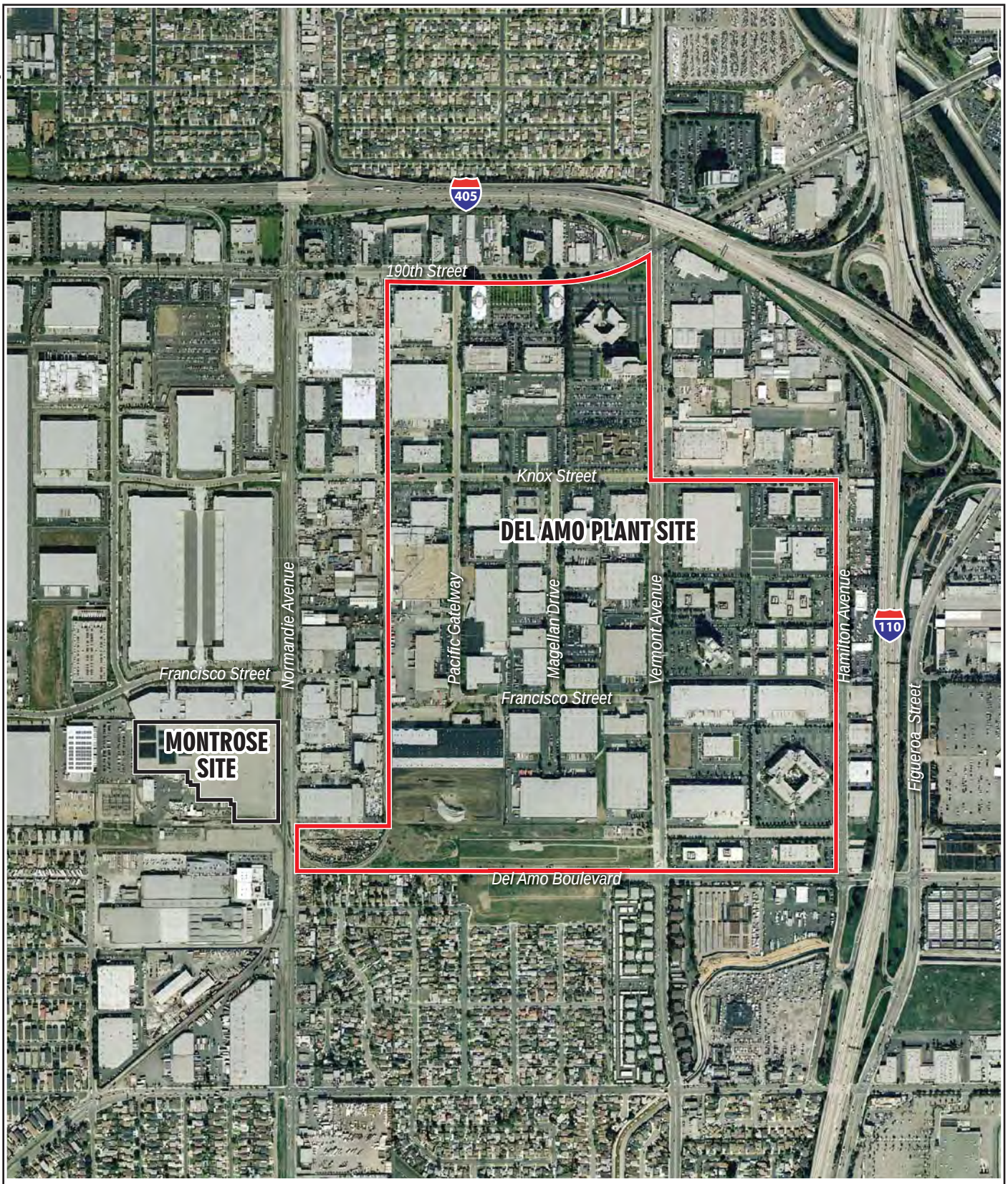
T:\Ladd\DelAmo\SiteLocMaps\906-228



N

0 1,000 2,000

Scale in Feet

Source: AirPhotoUSA dated February 2006

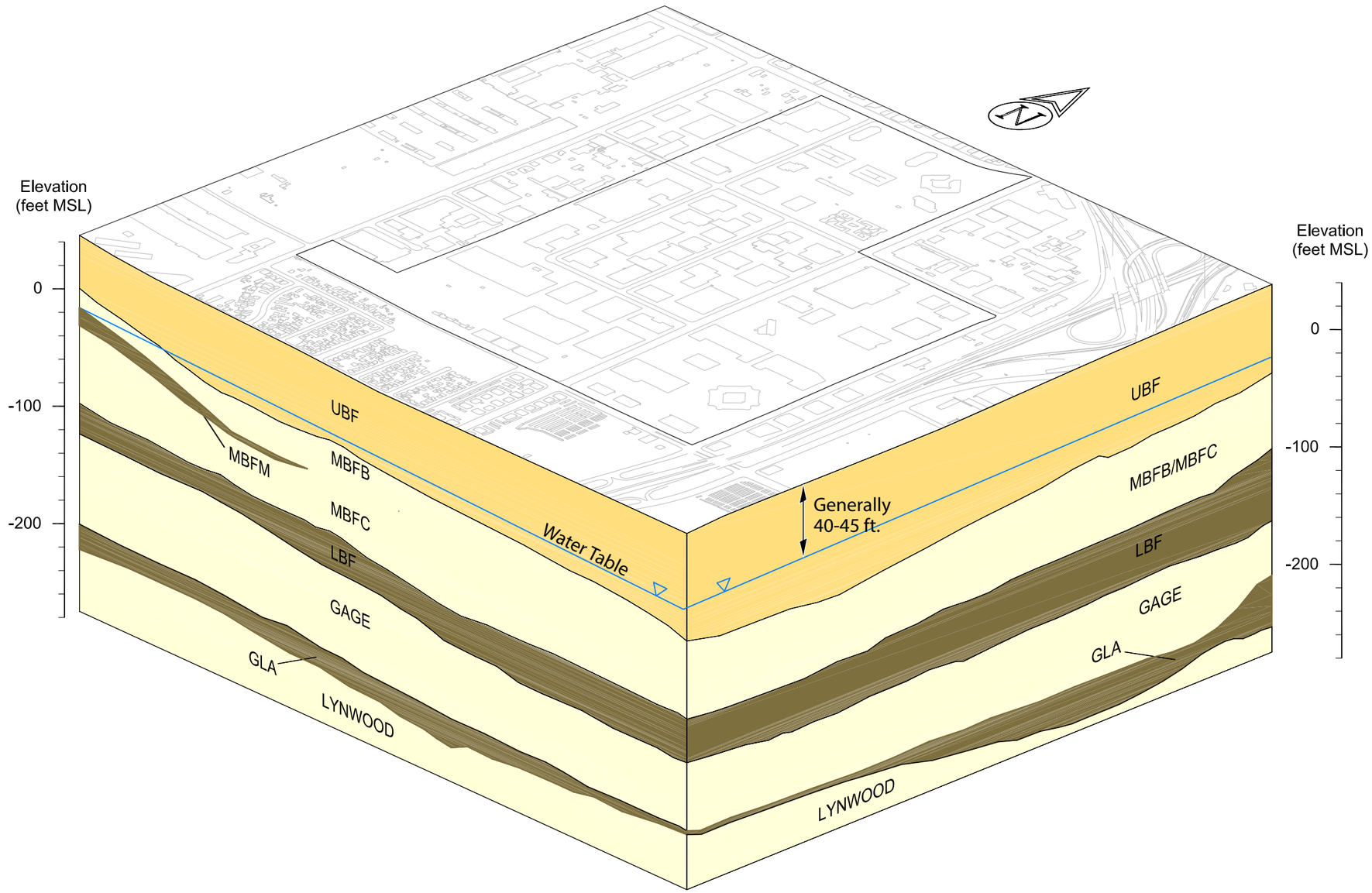
FIGURE 1

SITE LOCATION MAP

2014 Baseline
Groundwater Monitoring Report

URS

T/Ladd/DelAmo/2014Baseline/612-074A



EXPLANATION

UBF: Upper Bellflower Aquitard

MBFB: Middle Bellflower B Sand

MBFM: Middle Bellflower Mud

MBFC: Middle Bellflower C Sand

LBF: Lower Bellflower Aquitard

Gage: Gage Aquifer

GLA: Gage-Lynwood Aquitard

Lynwood: Lynwood Aquifer

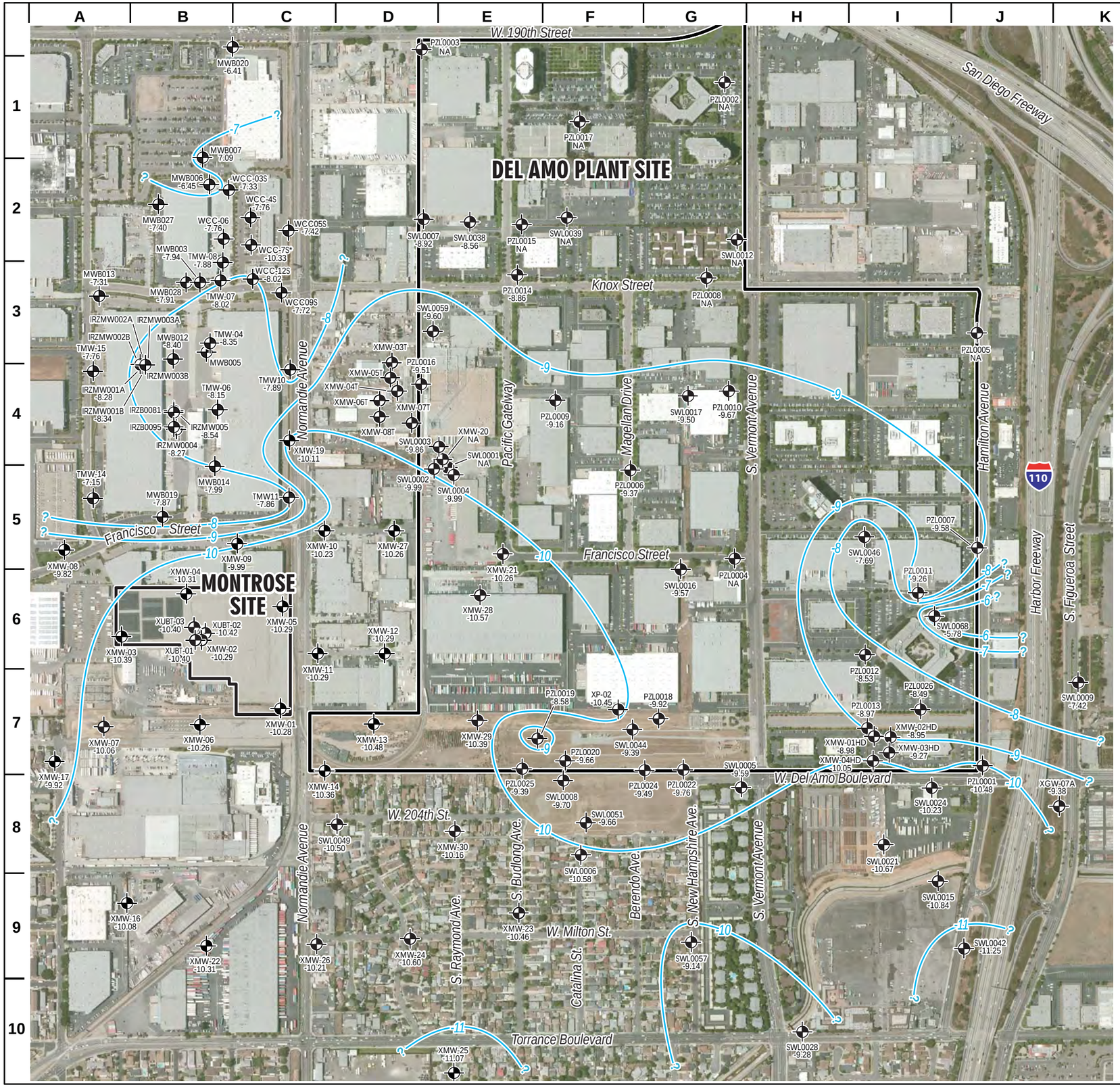
FIGURE 2

HYDROSTRATIGRAPHIC BLOCK DIAGRAM

2014 Baseline
