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San Diego, CA 92108
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January 5, 2005
PN14BP.U6021.05.3L58

Mr. Danny Martinez
San Diego County
Department of Environmental Health, Land and Water Quality Division
Site Assessment and Mitigation Program
P.O. Box 129261
San Diego, California 92112-9261

SUBJECT: Fourth Quarter 2004 Groundwater Monitoring Report
ARCO Facility 06021
1801 South Coast Highway
Oceanside, California
SAM Case No. H20616-002

Dear Mr. Martinez:

Attached please find the Fourth Quarter 2004 Groundwater Monitoring Report prepared by SECOR International Incorporated on behalf of Atlantic Richfield Company. Should you have any questions regarding the contents of this report, please call Mr. Brad Eisenberg at (619) 296-6195.

Respectfully submitted,
SECOR International Incorporated

Prepared by:

Melissa Garrett
Staff Scientist

Approved by:

Bradley G. Eisenberg, RG# 6872
Senior Geologist

REGISTERED GEOLOGIST
BRADLEY G EISENBERG
No. 6872
Exp 11/05
STATE OF CALIFORNIA

Enclosure

cc: Mr. Roy Thun, Atlantic Richfield Company

January 5, 2005
PN14BP.U6021.05.3L58

ATLANTIC RICHFIELD QUARTERLY MONITORING REPORT
ARCO FACILITY 06021

Station No:	06021	Address:	1801 South Coast Highway, Oceanside, California
Atlantic Richfield Cotact / Phone No.:		Mr. Roy Thun / (661) 287-3855	
Consultant / Contact / Phone No.:		SECOR / Mr. Brad Eisenberg / (619) 296-6195	
SECOR Project No.:		14BP.U6021.05. 3L58	
Primary Agency / Regulatory ID No.:		County of San Diego – Site Assessment and Mitigation Program / SAM Case No. H20616-002	
Other Agencies to Receive Copies:		None	

WORK PERFORMED THIS QUARTER [Fourth Quarter - 2004]:

1. Submit the Third Quarter 2004 Site Status Report.
2. Submitted SECOR's October 29, 2004 *Addendum to Corrective Action Plan Dated August 1996.*
3. Performed the Fourth Quarter 2004 groundwater monitoring event.
4. Received the SAM's November 12, 2004 *Conditional Concurrence with Corrective Action Plan* correspondence.
5. Performed public notification as a result of receipt's of the SAM's November 12, 2004 correspondence.
6. Submitted SECOR's November 29, 2004 *Public Notification of Corrective Action Plan (CAP) Addendum* to the City of Oceanside Public Library.
7. Submitted SECOR's November 23, 2004 Documentation of SECOR's November 29, 2004 *Public Review Notification* to the SAM.

WORK PROPOSED NEXT QUARTER [First Quarter - 2005]:

1. Prepare the First Quarter 2005 Site Status Report.
2. Pending no response to the performed public notification, pursue final approval for implementation of the CAP Addendum with the SAM.

Current Phase of Project:	Monitoring	(Assmnt, Remed. etc.)
Frequency of Sampling:	Bi-Annually	(Quarterly, etc.)
Frequency of Monitoring:	Bi-Annually	(Monthly, etc.)
Is Liquid Phase Hydrocarbon Present On-site:	No	(Yes/No)
Cumulative LPH Recovered to Date:	141.5	(gallons)
LPH Recovered This Quarter:	0	(gallons)
Total Soil Removed to Date:	Unknown	(cubic yards)
Total Soil Removed This Quarter:	None	(cubic yards)
Water Wells or Surface Waters within a 2000' Radius & Their Respective Directions:	Pacific Ocean (approx. 1,400 feet / southwest)	(Distance and Direction)
Current Remediation Techniques:	Natural Attenuation	(SVES, LPH Removal, etc.)
Permits for Discharge:	County of San Diego Air Pollution Control District Control No. 205892 and Permit No. 961084	(NPDES, POTW, etc.)
Approximate Depth to Groundwater	19.81-23.89	(Measured Feet bgs)
Groundwater Gradient:	West-Southwest	(Direction)
	0.03 feet/foot	(Magnitude)
Groundwater Use	Non-Beneficial	(Beneficial / Non-Beneficial)
Summary of Unusual Activity:	None	

ATLANTIC RICHFIELD QUARTERLY MONITORING REPORT (CONTINUED)
ARCO FACILITY 06021

Summary of Unusual Activity:	None
Agency Directive Requirements:	Perform biannual groundwater monitoring (2nd and 4th Quarters) as approved in SAM's May 6, 2002 correspondence.

DISCUSSION: On October 5, 2004, SECOR International Incorporated (SECOR) personnel performed the biannual groundwater monitoring activities of 11 groundwater monitoring wells associated with the site (Figure 1), in accordance with the semi-annual sampling program (Table 1). Depth to groundwater varied across the site (and off-site) from 19.81 feet below ground surface (bgs) in MW-10 to 23.89 feet bgs in MW-5; groundwater elevations varied between 14.88 and 19.03 feet above mean sea level. The calculated groundwater flow direction was to the west-southwest with an approximate hydraulic gradient of 0.03 feet per foot. Depth to groundwater measurements and calculated groundwater elevations are presented in Table 2 and on Figure 2.

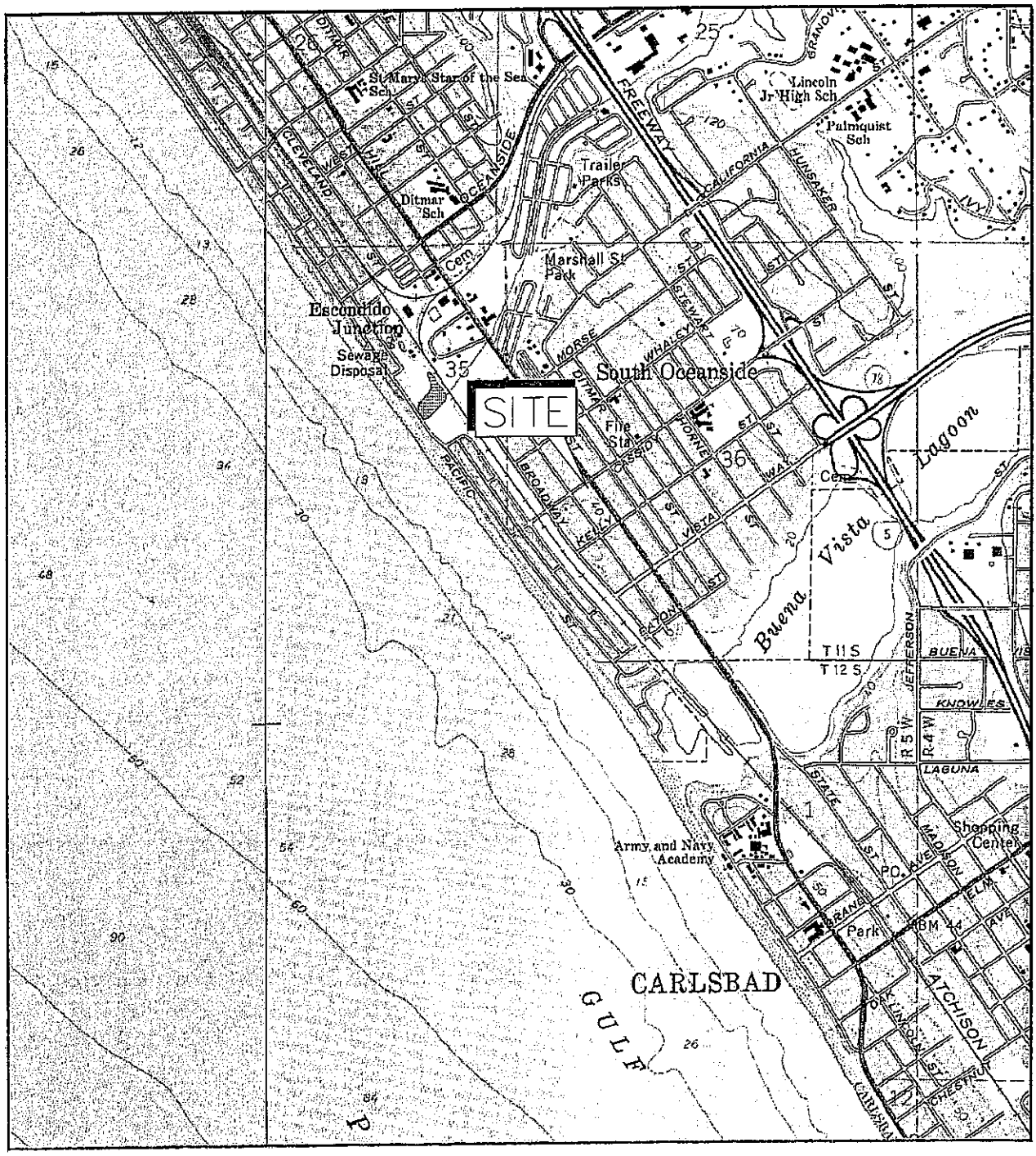
During the Fourth Quarter 2004 groundwater sampling event, collected groundwater samples were analyzed for gasoline range organics (GRO including C_6 - C_{12}) by Environmental Protection Agency (EPA) Method 8015M; for benzene, toluene, ethyl benzene, and total xylenes (BTEX), and for the fuel oxygenates methyl-tert-butyl ether (MTBE), ethyl tert-butyl ether (ETBE), di-isopropyl ether (DIPE), tert-amyl methyl ether (TAME), tert-butyl alcohol (TBA), and ethanol by EPA Method 8260B. Groundwater samples collected from wells MW-3, MW-4, MW-9, and MW-12 were additionally analyzed for the following biodegradation constituents: nitrate and sulfate by EPA Method 300.0; sulfide by EPA Method 376.2; hardness by EPA Method 130.2; chemical oxygen demand by EPA Method 410.4; manganese by EPA Method 6010B; and heterotrophic plate count by Standard Method 9215B. Analytical results are summarized in Tables 2 and 3. Isoconcentration maps are provided as Figures 3 through 6 for the reported dissolved hydrocarbon concentrations of GRO, benzene, and MTBE, respectively. Hydrographs presenting groundwater elevation, benzene, and MTBE concentrations are also attached.

CONCLUSIONS AND RECOMMENDATIONS: During the Fourth Quarter 2004 monitoring event, analytical groundwater results were similar to the previous sampling event (second quarter of 2004). SECOR recommends the October 29, 2004 Addendum to the 1996 CAP be implemented and the SAM consider the site for "no further action" status.

ATLANTIC RICHFIELD QUARTERLY MONITORING REPORT (CONTINUED)
ARCO FACILITY 06021

ATTACHMENTS:

- Site Location Map (Figure 1)
- Groundwater Elevation Contour Map (Figure 2)
- Hydrocarbon Concentrations in Groundwater Map (Figure 3)
- GRO Isoconcentration Map (Figure 4)
- Benzene Isoconcentration Map (Figure 5)
- MTBE Isoconcentration Map (Figure 6)
- Groundwater Sampling Schedule (Table 1)
- Groundwater Elevation and Analytical Data (Table 2)
- Natural Biodegradation Analytical Data (Table 3)
- Hydrograph for Well MW-2
- Hydrograph for Well MW-3
- Hydrograph for Well MW-4
- Hydrograph for Well MW-5
- Hydrograph for Well MW-6
- Hydrograph for Well MW-7
- Hydrograph for Well MW-8
- Hydrograph for Well MW-9
- Hydrograph for Well MW-10
- Hydrograph for Well MW-11
- Hydrograph for Well MW-12
- Certified Laboratory Analytical Reports and Chain of Custody
- Groundwater Sampling Data Sheets and Waste Disposal Documentation



Reference: U.S.G.S., 1966, Oceanside Quadrangle California - Los Angeles County, 7.5' Series (Topographic). Photorevised 1981.

NORTH

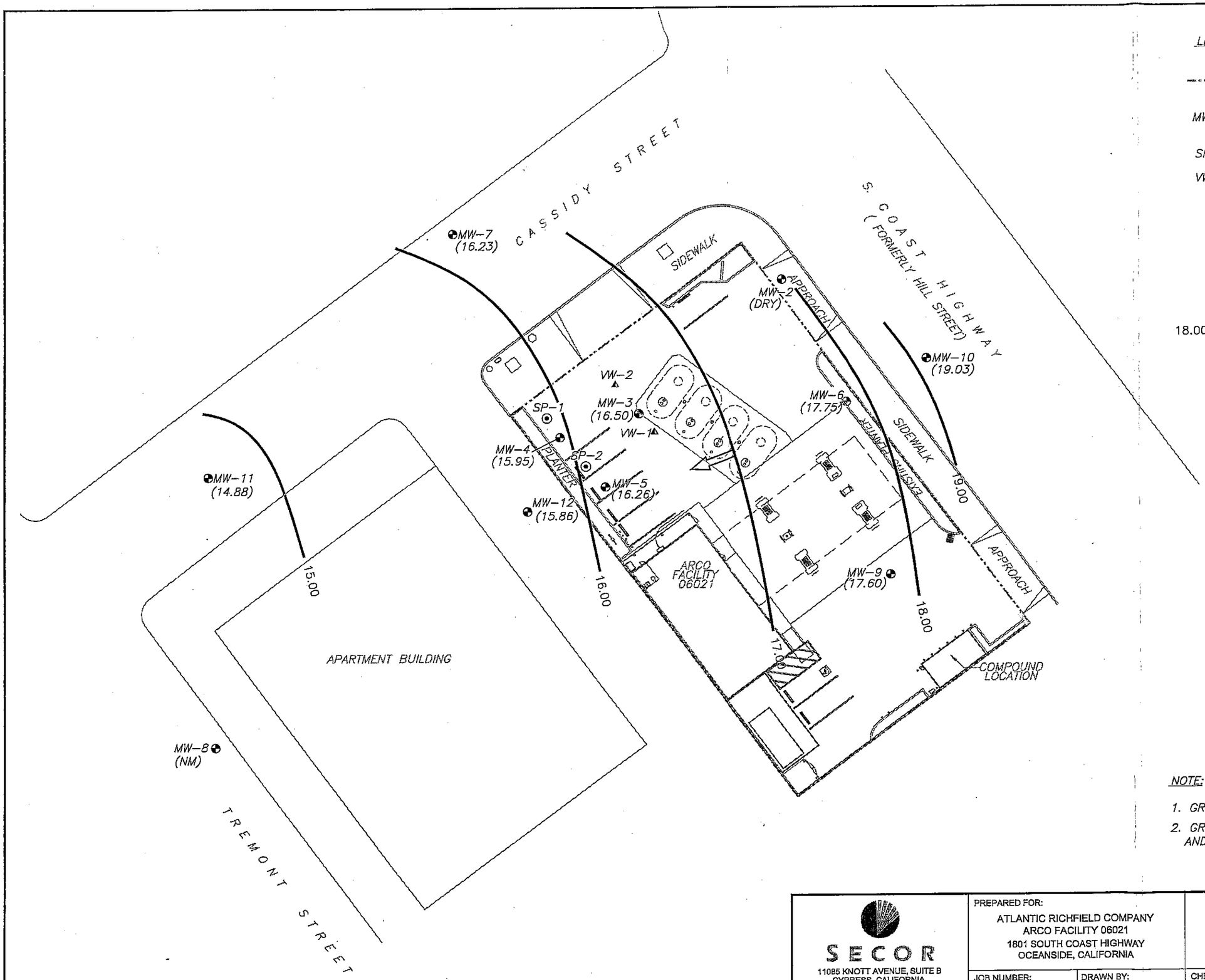
SCALE

1 inch = 2000 feet

0 1000 2000

SECOR 11085 KNOTT AVENUE, SUITE B CYPRESS, CALIFORNIA PHONE: (714)379-3366/FAX: (714)379-3375	PREPARED FOR: ATLANTIC RICHFIELD COMPANY ARCO FACILITY 06021 1801 SOUTH COAST HIGHWAY OCEANSIDE, CALIFORNIA		SITE LOCATION MAP		FIGURE: 1
	JOB NUMBER: 14BP.06021.02.0336	DRAWN BY: L. RAMIREZ	CHECKED BY: E. YOUNG	APPROVED BY: J. VALDEZ	DATE: NOVEMBER 2004

A6021_4Q04.DWG



LEGEND:

	APPROXIMATE SITE PROPERTY BOUNDARY
MW-2	GROUNDWATER MONITORING WELL LOCATION
SP-2	SPARGE POINT LOCATION
VW-2	VAPOR EXTRACTION WELL LOCATION
(NM)	NOT MEASURED
(DRY)	DRY WELL
(19.03)	GROUNDWATER ELEVATION (FEET ABOVE MEAN SEA LEVEL) MEASURED
18.00	GROUNDWATER ELEVATION CONTOUR LINE (MSL)
	INDICATES APPARENT GROUNDWATER FLOW DIRECTION

0 30 60

APPROXIMATE SCALE IN FEET

NOTE:

1. GROUNDWATER SAMPLING DATE OCTOBER 5, 2004.
2. GROUNDWATER SAMPLING EVENT OCCURS SECOND AND FOURTH QUARTER EACH YEAR.

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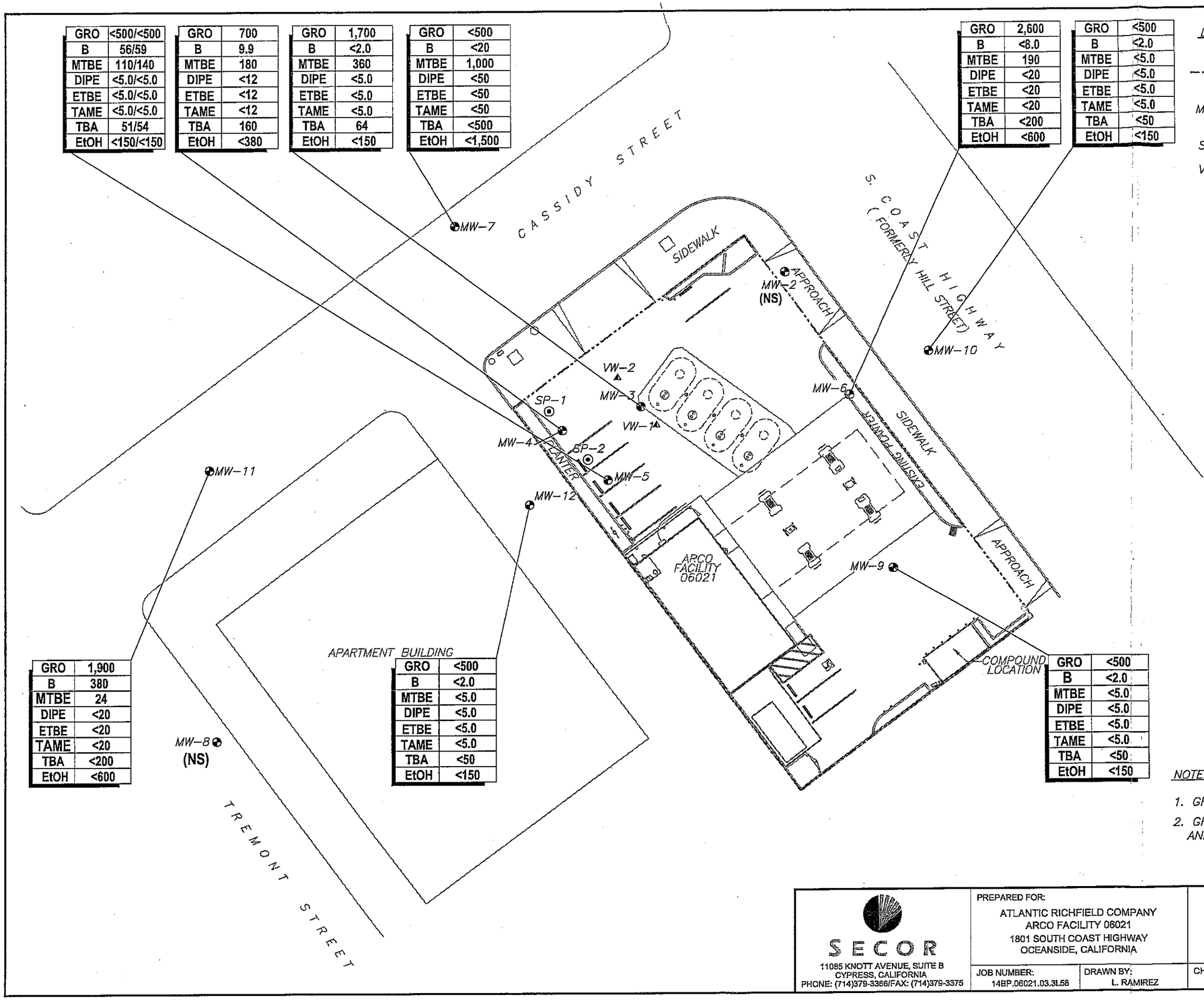
ARCO FACILITY 06021
1801 SOUTH COAST HIGHWAY
OCEANSIDE, CALIFORNIA

GROUNDWATER ELEVATION CONTOUR MAP

FIGURE: **2**

JOB NUMBER:	DRAWN BY:	CHECKED BY:	APPROVED BY:	DATE:
14BP.06021.03.3L58	L. RAMIREZ	E. YOUNG	J. VALDEZ	NOVEMBER 2004



GRO	<500/<500
B	56/59
MTBE	110/140
DIPE	<5.0/<5.0
ETBE	<5.0/<5.0
TAME	<5.0/<5.0
TBA	51/54
EtOH	<150/<150

GRO	700
B	9.9
MTBE	180
DIPE	<12
ETBE	<12
TAME	<12
TBA	160
EtOH	<380

GRO	1,700
B	<2.0
MTBE	360
DIPE	<5.0
ETBE	<5.0
TAME	<5.0
TBA	64
EtOH	<150

GRO	<500
B	<20
MTBE	1,000
DIPE	<50
ETBE	<50
TAME	<50
TBA	<500
EtOH	<1,500

GRO	2,600
B	<8.0
MTBE	190
DIPE	<20
ETBE	<20
TAME	<20
TBA	<200
EtOH	<600

GRO	<500
B	<2.0
MTBE	<5.0
DIPE	<5.0
ETBE	<5.0
TAME	<5.0
TBA	<50
EtOH	<150

GRO	1,900
B	380
MTBE	24
DIPE	<20
ETBE	<20
TAME	<20
TBA	<200
EtOH	<600

GRO	<500
B	<2.0
MTBE	<5.0
DIPE	<5.0
ETBE	<5.0
TAME	<5.0
TBA	<50
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GRO	<500
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MTBE	<5.0
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ETBE	<5.0
TAME	<5.0
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LEGEND:

- APPROXIMATE SITE PROPERTY BOUNDARY
- MW-2 GROUNDWATER MONITORING WELL LOCATION
- SP-2 SPARGE POINT LOCATION
- VW-2 VAPOR EXTRACTION WELL LOCATION
- (ug/L) MICROGRAMS PER LITER
- (NS) NOT SAMPLED

GRO	GASOLINE RANGE ORGANICS (ug/L)
B	BENZENE (ug/L)
MTBE	METHYL TERTIARY BUTYL ETHER (ug/L)
DIPE	DI-ISOPROPYL ETHER (ug/L)
TAME	TERTIARY-AMYL METHYL ETHER (ug/L)
ETBE	ETHYL TERTIARY-BUTYL ETHER (ug/L)
TBA	TERTIARY-BUTANOL (ug/L)
EtOH	ETHANOL (ug/L)

0 30 60

APPROXIMATE SCALE IN FEET

NOTE:

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ARCO FACILITY 06021
1801 SOUTH COAST HIGHWAY
OCEANSIDE, CALIFORNIA

HYDROCARBON CONCENTRATION IN GROUNDWATER MAP

FIGURE: 3

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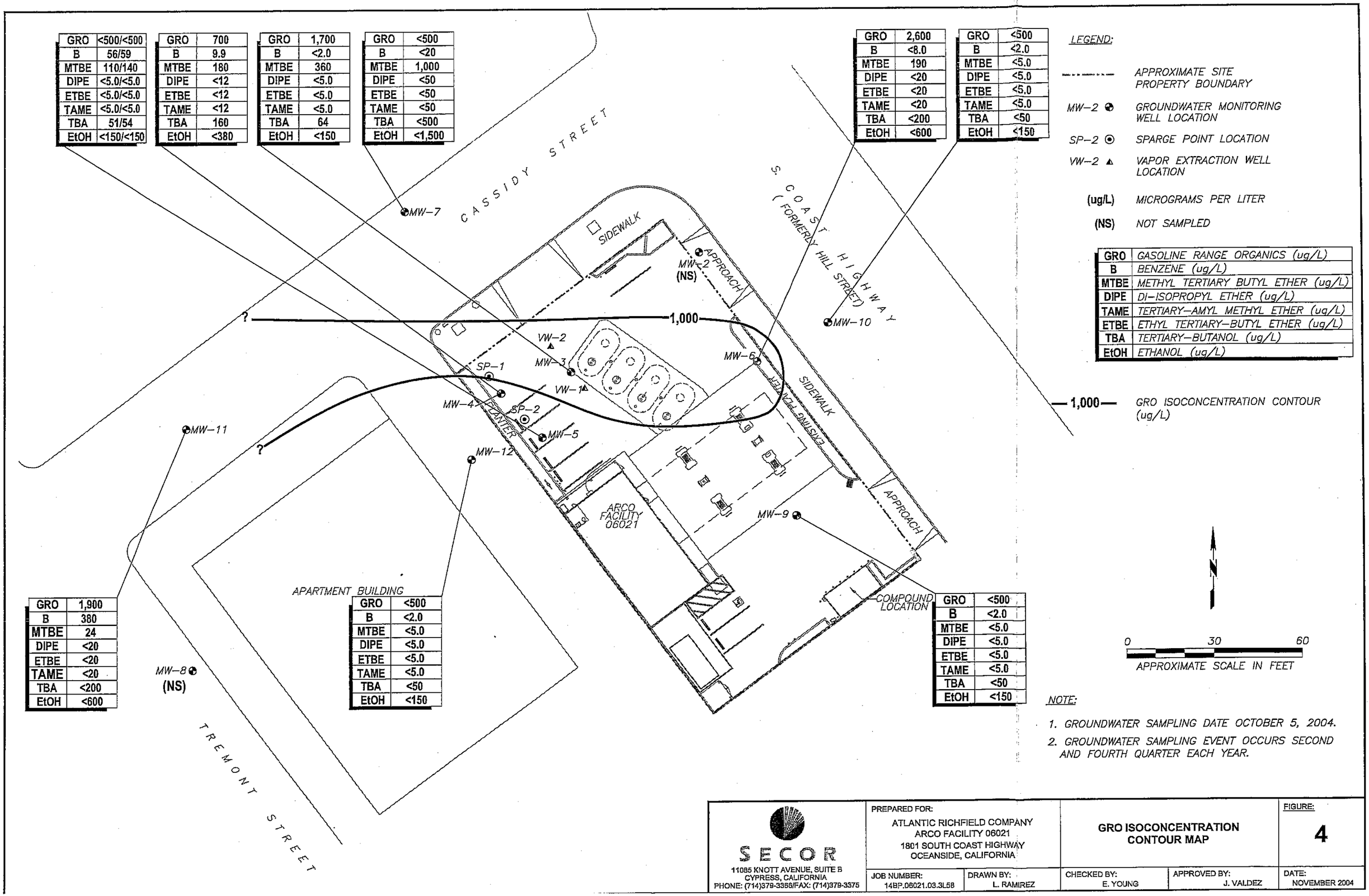

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ETBE	ETHYL TERTIARY-BUTYL ETHER (ug/L)
TBA	TERTIARY-BUTANOL (ug/L)
EtOH	ETHANOL (ug/L)

—1,000— GRO ISOCONCENTRATION CONTOUR (ug/L)

NOTE:

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GRO ISOCONCENTRATION CONTOUR MAP

FIGURE: 4

JOB NUMBER:	DRAWN BY:	CHECKED BY:	APPROVED BY:	DATE:
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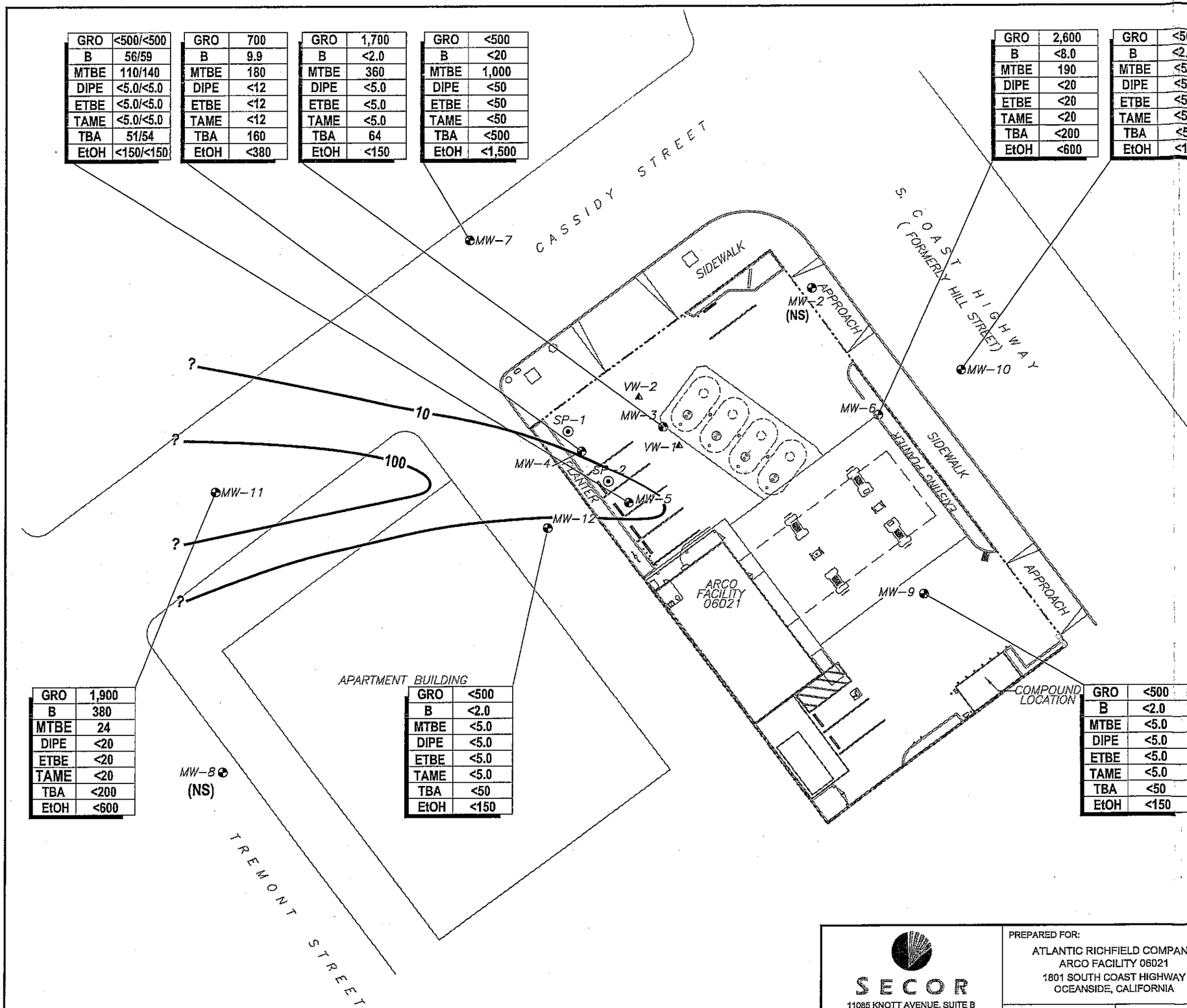

