

0816 77W

R E P O R T

0816 77W

**SECOND SEMIANNUAL 2007 GROUNDWATER
MONITORING REPORT**

**FORMER ASHLAND CHEMICAL COMPANY
10505 SOUTH PAINTER AVENUE
SANTA FE SPRINGS, CALIFORNIA**

Prepared for

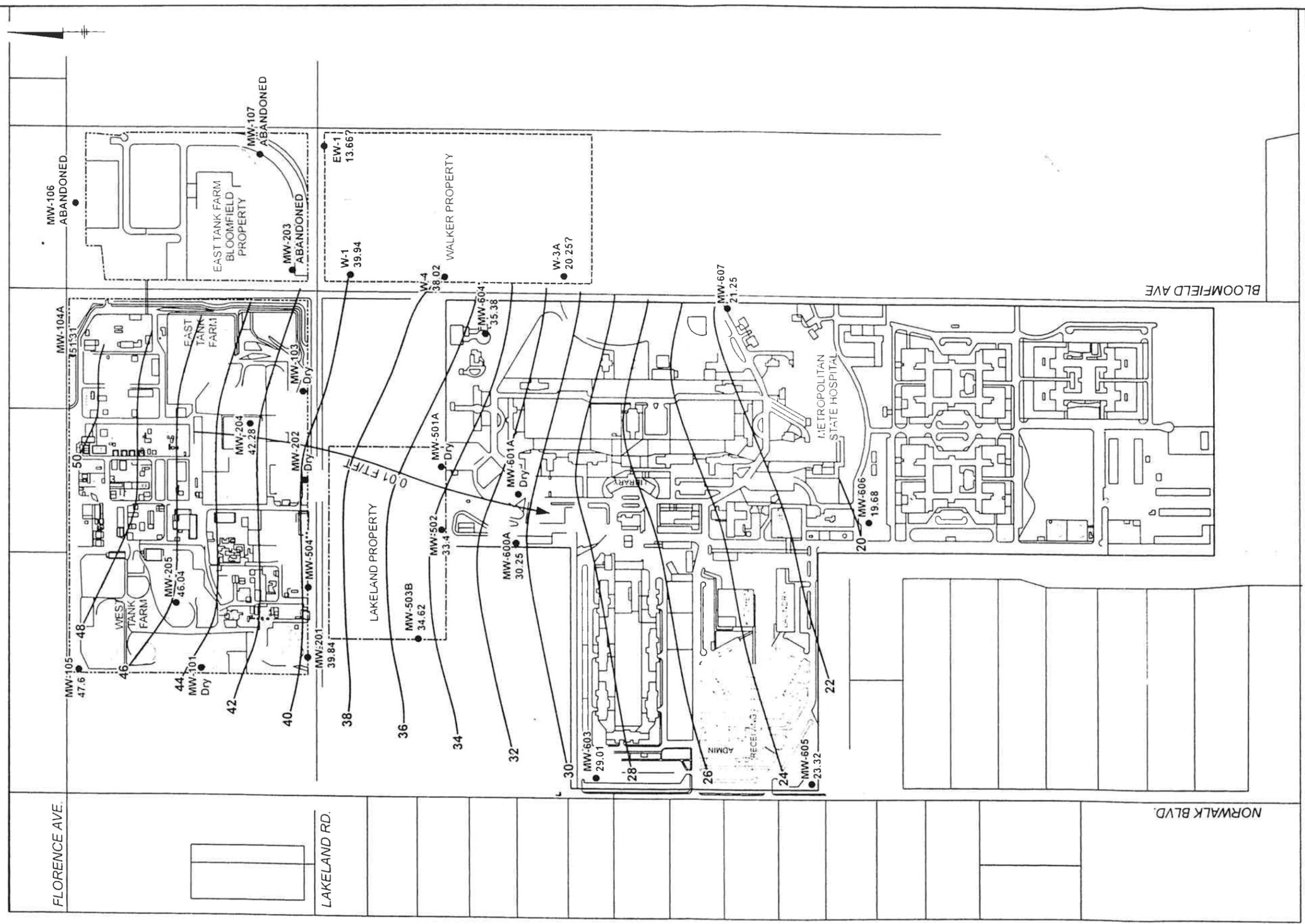
ASHLAND.

Ashland Inc.
5200 Blazer Parkway
Dublin, Ohio

January 15, 2008

URS

2020 East First Street
Suite 400
Santa Ana, California 92705
37680106



- LEGEND:**
- MW-607
23.47
MONITORING WELL LOCATION ID
GROUNDWATER ELEVATION (ft-msl)
 - 24 ——— GROUNDWATER ELEVATION
CONTOUR (ft-msl)
 - - - - - CENCO PROPERTY
 - - - - - FORMER LAKELAND PROPERTY
 - - - - - METROPOLITAN STATE HOSPITAL
 - - - - - WALKER PROPERTY BOUNDARY

- NOTES:**
- 1 * MONITORING WELL MW-604 DID NOT RECOVER AFTER PURGING WHEN SAMPLING WAS ATTEMPTED ON 10/6/2005
 - 2 ** MONITORING WELL MW-504 DID NOT HAVE HYDROCARBONS PRESENT DURING INITIAL GAUGING BUT FOLLOWING PURGING HYDROCARBONS WERE MEASURED
 - 3 ? GROUNDWATER ELEVATION NOT CONSISTENT WITH REGION AND WAS EXCLUDED FROM INTERPOLATION

1/27/06 SYR-85 EAB
Isola and Associates - Former Cenco Refinery
Q:\Isola\Associates\SantaFeSprings\FormerCencoRefinery\G_W_M_Vmxd\GWSurface.mxd

ISOLA AND ASSOCIATES LLP
FORMER CENCO REFINERY
SANTA FE SPRINGS, CALIFORNIA

GROUNDWATER SURFACE ELEVATIONS
OCTOBER 2005

BBL
BLASLAND BOUCK & LEE INC
ENGINEERS, ARCHITECTS, ACCOUNTANTS

0 500 1,000 Feet
GRAPHIC SCALE

Results of Groundwater Characterization of the Oil Field Reclamation Project Study Area (OFRP)



Santa Fe Springs, California

RESTRICTIVE LEGEND: THIS STUDY WAS CONDUCTED IN ACCORDANCE WITH SPECIFIC PROJECT OBJECTIVES AS DETERMINED BY THE OIL FIELD RECLAMATION PROJECT (OFRP). ANY RELIANCE OR REUSE OF ALL OR ANY PORTION OF THE DATA CONTAINED HEREIN OUTSIDE OF ITS INTENDED USE BY OTHER THAN THE OFRP WILL BE AT USER'S SOLE RISK AND LIABILITY.

July 31, 1996

Prepared by:

McLaren/Hart, Inc.
16755 Von Karman Avenue
Irvine, California 92606-4918



Results of Groundwater Characterization

McLaren/Hart Project No. 03.0601373.006

Oil Field Reclamation Project Study Area (OFRP) Santa Fe Springs, California

July 31, 1996

Prepared for: **Oil Field Reclamation Project**
10737 South Shoemaker Avenue
Santa Fe Springs, California 90670

Prepared by: **McLaren/Hart, Inc.**
16755 Von Karman Avenue
Irvine, California 92606-4918



Everett Ferguson Jr.
Associate Geoscientist



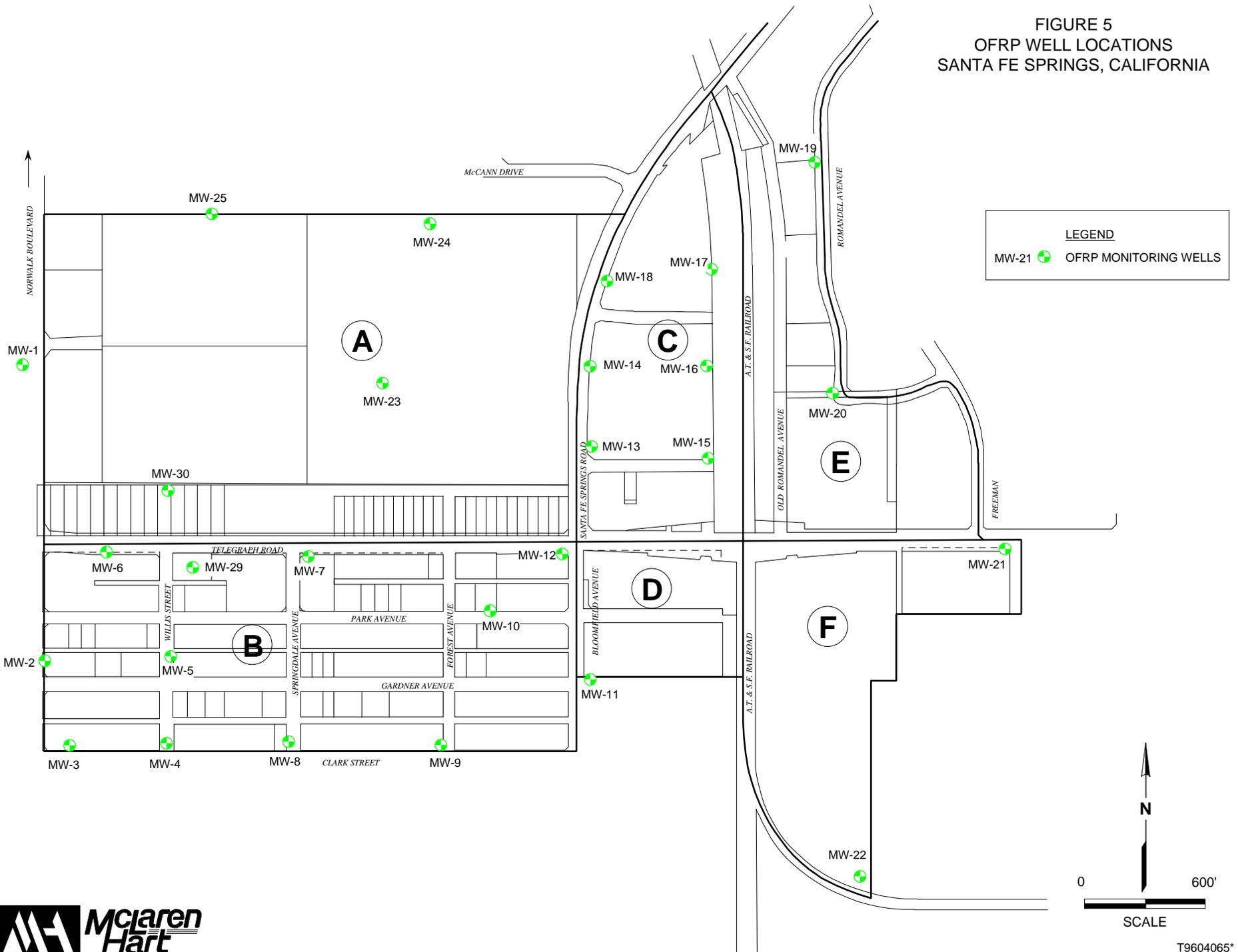
Eric A. Smith, R.G., C.HG.
Senior Geoscientist