Groundwater Monitoring Report

URS

T/Ladd/DelAmo/2014Baseline/1003-204E-1E



0 600 1200

Scale in Feet

Legend

PZL0009 -9.16	Monitoring location with groundwater elevation (feet MSL)
-11	Groundwater elevation contour (feet mean sea level)
NA	Not available

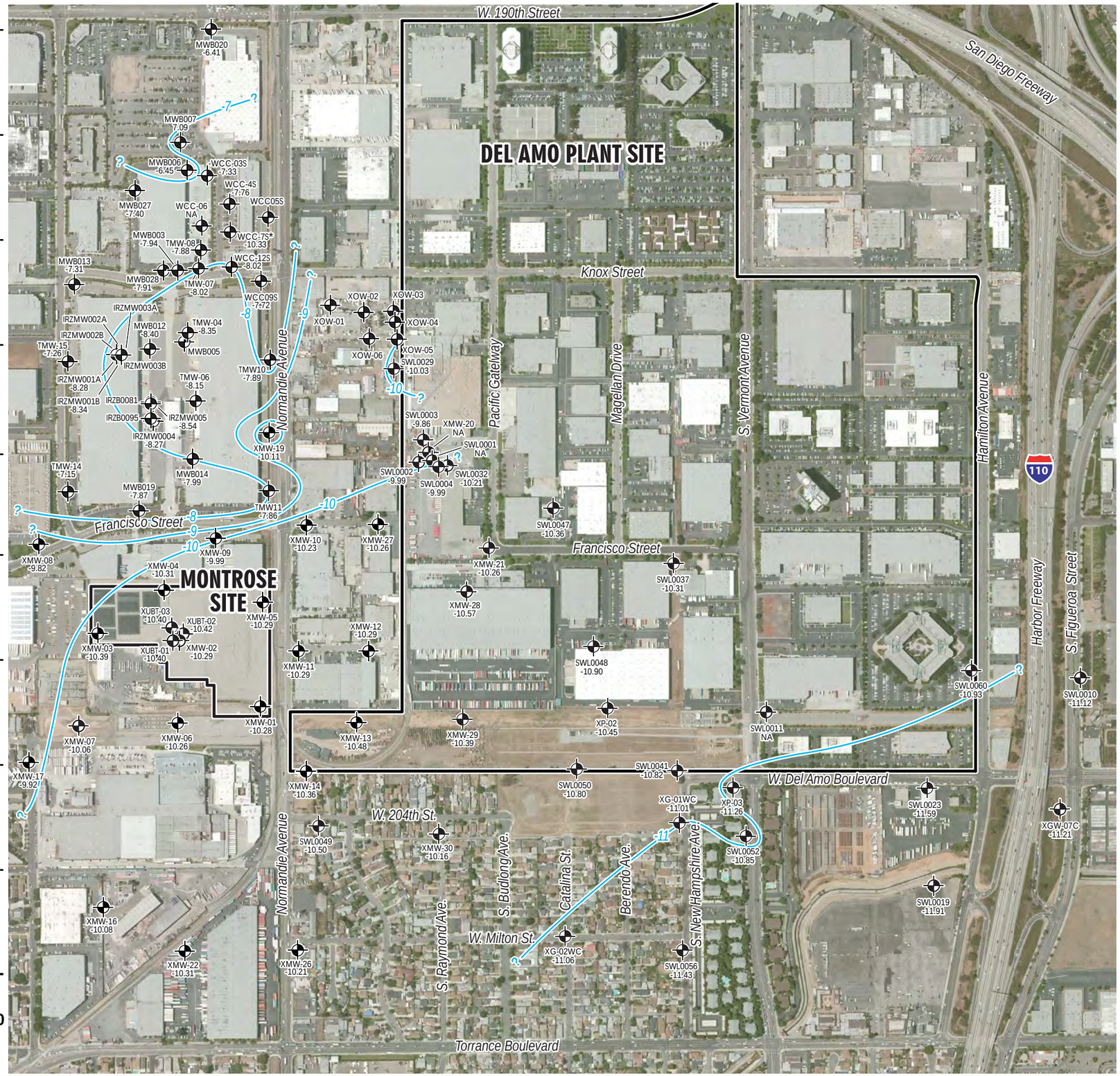
FIGURE 3

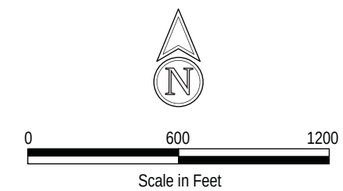
GROUNDWATER ELEVATIONS
WATER TABLE ZONE
September 2014

2014 Baseline
Groundwater Monitoring Report

URS

T/Ladd/DelAmo/2014Baseline/1003-202D-1D





Legend

SWL0004 -9.99	Monitoring location with groundwater elevation (feet MSL)
-11	Groundwater elevation contour (feet mean sea level)
NA	Not available

