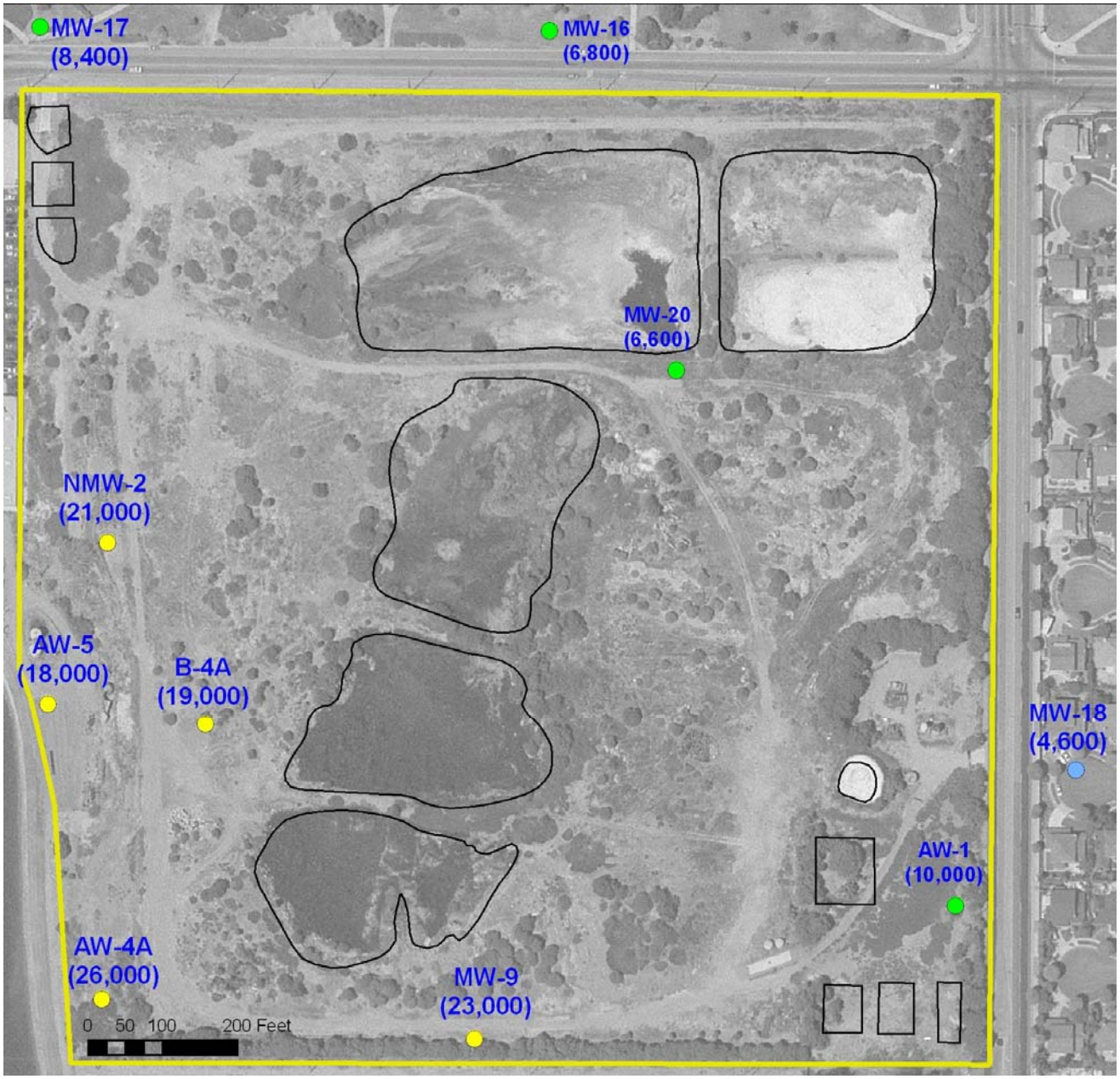


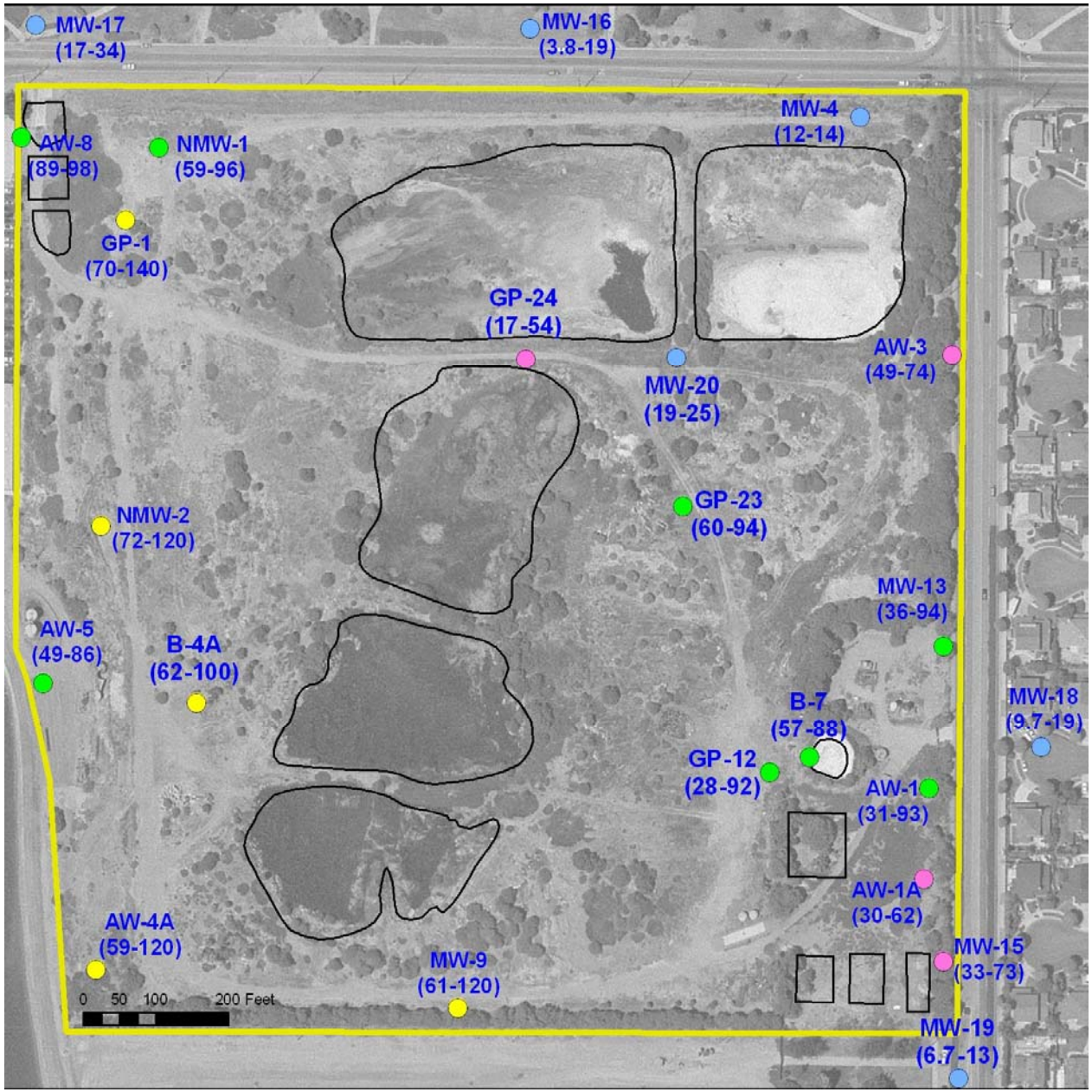
Legend

- GW Monitoring Well Location
- < 5,000 mg/L TDS Concentration at Monitoring Location
- 5,000 to 10,000 mg/L TDS Concentration at Monitoring Location
- >10,000 mg/L TDS Concentration at Monitoring Location
- (10,000) TDS Concentration in mg/L
- Ascon Site Boundary
- Pits and Lagoons Boundaries

N

Notes: mg/L = milligrams per liter

Distribution of TDS Concentrations in March/April 2004		Figure 6-1
Ascon Landfill Site, Huntington Beach, California	March 2005	GeoSyntec Consultants



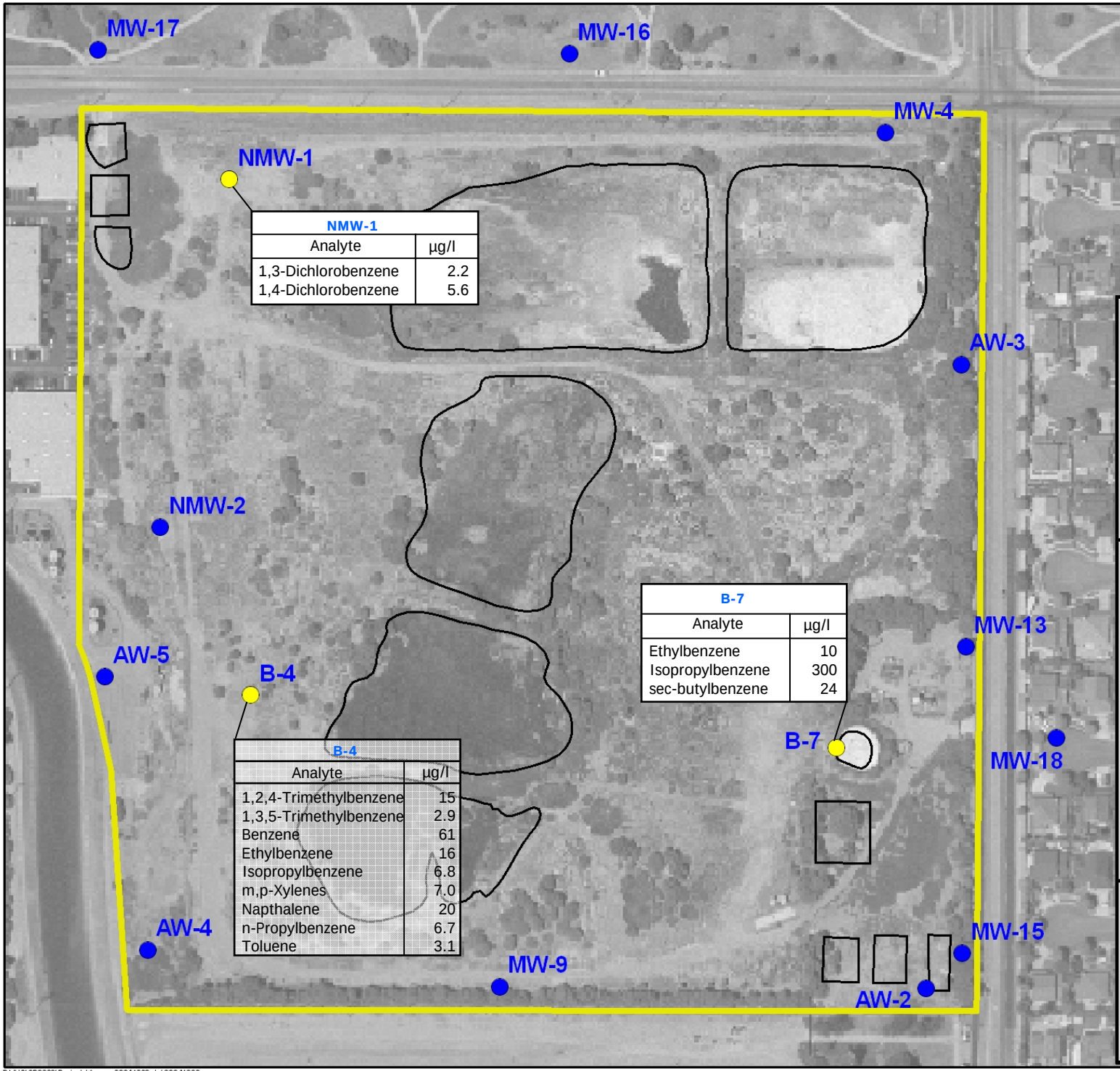
Legend

- GW Monitoring Well Location
- < 50µg/L Selenium Concentration Detected[1]
- 51-75 µg/L Selenium Concentration Detected[1]
- 76-99 µg/L Selenium Concentration Detected[1]
- ≥100 µg/L Selenium Concentration Detected[1]
- (31-93) Range of selenium concentration detected at monitoring location in 2004
- Ascon Site Boundary
- Pits and Lagoons Boundaries