Douglas W. Jones, P.E.
Senior Vice President
Managing Principal Engineer



FIGURE 5
 OFRP WELL LOCATIONS
 SANTA FE SPRINGS, CALIFORNIA



GROUNDWATER DATA EVALUATION REPORT

**Waste Disposal, Inc. Superfund Site
Santa Fe Springs, California**

Prepared under Contract DACW05-D-0008 for:

**U.S. Army Corps of Engineers
Sacramento District
Sacramento, California**

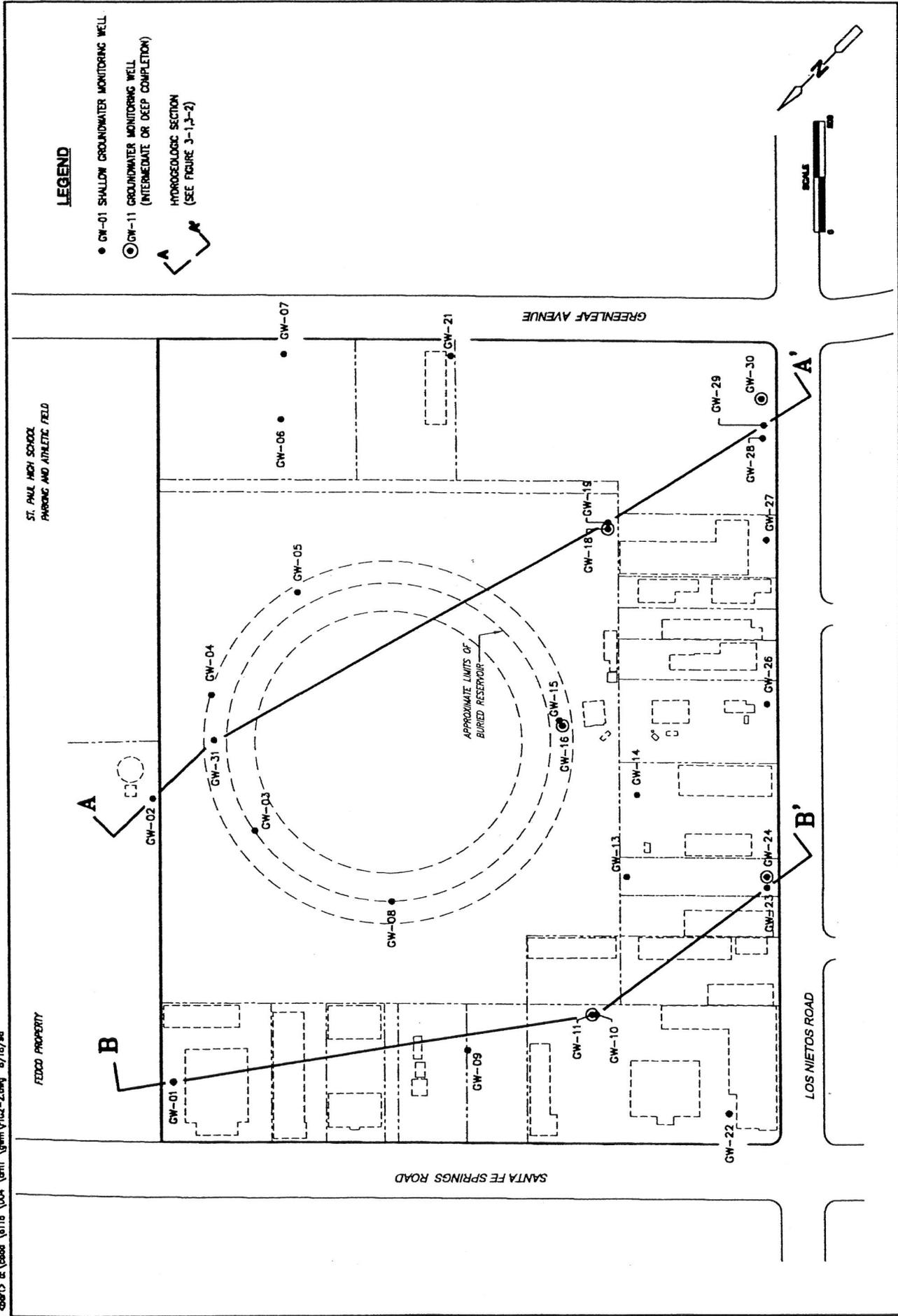
for the

**U.S. Environmental Protection Agency
Region 9
75 Hawthorne Street
San Francisco, California**

Prepared by:

**CDM Federal Programs Corporation
100 Pringle Avenue, Suite 500
Walnut Creek, California**

January 14, 1999



Location of Groundwater Monitoring Wells and Cross Sections
 Waste Disposal, Inc., Santa Fe Springs, California

Figure 2-2

0816 77W

R E P O R T

0816 77W

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MONITORING REPORT**

**FORMER ASHLAND CHEMICAL COMPANY
10505 SOUTH PAINTER AVENUE
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Prepared for

ASHLAND.

Ashland Inc.
5200 Blazer Parkway
Dublin, Ohio

January 15, 2008

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2020 East First Street
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37680106

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Santa Fe Springs, California

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Results of Groundwater Characterization

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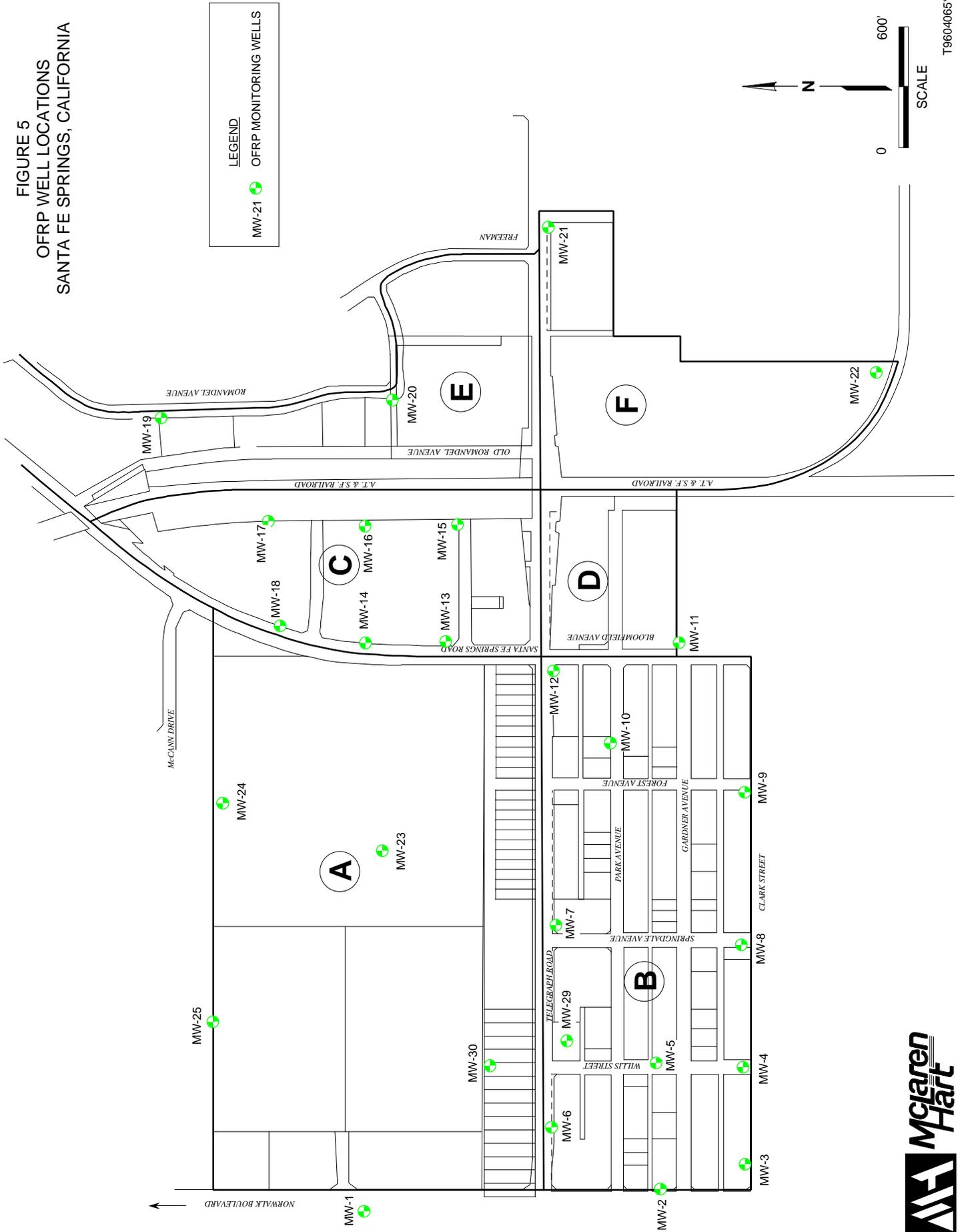
Eric A. Smith, R.G., C.HG.
Senior Geoscientist