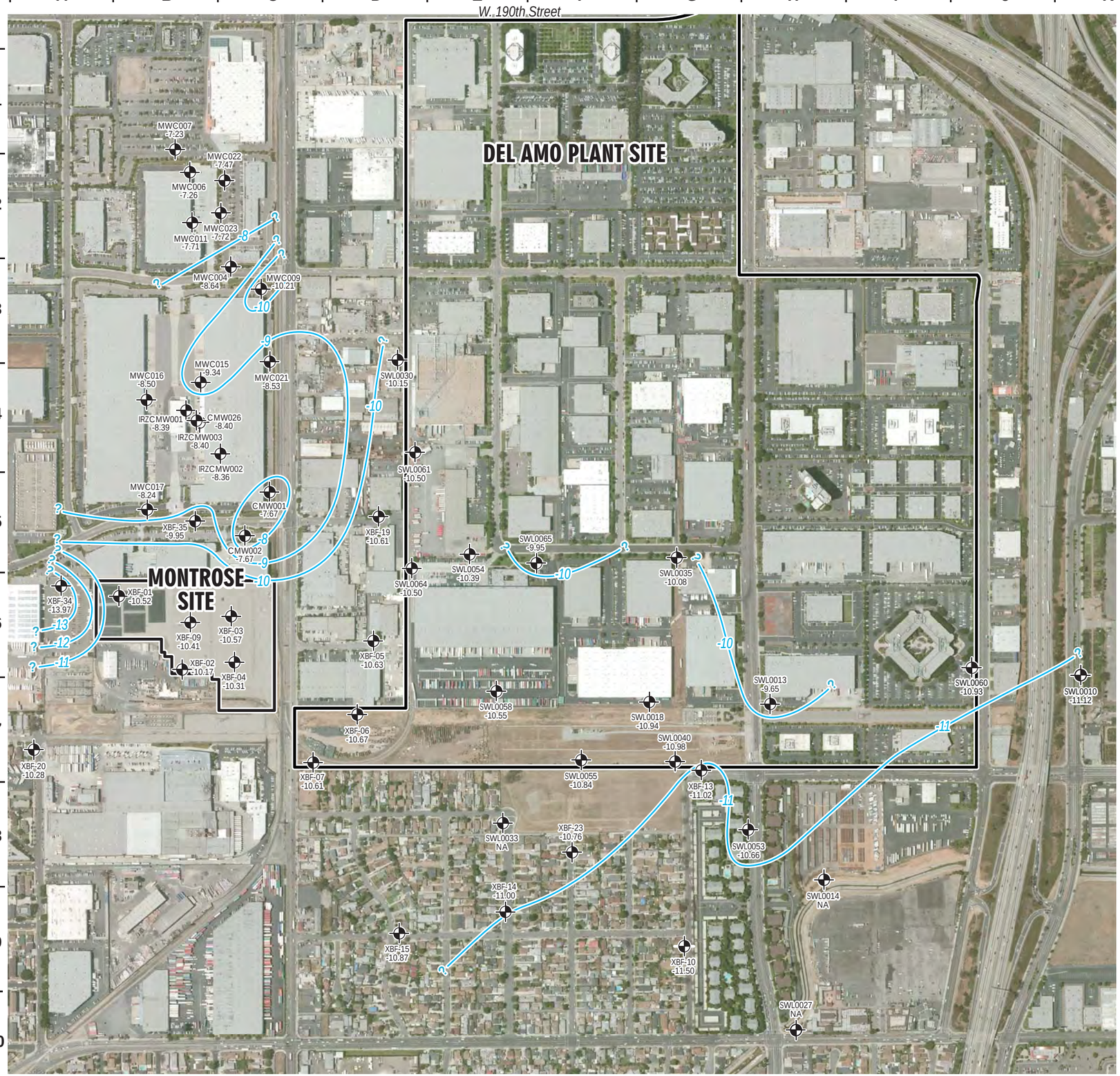
FIGURE 4

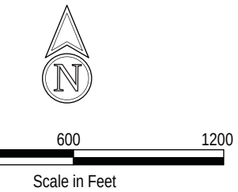
GROUNDWATER ELEVATIONS
MIDDLE BELLFLOWER B SAND
September 2014

2014 Baseline
Groundwater Monitoring Report

URS

T/Ladd/DelAmo/2014Baseline/903-201D-1C





Legend

SWL0061 -10.50	Monitoring location with groundwater elevation (feet MSL)
-11	Groundwater elevation contour (feet mean sea level)
NA	Not available

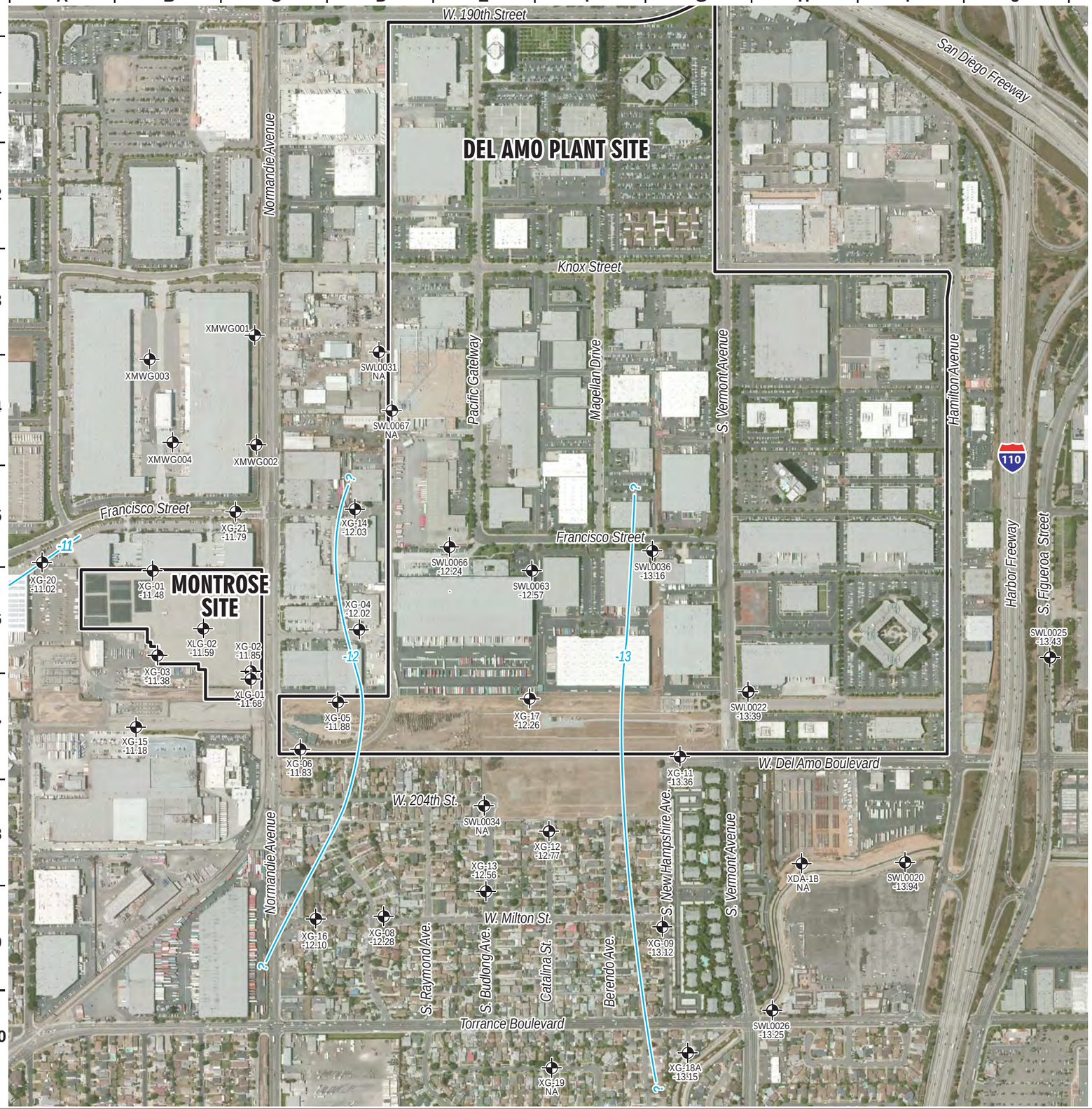
FIGURE 5

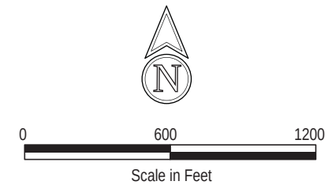
GROUNDWATER ELEVATIONS
MIDDLE BELLFLOWER C SAND
September 2014

2014 Baseline
Groundwater Monitoring Report

URS

T/Ladd/DelAmo/2014Baseline/1003-203D-1D





Legend

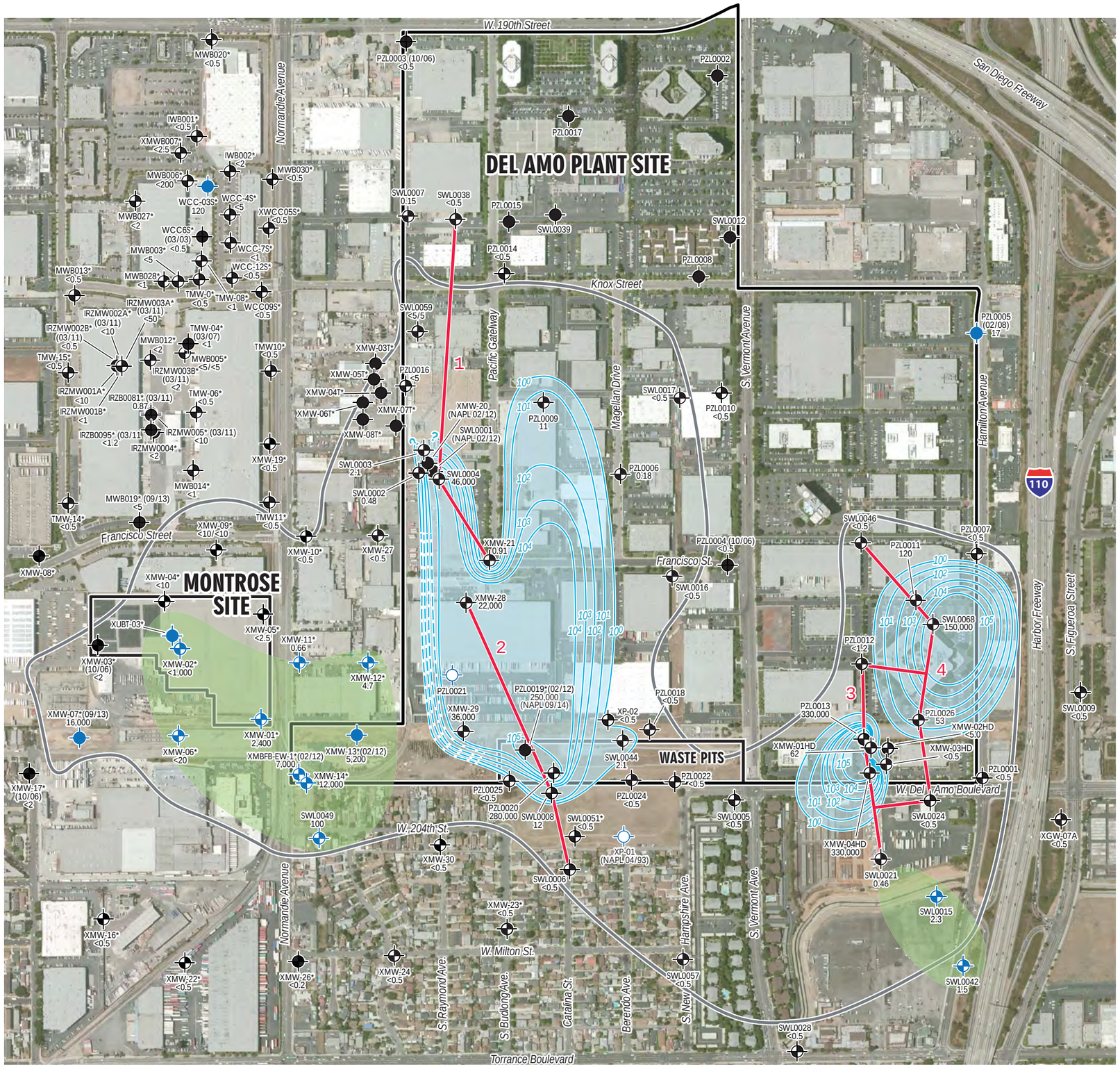
SWL0022 -13.39	Monitoring location with groundwater elevation (feet MSL)
-13	Groundwater elevation contour (feet mean sea level)
NA	Not available