N

Notes:
1: Highest selenium concentration selected for showing distribution.
2: µg/L = micrograms per liter

Distribution of Selenium Concentrations in 2004		Figure 6-2
Environmental Science & Engineering, Inc. (1997) PNL (2002) Ascon Landfill Site, Huntington Beach, California	March 2005	GeoSyntec Consultants



NMW-1	
Analyte	µg/l
1,3-Dichlorobenzene	2.2
1,4-Dichlorobenzene	5.6

B-7	
Analyte	µg/l
Ethylbenzene	10
Isopropylbenzene	300
sec-butylbenzene	24

B-4	
Analyte	µg/l
1,2,4-Trimethylbenzene	15
1,3,5-Trimethylbenzene	2.9
Benzene	61
Ethylbenzene	16
Isopropylbenzene	6.8
m,p-Xylenes	7.0
Napthalene	20
n-Propylbenzene	6.7
Toluene	3.1

Figure 6-3
VOCs Detected in Groundwater (Onsite and Offsite) in June 2002 and August 2002

Ascon Landfill Site, Huntington Beach, California

Legend

Groundwater Monitoring Well Locations

- VOC Detected (ug/L)
- VOC Not Detected
- Ascon Site Boundary
- Pit or Lagoon Boundary

NOTES:
1. Groundwater data collected by PNL in June 2002 and August 2002

N

0 100 200 Feet

Date: Mar. 2005 | Project: SB0202

GeoSyntec Consultants

P:\GIS\SB0202\Projects\Ascon_20041206 dgl 20041206

GP-24	
Analyte	ug/l
sec-butylbenzene	1.0

AW-5	
Analyte	ug/l
Ethylbenzene	43
m,p-Xylene	35

B-7	
Analyte	ug/l
Ethylbenzene	1.7
Isopropylbenzene	92
Napthalene	1.3
N-Propylbenzene	1.9
sec-butylbenzene	6

B-4A	
Analyte	ug/l
1,2,4-Trimethylbenzene	18
1,3,5-Trimethylbenzene	5.1
Benzene	16
Ethylbenzene	11
Isopropylbenzene	3.6
m,p-Xylene	7.8
Naphthalene	12
n-Propylbenzene	4
o-Xylene	1.6
Toluene	2.4
p-Isopropyltoluene	1.3*

Figure 6-4
VOCs Detected in Groundwater (Onsite and Offsite) in March – April 2004

Ascon Landfill Site, Huntington Beach, California

Legend

Groundwater Monitoring Well Locations

- VOC Detected (ug/l)
- VOC Not Detected
- Ascon Site Boundary
- Pit or Lagoon Boundary
- * Detected in Duplicate Sample

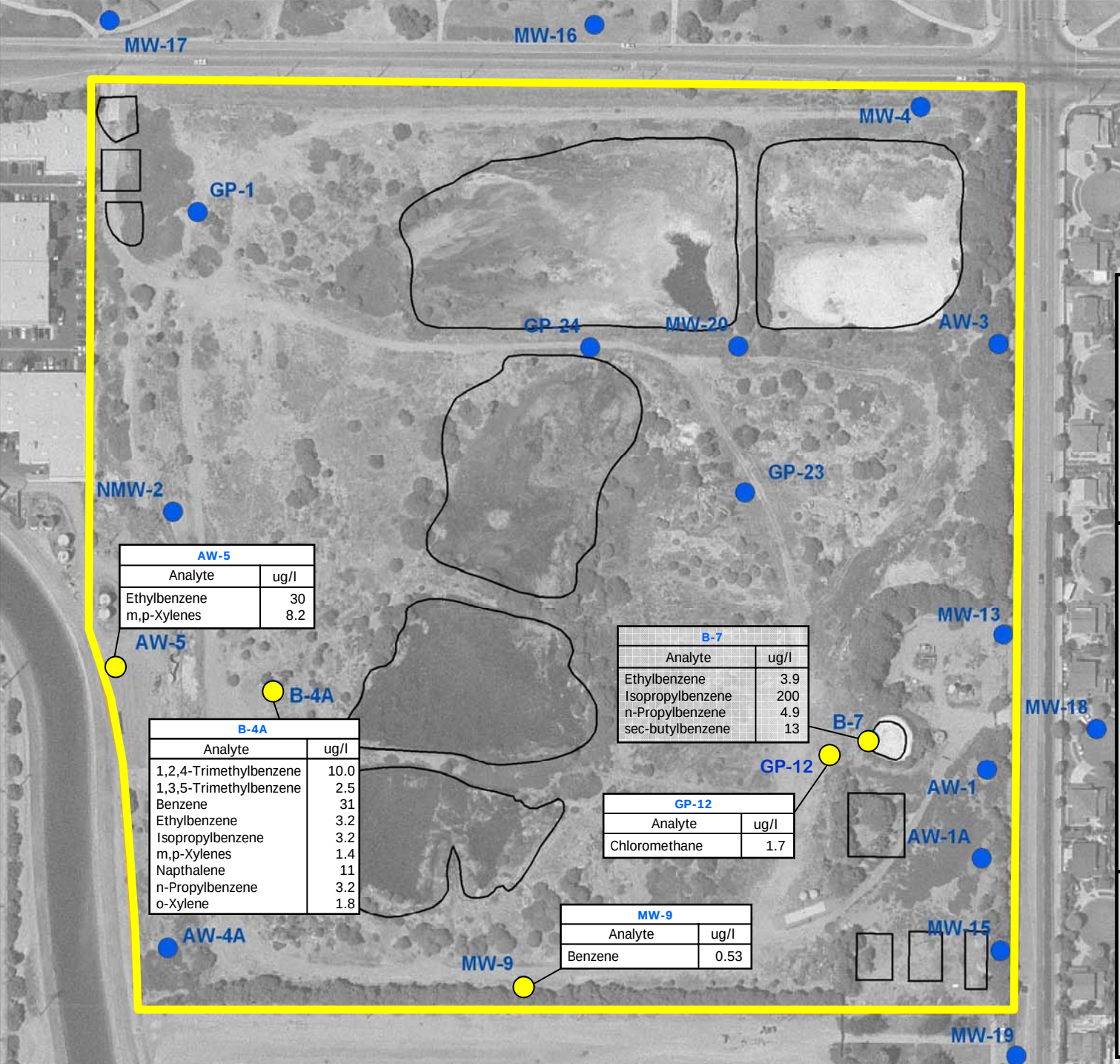
NOTES:
1. Groundwater data collected by GeoSyntec in March – April 2004

N

0 100 200 Feet

Date: Mar. 2005 | Project: SB0202

GeoSyntec Consultants



AW-5	
Analyte	ug/l
Ethylbenzene	30
m,p-Xylenes	8.2

B-4A	
Analyte	ug/l
1,2,4-Trimethylbenzene	10.0
1,3,5-Trimethylbenzene	2.5
Benzene	31
Ethylbenzene	3.2
Isopropylbenzene	3.2
m,p-Xylenes	1.4
Napthalene	11
n-Propylbenzene	3.2
o-Xylene	1.8

B-7	
Analyte	ug/l
Ethylbenzene	3.9
Isopropylbenzene	200
n-Propylbenzene	4.9
sec-butylbenzene	13

GP-12	
Analyte	ug/l
Chloromethane	1.7

MW-9	
Analyte	ug/l
Benzene	0.53

Figure 6-5
VOCs Detected in Groundwater (Onsite and Offsite) in June 2004

Ascon Landfill Site, Huntington Beach, California

Legend

Groundwater Monitoring Well Locations

- VOC Detected (ug/L)
- VOC Not Detected
- Ascon Site Boundary
- Pit or Lagoon Boundary

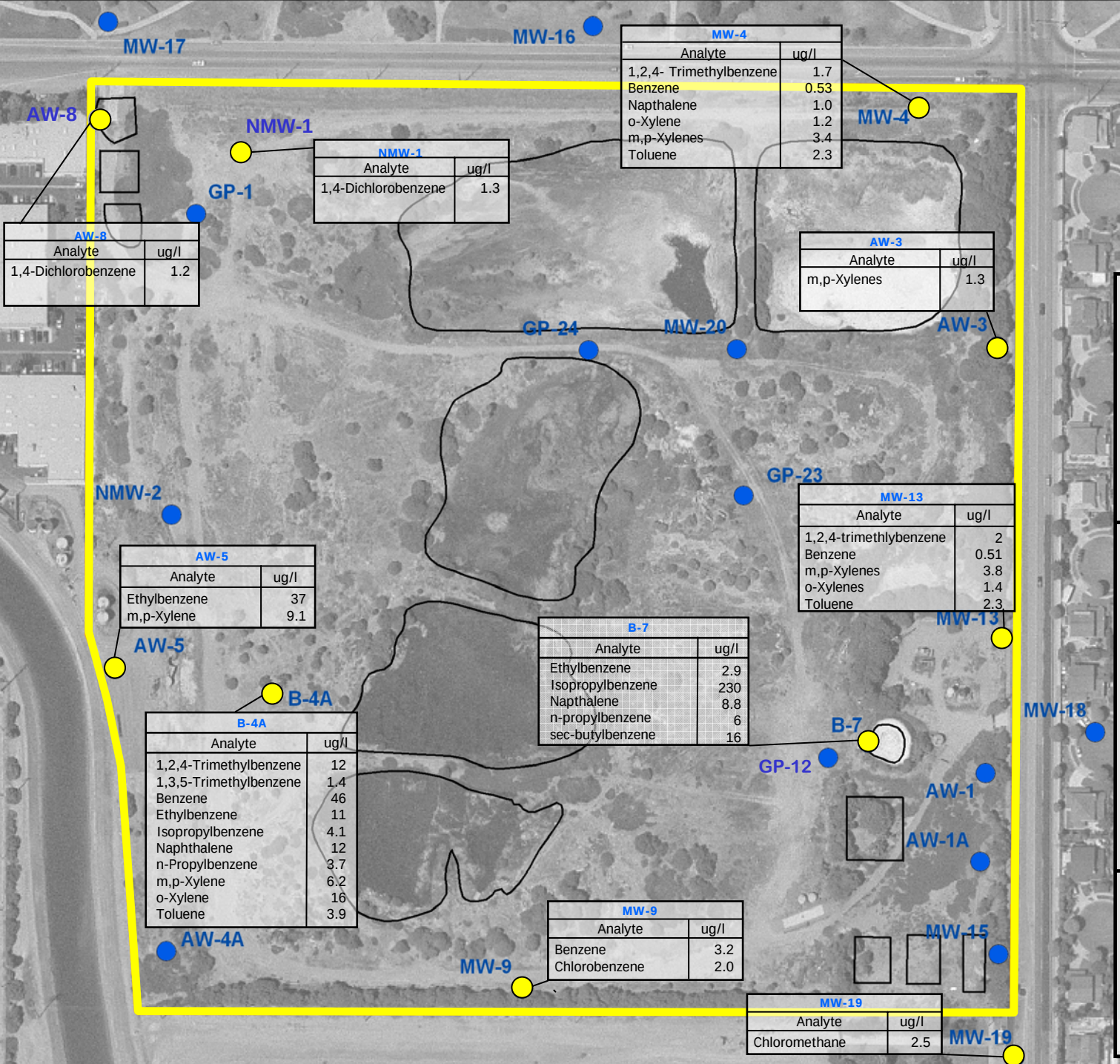
NOTES:
1. Groundwater data collected by GeoSyntec in June 2004

N

0 100 200 Feet

Date: Mar. 2005 | Project: SB0202

GeoSyntec Consultants



MW-4	
Analyte	ug/l
1,2,4- Trimethylbenzene	1.7
Benzene	0.53
Napthalene	1.0
o-Xylene	1.2
m,p-Xylenes	3.4
Toluene	2.3