Douglas W. Jones, P.E.
Senior Vice President
Managing Principal Engineer



FIGURE 5
 OFRP WELL LOCATIONS
 SANTA FE SPRINGS, CALIFORNIA



T9604065*

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Santa Fe Springs, California**

Prepared under Contract DACW05-D-0008 for:

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Sacramento District
Sacramento, California**

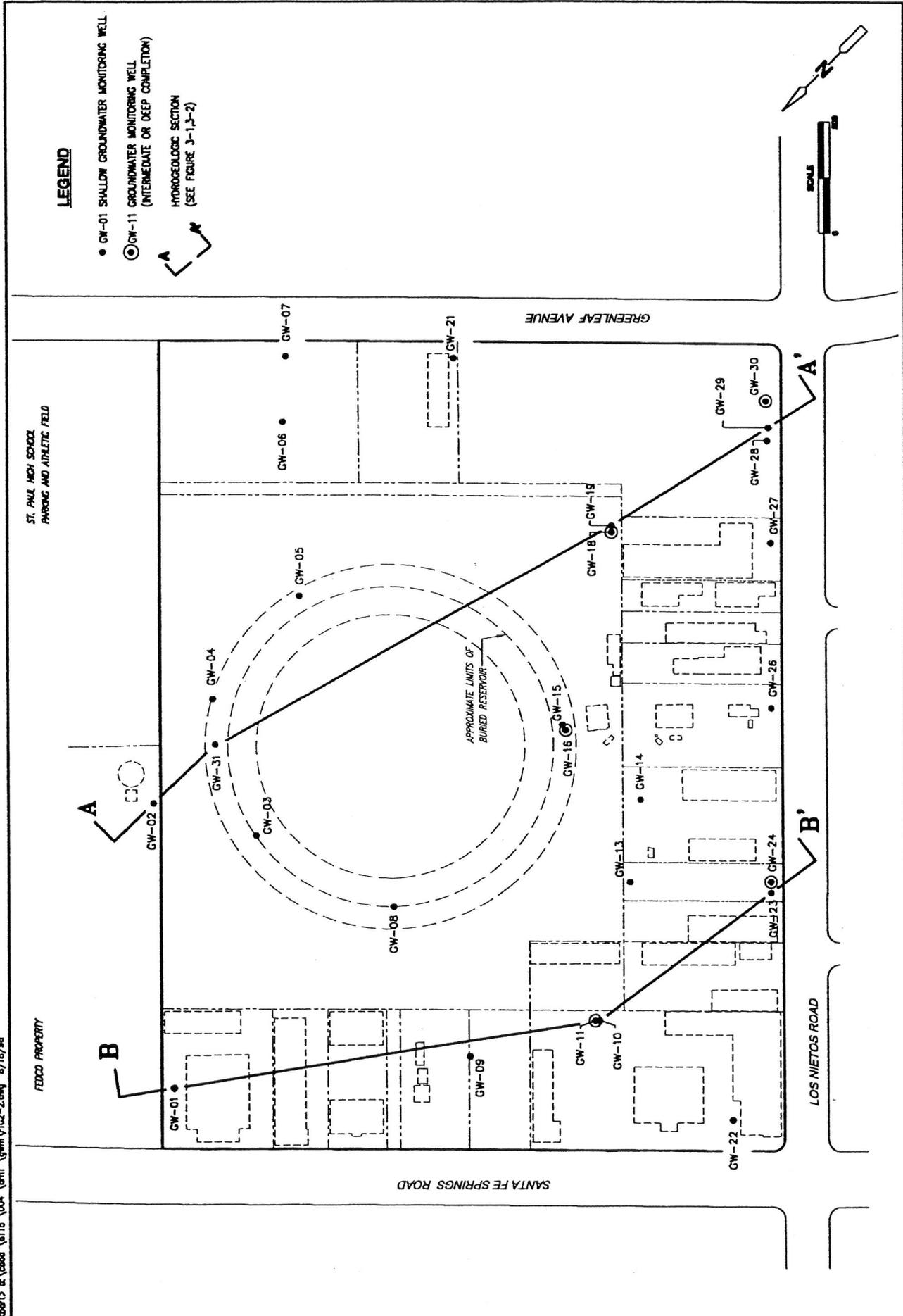
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**U.S. Environmental Protection Agency
Region 9
75 Hawthorne Street
San Francisco, California**

Prepared by:

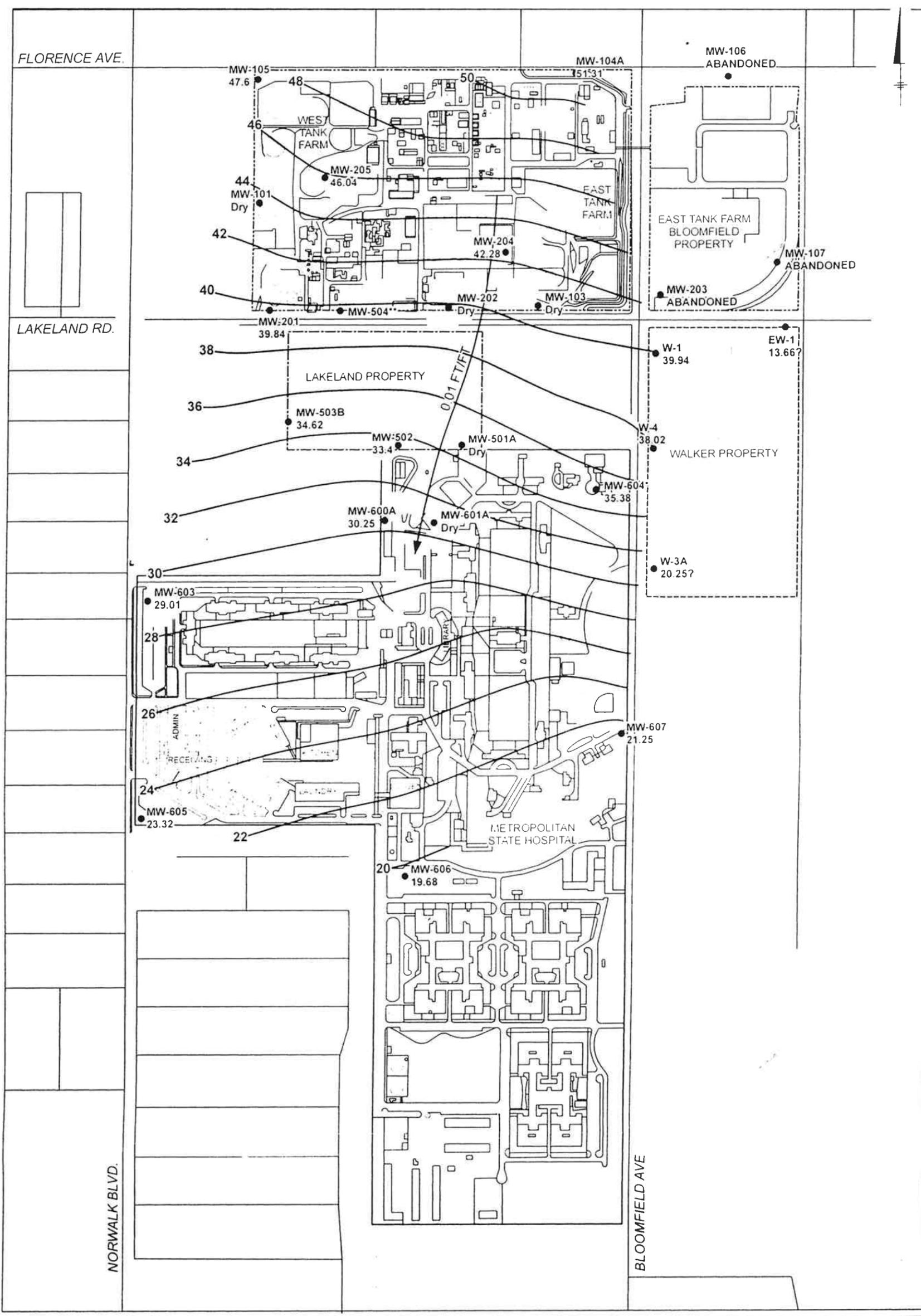
**CDM Federal Programs Corporation
100 Pringle Avenue, Suite 500
Walnut Creek, California**

January 14, 1999



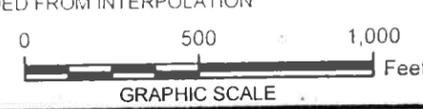
Location of Groundwater Monitoring Wells and Cross Sections
 Waste Disposal, Inc., Santa Fe Springs, California

Figure 2-2



- LEGEND:**
- MW-607 23.47 MONITORING WELL LOCATION ID
GROUNDWATER ELEVATION (ft-msl)
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CONTOUR (ft-msl)
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- NOTES**
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1/27/06 SYR-85 EAB
Isola and Associates - Former Cenco Refinery
Q:\IsolaandAssociates\SantaFeSprings\FomerCencoRefinery\G W M \mxd\GWSurface.mxd