FIGURE 6

GROUNDWATER ELEVATIONS GAGE AQUIFER September 2014

2014 Baseline Groundwater Monitoring Report

URS



0 600 1200

Scale in Feet

Legend

- SWL0016 <0.5 — Monitoring well location with 2014 benzene concentration (µg/l)
- PZL0010 <0.5 — Monitoring well not sampled in 2014 with most recent historical (2006 and later) benzene concentration (µg/l) and date
- PZL0021 — Abandoned/destroyed monitoring well
- Location where benzene is present but is not associated with the Del Amo Site
- (NAPL 02/12) — Non-aqueous phase liquid present and date of observation
- TI-waiver/containment zone, as presented in the groundwater ROD (EPA, 1999)
- 100 — Benzene Concentration Isopleth (µg/l), dashed where uncertain
- Benzene plume associated with Del Amo Site
- Area of benzene within the chorobenzene plume
- * — Data collected by other investigators
- 1 — Natural attenuation transect

FIGURE 7

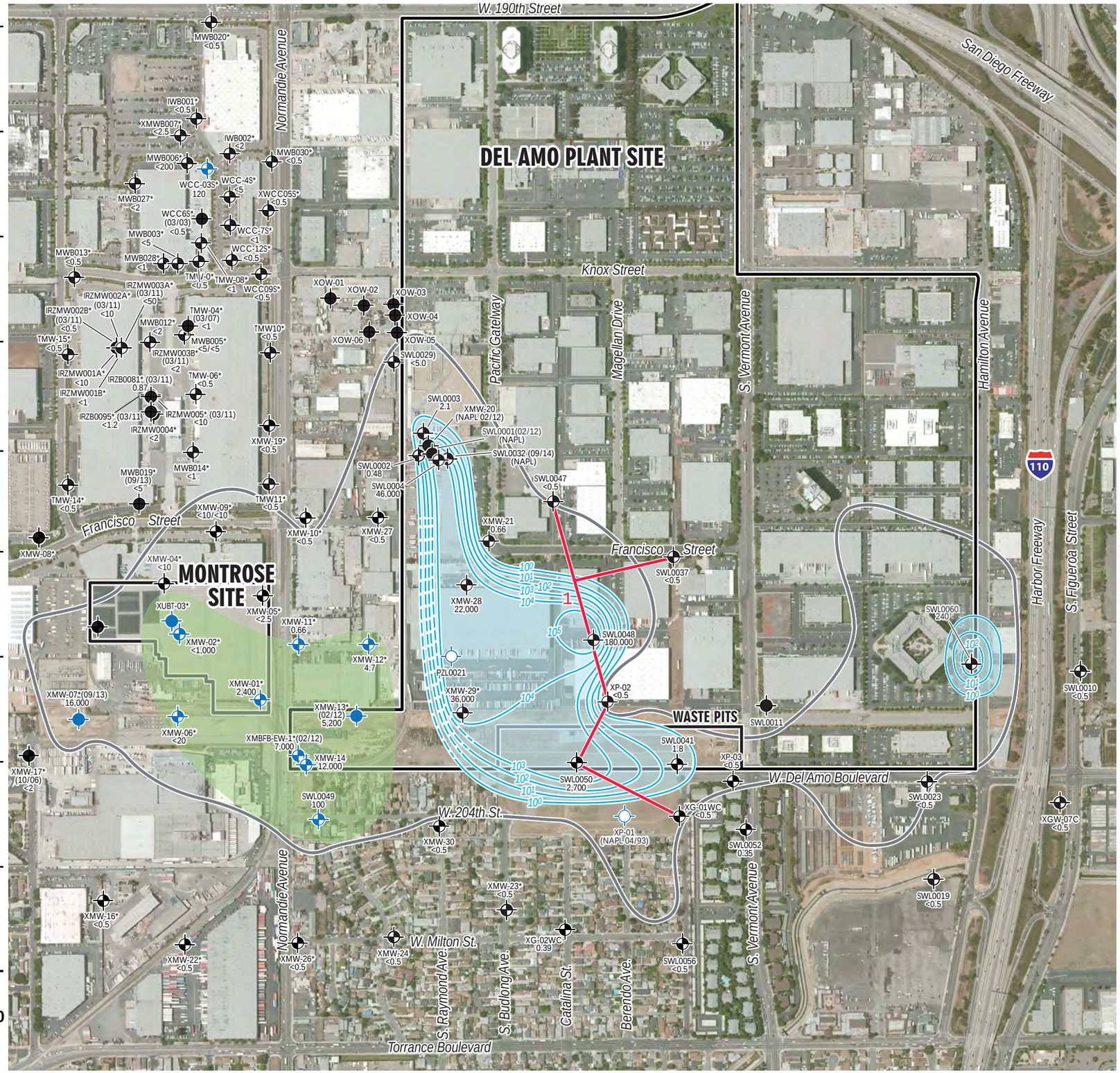
DISSOLVED BENZENE DISTRIBUTION WATER TABLE ZONE

2014 Baseline Groundwater Monitoring Report

URS

V:/Projects/GIS_Proj//Ladd/DelAmo/2014Baseline/1003-204E-2R Version C

V:/Projects/GIS_Proj/Ladd/DelAmo/2014Baseline/1003-202D-2F Version C



0 600 1200

Scale in Feet

Legend

XP-03 <0.5	Monitoring well location with 2014 benzene concentration (µg/l)
SWL0047 <0.5	Monitoring well not sampled in 2014 with most recent historical (2006 and later) benzene concentration (µg/l) and date
MWB030 <0.5	Abandoned/destroyed monitoring well
	Location where benzene is present but is not associated with the Del Amo Site
(NAPL 02/12)	Non-aqueous phase liquid present and date of observation
	TI-waiver/containment zone, as presented in the groundwater ROD (EPA, 1999)
100	Benzene Concentration Isopleth (µg/l), dashed where uncertain
	Benzene plume associated with Del Amo Site
	Area of benzene within the chlorobenzene plume
*	Data collected by other investigators
1	Natural attenuation transect