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ETBE	ETHYL TERTIARY-BUTYL ETHER (ug/L)
TBA	TERTIARY-BUTANOL (ug/L)
EtOH	ETHANOL (ug/L)

100 BENZENE ISOCONCENTRATION CONTOUR (ug/L)

N

0 30 60

APPROXIMATE SCALE IN FEET

NOTE:

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ARCO FACILITY 06021
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OCEANSIDE, CALIFORNIA

BENZENE ISOCONCENTRATION CONTOUR MAP

FIGURE: 5

JOB NUMBER:	DRAWN BY:	CHECKED BY:	APPROVED BY:	DATE:
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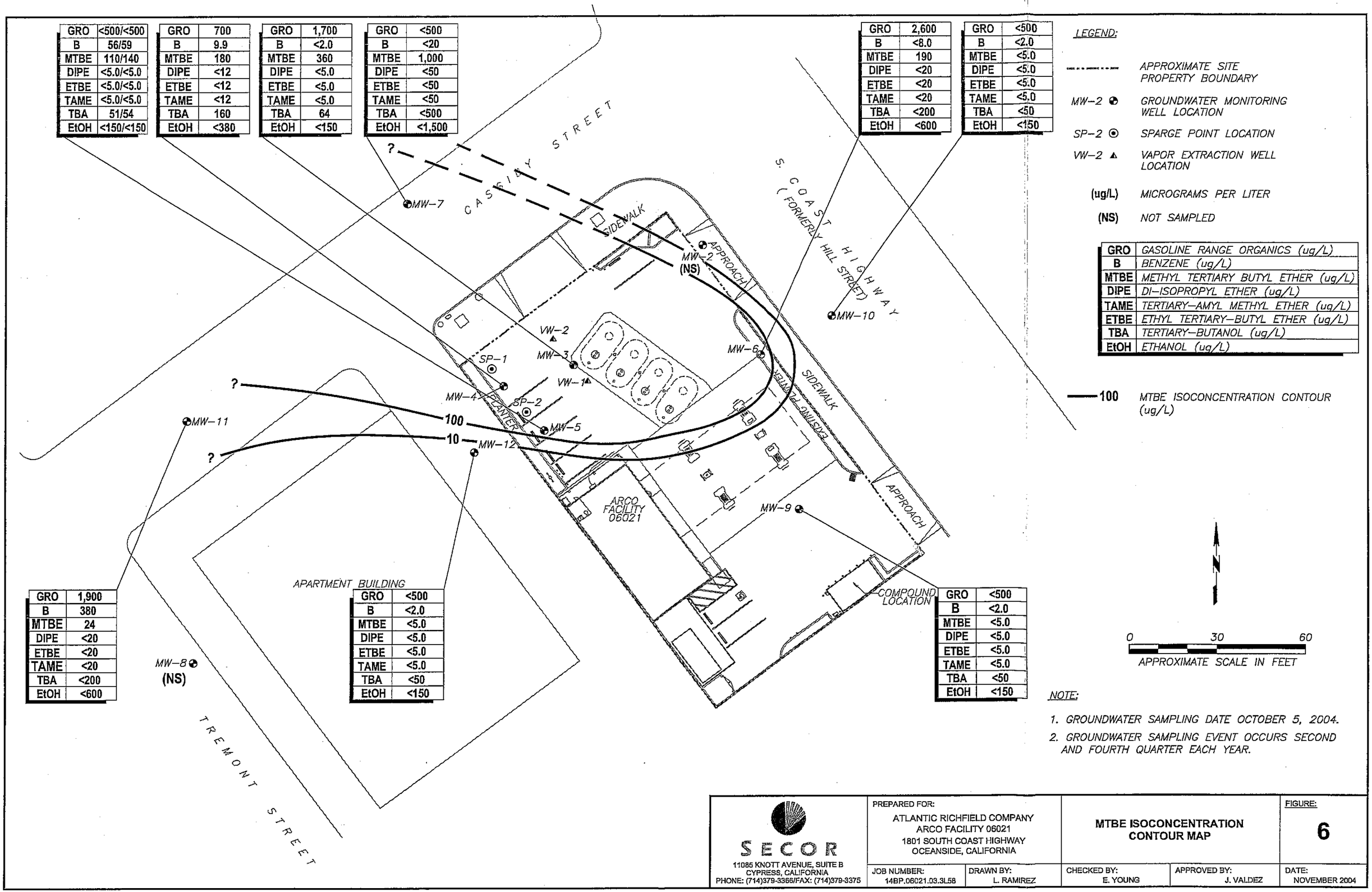

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TAME	TERTIARY-AMYL METHYL ETHER (ug/L)
ETBE	ETHYL TERTIARY-BUTYL ETHER (ug/L)
TBA	TERTIARY-BUTANOL (ug/L)
EtOH	ETHANOL (ug/L)

100 MTBE ISOCONCENTRATION CONTOUR (ug/L)

NOTE:

1. GROUNDWATER SAMPLING DATE OCTOBER 5, 2004.
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ARCO FACILITY 06021
1801 SOUTH COAST HIGHWAY
OCEANSIDE, CALIFORNIA

MTBE ISOCONCENTRATION CONTOUR MAP

FIGURE: 6

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14BP.06021.03.3L58	L. RAMIREZ	E. YOUNG	J. VALDEZ	NOVEMBER 2004

TABLE 1
GROUNDWATER SAMPLING SCHEDULE

ARCO Facility 6021
1801 South Coast Highway
Oceanside, California

Well Number	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
MW-2	d	a,c	d	a,c
MW-3	d	a,c	d	a,b,c
MW-4	d	a,c	d	a,b,c
MW-5	d	a,c	d	a,c
MW-6	d	a,c	d	a,c
MW-7	d	a,c	d	a,c
MW-8	d	a,c	d	a,b,c
MW-9	d	a,c	d	a,b,c
MW-10	d	a,c	d	a,c
MW-11	d	a,c	d	a,c
MW-12	d	a,c	d	a,b,c

Notes:

a = Gasoline Range Organics (also described as GRO including C_6-C_{12}) by EPA 8015m, BTEX, MTBE, TAME, DIPE, ETBE, TBA, and ethanol by 8260B

b = natural attenuation parameters including hardness, nitrate, sulfate, sulfide, manganese, chemical oxidation demand (COD), and bacteria by a heterotropic plate count (HPC).

c = gauge and purge

d = Site bi-annually (twice per year) sampled as approved in SAM's May 6, 2002 *Changes To Groundwater Monitoring* correspondance.

FIELD ANALYSIS = DO, ORP, ferrous iron, conductivity, pH and temp.

TABLE 2
GROUNDWATER ELEVATION AND ANALYTICAL DATA

ARCO Facility 6021
1801 South Coast Highway
Oceanside, California

Well No./ Date	Depth to Groundwater (Feet)	Groundwater Elevation (Feet msl)	Product Thickness (Feet)	GRO (mg/L)	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Total Xylenes (mg/L)	MTBE (mg/L)	DIPE (mg/L)	ETBE (mg/L)	TAME (mg/L)	TBA (mg/L)	Ethanol (mg/L)
MW-2	WHE = 00.61 ft msl													
6/16/93	21.13	79.48	0.00	41,000	3,200	7,300	1,400	7,300	NA	NA	NA	NA	NA	NA
3/2/94	21.95	78.66	0.00	150	6	8	5	18	NA	NA	NA	NA	NA	NA
3/1/1995	NM	NA	0.00	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
3/10/95	22.22	78.39	0.00	<50	1.6	1.4	0.92	2.6	NA	NA	NA	NA	NA	NA
6/9/95	20.80	79.81	0.00	1,600	240	260	42	190	NA	NA	NA	NA	NA	NA
	WHE = 39.35 ft msl													
8/31/95	20.28	19.07	0.00	2,800	420	490	78	270	NA	NA	NA	NA	NA	NA
11/30/1995	20.53	18.82	0.00	8,900	1,400	1,500	260	820	NA	NA	NA	NA	NA	NA
3/1/96	21.50	17.85	0.00	4,800	750	890	140	440	NA	NA	NA	NA	NA	NA
6/5/1996	22.12	17.23	0.00	2,300	490	780	100	370	NA	NA	NA	NA	NA	NA
8/14/1996	22.68	16.67	0.00	260	48	78	10	37	<10	NA	NA	NA	NA	NA
11/6/1996	22.94	16.41	0.00	<500	50	99	12	54	<35	NA	NA	NA	NA	NA
3/26/97 NP	22.23	17.12	0.00	<500	0.90	<0.50	<0.50	<1.5	<10	NA	NA	NA	NA	NA
5/16/97 NP	22.24	17.11	0.00	<500	<0.50	<0.50	<0.50	<1.5	<10	NA	NA	NA	NA	NA
8/20/97 NP	22.60	16.75	0.00	<500	<0.50	<0.50	<0.50	<1.5	<10	NA	NA	NA	NA	NA
11/13/97 NP	22.86	16.49	0.00	<500	0.97	2.3	<0.50	2.6	11	NA	NA	NA	NA	NA
3/24/98 NP	22.01	17.34	0.00	<500	<0.50	<0.50	<0.50	<1.5	<10	NA	NA	NA	NA	NA
6/24/98 NP	19.63	19.72	0.00	<50	<0.30	<0.30	<0.30	<0.60	<10	NA	NA	NA	NA	NA
9/16/98 NP	19.43	19.92	0.00	<500	<0.50	<0.50	<0.50	<1.5	<10	NA	NA	NA	NA	NA
12/4/98 NP	19.71	19.64	0.00	<500	<0.50	<0.50	<0.50	<1.5	<10	NA	NA	NA	NA	NA
2/23/99 NP	20.33	19.02	0.00	<500	<0.50	<0.50	<0.50	<1.5	<10	NA	NA	NA	NA	NA
5/13/99 NP	20.80	18.55	0.00	<500	<0.50	<0.50	<0.50	<1.5	<20	NA	NA	NA	NA	NA
8/17/99 NP	21.08	18.27	0.00	<500	<0.50	<0.50	<0.50	<1.5	<20	NA	NA	NA	NA	NA
11/18/99 NP	21.63	17.72	0.00	<500	<0.50	12	1.9	23	<10	NA	NA	NA	NA	NA
2/18/00 NP	22.16	17.19	0.00	<500	<0.50	<0.50	<0.50	<1.5	<5.0	NA	NA	NA	NA	NA
5/12/00 NP	22.41	16.94	0.00	<500	<0.50	<0.50	<0.50	<1.5	<5.0	NA	NA	NA	NA	NA
7/27/00 NP	22.10	17.25	0.00	<500	<0.50^{M}	<0.50^{M}	<0.50^{M}	<1.5^{M}	<1.0^{M}	<5.0^{M}	<5.0^{M}	<5.0^{M}	<25^{M}	NA
11/20/00 NP	22.32	17.03	0.00	<500	<0.50	<0.50	<0.50	<1.5	<1.0	NA	NA	NA	NA	NA
1/30/01 NP	22.15	17.2	0.00	<500	<0.50^{M}	<0.50^{M}	<0.50^{M}	<1.5^{M}	<1.0^{M}	<5.0^{M}	<5.0^{M}	<5.0^{M}	<25^{M}	NA
5/16/01 NP	21.99	17.36	0.00	<500	<0.50^{M}	<0.50^{M}	<0.50^{M}	<1.5^{M}	<1.0^{M}	<5.0^{M}	<5.0^{M}	<5.0^{M}	<25^{M}	NA
8/2/01 NP	21.46	17.89	0.00	<500	<0.50^{M}	<0.50^{M}	<0.50^{M}	<1.5^{M}	<1.0^{M}	<5.0^{M}	<5.0^{M}	<5.0^{M}	<25^{M}	NA
12/19/01 NP	20.53	18.82	0.00	<500	<0.50^{M}	<0.50^{M}	<0.50^{M}	<1.5^{M}	<1.0^{M}	<5.0^{M}	<5.0^{M}	<5.0^{M}	<25^{M}	NA
3/7/02	20.45	18.90	0.00	4,300	94^{M}	840^{M}	310^{M}	1,300^{M}	240^{M}	<50^{M}	<50^{M}	<50^{M}	<250^{M}	NA
4/16/02 NP	20.67	18.68	0.00	<500	<0.50	<0.50	<0.50	<1.5	<1.0	<5.0	<5.0	<5.0	<25	NA
11/8/2002	21.00	18.35	0.00	Well not sampled, reported dry										
6/2/2003	21.28	18.07	0.00	Well not sampled, reported dry										
12/11/2003	NM	NM	NM	Well not sampled, reported dry										
6/11/2004	21.57	17.78	0.00	<500	<2.0	<2.0	<2.0	<4.0	<5.0	<5.0	<5.0	<5.0	<50	<150
10/5/2004	NM	NM	NM	Well not sampled, reported dry										

TABLE 2
GROUNDWATER ELEVATION AND ANALYTICAL DATA

ARCO Facility 6021
1801 South Coast Highway
Oceanside, California

Well No./ Date	Depth to Groundwater (Feet)	Groundwater Elevation (Feet)	Product Thickness (Feet)	GRO (mg/L)	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Total Xylenes (mg/L)	MTBE (mg/L)	DIPE (mg/L)	ETBE (mg/L)	TAME (mg/L)	TBA (mg/L)	Ethanol (mg/L)
MW-3	WHE = 100.86 ft msl													
6/16/93	22.25	78.61	0.00	48,000	3,100	8,900	1,200	9,100	NA	NA	NA	NA	NA	NA
3/2/94	23.29	77.57	0.00	39,000	4,800	7,500	1,300	4,600	NA	NA	NA	NA	NA	NA
3/1/95	23.57	77.29	0.00	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
3/10/95	23.43	77.43	0.00	17,000	2,000	4,700	560	4,100	NA	NA	NA	NA	NA	NA
6/9/95	22.06	78.80	0.00	25,000	2,400	5,100	900	3,600	NA	NA	NA	NA	NA	NA
	WHE = 39.64 ft msl													
8/31/95	21.62	18.02	0.00	22,000	2,000	4,100	650	3,300	NA	NA	NA	NA	NA	NA
11/30/1995	21.92	17.72	0.00	21,000	1,700	3,400	560	3,000	NA	NA	NA	NA	NA	NA
3/1/96	22.89	16.75	0.00	27,000	2,400	4,900	710	4,200	NA	NA	NA	NA	NA	NA
6/5/1996	23.60	16.04	0.00	7,300	1,300	1,900	470	1,800	NA	NA	NA	NA	NA	NA
8/14/1996	24.04	15.60	0.00	6,500	930	1,300	340	1,400	<400	NA	NA	NA	NA	NA
11/6/1996	24.17	15.47	0.00	7,800	1,200	960	410	1,400	1,300	NA	NA	NA	NA	NA
3/26/97 NP	23.45	16.19	0.00	8,600	2,200	910	470	2,600	5,900	NA	NA	NA	NA	NA
5/16/97 NP	23.51	16.13	0.00	9,200	2,400	810	660	2,000	4,900	NA	NA	NA	NA	NA
8/20/1997	23.85	15.80	0.01	Not Sampled due to presence of LPH										
11/13/1997	24.11	15.54	0.02	Not Sampled due to presence of LPH										
3/24/1998	23.85	16.23	0.60	Not Sampled due to presence of LPH										
6/24/1998	20.93	18.74	0.04	Not Sampled due to presence of LPH										
9/16/1998	20.71	18.97	0.06	Not Sampled due to presence of LPH										
12/4/98 NP	21.12	18.52	0.00	42,000	1,400	580	690	14,000	<2,000	NA	NA	NA	NA	NA
2/23/1999	21.81	17.84	0.01	Not Sampled due to presence of LPH										
5/13/99 NP	22.22	17.42	0.00	21,000	1,400	820	150	5,100	790	NA	NA	NA	NA	NA
8/17/99 NP	22.56	17.08	0.00	51,000	840	9,800	450	12,000	<2,000	NA	NA	NA	NA	NA
11/18/1999	25.57	14.07	Trace	Not Sampled due to presence of LPH										
2/18/2000	23.45	16.19	Sheen	Not Sampled due to presence of LPH										
5/12/2000	23.68	15.96	Sheen	Not Sampled due to presence of LPH										
7/27/2000	23.40	16.24	Sheen	Not Sampled due to presence of LPH										
11/20/2000	23.19	16.45	Sheen	Not Sampled due to presence of LPH										
1/30/2001	23.01	16.63	Sheen	Not Sampled due to presence of LPH										
5/16/2001	23.15	16.49	Sheen	Not Sampled due to presence of LPH										
8/2/01 NP	22.58	17.06	0.00	2,100	32^M	49^M	9.1^M	410^M	110^M	$<5.0^M$	$<5.0^M$	$<5.0^M$	55^M	NA
12/19/01 NP	21.54	18.10	0.00	<500	8.8^M	13^M	4.4^M	130^M	100^M	$<5.0^M$	$<5.0^M$	$<5.0^M$	26^M	NA
3/7/02	21.32	18.32	0.00	2,300	19^M	$<5.0^M$	490^M	400^M	$1,100^M$	$<50^M$	$<50^M$	$<50^M$	$<250^M$	NA
4/16/02 NP	21.56	18.08	0.00	<500	<0.50	<0.50	<0.50	<1.5	2.3	<5.0	<5.0	<5.0	<25	NA
11/8/2002	23.30	16.34	0.00	910	6.2 J	1.3 J	200	110	590	<50	<50	<50	110 J	NA
6/2/2003	22.37	17.27	0.00	280	1.9 J	<8.0	21	14 J	190	<20	<20	<20	73 J	<600
12/11/2003	22.03	17.61	0.00	1,200	3.2 J	9.7	160	340	170	<20	<20	<20	84 J	<600
6/11/2004	23.03	16.61	0.00	31 J	<2.0	<2.0	0.85 J	1.4 J	90	<5.0	<5.0	<5.0	35 J	<150
10/5/2004	23.14	16.50	0.00	1,700	<2.0	2.2	99	670	360	<5.0	<5.0	<5.0	64	<150

TABLE 2
GROUNDWATER ELEVATION AND ANALYTICAL DATA

ARCO Facility 6021
1801 South Coast Highway
Oceanside, California

Well No./ Date	Depth to Groundwater (Feet)	Groundwater Elevation (Feet msl)	Product Thickness (Feet)	GRO (mg/L)	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Total Xylenes (mg/L)	MTBE (mg/L)	DIPE (mg/L)	ETBE (mg/L)	TAME (mg/L)	TBA (mg/L)	Ethanol (mg/L)
MW-4	**WHE = 100.38 ft msl**													
6/16/93	22.12	78.26	0.00	14,000	1,400	2,700	400	2,300	NA	NA	NA	NA	NA	NA
3/2/94	23.24	77.14	0.00	24,000	3,300	4,400	810	2,600	NA	NA	NA	NA	NA	NA
3/1/95	24.12	76.96	0.95	Not Sampled due to presence of LPH										
3/10/95	24.36	76.37	0.47	Not Sampled due to presence of LPH										
6/9/95	22.05	78.33	0.00	66,000	5,600	12,000	1,500	11,000	NA	NA	NA	NA	NA	NA
	WHE = 39.10 ft msl													
8/31/95	21.58	17.52	0.00	23,000	3,100	4,700	880	3,900	NA	NA	NA	NA	NA	NA
11/30/1995	21.85	17.25	0.00	31,000	3,000	5,200	880	4,400	NA	NA	NA	NA	NA	NA
3/1/96	22.86	16.24	0.00	41,000	4,000	5,500	1,400	5,700	NA	NA	NA	NA	NA	NA
6/5/1996	23.63	15.47	0.00	24,000	3,700	5,000	1,300	6,200	NA	NA	NA	NA	NA	NA
8/14/1996	25.15	15.02	1.45	Not Sampled due to presence of LPH										
11/6/1996	25.10	14.96	1.30	Not Sampled due to presence of LPH										
3/26/97 [P]	23.70	15.77	0.50	Not Sampled due to presence of LPH										
5/16/97 [NP]	23.76	15.74	0.54	Not Sampled due to presence of LPH										
8/20/1997	24.70	15.29	1.20	Not Sampled due to presence of LPH										
11/13/1997	25.70	14.99	2.15	Not Sampled due to presence of LPH										
3/24/98 [NP]	23.00	16.10	0.00	36,000	3,000	6,700	1,100	7,600	1,600	NA	NA	NA	NA	NA
6/24/1998	20.80	18.31	0.02	Not Sampled due to presence of LPH										
9/16/98 [NP]	20.62	18.48	0.00	44,000	4,600	3,700	1,100	10,000	5,500	NA	NA	NA	NA	NA
12/4/98 [NP]	21.04	18.06	0.00	58,000	5,800	9,400	1,500	14,000	13,000	NA	NA	NA	NA	NA
2/23/1999	21.77	17.33	Sheen	Not Sampled due to presence of LPH										
5/13/99 [NP]	21.12	17.98	0.00	82,000	9,700	15,000	2,400	21,000	12,000	NA	NA	NA	NA	NA
8/17/99 [NP]	22.52	16.58	0.00	1,500	5.8	19	4.3	180	53	NA	NA	NA	NA	NA
11/18/1999	23.40	15.70	Trace	Not Sampled due to presence of LPH										
2/18/2000	23.40	15.70	Sheen	Not Sampled due to presence of LPH										
5/12/2000	23.60	15.50	Sheen	Not Sampled due to presence of LPH										
7/27/2000	23.25	15.85	Sheen	Not Sampled due to presence of LPH										
11/20/2000	23.05	16.05	Sheen	Not Sampled due to presence of LPH										
1/30/2001	23.00	16.10	Sheen	Not Sampled due to presence of LPH										
5/16/2001	23.18	15.92	Sheen	Not Sampled due to presence of LPH										
8/2/01 [NP]	22.46	16.64	0.00	560	41^{M}	3.2^{M}	1.1^{M}	98^{M}	7.3^{M}	$<5.0^{M}$	$<5.0^{M}$	$<5.0^{M}$	200^{M}	NA
12/19/01 [NP]	21.30	17.80	0.00	8,200	130^{M}	300^{M}	62^{M}	$3,200^{M}$	48^{M}	$<100^{M}$	$<100^{M}$	$<100^{M}$	3000^{M}	NA
3/7/02	21.07	18.03	0.00	19,000	570^{M}	$1,000^{M}$	470^{M}	$5,400^{M}$	210^{M}	$<100^{M}$	$<100^{M}$	$<100^{M}$	1700^{M}	NA
4/16/02 [NP]	22.29	16.81	0.00	9,300	82	32	<10	3,700	72	<100	<100	<100	4,500	NA
11/8/2002	23.24	15.86	0.00	22,000	1,000	920	800	7,900	480 J	<500	<500	<500	830 J	NA
6/2/2003	22.39	16.71	0.00	20,000	420	1,800	520	10,000	320	<250	<250	<250	1700 J	<7500
12/11/2003	21.99	17.11	0.00	5,300	25	6.4 J	29	460	100	<25	<25	<25	960	<750
6/11/2004	23.01	16.09	0.00	<10,000	17	1.9 J	33	530	3.5 J	<25	<25	<25	<250	<750
10/5/2004	23.15	15.95	0.00	700	9.9	6.0	16	200	180	<12	<12	<12	160	<380

TABLE 2
GROUNDWATER ELEVATION AND ANALYTICAL DATA

ARCO Facility 6021
1801 South Coast Highway
Oceanside, California

Well No./ Date	Depth to Groundwater (Feet)	Groundwater Elevation (Feet)	Product Thickness (Feet)	GRO (mg/L)	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Total Xylenes (mg/L)	MTBE (mg/L)	DIPE (mg/L)	ETBE (mg/L)	TAME (mg/L)	TBA (mg/L)	Ethanol (mg/L)
MW-5	WHE = 101.43 ft msl													
6/16/93	23.15	78.28	0.00	24,000	5,600	3,500	760	2,500	NA	NA	NA	NA	NA	NA
3/2/94	24.21	77.22	0.00	21,000	4,600	3,800	620	1,800	NA	NA	NA	NA	NA	NA
3/1/95	24.45	76.98	0.00	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
3/10/95	24.27	77.16	0.00	7,900	2,000	1,800	470	1,400	NA	NA	NA	NA	NA	NA
6/9/95	23.04	78.39	0.00	7,200	1,300	630	270	610	NA	NA	NA	NA	NA	NA
	WHE = 40.15 ft msl													
8/31/95	22.55	17.60	0.00	6,900	1,100	510	290	770	NA	NA	NA	NA	NA	NA
11/30/1995	22.82	17.33	0.00	6,300	900	570	280	820	NA	NA	NA	NA	NA	NA
3/1/96	23.85	16.30	0.00	16,000	1,900	740	800	2,400	NA	NA	NA	NA	NA	NA
6/5/1996	24.48	15.67	0.00	5,700	840	690	450	1,500	NA	NA	NA	NA	NA	NA
8/14/1996	24.88	15.27	0.00	4,000	550	450	260	920	15	NA	NA	NA	NA	NA
11/696	25.01	15.14	0.00	8,100	1,400	740	400	1,200	700	NA	NA	NA	NA	NA
3/26/97 NP	24.33	15.82	0.00	12,000	3,900	980	490	1,500	2,700	NA	NA	NA	NA	NA
5/16/97 NP	24.50	15.65	0.00	33,000	9,100	3,700	1,500	4,500	5,100	NA	NA	NA	NA	NA
8/20/1997	24.88	15.42	0.20	Not Sampled due to presence of LPH										
11/13/1997	25.15	15.19	0.25	Not Sampled due to presence of LPH										
3/24/1998	24.16	16.18	0.26	Not Sampled due to presence of LPH										
6/24/1998	21.81	18.36	0.03	Not Sampled due to presence of LPH										
9/16/98 NP	21.61	18.54	0.00	710	16	7.0	1.4	110	150	NA	NA	NA	NA	NA
12/4/98 NP	22.02	18.13	0.00	640	73	7.5	1.0	95	360	NA	NA	NA	NA	NA
2/23/99 NP	22.73	17.42	0.00	######	2,000	2,200	1,700	13,000	1,100	NA	NA	NA	NA	NA
5/13/99 NP	23.17	16.98	0.00	23,000	3,500	830	170	4,900	<2,000	NA	NA	NA	NA	NA
8/17/1999	23.78	16.47	0.13	Not Sampled due to presence of LPH										
11/18/1999	26.13	14.02	Trace	Not Sampled due to presence of LPH										
2/18/2000	24.41	15.74	Sheen	Not Sampled due to presence of LPH										
5/12/2000	24.53	15.62	Sheen	Not Sampled due to presence of LPH										
7/27/2000	24.19	15.96	Sheen	Not Sampled due to presence of LPH										
11/20/2000	24.00	16.15	Sheen	Not Sampled due to presence of LPH										
1/30/2001	23.96	16.19	Sheen	Not Sampled due to presence of LPH										
5/16/2001	24.06	16.09	Sheen	Not Sampled due to presence of LPH										
8/2/01 NP	23.42	16.73	0.00	940	0.51^{M}	8.7^{M}	11^{M}	270^{M}	<1.0^{M}	<5.0^{M}	<5.0^{M}	<5.0^{M}	<25^{M}	NA
12/19/01 NP	22.31	17.84	0.00	<500	<0.50^{M}	2.5^{M}	<0.50^{M}	53^{M}	<1.0^{M}	<5.0^{M}	<5.0^{M}	<5.0^{M}	<25^{M}	NA
3/7/02	22.10	18.05	0.00	<500	4.7^{M}	<0.50^{M}	8.1^{M}	19^{M}	49^{M}	<5.0^{M}	<5.0^{M}	<5.0^{M}	<25^{M}	NA
4/16/02 NP	22.32	17.83	0.00	<500	<0.50	<0.50	<0.50	<1.5	8.5	<5.0	<5.0	<5.0	<25	NA
11/8/2002	24.13	16.02	0.00	310	32	1.0 J	44	12	130	<5.0	<5.0	<5.0	24 J	NA
6/2/2003	23.36	16.79	0.00	200	29	1.0 J	2.0	37	59	<5.0	<5.0	<5.0	130	<150
12/11/2003	23.11	17.04	0.00	2,400	480	5.2 J	300	140	570	<25	<25	1.8 J	480	<750
6/11/2004	23.94	16.21	0.00	47 J	7.9	<2.0	<2.0	0.60 J	68	<5.0	<5.0	<5.0	47 J	<150
10/5/2004	23.89	16.26	0.00	<500	56	<2.0	18	6.2	110	<5.0	<5.0	<5.0	51	<150
10/5/2004dup	23.89	16.26	0.00	<500	59	<2.0	20	6.7	140	<5.0	<5.0	<5.0	54	<150

