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January 5, 2005
PN 14BP.U6143.02.4L58

Mr. Arman Toumari
California Regional Water Quality Control Board
Los Angeles Region
320 W. 4th Street, Suite 200
Los Angeles, CA 90013

SUBJECT: Fourth Quarter 2004 Groundwater Monitoring Report
ARCO Facility 06143
3704 Cahuenga Boulevard
North Hollywood, California
File Number 916040416A

Dear Mr. Toumari:

Please find attached the Fourth Quarter 2004 Groundwater Monitoring Report prepared by SECOR International Incorporated (SECOR) on behalf of Atlantic Richfield Company for the referenced site.

If you have any questions regarding the contents of this report, please call Ms. Cathy Sanford at (714) 379-3366, extension 276.

Respectfully submitted,
SECOR International Incorporated

Prepared By:	Reviewed by:	Approved by:
Carrie Salenko	Cathy Sanford	Holly Quasem
Carrie Salenko Staff Scientist	Cathy Sanford Associate Geologist	Holly Quasem, P.E. 56022 Senior Engineer

REGISTERED PROFESSIONAL ENGINEER
HOLLY E. QUASEM
No. C 56022
Exp. 12/31/06
CIVIL
STATE OF CALIFORNIA

Enclosure

cc: Mr. Roy Thun, Atlantic Richfield Company

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ATLANTIC RICHFIELD COMPANY QUARTERLY REPORT
Fourth Quarter 2004 January 5, 2005

ARCO Facility: 06143 Address: 3704 Cahuenga Boulevard, North Hollywood, California
Atlantic Richfield Company Environmental Engineer/Phone No.: Mr. Roy Thun/661-287-3855
Consulting Co./Contact Person/Phone No.: SECOR/ Ms. Cathy Sanford/ (714) 379-3366 Ext. 276
SECOR Project No.:14BP.U6143.02.4L58
Primary Agency/Regulatory ID No.: LARWQCB/Arman Toumari/Case No. 916040416A
Other Agencies to Receive Copies: None

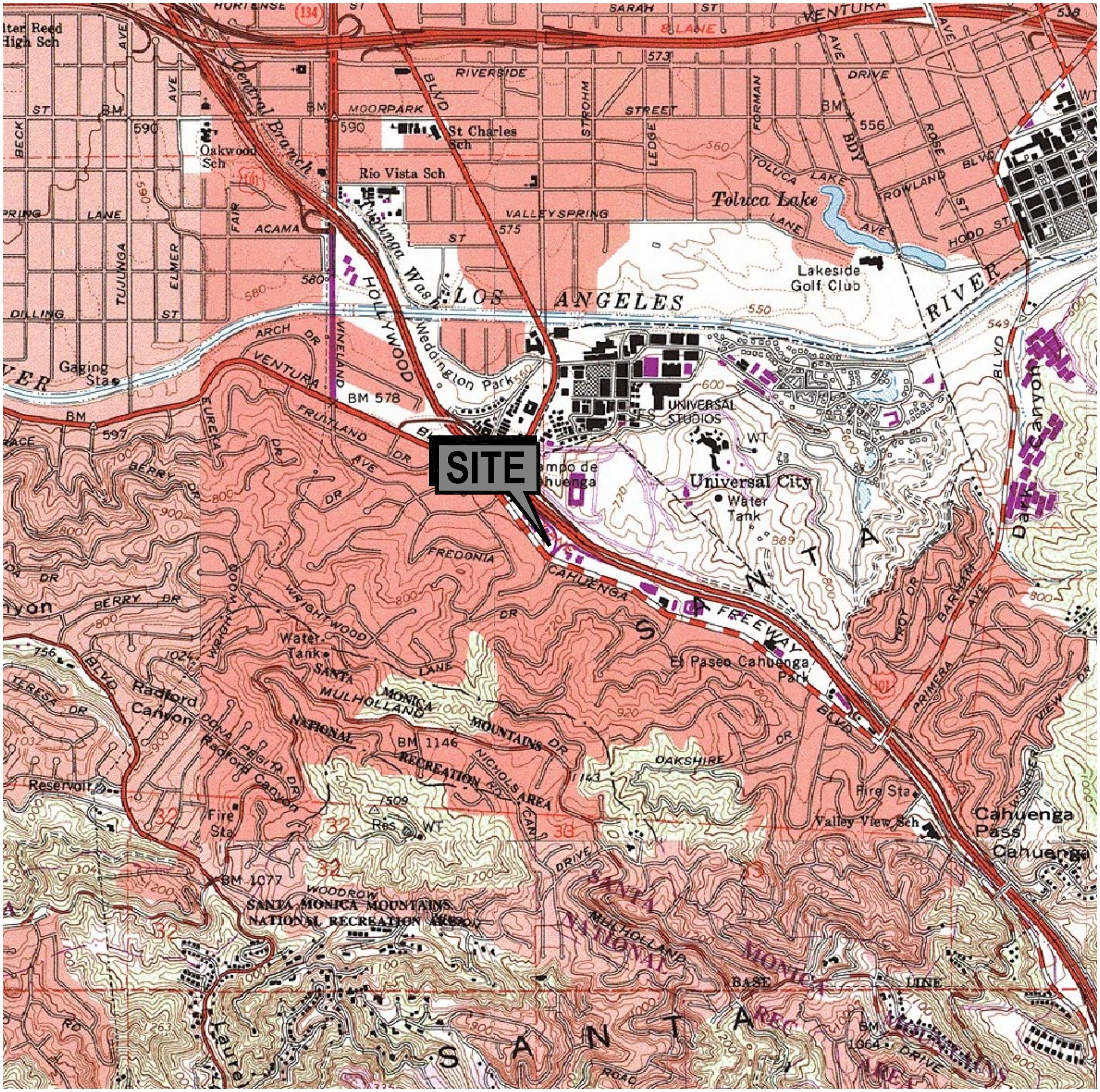
WORK PERFORMED THIS QUARTER [Fourth - 2004]:
1. Completed quarterly groundwater sampling and prepared Quarterly Groundwater Monitoring Report.

WORK PROPOSED FOR NEXT QUARTER [First- 2005]:
1. Conduct quarterly groundwater sampling and prepare Quarterly Groundwater Monitoring Report.
2. Request Case Closure.

Current Phase of Project:	Assessment/Monitoring	(Assmnt, Remed. etc)
Frequency of Sampling:	Quarterly	(Quarterly, etc.)
Frequency of Monitoring:	Quarterly	(Monthly, etc.)
Liquid Phase Hydrocarbon Present On-Site	No	(Yes/No)
Cumulative LPH Recovered to Date:	None	(gallons)
LPH Recovered This Quarter:	None	(gallons)
Bulk Soil Removed to Date:	855	(cubic yards)
Bulk Soil Removed This Quarter:	None	(cubic yards)
Water Wells or Surface Waters (4000-ft)	Well 3835H	
Radius & Their Respective Directions:	2,600 ft N	(Distance and Direction)
Current Remediation Techniques:	None	(SVES, LPH Removal)
Permits for Discharge:	N/A	(NPDES, POTW, etc.)
Approximate Depth to Groundwater:	15.30 to 17.98	(Measured Feet)
Groundwater Gradient:	North - Northwest	(Direction)
	0.01 feet/foot	(Magnitude)
Agency Directive Requirement:	Conduct quarterly groundwater monitoring and reporting per LARWQCB directive dated September 16, 2003.	

ATTACHED:
- Figure 1 - Site Location Map
- Figure 2 - Groundwater Elevation Contour Map
- Figure 3 - Hydrocarbon Concentration in Groundwater Map
- Figure 4 - GRO Isoconcentration Contour Map
- Figure 5 - Benzene Isoconcentration Contour Map
- Figure 6 - MTBE Isoconcentration Contour Map
- Figure 7 - TBA Isoconcentration Contour Map
- Table 1 - Groundwater Elevation and Analytical Data
- Appendix A – Groundwater Sampling Field Data Sheets
- Appendix B – Waste Disposal Documents
- Appendix C – Certified Laboratory Analytical Report and Chain-of-Custody Documentation

FIGURES



CALIFORNIA

QUADRANGLE LOCATION

NORTH

SCALE
1 inch = 2000 feet
0 1000 2000

REFERENCE: USGS 7.5 MINUTE QUADRANGLE; NORTH HOLLYWOOD QUAD, CALIFORNIA; REVISION DATE 1981

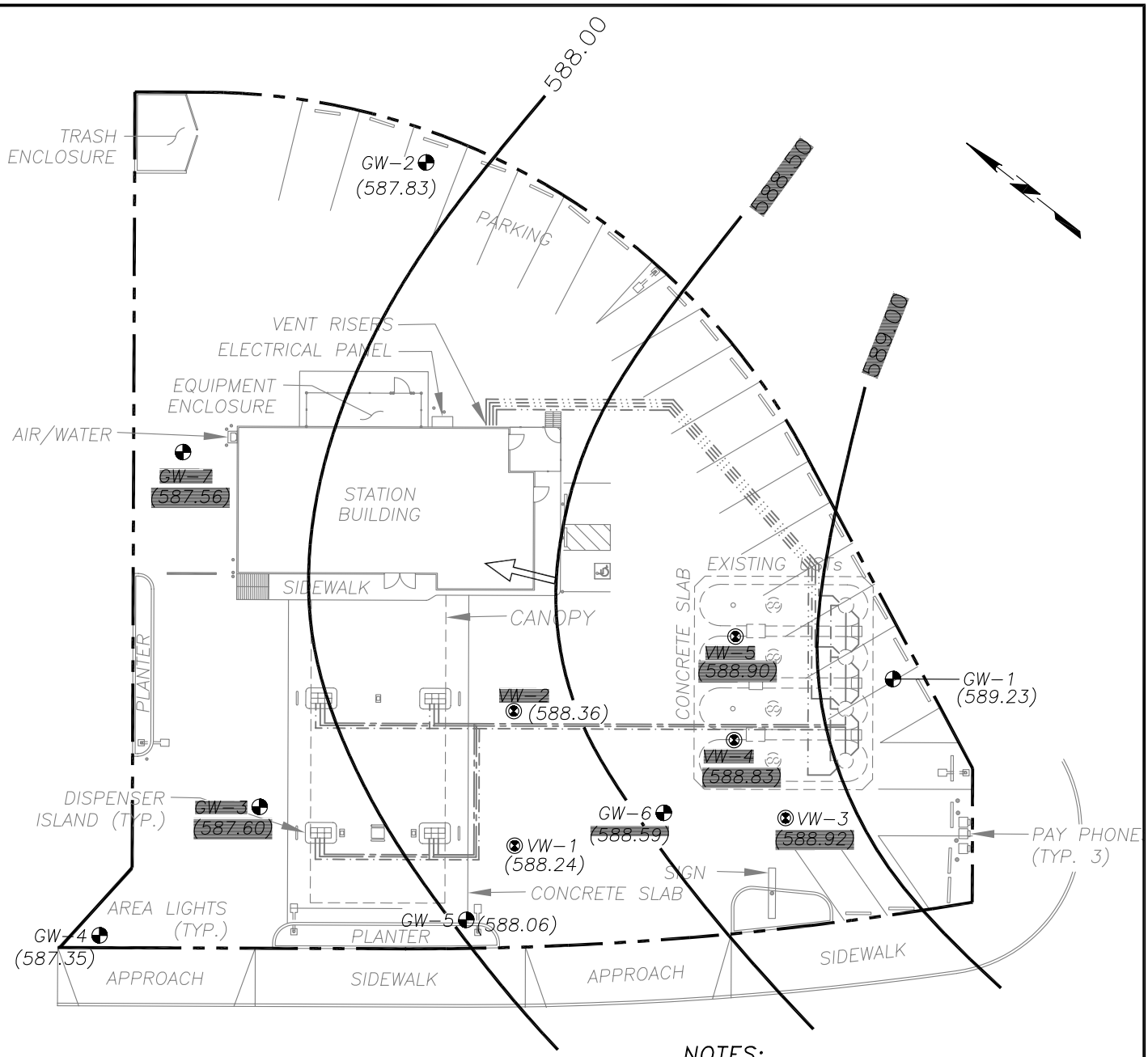
SECOR
11085 KNOTT AVENUE, SUITE B
CYPRESS, CALIFORNIA
PHONE: (714)379-3366/FAX: (714)379-3375

PREPARED FOR:
ATLANTIC RICHFIELD COMPANY
FACILITY 06143
3704 CAHUENGA BOULEVARD
NORTH HOLLYWOOD

SITE LOCATION MAP

FIGURE: **1**

JOB NUMBER:	DRAWN BY:	CHECKED BY:	APPROVED BY:	DATE:
14BP.U6143.02.4081	L. RAMIREZ	C. SALENKO	C. SANFORD	OCTOBER 2004



LEGEND

— — —	SITE PROPERTY LINE
GW-1	GROUNDWATER MONITORING WELL LOCATIONS
VW-1	VADOSE MONITORING WELL LOCATIONS
(587.83)	GROUNDWATER ELEVATION (Feet above mean sea level)
⇨	GROUNDWATER FLOW DIRECTION
∼	GROUNDWATER ELEVATION CONTOUR LINE

NOTES:

1. SOURCE OF MAP: F.F. AND ASSOCIATES, DATED OCTOBER 2, 2000.
2. MONITORING WELLS SURVEYED BY WM HOLDINGS INC., ON NOVEMBER 13, 2003. SITE FEATURES AND LOCATIONS ARE APPROXIMATE.
3. GROUNDWATER MONITORING WELLS SAMPLED AND GAUGED ON OCTOBER 14, 2004.