ISOLA AND ASSOCIATES LLP
FORMER CENCO REFINERY
SANTA FE SPRINGS, CALIFORNIA

**GROUNDWATER SURFACE ELEVATIONS
OCTOBER 2005**

BBL
BLASLAND BOUCK & LEE, INC.
engineers, scientists, economists

FIGURE
3

0816 77W

R E P O R T

0816 77W

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10505 SOUTH PAINTER AVENUE
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Prepared for

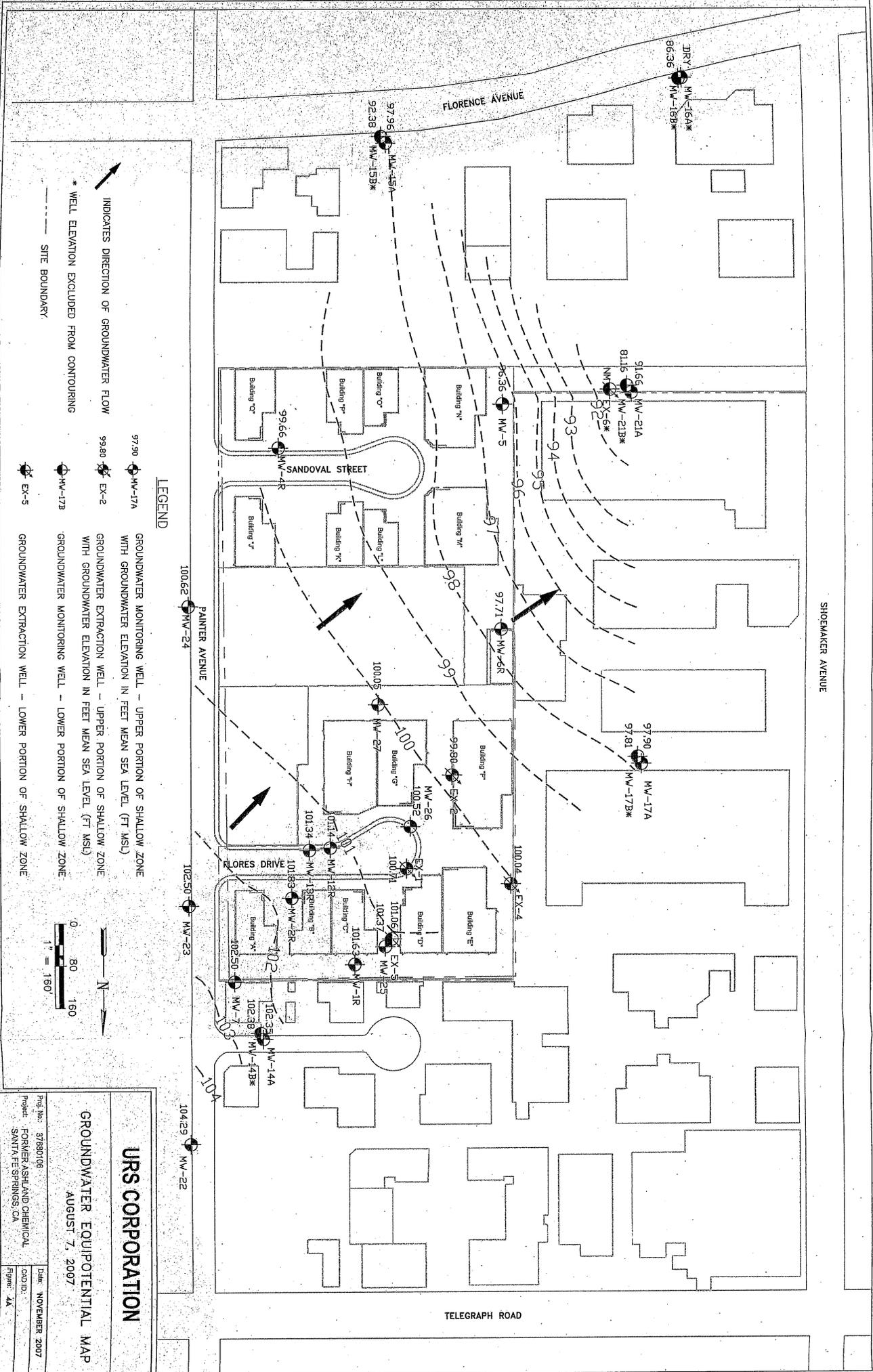
ASHLAND.

Ashland Inc.
5200 Blazer Parkway
Dublin, Ohio

January 15, 2008

URS

2020 East First Street
Suite 400
Santa Ana, California 92705
37680106



INDICATES DIRECTION OF GROUNDWATER FLOW

* WELL ELEVATION EXCLUDED FROM CONTOURING

--- SITE BOUNDARY

97.90 MW-17A

99.80 EX-2

97.90 MW-17A

97.81 MW-17B*

100.62 MW-24

102.50 MW-23

102.50 MW-7

102.35 MW-14A

102.38 MW-14B*

104.29 MW-22

97.90 MW-17A

97.81 MW-17B*

99.80 EX-2

97.90 MW-17A

97.81 MW-17B*

100.05 MW-27

100.52 EX-2

100.71 EX-2

101.06 EX-5

101.34 MW-12R

101.53 MW-1R

101.63 MW-1R

LEGEND

GROUNDWATER MONITORING WELL - UPPER PORTION OF SHALLOW ZONE WITH GROUNDWATER ELEVATION IN FEET MEAN SEA LEVEL (FT MSL)

GROUNDWATER EXTRACTION WELL - UPPER PORTION OF SHALLOW ZONE WITH GROUNDWATER ELEVATION IN FEET MEAN SEA LEVEL (FT MSL)