TABLE 2
GROUNDWATER ELEVATION AND ANALYTICAL DATA

ARCO Facility 6021
1801 South Coast Highway
Oceanside, California

Well No./ Date	Depth to Groundwater (Feet)	Groundwater Elevation (Feet msl)	Product Thickness (Feet)	GRO (mg/L)	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Total Xylenes (mg/L)	MTBE (mg/L)	DIPE (mg/L)	ETBE (mg/L)	TAME (mg/L)	TBA (mg/L)	Ethanol (mg/L)
MW-6	**WHE = 101.40 ft msl**													
	MW-6, MW-7 and MW-8 installed February 1994													
3/2/94	21.99	79.41	0.00	110	4	3	3	10	NA	NA	NA	NA	NA	NA
3/10/95	22.31	79.09	0.00	310	16	2	9.2	5.9	NA	NA	NA	NA	NA	NA
6/9/95	21.06	80.34	0.00	72	1.8	0.67	0.68	2.3	NA	NA	NA	NA	NA	NA
	WHE = 39.90 ft msl													
8/31/95	20.59	19.31	0.00	<50	0.75	<0.30	0.33	<0.60	NA	NA	NA	NA	NA	NA
11/30/1995	20.90	19.00	0.00	130	6.4	2.4	6.8	9.5	NA	NA	NA	NA	NA	NA
3/1/96	21.74	18.16	0.00	<500	<0.5	<0.5	<0.5	<1.5	NA	NA	NA	NA	NA	NA
6/5/1996	22.33	17.57	0.00	<500	1.1	<0.50	1.3	2.2	NA	NA	NA	NA	NA	NA
8/14/1996	22.87	17.03	0.00	<500	<0.50	<0.50	<0.50	<1.5	<10	NA	NA	NA	NA	NA
11/6/1996	23.19	16.71	0.00	<500	<0.50	<0.50	<0.50	<1.5	<35	NA	NA	NA	NA	NA
3/26/97 NP	22.54	17.36	0.00	<500	<0.50	0.50	<0.50	1.7	<10	NA	NA	NA	NA	NA
5/16/97 NP	22.51	17.39	0.00	<500	<0.50	0.50	<0.50	1.5	<10	NA	NA	NA	NA	NA
8/20/97 NP	22.88	17.02	0.00	<500	<0.50	<0.50	<0.50	<1.5	<10	NA	NA	NA	NA	NA
11/13/97 NP	23.13	16.77	0.00	<500	0.71	2.1	<0.50	2.7	<10	NA	NA	NA	NA	NA
3/24/98 NP	22.39	17.51	0.00	<500	<0.50	<0.50	<0.50	<1.5	<10	NA	NA	NA	NA	NA
6/24/98 NP	20.06	19.84	0.00	<50	<0.30	<0.30	<0.30	<0.60	<10	NA	NA	NA	NA	NA
9/16/98 NP	19.80	20.10	0.00	<500	<0.50	<0.50	<0.50	<1.5	<10	NA	NA	NA	NA	NA
12/4/98 NP	20.06	19.84	0.00	<500	<0.50	<0.50	<0.50	<1.5	<10	NA	NA	NA	NA	NA
2/23/99 NP	20.67	19.23	0.00	<500	<0.50	<0.50	<0.50	<1.5	<10	NA	NA	NA	NA	NA
5/13/99 NP	21.02	18.88	0.00	<500	<0.50	<0.50	<0.50	<1.5	<20	NA	NA	NA	NA	NA
8/17/99 NP	21.30	18.60	0.00	<500	<0.50	<0.50	<0.50	<1.5	<20	NA	NA	NA	NA	NA
11/18/99 NP	21.46	18.44	0.00	1,600	<1.5	54	27	280	48^{M}	NA	NA	NA	NA	NA
2/18/00 NP	22.35	17.55	0.00	<500	<0.50	<0.50	<0.50	<1.5	<5.0	NA	NA	NA	NA	NA
5/12/00 NP	22.52	17.38	0.00	<500	<0.50	<0.50	<0.50	<1.5	<5.0	NA	NA	NA	NA	NA
7/27/00 NP	22.35	17.55	0.00	<500	$<0.50^{M}$	$<0.50^{M}$	$<0.50^{M}$	$<1.5^{M}$	$<1.0^{M}$	$<5.0^{M}$	$<5.0^{M}$	$<5.0^{M}$	$<25^{M}$	NA
11/20/00 NP	21.70	18.20	0.00	<500	<0.50	<0.50	<0.50	<1.5	7.0^{M}	NA	NA	NA	NA	NA
1/30/01 NP	21.65	18.25	0.00	14,000	$<13^{M}$	110^{M}	$1,700^{M}$	$2,000^{M}$	$4,500^{M}$	$<130^{M}$	$<130^{M}$	$<130^{M}$	$1,300^{M}$	NA
5/16/01 NP	22.30	17.60	0.00	<500	$<0.50^{M}$	$<0.50^{M}$	$<0.50^{M}$	$<1.5^{M}$	$<1.0^{M}$	$<5.0^{M}$	$<5.0^{M}$	$<5.0^{M}$	$<25^{M}$	NA
8/2/01 NP	21.83	18.07	0.00	<500	$<0.50^{M}$	$<0.50^{M}$	$<0.50^{M}$	$<1.5^{M}$	$<1.0^{M}$	$<5.0^{M}$	$<5.0^{M}$	$<5.0^{M}$	$<25^{M}$	NA
12/19/01 NP	21.04	18.86	0.00	<500	$<0.50^{M}$	$<0.50^{M}$	$<0.50^{M}$	$<1.5^{M}$	$<1.0^{M}$	$<5.0^{M}$	$<5.0^{M}$	$<5.0^{M}$	$<25^{M}$	NA
3/7/02	20.95	18.95	0.00	<500	$<0.50^{M}$	$<0.50^{M}$	1.9^{M}	$<1.5^{M}$	$<1.0^{M}$	$<5.0^{M}$	$<5.0^{M}$	$<5.0^{M}$	$<25^{M}$	NA
4/16/02 NP	21.15	18.75	0.00	<500	<0.50	<0.50	<0.50	<1.5	<1.0	<0.50	<0.50	<0.50	<25	NA
11/8/2002	22.50	17.40	0.00	5,000	<20	5.1 J	590	390	640	<50	<50	<50	<500	NA
6/2/2003	21.50	18.40	0.00	87	<2.0	<2.0	0.71 J	2.9 J	72	<5.0	<5.0	<5.0	40 J	<150
12/11/2003	21.20	18.70	0.00	53	<2.0	<2.0	0.25 J	<4.0	<5.0	<5.0	<5.0	<5.0	<50	<150
6/11/2004	21.91	17.99	0.00	<500	<2.0	<2.0	<2.0	<4.0	<5.0	<5.0	<5.0	<5.0	<50	<150
10/5/2004	22.15	17.75	0.00	2,600	<8.0	<8.0	430	<16	190	<20	<20	<20	<200	<600

TABLE 2
GROUNDWATER ELEVATION AND ANALYTICAL DATA

ARCO Facility 6021
1801 South Coast Highway
Oceanside, California

Well No./ Date	Depth to Groundwater (Feet)	Groundwater Elevation (Feet)	Product Thickness (Feet)	GRO (mg/L)	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Total Xylenes (mg/L)	MTBE (mg/L)	DIPE (mg/L)	ETBE (mg/L)	TAME (mg/L)	TBA (mg/L)	Ethanol (mg/L)
MW-7	WHE = 98.88 ft msl													
3/2/94	21.54	77.34	0.00	<50	<0.5	2	<0.5	2	NA	NA	NA	NA	NA	NA
3/10/95	21.56	77.32	0.00	73	<0.30	<0.30	<0.30	<0.60	NA	NA	NA	NA	NA	NA
6/9/95	20.21	78.67	0.00	<50	<0.30	<0.30	<0.30	<0.60	NA	NA	NA	NA	NA	NA
	WHE = 37.73 ft msl													
8/31/95	19.97	17.76	0.00	51	0.34	0.34	<0.30	0.91	NA	NA	NA	NA	NA	NA
11/30/1995	20.35	17.38	0.00	<50	<0.30	<0.30	<0.30	<0.60	NA	NA	NA	NA	NA	NA
3/1/96	21.26	16.47	0.00	<500	<0.5	<0.5	<0.5	<1.5	NA	NA	NA	NA	NA	NA
6/5/1996	21.90	15.83	0.00	<500	<0.50	<0.50	<0.50	<1.5	NA	NA	NA	NA	NA	NA
8/14/1996	22.33	15.40	0.00	<500	<0.50	<0.50	<0.50	<1.5	26	NA	NA	NA	NA	NA
11/6/1996	22.43	15.30	0.00	<500	<0.50	<0.50	<0.50	<1.5	47	NA	NA	NA	NA	NA
3/26/97 NP	21.68	16.05	0.00	<500	<0.50	0.52	<0.50	<1.5	<10	NA	NA	NA	NA	NA
5/16/97 NP	21.76	15.97	0.00	<500	<0.50	<0.50	<0.50	<1.5	<10	NA	NA	NA	NA	NA
8/20/97 NP	22.11	15.62	0.00	<500	<0.50	<0.50	<0.50	<1.5	<10	NA	NA	NA	NA	NA
11/13/97 NP	22.36	15.37	0.00	<500	<0.50	1.7	<0.50	<1.5	27	NA	NA	NA	NA	NA
3/24/98 NP	21.21	16.52	0.00	<500	<0.50	<0.50	<0.50	<1.5	680	NA	NA	NA	NA	NA
6/24/98 NP	19.21	18.52	0.00	<50	<0.30	<0.30	<0.30	<0.60	800	NA	NA	NA	NA	NA
9/16/98 NP	19.15	18.58	0.00	<500	<0.50	<0.50	<0.50	<1.5	<10	NA	NA	NA	NA	NA
12/4/98 NP	19.50	18.23	0.00	<500	<0.50	<0.50	<0.50	<1.5	<10	NA	NA	NA	NA	NA
2/23/99 NP	20.25	17.48	0.00	<500	<0.50	<0.50	<0.50	<1.5	<10	NA	NA	NA	NA	NA
5/13/99 NP	20.80	16.93	0.00	<500	<0.50	<0.50	<0.50	<1.5	<20	NA	NA	NA	NA	NA
8/17/99 NP	21.11	16.62	0.00	<500	<0.50	<0.50	<0.50	<1.5	<20	NA	NA	NA	NA	NA
11/18/99 NP	21.21	16.52	0.00	<500	<0.50	<0.50	<0.50	<1.5	<10	NA	NA	NA	NA	NA
2/18/00 NP	21.92	15.81	0.00	<500	<0.50	<0.50	<0.50	<1.5	<5.0	NA	NA	NA	NA	NA
5/12/00 NP	22.05	15.68	0.00	3,200	<10	<10	<10	<30	4,200^{M}	NA	NA	NA	NA	NA
7/27/00 NP	21.77	15.96	0.00	<500	<13^{M}	<13^{M}	<13^{M}	<38^{M}	4,200^{M}	<25^{M}	<25^{M}	<25^{M}	<25^{M}	NA
11/20/00 NP	21.55	16.18	0.00	<500	<5.0	<5.0	<5.0	<15	5,700^{M}	NA	NA	NA	NA	NA
1/30/01 NP	21.47	16.26	0.00	<500	<13^{M}	<13^{M}	<13^{M}	<38^{M}	4,100^{M}	<130^{M}	<130^{M}	<130^{M}	920^{M}	NA
5/16/01 NP	21.50	16.23	0.00	<500	<25^{M}	<25^{M}	<25^{M}	<75^{M}	8,300^{M}	<250^{M}	<250^{M}	<250^{M}	<1300^{M}	NA
8/2/01 NP	20.83	16.90	0.00	<500	<50^{M}	<50^{M}	<50^{M}	<150^{M}	6,500^{M}	<500^{M}	<500^{M}	<500^{M}	<2500^{M}	NA
12/19/01 NP	19.70	18.03	0.00	<500	<0.50^{M}	<0.50^{M}	<0.50^{M}	<1.5^{M}	<1.0^{M}	<5.0^{M}	<5.0^{M}	<5.0^{M}	<25^{M}	NA
3/7/02 NP	19.54	18.19	0.00	<500	<0.50^{M}	<0.50^{M}	<0.50^{M}	<1.5^{M}	<1.0^{M}	<5.0^{M}	<5.0^{M}	<5.0^{M}	<25^{M}	NA
4/16/02 NP	19.74	17.99	0.00	<500	<0.50	<0.50	<0.50	<1.5	<1.0	<5.0	<5.0	<5.0	<25	NA
11/8/2002	21.72	16.01	0.00	18 J	0.13 J	<2.0	0.33 J	<4.0	0.46 J	<5.0	<5.0	<5.0	<50	NA
6/2/2003	20.73	17.00	0.00	16 J	<2.0	<2.0	<2.0	<4.0	19	<5.0	<5.0	<5.0	<50	<150
12/11/2003	20.65	17.08	0.00	150	<20	<20	<20	<40	480	<50	<50	<50	<500	<1500
6/11/2004	21.54	16.19	0.00	<500	<20	<20	<20	<40	760	<50	<50	<50	94 J	<1500
10/5/2004	21.50	16.23	0.00	<500	<20	<20	<20	<40	1,000	<50	<50	<50	<500	<1500

TABLE 2
GROUNDWATER ELEVATION AND ANALYTICAL DATA

ARCO Facility 6021
1801 South Coast Highway
Oceanside, California

Well No./ Date	Depth to Groundwater (Feet)	Groundwater Elevation (Feet msl)	Product Thickness (Feet)	GRO (mg/L)	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Total Xylenes (mg/L)	MTBE (mg/L)	DIPE (mg/L)	ETBE (mg/L)	TAME (mg/L)	TBA (mg/L)	Ethanol (mg/L)
MW-8	WHE = 99.04 ft msl													
3/2/94	23.99	75.05	0.00	<50	<0.5	5	<0.5	3	NA	NA	NA	NA	NA	NA
3/10/95	23.59	75.45	0.00	<50	<0.30	<0.30	<0.30	<0.60	NA	NA	NA	NA	NA	NA
6/9/95	22.6	76.44	0.00	<50	<0.30	0.37	<0.30	<0.60	NA	NA	NA	NA	NA	NA
	WHE = 37.90 ft msl													
8/31/95	22.47	15.43	0.00	<50	<0.30	<0.30	<0.30	<0.60	NA	NA	NA	NA	NA	NA
11/30/1995	22.84	15.06	0.00	<50	<0.30	<0.30	<0.30	<0.60	NA	NA	NA	NA	NA	NA
3/1/96	23.85	14.05	0.00	<500	<0.5	<0.5	<0.5	<1.5	NA	NA	NA	NA	NA	NA
6/5/1996	24.52	13.38	0.00	<500	<0.50	<0.50	<0.50	<1.5	NA	NA	NA	NA	NA	NA
8/14/1996	24.26	13.64	0.00	<500	<0.50	<0.50	<0.50	<1.5	<10	NA	NA	NA	NA	NA
11/6/1996	24.64	13.26	0.00	<500	<0.50	<0.50	<0.50	<1.5	<35	NA	NA	NA	NA	NA
3/26/97 NP	23.89	14.01	0.00	<500	<0.50	0.64	<0.50	<1.5	<10	NA	NA	NA	NA	NA
5/16/97 NP	24.08	13.82	0.00	<500	<0.50	0.71	<0.50	<1.5	<10	NA	NA	NA	NA	NA
8/20/97 NP	24.55	13.35	0.00	<500	<0.50	<0.50	<0.50	<1.5	<10	NA	NA	NA	NA	NA
11/13/97 NP	24.75	13.15	0.00	<500	<0.50	1.4	<0.50	<1.5	<10	NA	NA	NA	NA	NA
3/24/98 NP	23.47	14.43	0.00	<500	0.87	0.41	<0.50	0.70	<10	NA	NA	NA	NA	NA
6/24/98 NP	21.66	16.24	0.00	<50	<0.30	<0.30	<0.30	<0.60	<10	NA	NA	NA	NA	NA
9/16/98 NP	21.61	16.29	0.00	<500	<0.50	<0.50	<0.50	<1.5	<10	NA	NA	NA	NA	NA
12/4/98 NP	22.10	15.80	0.00	<500	<0.50	<0.50	<0.50	<1.5	<10	NA	NA	NA	NA	NA
2/23/99 NP	22.90	15.00	0.00	<500	<0.50	<0.50	<0.50	<1.5	<10	NA	NA	NA	NA	NA
5/13/99 NP	23.46	14.44	0.00	<500	<0.50	<0.50	<0.50	<1.5	<20	NA	NA	NA	NA	NA
8/17/99 NP	23.78	14.12	0.00	<500	<0.50	<0.50	<0.50	<1.5	<20	NA	NA	NA	NA	NA
11/18/99 NP	23.91	13.99	0.00	<500	<0.50	<0.50	<0.50	<1.5	<10	NA	NA	NA	NA	NA
2/18/00 NP	24.51	13.39	0.00	<500	<0.50	<0.50	<0.50	<1.5	<5.0	NA	NA	NA	NA	NA
5/12/00 NP	24.37	13.53	0.00	<500	<0.50	<0.50	<0.50	<1.5	<1.0^{M}	NA	NA	NA	NA	NA
7/27/00 NP	23.85	14.05	0.00	<500	<0.50^{M}	<0.50^{M}	<0.50^{M}	<1.5^{M}	<1.0^{M}	<5.0^{M}	<5.0^{M}	<5.0^{M}	<25^{M}	NA
11/20/00 NP	23.40	14.50	0.00	<500	<0.50	<0.50	<0.50	<1.5	<1.0	NA	NA	NA	NA	NA
1/30/01 NP	23.36	14.54	0.00	<500	<0.50^{M}	<0.50^{M}	<0.50^{M}	<1.5^{M}	<1.0^{M}	<5.0^{M}	<5.0^{M}	<5.0^{M}	<25^{M}	NA
5/16/01 NP	23.82	14.08	0.00	<500	<0.50^{M}	<0.50^{M}	<0.50^{M}	<1.5^{M}	<1.0^{M}	<5.0^{M}	<5.0^{M}	<5.0^{M}	<25^{M}	NA
8/2/01 NP	23.07	14.83	0.00	<500	<0.50^{M}	<0.50^{M}	<0.50^{M}	<1.5^{M}	<1.0^{M}	<5.0^{M}	<5.0^{M}	<5.0^{M}	<25^{M}	NA
12/19/01 NP	21.47	16.43	0.00	<500	<0.50^{M}	<0.50^{M}	<0.50^{M}	<1.5^{M}	<1.0^{M}	<5.0^{M}	<5.0^{M}	<5.0^{M}	<25^{M}	NA
3/7/02 NP	21.19	16.71	0.00	<500	<0.50^{M}	<0.50^{M}	<0.50^{M}	<1.5^{M}	<1.0^{M}	<5.0^{M}	<5.0^{M}	<5.0^{M}	<25^{M}	NA
4/16/02 NP	21.37	16.53	0.00	<500	<0.50	<0.50	<0.50	<1.5	<1.0	<5.0	<5.0	<5.0	<25	NA
11/8/2002	24.07	13.83	0.00	10 J	<2.0	<2.0	<2.0	<4.0	<5.0	<5.0	<5.0	<5.0	<50	NA
6/2/2003	23.15	14.75	0.00	8.3 J	<2.0	<2.0	<2.0	<4.0	<5.0	<5.0	<5.0	<5.0	<50	<150
12/11/2003	NM	NM	NM	Not Sampled due to truck parked on the well										
6/11/2004	24.03	13.87	0.00	Not Sampled due to truck parked on the well										
10/5/2004	NM	NM	NM	Not Sampled due to truck parked on the well										

TABLE 2
GROUNDWATER ELEVATION AND ANALYTICAL DATA

ARCO Facility 6021
1801 South Coast Highway
Oceanside, California

Well No./ Date	Depth to Groundwater (Feet)	Groundwater Elevation (Feet)	Product Thickness (Feet)	GRO (mg/L)	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Total Xylenes (mg/L)	MTBE (mg/L)	DIPE (mg/L)	ETBE (mg/L)	TAME (mg/L)	TBA (mg/L)	Ethanol (mg/L)
MW-9	WHE = NM													
						MW-9 installed March 1995								
6/9/95	21.95	NA	0.00	<50	<0.30	<0.30	<0.30	<0.60	NA	NA	NA	NA	NA	NA
	WHE = 40.13 ft msl													
8/31/95	21.34	18.79	0.00	<50	0.49	<0.30	<0.30	<0.60	NA	NA	NA	NA	NA	NA
11/30/1995	21.53	18.60	0.00	<50	0.45	0.31	<0.30	1.7	NA	NA	NA	NA	NA	NA
3/1/96	22.38	17.75	0.00	<500	<0.5	<0.5	<0.5	<1.5	NA	NA	NA	NA	NA	NA
6/5/1996	22.93	17.20	0.00	<500	<0.50	<0.50	<0.50	<1.5	NA	NA	NA	NA	NA	NA
8/14/1996	23.35	16.78	0.00	<500	<0.50	<0.50	<0.50	<1.5	<10	NA	NA	NA	NA	NA
11/6/1996	23.66	16.47	0.00	<500	<0.50	<0.50	<0.50	<1.5	<35	NA	NA	NA	NA	NA
3/26/97 NP	23.23	16.90	0.00	<500	<0.50	<0.50	<0.50	<1.5	<10	NA	NA	NA	NA	NA
5/16/97 NP	23.11	17.02	0.00	<500	<0.50	0.50	<0.50	<1.5	<10	NA	NA	NA	NA	NA
8/20/97 NP	23.50	16.63	0.00	<500	<0.50	<0.50	<0.50	<1.5	<10	NA	NA	NA	NA	NA
11/13/97 NP	23.78	16.35	0.00	<500	<0.50	2.5	<0.50	1.6	<10	NA	NA	NA	NA	NA
3/24/98 NP	23.28	16.85	0.00	<500	<0.50	<0.50	<0.50	<1.5	<10	NA	NA	NA	NA	NA
6/24/98 NP	20.80	19.33	0.00	<50	<0.30	<0.30	<0.30	<0.60	<10	NA	NA	NA	NA	NA
9/16/98 NP	20.47	19.66	0.00	<500	<0.50	<0.50	<0.50	<1.5	<10	NA	NA	NA	NA	NA
12/4/98 NP	20.73	19.40	0.00	<500	<0.50	<0.50	<0.50	<1.5	<10	NA	NA	NA	NA	NA
2/23/99 NP	21.30	18.83	0.00	<500	<0.50	<0.50	<0.50	<1.5	<10	NA	NA	NA	NA	NA
5/13/99 NP	21.68	18.45	0.00	<500	<0.50	<0.50	<0.50	<1.5	<20	NA	NA	NA	NA	NA
8/17/99 NP	21.92	18.21	0.00	<500	<0.50	<0.50	<0.50	<1.5	<20	NA	NA	NA	NA	NA
11/18/99 NP	22.02	18.11	0.00	<500	<0.50	<0.50	<0.50	<1.5	<10	NA	NA	NA	NA	NA
2/18/00 NP	22.97	17.16	0.00	<500	<0.50	<0.50	<0.50	<1.5	<5.0	NA	NA	NA	NA	NA
5/12/00 NP	23.20	16.93	0.00	<500	<0.50	<0.50	<0.50	<1.5	<5.0	NA	NA	NA	NA	NA
7/27/00 NP	23.02	17.11	0.00	<500	<0.50^{M}	<0.50^{M}	<0.50^{M}	<1.5^{M}	<1.0^{M}	<5.0^{M}	<5.0^{M}	<5.0^{M}	<25^{M}	NA
11/20/00 NP	23.00	17.13	0.00	<500	<0.50	<0.50	<0.50	23	<1.0	NA	NA	NA	NA	NA
1/30/01 NP	22.93	17.20	0.00	<500	<0.50^{M}	<0.50^{M}	<0.50^{M}	<1.5^{M}	<1.0^{M}	<5.0^{M}	<5.0^{M}	<5.0^{M}	<25^{M}	NA
5/16/01 NP	23.09	17.04	0.00	<500	<0.50^{M}	<0.50^{M}	<0.50^{M}	<1.5^{M}	<1.0^{M}	<5.0^{M}	<5.0^{M}	<5.0^{M}	<25^{M}	NA
8/2/01 NP	22.50	17.63	0.00	<500	<0.50^{M}	<0.50^{M}	<0.50^{M}	<1.5^{M}	<1.0^{M}	<5.0^{M}	<5.0^{M}	<5.0^{M}	<25^{M}	NA
12/19/01 NP	21.71	18.42	0.00	<500	<0.50^{M}	<0.50^{M}	<0.50^{M}	<1.5^{M}	<1.0^{M}	<5.0^{M}	<5.0^{M}	<5.0^{M}	<25^{M}	NA
3/7/02	21.58	18.55	0.00	<500	<0.50^{M}	<0.50^{M}	<0.50^{M}	<1.5^{M}	<1.0^{M}	<5.0^{M}	<5.0^{M}	<5.0^{M}	<25^{M}	NA
4/16/02 NP	21.74	18.39	0.00	<500	<0.50	<0.50	<0.50	<1.5	<1.0	<5.0	<5.0	<5.0	<25	NA
11/8/2002	22.93	17.20	0.00	16 J	0.12 J	0.23 J	0.14 J	0.27 J	<5.0	<5.0	<5.0	<5.0	<50	NA
6/2/2003	21.96	18.17	0.00	7.5 J	<2.0	7.5	0.87 J	4.6	<5.0	<5.0	<5.0	<5.0	<50	<150
12/11/2003	21.60	18.53	0.00	<50	0.69 J	<2.0	<2.0	<4.0	<5.0	<5.0	<5.0	<5.0	<50	<150
6/11/2004	22.52	17.61	0.00	<500	<2.0	<2.0	<2.0	<4.0	<5.0	<5.0	<5.0	<5.0	<50	<150
10/5/2004	22.53	17.60	0.00	<500	<2.0	<2.0	<2.0	<4.0	<5.0	<5.0	<5.0	<5.0	<50	<150

TABLE 2
GROUNDWATER ELEVATION AND ANALYTICAL DATA

ARCO Facility 6021
1801 South Coast Highway
Oceanside, California

Well No./ Date	Depth to Groundwater (Feet)	Groundwater Elevation (Feet msl)	Product Thickness (Feet)	GRO (mg/L)	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Total Xylenes (mg/L)	MTBE (mg/L)	DIPE (mg/L)	ETBE (mg/L)	TAME (mg/L)	TBA (mg/L)	Ethanol (mg/L)
MW-10	**WHE = 38.84 ft msl**													
						MW-10 installed June 1995								
6/9/95	19.00	19.84	0.00	<50	<0.30	<0.30	<0.30	<0.60	NA	NA	NA	NA	NA	NA
8/31/95	18.53	20.31	0.00	<50	<0.30	<0.30	<0.30	<0.60	NA	NA	NA	NA	NA	NA
11/30/1995	18.85	19.99	0.00	<50	<0.30	<0.30	<0.30	<0.60	NA	NA	NA	NA	NA	NA
3/1/96	19.64	19.20	0.00	<500	<0.5	<0.5	<0.5	<1.5	NA	NA	NA	NA	NA	NA
6/5/1996	20.27	18.57	0.00	<500	<0.50	<0.50	<0.50	<1.5	NA	NA	NA	NA	NA	NA
8/14/1996	20.84	18.00	0.00	<500	<0.50	<0.50	<0.50	<1.5	<10	NA	NA	NA	NA	NA
11/6/1996	21.21	17.63	0.00	<500	<0.50	<0.50	<0.50	<1.5	<35	NA	NA	NA	NA	NA
3/26/97 NP	20.50	18.34	0.00	<500	<0.50	<0.50	<0.50	<1.5	<10	NA	NA	NA	NA	NA
5/16/97 NP	20.47	18.37	0.00	<500	<0.50	0.51	<0.50	<1.5	<10	NA	NA	NA	NA	NA
8/20/97 NP	20.83	18.01	0.00	<500	<0.50	<0.50	<0.50	<1.5	<10	NA	NA	NA	NA	NA
11/13/97 NP	21.10	17.74	0.00	<500	1.1	2.2	<0.50	1.6	<10	NA	NA	NA	NA	NA
3/24/1998	NM	NM	NM	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
6/24/98 NP	18.03	20.81	0.00	<50	<0.30	<0.30	<0.30	<0.60	51	NA	NA	NA	NA	NA
9/16/98 NP	17.02	21.82	0.00	<500	<0.50	<0.50	<0.50	<1.5	<10	NA	NA	NA	NA	NA
12/4/98 NP	16.55	22.29	0.00	<500	<0.50	<0.50	<0.50	<1.5	<10	NA	NA	NA	NA	NA
2/23/99 NP	17.81	21.03	0.00	<500	<0.50	<0.50	<0.50	<1.5	<10	NA	NA	NA	NA	NA
5/13/99 NP	18.55	20.29	0.00	<500	<0.50	<0.50	<0.50	<1.5	<20	NA	NA	NA	NA	NA
8/26/99 NP	NM	NM	0.00	<500	<0.50	<0.50	<0.50	<1.5	<20	NA	NA	NA	NA	NA
11/18/99 NP	18.91	19.93	0.00	<500	<0.50	5.2	6.0	43	47^{M}	NA	NA	NA	NA	NA
2/18/00 NP	19.97	18.87	0.00	<500	<0.50	<0.50	<0.50	<1.5	<5.0	NA	NA	NA	NA	NA
5/12/00 NP	20.26	18.58	0.00	<500	<0.50	<0.50	<0.50	<1.5	<5.0	NA	NA	NA	NA	NA
7/27/00 NP	20.17	18.67	0.00	<500	$<0.50^{M}$	$<0.50^{M}$	$<0.50^{M}$	$<1.5^{M}$	$<1.0^{M}$	NA	NA	NA	NA	NA
11/20/00 NP	20.05	18.79	0.00	<500	<0.50	<0.50	<0.50	<1.5	2.5^{M}	NA	NA	NA	NA	NA
1/30/01 NP	19.97	18.87	0.00	<500	$<0.50^{M}$	$<0.50^{M}$	$<0.50^{M}$	$<1.5^{M}$	9.6^{M}	$<5.0^{M}$	$<5.0^{M}$	$<5.0^{M}$	$<25^{M}$	NA
5/16/01 NP	19.60	19.24	0.00	<500	$<0.50^{M}$	$<0.50^{M}$	$<0.50^{M}$	$<1.5^{M}$	1.1^{M}	$<5.0^{M}$	$<5.0^{M}$	$<5.0^{M}$	$<25^{M}$	NA
8/2/01 NP	19.70	19.14	0.00	<500	$<0.50^{M}$	$<0.50^{M}$	$<0.50^{M}$	$<1.5^{M}$	$<1.0^{M}$	$<5.0^{M}$	$<5.0^{M}$	$<5.0^{M}$	$<25^{M}$	NA
12/19/01 NP	19.05	19.79	0.00	<500	$<0.50^{M}$	$<0.50^{M}$	$<0.50^{M}$	$<1.5^{M}$	$<1.0^{M}$	$<5.0^{M}$	$<5.0^{M}$	$<5.0^{M}$	$<25^{M}$	NA
3/7/02 NP	19.11	19.73	0.00	<500	$<0.50^{M}$	$<0.50^{M}$	$<0.50^{M}$	$<1.5^{M}$	$<1.0^{M}$	$<5.0^{M}$	$<5.0^{M}$	$<5.0^{M}$	$<25^{M}$	NA
4/16/02 NP	18.42	20.42	0.00	<500	<0.50	<0.50	<0.50	<1.5	<1.0	<5.0	<5.0	<5.0	<25	NA
11/8/2002	20.14	18.70	0.00	<50	<2.0	<2.0	<2.0	<4.0	<5.0	<5.0	<5.0	<5.0	<50	NA
6/2/2003	19.11	19.73	0.00	9.7 J	<2.0	<2.0	<2.0	<4.0	<5.0	<5.0	<5.0	<5.0	<50	<150
12/11/2003	18.61	20.23	0.00	<50	<2.0	<2.0	<2.0	<4.0	<5.0	<5.0	<5.0	<5.0	<50	<150
6/11/2004	19.52	19.32	0.00	<500	<2.0	<2.0	<2.0	<4.0	<5.0	<5.0	<5.0	<5.0	<50	<150
10/5/2004	19.81	19.03	0.00	<500	<2.0	<2.0	<2.0	<4.0	<5.0	<5.0	<5.0	<5.0	<50	<150

