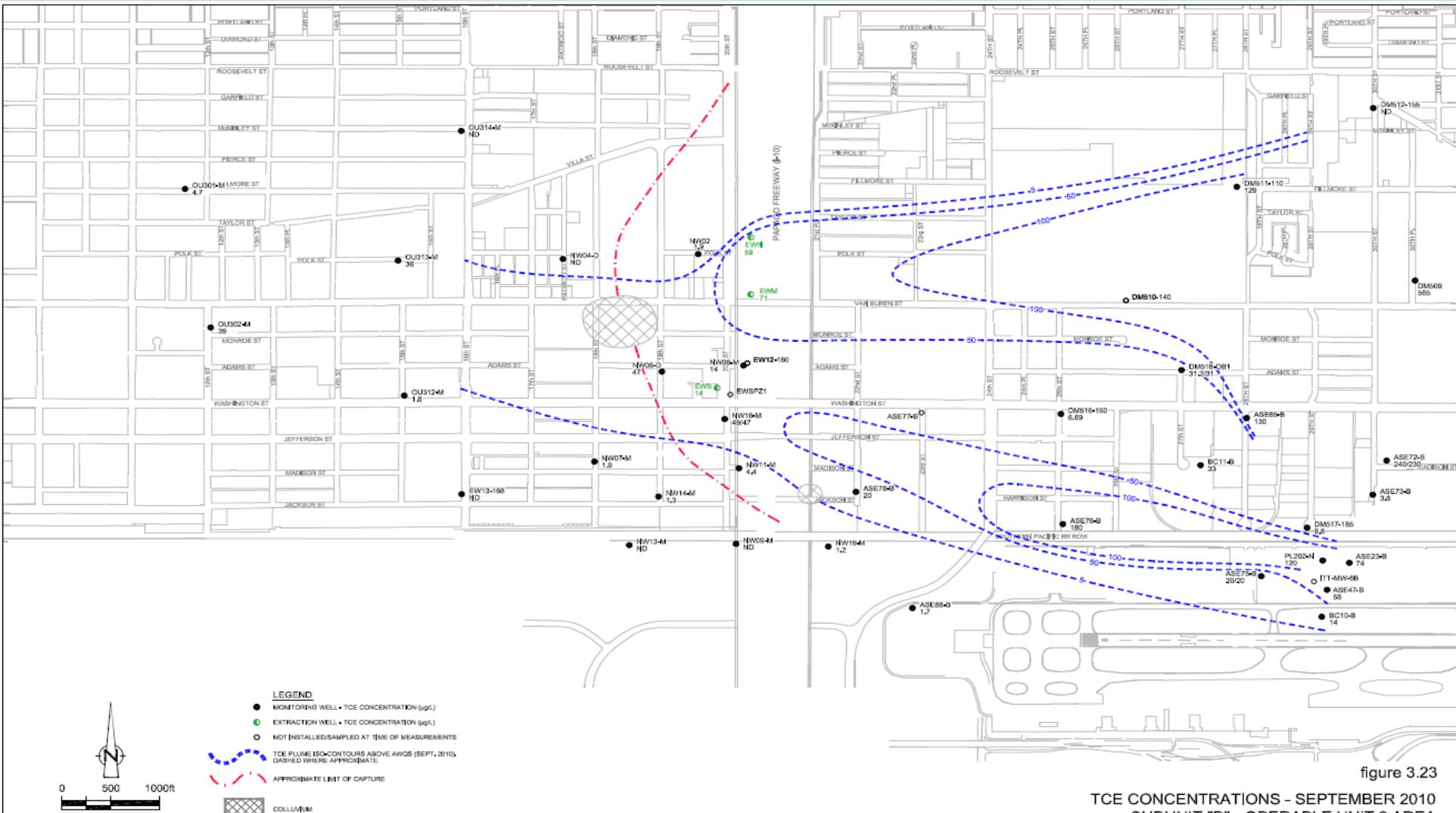


figure 3.23

TCE CONCENTRATIONS - SEPTEMBER 2010