GROUNDWATER MONITORING WELL - LOWER PORTION OF SHALLOW ZONE

GROUNDWATER EXTRACTION WELL - LOWER PORTION OF SHALLOW ZONE



URS CORPORATION

GROUNDWATER EQUIPOTENTIAL MAP

AUGUST 7, 2007

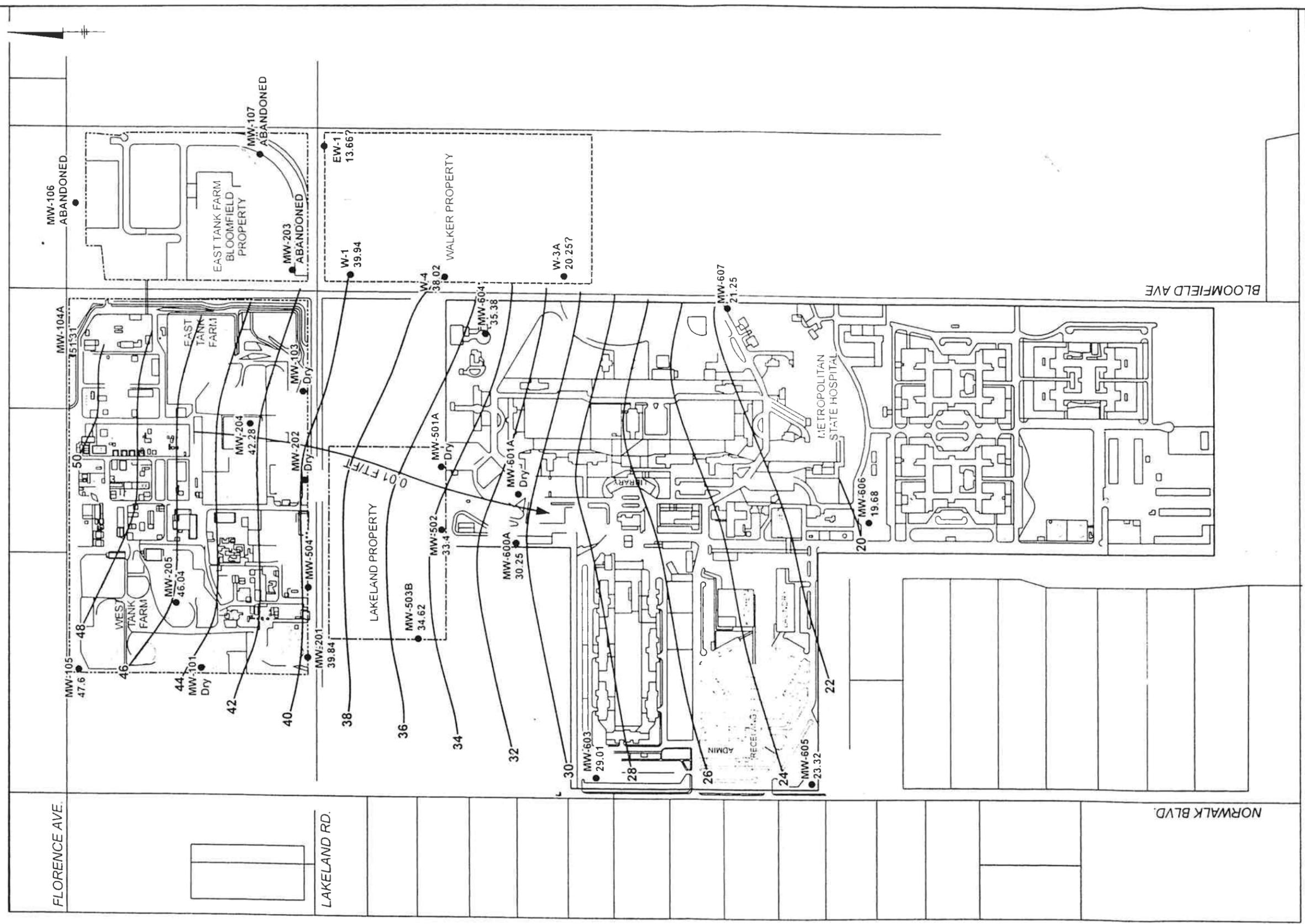
Proj No: 37880106

Client: NOVEMBER 2007

Project: FORMER ASHLAND CHEMICAL

Location: SANTA FE SPRINGS, CA

Figure: 4A



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- MW-607
23.47
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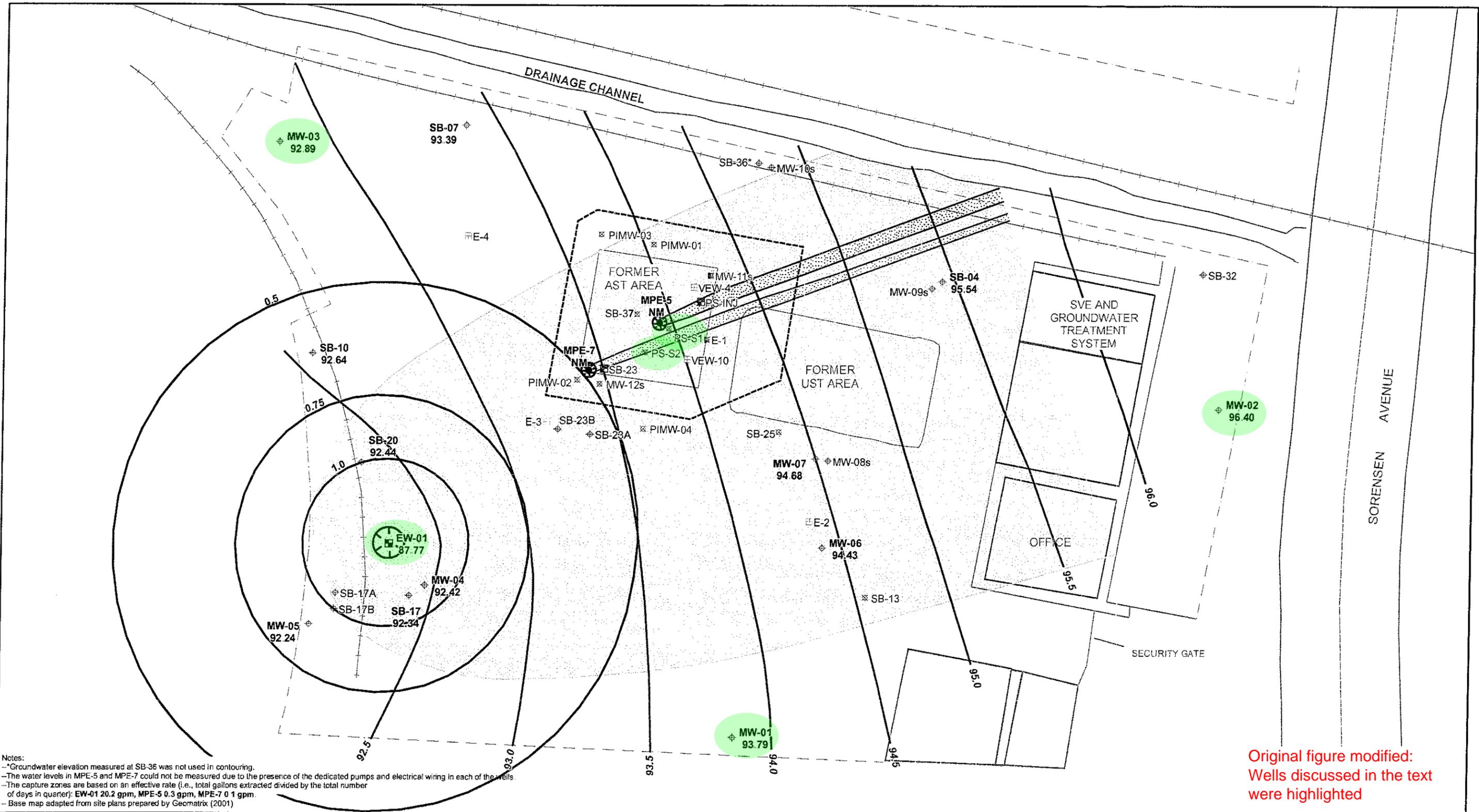
1/27/06 SYR-85 EAB
Isola and Associates - Former Cenco Refinery
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ISOLA AND ASSOCIATES LLP
FORMER CENCO REFINERY
SANTA FE SPRINGS, CALIFORNIA

GROUNDWATER SURFACE ELEVATIONS
OCTOBER 2005

BBL
BLASLAND BOUCK & LEE INC
ENGINEERS, ARCHITECTS, ACCOUNTANTS

0 500 1,000 Feet
GRAPHIC SCALE



Notes:
 - Groundwater elevation measured at SB-36 was not used in contouring.
 - The water levels in MPE-5 and MPE-7 could not be measured due to the presence of the dedicated pumps and electrical wiring in each of the wells.
 - The capture zones are based on an effective rate (i.e., total gallons extracted divided by the total number of days in quarter): EW-01 20.2 gpm, MPE-5 0.3 gpm, MPE-7 0.1 gpm.
 - Base map adapted from site plans prepared by Geomatrix (2001)

Original figure modified:
 Wells discussed in the text
 were highlighted

Legend ◆ MW-05 Well Location and Name 93.79 Groundwater Elevation in feet MSL, 9 March 2009 — Modeled Drawdown (0.25 foot interval) NM Not Measured (see notes above)		94.0 Potentiometric Contour (0.5 foot interval) EW-1 Hydraulic Capture Zone MPE-7 Hydraulic Capture Zone MPE-5 Hydraulic Capture Zone		◆ Groundwater Monitoring Well □ Groundwater Extraction Well □ Vapor Extraction Well ● Multi-Phase Extraction Well ✕ Destroyed Groundwater Monitoring Well ✕ Destroyed Groundwater Extraction Well ✕ Destroyed Vapor Extraction Well		□ Surface Cover □ Building - Cyclone Fence - Railroad Track				Geosyntec consultants Project No. WR1216 June 2009 Oakland		Figure 5 Hydraulic Capture Zone Groundwater Extraction System - 9 March 2009 Former McKesson Chemical Company Facility Santa Fe Springs, California	
--	--	--	--	---	--	--	--	--	--	---	--	--	--

Prepared for

McKesson Corporation
One Post Street
San Francisco, California 94104

ADDITIONAL OFF-PROPERTY INVESTIGATION REPORT

Former McKesson Chemical Company Facility
9005 Sorensen Avenue
Santa Fe Springs, California