0 30 60

APPROXIMATE SCALE IN FEET

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GROUNDWATER ELEVATION CONTOUR MAP

FIGURE: **2**

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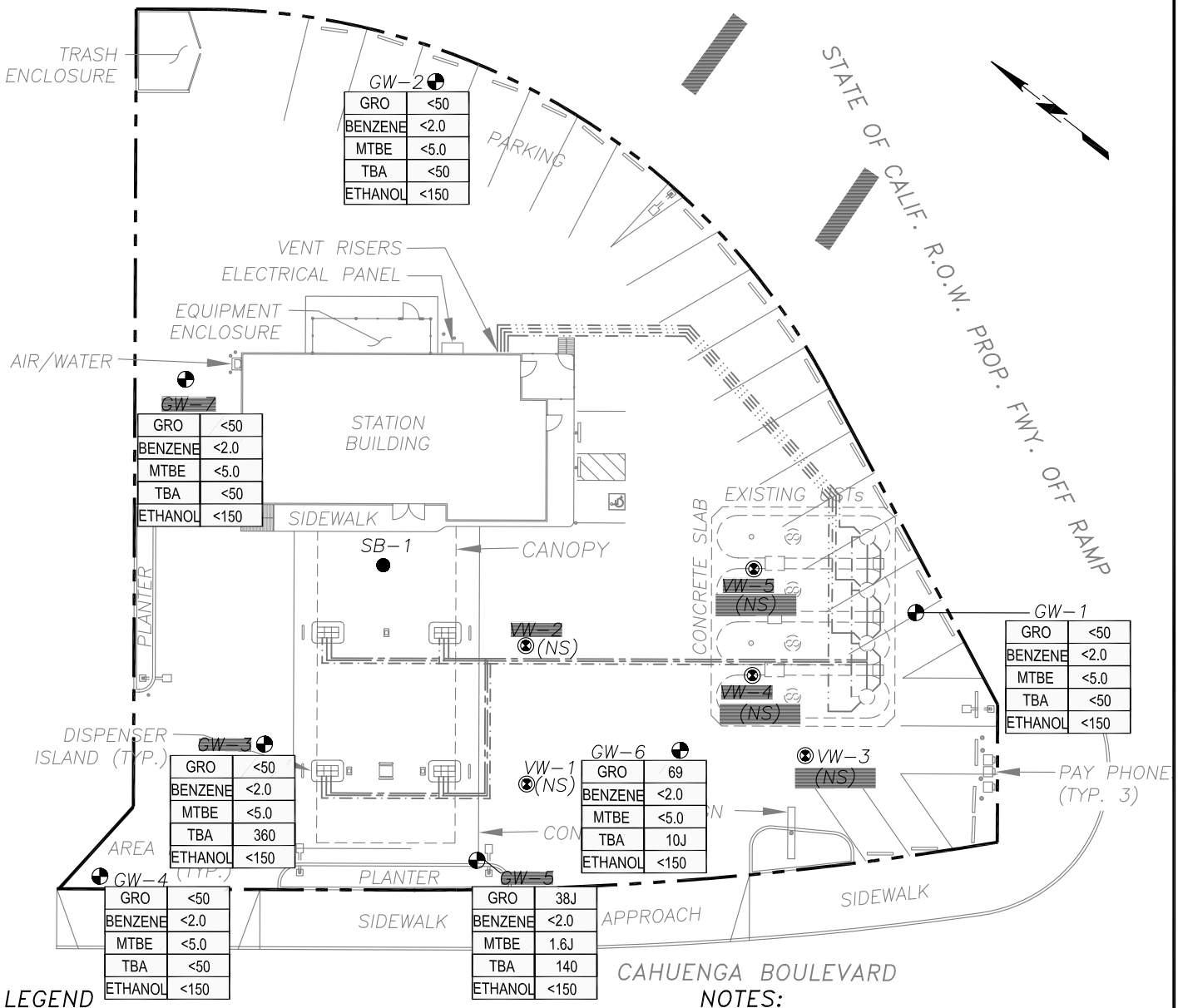

LEGEND

— — —	SITE PROPERTY LINE
GW-1 ⊕	GROUNDWATER MONITORING WELL LOCATIONS
VW-1 ⊗	VADOSE MONITORING WELL LOCATIONS
(NS)	NOT SAMPLED
J	ESTIMATED VALUE; BELOW THE REPORTING LIMIT AND ABOVE THE METHOD DETECTION LIMIT (MDL)
GRO	GASOLINE RANGE ORGANICS (C4-C12)
BENZENE	BENZENE
MTBE	METHYL TERTIARY BUTYL ETHER
TBA	TERTIARY BUTYL ALCOHOL
ETHANOL	ETHANOL CONCENTRATIONS IN MICROGRAMS PER LITER (ug/L)

NOTES:

1. SOURCE OF MAP: F.F. AND ASSOCIATES, DATED OCTOBER 2, 2000.
2. MONITORING WELLS SURVEYED BY WM HOLDINGS INC., ON NOVEMBER 13, 2003. SITE FEATURES AND LOCATIONS ARE APPROXIMATE.
3. GROUNDWATER MONITORING WELLS SAMPLED AND GAUGED ON OCTOBER 14, 2004.

0 30 60

APPROXIMATE SCALE IN FEET

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NORTH HOLLYWOOD

HYDROCARBON CONCENTRATION IN GROUNDWATER MAP

FIGURE: **3**

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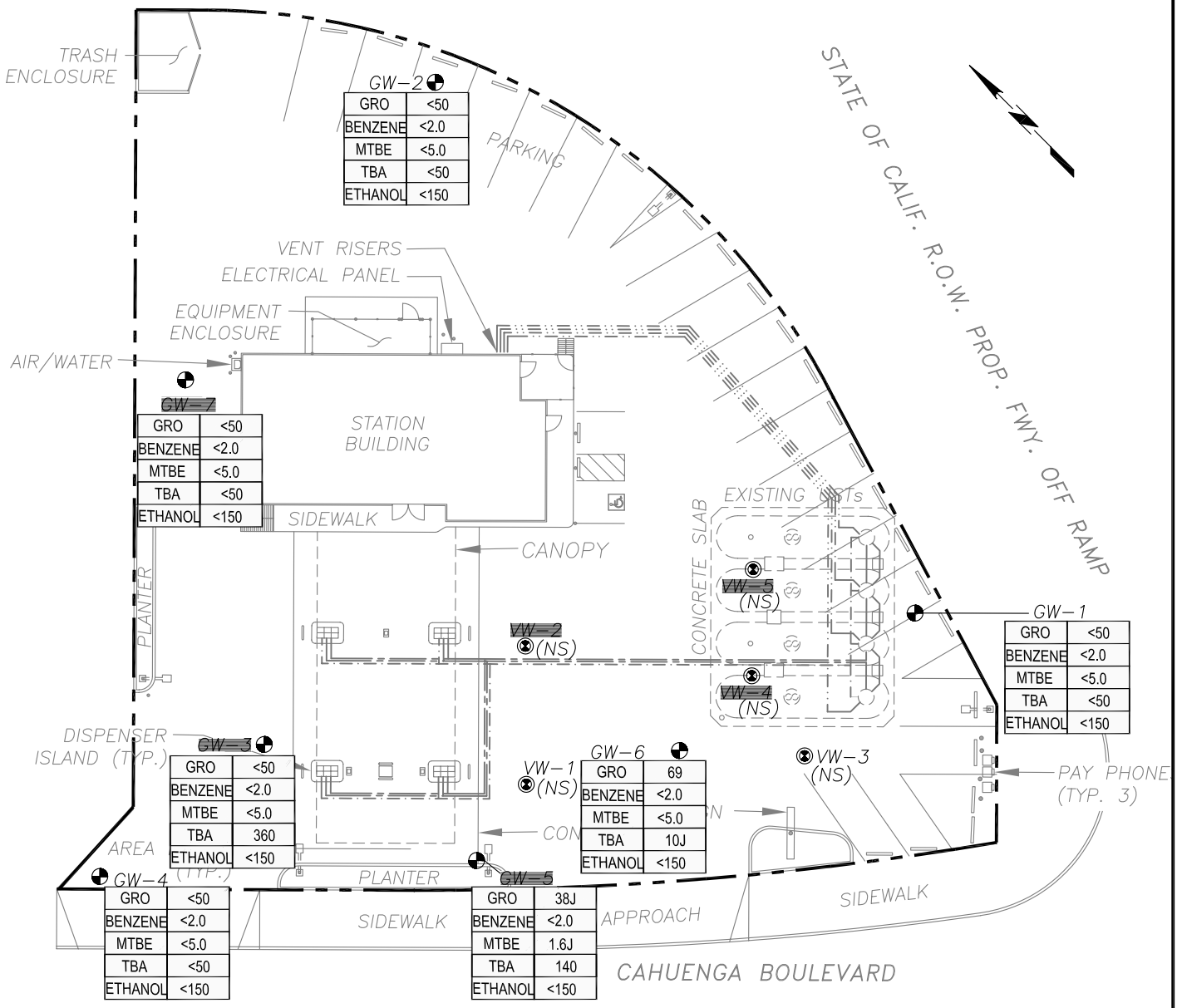

LEGEND

— — —	SITE PROPERTY LINE
GW-1	GROUNDWATER MONITORING WELL LOCATIONS
VW-1	VADOSE MONITORING WELL LOCATIONS
(NS)	NOT SAMPLED
J	ESTIMATED VALUE; BELOW THE REPORTING LIMIT AND ABOVE THE METHOD DETECTION LIMIT (MDL)
GRO	GASOLINE RANGE ORGANICS (C4-C12)
BENZENE	BENZENE
MTBE	METHYL TERTIARY BUTYL ETHER
TBA	TERTIARY BUTYL ALCOHOL
ETHANOL	ETHANOL CONCENTRATIONS IN MICROGRAMS PER LITER (ug/L)

NOTES:

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3. GROUNDWATER MONITORING WELLS SAMPLED AND GAUGED ON OCTOBER 14, 2004.
4. GRO NOT DETECTED ABOVE 100 ug/L

0 30 60

APPROXIMATE SCALE IN FEET

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GRO ISOCONCENTRATION CONTOUR MAP

FIGURE: **4**

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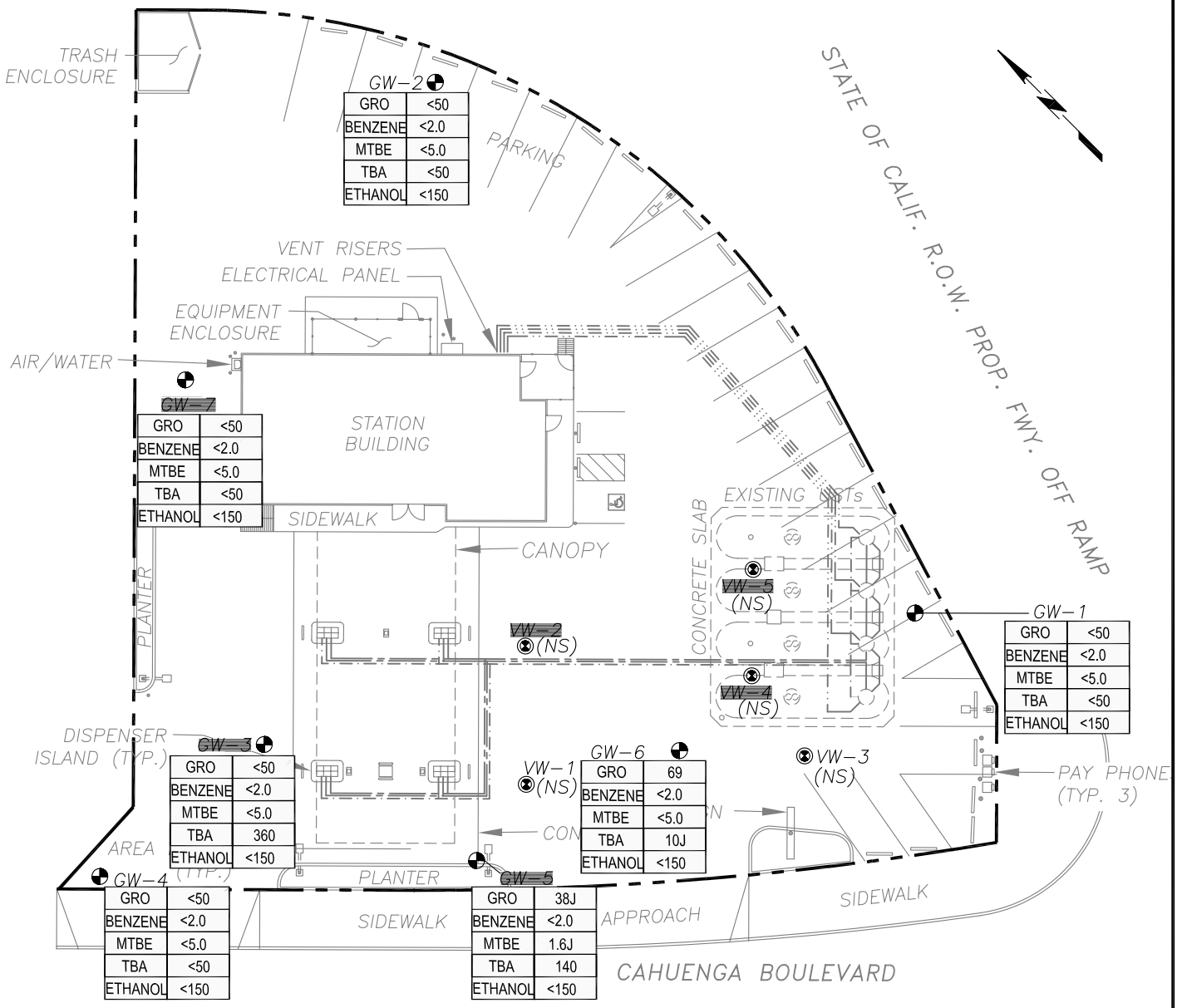