NMW-1	
Analyte	ug/l
1,4-Dichlorobenzene	1.3

AW-8	
Analyte	ug/l
1,4-Dichlorobenzene	1.2

AW-3	
Analyte	ug/l
m,p-Xylenes	1.3

MW-13	
Analyte	ug/l
1,2,4-trimethlybenzene	2
Benzene	0.51
m,p-Xylenes	3.8
o-Xylenes	1.4
Toluene	2.3

AW-5	
Analyte	ug/l
Ethylbenzene	37
m,p-Xylene	9.1

B-7	
Analyte	ug/l
Ethylbenzene	2.9
Isopropylbenzene	230
Napthalene	8.8
n-propylbenzene	6
sec-butylbenzene	16

B-4A	
Analyte	ug/l
1,2,4-Trimethylbenzene	12
1,3,5-Trimethylbenzene	1.4
Benzene	46
Ethylbenzene	11
Isopropylbenzene	4.1
Naphthalene	12
n-Propylbenzene	3.7
m,p-Xylene	6.2
o-Xylene	16
Toluene	3.9

MW-9	
Analyte	ug/l
Benzene	3.2
Chlorobenzene	2.0

MW-19	
Analyte	ug/l
Chloromethane	2.5

Figure 6-6
VOCs Detected in Groundwater (Onsite and Offsite) in September 2004

Ascon Landfill Site, Huntington Beach, California

Legend

Groundwater Monitoring Well Locations

- VOC Detected (ug/L)
- VOC Not Detected
- Ascon Site Boundary
- Pit or Lagoon Boundary

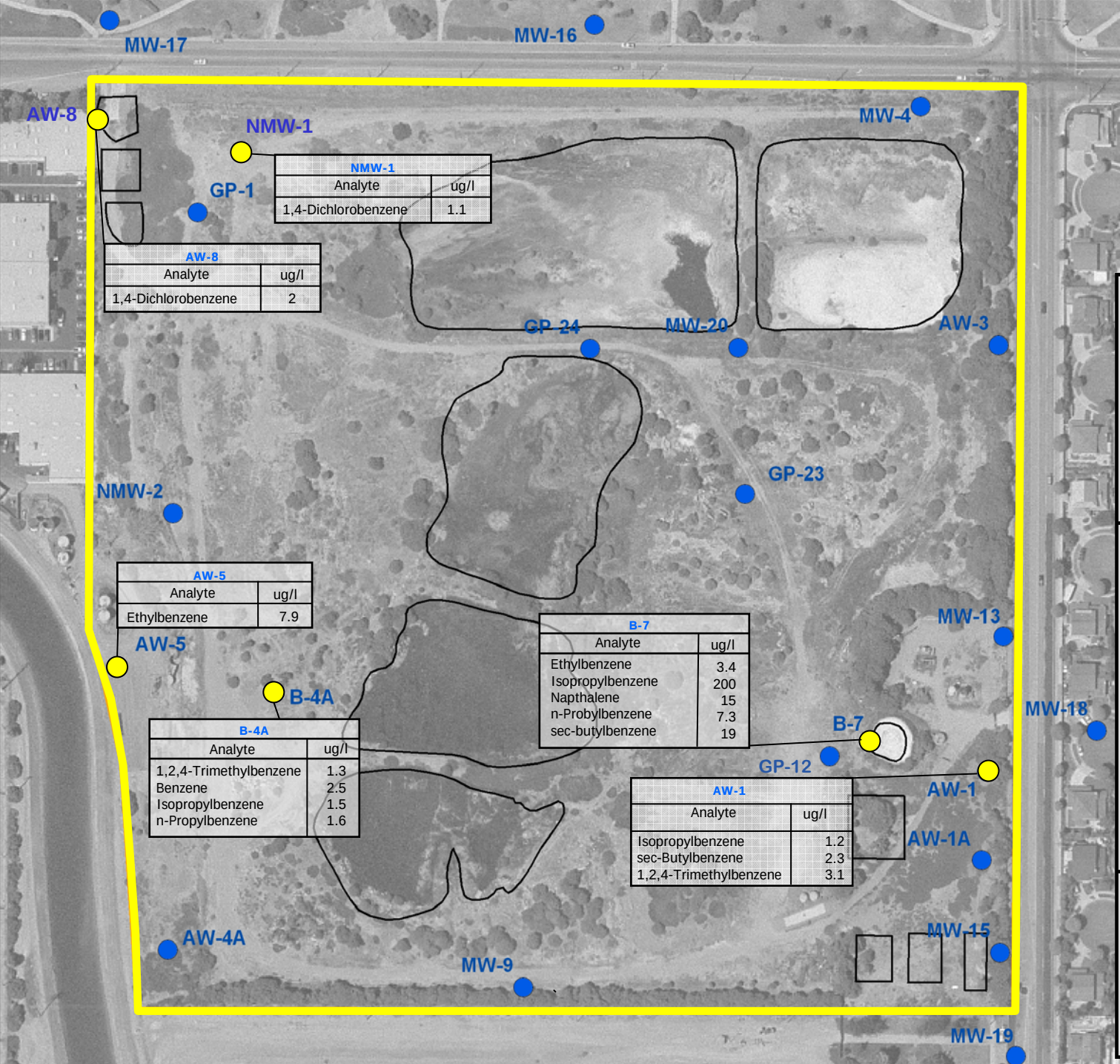
NOTES:
1. Groundwater data collected by GeoSyntec in September 2004

N

0 100 200 Feet

Date: Mar. 2005 | Project: SB0202

GeoSyntec Consultants



NMW-1	
Analyte	ug/l
1,4-Dichlorobenzene	1.1

AW-8	
Analyte	ug/l
1,4-Dichlorobenzene	2

AW-5	
Analyte	ug/l
Ethylbenzene	7.9

B-7	
Analyte	ug/l
Ethylbenzene	3.4
Isopropylbenzene	200
Napthalene	15
n-Probylbenzene	7.3
sec-butylbenzene	19

B-4A	
Analyte	ug/l
1,2,4-Trimethylbenzene	1.3
Benzene	2.5
Isopropylbenzene	1.5
n-Propylbenzene	1.6

AW-1	
Analyte	ug/l
Isopropylbenzene	1.2
sec-Butylbenzene	2.3
1,2,4-Trimethylbenzene	3.1

Figure 6-7
VOCs Detected in Groundwater (Onsite and Offsite) in December 2004

Ascon Landfill Site, Huntington Beach, California

Legend

Groundwater Monitoring Well Locations

- VOC Detected (ug/L)
- VOC Not Detected
- Ascon Site Boundary
- Pit or Lagoon Boundary

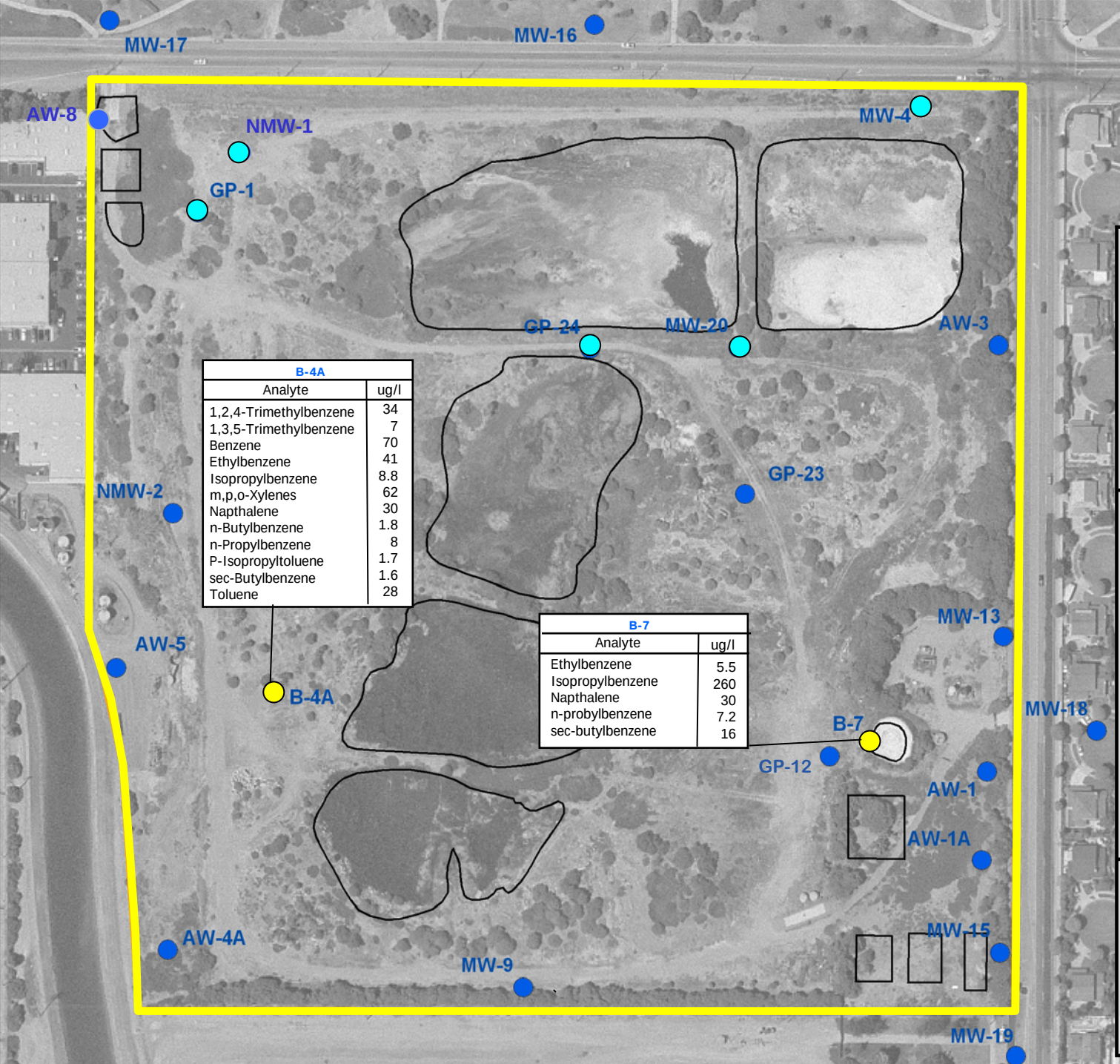
NOTES:
1. Groundwater data collected by GeoSyntec in December 2004

N

0 100 200 Feet

Date: Mar. 2005 | Project: SB0202

GeoSyntec Consultants



B-4A	
Analyte	ug/l
1,2,4-Trimethylbenzene	34
1,3,5-Trimethylbenzene	7
Benzene	70
Ethylbenzene	41
Isopropylbenzene	8.8
m,p,o-Xylenes	62
Napthalene	30
n-Butylbenzene	1.8
n-Propylbenzene	8
P-Isopropyltoluene	1.7
sec-Butylbenzene	1.6
Toluene	28

B-7	
Analyte	ug/l
Ethylbenzene	5.5
Isopropylbenzene	260
Napthalene	30
n-probylbenzene	7.2
sec-butylbenzene	16

Figure 6-8
VOCs Detected in Groundwater (Onsite and Offsite) in December 2006

Ascon Landfill Site, Huntington Beach, California

Legend

Groundwater Monitoring Well Sampling Locations

- Monitoring Well Destroyed (Well Not Sampled)
- VOC Detected (ug/L)
- VOC Not Detected
- Ascon Site Boundary
- Pit or Lagoon Boundary