TABLE 2
GROUNDWATER ELEVATION AND ANALYTICAL DATA

ARCO Facility 6021
1801 South Coast Highway
Oceanside, California

Well No./ Date	Depth to Groundwater (Feet)	Groundwater Elevation (Feet)	Product Thickness (Feet)	GRO (mg/L)	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Total Xylenes (mg/L)	MTBE (mg/L)	DIPE (mg/L)	ETBE (mg/L)	TAME (mg/L)	TBA (mg/L)	Ethanol (mg/L)
MW-11	WHE = 37.78 ft msl													
						MW-11 installed August 1995								
8/31/95	21.39	16.39	0.00	5,000	270	220	690	330	NA	NA	NA	NA	NA	NA
11/30/1995	21.78	16.00	0.00	5,400	300	260	1,100	330	NA	NA	NA	NA	NA	NA
3/1/96	22.77	15.01	0.00	6,900	240	250	1,300	270	NA	NA	NA	NA	NA	NA
6/5/1996	23.40	14.38	0.00	2,200	180	410	1,300	340	NA	NA	NA	NA	NA	NA
8/14/1996	23.63	14.15	0.00	3,100	92	180	840	280	19	NA	NA	NA	NA	NA
11/6/1996	23.87	13.91	0.00	4,900	170	460	920	550	1,200	NA	NA	NA	NA	NA
3/26/97 NP	22.99	14.79	0.00	<500	3.6	2.0	9.1	3.4	36	NA	NA	NA	NA	NA
5/16/97 NP	23.14	14.64	0.00	3,000	120	78	830	110	<200	NA	NA	NA	NA	NA
8/20/97 NP	23.52	14.26	0.00	3,100	160	17	810	49	<400	NA	NA	NA	NA	NA
11/13/97 NP	23.71	14.07	0.00	3,000	140	18	680	31	<200	NA	NA	NA	NA	NA
3/24/1998	NM	NM	NM	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
6/24/98 NP	20.70	17.08	0.00	<50	<0.30	<0.30	<0.30	<0.60	<10	NA	NA	NA	NA	NA
9/16/98 NP	20.60	17.18	0.00	2,000	25	9.0	310	120	<100	NA	NA	NA	NA	NA
12/4/98 NP	21.02	16.76	0.00	<500	0.72	<0.50	11	<1.5	<10	NA	NA	NA	NA	NA
2/23/99 NP	21.83	15.95	0.00	1,400	32	13	280	19	<100	NA	NA	NA	NA	NA
5/13/99 NP	22.31	15.47	0.00	1,900	16	34	280	58	<5.0[M]	NA	NA	NA	NA	NA
8/17/99 NP	22.70	15.08	0.00	1,900	15	14	300	28	<100	NA	NA	NA	NA	NA
11/18/99 NP	22.85	14.93	0.00	1,600	26	8.1	330	27	<100	NA	NA	NA	NA	NA
2/18/00 NP	23.50	14.28	0.00	1,700	88	12	450	<6.0	<50	NA	NA	NA	NA	NA
5/12/00 NP	23.50	14.28	0.00	690	60	<1.0	63	<3.0	1.3[M]	NA	NA	NA	NA	NA
7/27/00 NP	23.00	14.78	0.00	1,800	84[M]	<1.0[M]	43[M]	<3.0[M]	<2.0[M]	<10[M]	<10[M]	<10[M]	<50[M]	NA
11/20/00 NP	22.87	14.91	0.00	<500	<0.50	<0.50	<0.50	<1.5	<1.0	NA	NA	NA	NA	NA
1/30/01 NP	22.76	15.02	0.00	<500	<0.50[M]	<0.50[M]	<0.50[M]	<1.5[M]	<1.0[M]	<5.0[M]	<5.0[M]	<5.0[M]	<25[M]	NA
5/16/01 NP	22.45	15.33	0.00	<500	<0.50[M]	<0.50[M]	<0.50[M]	<1.5[M]	<1.0[M]	<5.0[M]	<5.0[M]	<5.0[M]	<25[M]	NA
8/2/01 NP	21.08	16.70	0.00	<500	<0.50[M]	<0.50[M]	<0.50[M]	<1.5[M]	<1.0[M]	<5.0[M]	<5.0[M]	<5.0[M]	<25[M]	NA
12/19/01 NP	19.17	18.61	0.00	<500	<0.50[M]	<0.50[M]	<0.50[M]	<1.5[M]	<1.0[M]	<5.0[M]	<5.0[M]	<5.0[M]	<25[M]	NA
3/7/02 NP	18.66	19.12	0.00	<500	<0.50[M]	<0.50[M]	<0.50[M]	<1.5[M]	<1.0[M]	<5.0[M]	<5.0[M]	<5.0[M]	<25[M]	NA
4/16/02 NP	18.67	19.11	0.00	<500	<0.50	<0.50	<0.50	<1.5	<1.0	<5.0	<5.0	<5.0	<25	NA
11/8/2002	23.21	14.57	0.00	1,500	85	6.0 J	230	260	<20	<20	<20	<20	<200	NA
6/2/2003	22.20	15.58	0.00	1,000	19	1.2 J	140	1.3 J	<10	<10	<10	<10	<100	<300
12/11/2003	23.11	14.67	0.00	6,000	160	480	710	1,000	<50	<50	<50	<50	<500	<1500
6/11/2004	22.92	14.86	0.00	1,200	85	<8.0	280	2.4 J	18 J	<20	<20	<20	<200	<600
10/5/2004	22.90	14.88	0.00	1,900	380	<8.0	680	<16	24	<20	<20	<20	<200	<600

TABLE 2
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Well No./ Date	Depth to Groundwater (Feet)	Groundwater Elevation (Feet msl)	Product Thickness (Feet)	GRO (mg/L)	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Total Xylenes (mg/L)	MTBE (mg/L)	DIPE (mg/L)	ETBE (mg/L)	TAME (mg/L)	TBA (mg/L)	Ethanol (mg/L)
MW-12	WHE = 39.40 ft msl													
				MW-12 installed March 1997										
3/26/1997	24.15	15.44	0.25	Not Sampled due to presence of LPH										
5/16/1997	25.05	15.39	1.40	Not Sampled due to presence of LPH										
8/20/1997	26.35	14.90	2.50	Not Sampled due to presence of LPH										
11/13/1997	26.90	14.72	3.00	Not Sampled due to presence of LPH										
3/24/1998	25.15	14.55	0.41	Not Sampled due to presence of LPH										
6/24/1998	21.57	17.99	0.22	Not Sampled due to presence of LPH										
9/16/1998	21.76	17.77	0.18	Not Sampled due to presence of LPH										
12/4/1998	22.41	17.33	0.46	Not Sampled due to presence of LPH										
2/23/1999	22.30	17.10	Sheen	Not Sampled due to presence of LPH										
5/13/1999	23.66	16.39	0.88	Not Sampled due to presence of LPH										
8/17/99 NP	22.90	16.50	0.00	17,000	260	1,100	270	2,800	<500	NA	NA	NA	NA	NA
11/18/1999	26.83	12.73	0.22	Not Sampled due to presence of LPH										
2/18/2000	24.02	15.38	Sheen	Not Sampled due to presence of LPH										
5/12/2000	23.88	15.56	0.06	Not Sampled due to presence of LPH										
7/27/2000	23.48	15.92	Trace	Not Sampled due to presence of LPH										
11/20/2000	23.19	16.21	Trace	Not Sampled due to presence of LPH										
1/30/2001	23.04	16.36	Sheen	Not Sampled due to presence of LPH										
5/16/2001	23.17	16.23	Sheen	Not Sampled due to presence of LPH										
8/2/2001	23.02	16.38	Sheen	Not Sampled due to presence of LPH										
12/19/01 NP	21.63	17.77	0.00	<500	<0.50[M]	<0.50[M]	<0.50[M]	<1.5[M]	2.3[M]	<5.0[M]	<5.0[M]	<5.0[M]	<25[M]	NA
3/7/02	21.63	21.34	0.00	<500	<0.50[M]	<0.50[M]	<0.50[M]	0.68[M]	3.3[M]	<5.0[M]	<5.0[M]	<5.0[M]	<25[M]	NA
4/16/02 NP	20.70	18.70	0.00	<500	<0.50	<0.50	<0.50	<1.5	1.4	<5.0	<5.0	<5.0	<25	NA
11/8/2002	23.75	15.65	0.00	1,400	4.6	2.8	53	62	45	<5.0	<5.0	<5.0	100	NA
6/2/2003	22.92	16.48	0.00	2,000	1.3 J	3.1	15	1,200	13	<5.0	<5.0	<5.0	<50	<150
12/11/2003	22.60	16.80	0.00	70	0.31 J	<2.0	0.89 J	1.7 J	4.7 J	<5.0	<5.0	<5.0	11 J	<150
6/11/2004	23.55	15.85	0.00	970 J	0.61 J	0.41 J	2.4	88	2.8 J	<5.0	<5.0	<5.0	<50	<150
10/5/2004	23.54	15.86	0.00	<500	<2.0	<2.0	<2.0	8.6	<5.0	<5.0	<5.0	<5.0	<50	<150

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Well No./ Date	Depth to Groundwater (Feet)	Groundwater Elevation (Feet)	Product Thickness (Feet)	GRO (mg/L)	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Total Xylenes (mg/L)	MTBE (mg/L)	DIPE (mg/L)	ETBE (mg/L)	TAME (mg/L)	TBA (mg/L)	Ethanol (mg/L)
QCTB														
11/8/2002	NA	NA	NA	10 J	<2.0	0.23 J	<2.0	0.38 J	<5.0	<5.0	<5.0	<5.0	<50	NA
6/2/2003	NA	NA	NA	8.3 J	<2.0	<2.0	<2.0	<4.0	<5.0	<5.0	<5.0	<5.0	<50	<150
12/11/2003	NA	NA	NA	<50	<2.0	<2.0	<2.0	<4.0	<5.0	<5.0	<5.0	<5.0	<50	<150
6/11/2004	NA	NA	NA	<500	<2.0	<2.0	<2.0	<4.0	<5.0	<5.0	<5.0	<5.0	<50	<150
10/5/2004	NA	NA	NA	<500	<2.0	<2.0	<2.0	<4.0	<5.0	<5.0	<5.0	<5.0	<50	<150
EB-1														
11/8/2002	NA	NA	NA	<50	<2.0	<2.0	<2.0	<4.0	<5.0	<5.0	<5.0	<5.0	<50	NA
12/11/2003	NA	NA	NA	<50	<2.0	<2.0	<2.0	<4.0	<5.0	<5.0	<5.0	<5.0	<50	<150
6/11/2004	NA	NA	NA	<500	<2.0	<2.0	<2.0	<4.0	<5.0	<5.0	<5.0	<5.0	<50	<150

NOTES:
- Groundwater samples collected on and after December 19, 2001 were analyzed for GRO by EPA Method 8015 and BTEX compounds, MTBE, DIPE, ETBE, TAME, TBA, and ethanol by EPA Method 8260.
- Wells MW-2 through MW-9, well head elevations prior to August 1995 referenced an assumed benchmark of 100 feet above mean sea level. The wells were resurveyed to an existing benchmark in August 1995.
- For wells with measurable floating product, the groundwater elevation was corrected using a density of 0.74 g/cm^3
- Site sampled biannually, as approved in SAM's May 6, 2002 *Changes to Groundwater Monitoring* correspondence.

NM - Not measured
WHE - Well Head Elevation
GRO - Gasoline Range Organics
MTBE - Methyl-Tert-Butyl Ether
mg/L - Micrograms per Liter
< - Reported less than the method limit of detection
M - Analyzed by EPA Method 8260
J - Concentrations are estimated values at or above the method detection limit but below the reporting limit
NA - Not analyzed/applicable
NS - Not sampled
LPH - No groundwater sample collected due to presence of liquid phase hydrocarbons
P - Monitoring well purged prior to sampling.
NP - Monitoring well not purged prior to sampling.
Dup - Duplicate sample

TABLE 3
NATURAL BIODEGRADATION ANALYTICAL DATA

ARCO Facility 06021
1801 South Coast Highway
Oceanside, California

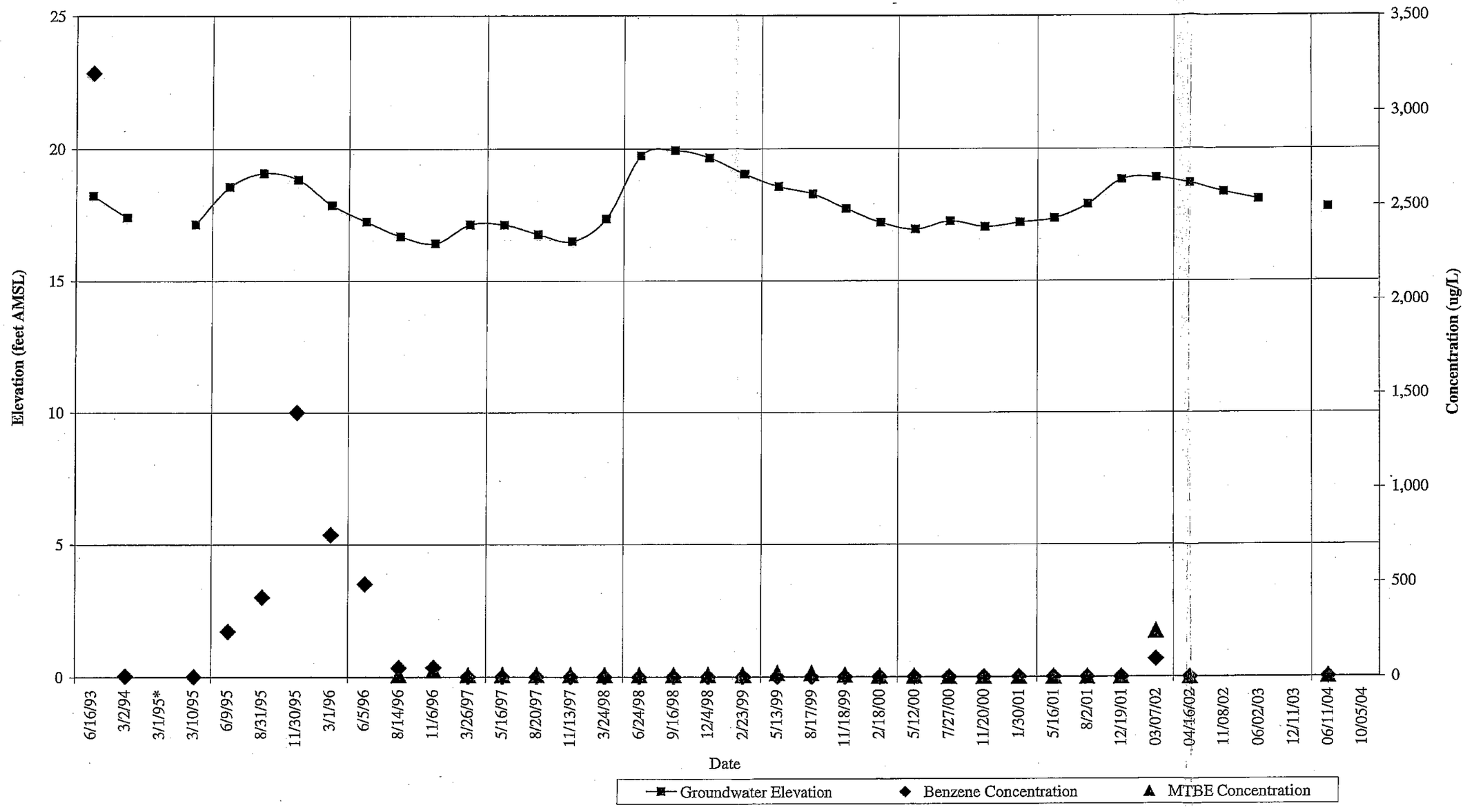
Well I.D.	Date Sampled	Alkalinity SM2320B (mg/l)	Nitrate-N EPA 300.0 (mg/l)	Sulfate EPA 300.0 (mg/l)	Sulfide EPA 376.2 (mg/l)	Hardness EPA 130.2 (mg/l)	COD EPA 410.4 (mg/l)	Ferrous Iron EPA 6010B (mg/l)	Ferrous Iron Field Reading (mg/l)	ORP Field Reading mV	Manganese EPA 6010B (mg/l)	Plate Count SM9215B CFU/ml	DO Field Reading (mg/l)	pH Field Reading
MW-3	06/02/03	NA	8.8	310	<0.10	490	<20	NA	2.2	80	0.76	19,000	0.68	6.94
	12/11/03	NA	8.8	360	<0.10	480	220	NA	0	21	0.24	47,000	2.14	7.28
	06/11/04	NA	6.5	360	0.013	360	17	NA	0	132	0.19	NA	0.49	8.31
	06/11/04	NA	6.5	360	0.013	360	17	NA	0	132	0.19	NA	0.49	8.31
	10/05/04	NA	7.4	260	<0.10	270	<20	NA	0	79	0.45	520	NA	7.60
MW-4	11/08/02	720	0.76	110	2.1	250	270	0.78	NA	NA	0.65	550	NA	NA
	06/02/03	NA	<0.22	110	<0.10	300	290	NA	3.0	30	0.66	120,000	0.81	6.84
	12/11/03	NA	<0.22	51	3.8	250	290	NA	0	-91	0.42	2,600	1.18	7.08
	06/11/04	NA	0.81	240	0.061	250	49	NA	3.6	62	0.86	24,000	0.84	7.30
	10/05/04	NA	3.9	160	0.18	230	50	NA	0.40	60	0.22	1,100	NA	7.61
MW-5	11/08/02	330	13	300	<0.10	250	<20	<0.040	NA	NA	0.13	17,000	NA	NA
	06/11/04	NA	NA	NA	NA	NA	NA	NA	0	62	NA	NA	NA	7.81
	10/05/04	NA	NA	NA	NA	NA	NA	NA	0.20	15	NA	NA	NA	7.20
MW-6	11/08/02	560	8.0	250	2.3	410	39	<0.040	NA	NA	0.88	20,000	NA	NA
	06/11/04	NA	NA	NA	NA	NA	NA	NA	0	145	NA	NA	0.59	7.98
	10/05/04	NA	NA	NA	NA	NA	NA	NA	0	74	NA	NA	NA	7.07
MW-8	11/08/02	210	<0.11	200	<0.10	22	<20	<0.040	NA	NA	0.37	7,000	NA	NA
	06/02/03	NA	<0.11	190	<0.10	30	<20	NA	1.2	86	0.16	5,000	0.71	7.08
	10/05/04	NA	NA	NA	NA	NA	NA	NA	0	76	NA	NA	NA	7.41
MW-9	06/02/03	NA	14	390	<0.10	380	<20	NA	0	40	0.50	160	0.57	7.15
	12/11/03	NA	13	410	<0.10	360	<20	NA	0	130	0.036	54	NA	7.39
	06/11/04	NA	10	400	0.035	320	<20	NA	0	48	0.040	1,100	0.57	7.77
	10/05/04	NA	12	450	<0.10	350	<20	NA	0	87	<0.020	140	NA	7.61
MW-12	11/08/02	550	<0.22	310	0.15	180	35	0.070	NA	NA	1.2	45,000	NA	NA
	06/02/03	NA	0.63	270	<0.10	160	<20	NA	1.4	91	0.51	18,000	0.92	7.04
	12/11/03	NA	0.15	150	0.063 J	150	130	NA	0	124	0.90	47,000	NA	7.93
	06/11/04	NA	0.49	290	2.4	900	1,400	NA	0	121	1.7	66,000	0.72	8.07
	10/05/04	NA	1.8	260	<0.10	400	310	NA	0	84	6.3	43,000	NA	7.53

NOTES:

EPA	= Environmental protection agency
SM	= Standard Method
mg/l	= Milligrams per liter
mV	= Millivolts
COD	= Chemical oxygen demand
ORP	= Oxidation reduction potential
CFU/ml	= Colony-forming units per milliliter
DO	= Dissolved oxygen
NA	= Not analyzed

Hydrograph for MW-2

ARCO Facility 06021
1801 South Coast Highway
Oceanside, California



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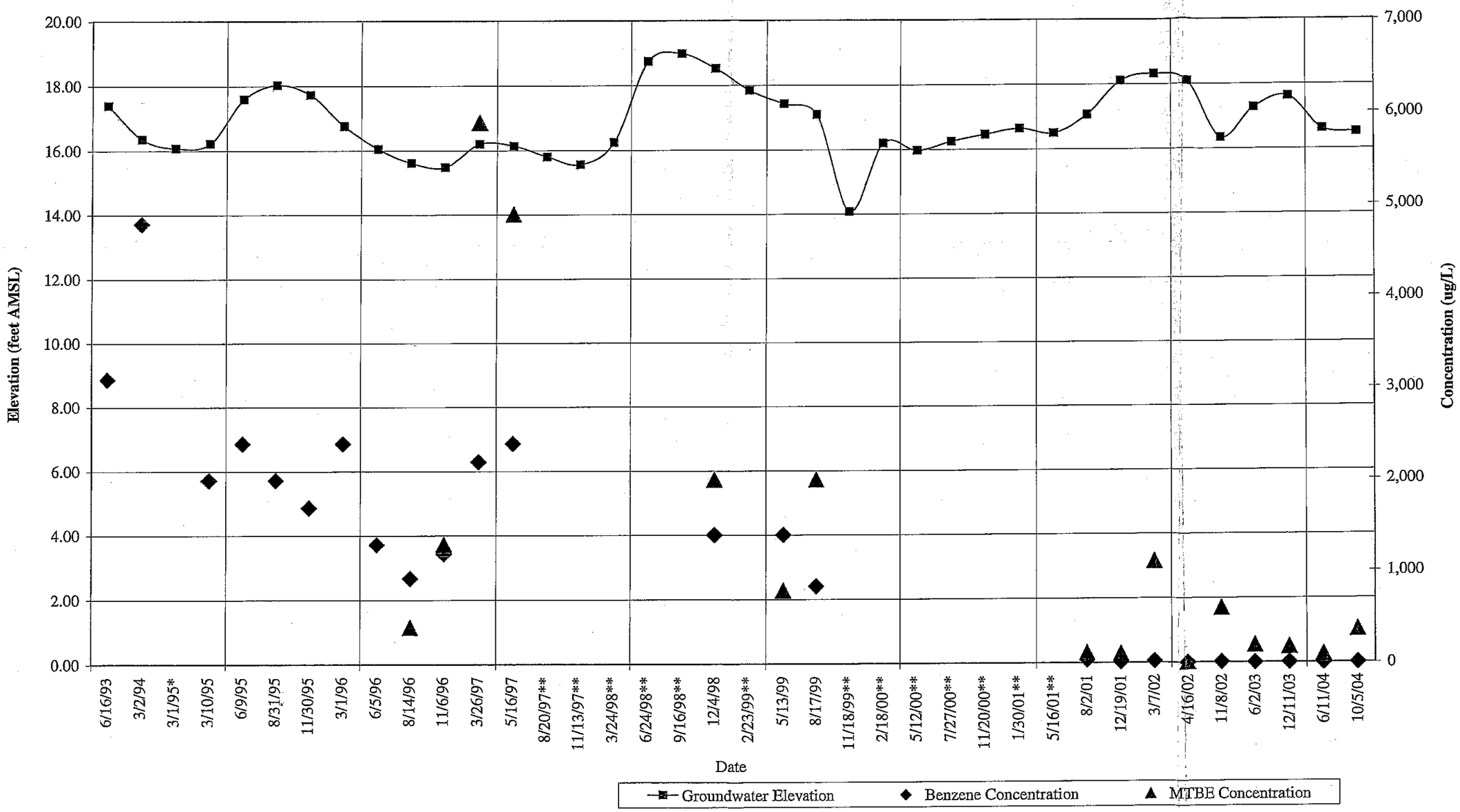
Hydrograph for MW-3

ARCO Facility 06021
1801 South Coast Highway
Oceanside, California



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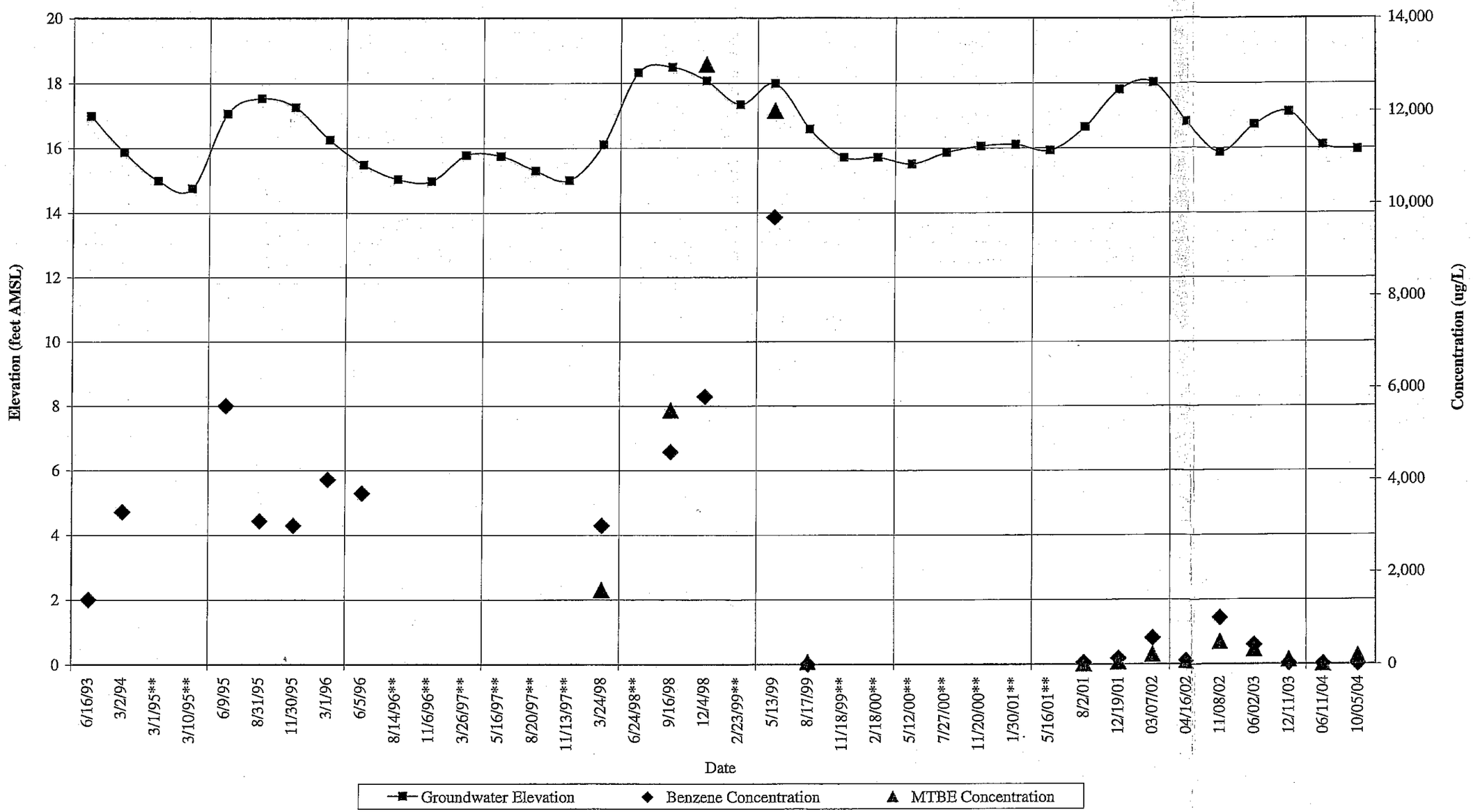
Hydrograph for MW-4