LEGEND

— — —	SITE PROPERTY LINE
GW-1	GROUNDWATER MONITORING WELL LOCATIONS
VW-1	VADOSE MONITORING WELL LOCATIONS
(NS)	NOT SAMPLED
J	ESTIMATED VALUE; BELOW THE REPORTING LIMIT AND ABOVE THE METHOD DETECTION LIMIT (MDL)
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BENZENE	BENZENE
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3. GROUNDWATER MONITORING WELLS SAMPLED AND GAUGED ON OCTOBER 14, 2004.
4. BENZENE NOT DETECTED AT OR ABOVE THE LABORATORY REPORTING LIMIT.

0 30 60

APPROXIMATE SCALE IN FEET

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BENZENE ISOCONCENTRATION CONTOUR MAP

FIGURE: **5**

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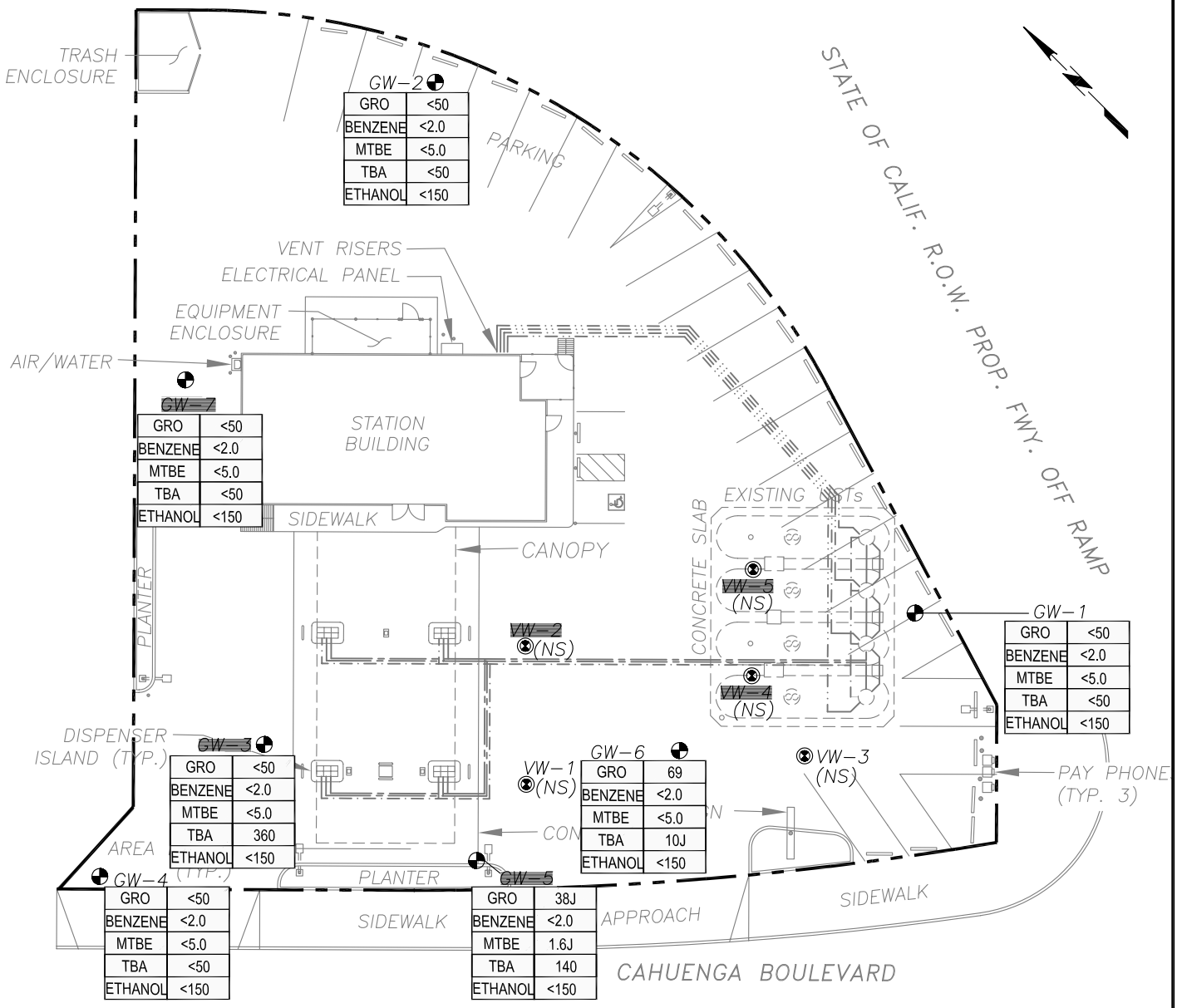

LEGEND

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4. MTBE NOT DETECTED AT OR ABOVE THE LABORATORY REPORTING LIMIT.

0 30 60

APPROXIMATE SCALE IN FEET

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MTBE ISOCONCENTRATION CONTOUR MAP

FIGURE: **6**

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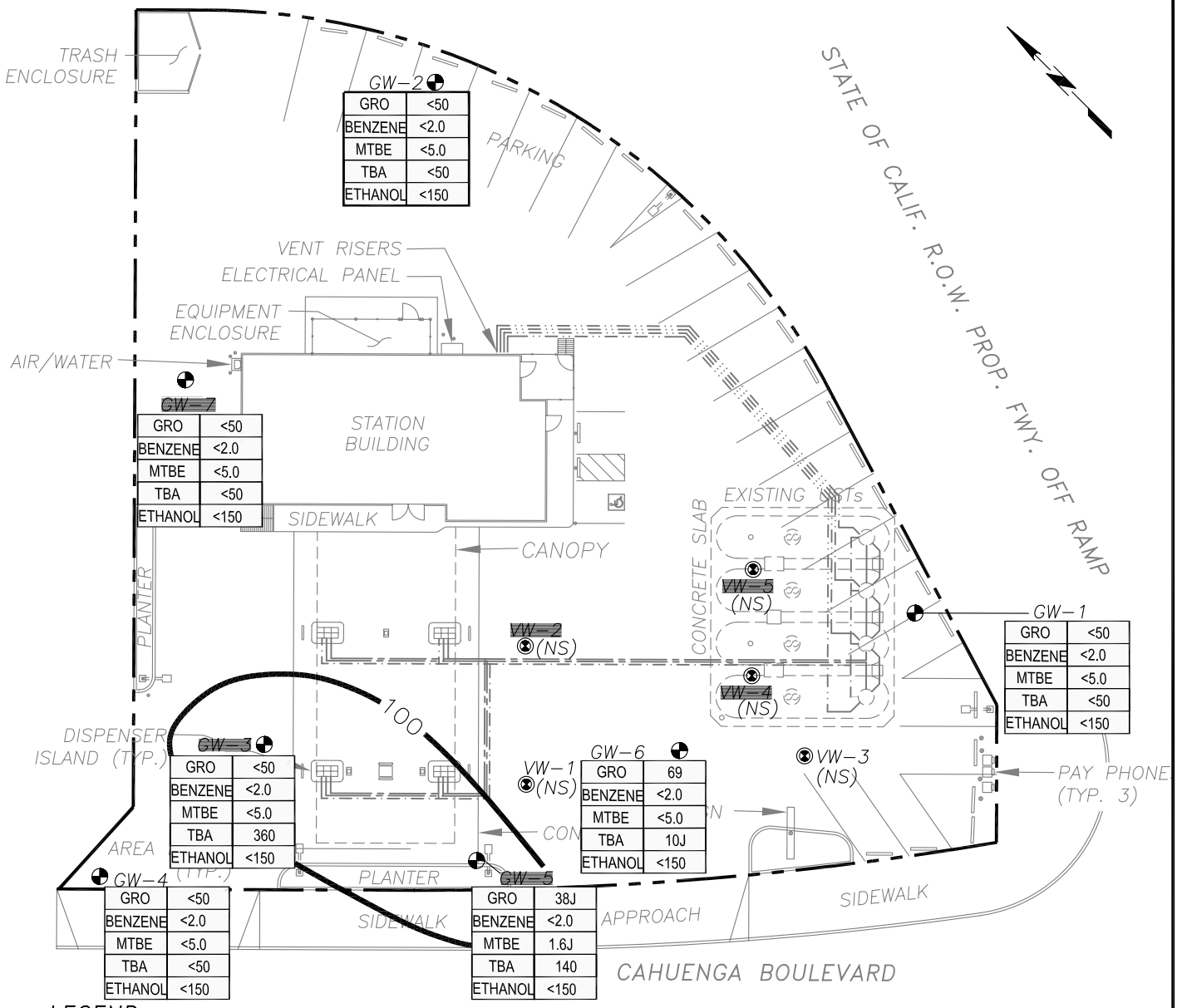

LEGEND

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TBA	TERTIARY BUTYL ALCOHOL
ETHANOL	ETHANOL CONCENTRATIONS IN MICROGRAMS PER LITER (ug/L)
—100—	TBA CONCENTRATION CONTOUR

NOTES:

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0 30 60

APPROXIMATE SCALE IN FEET

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NORTH HOLLYWOOD, CALIFORNIA

TBA ISOCONCENTRATION CONTOUR MAP

FIGURE: **7**

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14BP.U6143.03.4081	L. RAMIREZ	C. SALENKO	C. SANFORD	OCTOBER 2004

TABLE

Table 1
Groundwater Elevation and Analytical Data
ARCO Facility 06143
3704 Cahuenga Boulevard
North Hollywood, California