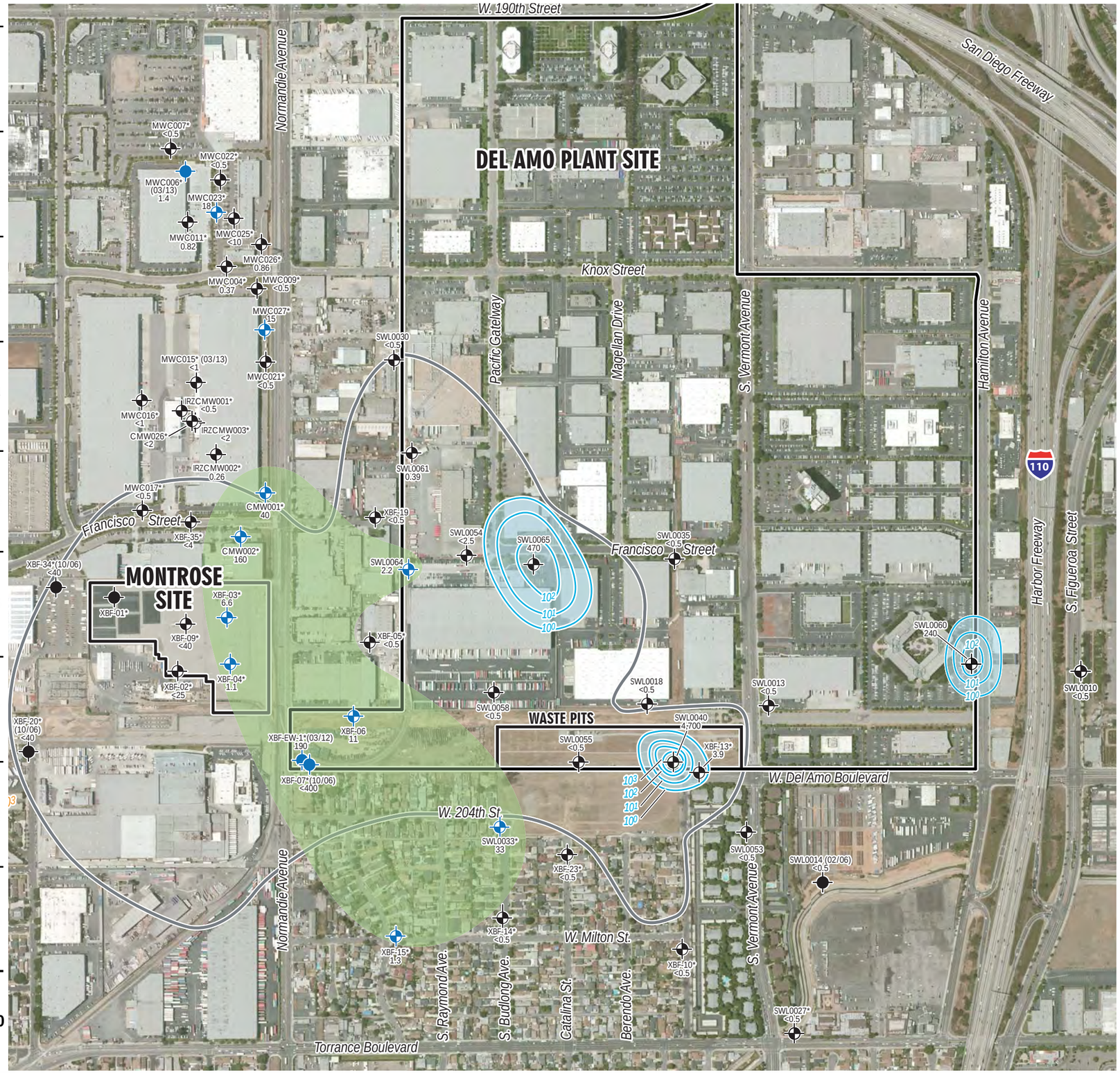
FIGURE 8

DISSOLVED BENZENE DISTRIBUTION MIDDLE BELLFLOWER B SAND

2014 Baseline Groundwater Monitoring Report

URS

V:/Projects/GIS_Proj/Ladd/DelAmo/2014 Baseline/903-201D-2J Version C



0 600 1200

Scale in Feet

Legend

- SWL0060 240 — Monitoring well location with 2014 benzene concentration (µg/l)
- XBF-01* — Monitoring well not sampled in 2014 with most recent historical (2006 and later) benzene concentration (µg/l) and date
- MWC006*(03/13) 1.4 / MWC027* 15 — Location where benzene is present but is not associated with the Del Amo Site
- TI-waiver/containment zone, as presented in the groundwater ROD (EPA, 1999)
- 10^0 — Benzene Concentration Isopleth (µg/l)
- Benzene plume associated with Del Amo Site
- Area of benzene within the chlorobenzene plume
- * — Data collected by other investigators

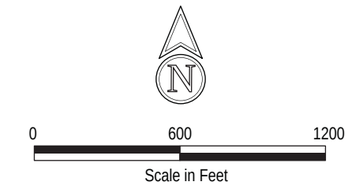
FIGURE 9

DISSOLVED BENZENE DISTRIBUTION MIDDLE BELLFLOWER C SAND

2014 Baseline Groundwater Monitoring Report

URS

V:/Projects/GIS_Proj/Ladd/DelAmo/2014Baseline/1003-203D-2J Version C



Legend

XG-09* <1	Monitoring well location with 2014 benzene concentration (µg/l)
SWL0020	Monitoring well not sampled in 2014 with most recent historical (2006 and later) benzene concentration (µg/l) and date
XMWG001* 33	Location where benzene is present but is not associated with the Del Amo Site
	TI-waiver/containment zone, as presented in the groundwater ROD (EPA, 1999)
10^0	Benzene Concentration Isopleth (µg/l)
	Benzene plume associated with Del Amo Site
	Area of benzene within the chlorobenzene plume
*	Data collected by other investigators

FIGURE 10

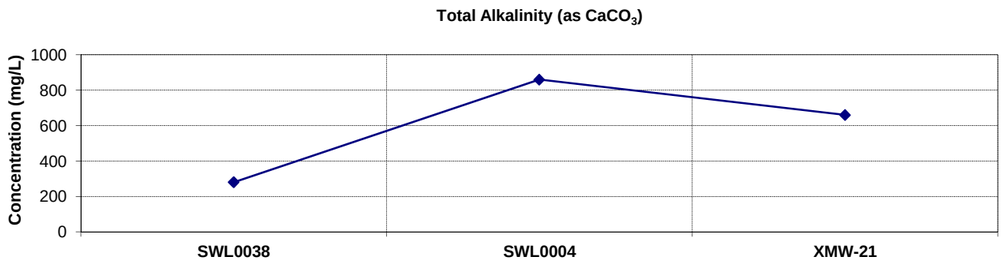
DISSOLVED BENZENE DISTRIBUTION GAGE AQUIFER

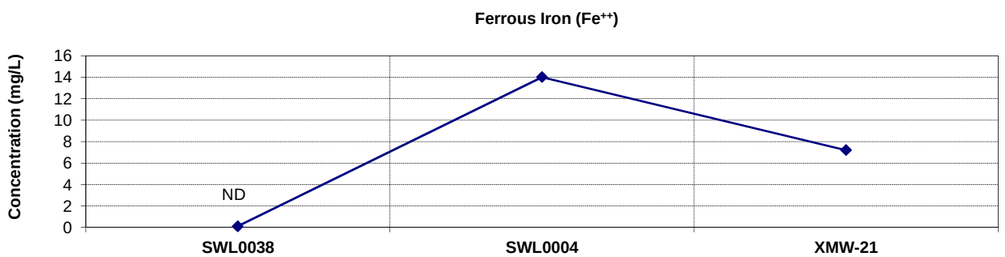
2014 Baseline
Groundwater Monitoring Report

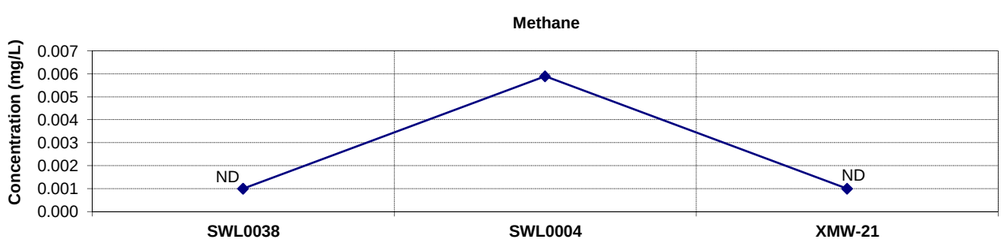
URS

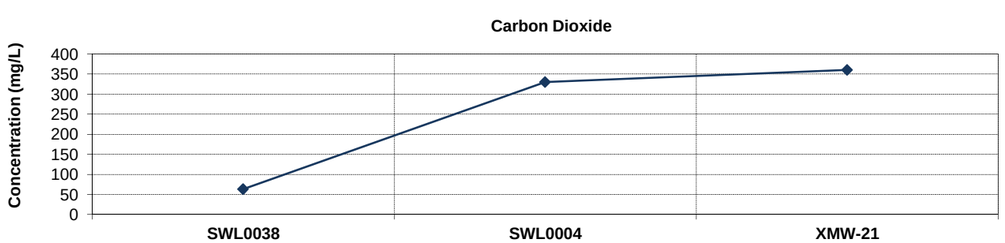
Figure 11
Biodegradation Indicators Along Water Table Zone Transect 1
2014 Baseline Groundwater Monitoring Report

Outside of Plume (North)	Mid-Plume	Edge of Plume (Southeast)