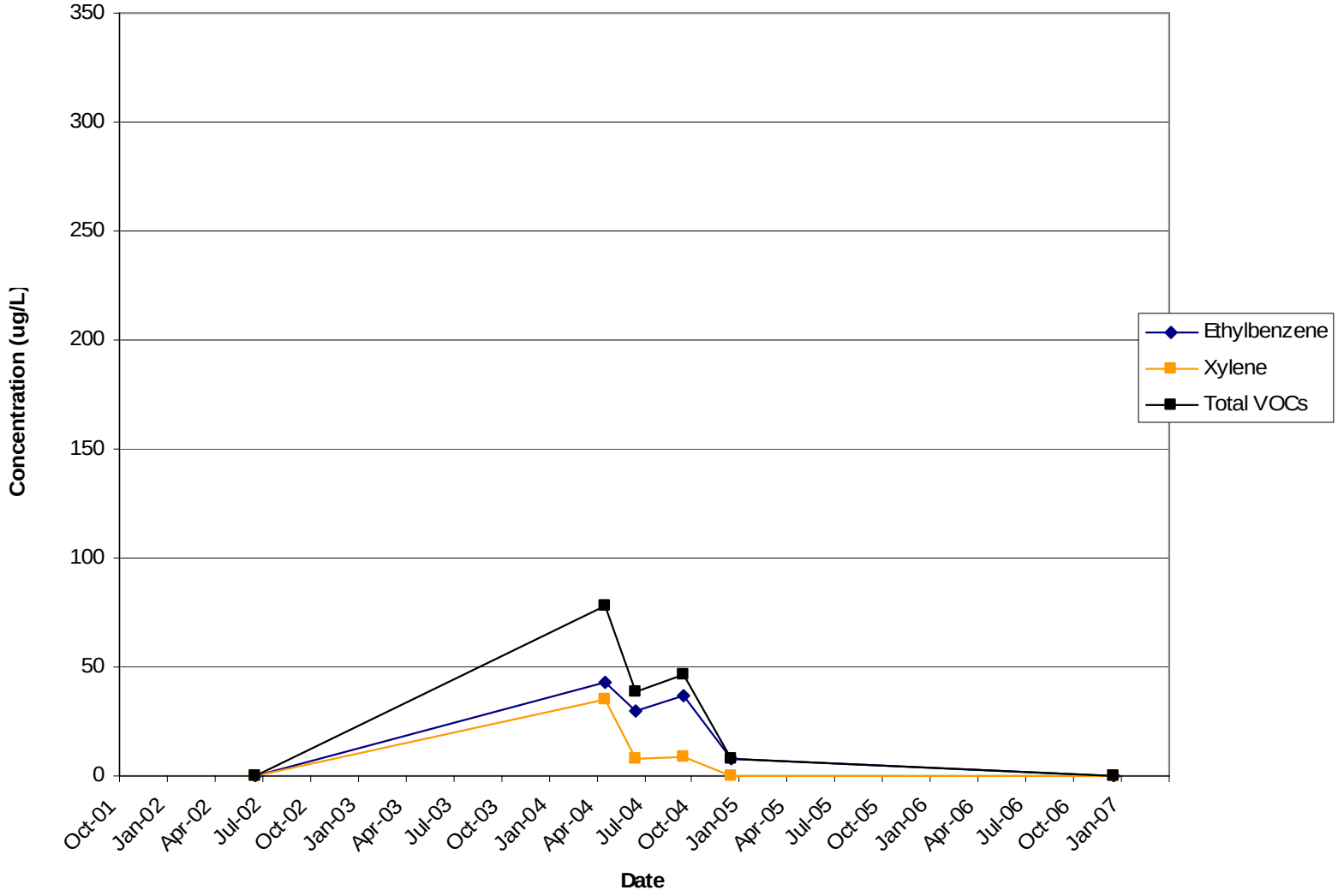
NOTES:
1. Groundwater data collected by GeoSyntec in December 2006

N

0 100 200 Feet

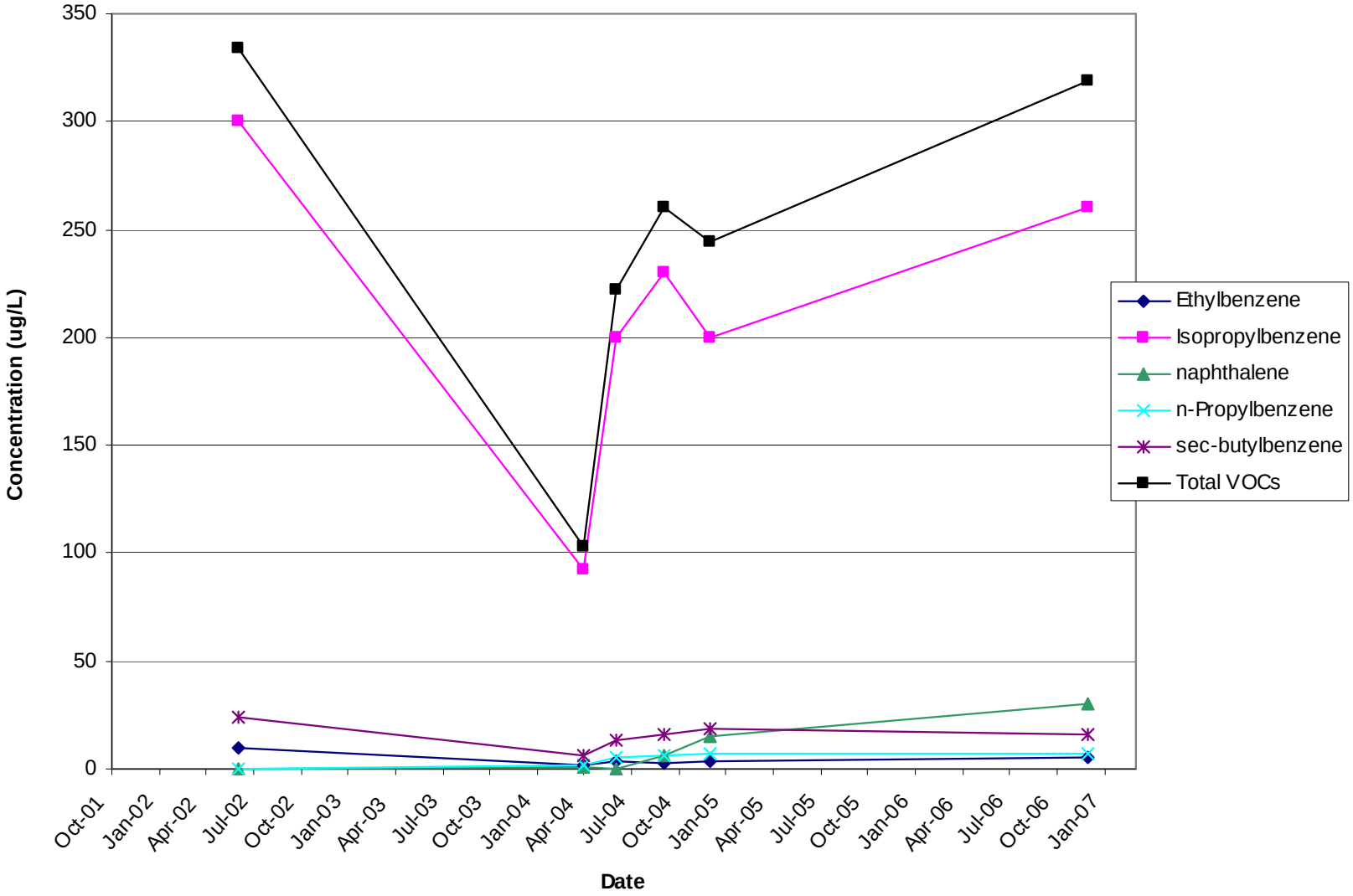
Date: Jan. 2007 | Project: SB0320

GeoSyntec Consultants

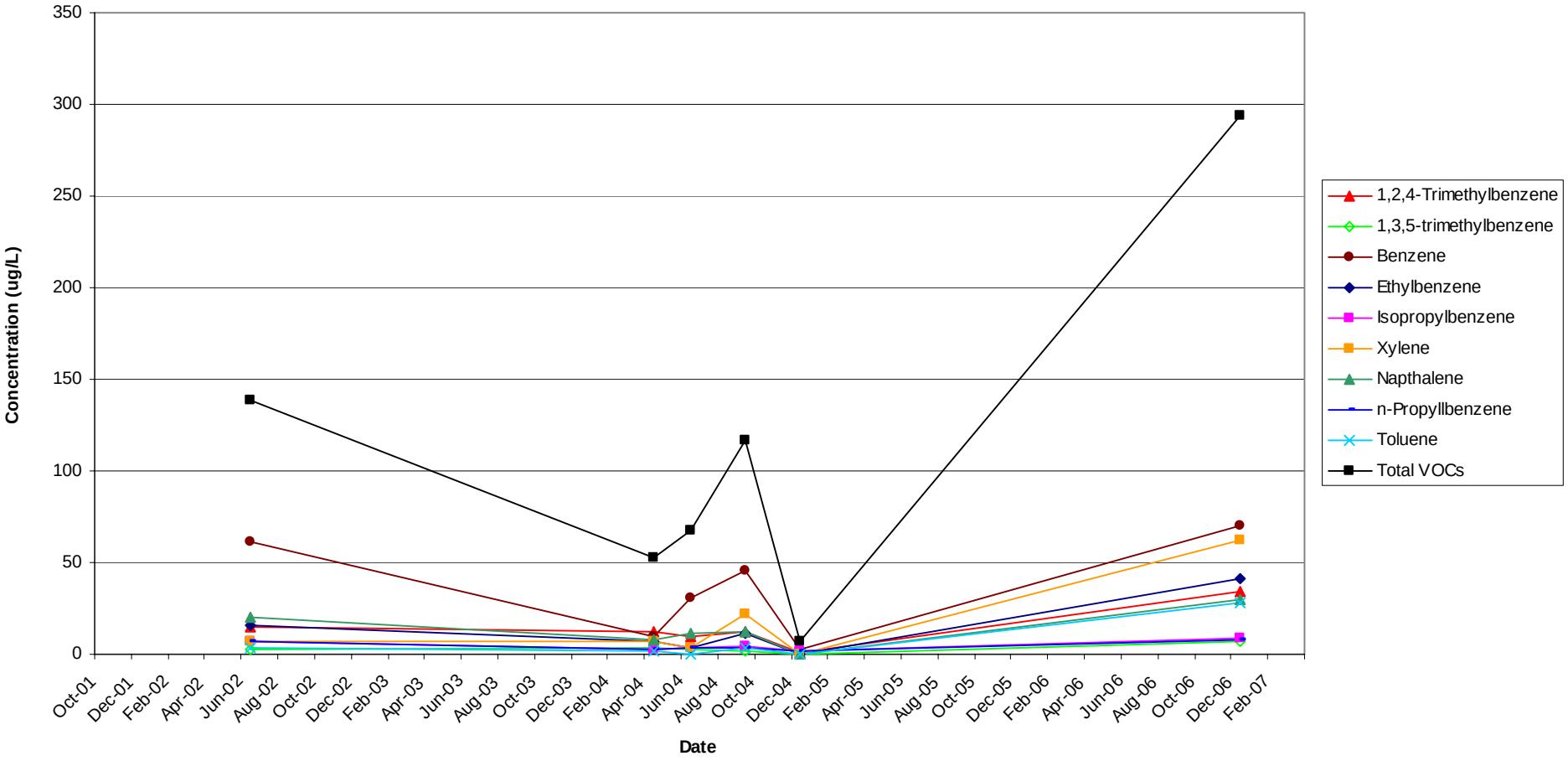


ND: VOCs not detected on 6/02 or12/06

Well AW-5 Summary of VOC Data		Figure 6-9
Ascon Landfill Site, Huntington Beach, California.	March 2007	GEOSYNTEC CONSULTANTS



Well B-7 Summary of VOC Data		Figure 6-10
Ascon Landfill Site, Huntington Beach, California.	March 2007	GeoSyntec Consultants



Well B4/B4A - Summary of VOC Data		Figure 6-11
Ascon Landfill Site, Huntington Beach, California.	March 2007	GeoSyntec Consultants