ARCO Facility 06021
1801 South Coast Highway
Oceanside, California



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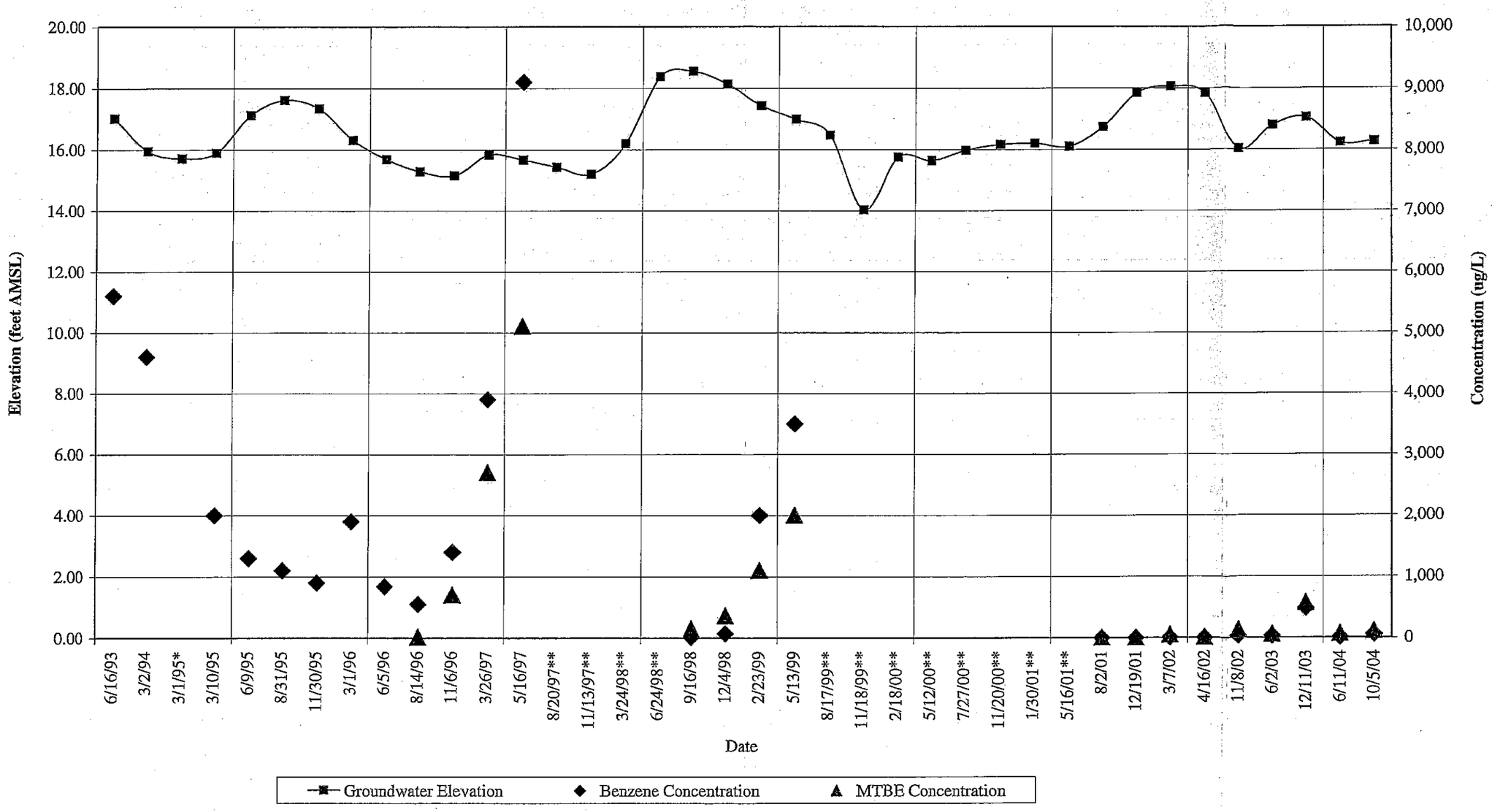
Hydrograph for MW-5

ARCO Facility 06021
1801 South Coast Highway
Oceanside, California



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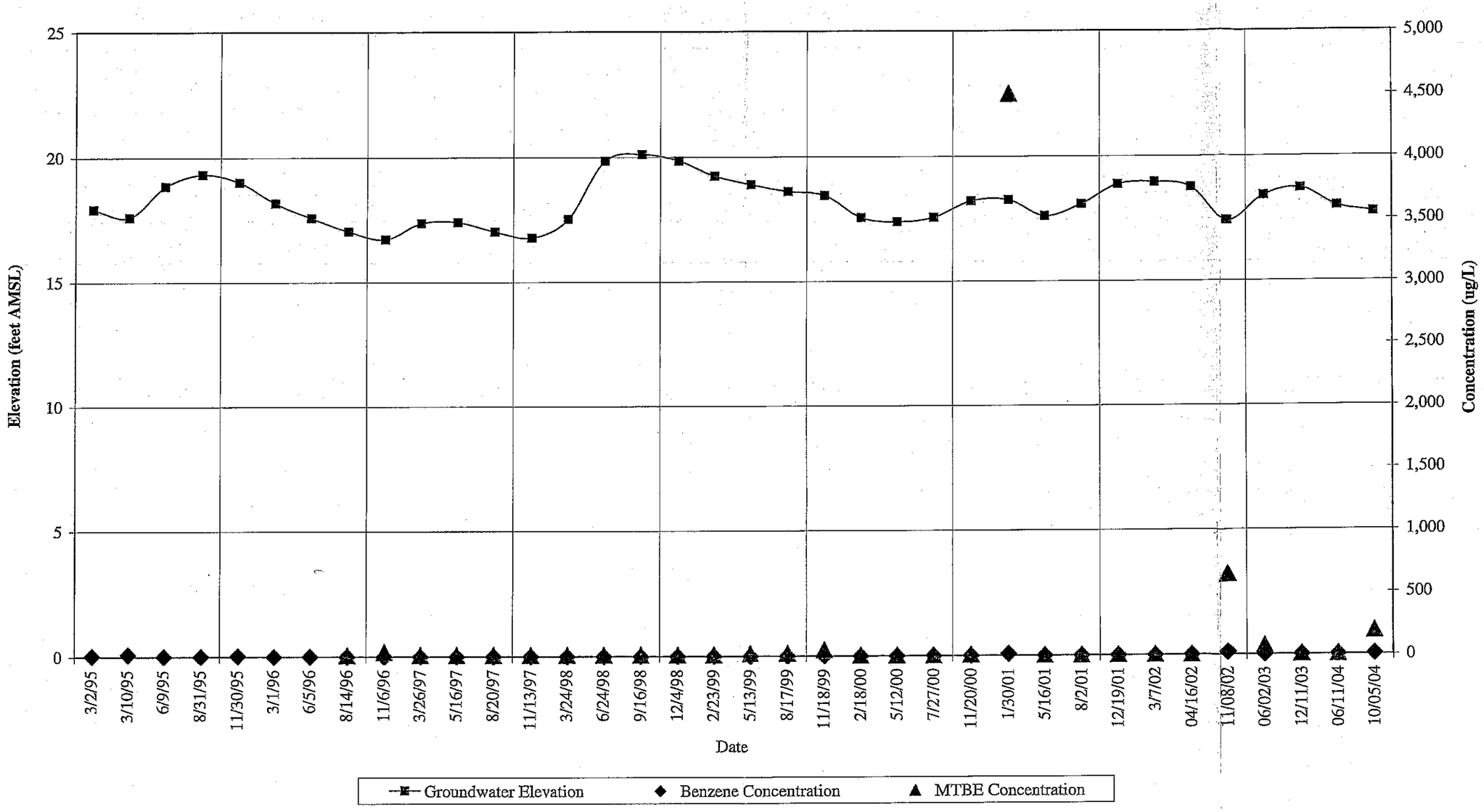
Hydrograph for MW-6

ARCO Facility 06021
1801 South Coast Highway
Oceanside, California



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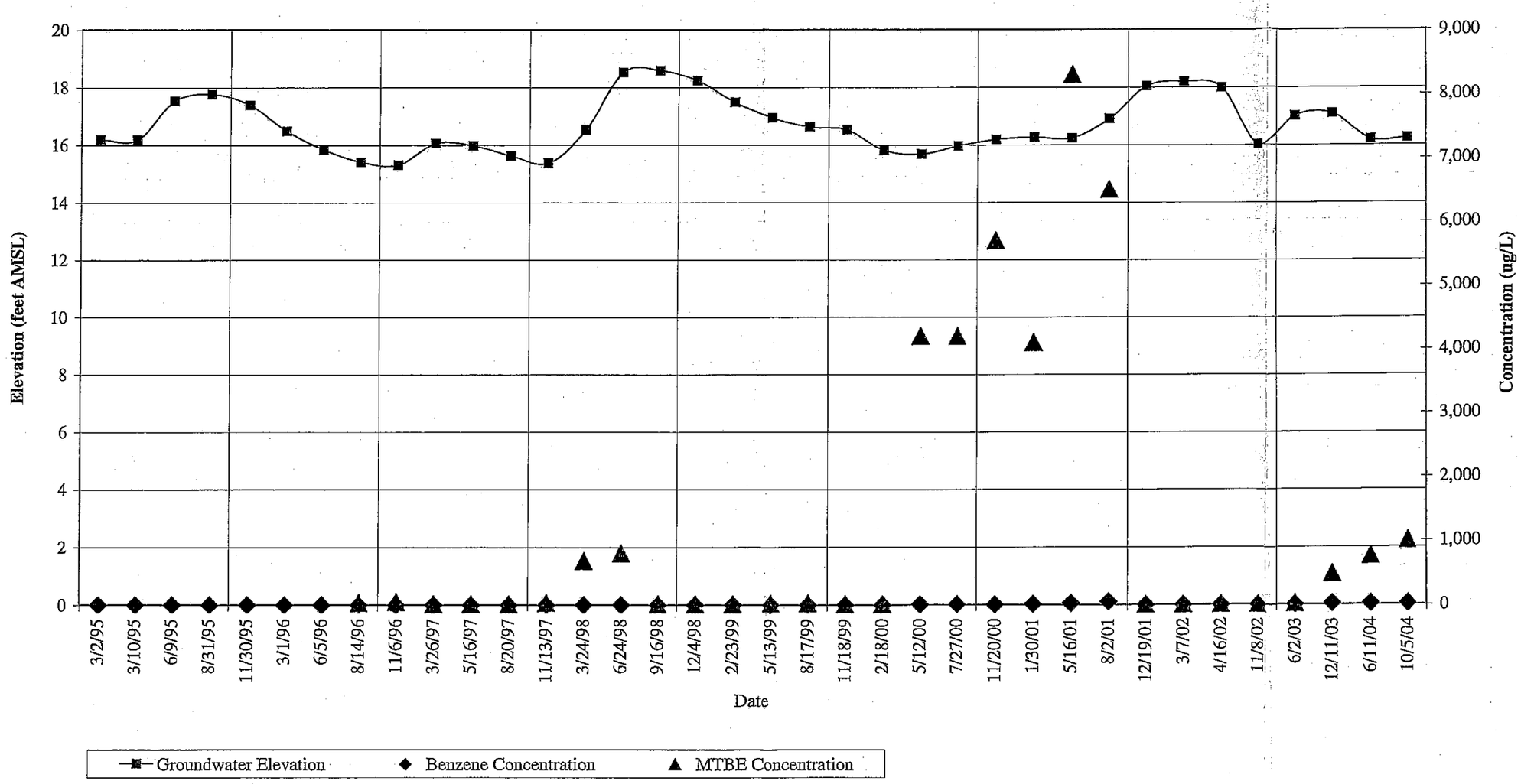
Hydrograph for MW-7

ARCO Facility 06021
1801 South Coast Highway
Oceanside, California



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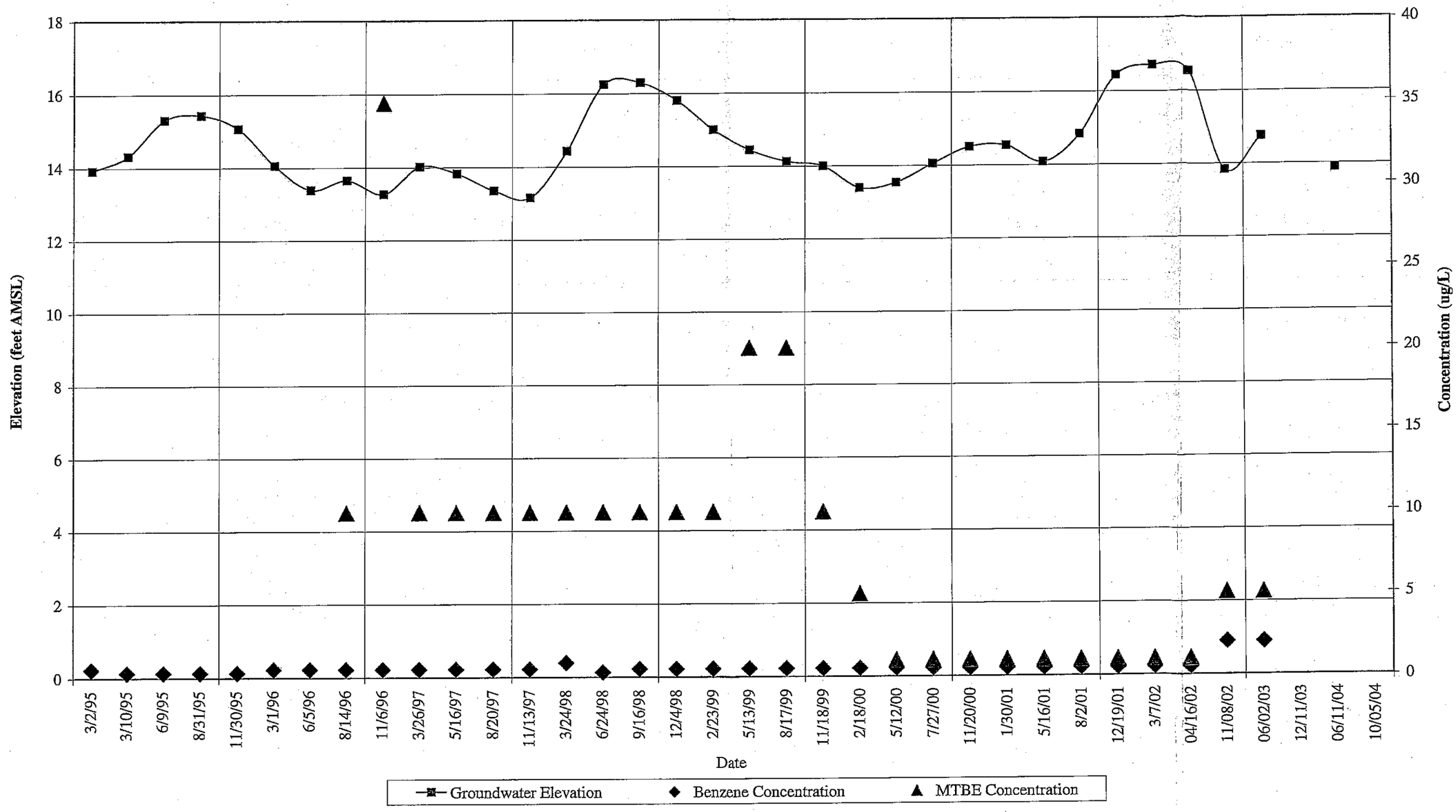
Hydrograph for MW-8

ARCO Facility 06021
1801 South Coast Highway
Oceanside, California



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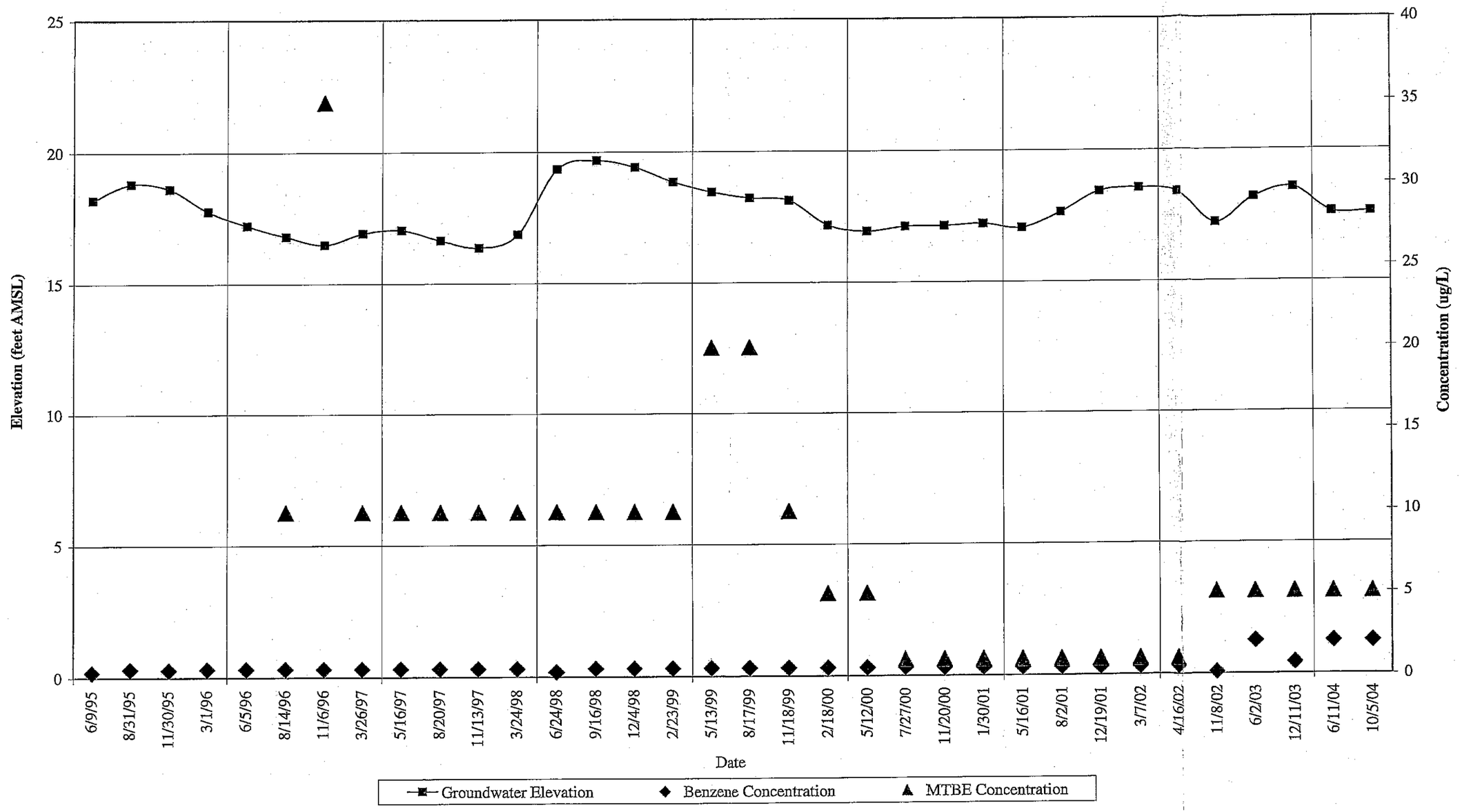
Hydrograph for MW-9

ARCO Facility 06021
1801 South Coast Highway
Oceanside, California



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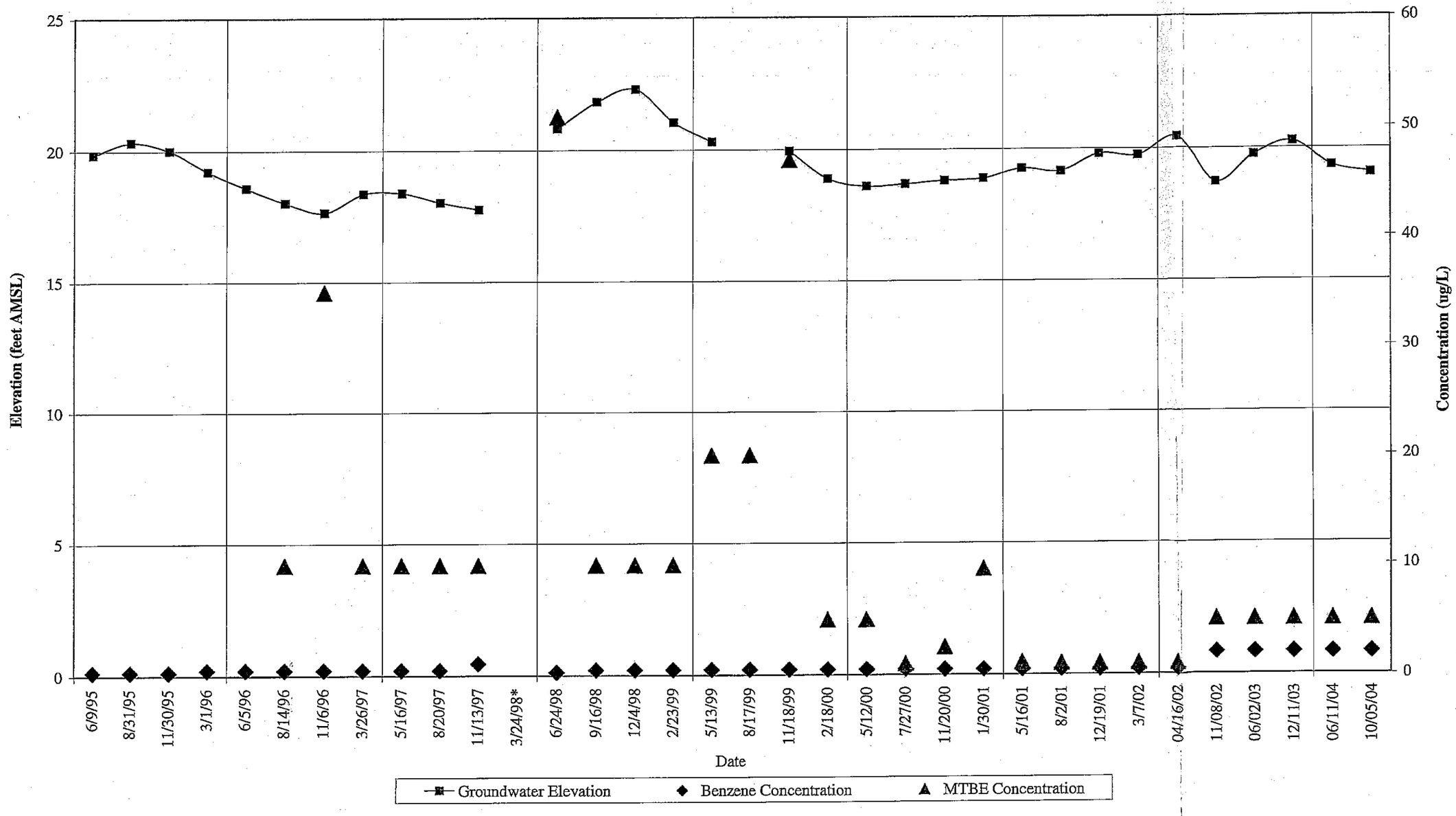
Hydrograph for MW-10

ARCO Facility 06021
1801 South Coast Highway
Oceanside, California



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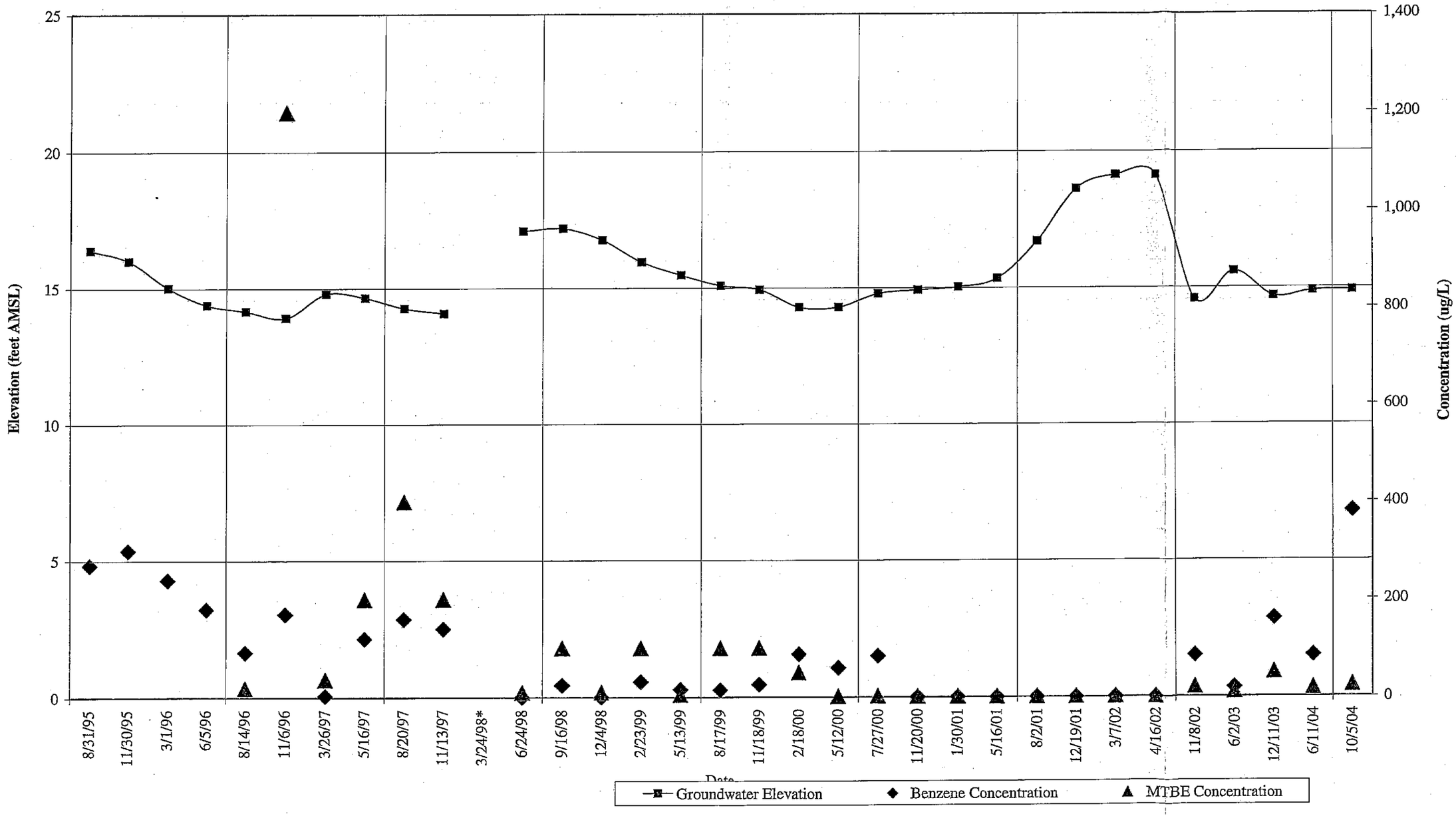
Hydrograph for MW-11

ARCO Facility 06021
1801 South Coast Highway
Oceanside, California



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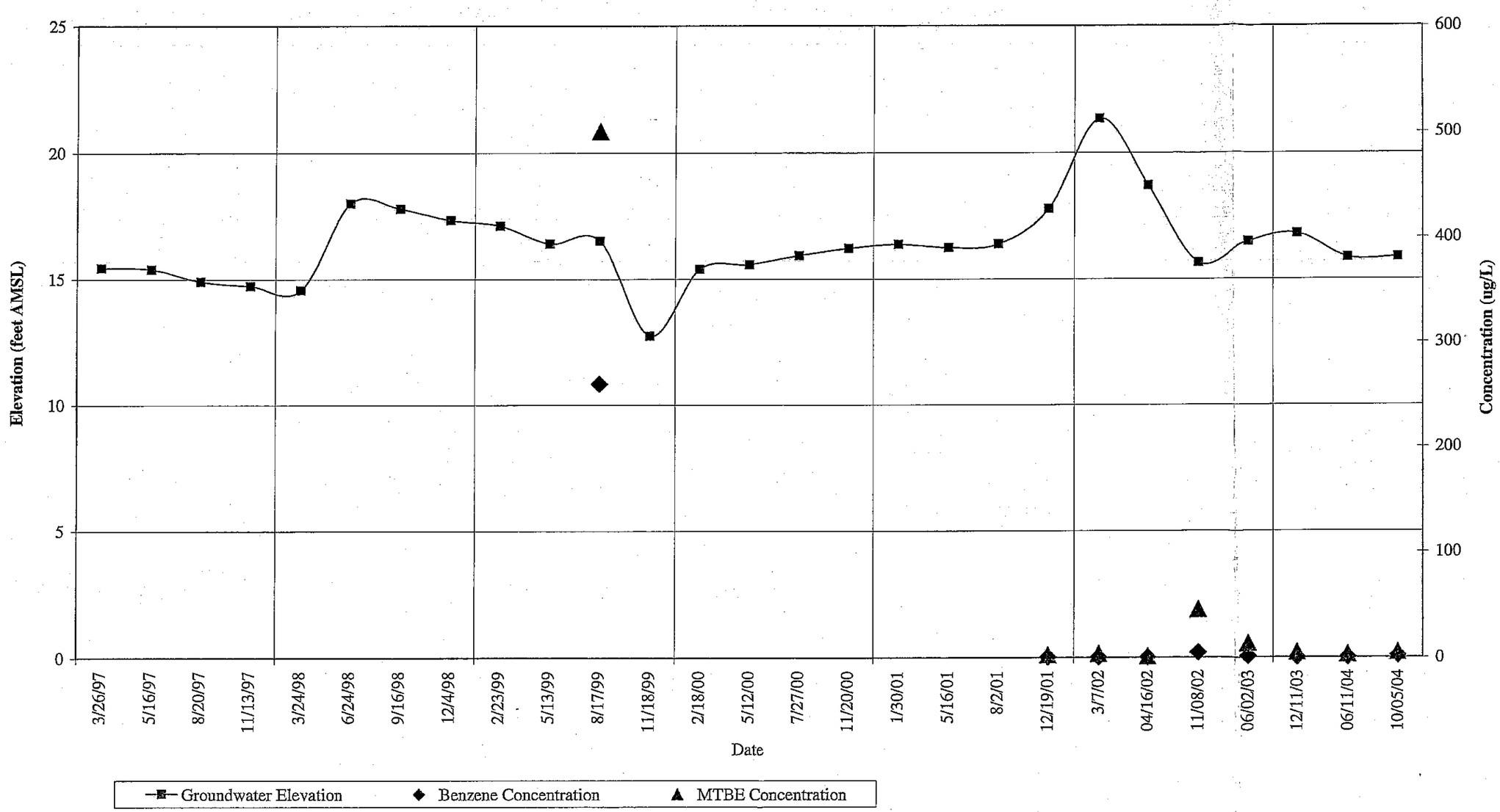
Hydrograph for MW-12

ARCO Facility 06021
1801 South Coast Highway
Oceanside, California



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LABORATORY REPORT

Prepared For: SECOR International, Inc.-Orange County
11085 Knott Ave, Suite B
Cypress, CA 90630
Attention: Jamin Valdez

Project: ARCO 6021, Oceanside

Sampled: 10/05/04
Received: 10/05/04
Issued: 10/20/04 16:07

NELAP #01108CA CA ELAP #1197 CSDLAC #10117

The results listed within this Laboratory Report pertain only to the samples tested in the laboratory. The analyses contained in this report were performed in accordance with the applicable certifications as noted. All soil samples are reported on a wet weight basis unless otherwise noted in the report. This Laboratory Report is confidential and is intended for the sole use of Del Mar Analytical and its client. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical. The Chain(s) of Custody, 4 pages, are included and are an integral part of this report.
This entire report was reviewed and approved for release.