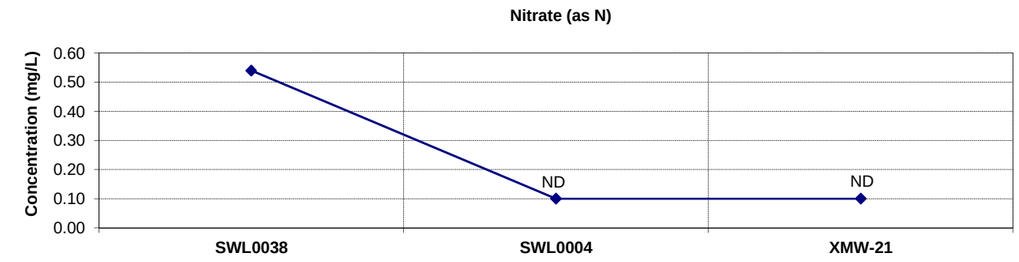


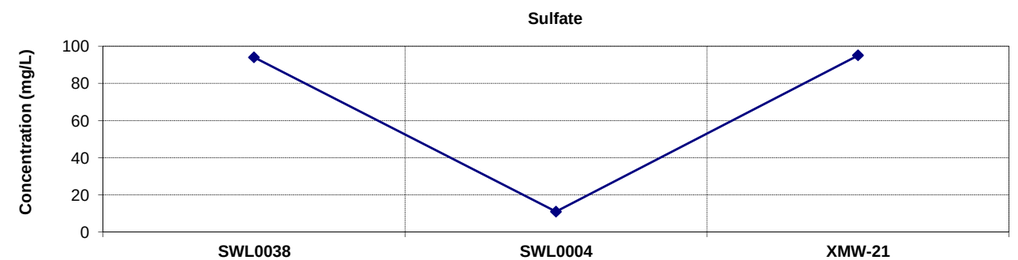


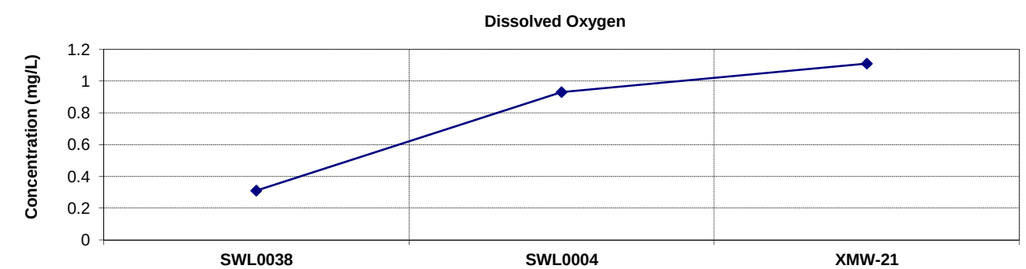




Outside of Plume (North)	Mid-Plume	Edge of Plume (Southeast)







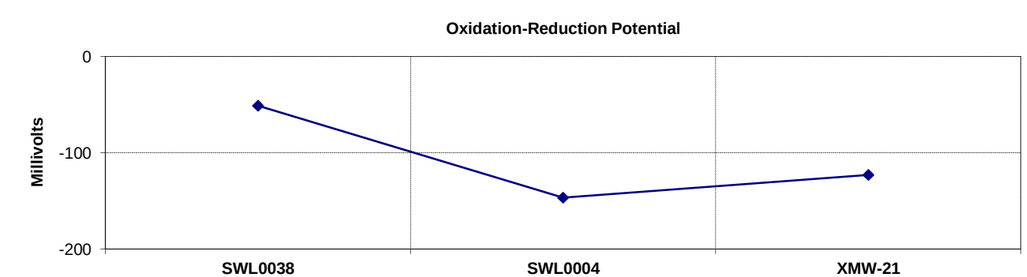
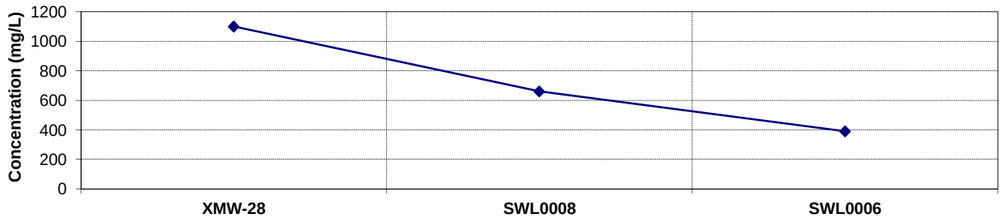


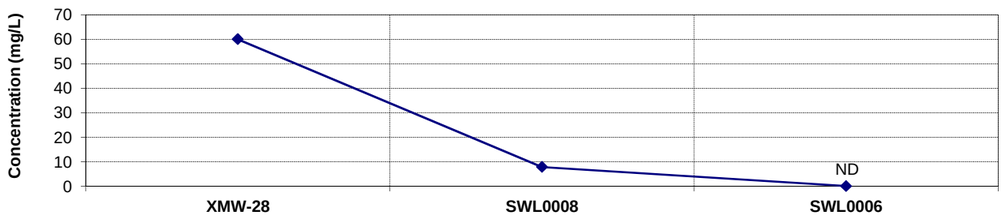
Figure 12
Biodegradation Indicators Along Water Table Zone Transect 2
2014 Baseline Groundwater Monitoring Report

Mid-Plume	Edge of Plume	Outside of Plume (South)

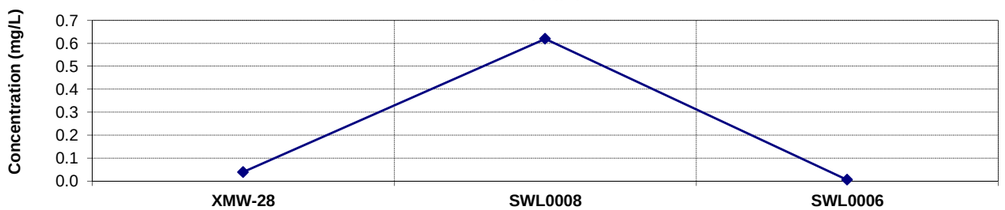
Total Alkalinity (as $CaCO_3$)



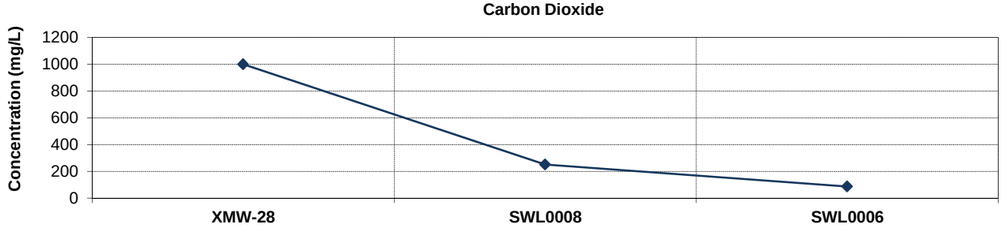
Ferrous Iron (Fe^{++})



Methane

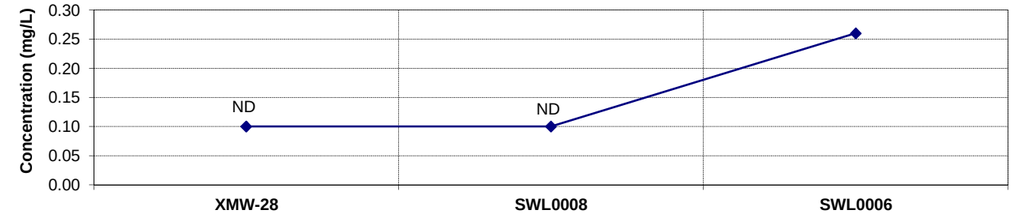


Carbon Dioxide

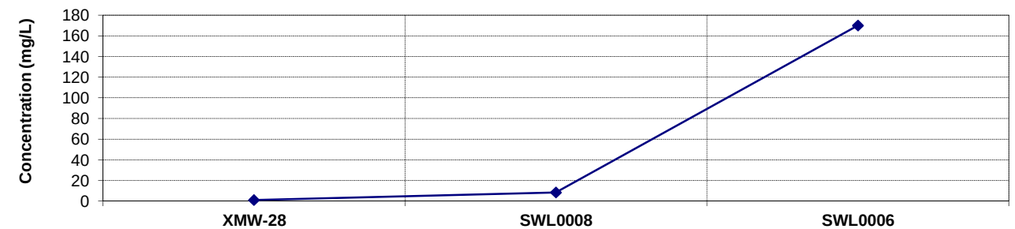


Mid-Plume	Edge of Plume	Outside of Plume (South)

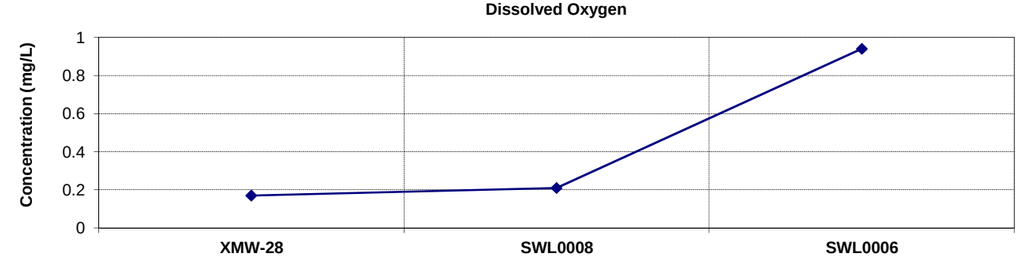
Nitrate (as N)



Sulfate



Dissolved Oxygen



Oxidation-Reduction Potential

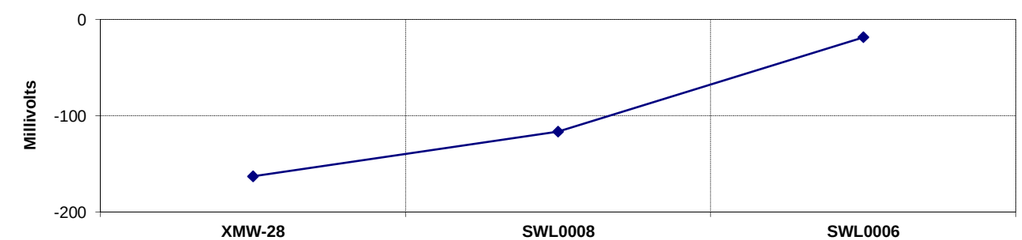


Figure 13
Biodegradation Indicators Along Water Table Zone Transect 3
2014 Baseline Groundwater Monitoring Report