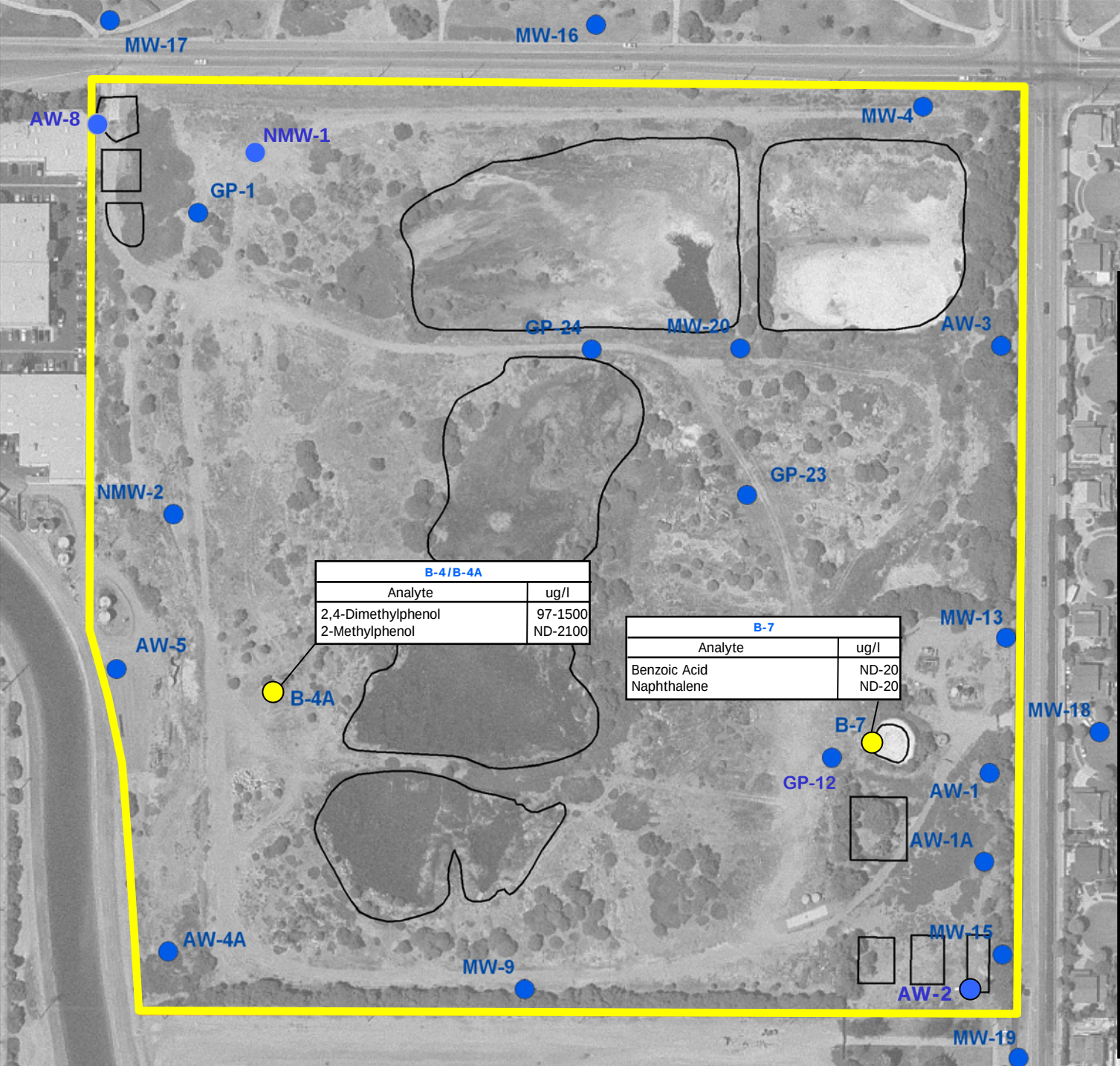


Figure 6-12
Summary of SVOCs Detected in Groundwater (Onsite and Offsite) Years 2002 - 2006

Ascon Landfill Site, Huntington Beach, California

Legend

Groundwater Monitoring Well Locations

- SVOC Detected (ug/L)
- SVOC Not Detected
- Ascon Site Boundary
- Pit or Lagoon Boundary

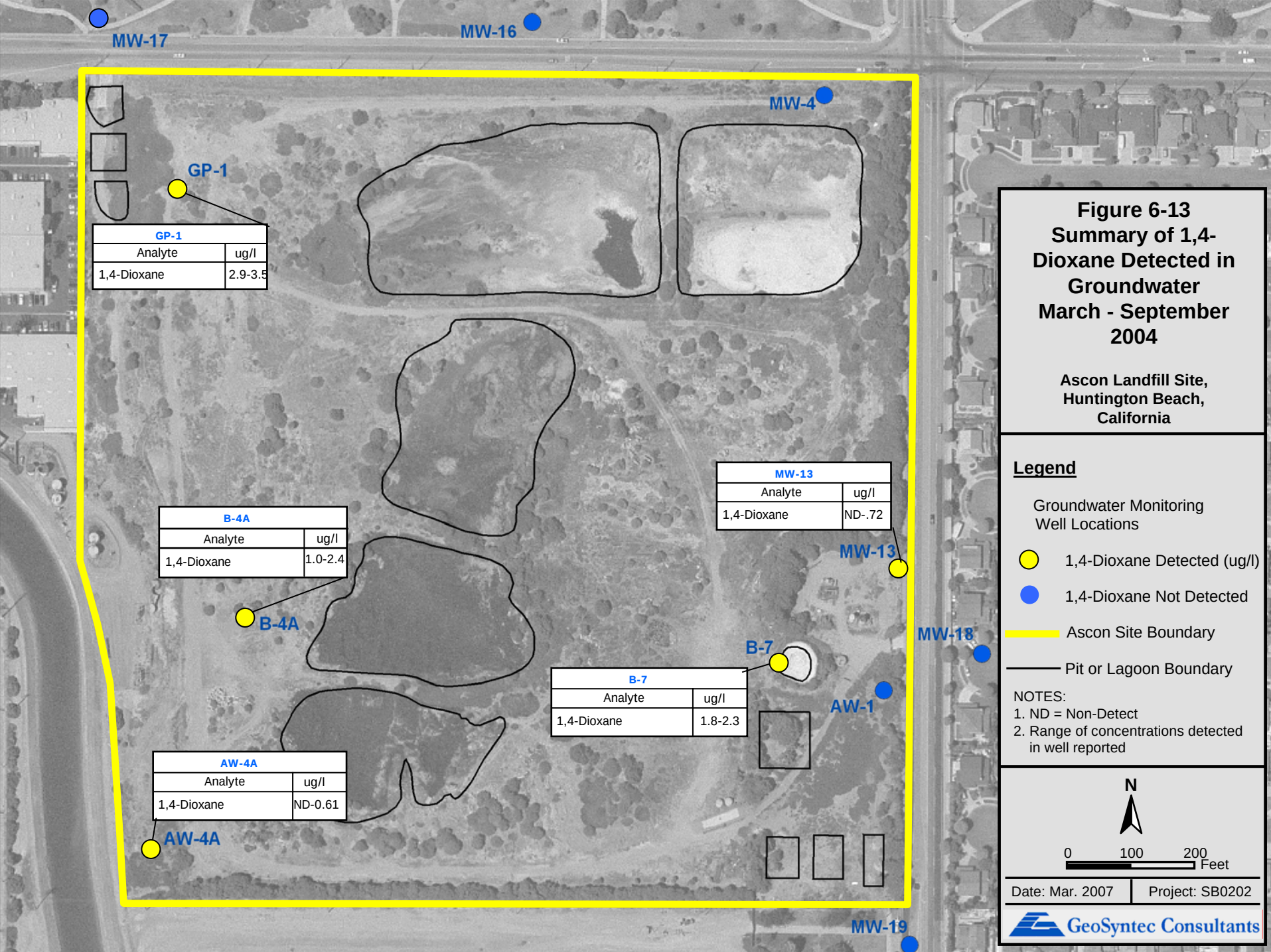
NOTES:
1. ND = Non-Detect
2. Range of concentrations detected in well reported

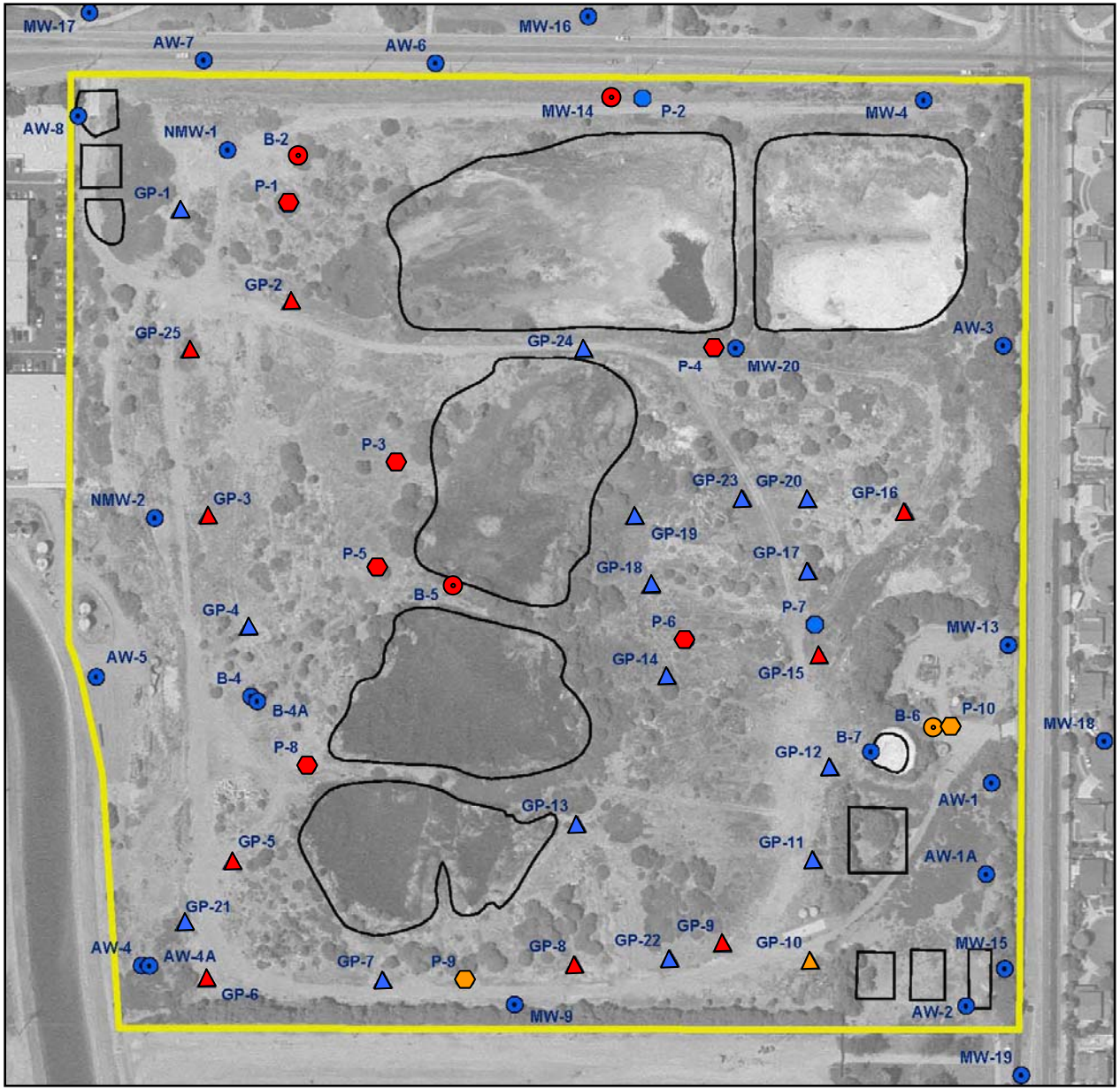
N

0 100 200 Feet

Date: Mar. 2007 | Project: SB0202

GeoSyntec Consultants


MW-17
MW-16
MW-4
GP-1
GP-1
Analyte | ug/l
1,4-Dioxane | 2.9-3.5
MW-13
Analyte | ug/l
1,4-Dioxane | ND-.72
MW-13
B-4A
Analyte | ug/l
1,4-Dioxane | 1.0-2.4
B-4A
MW-18
B-7
B-7
Analyte | ug/l
1,4-Dioxane | 1.8-2.3
AW-1
AW-4A
Analyte | ug/l
1,4-Dioxane | ND-0.61
AW-4A
MW-19
Figure 6-13
Summary of 1,4-Dioxane Detected in Groundwater
March - September 2004
Ascon Landfill Site, Huntington Beach, California
Legend
Groundwater Monitoring Well Locations
1,4-Dioxane Detected (ug/l)
1,4-Dioxane Not Detected
Ascon Site Boundary
Pit or Lagoon Boundary
NOTES:
1. ND = Non-Detect
2. Range of concentrations detected in well reported
N
0
100
200
Feet
Date: Mar. 2007
Project: SB0202
GeoSyntec Consultants