WELL NAME	SAMPLE DATE	WELL HEAD ELEVATION feet amsl	DEPTH TO WATER feet btoc	LPH THICKNESS feet	GROUND WATER ELEVATION feet amsl	GRO µg/L	BENZENE µg/L	ETHYL-BENZENE µg/L	TOLUENE µg/L	TOTAL XYLENES µg/L	MTBE µg/L	DIPE µg/L	ETBE µg/L	TAME µg/L	TBA µg/L	ETHANOL µg/L
GW-1	11/06/92	183.84	17.84	0.00	166.00	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA
	08/16/93		14.74	0.00	169.10	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA
	10/13/93		15.62	0.00	168.22	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA
	03/29/94		14.42	0.00	169.42	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA
	06/09/94		17.43	0.00	166.41	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA
	10/13/94		18.50	0.00	165.34	<50	<0.30	<0.30	<0.30	<0.60	NA	NA	NA	NA	NA	NA
	03/28/95		14.93	0.00	168.91	<50	<0.30	<0.30	<0.30	<0.60	NA	NA	NA	NA	NA	NA
	08/27/02		14.95	0.00	168.89	<50	<2.0	<2.0	<2.0	<4.0	<5.0	<5.0	<5.0	<5.0	<50	NA
	12/26/02		18.60	0.00	165.24	<50	<2.0	<2.0	<2.0	<4.0	<5.0	<5.0	<5.0	<5.0	<50	NA
	07/25/03	605.78	18.66	0.00	587.12	<50	<2.0	<2.0	<2.0	<4.0	<5.0	<5.0	<5.0	<5.0	<50	<150
	12/03/03		18.80	0.00	586.98	<50	<2.0	<2.0	<2.0	<4.0	<5.0	<5.0	<5.0	<5.0	<50	<150
	03/24/04		17.14	0.00	588.64	<50	<2.0	<2.0	<2.0	<4.0	<5.0	<5.0	<5.0	<5.0	<50	<150
	06/23/04		16.57	0.00	589.21	<50	<2.0	<2.0	<2.0	<4.0	<5.0	<5.0	<5.0	<5.0	<50	<150
	08/17/04		16.31	0.00	589.47	<50	<2.0	<2.0	<2.0	<4.0	<5.0	<5.0	<5.0	<5.0	<50	<150
	10/14/04		16.55	0.00	589.23	<50	<2.0	<2.0	<2.0	<4.0	<5.0	<5.0	<5.0	<5.0	<50	<150
GW-2	11/06/92	183.88	18.86	0.00	165.02	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA
	08/16/93		16.10	0.00	167.78	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA
	10/13/93		16.90	0.00	166.98	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA
	03/29/94		15.78	0.00	168.10	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA
	06/09/94		18.49	0.00	165.39	83	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA
	10/13/94		19.47	0.00	164.41	<50	<0.30	<0.30	<0.30	<0.60	NA	NA	NA	NA	NA	NA
	03/28/95		16.16	0.00	167.72	<50	<0.30	<0.30	<0.30	<0.60	NA	NA	NA	NA	NA	NA
	08/27/02		18.49	0.00	165.39	8.8J	<2.0	<2.0	<2.0	<4.0	<5.0	<5.0	<5.0	<5.0	<50	NA
	12/26/02		19.47	0.00	164.41	<50	<2.0	<2.0	<2.0	<4.0	<5.0	<5.0	<5.0	<5.0	<50	NA
	07/25/03	605.81	19.63	0.00	586.18	<50	<2.0	<2.0	<2.0	<4.0	<5.0	<5.0	<5.0	<5.0	<50	<150
	12/03/03		19.79	0.00	586.02	<50	<2.0	<2.0	<2.0	<4.0	<5.0	<5.0	<5.0	<5.0	<50	<150
	03/24/04		18.42	0.00	587.39	<50	<2.0	<2.0	<2.0	<4.0	<5.0	<5.0	<5.0	<5.0	<50	<150
	06/23/04		17.97	0.00	587.84	<50	<2.0	<2.0	<2.0	<4.0	<5.0	<5.0	<5.0	<5.0	<50	<150
	08/17/04		17.80	0.00	588.01	<50	<2.0	<2.0	<2.0	<4.0	<5.0	<5.0	<5.0	<5.0	<50	<150
	10/14/04		17.98	0.00	587.83	<50	<2.0	<2.0	<2.0	<4.0	<5.0	<5.0	<5.0	<5.0	<50	<150
GW-3	11/06/92	182.02	17.32	0.00	164.70	ND	0.6	0.40	ND	ND	NA	NA	NA	NA	NA	NA
	08/16/93		14.59	0.00	167.43	ND	1.3	1.0	ND	ND	NA	NA	NA	NA	NA	NA
	10/13/93		15.30	0.00	166.72	4,300	190	120	0.9	0.7	NA	NA	NA	NA	NA	NA
	03/29/94		14.25	0.00	167.77	3,500	190	93	ND	ND	NA	NA	NA	NA	NA	NA
	06/09/94		17.02	0.00	165.00	4,600	440	210	ND	ND	NA	NA	NA	NA	NA	NA
	10/13/94		18.00	0.00	164.02	4,600	330	130	<0.30	<0.60	NA	NA	NA	NA	NA	NA
	03/28/95		14.70	0.00	167.32	750	24	10	0.49	<0.60	NA	NA	NA	NA	NA	NA
	08/27/02		17.39	0.00	164.63	170	0.12 J	<2.0	<2.0	<4.0	1.5 J	<5.0	<5.0	<5.0	2,000	NA
	12/26/02		17.89	0.00	164.13	68	<2.0	<2.0	<2.0	<4.0	3.3 J	<5.0	<5.0	<5.0	780	NA
	12/26/02		17.89	0.00	164.13	66	<2.0	<2.0	<2.0	<4.0	2.7 J	<5.0	<5.0	<5.0	740	NA
	07/25/03	603.96	18.05	0.00	585.91	100	<2.0	<2.0	<2.0	<4.0	2.3 J	<5.0	<5.0	<5.0	280	<150
Duplicate	07/25/03		18.05	0.00	585.91	79	<2.0	<2.0	<2.0	<4.0	1.9 J	<5.0	<5.0	<5.0	150	<150
	12/03/03		18.21	0.00	585.75	90	<2.0	<2.0	<2.0	<4.0	1.1 J	<5.0	<5.0	<5.0	950	<150
Duplicate	12/03/03		18.21	0.00	585.75	85	<2.0	<2.0	<2.0	<4.0	1.1 J	<5.0	<5.0	<5.0	900	<150
	03/24/04		16.83	0.00	587.13	26 J	<4.0	<4.0	<4.0	<8.0	<10	<10	<10	<10	1,400	<300
Duplicate	03/24/04		16.83	0.00	587.13	27 J	<4.0	<4.0	<4.0	<8.0	<10	<10	<10	<10	1,400	<300
	06/23/04		16.39	0.00	587.57	250	<50	<50	<50	<100	32 J	<120	<120	120	11,000	<3,800
Duplicate	06/23/04		16.39	0.00	587.57	240	<80	<80	<80	<160	47 J	<200	<200	<200	11,000	<6,000
	08/17/04		16.19	0.00	587.77	31 J	<2.0	<2.0	<2.0	<4.0	<5.0	<5.0	<5.0	<5.0	1,200	<150
Duplicate	08/17/04		16.19	0.00	587.77	30 J	<4.0	<4.0	<4.0	<8.0	<10	<10	<10	<10	1,300	<300
	10/14/04		16.36	0.00	587.60	<50	<2.0	<2.0	<2.0	<4.0	<5.0	<5.0	<5.0	<5.0	360	<150
Duplicate	10/14/04		16.36	0.00	587.60	<50	<2.0	<2.0	<2.0	<4.0	<5.0	<5.0	<5.0	<5.0	820	<150

Table 1
Groundwater Elevation and Analytical Data
ARCO Facility 06143
3704 Cahuenga Boulevard
North Hollywood, California

WELL NAME	SAMPLE DATE	WELL HEAD ELEVATION feet amsl	DEPTH TO WATER feet btoc	LPH THICKNESS feet	GROUND WATER ELEVATION feet amsl	GRO µg/L	BENZENE µg/L	ETHYL-BENZENE µg/L	TOLUENE µg/L	TOTAL XYLENES µg/L	MTBE µg/L	DIPE µg/L	ETBE µg/L	TAME µg/L	TBA µg/L	ETHANOL µg/L
GW-4	12/03/03	602.65	17.08	0.00	585.57	<50	<2.0	<2.0	<2.0	<4.0	0.99 J	<5.0	<5.0	<5.0	26 J	<150
	03/24/04		15.77	0.00	586.88	<50	<2.0	<2.0	<2.0	<4.0	0.81 J	<5.0	<5.0	<5.0	11 J	<150
	06/23/04		15.34	0.00	587.31	<50	<2.0	<2.0	<2.0	<4.0	0.76 J	<5.0	<5.0	<5.0	260	<150
	08/17/04		15.02	0.00	587.63	59	<2.0	<2.0	<2.0	<4.0	0.95 J	<5.0	<5.0	<5.0	60	<150
	10/14/04		15.30	0.00	587.35	<50	<2.0	<2.0	<2.0	<4.0	<5.0	<5.0	<5.0	<5.0	<50	<150
GW-5	12/03/03	604.32	18.22	0.00	586.10	34 J	<2.0	<2.0	<2.0	<4.0	36	<5.0	<5.0	<5.0	720	<150
	03/24/04		16.77	0.00	587.55	43 J	<2.0	<2.0	<2.0	<4.0	20	<5.0	<5.0	<5.0	860	<150
	06/23/04		16.29	0.00	588.03	33 J	<2.0	<2.0	<2.0	<4.0	1.4 J	<5.0	<5.0	<5.0	270	<150
	08/17/04		18.42	0.00	585.90	37 J	<2.0	<2.0	<2.0	<4.0	0.65 J	<5.0	<5.0	<5.0	220	<150
	10/14/04		16.26	0.00	588.06	38 J	<2.0	0.50 J	<2.0	<4.0	1.6 J	<5.0	<5.0	<5.0	140	<150
GW-6	12/03/03	604.85	18.34	0.00	586.51	50	<2.0	<2.0	<2.0	<4.0	0.40 J	<5.0	<5.0	<5.0	13 J	<150
	03/24/04		16.81	0.00	588.04	91	<2.0	<2.0	<2.0	<4.0	0.46 J	<5.0	<5.0	<5.0	11 J	<150
	06/23/04		16.25	0.00	588.60	51	<2.0	<2.0	<2.0	<4.0	<5.0	<5.0	<5.0	<5.0	8.5 J	<150
	08/17/04		18.41	0.00	586.44	78	<2.0	<2.0	<2.0	<4.0	<5.0	<5.0	<5.0	<5.0	<50	<150
	10/14/04		16.26	0.00	588.59	69	<2.0	<2.0	<2.0	<4.0	<5.0	<5.0	<5.0	<5.0	10 J	<150
GW-7	12/03/03	604.95	19.15	0.00	585.8	<50	<2.0	<2.0	<2.0	<4.0	<5.0	<5.0	<5.0	<5.0	<50	<150
	03/24/04		17.84	0.00	587.11	<50	<2.0	<2.0	<2.0	<4.0	<5.0	<5.0	<5.0	<5.0	<50	<150
	06/23/04		17.39	0.00	587.56	<50	<2.0	<2.0	<2.0	<4.0	<5.0	<5.0	<5.0	<5.0	<50	<150
	08/17/04		17.21	0.00	587.74	<50	<2.0	<2.0	<2.0	<4.0	<5.0	<5.0	<5.0	<5.0	<50	<150
	10/14/04		17.39	0.00	587.56	<50	<2.0	<2.0	<2.0	<4.0	<5.0	<5.0	<5.0	<5.0	<50	<150
VW-1	08/27/02	NM	17.69	0.00	NM	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	12/26/02	NM	NM	0.00	NM	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	12/03/03	604.70	NM	0.00	NM	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	03/24/04		16.99	0.00	587.71	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	06/23/04		16.23	0.00	588.47	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	08/17/04		16.28	0.00	588.42	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	10/14/04		16.46	0.00	588.24	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
VW-2	08/27/02	NM	17.59	0.00	NM	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	12/26/02	NM	18.01	0.00	NM	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	12/03/03	604.70	NM	0.00	NM	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	03/24/04		16.91	0.00	587.79	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	06/23/04		16.35	0.00	588.35	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	08/17/04		16.15	0.00	588.55	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	10/14/04		16.34	0.00	588.36	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
VW-3	08/27/02	NM	17.85	0.00	NM	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	12/26/02	NM	NM	0.00	NM	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	12/03/03	605.33	NM	0.00	NM	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	03/24/04		17.01	0.00	588.32	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	06/23/04		16.42	0.00	588.91	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	08/17/04		16.23	0.00	589.10	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	10/14/04		16.41	0.00	588.92	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
VW-4	08/27/02	NM	18.06	0.00	NM	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	12/26/02	NM	18.54	0.00	NM	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	12/03/03	605.48	18.81	0.00	586.67	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	03/24/04		17.74	0.00	587.74	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	06/23/04		16.63	0.00	588.85	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	08/17/04		16.44	0.00	589.04	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	10/14/04		16.65	0.00	588.83	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS

Table 1
Groundwater Elevation and Analytical Data
ARCO Facility 06143
3704 Cahuenga Boulevard
North Hollywood, California

WELL NAME	SAMPLE DATE	WELL HEAD ELEVATION feet amsl	DEPTH TO WATER feet btoc	LPH THICKNESS feet	GROUND WATER ELEVATION feet amsl	GRO µg/L	BENZENE µg/L	ETHYL-BENZENE µg/L	TOLUENE µg/L	TOTAL XYLENES µg/L	MTBE µg/L	DIPE µg/L	ETBE µg/L	TAME µg/L	TBA µg/L	ETHANOL µg/L
VW-5	08/27/02	NM	17.96	0.00	NM	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	12/26/02	NM	18.48	0.00	NM	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	12/03/03	605.44	18.71	0.00	586.73	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	03/24/04		17.12	0.00	588.32	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	06/23/04		16.52	0.00	588.92	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	08/17/04		16.32	0.00	589.12	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	10/14/04		16.54	0.00	588.90	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
QCTB	12/26/02	NA	NA	NA	NA	<50	<2.0	<2.0	<2.0	<4.0	<5.0	<5.0	<5.0	<5.0	<50	NA
	07/25/03	NA	NA	NA	NA	<50	<2.0	0.30 J	<2.0	3.0 J	<5.0	<5.0	<5.0	<5.0	5.2 J	<150
	12/03/03	NA	NA	NA	NA	<50	<2.0	<2.0	<2.0	<4.0	<5.0	<5.0	<5.0	<5.0	<50	<150
	03/24/04	NA	NA	NA	NA	<50	<2.0	<2.0	<2.0	<4.0	<5.0	<5.0	<5.0	<5.0	<50	<150
	06/23/04	NA	NA	NA	NA	24 J	<2.0	<2.0	<2.0	<4.0	<5.0	<5.0	<5.0	<5.0	<50	<150
	08/17/04	NA	NA	NA	NA	<50	<2.0	<2.0	<2.0	<4.0	<5.0	<5.0	<5.0	<5.0	<50	<150
	10/14/04	NA	NA	NA	NA	<50	<2.0	<2.0	<2.0	<4.0	<5.0	<5.0	<5.0	<5.0	<50	<150

Notes:

GRO = Gasoline Range Organics (C_4 - C_{12})
MTBE = Methyl Tertiary Butyl Ether
DIPE = Di-Isopropyl Ether
ETBE = Ethyl Tertiary Butyl Ether
TAME = Tertiary Amyl Methyl Ether
TBA = Tertiary Butyl Alcohol
< = Denotes less than laboratory reporting limit or method detection limit if specified
J = Analyte detected at a level less than the reporting limit and greater than or equal to the method detection

btoc = below top of casing
LPH = Liquid Phase Hydrocarbons
µg/L = micrograms per liter
amsl = above mean sea level

NS= Not Sampled
NA=Not Applicable
NM=Not Measured
ND= Not detected at or above reporting limits
Duplicate= Duplicate sample
QCTB= Lab Trip Blank
GRO analyzed by EPA Method 8015M
BTEX and oxygenates analyzed by EPA Method 8260B.