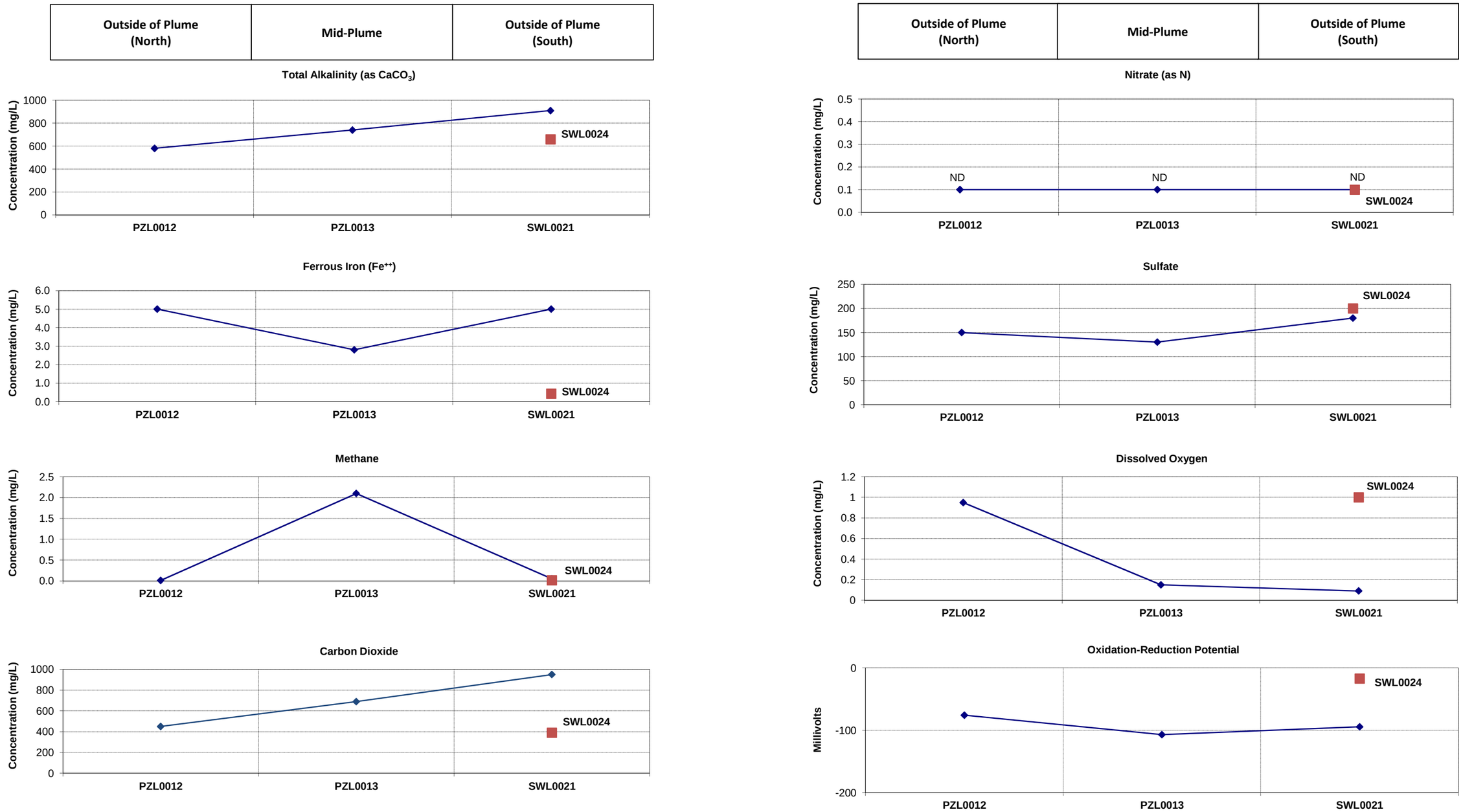
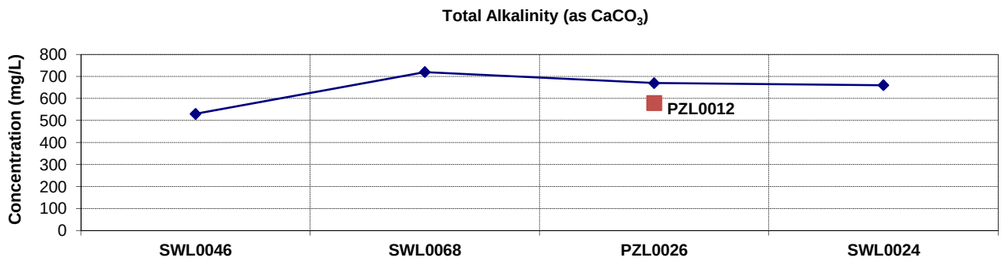
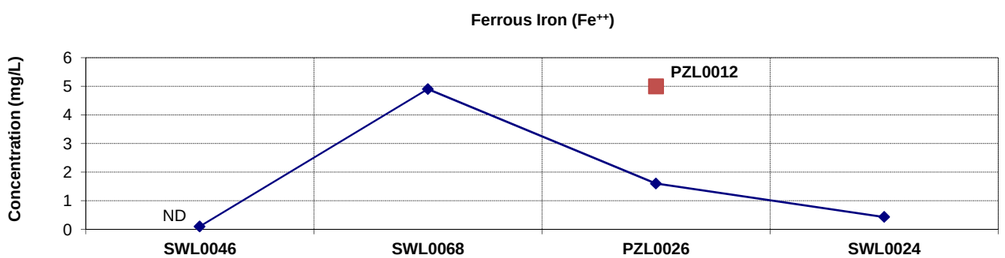
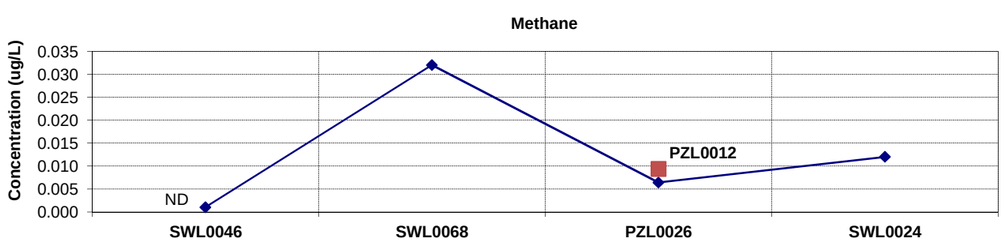


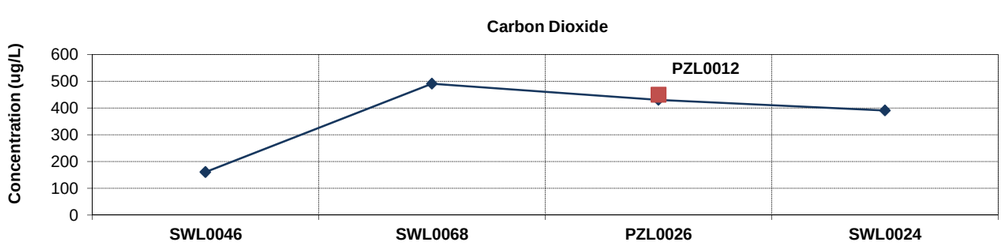
Figure 14
Biodegradation Indicators Along Water Table Zone Transect 4
2014 Baseline Groundwater Monitoring Report

Outside of Plume (Northwest)	Mid Plume	Edge of Plume (South)	Outside of Plume (South)