Legend

- GW Monitoring Well Locations
- Geoprobe Monitoring Well Locations
- Piezometer Well Locations
- Locations with NAPL detected in December 2004
- Locations with trace NAPL in December 2004 (observed but not detected by interface probe)
- Ascon Site Boundary
- Pits and Lagoons Boundaries

N

NOTES:

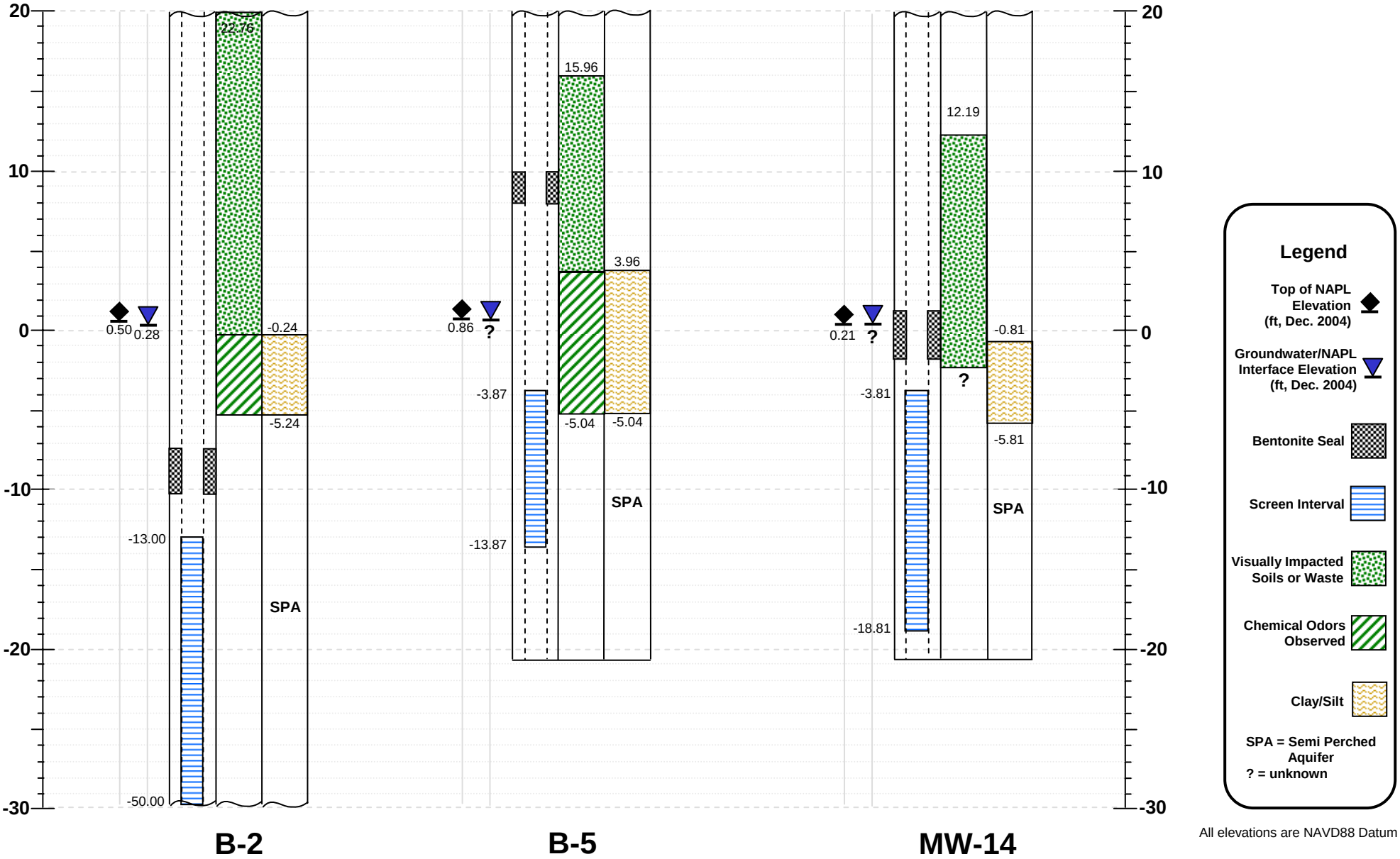
1. Monitoring wells AW-6 and AW-7 have been reported as being paved over during the expansion of Hamilton Avenue in 1986 (ESE, 1997).
2. The characteristics of the material encountered at monitoring well B-6 was different (i.e., light-tan, taffy-like, gluey material) than the NAPL at other wells.
3. Based on gauging data collected by GeoSyntec in December 2004 (GeoSyntec, 2004).

NAPL Distribution in Monitoring Wells, Piezometers, and Geoprobe Wells – December, 2004 (Includes Wells with Observed or Measurable Free-Phase Hydrocarbon)

Figure 6-14

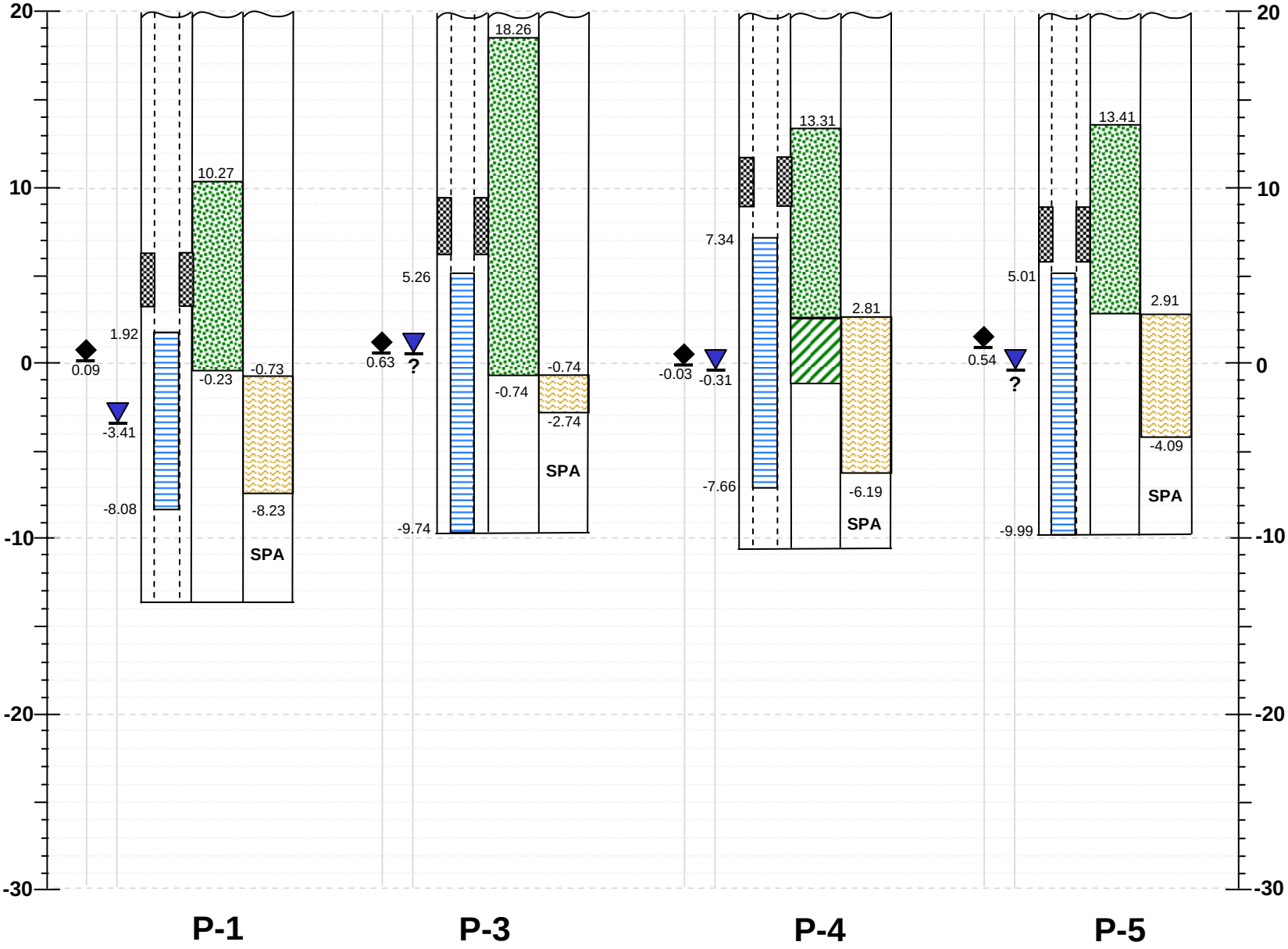
GeoSyntec
Ascon Landfill Site, Huntington Beach, California

March 2007



All elevations are NAVD88 Datum

Summary of Monitoring Well Construction for Wells Containing NAPL (B-2, B-5, MW-14)		Figure 6-15a
Groundwater Remedial Investigation Ascon Landfill Site, Huntington Beach, California	March 2005	PROJECT NAVIGATOR, LTD.



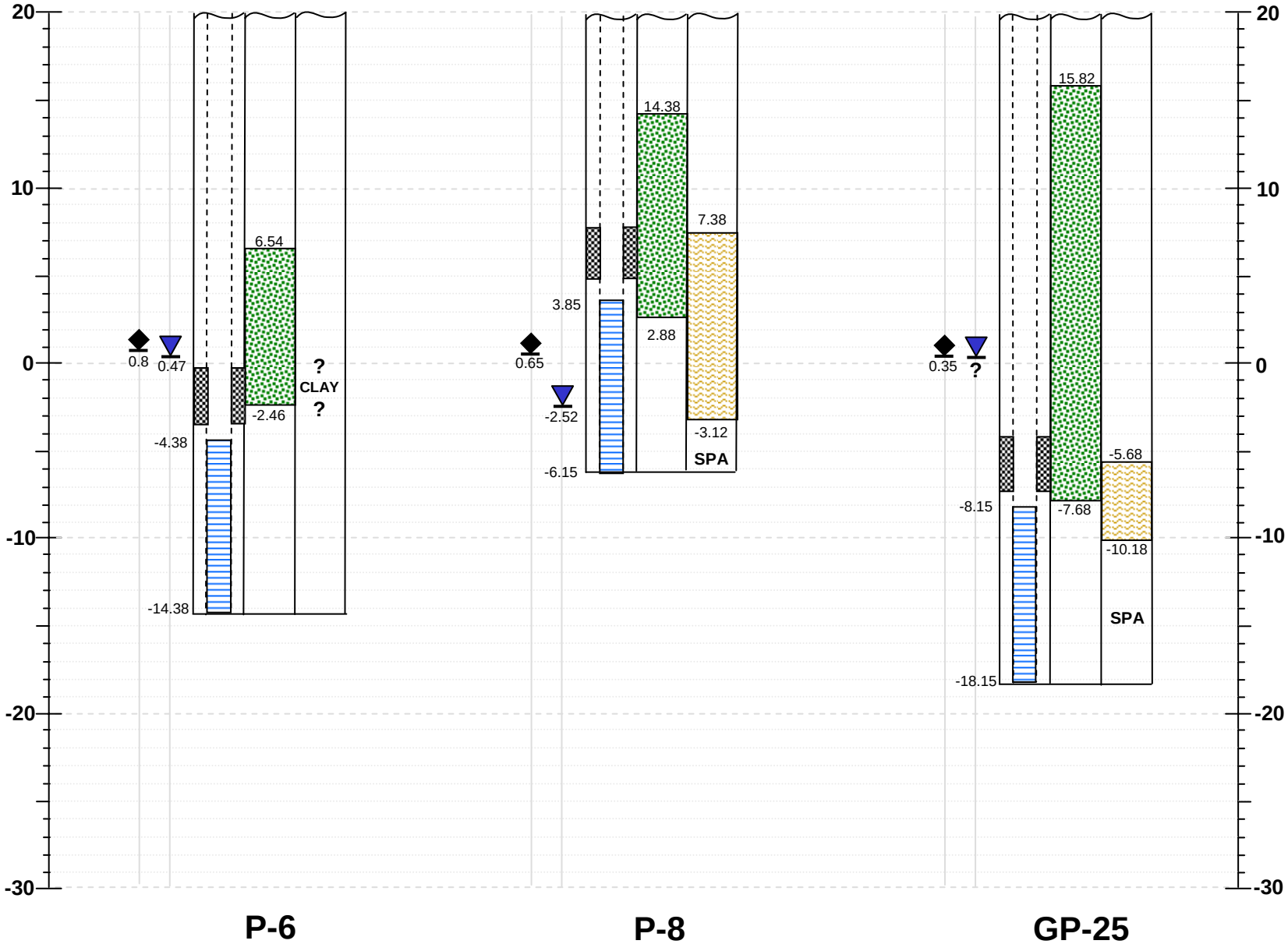
Legend

- Top of NAPL Elevation (ft, Dec. 2004)
- Groundwater/NAPL Interface Elevation (ft, Dec. 2004)
- Bentonite Seal
- Screen Interval
- Visually Impacted Soils or Waste
- Chemical Odors Observed
- Clay/Silt