APPENDIX A

Groundwater Sampling Field Data Sheets

Subjective and Well -Head Evaluation Form

Project No.: Q4-2004 Groundwater Location: North Hollywood Date: 10/14/2004

Station No.: 6143 Field Technician: Shaun Dickinson Day of Week: Thursday

DTW ORDER	WELL ID	SURFICIAL SEAL	CONCRETE SEAL	LID SECURE	GASKET	LOCK	EXPANDING CAP	TOTAL DEPTH (feet)	DEPTH TO WATER (feet)	FLOATING PRODUCT THICKNESS (feet)	DISSOLVED OXYGEN READING (mg/L)	COMMENTS
	GW-1	Y	Y	Y	Y	N	Y	39.10	16.55	Ø	0.26	
	GW-2	Y	Y	Y	Y	N	Y	35.30	17.58	Ø	0.31	
	GW-3	Y	Y	Y	Y	N	Y	39.40	16.86	Ø	0.26	Dup
	GW-4	Y	Y	Y	Y	N	Y	34.50	15.30	Ø	0.24	
	GW-5	Y	Y	Y	Y	N	Y	35.00	16.26	Ø	0.29	
	GW-6	Y	Y	Y	Y	N	Y	35.11	16.26	Ø	0.30	
	GW-7	Y	Y	Y	Y	N	Y	35.20	17.39	Ø	0.28	
	VW-1	Y	Y	N	Y	N	Y	18.40	16.46	Ø	0.27	Bolt Holes Stripped Gauge and D.O. Only
	VW-2	Y	Y	Y	Y	N	Y	18.35	16.34	Ø	0.25	Gauge and D.O. Only
	VW-3	Y	Y	Y	Y	N	Y	18.25	16.41	Ø	0.64	Gauge and D.O. Only
	VW-4	Y	Y	N	Y	N	Y	20.00	16.65	Ø	0.34	Missing Bolts Gauge and D.O. Only
	VW-5	Y	Y	Y	Y	N	Y	20.00	16.54	Ø	0.25	Gauge and D.O. Only
												263 total Gal

Note: Use G=Good and P=poor for well condition

GROUNDWATER SAMPLE FIELD DATA SHEET

ATLANTIC RICHFIELD COMPANY	PROJECT NO: Q4-2004 Groundwater	SAMPLE ID: GW-2
	SAMPLER: Shawn Dickinson	FACILITY NO: 6143
	DATE: 10/14/04	LOCATION: North Hollywood

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

DEPTH OF WELL (feet): 35.30	CALCULATED PURGE (gal): 34.6
DEPTH TO WATER (feet): 17.88	ACTUAL PURGE VOL (gal): 35
Standing Water in Casing (feet) 17.32 x 0.20= 3.464 + DTW 21.44 =80% Recharge Water Level	

2 (inches)	Standing Water in Casing (feet)	x 0.5=	3 Casing Volumes (gal.)
4 (inches)	Standing Water in Casing (feet)	x 2.0=	3 Casing Volumes (gal.)
6 (inches)	Standing Water in Casing (feet)	x 4.4=	3 Casing Volumes (gal.)
8 (inches)	Standing Water in Casing (feet)	x 7.8=	3 Casing Volumes (gal.)

Date Purged: 10/14/04 Start (2400 Hr.): 1307 End (2400 Hr.): 1326

Date Sampled: 10/14/04 Time (2400 Hr.): 1345 DTW @ Samp. Time: 19.00

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) X1000	pH (units)	COLOR (visual)*	TURBIDITY (visual)**	TOTALIZE (gallons)
1320	12	75.4	2005	7.67	clear	Trace	
1324	24	75.0	2011	7.67	"	"	
1326	35	74.2	2011	7.68	"	"	

* (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)
Contrifugal Pump	Bailer (PVC)	Submersible Pump	Bailer (Teflon)
Submersible Pump	Bailer (Stainless Steel)	Dipper	~~Bailer (Disposable Teflon)~~
Redi-Flo2	Dedicated	Well Wizard	Dedicated
OTHER: VAC TRUCK		OTHER:	

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

Floating Product Thickness (feet): Color: Padlock Number:

COMMENTS:

40 ml VOA, HCL: 1 liter amber, none: 16 ox poly, HNO3:

WATER LEVEL ONLY. NO SAMPLE COLLECTED: REVIEWED BY: Lmoreno DATE 10/18/04

GROUNDWATER SAMPLE FIELD DATA SHEET

ATLANTIC RICHFIELD COMPANY	PROJECT NO: Q4-2004 Groundwater	SAMPLE ID: GW-3
	SAMPLER:	FACILITY NO: 6143
	DATE: 10/14/04	LOCATION: North Hollywood

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

DEPTH OF WELL (feet): 39.40	CALCULATED PURGE (gal): 46.0
DEPTH TO WATER (feet): 16.36	ACTUAL PURGE VOL (gal): 47
Standing Water in Casing (feet) 23.04 x 0.20= 4.608 + DTW 20.96 =80% Recharge Water Level	

2 (inches)	Standing Water in Casing (feet)	x 0.5=	3 Casing Volumes (gal.)
4 (inches)	Standing Water in Casing (feet)	x 2.0=	3 Casing Volumes (gal.)
6 (inches)	Standing Water in Casing (feet)	x 4.4=	3 Casing Volumes (gal.)
8 (inches)	Standing Water in Casing (feet)	x 7.8=	3 Casing Volumes (gal.)

Date Purged: 10/14/04 Start (2400 Hr.): 1207 End (2400 Hr.): 1219

Date Sampled: 10/14/04 Time (2400 Hr.): 1240 DTW @ Samp. Time: 18.05

FIELD QC SAMPLES COLLECTED AT THIS WELL (IE: FB-1, X-DUP-1): DUP-GW-99

TIME (2400 Hr.)	VOLUME (gallons)	TEMP (degrees F)	E.C. (uS/cm) X1000	pH (units)	COLOR (visual)*	TURBIDITY (visual)**	TOTALIZE (gallons)
1205	15	75.0	1719	7.68	Clear	Trace	
1211	30	74.6	1816	8.10	"	"	
1219	47	75.9	1873	8.12	"	"	

* (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)
Contrifugal Pump	Bailer (PVC)	Submersible Pump	~~Bailer (Teflon)~~
Submersible Pump	Bailer (Stainless Steel)	Dipper	Bailer (Disposable Teflon)
Redi-Flo2	Dedicated	Well Wizard	Dedicated
OTHER:	VAC TRUCK	OTHER:	

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

Floating Product Thickness (feet): Color: Padlock Number:

COMMENTS:

40 ml VOA, HCL: 1 liter amber, none: 16 ox poly, HNO3:

WATER LEVEL ONLY. NO SAMPLE COLLECTED: REVIEWED BY: J Moreno DATE 10/18/04

GROUNDWATER SAMPLE FIELD DATA SHEET

ATLANTIC RICHFIELD COMPANY	PROJECT NO: Q4-2004 Groundwater	SAMPLE ID: GW-4
	SAMPLER: Shaun Dickinson	FACILITY NO: 6143
	DATE: 10/14/04	LOCATION: North Hollywood

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

DEPTH OF WELL (feet): 34.50	CALCULATED PURGE (gal): 38.4
DEPTH TO WATER (feet): 15.30	ACTUAL PURGE VOL (gal): 39
Standing Water in Casing (feet) 19.20 x 0.20= 3.84	+ DTW 19.14 =80% Recharge Water Level

2 (inches)	Standing Water in Casing (feet)	x 0.5=	3 Casing Volumes (gal.)
4 (inches)	Standing Water in Casing (feet)	x 2.0=	3 Casing Volumes (gal.)
6 (inches)	Standing Water in Casing (feet)	x 4.4=	3 Casing Volumes (gal.)
8 (inches)	Standing Water in Casing (feet)	x 7.8=	3 Casing Volumes (gal.)

Date Purged: 10/14/04 Start (2400 Hr.): 1107 End (2400 Hr.): 1149
Date Sampled: 10/14/04 Time (2400 Hr.): 1205 DTW @ Samp. Time: 19.00

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) X1000	pH (units)	COLOR (visual)*	TURBIDITY (visual)**	TOTALIZE (gallons)
1120	13	74.1	1733	7.75	clear	Trace	
1132	26	76.4	1588	8.18	"	"	
1149	39	78.1	1530	8.02	"	"	

* (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)
Contrifugal Pump	Bailer (PVC)	Submersible Pump	Bailer (Teflon)
Submersible Pump	Bailer (Stainless Steel)	Dipper	Bailer (Disposable Teflon)
Redi-Flo2	Dedicated	Well Wizard	Dedicated

OTHER: VAC TRUCK	OTHER:

Well Condition (cap, cement, padlock, screws, lid, etc.):
Floating Product Thickness (feet): Color: Padlock Number:

COMMENTS:

40 ml VOA, HCL: 1 liter amber, none: 16 ox poly, HNO3:

WATER LEVEL ONLY. NO SAMPLE COLLECTED: REVIEWED BY: DATE: 10/18/04

Atlantic Richfield Company No. # 6143

GROUNDWATER SAMPLE FIELD DATA SHEET

ATLANTIC RICHFIELD COMPANY	PROJECT NO: Q4-2004 Groundwater	SAMPLE ID: GW-5
	SAMPLER: Shaun Dickinson	FACILITY NO: 6143
	DATE: 10/14/04	LOCATION: North Hollywood

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

DEPTH OF WELL (feet): 35.00	CALCULATED PURGE (gal): 37.4
DEPTH TO WATER (feet): 16.26	ACTUAL PURGE VOL (gal): 38
Standing Water in Casing (feet) 18.74 x 0.20= 3.748 + DTW 20.008 =80% Recharge Water Level	

2 (inches)	Standing Water in Casing (feet)	x 0.5=	3 Casing Volumes (gal.)
4 (inches)	Standing Water in Casing (feet)	x 2.0=	3 Casing Volumes (gal.)
6 (inches)	Standing Water in Casing (feet)	x 4.4=	3 Casing Volumes (gal.)
8 (inches)	Standing Water in Casing (feet)	x 7.8=	3 Casing Volumes (gal.)

Date Purged: 10/14/04 Start (2400 Hr.): 1015 End (2400 Hr.): 1055

Date Sampled: 10/14/04 Time (2400 Hr.): 1110 DTW @ Samp. Time: 18.40

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) X1000	pH (units)	COLOR (visual)*	TURBIDITY (visual)**	TOTALIZE (gallons)
1035	13	72.5	1332	7.73	Cloudy	Trace	
1044	26	70.2	1386	7.76	"	"	
1055	38	71.2	1373	7.75	"	"	

* (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)
Contrifugal Pump	Bailer (PVC)	Submersible Pump	~~Bailer (Teflon)~~
Submersible Pump	Bailer (Stainless Steel)	Dipper	✓ Bailer (~~Disposable Teflon~~)
Redi-Flo2	Dedicated	Well Wizard	Dedicated

OTHER: (VAC TRUCK)	OTHER:

Well Condition (cap, cement, padlock, screws, lid, etc.):		
Floating Product Thickness (feet):	Color:	Padlock Number:

COMMENTS:

40 ml VOA, HCL: 1 liter amber, none: 16 ox poly, HNO3:

WATER LEVEL ONLY. NO SAMPLE COLLECTED: REVIEWED BY: Moreno DATE 10/18/04

Atlantic Richfield Company No. # 6143

GROUNDWATER SAMPLE FIELD DATA SHEET

ATLANTIC RICHFIELD COMPANY	PROJECT NO: Q4-2004 Groundwater	SAMPLE ID: GW-6
	SAMPLER: Shaun Dickinson	FACILITY NO: 6143
	DATE: 10/14/04	LOCATION: North Hollywood

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

DEPTH OF WELL (feet): 35.11	CALCULATED PURGE (gal): 37.7
DEPTH TO WATER (feet): 16.26	ACTUAL PURGE VOL (gal): 38 26
Standing Water in Casing (feet) 18.85 x 0.20= 3.77 + DTW 20.03 =80% Recharge Water Level	

2 (inches)	Standing Water in Casing (feet)	x 0.5=	3 Casing Volumes (gal.)
4 (inches)	Standing Water in Casing (feet)	x 2.0=	3 Casing Volumes (gal.)
6 (inches)	Standing Water in Casing (feet)	x 4.4=	3 Casing Volumes (gal.)
8 (inches)	Standing Water in Casing (feet)	x 7.8=	3 Casing Volumes (gal.)