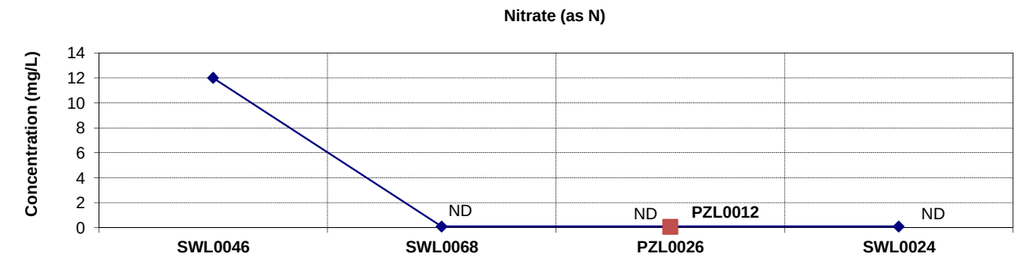


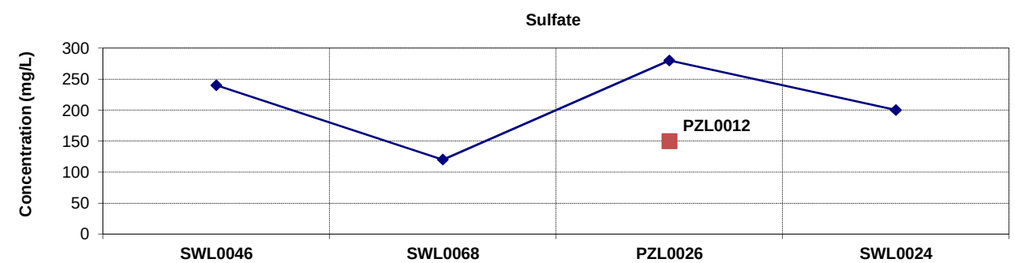


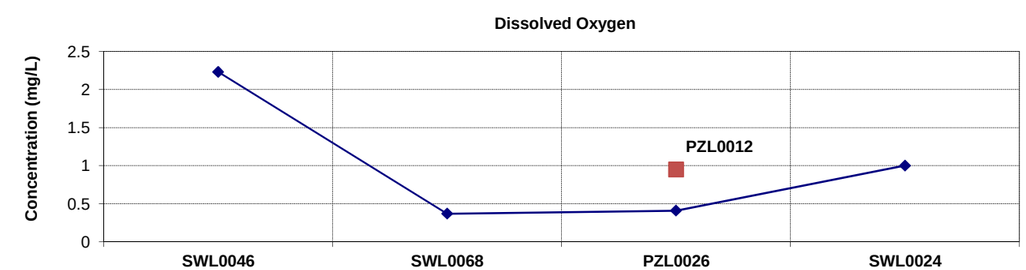


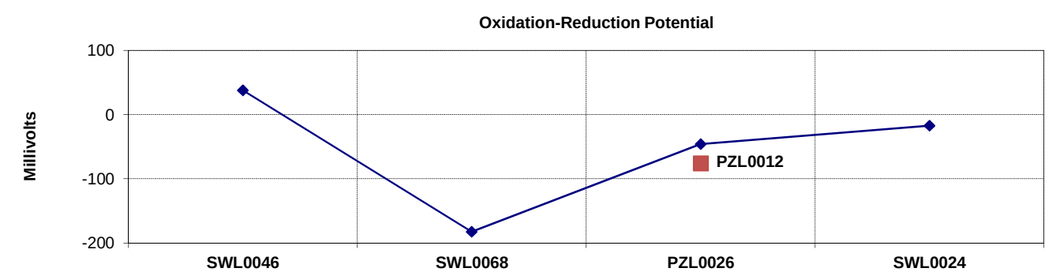


Outside of Plume (Northwest)	Mid Plume	Edge of Plume (South)	Outside of Plume (South)



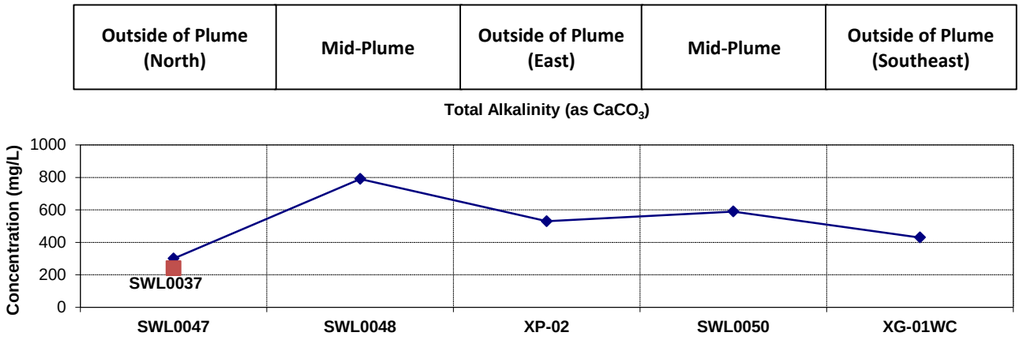


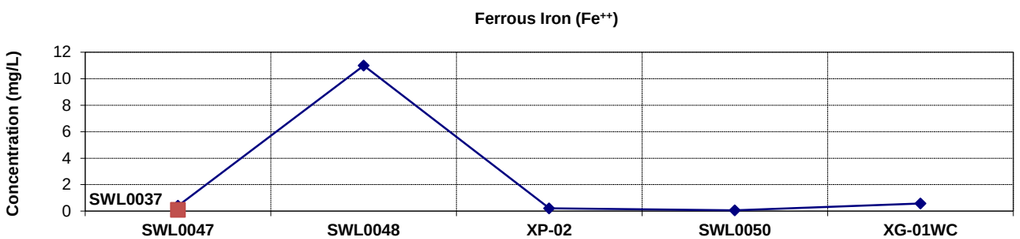


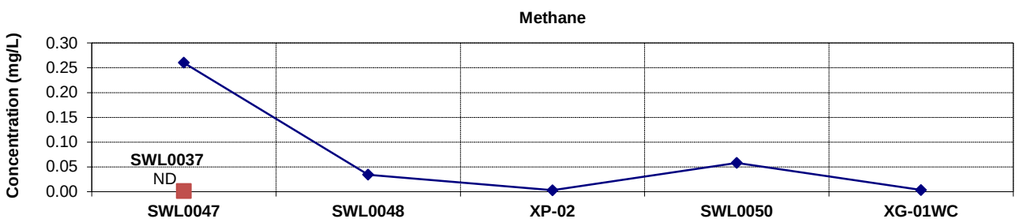


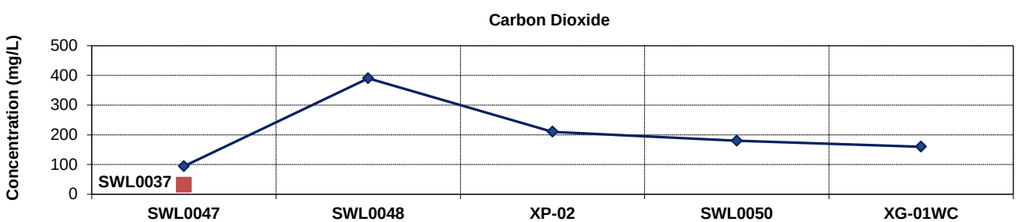
Indicates cross gradient well

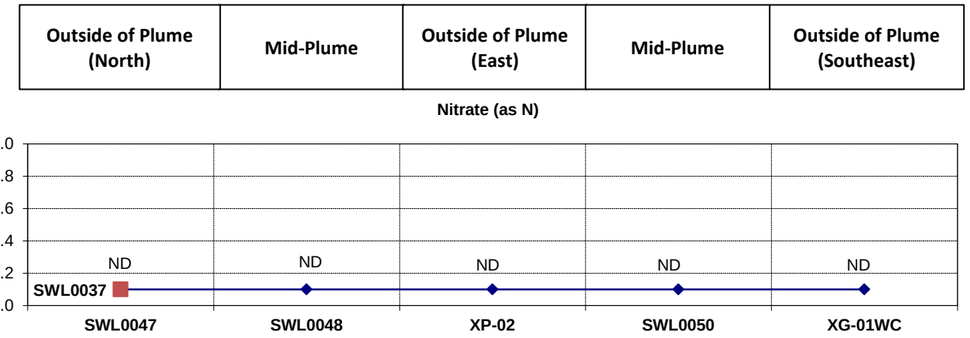
Figure 15
Biodegradation Indicators Along MBFB Zone Transect 1
2014 Baseline Groundwater Monitoring Report

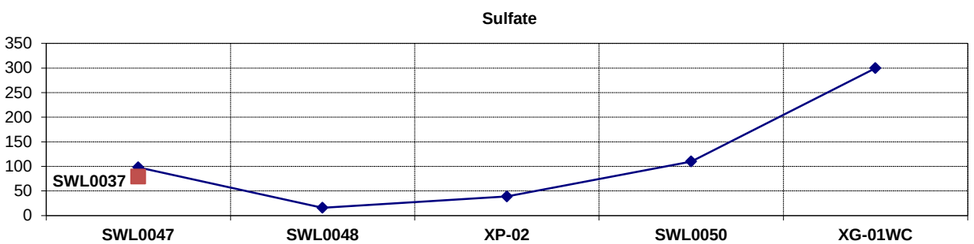


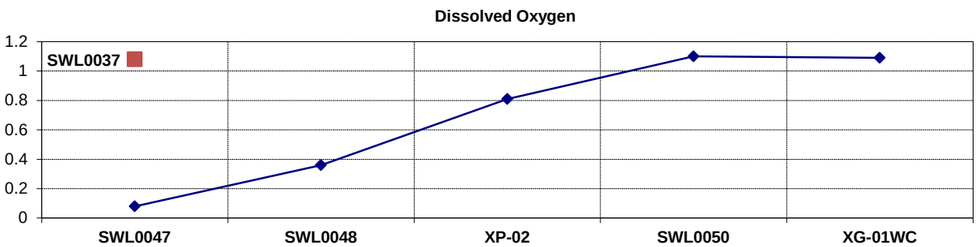


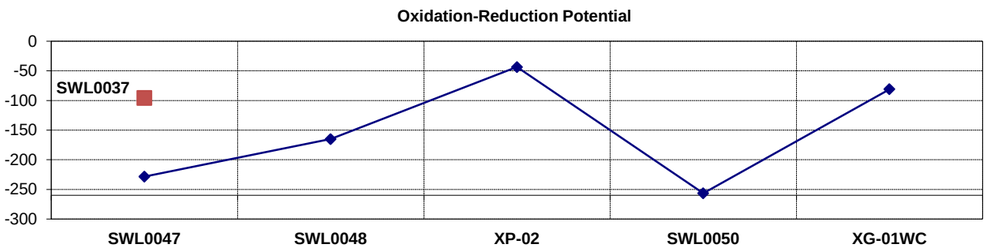












Indicates cross gradient well