CASE NARRATIVE

SAMPLE RECEIPT: Samples were received intact, at 3°C, on ice and with chain of custody documentation.

HOLDING TIMES: All samples were analyzed within prescribed holding times and/or in accordance with the Del Mar Analytical Sample Acceptance Policy unless otherwise noted in the report.

PRESERVATION: Samples requiring preservation were verified prior to sample analysis.

QA/QC CRITERIA: All analyses met method criteria, except as noted in the report with data qualifiers.

COMMENTS: No significant observations were made.

SUBCONTRACTED: Refer to the last page for specific subcontract laboratory information included in this report.

LABORATORY ID	CLIENT ID	MATRIX
INJ0230-01	MW-3	Water
INJ0230-02	MW-4	Water
INJ0230-03	MW-5	Water
INJ0230-04	MW-6	Water
INJ0230-05	MW-7	Water
INJ0230-06	MW-9	Water
INJ0230-07	MW-10	Water
INJ0230-08	MW-11	Water
INJ0230-09	MW-12	Water
INJ0230-10	TB-6021-20041005	Water

Del Mar Analytical, Irvine
Chris Roberts
Project Manager

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SECOR International, Inc.-Orange County
11085 Knott Ave, Suite B
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Attention: Jamin Valdez

Project ID: ARCO 6021, Oceanside

Report Number: INJ0230

Sampled: 10/05/04
Received: 10/05/04

LABORATORY ID	CLIENT ID	MATRIX
INJ0230-11	DUP-6021-20041005	Water

Reviewed By:

Del Mar Analytical, Irvine
Chris Roberts
Project Manager

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Attention: Jamin Valdez

Project ID: ARCO 6021, Oceanside

Report Number: INJ0230

Sampled: 10/05/04
Received: 10/05/04

VOLATILE FUEL HYDROCARBONS (EPA 5030/CADHS Mod. 8015)

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: INJ0230-01 (MW-3 - Water)								
Reporting Units: ug/l								
Volatile Fuel Hydrocarbons (C6-C12)	EPA 8015 Mod.	4J12039	1000	**1700**	2	10/12/2004	10/12/2004	
Surrogate: 4-BFB (FID) (60-135%)				*153 %*				*AZ*
Sample ID: INJ0230-02 (MW-4 - Water)								
Reporting Units: ug/l								
Volatile Fuel Hydrocarbons (C6-C12)	EPA 8015 Mod.	4J12039	500	**700**	1	10/12/2004	10/12/2004	
Surrogate: 4-BFB (FID) (60-135%)				*140 %*				*AZ*
Sample ID: INJ0230-03 (MW-5 - Water)								
Reporting Units: ug/l								
Volatile Fuel Hydrocarbons (C6-C12)	EPA 8015 Mod.	4J12039	500	ND	1	10/12/2004	10/12/2004	
Surrogate: 4-BFB (FID) (60-135%)				*165 %*				*AZ*
Sample ID: INJ0230-04 (MW-6 - Water)								
Reporting Units: ug/l								
Volatile Fuel Hydrocarbons (C6-C12)	EPA 8015 Mod.	4J12039	500	**2600**	10	10/12/2004	10/12/2004	
Surrogate: 4-BFB (FID) (60-135%)				*160 %*				*AZ*
Sample ID: INJ0230-05 (MW-7 - Water)								
Reporting Units: ug/l								
Volatile Fuel Hydrocarbons (C6-C12)	EPA 8015 Mod.	4J12039	500	ND	1	10/12/2004	10/12/2004	
Surrogate: 4-BFB (FID) (60-135%)				*77 %*				
Sample ID: INJ0230-06 (MW-9 - Water)								
Reporting Units: ug/l								
Volatile Fuel Hydrocarbons (C6-C12)	EPA 8015 Mod.	4J12039	500	ND	1	10/12/2004	10/12/2004	
Surrogate: 4-BFB (FID) (60-135%)				*74 %*				
Sample ID: INJ0230-07 (MW-10 - Water)								
Reporting Units: ug/l								
Volatile Fuel Hydrocarbons (C6-C12)	EPA 8015 Mod.	4J12039	500	ND	1	10/12/2004	10/12/2004	
Surrogate: 4-BFB (FID) (60-135%)				*77 %*				
Sample ID: INJ0230-08 (MW-11 - Water)								
Reporting Units: ug/l								
Volatile Fuel Hydrocarbons (C6-C12)	EPA 8015 Mod.	4J12039	1000	**1900**	2	10/12/2004	10/12/2004	
Surrogate: 4-BFB (FID) (60-135%)				*418 %*				*AZ*

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Chris Roberts
Project Manager

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SECOR International, Inc.-Orange County
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Cypress, CA 90630
Attention: Jamin Valdez

Project ID: ARCO 6021, Oceanside

Report Number: INJ0230

Sampled: 10/05/04
Received: 10/05/04

VOLATILE FUEL HYDROCARBONS (EPA 5030/CADHS Mod. 8015)

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: INJ0230-09 (MW-12 - Water)								
Reporting Units: ug/l								
Volatile Fuel Hydrocarbons (C6-C12)	EPA 8015 Mod.	4J12039	500	ND	1	10/12/2004	10/12/2004	
Surrogate: 4-BFB (FID) (60-135%)				*90 %*				
Sample ID: INJ0230-10 (TB-6021-20041005 - Water)								
Reporting Units: ug/l								
Volatile Fuel Hydrocarbons (C6-C12)	EPA 8015 Mod.	4J12039	500	ND	1	10/12/2004	10/12/2004	
Surrogate: 4-BFB (FID) (60-135%)				*73 %*				
Sample ID: INJ0230-11 (DUP-6021-20041005 - Water)								
Reporting Units: ug/l								
Volatile Fuel Hydrocarbons (C6-C12)	EPA 8015 Mod.	4J12039	500	ND	1	10/12/2004	10/12/2004	
Surrogate: 4-BFB (FID) (60-135%)				*151 %*				*AZ*

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Attention: Jamin Valdez

Project ID: ARCO 6021, Oceanside

Report Number: INJ0230

Sampled: 10/05/04
Received: 10/05/04

BTEX/OXYGENATES by GC/MS (EPA 8260B)

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: INJ0230-01 (MW-3 - Water)								
Reporting Units: ug/l								
Benzene	EPA 8260B	4J11022	2.0	ND	1	10/11/2004	10/11/2004	
Ethylbenzene	EPA 8260B	4J11022	2.0	**99**	1	10/11/2004	10/11/2004	
Toluene	EPA 8260B	4J11022	2.0	**2.2**	1	10/11/2004	10/11/2004	
Di-isopropyl Ether (DIPE)	EPA 8260B	4J11022	5.0	ND	1	10/11/2004	10/11/2004	
Ethyl tert-Butyl Ether (ETBE)	EPA 8260B	4J11022	5.0	ND	1	10/11/2004	10/11/2004	
tert-Amyl Methyl Ether (TAME)	EPA 8260B	4J11022	5.0	ND	1	10/11/2004	10/11/2004	
tert-Butanol (TBA)	EPA 8260B	4J11022	50	**64**	1	10/11/2004	10/11/2004	
Ethanol	EPA 8260B	4J11022	150	ND	1	10/11/2004	10/11/2004	
Surrogate: Dibromofluoromethane (80-120%)				*100 %*				
Surrogate: Toluene-d8 (80-120%)				*102 %*				
Surrogate: 4-Bromofluorobenzene (80-120%)				*100 %*				
Sample ID: INJ0230-01RE1 (MW-3 - Water)								
Reporting Units: ug/l								
m,p-Xylenes	EPA 8260B	4J12004	10	**660**	5	10/12/2004	10/12/2004	
o-Xylene	EPA 8260B	4J12004	10	**16**	5	10/12/2004	10/12/2004	
Xylenes, Total	EPA 8260B	4J12004	20	**670**	5	10/12/2004	10/12/2004	
Methyl-tert-butyl Ether (MTBE)	EPA 8260B	4J12004	25	**360**	5	10/12/2004	10/12/2004	
Surrogate: Dibromofluoromethane (80-120%)				*100 %*				
Surrogate: Toluene-d8 (80-120%)				*105 %*				
Surrogate: 4-Bromofluorobenzene (80-120%)				*102 %*				
Sample ID: INJ0230-02 (MW-4 - Water)								
Reporting Units: ug/l								
Benzene	EPA 8260B	4J12004	5.0	**9.9**	2.5	10/12/2004	10/12/2004	
Ethylbenzene	EPA 8260B	4J12004	5.0	**16**	2.5	10/12/2004	10/12/2004	
Toluene	EPA 8260B	4J12004	5.0	**6.0**	2.5	10/12/2004	10/12/2004	
m,p-Xylenes	EPA 8260B	4J12004	5.0	**110**	2.5	10/12/2004	10/12/2004	
o-Xylene	EPA 8260B	4J12004	5.0	**86**	2.5	10/12/2004	10/12/2004	
Xylenes, Total	EPA 8260B	4J12004	10	**200**	2.5	10/12/2004	10/12/2004	
Di-isopropyl Ether (DIPE)	EPA 8260B	4J12004	12	ND	2.5	10/12/2004	10/12/2004	
Ethyl tert-Butyl Ether (ETBE)	EPA 8260B	4J12004	12	ND	2.5	10/12/2004	10/12/2004	
tert-Amyl Methyl Ether (TAME)	EPA 8260B	4J12004	12	ND	2.5	10/12/2004	10/12/2004	
Methyl-tert-butyl Ether (MTBE)	EPA 8260B	4J12004	12	**180**	2.5	10/12/2004	10/12/2004	
tert-Butanol (TBA)	EPA 8260B	4J12004	120	**160**	2.5	10/12/2004	10/12/2004	
Ethanol	EPA 8260B	4J12004	380	ND	2.5	10/12/2004	10/12/2004	
Surrogate: Dibromofluoromethane (80-120%)				*100 %*				
Surrogate: Toluene-d8 (80-120%)				*104 %*				
Surrogate: 4-Bromofluorobenzene (80-120%)				*98 %*				

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Attention: Jamin Valdez

Project ID: ARCO 6021, Oceanside

Report Number: INJ0230

Sampled: 10/05/04
Received: 10/05/04

BTEX/OXYGENATES by GC/MS (EPA 8260B)

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: INJ0230-03 (MW-5 - Water)								
Reporting Units: ug/l								
Benzene	EPA 8260B	4J11022	2.0	**56**	1	10/11/2004	10/11/2004	
Ethylbenzene	EPA 8260B	4J11022	2.0	**18**	1	10/11/2004	10/11/2004	
Toluene	EPA 8260B	4J11022	2.0	ND	1	10/11/2004	10/11/2004	
m,p-Xylenes	EPA 8260B	4J11022	2.0	**2.4**	1	10/11/2004	10/11/2004	
o-Xylene	EPA 8260B	4J11022	2.0	**3.8**	1	10/11/2004	10/11/2004	
Xylenes, Total	EPA 8260B	4J11022	4.0	**6.2**	1	10/11/2004	10/11/2004	
Di-isopropyl Ether (DIPE)	EPA 8260B	4J11022	5.0	ND	1	10/11/2004	10/11/2004	
Ethyl tert-Butyl Ether (ETBE)	EPA 8260B	4J11022	5.0	ND	1	10/11/2004	10/11/2004	
tert-Amyl Methyl Ether (TAME)	EPA 8260B	4J11022	5.0	ND	1	10/11/2004	10/11/2004	
Methyl-tert-butyl Ether (MTBE)	EPA 8260B	4J11022	5.0	**110**	1	10/11/2004	10/11/2004	
tert-Butanol (TBA)	EPA 8260B	4J11022	50	**51**	1	10/11/2004	10/11/2004	
Ethanol	EPA 8260B	4J11022	150	ND	1	10/11/2004	10/11/2004	
Surrogate: Dibromofluoromethane (80-120%)				*101 %*				
Surrogate: Toluene-d8 (80-120%)				*103 %*				
Surrogate: 4-Bromofluorobenzene (80-120%)				*103 %*				
Sample ID: INJ0230-04 (MW-6 - Water)								
Reporting Units: ug/l								
Benzene	EPA 8260B	4J12004	8.0	ND	4	10/12/2004	10/12/2004	
Ethylbenzene	EPA 8260B	4J12004	8.0	**430**	4	10/12/2004	10/12/2004	
Toluene	EPA 8260B	4J12004	8.0	ND	4	10/12/2004	10/12/2004	
m,p-Xylenes	EPA 8260B	4J12004	8.0	ND	4	10/12/2004	10/12/2004	
o-Xylene	EPA 8260B	4J12004	8.0	ND	4	10/12/2004	10/12/2004	
Xylenes, Total	EPA 8260B	4J12004	16	ND	4	10/12/2004	10/12/2004	
Di-isopropyl Ether (DIPE)	EPA 8260B	4J12004	20	ND	4	10/12/2004	10/12/2004	
Ethyl tert-Butyl Ether (ETBE)	EPA 8260B	4J12004	20	ND	4	10/12/2004	10/12/2004	
tert-Amyl Methyl Ether (TAME)	EPA 8260B	4J12004	20	ND	4	10/12/2004	10/12/2004	
Methyl-tert-butyl Ether (MTBE)	EPA 8260B	4J12004	20	**190**	4	10/12/2004	10/12/2004	
tert-Butanol (TBA)	EPA 8260B	4J12004	200	ND	4	10/12/2004	10/12/2004	
Ethanol	EPA 8260B	4J12004	600	ND	4	10/12/2004	10/12/2004	
Surrogate: Dibromofluoromethane (80-120%)				*100 %*				
Surrogate: Toluene-d8 (80-120%)				*105 %*				
Surrogate: 4-Bromofluorobenzene (80-120%)				*100 %*				

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Project ID: ARCO 6021, Oceanside

Report Number: INJ0230

Sampled: 10/05/04
Received: 10/05/04

BTEX/OXYGENATES by GC/MS (EPA 8260B)

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: INJ0230-05 (MW-7 - Water)								
Reporting Units: ug/l								
Benzene	EPA 8260B	4J11022	20	ND	10	10/11/2004	10/11/2004	
Ethylbenzene	EPA 8260B	4J11022	20	ND	10	10/11/2004	10/11/2004	
Toluene	EPA 8260B	4J11022	20	ND	10	10/11/2004	10/11/2004	
m,p-Xylenes	EPA 8260B	4J11022	20	ND	10	10/11/2004	10/11/2004	
o-Xylene	EPA 8260B	4J11022	20	ND	10	10/11/2004	10/11/2004	
Xylenes, Total	EPA 8260B	4J11022	40	ND	10	10/11/2004	10/11/2004	
Di-isopropyl Ether (DIPE)	EPA 8260B	4J11022	50	ND	10	10/11/2004	10/11/2004	
Ethyl tert-Butyl Ether (ETBE)	EPA 8260B	4J11022	50	ND	10	10/11/2004	10/11/2004	
tert-Amyl Methyl Ether (TAME)	EPA 8260B	4J11022	50	ND	10	10/11/2004	10/11/2004	
Methyl-tert-butyl Ether (MTBE)	EPA 8260B	4J11022	50	**1000**	10	10/11/2004	10/11/2004	
tert-Butanol (TBA)	EPA 8260B	4J11022	500	ND	10	10/11/2004	10/11/2004	ID
Ethanol	EPA 8260B	4J11022	1500	ND	10	10/11/2004	10/11/2004	
Surrogate: Dibromofluoromethane (80-120%)				*100 %*				
Surrogate: Toluene-d8 (80-120%)				*102 %*				
Surrogate: 4-Bromofluorobenzene (80-120%)				*103 %*				
Sample ID: INJ0230-06 (MW-9 - Water)								
Reporting Units: ug/l								
Benzene	EPA 8260B	4J11022	2.0	ND	1	10/11/2004	10/11/2004	
Ethylbenzene	EPA 8260B	4J11022	2.0	ND	1	10/11/2004	10/11/2004	
Toluene	EPA 8260B	4J11022	2.0	ND	1	10/11/2004	10/11/2004	
m,p-Xylenes	EPA 8260B	4J11022	2.0	ND	1	10/11/2004	10/11/2004	
o-Xylene	EPA 8260B	4J11022	2.0	ND	1	10/11/2004	10/11/2004	
Xylenes, Total	EPA 8260B	4J11022	4.0	ND	1	10/11/2004	10/11/2004	
Di-isopropyl Ether (DIPE)	EPA 8260B	4J11022	5.0	ND	1	10/11/2004	10/11/2004	
Ethyl tert-Butyl Ether (ETBE)	EPA 8260B	4J11022	5.0	ND	1	10/11/2004	10/11/2004	
tert-Amyl Methyl Ether (TAME)	EPA 8260B	4J11022	5.0	ND	1	10/11/2004	10/11/2004	
Methyl-tert-butyl Ether (MTBE)	EPA 8260B	4J11022	5.0	ND	1	10/11/2004	10/11/2004	
tert-Butanol (TBA)	EPA 8260B	4J11022	50	ND	1	10/11/2004	10/11/2004	
Ethanol	EPA 8260B	4J11022	150	ND	1	10/11/2004	10/11/2004	
Surrogate: Dibromofluoromethane (80-120%)				*101 %*				
Surrogate: Toluene-d8 (80-120%)				*102 %*				
Surrogate: 4-Bromofluorobenzene (80-120%)				*103 %*				

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Project ID: ARCO 6021, Oceanside

Report Number: INJ0230

Sampled: 10/05/04
Received: 10/05/04

BTEX/OXYGENATES by GC/MS (EPA 8260B)

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: INJ0230-07 (MW-10 - Water)								
Reporting Units: ug/l								
Benzene	EPA 8260B	4J11022	2.0	ND	1	10/11/2004	10/11/2004	
Ethylbenzene	EPA 8260B	4J11022	2.0	ND	1	10/11/2004	10/11/2004	
Toluene	EPA 8260B	4J11022	2.0	ND	1	10/11/2004	10/11/2004	
m,p-Xylenes	EPA 8260B	4J11022	2.0	ND	1	10/11/2004	10/11/2004	
o-Xylene	EPA 8260B	4J11022	2.0	ND	1	10/11/2004	10/11/2004	
Xylenes, Total	EPA 8260B	4J11022	4.0	ND	1	10/11/2004	10/11/2004	
Di-isopropyl Ether (DIPE)	EPA 8260B	4J11022	5.0	ND	1	10/11/2004	10/11/2004	
Ethyl tert-Butyl Ether (ETBE)	EPA 8260B	4J11022	5.0	ND	1	10/11/2004	10/11/2004	
tert-Amyl Methyl Ether (TAME)	EPA 8260B	4J11022	5.0	ND	1	10/11/2004	10/11/2004	
Methyl-tert-butyl Ether (MTBE)	EPA 8260B	4J11022	5.0	ND	1	10/11/2004	10/11/2004	
tert-Butanol (TBA)	EPA 8260B	4J11022	50	ND	1	10/11/2004	10/11/2004	
Ethanol	EPA 8260B	4J11022	150	ND	1	10/11/2004	10/11/2004	
Surrogate: Dibromofluoromethane (80-120%)				*103 %*				
Surrogate: Toluene-d8 (80-120%)				*102 %*				
Surrogate: 4-Bromofluorobenzene (80-120%)				*103 %*				
Sample ID: INJ0230-08 (MW-11 - Water)								
Reporting Units: ug/l								
Benzene	EPA 8260B	4J11022	8.0	**380**	4	10/11/2004	10/11/2004	
Ethylbenzene	EPA 8260B	4J11022	8.0	**680**	4	10/11/2004	10/11/2004	
Toluene	EPA 8260B	4J11022	8.0	ND	4	10/11/2004	10/11/2004	
m,p-Xylenes	EPA 8260B	4J11022	8.0	ND	4	10/11/2004	10/11/2004	
o-Xylene	EPA 8260B	4J11022	8.0	ND	4	10/11/2004	10/11/2004	
Xylenes, Total	EPA 8260B	4J11022	16	ND	4	10/11/2004	10/11/2004	
Di-isopropyl Ether (DIPE)	EPA 8260B	4J11022	20	ND	4	10/11/2004	10/11/2004	
Ethyl tert-Butyl Ether (ETBE)	EPA 8260B	4J11022	20	ND	4	10/11/2004	10/11/2004	
tert-Amyl Methyl Ether (TAME)	EPA 8260B	4J11022	20	ND	4	10/11/2004	10/11/2004	
Methyl-tert-butyl Ether (MTBE)	EPA 8260B	4J11022	20	**24**	4	10/11/2004	10/11/2004	
tert-Butanol (TBA)	EPA 8260B	4J11022	200	ND	4	10/11/2004	10/11/2004	
Ethanol	EPA 8260B	4J11022	600	ND	4	10/11/2004	10/11/2004	
Surrogate: Dibromofluoromethane (80-120%)				*102 %*				
Surrogate: Toluene-d8 (80-120%)				*103 %*				
Surrogate: 4-Bromofluorobenzene (80-120%)				*104 %*				

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Project ID: ARCO 6021, Oceanside

Report Number: INJ0230

Sampled: 10/05/04
Received: 10/05/04

BTEX/OXYGENATES by GC/MS (EPA 8260B)

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: INJ0230-09 (MW-12 - Water)								
Reporting Units: ug/l								
Benzene	EPA 8260B	4J11022	2.0	ND	1	10/11/2004	10/11/2004	
Ethylbenzene	EPA 8260B	4J11022	2.0	ND	1	10/11/2004	10/11/2004	
Toluene	EPA 8260B	4J11022	2.0	ND	1	10/11/2004	10/11/2004	
m,p-Xylenes	EPA 8260B	4J11022	2.0	**2.9**	1	10/11/2004	10/11/2004	
o-Xylene	EPA 8260B	4J11022	2.0	**5.7**	1	10/11/2004	10/11/2004	
Xylenes, Total	EPA 8260B	4J11022	4.0	**8.6**	1	10/11/2004	10/11/2004	
Di-isopropyl Ether (DIPE)	EPA 8260B	4J11022	5.0	ND	1	10/11/2004	10/11/2004	
Ethyl tert-Butyl Ether (ETBE)	EPA 8260B	4J11022	5.0	ND	1	10/11/2004	10/11/2004	
tert-Amyl Methyl Ether (TAME)	EPA 8260B	4J11022	5.0	ND	1	10/11/2004	10/11/2004	
Methyl-tert-butyl Ether (MTBE)	EPA 8260B	4J11022	5.0	ND	1	10/11/2004	10/11/2004	
tert-Butanol (TBA)	EPA 8260B	4J11022	50	ND	1	10/11/2004	10/11/2004	
Ethanol	EPA 8260B	4J11022	150	ND	1	10/11/2004	10/11/2004	
Surrogate: Dibromofluoromethane (80-120%)				*104 %*				
Surrogate: Toluene-d8 (80-120%)				*103 %*				
Surrogate: 4-Bromofluorobenzene (80-120%)				*104 %*				
Sample ID: INJ0230-10 (TB-6021-20041005 - Water)								
Reporting Units: ug/l								
Benzene	EPA 8260B	4J12004	2.0	ND	1	10/12/2004	10/12/2004	
Ethylbenzene	EPA 8260B	4J12004	2.0	ND	1	10/12/2004	10/12/2004	
Toluene	EPA 8260B	4J12004	2.0	ND	1	10/12/2004	10/12/2004	
m,p-Xylenes	EPA 8260B	4J12004	2.0	ND	1	10/12/2004	10/12/2004	
o-Xylene	EPA 8260B	4J12004	2.0	ND	1	10/12/2004	10/12/2004	
Xylenes, Total	EPA 8260B	4J12004	4.0	ND	1	10/12/2004	10/12/2004	
Di-isopropyl Ether (DIPE)	EPA 8260B	4J12004	5.0	ND	1	10/12/2004	10/12/2004	
Ethyl tert-Butyl Ether (ETBE)	EPA 8260B	4J12004	5.0	ND	1	10/12/2004	10/12/2004	
tert-Amyl Methyl Ether (TAME)	EPA 8260B	4J12004	5.0	ND	1	10/12/2004	10/12/2004	
Methyl-tert-butyl Ether (MTBE)	EPA 8260B	4J12004	5.0	ND	1	10/12/2004	10/12/2004	
tert-Butanol (TBA)	EPA 8260B	4J12004	50	ND	1	10/12/2004	10/12/2004	
Ethanol	EPA 8260B	4J12004	150	ND	1	10/12/2004	10/12/2004	
Surrogate: Dibromofluoromethane (80-120%)				*99 %*				
Surrogate: Toluene-d8 (80-120%)				*106 %*				
Surrogate: 4-Bromofluorobenzene (80-120%)				*96 %*				

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Project ID: ARCO 6021, Oceanside

Report Number: INJ0230

Sampled: 10/05/04
Received: 10/05/04

BTEX/OXYGENATES by GC/MS (EPA 8260B)

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: INJ0230-11 (DUP-6021-20041005 - Water)								
Reporting Units: ug/l								
Benzene	EPA 8260B	4J11022	2.0	**59**	1	10/11/2004	10/12/2004	
Ethylbenzene	EPA 8260B	4J11022	2.0	**20**	1	10/11/2004	10/12/2004	
Toluene	EPA 8260B	4J11022	2.0	ND	1	10/11/2004	10/12/2004	
m,p-Xylenes	EPA 8260B	4J11022	2.0	**2.5**	1	10/11/2004	10/12/2004	
o-Xylene	EPA 8260B	4J11022	2.0	**4.2**	1	10/11/2004	10/12/2004	
Xylenes, Total	EPA 8260B	4J11022	4.0	**6.7**	1	10/11/2004	10/12/2004	
Di-isopropyl Ether (DIPE)	EPA 8260B	4J11022	5.0	ND	1	10/11/2004	10/12/2004	
Ethyl tert-Butyl Ether (ETBE)	EPA 8260B	4J11022	5.0	ND	1	10/11/2004	10/12/2004	
tert-Amyl Methyl Ether (TAME)	EPA 8260B	4J11022	5.0	ND	1	10/11/2004	10/12/2004	
Methyl-tert-butyl Ether (MTBE)	EPA 8260B	4J11022	5.0	**140**	1	10/11/2004	10/12/2004	
tert-Butanol (TBA)	EPA 8260B	4J11022	50	**54**	1	10/11/2004	10/12/2004	
Ethanol	EPA 8260B	4J11022	150	ND	1	10/11/2004	10/12/2004	
Surrogate: Dibromofluoromethane (80-120%)				*102 %*				
Surrogate: Toluene-d8 (80-120%)				*103 %*				
Surrogate: 4-Bromofluorobenzene (80-120%)				*106 %*				

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METALS

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: INJ0230-01 (MW-3 - Water)								
Reporting Units: mg/l								
Manganese	EPA 6010B	4J07109	0.020	**0.45**	1	10/7/2004	10/8/2004	
Sample ID: INJ0230-02 (MW-4 - Water)								
Reporting Units: mg/l								
Manganese	EPA 6010B	4J07109	0.020	**0.22**	1	10/7/2004	10/8/2004	
Sample ID: INJ0230-06 (MW-9 - Water)								
Reporting Units: mg/l								
Manganese	EPA 6010B	4J07109	0.020	ND	1	10/7/2004	10/8/2004	
Sample ID: INJ0230-09 (MW-12 - Water)								
Reporting Units: mg/l								
Manganese	EPA 6010B	4J07109	0.040	**6.3**	2	10/7/2004	10/8/2004	