Date Purged: 10/14/04 Start (2400 Hr.): 0935 End (2400 Hr.): 1008
Date Sampled: 10/14/04 Time (2400 Hr.): 1020 DTW @ Samp. Time: 17.89

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) X1000	pH (units)	COLOR (visual)*	TURBIDITY (visual)**	TOTALIZE (gallons)
0945	13	69.9	993.1	8.12	Clear	Trace	
1003	26	69.3	984.6	7.86	"	"	
	38						

* (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)
Contrifugal Pump	Bailer (PVC)	Submersible Pump	~~Bailer (Teflon)~~
Submersible Pump	Bailer (Stainless Steel)	Dipper	Bailer (Disposable Teflon)
Redi-Flo2	Dedicated	Well Wizard	Dedicated

OTHER: VAC TRUCK	OTHER:

Well Condition (cap, cement, padlock, screws, lid, etc.):		
Floating Product Thickness (feet):	Color:	Padlock Number:

COMMENTS:

40 ml VOA, HCL: _____ 1 liter amber, none: _____ 16 ox poly, HNO3: _____

WATER LEVEL ONLY. NO SAMPLE COLLECTED: _____ REVIEWED BY: Denaeu DATE: 10/18/04

Atlantic Richfield Company No. # 6143

GROUNDWATER SAMPLE FIELD DATA SHEET

ATLANTIC RICHFIELD COMPANY	PROJECT NO: Q4-2004 Groundwater	SAMPLE ID: GW-7
	SAMPLER: Shaun Dickinson	FACILITY NO: 6143
	DATE: 10/14/04	LOCATION: North Hollywood

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

DEPTH OF WELL (feet): 35.20	CALCULATED PURGE (gal): 3.5.4
DEPTH TO WATER (feet): 17.39	ACTUAL PURGE VOL (gal): 3 to 20
Standing Water in Casing (feet) 17.81 x 0.20= 3.56 + DTW 16.15 =80% Recharge Water Level	

2 (inches)	Standing Water in Casing (feet)	x 0.5=	3 Casing Volumes (gal.)
4 (inches)	Standing Water in Casing (feet)	x 2.0=	3 Casing Volumes (gal.)
6 (inches)	Standing Water in Casing (feet)	x 4.4=	3 Casing Volumes (gal.)
8 (inches)	Standing Water in Casing (feet)	x 7.8=	3 Casing Volumes (gal.)

Date Purged: 10/14/04 Start (2400 Hr.): 1226 End (2400 Hr.): 1254

Date Sampled: 10/14/04 Time (2400 Hr.): 1330 DTW @ Samp. Time: 16.00

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) X1000	pH (units)	COLOR (visual)*	TURBIDITY (visual)**	TOTALIZE (gallons)
1236	12	75.4	2087	8.04	clear	Trace	
1243	~~24~~ 17	72.0	2078	8.23	"	"	
1254	~~36~~ 20	75.0	2095	7.83	"	"	
			Dry at 20 Gal				

* (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)
Contrifugal Pump	Bailer (PVC)	Submersible Pump	Bailer (Teflon)
Submersible Pump	Bailer (Stainless Steel)	Dipper	Bailer (Disposable Teflon)
Redi-Flo2	Dedicated	Well Wizard	Dedicated

OTHER: VAC TRUCK	OTHER:

Well Condition (cap, cement, padlock, screws, lid, etc.):
Floating Product Thickness (feet): Color: Padlock Number:

COMMENTS:

40 ml VOA, HCL: 1 liter amber, none: 16 ox poly, HNO3:

WATER LEVEL ONLY. NO SAMPLE COLLECTED: REVIEWED BY: Dmoreno DATE: 10/18/04

Atlantic Richfield Company No. # 6143

GROUN WATER SAMPLE FIELD DAT/ SHEET

ATLANTIC RICHFIELD COMPANY

PROJECT NO: Q4-2004 Groundwater	SAMPLE ID: GW-1
SAMPLER: Shaun Dickinson	FACILITY NO: 6143
DATE: 10/14/04	LOCATION: North Hollywood

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

DEPTH OF WELL (feet): 39.10	CALCULATED PURGE (gal): 45.1
DEPTH TO WATER (feet): 16.55	ACTUAL PURGE VOL (gal): 46
Standing Water in Casing (feet) 22.55 x 0.20= 4.57	+ DTW 21.06 =80% Recharge Water Level

2 (inches)	Standing Water in Casing (feet)	x 0.5=	3 Casing Volumes (gal.)
4 (inches)	Standing Water in Casing (feet)	x 2.0=	3 Casing Volumes (gal.)
6 (inches)	Standing Water in Casing (feet)	x 4.4=	3 Casing Volumes (gal.)
8 (inches)	Standing Water in Casing (feet)	x 7.8=	3 Casing Volumes (gal.)

Date Purged: 10/14/04 Start (2400 Hr.): 0907 End (2400 Hr.): 0930

Date Sampled: 10/14/04 Time (2400 Hr.): 0955 DTW @ Samp. Time: 16.90

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) X1000	pH (units)	COLOR (visual)*	TURBIDITY (visual)**	TOTALIZE (gallons)
0951	15	68.7	~~68~~1394	7.43	clear	Trace	
0922	30	69.1	1330	7.55	"	"	
0930	46	69.0	1320	7.93	"	"	

* (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)
Contrifugal Pump	Bailer (PVC)	Submersible Pump	~~Bailer (Teflon)~~
Submersible Pump	Bailer (Stainless Steel)	Dipper	Bailer (Disposable Teflon)
Redi-Flo2	Dedicated	Well Wizard	Dedicated
OTHER: VAC TRUCK		OTHER:	

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

Floating Product Thickness (feet): Color: Padlock Number:

COMMENTS:

40 ml VOA, HCL: 1 liter amber, none: 16 ox poly, HNO3:

WATER LEVEL ONLY. NO SAMPLE COLLECTED: REVIEWED BY: Moreno DATE: 10/18/04

Atlantic Richfield Company No. # 6143

APPENDIX B

Waste Disposal Documents

NO. 23844

NON-HAZARDOUS WASTE DATA FORM

TO BE COMPLETED BY GENERATOR

NAME: BP West Coast Products LLC

ADDRESS: P.O. Box 80249

CITY, STATE, ZIP: Rancho Santa Margarita, CA 92688

PHONE NO.: (949) 753-5820

GENERATING SITE: ARCO STATION # 6143

3704 CAHUENGA BLVD.

HOLLYWOOD

SITE CONTACT:

PROFILE NO.:

CONTAINERS: No. 1 GALLONS X 265 Gallons WEIGHT:

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

WASTE DESCRIPTION: NON-HAZARDOUS WATER

GENERATING PROCESS: GROUNDWATER SAMPLING

COMPONENTS OF WASTE	PPM	%	COMPONENTS OF WASTE	PPM	%
1. WATER		99-100%	4.		
2. TPH		< 1%	5.		
3.			6. BESI # 104714		

PROPERTIES: pH 7 [ ] SOLID [X] LIQUID [ ] SLUDGE [ ] SLURRY [ ] OTHER

HANDLING INSTRUCTIONS: WEAR APPROPRIATE PROTECTIVE CLOTHING

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

Larry Moothart as Agent of BP West Coast Products LLC — TYPED OR PRINTED FULL NAME & SIGNATURE — DATE 10/14/04

TRANSPORTER

NAME: NIETO AND SONS TRUCKING, INC.

EPA I.D. NO.:

ADDRESS: 1281 BREA CANYON ROAD

SERVICE ORDER NO.:

CITY, STATE, ZIP: BREA, CALIFORNIA 92821

PICK UP DATE: 10/14/04

PHONE NO.: (714) 990-6855

TYPED OR PRINTED FULL NAME & SIGNATURE — DATE 10/14/04

TRUCK, UNIT, I.D. NO.: X 252

TSD FACILITY

NAME: DeMenno Kerdoon

EPA I.D. NO.:

ADDRESS: 2000 N. Alameda Street

DISPOSAL METHOD: [ ] LANDFILL [X] RECYCLER

CITY, STATE, ZIP: Compton, CA 90222

Recycler

PHONE NO.: 310-537-7100

TYPED OR PRINTED FULL NAME & SIGNATURE — DATE 10/18/04

GEN	OLD/NEW	L A	TONS	
TRANS		S B		
C/O		RT/CD	HWDF NONE	DISCREPANCY

APPENDIX C

Certified Laboratory Analytical Report And Chain-of-Custody Documentation

Del Mar Analytical

17461Derian Ave., Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297
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9484 Chesapeake Dr., Suite 805, San Diego, CA 92123 (858) 505-8596 FAX (858) 505-9689
9830 South 51st St., Suite B-120, Phoenix, AZ 85044 (480) 785-0043 FAX (480) 785-0851
2520 E. Sunset Rd. #3, Las Vegas, NV 89120 (702) 798-3620 FAX (702) 798-3621

LABORATORY REPORT

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

Project: ARCO 6143, Los Angeles

Sampled: 10/14/04
Received: 10/15/04
Issued: 10/27/04 17:05

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 of Custody, 1 page, is included and is an integral part of this report.
This entire report was reviewed and approved for release.

CASE NARRATIVE

SAMPLE RECEIPT: Samples were received intact, at 7°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.

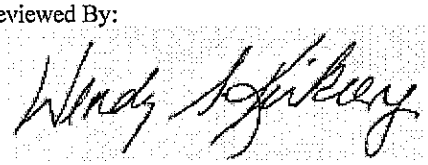
QA/QC CRITERIA: All analyses met method criteria, except as noted in the report with data qualifiers.

COMMENTS: Results that fall between the MDL and RL are 'J' flagged.

SUBCONTRACTED: No analyses were subcontracted to an outside laboratory.

LABORATORY ID	CLIENT ID	MATRIX
INJ1016-01	GW-1	Water
INJ1016-02	GW-2	Water
INJ1016-03	GW-3	Water
INJ1016-04	GW-4	Water
INJ1016-05	GW-5	Water
INJ1016-06	GW-6	Water
INJ1016-07	GW-7	Water
INJ1016-08	DUP-6143-20041014	Water
INJ1016-09	TB-6143-20041014	Water

Reviewed By:



Del Mar Analytical, Irvine
Wendy Kirkeeng For Chris Roberts
Project Manager

Del Mar Analytical

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

Project ID: ARCO 6143, Los Angeles
Report Number: INJ1016

Sampled: 10/14/04
Received: 10/15/04

VOLATILE FUEL HYDROCARBONS (EPA 5030/8015M)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: INJ1016-01 (GW-1 - Water)									
Reporting Units: ug/l									
GRO (C4 - C12)	EPA 8015B	4J25006	22	50	ND	1	10/25/04	10/25/04	
Surrogate: 4-BFB (FID) (60-135%)					*86 %*				
Sample ID: INJ1016-02 (GW-2 - Water)									
Reporting Units: ug/l									
GRO (C4 - C12)	EPA 8015B	4J25006	22	50	ND	1	10/25/04	10/25/04	
Surrogate: 4-BFB (FID) (60-135%)					*102 %*				
Sample ID: INJ1016-03 (GW-3 - Water)									
Reporting Units: ug/l									
GRO (C4 - C12)	EPA 8015B	4J25006	22	50	ND	1	10/25/04	10/25/04	
Surrogate: 4-BFB (FID) (60-135%)					*98 %*				
Sample ID: INJ1016-04 (GW-4 - Water)									
Reporting Units: ug/l									
GRO (C4 - C12)	EPA 8015B	4J25006	22	50	ND	1	10/25/04	10/25/04	
Surrogate: 4-BFB (FID) (60-135%)					*99 %*				
Sample ID: INJ1016-05 (GW-5 - Water)									
Reporting Units: ug/l									
GRO (C4 - C12)	EPA 8015B	4J25006	22	50	**38**	1	10/25/04	10/25/04	J,DX
Surrogate: 4-BFB (FID) (60-135%)					*103 %*				
Sample ID: INJ1016-06 (GW-6 - Water)									
Reporting Units: ug/l									
GRO (C4 - C12)	EPA 8015B	4J25006	22	50	**69**	1	10/25/04	10/25/04	PV
Surrogate: 4-BFB (FID) (60-135%)					*102 %*				
Sample ID: INJ1016-07 (GW-7 - Water)									
Reporting Units: ug/l									
GRO (C4 - C12)	EPA 8015B	4J25006	22	50	ND	1	10/25/04	10/25/04	
Surrogate: 4-BFB (FID) (60-135%)					*103 %*				
Sample ID: INJ1016-08 (DUP-6143-20041014 - Water)									
Reporting Units: ug/l									
GRO (C4 - C12)	EPA 8015B	4J25006	22	50	ND	1	10/25/04	10/25/04	
Surrogate: 4-BFB (FID) (60-135%)					*97 %*				