SPA = Semi Perched Aquifer
? = unknown

All elevations are NAVD88 Datum

Summary of Monitoring Well Construction for Wells Containing NAPL (P-1, P-3, P-4, P-5)		Figure 6-15b
Groundwater Remedial Investigation Ascon Landfill Site, Huntington Beach, California	March 2005	PROJECT NAVIGATOR, LTD.



Legend

- Top of NAPL Elevation (ft, Dec. 2004)
- Groundwater/NAPL Interface Elevation (ft, Dec. 2004)
- Bentonite Seal
- Screen Interval
- Visually Impacted Soils or Waste
- Chemical Odors Observed
- Clay/Silt

SPA = Semi Perched Aquifer
? = unknown

All elevations are NAVD88 Datum

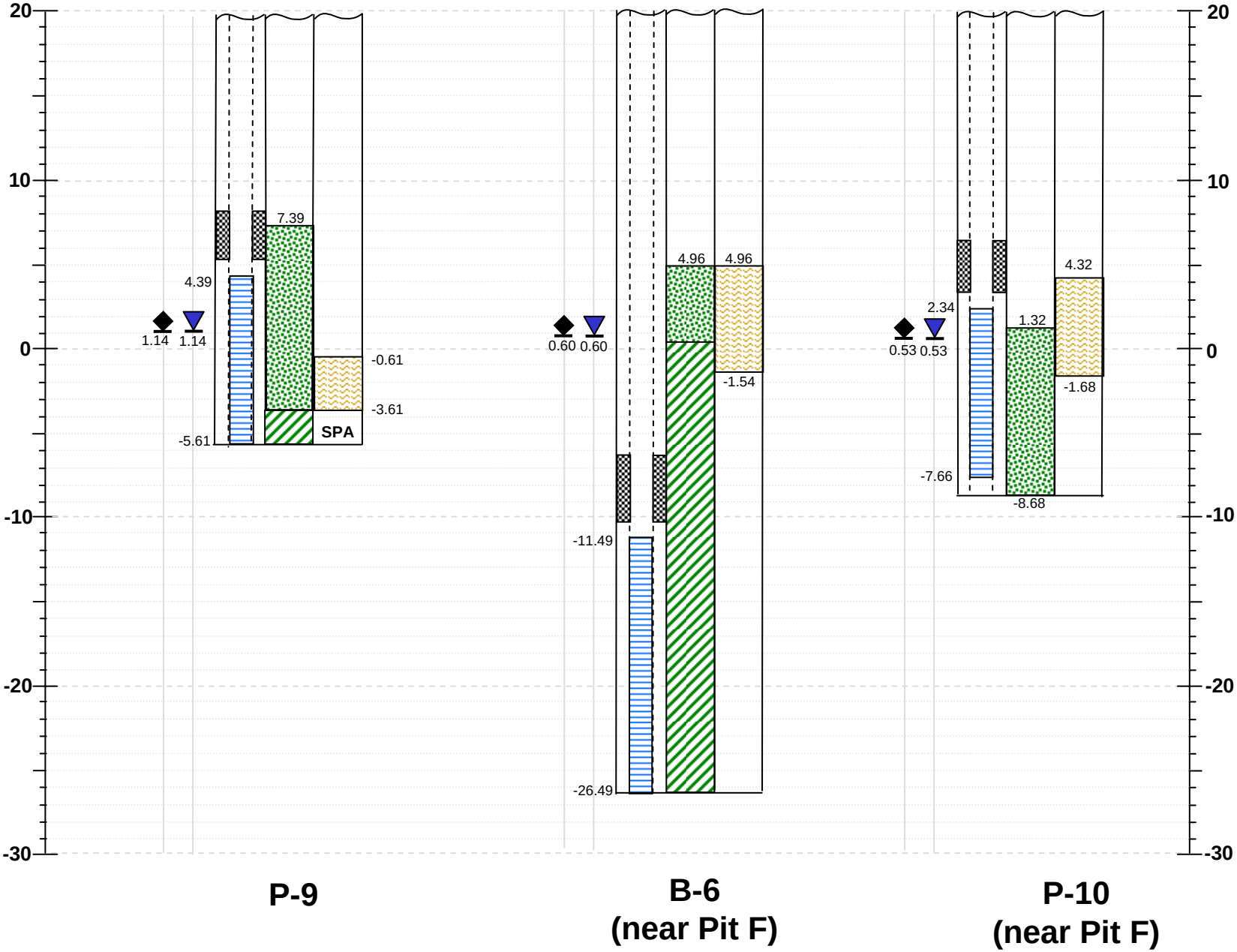
Summary of Monitoring Well Construction for Wells Containing NAPL (P-6, P-8, GP-25)

Figure 6-15c

Groundwater Remedial Investigation
Ascon Landfill Site, Huntington Beach, California

March 2005

PROJECT NAVIGATOR, LTD.®



Legend

- Top of NAPL Elevation (ft, Dec. 2004)
- Groundwater/NAPL Interface Elevation (ft, Dec. 2004)
- Bentonite Seal
- Screen Interval
- Visually Impacted Soils or Waste
- Chemical Odors Observed
- Clay/Silt

SPA = Semi Perched Aquifer
? = unknown

All elevations are NAVD88 Datum

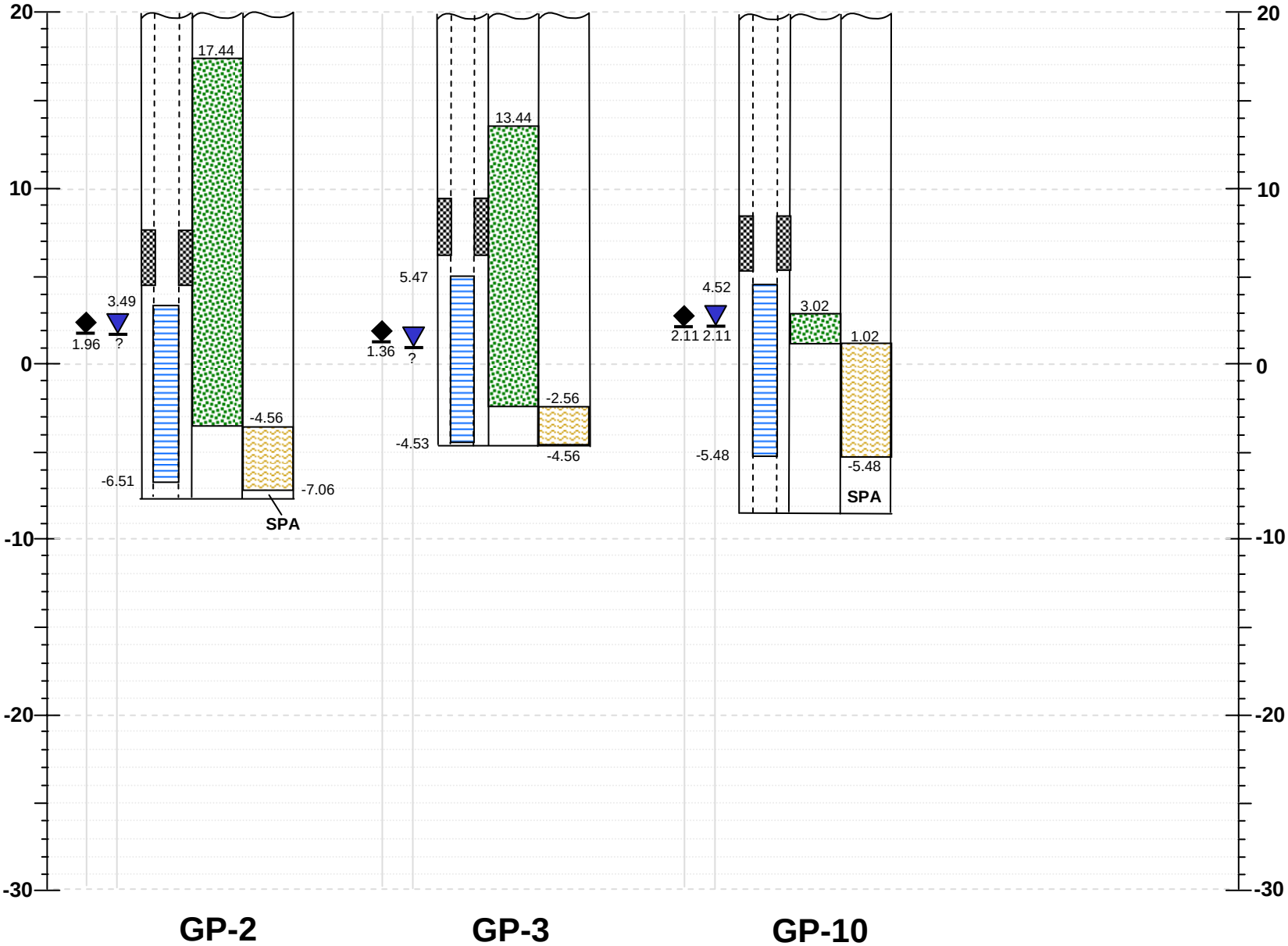
Summary of Monitoring Well Construction for Wells Containing NAPL (P-9, B-6, P-10)

Figure 6-15d

Groundwater Remedial Investigation
Ascon Landfill Site, Huntington Beach, California