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Attention: Jamin Valdez

Project ID: ARCO 6021, Oceanside

Report Number: INJ0230

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INORGANICS

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: INJ0230-01 (MW-3 - Water)								
Reporting Units: mg/l								
Chemical Oxygen Demand	EPA 410.4	4J07097	20	ND	1	10/7/2004	10/7/2004	
Hardness (as CaCO3)	EPA 130.2	4J06062	4.0	**270**	1	10/6/2004	10/6/2004	
Nitrate-N	EPA 300.0	4J05085	1.1	**7.4**	10	10/5/2004	10/6/2004	
Sulfate	EPA 300.0	4J05085	5.0	**260**	10	10/5/2004	10/6/2004	
Sulfide	EPA 376.2	4J06071	0.10	ND	1	10/6/2004	10/6/2004	
Sample ID: INJ0230-02 (MW-4 - Water)								
Reporting Units: mg/l								
Chemical Oxygen Demand	EPA 410.4	4J07097	20	**50**	1	10/7/2004	10/7/2004	
Hardness (as CaCO3)	EPA 130.2	4J06062	4.0	**230**	1	10/6/2004	10/6/2004	
Nitrate-N	EPA 300.0	4J05085	1.1	**3.9**	10	10/5/2004	10/6/2004	
Sulfate	EPA 300.0	4J05085	5.0	**160**	10	10/5/2004	10/6/2004	
Sulfide	EPA 376.2	4J06071	0.10	**0.18**	1	10/6/2004	10/6/2004	
Sample ID: INJ0230-06 (MW-9 - Water)								
Reporting Units: mg/l								
Chemical Oxygen Demand	EPA 410.4	4J07097	20	ND	1	10/7/2004	10/7/2004	
Hardness (as CaCO3)	EPA 130.2	4J06062	4.0	**350**	1	10/6/2004	10/6/2004	
Nitrate-N	EPA 300.0	4J05085	1.1	**12**	10	10/5/2004	10/6/2004	
Sulfate	EPA 300.0	4J05085	5.0	**450**	10	10/5/2004	10/6/2004	
Sulfide	EPA 376.2	4J06071	0.10	ND	1	10/6/2004	10/6/2004	
Sample ID: INJ0230-09 (MW-12 - Water)								
Reporting Units: mg/l								
Chemical Oxygen Demand	EPA 410.4	4J07097	20	**310**	1	10/7/2004	10/7/2004	
Hardness (as CaCO3)	EPA 130.2	4J06062	4.0	**400**	1	10/6/2004	10/6/2004	
Nitrate-N	EPA 300.0	4J05085	0.22	**1.8**	2	10/5/2004	10/5/2004	
Sulfate	EPA 300.0	4J05085	5.0	**260**	10	10/5/2004	10/6/2004	
Sulfide	EPA 376.2	4J06071	0.10	ND	1	10/6/2004	10/6/2004	

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HETEROTROPHIC PLATE COUNT (SM9215B)

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: INJ0230-01 (MW-3 - Water)								
Reporting Units: CFU/ml								
Heterotrophic Plate Count	SM9215B	C4J0616	10	**520**	10	10/6/2004	10/8/2004	
Sample ID: INJ0230-02 (MW-4 - Water)								
Reporting Units: CFU/ml								
Heterotrophic Plate Count	SM9215B	C4J0616	10	**1100**	10	10/6/2004	10/8/2004	
Sample ID: INJ0230-06 (MW-9 - Water)								
Reporting Units: CFU/ml								
Heterotrophic Plate Count	SM9215B	C4J0616	1.0	**140**	1	10/6/2004	10/8/2004	
Sample ID: INJ0230-09 (MW-12 - Water)								
Reporting Units: CFU/ml								
Heterotrophic Plate Count	SM9215B	C4J0616	100	**43000**	100	10/6/2004	10/8/2004	

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Received: 10/05/04

SHORT HOLD TIME DETAIL REPORT

	Hold Time (in days)	Date/Time Sampled	Date/Time Received	Date/Time Extracted	Date/Time Analyzed
Sample ID: MW-3 (INJ0230-01) - Water					
EPA 300.0	2	10/05/2004 11:25	10/05/2004 18:15	10/05/2004 21:00	10/06/2004 01:09
SM9215B	1	10/05/2004 11:25	10/05/2004 18:15	10/06/2004 16:45	10/08/2004 14:35
Sample ID: MW-4 (INJ0230-02) - Water					
EPA 300.0	2	10/05/2004 11:17	10/05/2004 18:15	10/05/2004 21:00	10/06/2004 01:23
SM9215B	1	10/05/2004 11:17	10/05/2004 18:15	10/06/2004 16:45	10/08/2004 14:35
Sample ID: MW-9 (INJ0230-06) - Water					
EPA 300.0	2	10/05/2004 13:40	10/05/2004 18:15	10/05/2004 21:00	10/06/2004 01:38
SM9215B	1	10/05/2004 13:40	10/05/2004 18:15	10/06/2004 16:45	10/08/2004 14:35
Sample ID: MW-12 (INJ0230-09) - Water					
EPA 300.0	2	10/05/2004 13:45	10/05/2004 18:15	10/05/2004 21:00	10/05/2004 22:29
SM9215B	1	10/05/2004 13:45	10/05/2004 18:15	10/06/2004 16:45	10/08/2004 14:35

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METHOD BLANK/QC DATA

VOLATILE FUEL HYDROCARBONS (EPA 5030/CADHS Mod. 8015)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 4J12039 Extracted: 10/12/04										
Blank Analyzed: 10/12/04 (4J12039-BLK1)										
Volatile Fuel Hydrocarbons (C6-C12)	ND	50	ug/l							
Surrogate: 4-BFB (FID)	*8.12*		*ug/l*	*10.0*		*81*	*60-135*			
LCS Analyzed: 10/12/04 (4J12039-BS1)										
Volatile Fuel Hydrocarbons (C6-C12)	193	50	ug/l	220		88	70-135			
Surrogate: 4-BFB (FID)	*8.70*		*ug/l*	*10.0*		*87*	*60-135*			
Matrix Spike Analyzed: 10/12/04 (4J12039-MS1)					**Source: INJ0230-03**					
Volatile Fuel Hydrocarbons (C6-C12)	453	50	ug/l	220	240	97	60-135			
Surrogate: 4-BFB (FID)	*16.9*		*ug/l*	*10.0*		*169*	*60-135*			*AZ*
Matrix Spike Dup Analyzed: 10/12/04 (4J12039-MSD1)					**Source: INJ0230-03**					
Volatile Fuel Hydrocarbons (C6-C12)	401	50	ug/l	220	240	73	60-135	12	20	
Surrogate: 4-BFB (FID)	*16.0*		*ug/l*	*10.0*		*160*	*60-135*			*AZ*

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Sampled: 10/05/04
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METHOD BLANK/QC DATA

BTEX/OXYGENATES by GC/MS (EPA 8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 4J11022 Extracted: 10/11/04										
Blank Analyzed: 10/11/04 (4J11022-BLK1)										
Benzene	ND	2.0	ug/l							
Ethylbenzene	ND	2.0	ug/l							
Toluene	ND	2.0	ug/l							
m,p-Xylenes	ND	2.0	ug/l							
o-Xylene	ND	2.0	ug/l							
Xylenes, Total	ND	4.0	ug/l							
Di-isopropyl Ether (DIPE)	ND	5.0	ug/l							
Ethyl tert-Butyl Ether (ETBE)	ND	5.0	ug/l							
tert-Amyl Methyl Ether (TAME)	ND	5.0	ug/l							
Methyl-tert-butyl Ether (MTBE)	ND	5.0	ug/l							
tert-Butanol (TBA)	ND	50	ug/l							
Ethanol	ND	150	ug/l							
Surrogate: Dibromofluoromethane	*25.5*		*ug/l*	*25.0*		*102*	*80-120*			
Surrogate: Toluene-d8	*25.5*		*ug/l*	*25.0*		*102*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*25.5*		*ug/l*	*25.0*		*102*	*80-120*			
LCS Analyzed: 10/11/04 (4J11022-BS1)										
Benzene	22.1	2.0	ug/l	25.0		88	70-120			
Ethylbenzene	24.5	2.0	ug/l	25.0		98	80-120			
Toluene	23.4	2.0	ug/l	25.0		94	75-120			
m,p-Xylenes	47.5	2.0	ug/l	50.0		95	75-120			*LO*
o-Xylene	23.0	2.0	ug/l	25.0		92	75-125			*LO*
Xylenes, Total	70.5	4.0	ug/l	75.0		94	75-125			*LO*
Di-isopropyl Ether (DIPE)	24.4	5.0	ug/l	25.0		98	65-135			
Ethyl tert-Butyl Ether (ETBE)	24.7	5.0	ug/l	25.0		99	60-140			
tert-Amyl Methyl Ether (TAME)	25.9	5.0	ug/l	25.0		104	60-140			
Methyl-tert-butyl Ether (MTBE)	25.2	5.0	ug/l	25.0		101	55-145			*LO*
tert-Butanol (TBA)	132	50	ug/l	125		106	70-140			
Ethanol	271	150	ug/l	250		108	35-165			
Surrogate: Dibromofluoromethane	*25.0*		*ug/l*	*25.0*		*100*	*80-120*			
Surrogate: Toluene-d8	*25.7*		*ug/l*	*25.0*		*103*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*25.4*		*ug/l*	*25.0*		*102*	*80-120*			

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METHOD BLANK/QC DATA

BTEX/OXYGENATES by GC/MS (EPA 8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 4J11022 Extracted: 10/11/04										
Matrix Spike Analyzed: 10/11/04 (4J11022-MS1)					**Source: INJ0230-01**					
Benzene	25.2	2.0	ug/l	25.0	1.2	96	70-120			
Ethylbenzene	120	2.0	ug/l	25.0	99	84	70-130			
Toluene	28.7	2.0	ug/l	25.0	2.2	106	70-120			
Di-isopropyl Ether (DIPE)	28.0	5.0	ug/l	25.0	ND	112	65-140			
Ethyl tert-Butyl Ether (ETBE)	29.5	5.0	ug/l	25.0	ND	118	60-140			
tert-Amyl Methyl Ether (TAME)	32.1	5.0	ug/l	25.0	ND	128	55-145			
tert-Butanol (TBA)	210	50	ug/l	125	64	117	65-145			
Ethanol	316	150	ug/l	250	96	88	35-165			
Surrogate: Dibromofluoromethane	*26.2*		*ug/l*	*25.0*		*105*	*80-120*			
Surrogate: Toluene-d8	*26.1*		*ug/l*	*25.0*		*104*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*25.9*		*ug/l*	*25.0*		*104*	*80-120*			
Matrix Spike Dup Analyzed: 10/11/04 (4J11022-MSD1)					**Source: INJ0230-01**					
Benzene	25.6	2.0	ug/l	25.0	1.2	98	70-120	2	20	
Ethylbenzene	121	2.0	ug/l	25.0	99	88	70-130	1	20	
Toluene	28.7	2.0	ug/l	25.0	2.2	106	70-120	0	20	
Di-isopropyl Ether (DIPE)	27.4	5.0	ug/l	25.0	ND	110	65-140	2	25	
Ethyl tert-Butyl Ether (ETBE)	29.9	5.0	ug/l	25.0	ND	120	60-140	1	25	
tert-Amyl Methyl Ether (TAME)	33.8	5.0	ug/l	25.0	ND	135	55-145	5	30	
tert-Butanol (TBA)	200	50	ug/l	125	64	109	65-145	5	25	
Ethanol	273	150	ug/l	250	96	71	35-165	15	30	
Surrogate: Dibromofluoromethane	*25.7*		*ug/l*	*25.0*		*103*	*80-120*			
Surrogate: Toluene-d8	*26.0*		*ug/l*	*25.0*		*104*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*26.0*		*ug/l*	*25.0*		*104*	*80-120*			
Batch: 4J12004 Extracted: 10/12/04										
Blank Analyzed: 10/12/04 (4J12004-BLK1)										
Benzene	ND	2.0	ug/l							
Ethylbenzene	ND	2.0	ug/l							
Toluene	ND	2.0	ug/l							
m,p-Xylenes	ND	2.0	ug/l							
o-Xylene	ND	2.0	ug/l							
Xylenes, Total	ND	4.0	ug/l							
Di-isopropyl Ether (DIPE)	ND	5.0	ug/l							
Ethyl tert-Butyl Ether (ETBE)	ND	5.0	ug/l							
tert-Amyl Methyl Ether (TAME)	ND	5.0	ug/l							

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Received: 10/05/04

METHOD BLANK/QC DATA

BTEX/OXYGENATES by GC/MS (EPA 8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 4J12004 Extracted: 10/12/04										
Blank Analyzed: 10/12/04 (4J12004-BLK1)										
Methyl-tert-butyl Ether (MTBE)	ND	5.0	ug/l							
tert-Butanol (TBA)	ND	50	ug/l							
Ethanol	ND	150	ug/l							
Surrogate: Dibromofluoromethane	*25.3*		*ug/l*	*25.0*		*101*	*80-120*			
Surrogate: Toluene-d8	*25.9*		*ug/l*	*25.0*		*104*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*24.2*		*ug/l*	*25.0*		*97*	*80-120*			
LCS Analyzed: 10/12/04 (4J12004-BS1)										
Benzene	24.4	2.0	ug/l	25.0		98	70-120			
Ethylbenzene	25.2	2.0	ug/l	25.0		101	80-120			
Toluene	24.8	2.0	ug/l	25.0		99	75-120			
m,p-Xylenes	50.1	2.0	ug/l	50.0		100	75-120			
o-Xylene	24.4	2.0	ug/l	25.0		98	75-125			
Xylenes, Total	74.5	4.0	ug/l	75.0		99	75-125			
Di-isopropyl Ether (DIPE)	27.4	5.0	ug/l	25.0		110	65-135			
Ethyl tert-Butyl Ether (ETBE)	26.0	5.0	ug/l	25.0		104	60-140			
tert-Amyl Methyl Ether (TAME)	27.4	5.0	ug/l	25.0		110	60-140			
Methyl-tert-butyl Ether (MTBE)	27.4	5.0	ug/l	25.0		110	55-145			
tert-Butanol (TBA)	116	50	ug/l	125		93	70-140			
Ethanol	193	150	ug/l	250		77	35-165			
Surrogate: Dibromofluoromethane	*26.6*		*ug/l*	*25.0*		*106*	*80-120*			
Surrogate: Toluene-d8	*26.8*		*ug/l*	*25.0*		*107*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*26.5*		*ug/l*	*25.0*		*106*	*80-120*			
Matrix Spike Analyzed: 10/12/04 (4J12004-MS1)					**Source: INJ0289-13**					
Benzene	25.2	2.0	ug/l	25.0	0.46	99	70-120			
Ethylbenzene	30.8	2.0	ug/l	25.0	5.1	103	70-130			
Toluene	27.8	2.0	ug/l	25.0	2.7	100	70-120			
m,p-Xylenes	66.3	2.0	ug/l	50.0	14	105	65-130			
o-Xylene	31.7	2.0	ug/l	25.0	6.2	102	65-125			
Xylenes, Total	97.9	4.0	ug/l	75.0	20	104	65-135			
Di-isopropyl Ether (DIPE)	27.2	5.0	ug/l	25.0	ND	109	65-140			
Ethyl tert-Butyl Ether (ETBE)	26.3	5.0	ug/l	25.0	ND	105	60-140			
tert-Amyl Methyl Ether (TAME)	26.9	5.0	ug/l	25.0	ND	108	55-145			
Methyl-tert-butyl Ether (MTBE)	27.8	5.0	ug/l	25.0	2.2	102	50-155			
tert-Butanol (TBA)	141	50	ug/l	125	ND	113	65-145			

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Chris Roberts
Project Manager

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2520 E. Sunset Rd. #3, Las Vegas, NV 89120 (702) 798-3620 FAX (702) 798-3621

SECOR International, Inc.-Orange County
11085 Knott Ave, Suite B
Cypress, CA 90630
Attention: Jamin Valdez

Project ID: ARCO 6021, Oceanside

Report Number: INJ0230

Sampled: 10/05/04
Received: 10/05/04

METHOD BLANK/QC DATA

BTEX/OXYGENATES by GC/MS (EPA 8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 4J12004 Extracted: 10/12/04										
Matrix Spike Analyzed: 10/12/04 (4J12004-MS1)					**Source: INJ0289-13**					
Ethanol	215	150	ug/l	250	ND	86	35-165			
Surrogate: Dibromofluoromethane	*25.7*		*ug/l*	*25.0*		*103*	*80-120*			
Surrogate: Toluene-d8	*26.3*		*ug/l*	*25.0*		*105*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*25.8*		*ug/l*	*25.0*		*103*	*80-120*			
Matrix Spike Dup Analyzed: 10/12/04 (4J12004-MSD1)					**Source: INJ0289-13**					
Benzene	26.9	2.0	ug/l	25.0	0.46	106	70-120	7	20	
Ethylbenzene	32.0	2.0	ug/l	25.0	5.1	108	70-130	4	20	
Toluene	29.2	2.0	ug/l	25.0	2.7	106	70-120	5	20	
m,p-Xylenes	66.0	2.0	ug/l	50.0	14	104	65-130	1	25	
o-Xylene	32.0	2.0	ug/l	25.0	6.2	103	65-125	1	20	
Xylenes, Total	98.0	4.0	ug/l	75.0	20	104	65-135	0	20	
Di-isopropyl Ether (DIPE)	29.3	5.0	ug/l	25.0	ND	117	65-140	7	25	
Ethyl tert-Butyl Ether (ETBE)	27.1	5.0	ug/l	25.0	ND	108	60-140	3	25	
tert-Amyl Methyl Ether (TAME)	27.5	5.0	ug/l	25.0	ND	110	55-145	2	30	
Methyl-tert-butyl Ether (MTBE)	29.2	5.0	ug/l	25.0	2.2	108	50-155	5	25	
tert-Butanol (TBA)	139	50	ug/l	125	ND	111	65-145	1	25	
Ethanol	236	150	ug/l	250	ND	94	35-165	9	30	
Surrogate: Dibromofluoromethane	*25.7*		*ug/l*	*25.0*		*103*	*80-120*			
Surrogate: Toluene-d8	*26.4*		*ug/l*	*25.0*		*106*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*25.4*		*ug/l*	*25.0*		*102*	*80-120*			

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Attention: Jamin Valdez

Project ID: ARCO 6021, Oceanside

Report Number: INJ0230

Sampled: 10/05/04
Received: 10/05/04

METHOD BLANK/QC DATA

METALS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 4J07109 Extracted: 10/07/04										
Blank Analyzed: 10/08/04 (4J07109-BLK1)										
Manganese	ND	0.020	mg/l							
LCS Analyzed: 10/08/04 (4J07109-BS1)										
Manganese	0.902	0.020	mg/l	1.00		90	80-120			
Matrix Spike Analyzed: 10/08/04 (4J07109-MS1)					**Source: INJ0058-01**					
Manganese	2.07	0.020	mg/l	1.00	1.2	87	75-125			
Matrix Spike Dup Analyzed: 10/08/04 (4J07109-MSD1)					**Source: INJ0058-01**					
Manganese	2.06	0.020	mg/l	1.00	1.2	86	75-125	1	20	

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Project ID: ARCO 6021, Oceanside

Report Number: INJ0230

Sampled: 10/05/04
Received: 10/05/04

METHOD BLANK/QC DATA

INORGANICS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 4J05085 Extracted: 10/05/04										
Blank Analyzed: 10/05/04 (4J05085-BLK1)										
Nitrate-N	ND	0.11	mg/l							
Sulfate	ND	0.50	mg/l							
LCS Analyzed: 10/05/04 (4J05085-BS1)										
Nitrate-N	1.15	0.11	mg/l	1.12		103	90-110			*LO*
Sulfate	9.71	0.50	mg/l	9.96		97	90-110			*LO*
Batch: 4J06062 Extracted: 10/06/04										
Blank Analyzed: 10/06/04 (4J06062-BLK1)										
Hardness (as CaCO3)	ND	4.0	mg/l							
LCS Analyzed: 10/06/04 (4J06062-BS1)										
Hardness (as CaCO3)	222	4.0	mg/l	224		99	90-110			
Duplicate Analyzed: 10/06/04 (4J06062-DUP1)					**Source: INI1765-03**					
Hardness (as CaCO3)	1930	4.0	mg/l		1900			2	20	
Batch: 4J06071 Extracted: 10/06/04										
Blank Analyzed: 10/06/04 (4J06071-BLK1)										
Sulfide	ND	0.10	mg/l							
LCS Analyzed: 10/06/04 (4J06071-BS1)										
Sulfide	0.557	0.10	mg/l	0.580		96	80-120			

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Attention: Jamin Valdez

Project ID: ARCO 6021, Oceanside

Report Number: INJ0230

Sampled: 10/05/04
Received: 10/05/04

METHOD BLANK/QC DATA

INORGANICS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 4J06071 Extracted: 10/06/04										
Matrix Spike Analyzed: 10/06/04 (4J06071-MS1)					**Source: INJ0146-02**					
Sulfide	0.539	0.10	mg/l	0.580	0.012	91	70-130			
Matrix Spike Dup Analyzed: 10/06/04 (4J06071-MSD1)					**Source: INJ0146-02**					
Sulfide	0.453	0.10	mg/l	0.580	0.012	76	70-130	17	30	
Batch: 4J07097 Extracted: 10/07/04										
Blank Analyzed: 10/07/04 (4J07097-BLK1)										
Chemical Oxygen Demand	ND	20	mg/l							
LCS Analyzed: 10/07/04 (4J07097-BS1)										
Chemical Oxygen Demand	497	20	mg/l	500		99	90-110			
Matrix Spike Analyzed: 10/07/04 (4J07097-MS1)					**Source: INJ0230-01**					
Chemical Oxygen Demand	516	20	mg/l	500	ND	103	90-110			
Matrix Spike Dup Analyzed: 10/07/04 (4J07097-MSD1)					**Source: INJ0230-01**					
Chemical Oxygen Demand	515	20	mg/l	500	ND	103	90-110	0	15	

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Attention: Jamin Valdez

Project ID: ARCO 6021, Oceanside

Report Number: INJ0230

Sampled: 10/05/04
Received: 10/05/04

DATA QUALIFIERS AND DEFINITIONS

AZ	Surr. recovery outside of acceptance limits due to matrix interf.
ID	Analyte identified by RT & presence of single mass ion
LO	MS and/or MSD result unavailable. Batch accept. based on LCS rec.
ND	Analyte NOT DETECTED at or above the reporting limit or MDL, if MDL is specified.
RPD	Relative Percent Difference

ADDITIONAL COMMENTS

For 8260 analyses:

Due to the high water solubility of alcohols and ketones, the calibration criteria for these compounds is <30% RSD.
The average % RSD of all compounds in the calibration is 15%, in accordance with EPA methods.

For Volatile Fuel Hydrocarbons (C6-C12):

Volatile Fuel Hydrocarbons (C6-C12) are quantitated against a gasoline standard.

8015 Analysis EDF Parlabel Cross Reference

Analyte	EDF Parlabel
Volatile Fuel Hydrocarbons (C6-C12)	GROC6C12

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11085 Knott Ave, Suite B
Cypress, CA 90630
Attention: Jamin Valdez

Project ID: ARCO 6021, Oceanside

Report Number: INJ0230

Sampled: 10/05/04
Received: 10/05/04

Certification Summary

Del Mar Analytical, Irvine

Method	Matrix	NELAP	CA
EPA 130.2	Water	X	X
EPA 300.0	Water	X	X
EPA 376.2	Water	X	X
EPA 410.4	Water	X	X
EPA 6010B	Water	X	X
EPA 8015 Mod.	Water	X	X
EPA 8260B	Water	X	X

NV and NELAP provide analyte specific accreditations. Analyte specific information for Del Mar Analytical may be obtained by contacting the laboratory or visiting our website at www.dmalabs.com.

Subcontracted Laboratories

Del Mar Analytical - Colton *CA ELAP Cert #1169, AZ DHS Licence #AZ0062 and NV Cert #CA-242*
1014 E. Cooley Drive, Suite AB - Colton, CA 92324
Method Performed: SM9215B
Samples: INJ0230-01, INJ0230-02, INJ0230-06, INJ0230-09

Del Mar Analytical, Irvine
Chris Roberts
Project Manager

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Chain of Custody Record

Project Name	Q4-2004 Groundwater
BP BU/GEM CO Portfolio:	Retail
BP Laboratory Contract Number:	Atlantic Richfield
Requested Due Date (mm/dd/yy)	10/19/2004

On-site Time:	0730	Temp:	67°
Off-site Time:	1700	Temp:	74°
Sky Conditions:	Clear		
Meteorological Events:	None		
Wind Speed:	3 mph	Direction:	E

Send To:		BP/GEM Facility No.:	06021	Consultant/Contractor:	SECOR International, Inc.
Lab Name:	Del Mar Analytical	BP/GEM Facility Address:	1801 S Coast Highway	Address:	11085 Knott Ave., Suite B
Lab Address:	17461 Derian Ave., Ste 100		Oceanside, CA.		Cypress, CA 90630
	Irvine, CA 92614	Site Lat/Long:		e-mail EDD:	bauchard@secor.com
		California Global ID #:	T0607301115	Consultant/Contractor Project No.:	14BP.U6021.05
Lab PM:	Chris Roberts	BP/GEM PM Contact:	Roy Thun	Consultant/Contractor Tele/Fax:	(714) 379-3366
Tele/Fax:	949-261-1022 / 949-261-1228	Address:	4 Centerpoint Dr.	Consultant/Contractor PM:	Jamin Valdez
Report Type & QC Level:	Standard		La Palma, CA	Invoice to:	Consultant
BP/GEM Account No.:		Tele/Fax:	(661) 287-3855	BP/GEM Work Release No:	
Lab Bottle Order No:					

Item No.	Sample Description	Time	Date	Matrix: Soil/Solid	Matrix: Water/Liquid	Matrix: Air	Laboratory No.	No. of containers	Preservatives: Unpreserved	Preservatives: H_2SO_4	Preservatives: HNO_3	Preservatives: HCl			Requested Analysis: ORG C6-C12 (8015)	Requested Analysis: BTEX/OXY/ET (8260)		Requested Analysis: SEE ATTACHED SHEET							Field Point Name / Comments
							INJ0230																		
1	~~MW-2~~ AC		10/5		X			4				X			X	X									(1) 40 ml HCL
2	MW-3	1125			X			9				X			X	X		X							(1) 1 L ACT
3	MW-4	1117			X			9				X			X	X		X							(1) 500 ml P NONE
4	MW-5	0922			X			4				X			X	X									(1) 500 ml P HNO_3
5	MW-6	1207			X			4				X			X	X									(1) 500 ml P H_2SO_4
6	MW-7	1427			X			4				X			X	X									(1) 500 ml P NAOH & ZINC
7	~~MW-8~~ AC				X							X			X	X		X							
8	MW-9	1340			X			9				X			X	X		X							
9	MW-10	1618			X			4				X			X	X									
10	MW-11	1508			X			4				X			X	X									
11	MW-12	1345			X			9				X			X	X		X							

	Relinquished By / Affiliation	Date	Time	Accepted By / Affiliation	Date	Time
Sampler's Name: Adrian Campos						
Sampler's Company: Secor		10/5	1815			
Shipment Date:					10/5/04	1815
Shipment Method:						
Shipment Tracking No:						

Special Instructions:

Custody Seals In Place Yes ___ No ✓ Temp Blank Yes ___ No ✓ Cooler Temperature on Receipt 3 °F/C Trip Blank Yes ✓ No ___

Chain of Custody Record

Project Name	Q4-2004 Groundwater
BP BU/GEM CO Portfolio:	Retail
BP Laboratory Contract Number:	Atlantic Richfield
Requested Due Date (mm/dd/yy)	10/19/2004

On-site Time:	0730 Temp: 67°
Off-site Time:	1700 Temp: 74°
Sky Conditions:	Clear
Meteorological Events:	None
Wind Speed:	3mph Direction: E

Send To:		BP/GEM Facility No.:	06021	Consultant/Contractor:	SECOR International, Inc.
Lab Name:	Del Mar Analytical	BP/GEM Facility Address:	1801 S Coast Highway	Address:	11085 Knott Ave., Suite B
Lab Address:	17461 Derian Ave., Ste 100		Oceanside, CA.		Cypress, CA 90630
	Irvine, CA 92614	Site Lat/Long:		e-mail EDD:	bauchard@secor.com
		California Global ID #:	T0607301115	Consultant/Contractor Project No.:	14BP.U6021.05
Lab PM:	Chris Roberts	BP/GEM PM Contact:	Roy Thun	Consultant/Contractor Tele/Fax:	(714) 379-3366
Tele/Fax:	949-261-1022 / 949-261-1228	Address:	4 Centerpoint Dr.	Consultant/Contractor PM:	Jamin Valdez
Report Type & QC Level:	Standard		La Palma, CA	Invoice to:	Consultant
BP/GEM Account No.:		Tele/Fax:	(661) 287-3855	BP/GEM Work Release No:	

Lab Bottle Order No: IN10230

Item No.	Sample Description	Time	Date	Matrix: Soil/Solid	Matrix: Water/Liquid	Matrix: Air	Laboratory No.	No. of containers	Preservatives: Unpreserved	Preservatives: H_2SO_4	Preservatives: HNO_3	Preservatives: HCl	Requested Analysis: ORG C6-C12 (8015)	Requested Analysis: BTEX/OXY/ET (8260)	Field Point Name / Comments
1	TB-6021-20041005	0800	10/5		X			4				X	X	X	
2	DUP-6021-20041005	1011	10/5		X			4				X	X	X	
3															
4															
5															
6															
7															
8															
9															
10															
11															