Prepared by

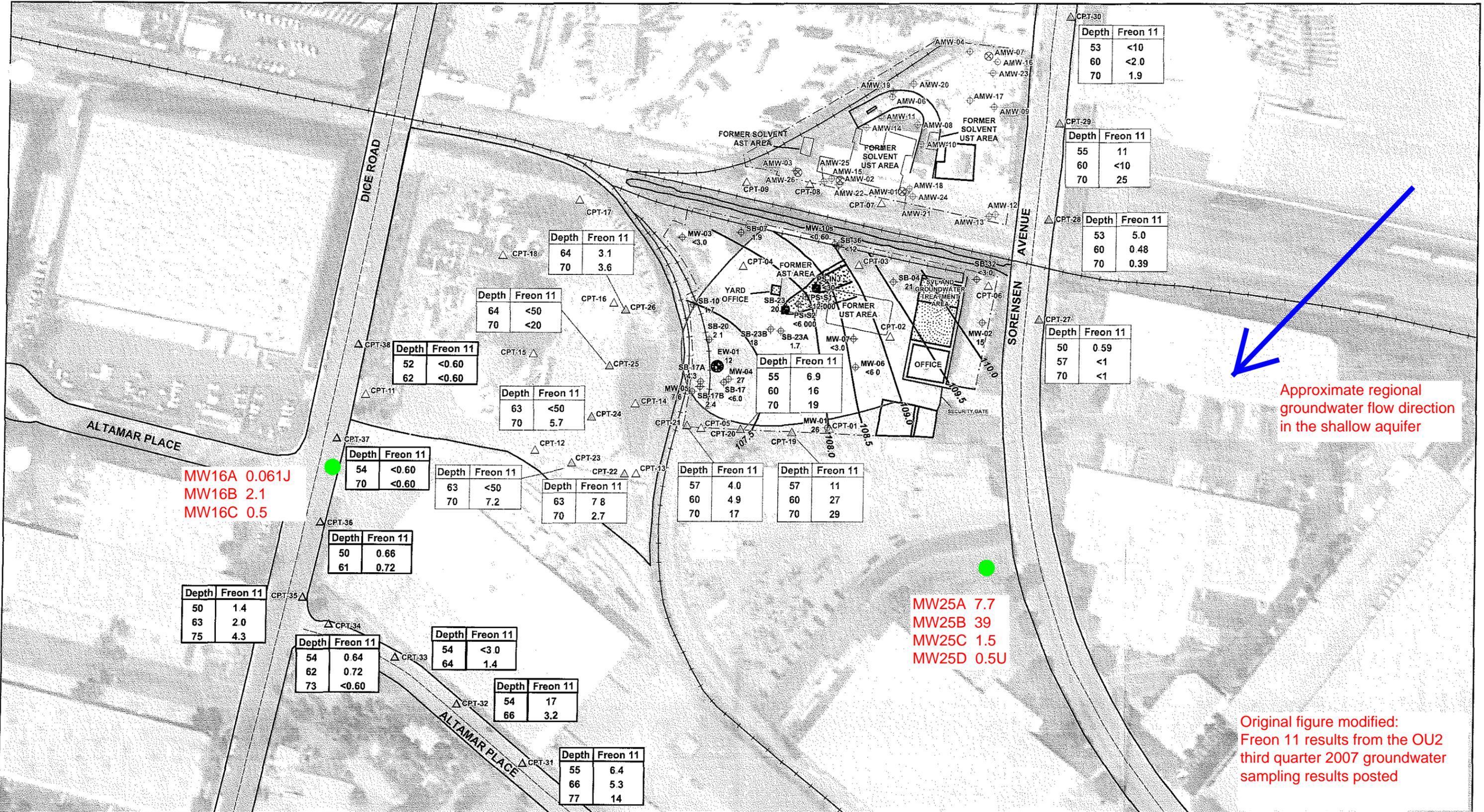
Geosyntec 
consultants

engineers | scientists | innovators

475 14th Street, Suite 400
Oakland, California 94612

HA0620-13

18 October 2007

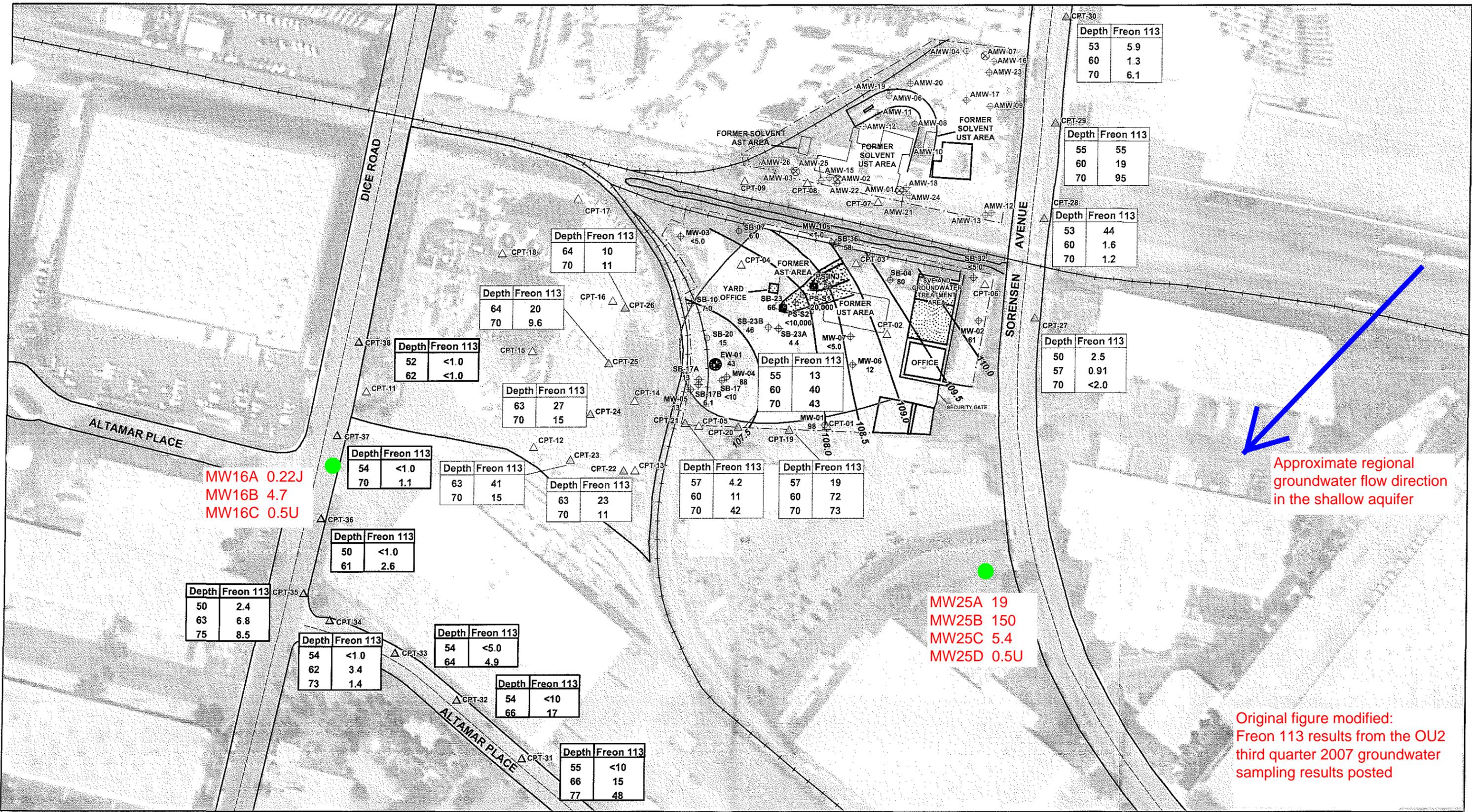


MW16A 0.061J
 MW16B 2.1
 MW16C 0.5

MW25A 7.7
 MW25B 39
 MW25C 1.5
 MW25D 0.5U

Approximate regional groundwater flow direction in the shallow aquifer

Original figure modified: Freon 11 results from the OU2 third quarter 2007 groundwater sampling results posted



MW16A 0.22J
 MW16B 4.7
 MW16C 0.5U

MW25A 19
 MW25B 150
 MW25C 5.4
 MW25D 0.5U

Approximate regional groundwater flow direction in the shallow aquifer

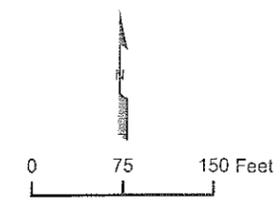
Original figure modified: Freon 113 results from the OU2 third quarter 2007 groundwater sampling results posted

- Legend**
- ▲ CPT (Geosyntec 2007)
 - ▲ CPT (Geosyntec 2004 & 2005)
 - ▲ CPT (HLA 1991)
 - ⊕ Groundwater Monitoring Well
 - ⊞ Groundwater Extraction Well
 - ⊗ Destroyed Well

- 108.5 Potentiometric Contour based on water level data from 19 March 2007 (0.5 foot interval)
- EW-1 Hydraulic Capture Zone
- SB-23 Hydraulic Capture Zone
- PS-INJ Hydraulic Capture Zone
- Concrete Surfacing
- Building
- Cyclone Fence
- Railroad Track

NOTES:

- Freon 113 = 1,1,2-Trichloro-2,2,2-Trifluoroethane
- Concentrations reported in micrograms per liter (ug/L)
- Depth = Feet Below Ground Surface
- NA = Not analyzed
- Groundwater samples for monitoring wells and extraction wells collected in March 2007
- The capture zones are based on an effective flow rate from the first quarter 2007 (i.e. total gallons extracted divided by the total number of days in quarter). As a result the flow rate for EW-1 was 28 gpm, the flow rate for SB-23 was 3 gpm and the flow rate for PS-INJ was 3 gpm.
- Base map adapted from site plans prepared by Geomatrix (2001)

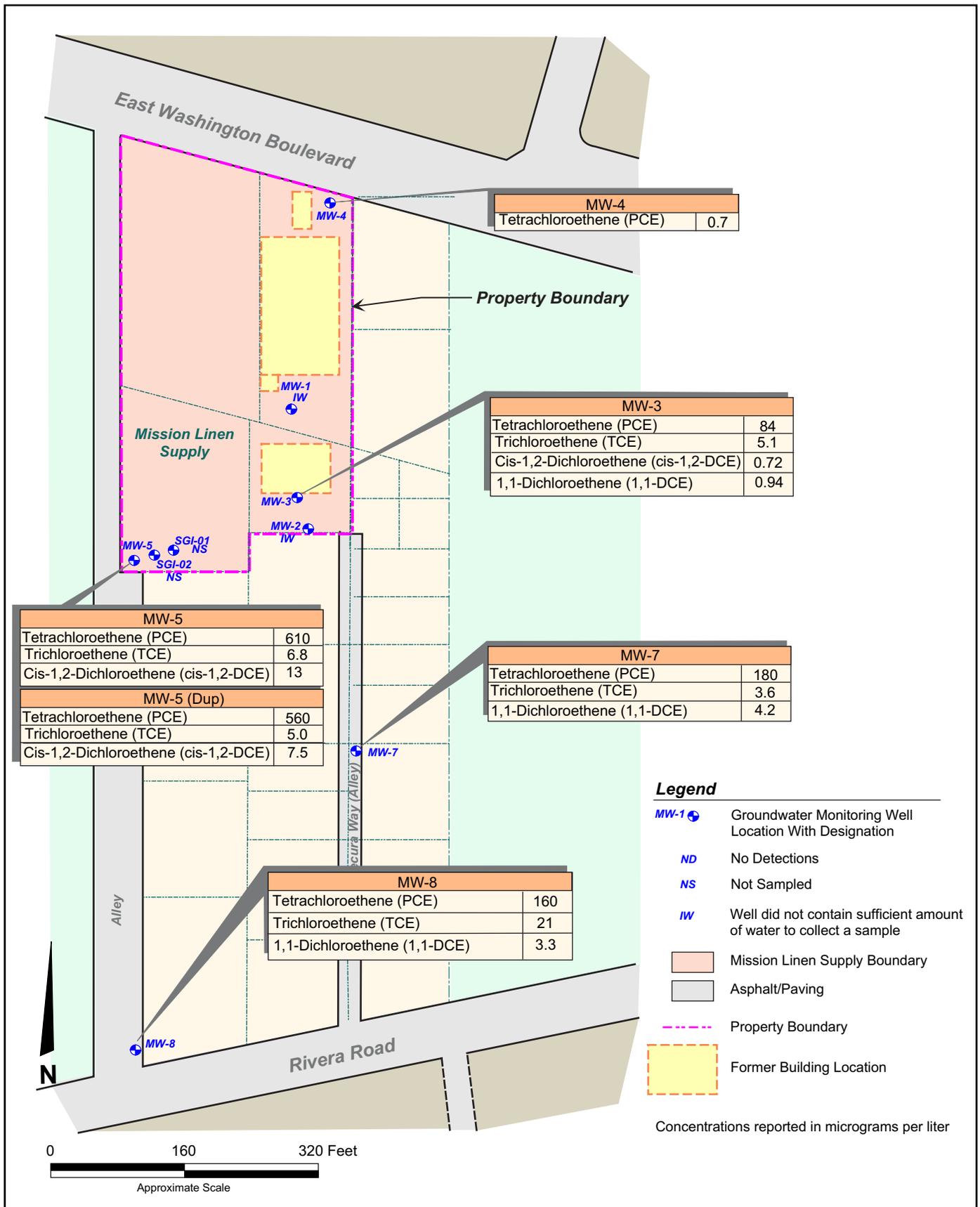


Geosyntec
 consultants

Project No. HA0620-13
 Document No.
 September 2007

Figure 13

Freon 113 in Groundwater
 Former McKesson Chemical Company Facility
 Santa Fe Springs, California