March 2005

PROJECT NAVIGATOR, LTD.®



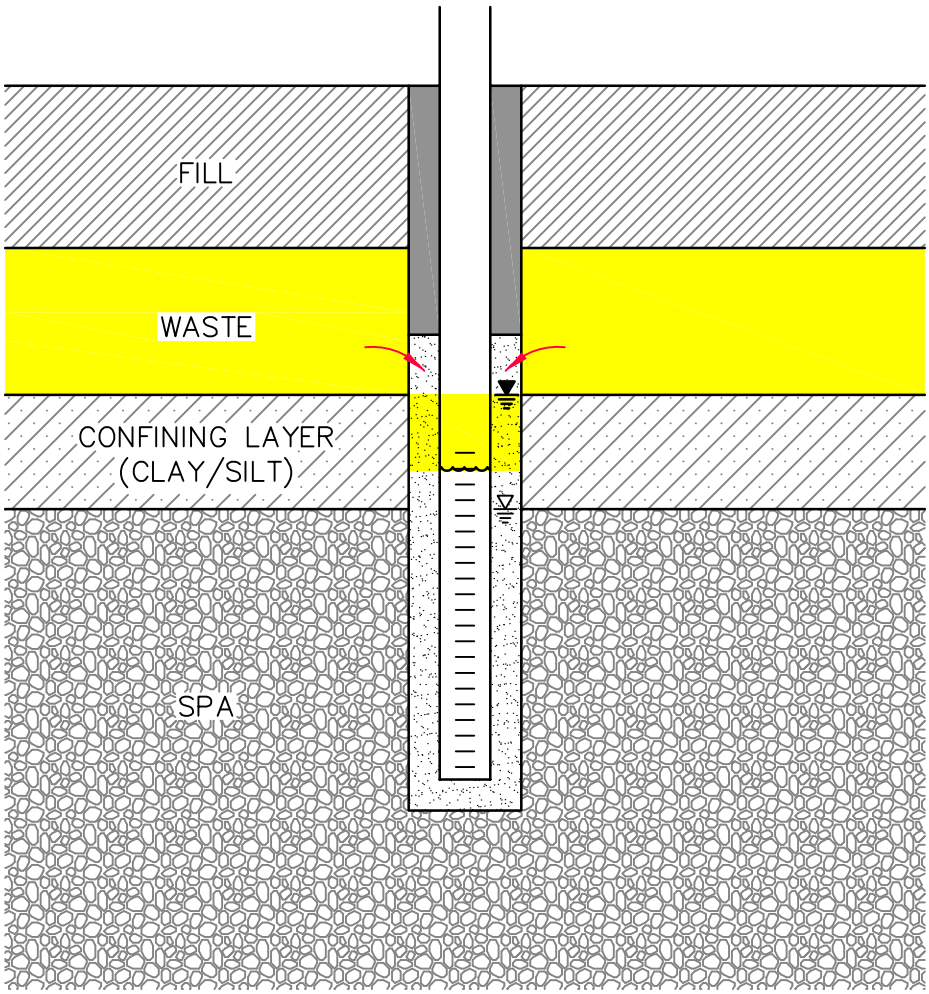
Legend

- Top of NAPL Elevation (ft, Dec. 2004)
- Groundwater/NAPL Interface Elevation (ft, Dec. 2004)
- Bentonite Seal
- Screen Interval
- Visually Impacted Soils or Waste
- Chemical Odors Observed
- Clay/Silt

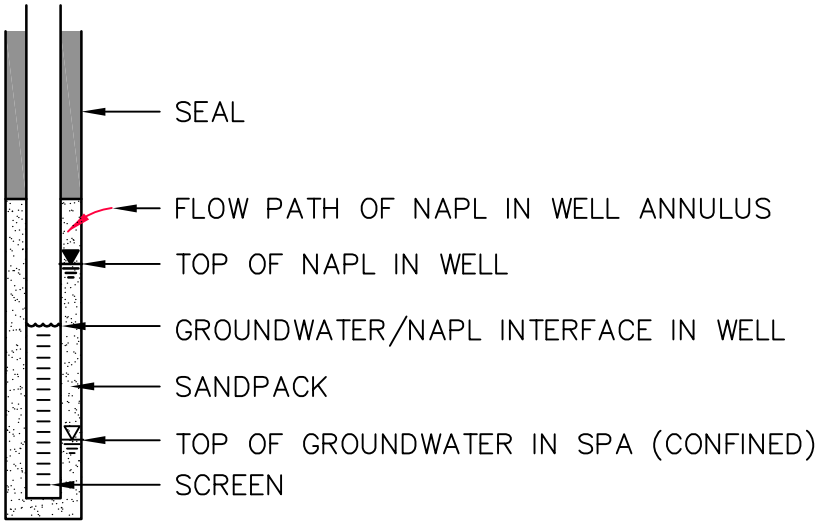
SPA = Semi Perched Aquifer
? = unknown

All elevations are NAVD88 Datum

Summary of Monitoring Well Construction for Wells Containing NAPL (GP-2, GP-3, GP-10)		Figure 6-15e
Groundwater Remedial Investigation Ascon Landfill Site, Huntington Beach, California	March 2005	PROJECT NAVIGATOR, LTD.



EXPLANATION



NOT TO SCALE

GEOSYNTEC CONSULTANTS

SCHEMATIC OF NAPL OCCURRENCE
IN MONITORING WELL AND FORMATION
ASCON LANDFILL SITE
HUNTINGTON BEACH, CALIFORNIA

FIGURE NO.	6-16
PROJECT NO.	SB0320-18
DOCUMENT NO.	
DATE:	MARCH 2007

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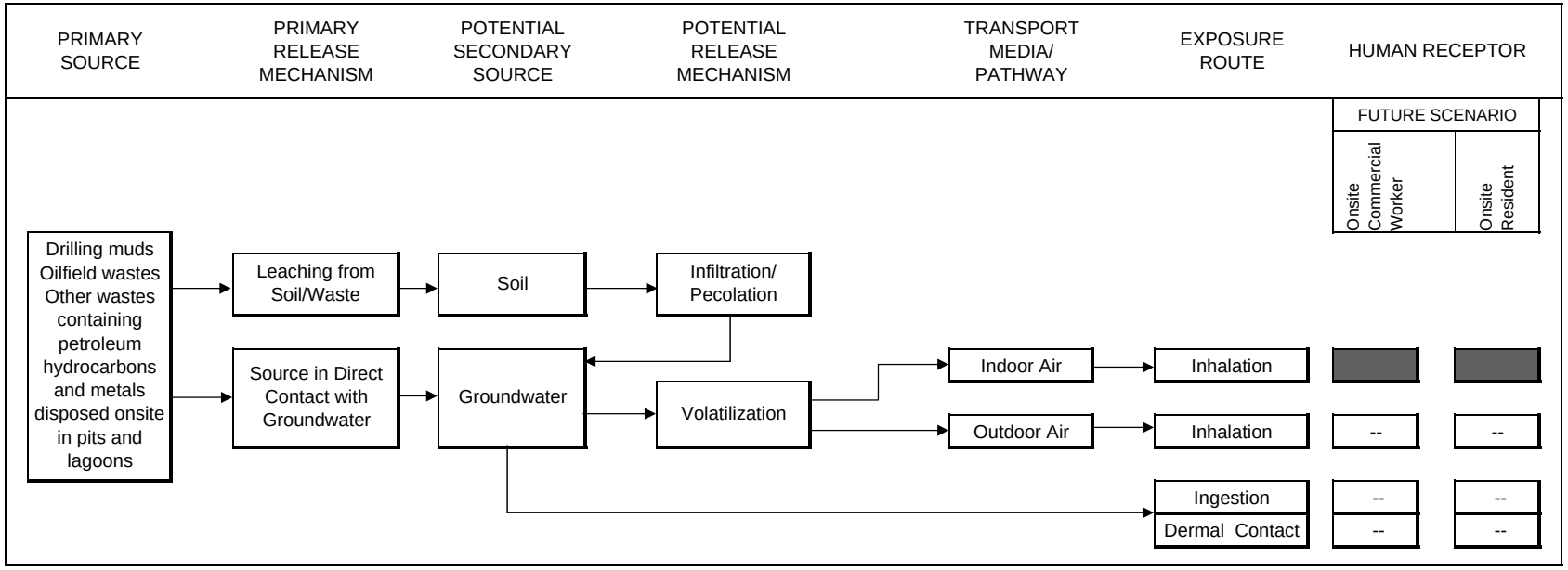
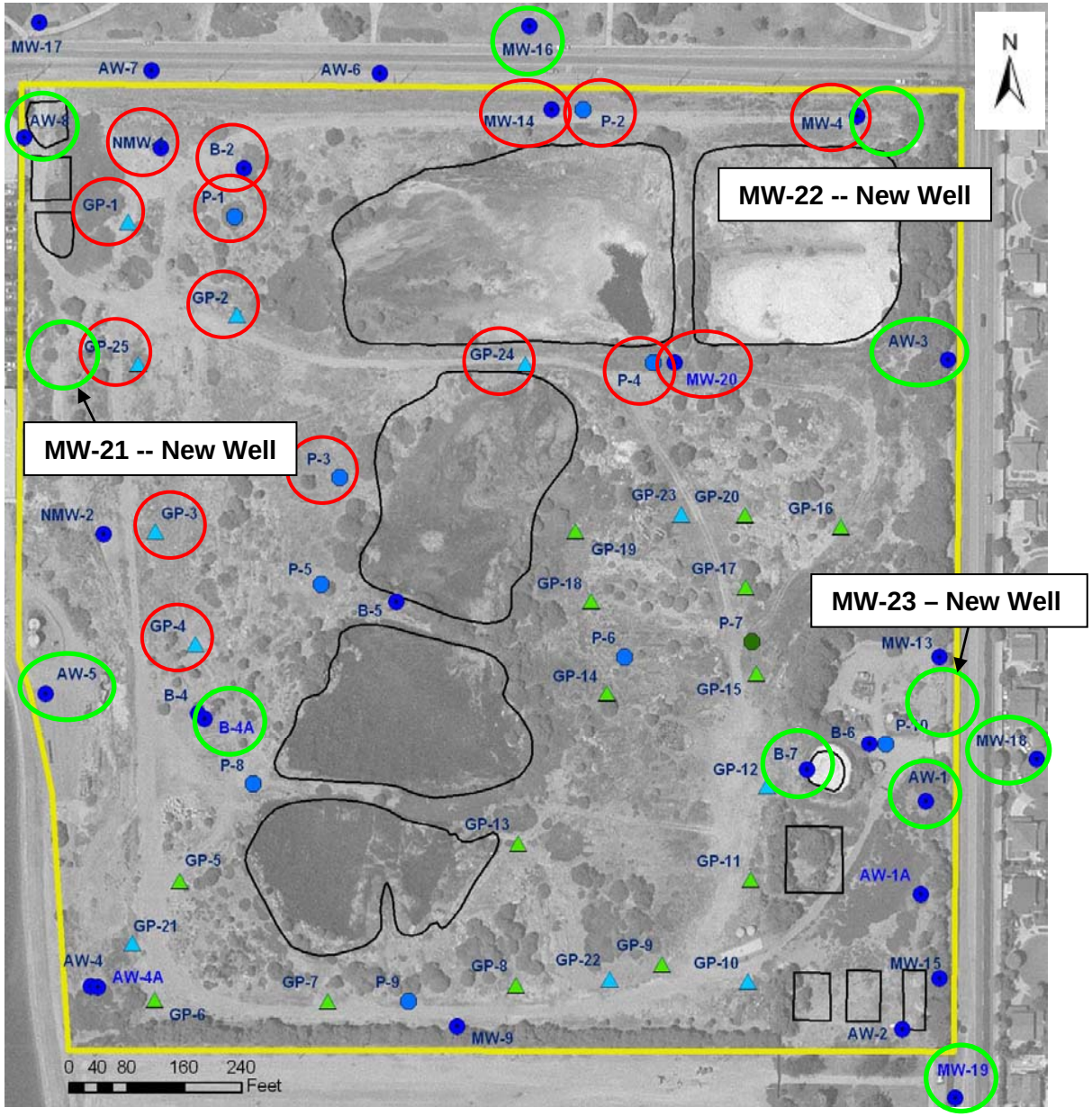
FIGURE 7-1
Conceptual Site Model
Ascon Site
Huntington Beach, California



Notes:

- Exposure pathway for quantitative evaluation
- Exposure pathway for qualitative evaluation
- -- Incomplete exposure pathway



Legend

- Monitoring Well in SPA
- Piezometer in SPA
- Geoprobe Well in SPA
- Piezometer in Perched Zone
- Geoprobe Well in Perched Zone
- Ascon Site Boundary
- Pit or Lagoon
- GW Monitoring Wells destroyed (abandoned) for EA work
- GW Monitoring Wells for Interim Program

SPA = Semi-Perched Aquifer

Base figure: Figure 4-1 from Groundwater Remedial Investigation Report, GeoSyntec, 2005.

Proposed Groundwater Monitoring Points – Interim Groundwater Monitoring Program		**Figure 9-1**
Groundwater Remedial Investigation Report – Revision 1.0 Ascon Landfill Site, Huntington Beach, California	April 2007	PROJECT NAVIGATOR, LTD.®