Sampler's Name:	Adrian Campos	Relinquished By / Affiliation	Date	Time	Accepted By / Affiliation	Date	Time
Sampler's Company:	Secor		10/5	1815			
Shipment Date:						10/5/04	1815
Shipment Method:							
Shipment Tracking No:							

Special Instructions:

Custody Seals In Place Yes ___ No X Temp Blank Yes ___ No X Cooler Temperature on Receipt 3 °F/C Trip Blank Yes X No ___

Del Mar Analytical

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2520 E. Sunset Rd., Suite #3, Las Vegas, NV 89120 Ph (702) 798-3620 Fax (702) 798-3621

SUBCONTRACT ORDER - PROJECT # INJ0230

SENDING LABORATORY:

Del Mar Analytical, Irvine
17461 Derian Avenue. Suite 100
Irvine, CA 92614
Phone: (949) 261-1022
Fax: (949) 261-1228
Project Manager: Chris Roberts

RECEIVING LABORATORY:

Del Mar Analytical - Colton
1014 E. Cooley Drive, Suite AB
Colton, CA 92324
Phone :(909) 370-4667
Fax: (909) 370-1046

Analysis	Expiration	Due	Comments
Sample ID: INJ0230-01 Water **Sampled: 10/05/04 11:25**			
Heterotrophic Bac	10/05/04 16:13	10/14/04 12:00	Sub to DMAC, HPC
Containers Supplied:			
Bacti Bottle (INJ0230-01I)			
Sample ID: INJ0230-02 Water **Sampled: 10/05/04 11:17**			
Heterotrophic Bac	10/05/04 16:05	10/14/04 12:00	Sub to DMAC, HPC
Containers Supplied:			
Bacti Bottle (INJ0230-02I)			
Sample ID: INJ0230-06 Water **Sampled: 10/05/04 13:40**			
Heterotrophic Bac	10/05/04 18:28	10/14/04 12:00	Sub to DMAC, HPC
Containers Supplied:			
Bacti Bottle (INJ0230-06I)			
Sample ID: INJ0230-09 Water **Sampled: 10/05/04 13:45**			
Heterotrophic Bac	10/05/04 18:33	10/14/04 12:00	Sub to DMAC, HPC
Containers Supplied:			
Bacti Bottle (INJ0230-09I)			

SAMPLE INTEGRITY:

All containers intact: ☐ Yes ☐ No
Custody Seals Present: ☐ Yes ☐ No
Sample labels/COC agree: ☐ Yes ☐ No
Samples Preserved Properly: ☐ Yes ☐ No
Samples Received On Ice:: ☐ Yes ☐ No
Samples Received at (temp): _____

Released By	Date	Time	Received By	Date	Time
Released By	Date	Time	Received By	Date	Time

GROUNDWATER SAMPLING FORM

ATLANTIC RICHFIELD COMPANY

PROJECT NO.:	14BP.U6021.05	SAMPLE ID:	MW-3
SAMPLER:	Adrian Campos	ARCO FACILITY NO.:	6021
DATE:	10-5-04	LOCATION:	OCEANSIDE

CASING DIAMETER (inches) 2 3 (4) 6 8 12

DEPTH OF WELL (feet):	31.00	CALCULATED PURGE (gal):	36
DEPTH OF WATER (feet):	23.14	ACTUAL PURGE VOL (gal):	33
Standing Water in Casing (feet):	7.86 X 0.20 = 1.572 + DTW 24.71 = 80% Recharge Water Level		

Bore Hole Diameter

PURGE VOLUME CALCULATIONS

8 (inches)	Standing Water in Casing (feet)	X 0.77=		X 3=	total volume purged (gal)
10 (inches)	Standing Water in Casing (feet)	X 1.50=	11.79	X 3=	total volume purged (gal)

Date Purged: 10-5-04 Start (2400 Hr.): 1031 End (2400 Hr.): 1109

Date Sampled: 10-5-04 Time (2400 Hr.): 1125 DTW @ Samp. Time: 24.52

FIELD QC SAMPLES COLLECTED AT THIS WELL (IE: FB-1, X-DUP-1):

TIME (2400 HR.)	VOLUME (gallons)	TEMP (degrees F)	E.C. (uS/cm)	pH (units)	COLOR (visual)*	TURBIDITY (visual)**	~~TOTALIZER (gallons)~~	
1042	12	73.9	1777	7.33	cloudy	light	ORP	Fe+2
1050	24	71.9	1812	7.53	clear	light	79	∅
1109	33	72.7	1841	7.60	clear	light		

*(Color) Clear, Cloudy Yellow, Brown **(Turbidity) Heavy, Moderate, Light, Trace

PURGING EQUIPMENT		SAMPLING EQUIPMENT	
2" Bladder Pump	Bailer (Teflon)	2" Bladder Pump	Bailer (Stainless Steel)
Centrifugal Pump	Bailer (PVC)	Submersible Pump	Bailer (Teflon)
X Submersible Pump	Bailer (Stainless Steel)	Dipper	X Bailer (Disposable Teflon)
Redi-Flo2	Dedicated Stinger	Well Wizard	Dedicated
Other:		Other:	

Well Condition (cap, cement, padlock, screws, lid, etc.):

Floating Product Thickness (Feet):

COMMENTS: Collected additional analytical dry @ 33gal.

40 ml VOA, HCl : 4 1 liter amber, none: 16 oz poly, HNO3:

WATER LEVEL ONLY. NO SAMPLE COLLECTED: ☐ REVIEWED BY: Bruce McFann DATE: 10-8-04

GROUNDWATER SAMPLING FORM

ATLANTIC RICHFIELD COMPANY

PROJECT NO.:	14BP.U6021.05	SAMPLE ID:	MW-4
SAMPLER:	Adrian Campos	ARCO FACILITY NO.:	6021
DATE:	10-5-04	LOCATION:	OCEANSIDE

CASING DIAMETER (inches) 2 3 (4) 6 8 12

DEPTH OF WELL (feet):	31.00	CALCULATED PURGE (gal):	36
DEPTH OF WATER (feet):	23.15	ACTUAL PURGE VOL (gal):	29

Standing Water in Casing (feet): 7.85 X 0.20 = 1.57 + DTW 24.72 = 80% Recharge Water Level

Bore Hole Diameter

PURGE VOLUME CALCULATIONS

8 (inches)	Standing Water in Casing (feet)	X 0.77=	X 3=	total volume purged (gal)
10 (inches)	Standing Water in Casing (feet)	X 1.50= 11.77	X 3=	total volume purged (gal)

Date Purged: 10-5-04 Start (2400 Hr.): 0940 End (2400 Hr.): 1014

Date Sampled: 10-5-04 Time (2400 Hr.): 1117 DTW @ Samp. Time: 23.41

FIELD QC SAMPLES COLLECTED AT THIS WELL (IE: FB-1, X-DUP-1):

TIME (2400 HR.)	VOLUME (gallons)	TEMP (degrees F)	E.C. (uS/cm)	pH (units)	COLOR (visual)*	TURBIDITY (visual)**	~~TOTALIZER (gallons)~~	
0953	12	72.8	1786	7.67	Grey	light	ORP	Fe+2
1003	24	73.9	1787	7.65	Grey	light	60	.40
1014	29	73.7	1783	7.61	cloudy	light		

*(Color) Clear, Cloudy Yellow, Brown

*(Turbidity) Heavy, Moderate, Light, Trace

PURGING EQUIPMENT		SAMPLING EQUIPMENT	
2" Bladder Pump	Bailer (Teflon)	2" Bladder Pump	Bailer (Stainless Steel)
Centrifugal Pump	Bailer (PVC)	Submersible Pump	Bailer (Teflon)
X Submersible Pump	Bailer (Stainless Steel)	Dipper	X Bailer (Disposable Teflon)
Redi-Flo2	Dedicated Stinger	Well Wizard	Dedicated
Other:		Other:	

Well Condition (cap, cement, padlock, screws, lid, etc.):

Floating Product Thickness (Feet):

COMMENTS: Collected additional Analytical drop 29 gal.

40 ml VOA, HCl: 4 1 liter amber, none: 16 oz poly, HNO3:

WATER LEVEL ONLY. NO SAMPLE COLLECTED: ☐ REVIEWED BY: Bruce McFain DATE: 10-8-04

GROUNDWATER SAMPLING FORM

ATLANTIC RICHFIELD COMPANY

PROJECT NO.:	14BP.U6021.05	SAMPLE ID:	MW-5
SAMPLER:	Adrian Campos	ARCO FACILITY NO.:	6021
DATE:	10-5-04	LOCATION:	OCEANSIDE

CASING DIAMETER (inches) 2 3 (4) 6 8 12

DEPTH OF WELL (feet):	31.00	CALCULATED PURGE (gal):	33
DEPTH OF WATER (feet):	23.89	ACTUAL PURGE VOL (gal):	33

Standing Water in Casing (feet): 7.11 X 0.20 = 1.422 + DTW 25.31 = 80% Recharge Water Level

Bore Hole Diameter

PURGE VOLUME CALCULATIONS

8 (inches)	Standing Water in Casing (feet)	X 0.77=	X 3=	total volume purged (gal)
10 (inches)	Standing Water in Casing (feet)	X 1.50=	X 3=	total volume purged (gal)

Date Purged: 10-5-04 Start (2400 Hr.): 0830 End (2400 Hr.): 0916

Date Sampled: 10-5-04 Time (2400 Hr.): ~~0922~~ 0922 DTW @ Samp. Time: 25.31

FIELD QC SAMPLES COLLECTED AT THIS WELL (IE: FB-1, X-DUP-1): DUP-6021-20041005

TIME (2400 HR.)	VOLUME (gallons)	TEMP (degrees F)	E.C. (uS/cm)	pH (units)	COLOR (visual)*	TURBIDITY (visual)**	~~TOTALIZER (gallons)~~	
0847	11	69.6	2166	7.22	cloudy	light	Fe+2	ORP
0903	22	70.1	2161	7.46	cloudy	light	.20	15
0916	33	74.0	2220	7.20	clear	light		

*(Color) Clear, Cloudy Yellow, Brown

*(Turbidity) Heavy, Moderate, Light, Trace

PURGING EQUIPMENT		SAMPLING EQUIPMENT	
2" Bladder Pump	Bailer (Teflon)	2" Bladder Pump	Bailer (Stainless Steel)
Centrifugal Pump	Bailer (PVC)	Submersible Pump	Bailer (Teflon)
X Submersible Pump	Bailer (Stainless Steel)	Dipper	X Bailer (Disposable Teflon)
Redi-Flo2	Dedicated Stinger	Well Wizard	Dedicated
Other:		Other:	

Well Condition (cap, cement, padlock, screws, lid, etc.):

Floating Product Thickness (Feet):

COMMENTS:

40 ml VOA, HCl: 4 1 liter amber, none: 16 oz poly, HNO3:

WATER LEVEL ONLY. NO SAMPLE COLLECTED: ☐ REVIEWED BY: Bruce McFann DATE: 10-8-04

GROUNDWATER SAMPLING FORM

ATLANTIC RICHFIELD COMPANY

PROJECT NO.:	14BP.U6021.05	SAMPLE ID:	MW-6
SAMPLER:	Adrian Campos	ARCO FACILITY NO.:	6021
DATE:	10-5-04	LOCATION:	OCEANSIDE

CASING DIAMETER (inches) (2) 3 4 6 8 12

DEPTH OF WELL (feet):	31.00	CALCULATED PURGE (gal):	21
DEPTH OF WATER (feet):	22.15	ACTUAL PURGE VOL (gal):	21

Standing Water in Casing (feet): 8.85 X 0.20 = 1.77 + DTW 23.92 = 80% Recharge Water Level

Bore Hole Diameter

PURGE VOLUME CALCULATIONS

6 (inches)	Standing Water in Casing (feet)	X 0.77=	X 3=	total volume purged (gal)
10 (inches)	Standing Water in Casing (feet)	X 1.50=	X 3=	total volume purged (gal)

Date Purged: 10-5-04 Start (2400 Hr.): 1131 End (2400 Hr.): 1152

Date Sampled: 10-5-04 Time (2400 Hr.): 1207 DTW @ Samp. Time: 23.92

FIELD QC SAMPLES COLLECTED AT THIS WELL (IE: FB-1, X-DUP-1):

TIME (2400 HR.)	VOLUME (gallons)	TEMP (degrees F)	E.C. (uS/cm)	pH (units)	COLOR (visual)*	TURBIDITY (visual)**	~~TOTALIZER (gallons)~~	
1138	7	73.4	2987	9.21	cloudy	light	ORP	Fe+2
1143	14	72.4	2228	7.19	Gray	light	74	0
1152	21	73.1	2127	7.07	Gray	light		

*(Color) Clear, Cloudy Yellow, Brown

*(Turbidity) Heavy, Moderate, Light, Trace

PURGING EQUIPMENT		SAMPLING EQUIPMENT	
2" Bladder Pump	Bailer (Teflon)	2" Bladder Pump	Bailer (Stainless Steel)
Centrifugal Pump	Bailer (PVC)	Submersible Pump	Bailer (Teflon)
X Submersible Pump	Bailer (Stainless Steel)	Dipper	X Bailer (Disposable Teflon)
Redi-Flo2	Dedicated Stinger	Well Wizard	Dedicated
Other:		Other:	

Well Condition (cap, cement, padlock, screws, lid, etc.):

Floating Product Thickness (Feet):

COMMENTS:

40 ml VOA, HCl: 4 1 liter amber, none: 16 oz poly, HNO3:

WATER LEVEL ONLY. NO SAMPLE COLLECTED: ☐ REVIEWED BY: Bruce McFann DATE: 10-8-04

GROUNDWATER SAMPLING FORM

ATLANTIC RICHFIELD COMPANY

PROJECT NO.:	14BP.U6021.05	SAMPLE ID:	MW-7
SAMPLER:	Adrian	ARCO FACILITY NO.:	6021
DATE:	10-5-04	LOCATION:	OCEANSIDE

CASING DIAMETER (inches) 2 3 (4) 6 8 12

DEPTH OF WELL (feet):	31.00	CALCULATED PURGE (gal):	42
DEPTH OF WATER (feet):	21.50	ACTUAL PURGE VOL (gal):	33
Standing Water in Casing (feet):	9.50 X 0.20 = 1.90	+ DTW 23.40	= 80% Recharge Water Level

Bore Hole Diameter

PURGE VOLUME CALCULATIONS

8 (inches)	Standing Water in Casing (feet)	X 0.77=	X 3=	total volume purged (gal)
10 (inches)	Standing Water in Casing (feet)	X 1.50=	X 3=	total volume purged (gal)

Date Purged: 10-5-04 Start (2400 Hr.): 1337 End (2400 Hr.): 1411

Date Sampled: 10-5-04 Time (2400 Hr.): 1427 DTW @ Samp. Time: 23.40

FIELD QC SAMPLES COLLECTED AT THIS WELL (IE: FB-1, X-DUP-1):

TIME (2400 HR.)	VOLUME (gallons)	TEMP (degrees F)	E.C. (uS/cm)	pH (units)	COLOR (visual)*	TURBIDITY (visual)**	~~TURBIDIMETER (units)~~	
1348	14	73.8	2613	7.00	cloudy	light	ORP	Fe+2
1359	28	73.4	2670	7.09	cloudy	light	76	Q
1411	33	73.1	2596	7.41	cloudy	light		

*(Color) Clear, Cloudy Yellow, Brown

*(Turbidity) Heavy, Moderate, Light, Trace

PURGING EQUIPMENT		SAMPLING EQUIPMENT	
2" Bladder Pump	Bailer (Teflon)	2" Bladder Pump	Bailer (Stainless Steel)
Centrifugal Pump	Bailer (PVC)	Submersible Pump	Bailer (Teflon)
X Submersible Pump	Bailer (Stainless Steel)	Dipper	X Bailer (Disposable Teflon)
Redi-Flo2	Dedicated Stinger	Well Wizard	Dedicated
Other:		Other:	

Well Condition (cap, cement, padlock, screws, lid, etc.):

Floating Product Thickness (Feet):

COMMENTS: dry @ 33 gal.

40 ml VOA, HCl: 4 1 liter amber, none: 16 oz poly, HNO3:

WATER LEVEL ONLY. NO SAMPLE COLLECTED: [ ] REVIEWED BY: Bruce McGuire DATE: 10-8-04

GROUNDWATER SAMPLING FORM

ATLANTIC RICHFIELD COMPANY

PROJECT NO.: 14BP.U6021.05	SAMPLE ID: MW-9
SAMPLER: Adrian Campos	ARCO FACILITY NO.: 6021
DATE: 10-5-04	LOCATION: OCEANSIDE

CASING DIAMETER (inches) 2 3 (4) 6 8 12

DEPTH OF WELL (feet): 30.00	CALCULATED PURGE (gal): 36
DEPTH OF WATER (feet): 22.53	ACTUAL PURGE VOL (gal): 29
Standing Water in Casing (feet): 7.47 X 0.20 = 1.494 + DTW 24.02 = 80% Recharge Water Level	

Bore Hole Diameter

PURGE VOLUME CALCULATIONS

8 (inches)	Standing Water in Casing (feet)	X 0.77=	X 3=	total volume purged (gal)
10 (inches)	Standing Water in Casing (feet)	X 1.50=	X 3=	total volume purged (gal)

Date Purged: 10-5-04 Start (2400 Hr.): 1212 End (2400 Hr.): 1247

Date Sampled: 10-5-04 Time (2400 Hr.): 1340 DTW @ Samp. Time: 22.80

FIELD QC SAMPLES COLLECTED AT THIS WELL (IE: FB-1, X-DUP-1):

TIME (2400 HR.)	VOLUME (gallons)	TEMP (degrees F)	E.C. (uS/cm)	pH (units)	COLOR (visual)*	TURBIDITY (visual)**	~~TOTALIZER (gallons)~~	
1221	12	73.8	2297	7.27	cloudy	light	ORP	Fe+2
1232	24	73.1	2295	7.74	cloudy	light	87	Q
1247	29	73.1	2284	7.61	cloudy	light		

*(Color) Clear, Cloudy Yellow, Brown

*(Turbidity) Heavy, Moderate, Light, Trace

PURGING EQUIPMENT		SAMPLING EQUIPMENT	
2" Bladder Pump	Bailer (Teflon)	2" Bladder Pump	Bailer (Stainless Steel)
Centrifugal Pump	Bailer (PVC)	Submersible Pump	Bailer (Teflon)
X Submersible Pump	Bailer (Stainless Steel)	Dipper	X Bailer (Disposable Teflon)
Redi-Flo2	Dedicated Stinger	Well Wizard	Dedicated
Other:		Other:	

Well Condition (cap, cement, padlock, screws, lid, etc.):

Floating Product Thickness (Feet):

COMMENTS: Collected additional analytical dry @ 29 gal

40 ml VOA, HCl: 4 1 liter amber, none: 16 oz poly, HNO_3:

WATER LEVEL ONLY. NO SAMPLE COLLECTED: ☐ REVIEWED BY: Bruce Main DATE: 10-8-04

GROUNDWATER SAMPLING FORM

ATLANTIC RICHFIELD COMPANY

PROJECT NO.:	14BP.U6021.05	SAMPLE ID:	MW-10
SAMPLER:	Adrian	ARCO FACILITY NO.:	6021
DATE:	10-5-04	LOCATION:	OCEANSIDE

CASING DIAMETER (inches) 2 3 (4) 6 8 12

DEPTH OF WELL (feet):	30.00	CALCULATED PURGE (gal):	45
DEPTH OF WATER (feet):	19.81	ACTUAL PURGE VOL (gal):	45

Standing Water in Casing (feet): 10.19 X 0.20 = 2.038 + DTW 21.84 = 80% Recharge Water Level

Bore Hole Diameter

PURGE VOLUME CALCULATIONS

8 (inches)	Standing Water in Casing (feet)	X 0.77=	X 3=	total volume purged (gal)
10 (inches)	Standing Water in Casing (feet)	X 1.50=	X 3=	total volume purged (gal)

Date Purged: 10-5-04 Start (2400 Hr.): 1534 End (2400 Hr.): 1607

Date Sampled: 10-5-04 Time (2400 Hr.): 1618 DTW @ Samp. Time: 21.84

FIELD QC SAMPLES COLLECTED AT THIS WELL (IE: FB-1, X-DUP-1):

TIME (2400 HR.)	VOLUME (gallons)	TEMP (degrees F)	E.C. (uS/cm)	pH (units)	COLOR (visual)*	TURBIDITY (visual)**	~~TOTALIZER (gallons)~~	
1543	15	74.3	1913	7.59	cloudy	light	ORP	Fe+2
1559	30	73.2	1774	7.16	cloudy	light	20	2
1607	45	72.9	1711	7.00	cloudy	light		

*(Color) Clear, Cloudy Yellow, Brown

**(Turbidity) Heavy, Moderate, Light, Trace

PURGING EQUIPMENT		SAMPLING EQUIPMENT	
2" Bladder Pump	Bailer (Teflon)	2" Bladder Pump	Bailer (Stainless Steel)
Centrifugal Pump	Bailer (PVC)	Submersible Pump	Bailer (Teflon)
X Submersible Pump	Bailer (Stainless Steel)	Dipper	X Bailer (Disposable Teflon)
Redi-Flo2	Dedicated Slinger	Well Wizard	Dedicated
Other:		Other:	

Well Condition (cap, cement, padlock, screws, lid, etc.):

Floating Product Thickness (Feet):

COMMENTS:

40 ml VOA, HCl: 4 1 liter amber, none: 16 oz poly, HNO3:

WATER LEVEL ONLY. NO SAMPLE COLLECTED: ☐ REVIEWED BY: Bruce McFann DATE: 10-8-04

GROUNDWATER SAMPLING FORM

ATLANTIC RICHFIELD COMPANY

PROJECT NO.: 14BP.U6021.05	SAMPLE ID: MW-11
SAMPLER:	ARCO FACILITY NO.: 6021
DATE: 10-5-04	LOCATION: OCEANSIDE

CASING DIAMETER (inches) 2 3 (4) 6 8 12

DEPTH OF WELL (feet): 30.00	CALCULATED PURGE (gal): 30
DEPTH OF WATER (feet): 22.90	ACTUAL PURGE VOL (gal): 23
Standing Water in Casing (feet): 7.1 X 0.20 = 1.42	+ DTW 24.32 = 80% Recharge Water Level

Bore Hole Diameter

PURGE VOLUME CALCULATIONS

8 (inches)	Standing Water in Casing (feet)	X 0.77=	X 3=	total volume purged (gal)
10 (inches)	Standing Water in Casing (feet)	X 1.50=	X 3=	total volume purged (gal)

Date Purged: 10-5-04 Start (2400 Hr.): 1420 End (2400 Hr.): 1447

Date Sampled: 10-5-04 Time (2400 Hr.): 1508 DTW @ Samp. Time: 24.32

FIELD QC SAMPLES COLLECTED AT THIS WELL (IE: FB-1, X-DUP-1):

TIME (2400 HR.)	VOLUME (gallons)	TEMP (degrees F)	E.C. (uS/cm)	pH (units)	COLOR (visual)*	TURBIDITY (visual)**	~~TOTALIZER~~ (gallons)	
1430	10	73.8	1433	7.19	clear	light	ORP	Fe+2
1439	20	73.5	1410	7.01	clear	light	35	.20
1447	23	73.1	1407	7.03	cloudy	light		

*(Color) Clear, Cloudy Yellow, Brown **(Turbidity) Heavy, Moderate, Light, Trace

PURGING EQUIPMENT		SAMPLING EQUIPMENT	
2" Bladder Pump	Bailer (Teflon)	2" Bladder Pump	Bailer (Stainless Steel)
Centrifugal Pump	Bailer (PVC)	Submersible Pump	Bailer (Teflon)
X Submersible Pump	Bailer (Stainless Steel)	Dipper	X Bailer (Disposable Teflon)
Redi-Flo2	Dedicated Stinger	Well Wizard	Dedicated
Other:		Other:	

Well Condition (cap, cement, padlock, screws, lid, etc.):

Floating Product Thickness (Feet):

COMMENTS: dry @ 23 gal.

40 ml VOA, HCl : 4 1 liter amber, none: 16 oz poly, HNO3:

WATER LEVEL ONLY. NO SAMPLE COLLECTED: ☐ REVIEWED BY: Bruce Nelson DATE: 10-8-04

GROUNDWATER SAMPLING FORM

ATLANTIC RICHFIELD COMPANY

PROJECT NO.:	14BP.U6021.05	SAMPLE ID:	MW-12
SAMPLER:	Adrian	ARCO FACILITY NO.:	6021
DATE:	10-5-04	LOCATION:	OCEANSIDE

CASING DIAMETER (inches) 2 3 (4) 6 8 12

DEPTH OF WELL (feet):	30.00	CALCULATED PURGE (gal):	30
DEPTH OF WATER (feet):	23.54	ACTUAL PURGE VOL (gal):	25
Standing Water in Casing (feet):	6.46 X 0.20 = 1.292 + DTW 24.83 = 80% Recharge Water Level		

Bore Hole Diameter

PURGE VOLUME CALCULATIONS

8 (inches)	Standing Water in Casing (feet)	X 0.77=	X 3=	total volume purged (gal)
10 (inches)	Standing Water in Casing (feet)	X 1.50=	X 3=	total volume purged (gal)

Date Purged: 10-5-04 Start (2400 Hr.): 1300 End (2400 Hr.): 1323

Date Sampled: 10-5-04 Time (2400 Hr.): 1345 DTW @ Samp. Time: 23.98

FIELD QC SAMPLES COLLECTED AT THIS WELL (IE: FB-1, X-DUP-1):

TIME (2400 HR.)	VOLUME (gallons)	TEMP (degrees F)	E.C. (uS/cm)	pH (units)	COLOR (visual)*	TURBIDITY (visual)**	~~TOTALIZER (gallons)~~	
1307	10	73.4	1324	7.72	cloudy	light	ORP	Fe+2
1316	20	73.7	1341	7.61	Grey	light	84	0
1323	25	73.4	1388	7.53	Grey	light		

*(Color) Clear, Cloudy Yellow, Brown

*(Turbidity) Heavy, Moderate, Light, Trace

PURGING EQUIPMENT		SAMPLING EQUIPMENT	
2" Bladder Pump	Bailer (Teflon)	2" Bladder Pump	Bailer (Stainless Steel)
Centrifugal Pump	Bailer (PVC)	Submersible Pump	Bailer (Teflon)
X Submersible Pump	Bailer (Stainless Steel)	Dipper	X Bailer (Disposable Teflon)
Redi-Flo2	Dedicated Stinger	Well Wizard	Dedicated
Other:		Other:	

Well Condition (cap, cement, padlock, screws, lid, etc.):

Floating Product Thickness (Feet):

COMMENTS: Collected additional analytical dry @ 25 gal.

40 ml VOA, HCl : 4 1 liter amber, none: 16 oz poly, HNO3:

WATER LEVEL ONLY, NO SAMPLE COLLECTED: ☐ REVIEWED BY: Bruce M. Gain DATE: 10-8-04

-16

NO. 842944

NON-HAZARDOUS WASTE DATA FORM

TO BE COMPLETED BY GENERATOR

SITE:

EPA I.D. NO. NOT REQUIRED

NAME BP WEST COAST PRODUCTS LLC ARCO #6021

PROFILE NO.

ADDRESS P.O. BOX 80249 1801 SOUTH HILL AVENUE

CITY, STATE, ZIP RANCHO SANTA MARGARITA, CA 92688 OCEANSIDE, CA 92054 PHONE NO. ( )

CONTAINERS: No. 6 VOLUME 330 gallons WEIGHT

TYPE: [X] TANK TRUCK [ ] DUMP TRUCK [ ] CARTONS [ ] OTHER

WASTE DESCRIPTION NON-HAZARDOUS WATER GENERATING PROCESS WELL PURGING/DECON WATER

COMPONENTS OF WASTE	PPM	%	COMPONENTS OF WASTE	PPM	%
1. WATER	99-100%		5.		
2. TPH	<1%		6.		
3.			7. BESI#105244.02		
4.			8.		

PROPERTIES: pH 7-10 [ ] SOLID [ ] LIQUID [ ] SLUDGE [ ] SLURRY [ ] OTHER

HANDLING INSTRUCTIONS: WEAR ALL APPROPRIATE PROTECTIVE CLOTHING

THE GENERATOR CERTIFIES THAT THE WASTE AS DESCRIBED IS 100% NON-HAZARDOUS.

Larry McGehan BESI for ARCO 10-18-04

TYPED OR PRINTED FULL NAME & SIGNATURE DATE

TRANSPORTER

EPA I.D. NO.

NAME Belshire Environmental Services, Inc. Nieto and Sons

ADDRESS 25971 TOWNE CENTRE DRIVE 1281 Brea Canyon Road SERVICE ORDER NO.

CITY, STATE, ZIP Lake Forest, CA 92610 Brea, CA 92821 PICK UP DATE 10 - 20 - 04

PHONE NO. 949-460-5200 (714) 990-6855

Steve Nieto (GG) 10 - 20 - 04

TYPED OR PRINTED FULL NAME & SIGNATURE DATE

TRUCK, UNIT, I.D. NO.

TSD FACILITY

EPA I.D. NO.

NAME DeMenno Kerdoon

DISPOSAL METHOD

ADDRESS 2000 N. Alameda St.

[ ] LANDFILL [X] OTHER RECYCLER

CITY, STATE, ZIP Compton, CA 90222

PHONE NO. 310-537-7100

10/21/04

TYPED OR PRINTED FULL NAME & SIGNATURE DATE

GEN	OLD/NEW	L A	TONS
TRANS		S B	
DIO		RT/CD	HWDF NONE

DISCREPANCY

10/21/04 14:17 FAX 714 990 4862