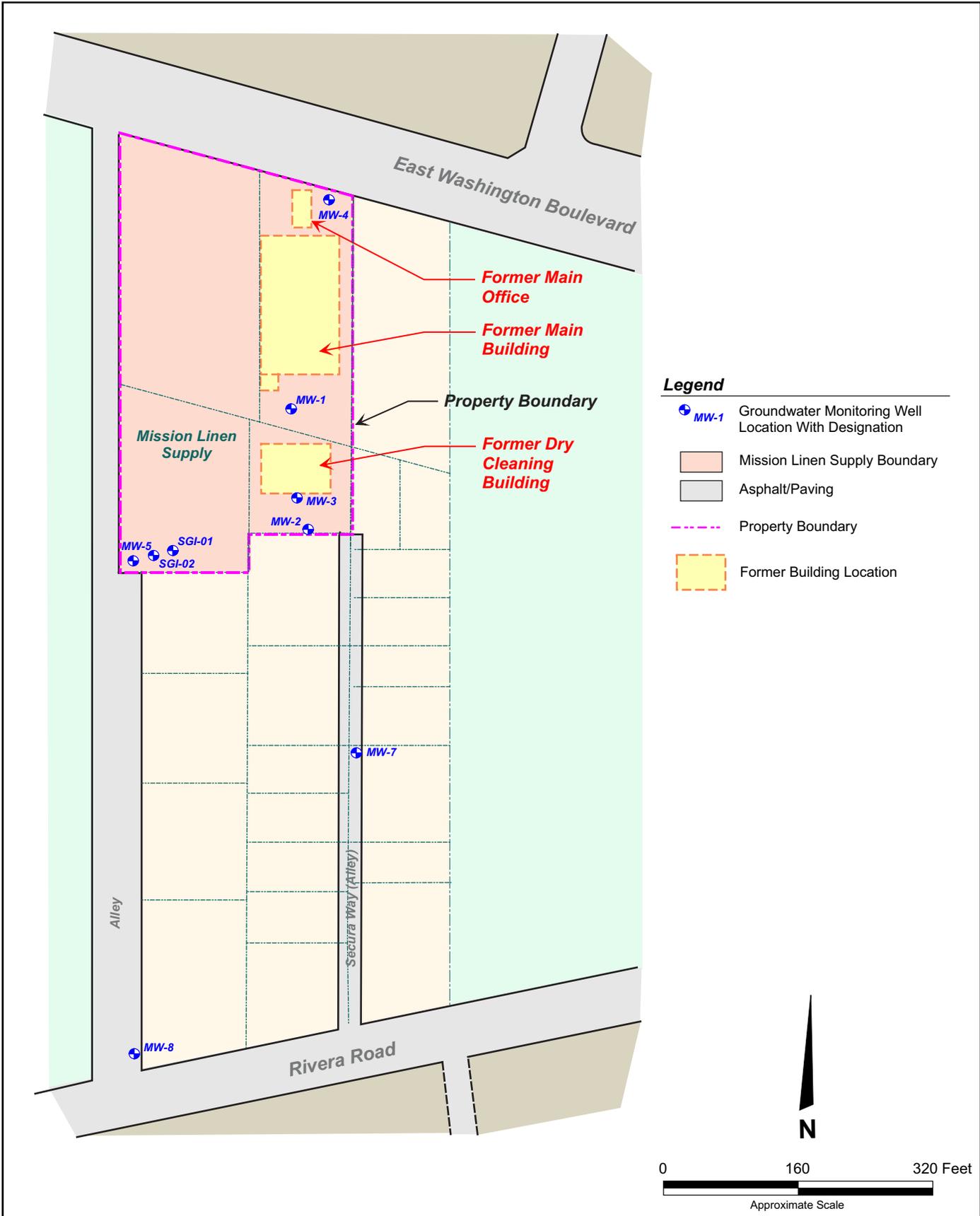
CGC Environmental, Inc.

Project Name: Former Mission Linen Supply Facility - Santa Fe Springs, Ca

Date: January 2009

**Groundwater Analytical Results
(November 2008)
Former Mission Linen Supply Facility
Santa Fe Springs, California**

Figure 4



CGC Environmental, Inc.

Project Name: Former Mission Linen Supply Facility - Santa Fe Springs, CA

Date: January 2009

**Site Plan
Former Mission Linen Supply Facility
Santa Fe Springs, California**

Figure 2

Results of Groundwater Characterization of the Oil Field Reclamation Project Study Area (OFRP)



Santa Fe Springs, California

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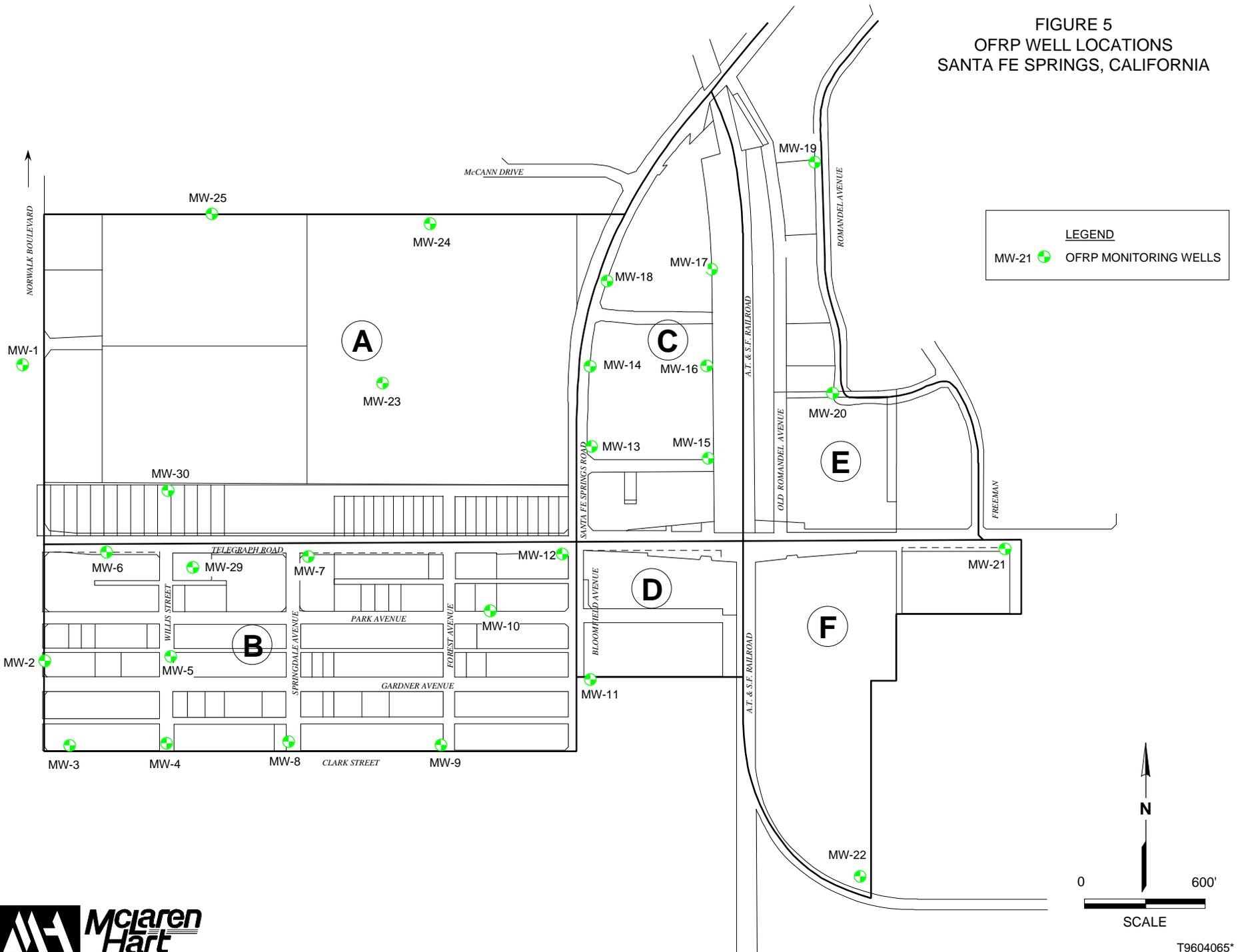
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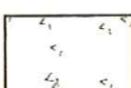
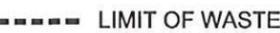
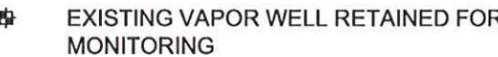