SUBUNIT "B" - OPERABLE UNIT 2 AREA
52nd STREET SUPERFUND SITE
Phoenix, Arizona

2010 TCE Subunit D

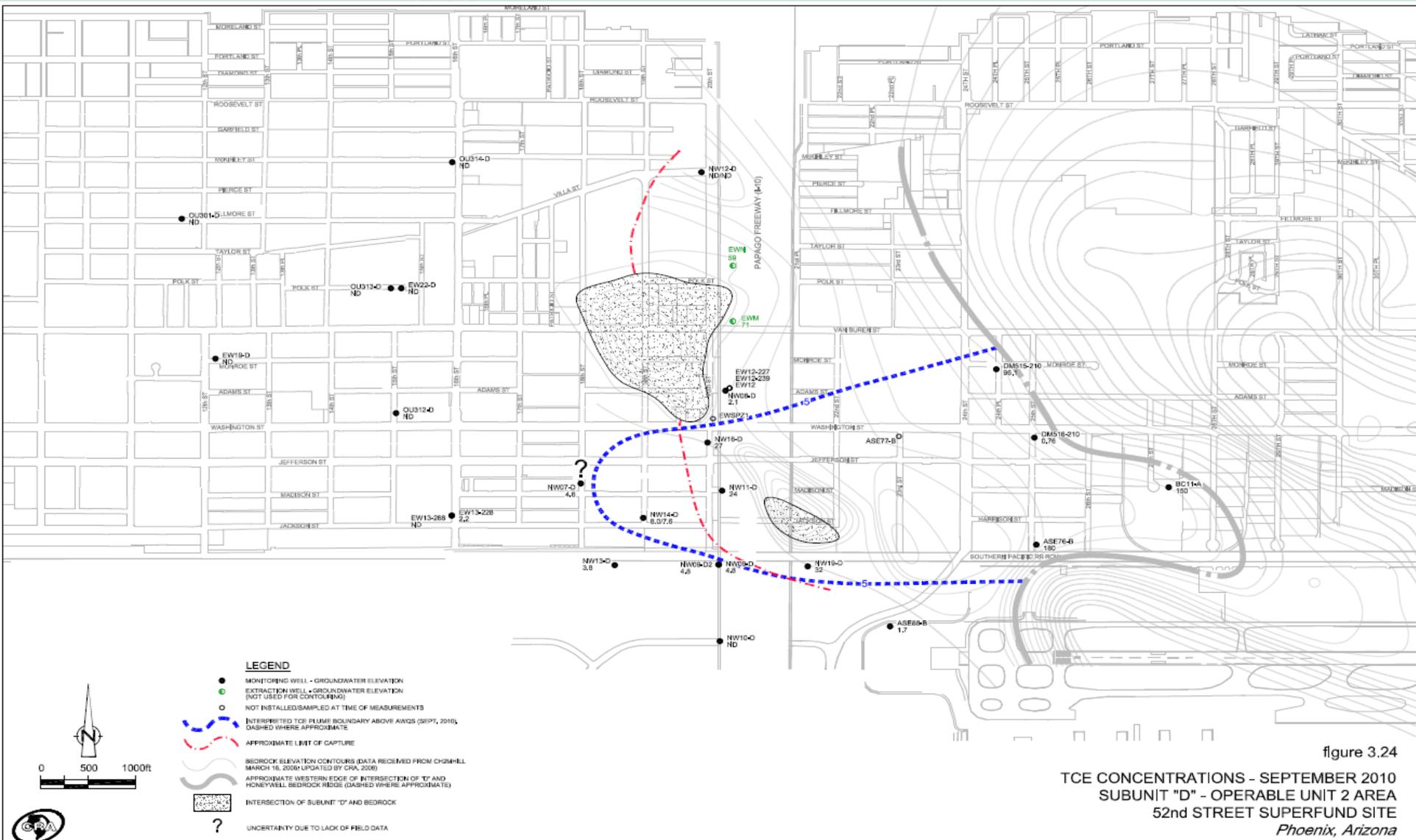
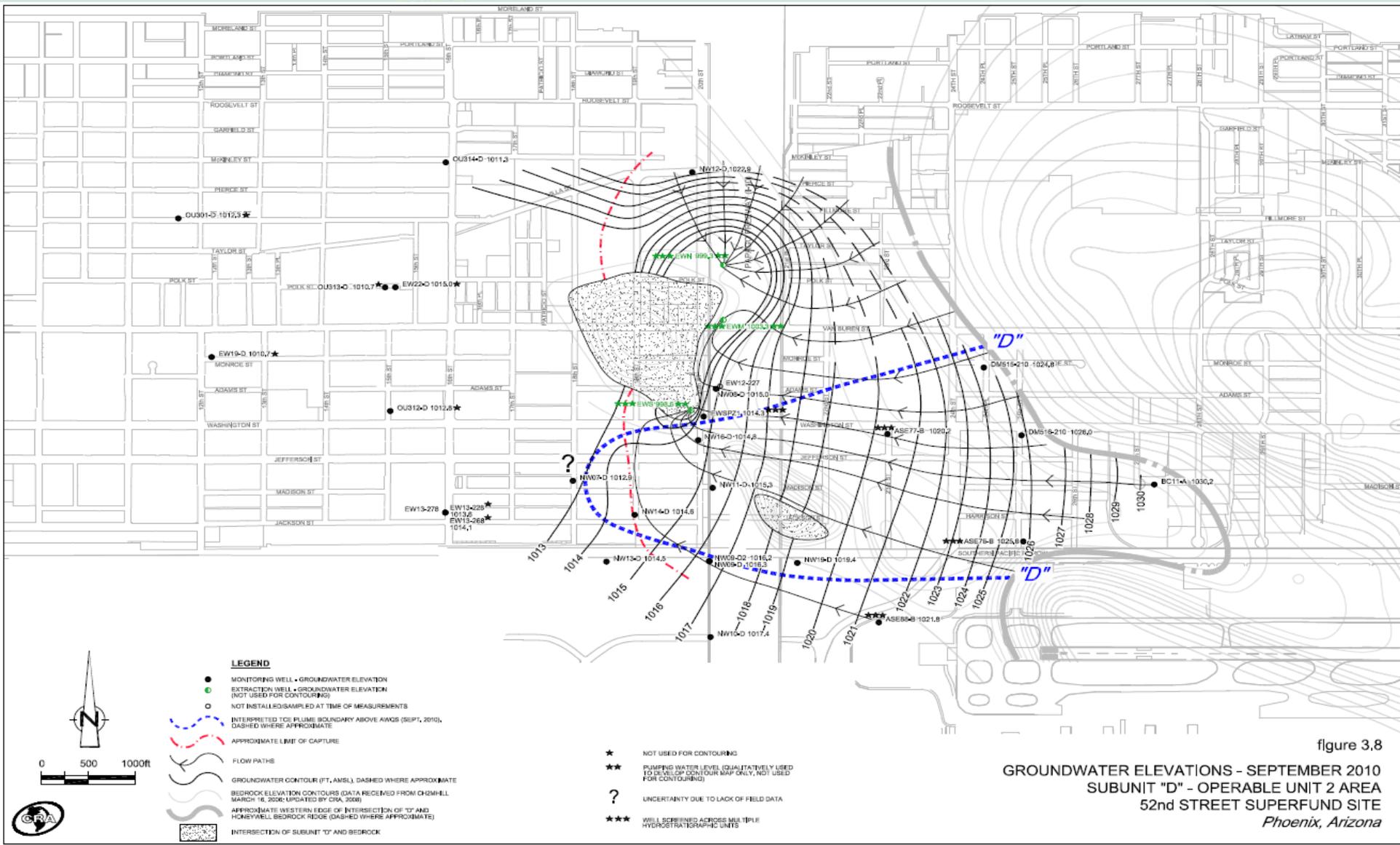