Del Mar Analytical, Irvine
Wendy Kirkeeng For Chris Roberts
Project Manager

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

Project ID: ARCO 6143, Los Angeles

Report Number: INJ1016

Sampled: 10/14/04
Received: 10/15/04

VOLATILE FUEL HYDROCARBONS (EPA 5030/8015M)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: INJ1016-09 (TB-6143-20041014 - Water)									
Reporting Units: ug/l									
GRO (C4 - C12)	EPA 8015B	4J25006	22	50	ND	1	10/25/04	10/25/04	
Surrogate: 4-BFB (FID) (60-135%)					*86 %*				

Del Mar Analytical, Irvine
Wendy Kirkeeng For Chris Roberts
Project Manager

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

Project ID: ARCO 6143, Los Angeles

Report Number: INJ1016

Sampled: 10/14/04
Received: 10/15/04

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

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: INJ1016-01 (GW-1 - Water)									
Reporting Units: ug/l									
Benzene	EPA 8260B	4J21031	0.28	2.0	ND	1	10/21/04	10/21/04	
Ethylbenzene	EPA 8260B	4J21031	0.25	2.0	ND	1	10/21/04	10/21/04	
Toluene	EPA 8260B	4J21031	0.36	2.0	ND	1	10/21/04	10/21/04	
m,p-Xylenes	EPA 8260B	4J21031	0.52	2.0	ND	1	10/21/04	10/21/04	
o-Xylene	EPA 8260B	4J21031	0.24	2.0	ND	1	10/21/04	10/21/04	
Xylenes, Total	EPA 8260B	4J21031	0.52	4.0	ND	1	10/21/04	10/21/04	
Di-isopropyl Ether (DIPE)	EPA 8260B	4J21031	0.25	5.0	ND	1	10/21/04	10/21/04	
Ethyl tert-Butyl Ether (ETBE)	EPA 8260B	4J21031	0.28	5.0	ND	1	10/21/04	10/21/04	
tert-Amyl Methyl Ether (TAME)	EPA 8260B	4J21031	0.33	5.0	ND	1	10/21/04	10/21/04	
Methyl-tert-butyl Ether (MTBE)	EPA 8260B	4J21031	0.32	5.0	ND	1	10/21/04	10/21/04	
tert-Butanol (TBA)	EPA 8260B	4J21031	3.1	50	ND	1	10/21/04	10/21/04	
Ethanol	EPA 8260B	4J21031	50	150	ND	1	10/21/04	10/21/04	
Surrogate: Dibromofluoromethane (80-120%)					*104 %*				
Surrogate: Toluene-d8 (80-120%)					*102 %*				
Surrogate: 4-Bromofluorobenzene (80-120%)					*99 %*				
Sample ID: INJ1016-02 (GW-2 - Water)									
Reporting Units: ug/l									
Benzene	EPA 8260B	4J21031	0.28	2.0	ND	1	10/21/04	10/21/04	
Ethylbenzene	EPA 8260B	4J21031	0.25	2.0	ND	1	10/21/04	10/21/04	
Toluene	EPA 8260B	4J21031	0.36	2.0	ND	1	10/21/04	10/21/04	
m,p-Xylenes	EPA 8260B	4J21031	0.52	2.0	ND	1	10/21/04	10/21/04	
o-Xylene	EPA 8260B	4J21031	0.24	2.0	ND	1	10/21/04	10/21/04	
Xylenes, Total	EPA 8260B	4J21031	0.52	4.0	ND	1	10/21/04	10/21/04	
Di-isopropyl Ether (DIPE)	EPA 8260B	4J21031	0.25	5.0	ND	1	10/21/04	10/21/04	
Ethyl tert-Butyl Ether (ETBE)	EPA 8260B	4J21031	0.28	5.0	ND	1	10/21/04	10/21/04	
tert-Amyl Methyl Ether (TAME)	EPA 8260B	4J21031	0.33	5.0	ND	1	10/21/04	10/21/04	
Methyl-tert-butyl Ether (MTBE)	EPA 8260B	4J21031	0.32	5.0	ND	1	10/21/04	10/21/04	
tert-Butanol (TBA)	EPA 8260B	4J21031	3.1	50	ND	1	10/21/04	10/21/04	
Ethanol	EPA 8260B	4J21031	50	150	ND	1	10/21/04	10/21/04	
Surrogate: Dibromofluoromethane (80-120%)					*103 %*				
Surrogate: Toluene-d8 (80-120%)					*102 %*				
Surrogate: 4-Bromofluorobenzene (80-120%)					*100 %*				

Del Mar Analytical, Irvine
Wendy Kirkeeng For Chris Roberts
Project Manager

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

Project ID: ARCO 6143, Los Angeles

Report Number: INJ1016

Sampled: 10/14/04
Received: 10/15/04

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

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: INJ1016-03 (GW-3 - Water)									
Reporting Units: ug/l									
Benzene	EPA 8260B	4J21031	0.28	2.0	ND	1	10/21/04	10/21/04	
Ethylbenzene	EPA 8260B	4J21031	0.25	2.0	ND	1	10/21/04	10/21/04	
Toluene	EPA 8260B	4J21031	0.36	2.0	ND	1	10/21/04	10/21/04	
m,p-Xylenes	EPA 8260B	4J21031	0.52	2.0	ND	1	10/21/04	10/21/04	
o-Xylene	EPA 8260B	4J21031	0.24	2.0	ND	1	10/21/04	10/21/04	
Xylenes, Total	EPA 8260B	4J21031	0.52	4.0	ND	1	10/21/04	10/21/04	
Di-isopropyl Ether (DIPE)	EPA 8260B	4J21031	0.25	5.0	ND	1	10/21/04	10/21/04	
Ethyl tert-Butyl Ether (ETBE)	EPA 8260B	4J21031	0.28	5.0	ND	1	10/21/04	10/21/04	
tert-Amyl Methyl Ether (TAME)	EPA 8260B	4J21031	0.33	5.0	ND	1	10/21/04	10/21/04	
Methyl-tert-butyl Ether (MTBE)	EPA 8260B	4J21031	0.32	5.0	ND	1	10/21/04	10/21/04	
tert-Butanol (TBA)	EPA 8260B	4J21031	3.1	50	**360**	1	10/21/04	10/21/04	
Ethanol	EPA 8260B	4J21031	50	150	ND	1	10/21/04	10/21/04	
Surrogate: Dibromofluoromethane (80-120%)					*110 %*				
Surrogate: Toluene-d8 (80-120%)					*102 %*				
Surrogate: 4-Bromofluorobenzene (80-120%)					*102 %*				
Sample ID: INJ1016-04 (GW-4 - Water)									
Reporting Units: ug/l									
Benzene	EPA 8260B	4J21031	0.28	2.0	ND	1	10/21/04	10/21/04	
Ethylbenzene	EPA 8260B	4J21031	0.25	2.0	ND	1	10/21/04	10/21/04	
Toluene	EPA 8260B	4J21031	0.36	2.0	ND	1	10/21/04	10/21/04	
m,p-Xylenes	EPA 8260B	4J21031	0.52	2.0	ND	1	10/21/04	10/21/04	
o-Xylene	EPA 8260B	4J21031	0.24	2.0	ND	1	10/21/04	10/21/04	
Xylenes, Total	EPA 8260B	4J21031	0.52	4.0	ND	1	10/21/04	10/21/04	
Di-isopropyl Ether (DIPE)	EPA 8260B	4J21031	0.25	5.0	ND	1	10/21/04	10/21/04	
Ethyl tert-Butyl Ether (ETBE)	EPA 8260B	4J21031	0.28	5.0	ND	1	10/21/04	10/21/04	
tert-Amyl Methyl Ether (TAME)	EPA 8260B	4J21031	0.33	5.0	ND	1	10/21/04	10/21/04	
Methyl-tert-butyl Ether (MTBE)	EPA 8260B	4J21031	0.32	5.0	ND	1	10/21/04	10/21/04	
tert-Butanol (TBA)	EPA 8260B	4J21031	3.1	50	ND	1	10/21/04	10/21/04	
Ethanol	EPA 8260B	4J21031	50	150	ND	1	10/21/04	10/21/04	
Surrogate: Dibromofluoromethane (80-120%)					*104 %*				
Surrogate: Toluene-d8 (80-120%)					*102 %*				
Surrogate: 4-Bromofluorobenzene (80-120%)					*100 %*				

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Project Manager

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SECOR International, Inc.-Orange County
11085 Knott Ave, Suite B
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Attention: Cathy Sanford

Project ID: ARCO 6143, Los Angeles

Report Number: INJ1016

Sampled: 10/14/04
Received: 10/15/04

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

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: INJ1016-05 (GW-5 - Water)									
Reporting Units: ug/l									
Benzene	EPA 8260B	4J21031	0.28	2.0	ND	1	10/21/04	10/21/04	
Ethylbenzene	EPA 8260B	4J21031	0.25	2.0	**0.50**	1	10/21/04	10/21/04	J,DX
Toluene	EPA 8260B	4J21031	0.36	2.0	ND	1	10/21/04	10/21/04	
m,p-Xylenes	EPA 8260B	4J21031	0.52	2.0	ND	1	10/21/04	10/21/04	
o-Xylene	EPA 8260B	4J21031	0.24	2.0	ND	1	10/21/04	10/21/04	
Xylenes, Total	EPA 8260B	4J21031	0.52	4.0	ND	1	10/21/04	10/21/04	
Di-isopropyl Ether (DIPE)	EPA 8260B	4J21031	0.25	5.0	ND	1	10/21/04	10/21/04	
Ethyl tert-Butyl Ether (ETBE)	EPA 8260B	4J21031	0.28	5.0	ND	1	10/21/04	10/21/04	
tert-Amyl Methyl Ether (TAME)	EPA 8260B	4J21031	0.33	5.0	ND	1	10/21/04	10/21/04	
Methyl-tert-butyl Ether (MTBE)	EPA 8260B	4J21031	0.32	5.0	**1.6**	1	10/21/04	10/21/04	J,DX
tert-Butanol (TBA)	EPA 8260B	4J21031	3.1	50	**140**	1	10/21/04	10/21/04	
Ethanol	EPA 8260B	4J21031	50	150	ND	1	10/21/04	10/21/04	
Surrogate: Dibromofluoromethane (80-120%)					*104 %*				
Surrogate: Toluene-d8 (80-120%)					*102 %*				
Surrogate: 4-Bromofluorobenzene (80-120%)					*100 %*				
Sample ID: INJ1016-06 (GW-6 - Water)									
Reporting Units: ug/l									
Benzene	EPA 8260B	4J21031	0.28	2.0	ND	1	10/21/04	10/21/04	
Ethylbenzene	EPA 8260B	4J21031	0.25	2.0	ND	1	10/21/04	10/21/04	
Toluene	EPA 8260B	4J21031	0.36	2.0	ND	1	10/21/04	10/21/04	
m,p-Xylenes	EPA 8260B	4J21031	0.52	2.0	ND	1	10/21/04	10/21/04	
o-Xylene	EPA 8260B	4J21031	0.24	2.0	ND	1	10/21/04	10/21/04	
Xylenes, Total	EPA 8260B	4J21031	0.52	4.0	ND	1	10/21/04	10/21/04	
Di-isopropyl Ether (DIPE)	EPA 8260B	4J21031	0.25	5.0	ND	1	10/21/04	10/21/04	
Ethyl tert-Butyl Ether (ETBE)	EPA 8260B	4J21031	0.28	5.0	ND	1	10/21/04	10/21/04	
tert-Amyl Methyl Ether (TAME)	EPA 8260B	4J21031	0.33	5.0	ND	1	10/21/04	10/21/04	
Methyl-tert-butyl Ether (MTBE)	EPA 8260B	4J21031	0.32	5.0	ND	1	10/21/04	10/21/04	
tert-Butanol (TBA)	EPA 8260B	4J21031	3.1	50	**10**	1	10/21/04	10/21/04	ID, J,DX
Ethanol	EPA 8260B	4J21031	50	150	ND	1	10/21/04	10/21/04	
Surrogate: Dibromofluoromethane (80-120%)					*105 %*				
Surrogate: Toluene-d8 (80-120%)					*101 %*				
Surrogate: 4-Bromofluorobenzene (80-120%)					*100 %*				

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Project Manager

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SECOR International, Inc.-Orange County
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Cypress, CA 90630
Attention: Cathy Sanford