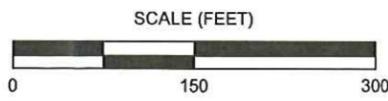
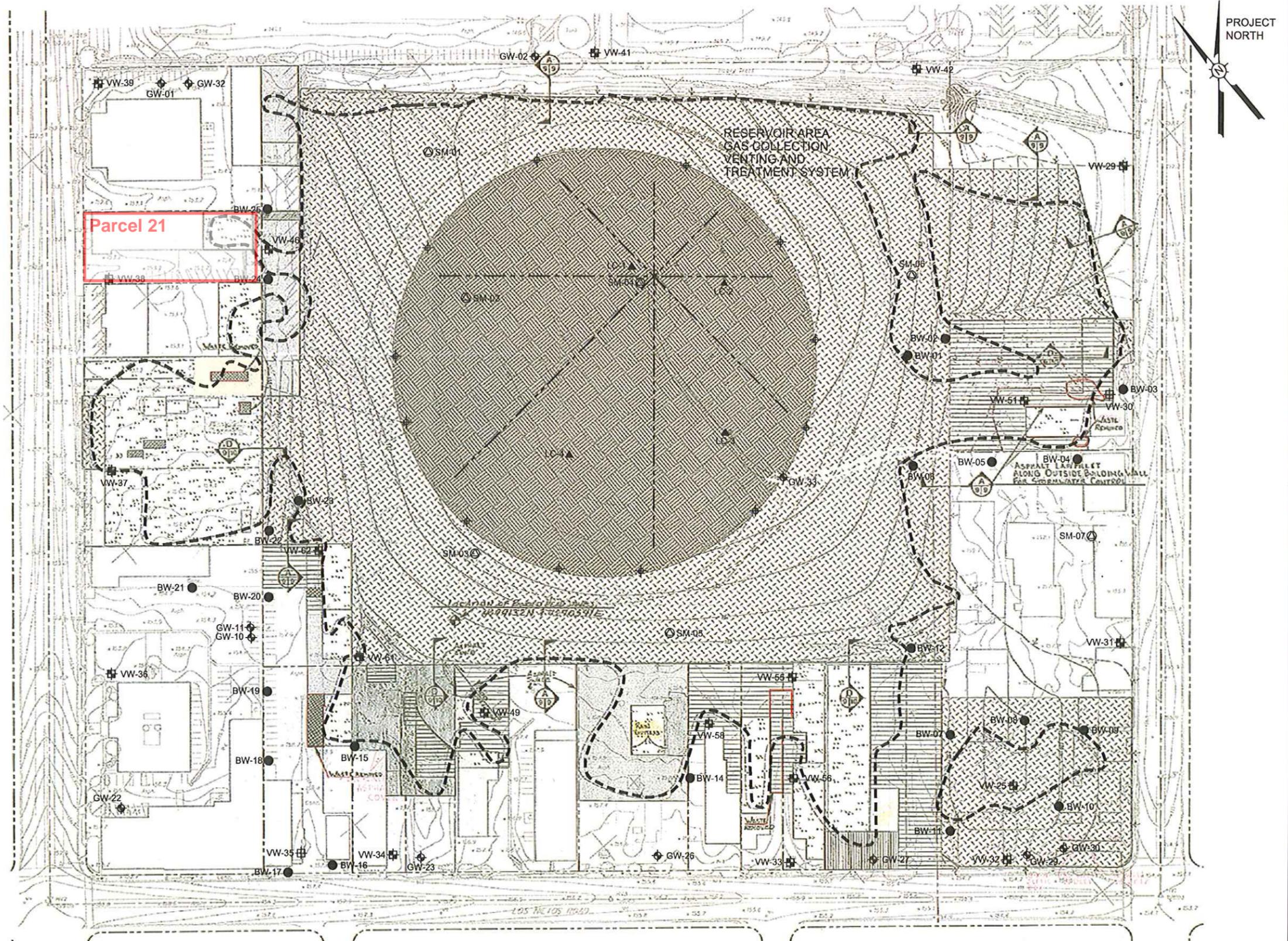
FIGURE 5
 OFRP WELL LOCATIONS
 SANTA FE SPRINGS, CALIFORNIA



MS=1:150 L:\Graphics\Projects\Number129-xxxx\29-0224 Waste Disposal inc\FIGURES (WITHOUT LOGO)\290224-Components(rev).dwg Oct 28, 2008 - 2:18pm Rollins

LEGEND

- 
RCRA SUBTITLE C-EQUIVALENT CAP AREA
DETAIL 4
9/10
- 
RCRA SUBTITLE D - EQUIVALENT COVER AREA
DETAIL 5
9/10
- 
REMOVE EXISTING ASPHALT AND REPLACE WITH ENGINEERED ASPHALT COVER
DETAIL 6
9/10
- 
2" ASPHALT OVERLAY COVER
DETAIL 6A
9/10
- 
REMOVE EXISTING CONCRETE AND REPLACE WITH ENGINEERED CONCRETE COVER
DETAIL 7
9/10
- 
ENGINEERED CONCRETE COVER WITH SEALED CRACKS
DETAIL 7A
9/10
- 
SEAL ASPHALT AND RESTRIPE
- 
CLEAN OUT
- 
LIMIT OF WASTE
- 
GAS COLLECTION PIPE
- 
BIOVENT WELL
- 
EXISTING GROUND WATER WELL RETAINED FOR MONITORING
- 
EXISTING VAPOR WELL RETAINED FOR MONITORING
- 
LEACHATE COLLECTION WELL
- 
SETTLEMENT MONUMENT



PROJECT: 156626
 FACILITY:
 WASTE DISPOSAL, INC.
 SANTA FE SPRINGS, CALIFORNIA

MAJOR REMEDY COMPONENTS

FIGURE 2-3

GROUNDWATER DATA EVALUATION REPORT

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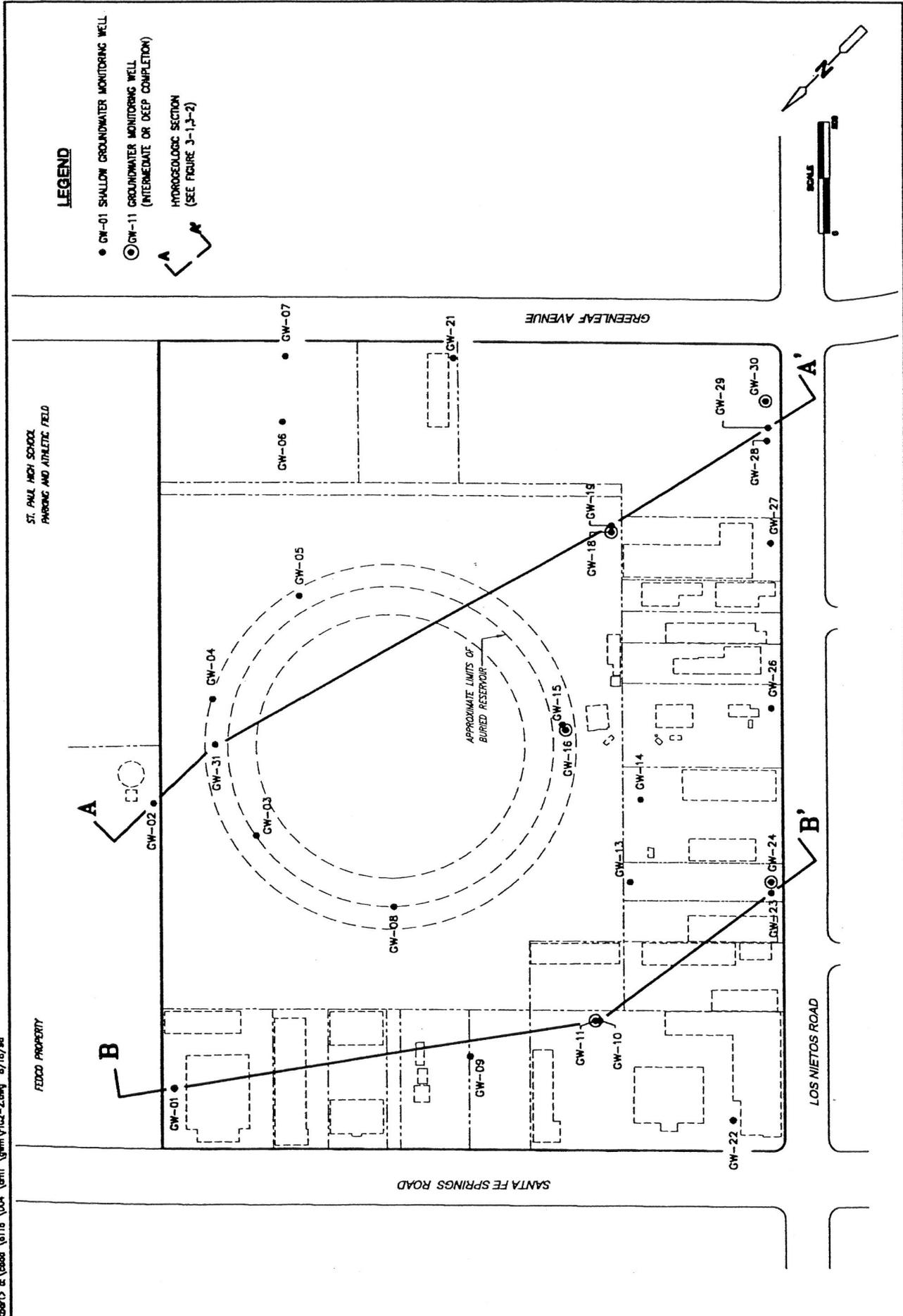
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January 14, 1999



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 Waste Disposal, Inc., Santa Fe Springs, California

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