figure 3.24

TCE CONCENTRATIONS - SEPTEMBER 2010
 SUBUNIT "D" - OPERABLE UNIT 2 AREA
 52nd STREET SUPERFUND SITE
 Phoenix, Arizona

2010 TCE Subunit D- Groundwater Elevation





Summary of TCE Decline in Extraction Wells

TCE Concentrations ug/L			
<i>Extraction Well</i>	<i>2001</i>	<i>2006</i>	<i>2010</i>
EWN	98	14	59
EWM	320	170	71
EWS	320	33	14

Baseline TCE Plume 2001 Subunit A OU2 & OU3

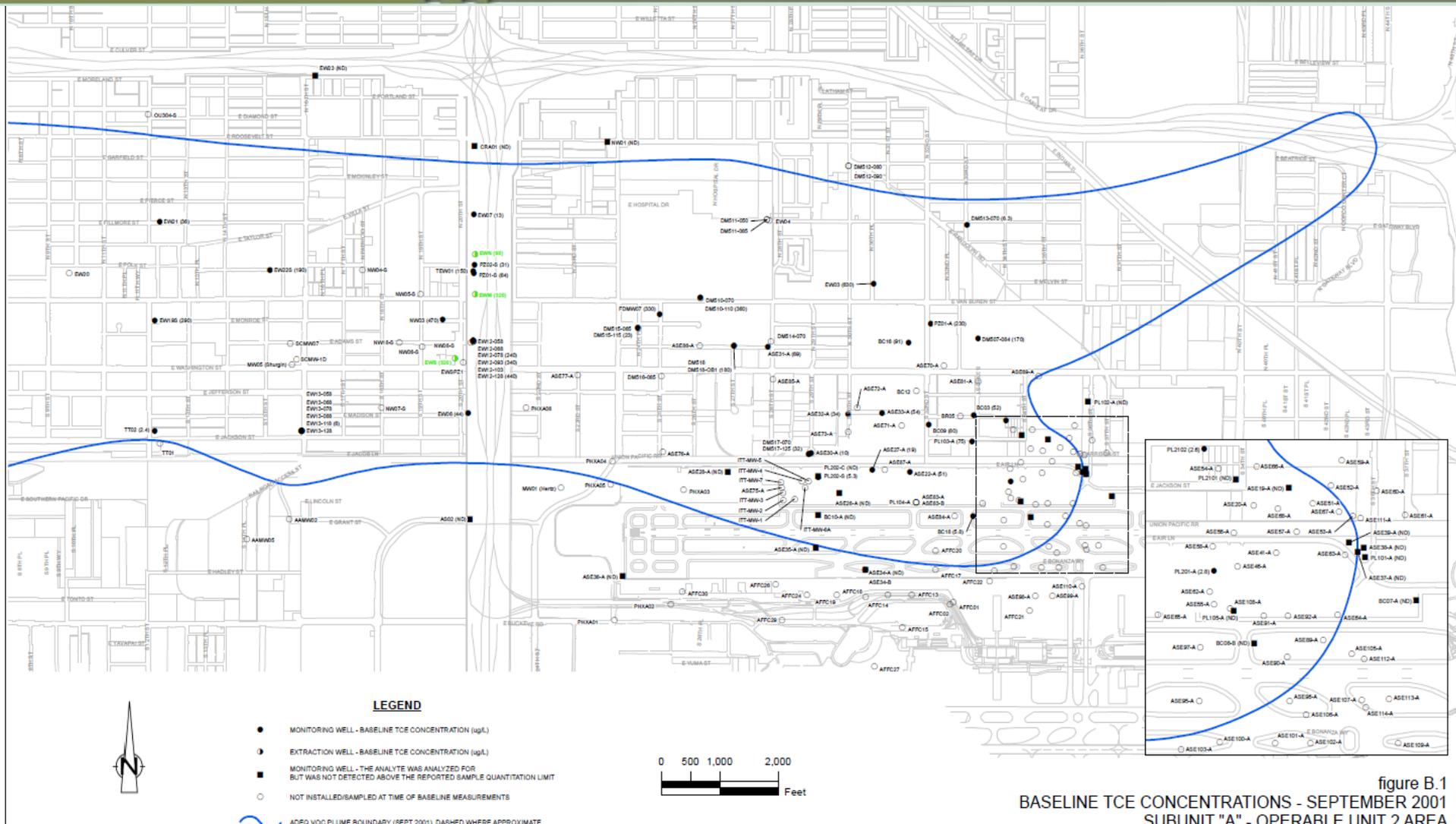
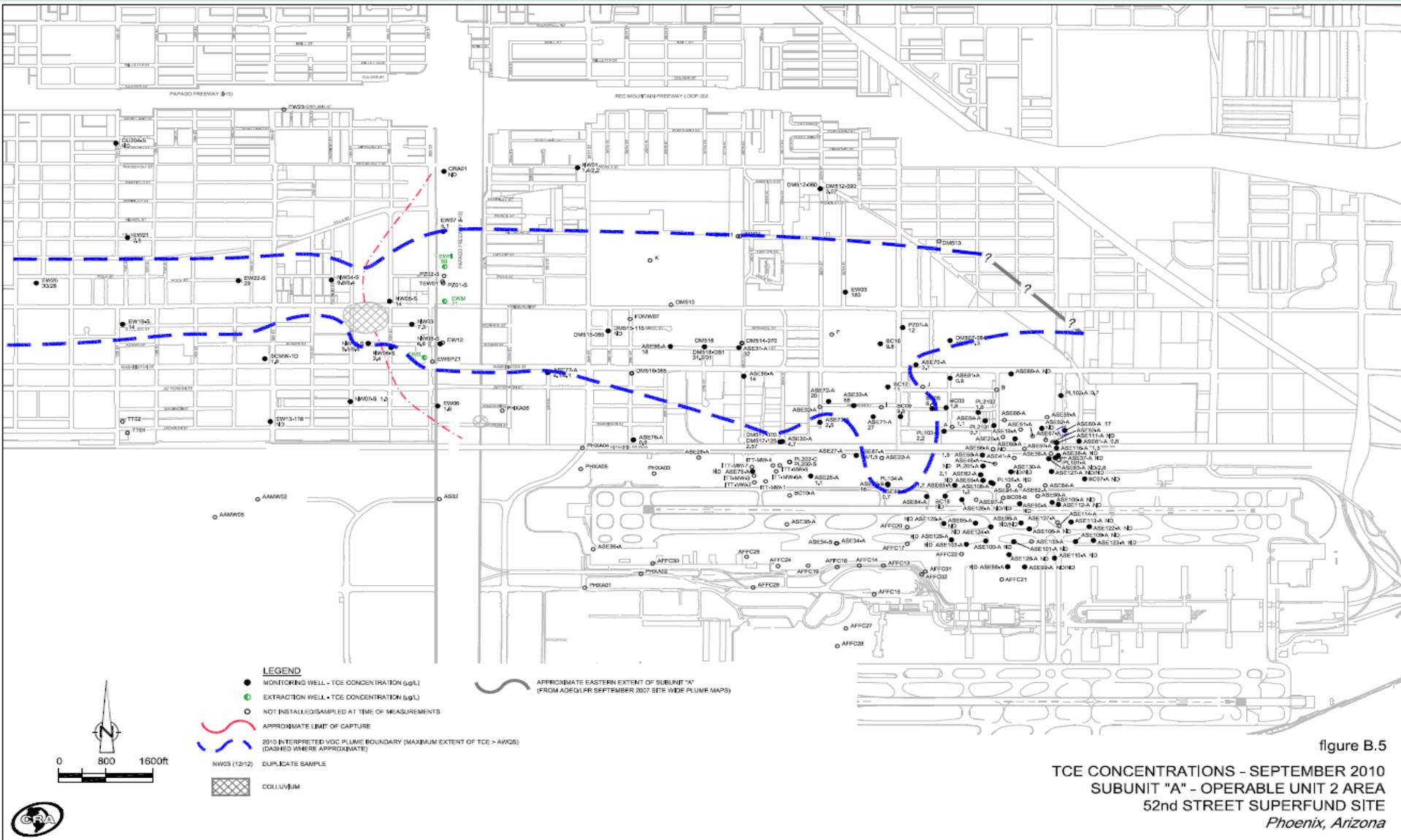


figure B.1
 BASELINE TCE CONCENTRATIONS - SEPTEMBER 2001
 SUBUNIT "A" - OPERABLE UNIT 2 AREA
 52nd STREET SUPERFUND SITE
 Phoenix, Arizona

2010 TCE Plume Subunit A OU2 & OU3 Downgradient



Conclusion and Summary

- Groundwater flow lines and Water surface (Potentiometric) maps demonstrate hydraulic containment
- Groundwater contours in cross-sections demonstrate depth of plume containment
- Statistically significant decreasing concentration trends are occurring downgradient and upgradient
- TCE concentrations have decreased or thinned out demonstrating narrowing of the plume

ADEQ and EPA Comments

- Still need more robust lines of evidence to prove capture in Subunit D to the SW
- Further clarification is needed for how Subunit D sediment was defined
- Clarification of contour lines requested
- Reduction in Boron Sampling Approved from Quarterly to Semi-Annual



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