Project ID: ARCO 6143, Los Angeles
Report Number: INJ1016

Sampled: 10/14/04
Received: 10/15/04

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

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: INJ1016-07 (GW-7 - Water)									
Reporting Units: ug/l									
Benzene	EPA 8260B	4J21031	0.28	2.0	ND	1	10/21/04	10/21/04	
Ethylbenzene	EPA 8260B	4J21031	0.25	2.0	ND	1	10/21/04	10/21/04	
Toluene	EPA 8260B	4J21031	0.36	2.0	ND	1	10/21/04	10/21/04	
m,p-Xylenes	EPA 8260B	4J21031	0.52	2.0	ND	1	10/21/04	10/21/04	
o-Xylene	EPA 8260B	4J21031	0.24	2.0	ND	1	10/21/04	10/21/04	
Xylenes, Total	EPA 8260B	4J21031	0.52	4.0	ND	1	10/21/04	10/21/04	
Di-isopropyl Ether (DIPE)	EPA 8260B	4J21031	0.25	5.0	ND	1	10/21/04	10/21/04	
Ethyl tert-Butyl Ether (ETBE)	EPA 8260B	4J21031	0.28	5.0	ND	1	10/21/04	10/21/04	
tert-Amyl Methyl Ether (TAME)	EPA 8260B	4J21031	0.33	5.0	ND	1	10/21/04	10/21/04	
Methyl-tert-butyl Ether (MTBE)	EPA 8260B	4J21031	0.32	5.0	ND	1	10/21/04	10/21/04	
tert-Butanol (TBA)	EPA 8260B	4J21031	3.1	50	ND	1	10/21/04	10/21/04	
Ethanol	EPA 8260B	4J21031	50	150	ND	1	10/21/04	10/21/04	
Surrogate: Dibromofluoromethane (80-120%)					*106 %*				
Surrogate: Toluene-d8 (80-120%)					*102 %*				
Surrogate: 4-Bromofluorobenzene (80-120%)					*100 %*				
Sample ID: INJ1016-08 (DUP-6143-20041014 - Water)									
Reporting Units: ug/l									
Benzene	EPA 8260B	4J21031	0.28	2.0	ND	1	10/21/04	10/21/04	
Ethylbenzene	EPA 8260B	4J21031	0.25	2.0	ND	1	10/21/04	10/21/04	
Toluene	EPA 8260B	4J21031	0.36	2.0	ND	1	10/21/04	10/21/04	
m,p-Xylenes	EPA 8260B	4J21031	0.52	2.0	ND	1	10/21/04	10/21/04	
o-Xylene	EPA 8260B	4J21031	0.24	2.0	ND	1	10/21/04	10/21/04	
Xylenes, Total	EPA 8260B	4J21031	0.52	4.0	ND	1	10/21/04	10/21/04	
Di-isopropyl Ether (DIPE)	EPA 8260B	4J21031	0.25	5.0	ND	1	10/21/04	10/21/04	
Ethyl tert-Butyl Ether (ETBE)	EPA 8260B	4J21031	0.28	5.0	ND	1	10/21/04	10/21/04	
tert-Amyl Methyl Ether (TAME)	EPA 8260B	4J21031	0.33	5.0	ND	1	10/21/04	10/21/04	
Methyl-tert-butyl Ether (MTBE)	EPA 8260B	4J21031	0.32	5.0	ND	1	10/21/04	10/21/04	
tert-Butanol (TBA)	EPA 8260B	4J21031	3.1	50	**820**	1	10/21/04	10/21/04	
Ethanol	EPA 8260B	4J21031	50	150	ND	1	10/21/04	10/21/04	
Surrogate: Dibromofluoromethane (80-120%)					*107 %*				
Surrogate: Toluene-d8 (80-120%)					*102 %*				
Surrogate: 4-Bromofluorobenzene (80-120%)					*99 %*				

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SECOR International, Inc.-Orange County
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Attention: Cathy Sanford

Project ID: ARCO 6143, Los Angeles

Report Number: INJ1016

Sampled: 10/14/04
Received: 10/15/04

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

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: INJ1016-09 (TB-6143-20041014 - Water)									
Reporting Units: ug/l									
Benzene	EPA 8260B	4J21031	0.28	2.0	ND	1	10/21/04	10/21/04	
Ethylbenzene	EPA 8260B	4J21031	0.25	2.0	ND	1	10/21/04	10/21/04	
Toluene	EPA 8260B	4J21031	0.36	2.0	ND	1	10/21/04	10/21/04	
m,p-Xylenes	EPA 8260B	4J21031	0.52	2.0	ND	1	10/21/04	10/21/04	
o-Xylene	EPA 8260B	4J21031	0.24	2.0	ND	1	10/21/04	10/21/04	
Xylenes, Total	EPA 8260B	4J21031	0.52	4.0	ND	1	10/21/04	10/21/04	
Di-isopropyl Ether (DIPE)	EPA 8260B	4J21031	0.25	5.0	ND	1	10/21/04	10/21/04	
Ethyl tert-Butyl Ether (ETBE)	EPA 8260B	4J21031	0.28	5.0	ND	1	10/21/04	10/21/04	
tert-Amyl Methyl Ether (TAME)	EPA 8260B	4J21031	0.33	5.0	ND	1	10/21/04	10/21/04	
Methyl-tert-butyl Ether (MTBE)	EPA 8260B	4J21031	0.32	5.0	ND	1	10/21/04	10/21/04	
tert-Butanol (TBA)	EPA 8260B	4J21031	3.1	50	ND	1	10/21/04	10/21/04	
Ethanol	EPA 8260B	4J21031	50	150	ND	1	10/21/04	10/21/04	
Surrogate: Dibromofluoromethane (80-120%)					*101 %*				
Surrogate: Toluene-d8 (80-120%)					*103 %*				
Surrogate: 4-Bromofluorobenzene (80-120%)					*101 %*				

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Project Manager

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Project ID: ARCO 6143, Los Angeles

Report Number: INJ1016

Sampled: 10/14/04
Received: 10/15/04

METHOD BLANK/QC DATA

VOLATILE FUEL HYDROCARBONS (EPA 5030/8015M)

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 4J25006 Extracted: 10/25/04											
Blank Analyzed: 10/25/04 (4J25006-BLK1)											
GRO (C4 - C12)	ND	50	22	ug/l							
Surrogate: 4-BFB (FID)	*8.71*			*ug/l*	*10.0*		*87*	*60-135*			
LCS Analyzed: 10/25/04 (4J25006-BS1)											
GRO (C4 - C12)	279	50	22	ug/l	220		127	70-135			
Surrogate: 4-BFB (FID)	*9.67*			*ug/l*	*10.0*		*97*	*60-135*			
Matrix Spike Analyzed: 10/25/04 (4J25006-MS1)					**Source: INJ1359-04**						
GRO (C4 - C12)	302	50	22	ug/l	220	43	118	60-135			
Surrogate: 4-BFB (FID)	*9.77*			*ug/l*	*10.0*		*98*	*60-135*			
Matrix Spike Dup Analyzed: 10/25/04 (4J25006-MSD1)					**Source: INJ1359-04**						
GRO (C4 - C12)	313	50	22	ug/l	220	43	123	60-135	4	20	
Surrogate: 4-BFB (FID)	*10.0*			*ug/l*	*10.0*		*100*	*60-135*			

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Report Number: INJ1016

Sampled: 10/14/04
Received: 10/15/04

METHOD BLANK/QC DATA

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

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 4J21031 Extracted: 10/21/04											
Blank Analyzed: 10/21/04 (4J21031-BLK1)											
Benzene	ND	2.0	0.28	ug/l							
Ethylbenzene	ND	2.0	0.25	ug/l							
Toluene	ND	2.0	0.36	ug/l							
m,p-Xylenes	ND	2.0	0.52	ug/l							
o-Xylene	ND	2.0	0.24	ug/l							
Xylenes, Total	ND	4.0	0.52	ug/l							
Di-isopropyl Ether (DIPE)	ND	5.0	0.25	ug/l							
Ethyl tert-Butyl Ether (ETBE)	ND	5.0	0.28	ug/l							
tert-Amyl Methyl Ether (TAME)	ND	5.0	0.33	ug/l							
Methyl-tert-butyl Ether (MTBE)	ND	5.0	0.32	ug/l							
tert-Butanol (TBA)	ND	50	3.1	ug/l							
Ethanol	ND	150	50	ug/l							
Surrogate: Dibromofluoromethane	*25.4*			*ug/l*	*25.0*		*102*	*80-120*			
Surrogate: Toluene-d8	*25.4*			*ug/l*	*25.0*		*102*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*24.8*			*ug/l*	*25.0*		*99*	*80-120*			
LCS Analyzed: 10/21/04 (4J21031-BS1)											
Benzene	22.5	2.0	0.28	ug/l	25.0		90	70-120			
Ethylbenzene	23.9	2.0	0.25	ug/l	25.0		96	80-120			
Toluene	23.4	2.0	0.36	ug/l	25.0		94	75-120			
m,p-Xylenes	45.9	2.0	0.52	ug/l	50.0		92	75-120			
o-Xylene	22.4	2.0	0.24	ug/l	25.0		90	75-125			
Xylenes, Total	68.3	4.0	0.52	ug/l	75.0		91	75-125			
Di-isopropyl Ether (DIPE)	22.7	5.0	0.25	ug/l	25.0		91	65-135			
Ethyl tert-Butyl Ether (ETBE)	23.6	5.0	0.28	ug/l	25.0		94	60-140			
tert-Amyl Methyl Ether (TAME)	23.2	5.0	0.33	ug/l	25.0		93	60-140			
Methyl-tert-butyl Ether (MTBE)	25.1	5.0	0.32	ug/l	25.0		100	55-145			
tert-Butanol (TBA)	136	50	3.1	ug/l	125		109	70-140			
Ethanol	192	150	50	ug/l	250		77	35-165			
Surrogate: Dibromofluoromethane	*24.8*			*ug/l*	*25.0*		*99*	*80-120*			
Surrogate: Toluene-d8	*25.5*			*ug/l*	*25.0*		*102*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*24.7*			*ug/l*	*25.0*		*99*	*80-120*			

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Project ID: ARCO 6143, Los Angeles

Report Number: INJ1016

Sampled: 10/14/04
Received: 10/15/04

METHOD BLANK/QC DATA

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

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 4J21031 Extracted: 10/21/04											
Matrix Spike Analyzed: 10/21/04 (4J21031-MS1)					**Source: INJ1016-02**						
Benzene	22.6	2.0	0.28	ug/l	25.0	ND	90	70-120			
Ethylbenzene	23.9	2.0	0.25	ug/l	25.0	ND	96	70-130			
Toluene	23.5	2.0	0.36	ug/l	25.0	ND	94	70-120			
m,p-Xylenes	44.9	2.0	0.52	ug/l	50.0	ND	90	65-130			
o-Xylene	22.3	2.0	0.24	ug/l	25.0	ND	89	65-125			
Xylenes, Total	67.1	4.0	0.52	ug/l	75.0	ND	89	65-135			
Di-isopropyl Ether (DIPE)	22.8	5.0	0.25	ug/l	25.0	ND	91	65-140			
Ethyl tert-Butyl Ether (ETBE)	24.2	5.0	0.28	ug/l	25.0	ND	97	60-140			
tert-Amyl Methyl Ether (TAME)	23.8	5.0	0.33	ug/l	25.0	ND	95	55-145			
Methyl-tert-butyl Ether (MTBE)	26.2	5.0	0.32	ug/l	25.0	ND	105	50-155			
tert-Butanol (TBA)	138	50	3.1	ug/l	125	ND	110	65-145			
Ethanol	182	150	50	ug/l	250	ND	73	35-165			
Surrogate: Dibromofluoromethane	*25.4*			*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*			
Matrix Spike Dup Analyzed: 10/21/04 (4J21031-MSD1)					**Source: INJ1016-02**						
Benzene	23.1	2.0	0.28	ug/l	25.0	ND	92	70-120	2	20	
Ethylbenzene	24.1	2.0	0.25	ug/l	25.0	ND	96	70-130	1	20	
Toluene	24.1	2.0	0.36	ug/l	25.0	ND	96	70-120	3	20	
m,p-Xylenes	46.1	2.0	0.52	ug/l	50.0	ND	92	65-130	3	25	
o-Xylene	22.5	2.0	0.24	ug/l	25.0	ND	90	65-125	1	20	
Xylenes, Total	68.6	4.0	0.52	ug/l	75.0	ND	91	65-135	2	20	
Di-isopropyl Ether (DIPE)	23.6	5.0	0.25	ug/l	25.0	ND	94	65-140	3	25	
Ethyl tert-Butyl Ether (ETBE)	24.9	5.0	0.28	ug/l	25.0	ND	100	60-140	3	25	
tert-Amyl Methyl Ether (TAME)	24.8	5.0	0.33	ug/l	25.0	ND	99	55-145	4	30	
Methyl-tert-butyl Ether (MTBE)	27.2	5.0	0.32	ug/l	25.0	ND	109	50-155	4	25	
tert-Butanol (TBA)	149	50	3.1	ug/l	125	ND	119	65-145	8	25	
Ethanol	209	150	50	ug/l	250	ND	84	35-165	14	30	
Surrogate: Dibromofluoromethane	*25.8*			*ug/l*	*25.0*		*103*	*80-120*			
Surrogate: Toluene-d8	*25.7*			*ug/l*	*25.0*		*103*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*25.1*			*ug/l*	*25.0*		*100*	*80-120*			

Del Mar Analytical, Irvine
Wendy Kirkeeng For Chris Roberts
Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical.

Del Mar Analytical

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SECOR International, Inc.-Orange County	Project ID: ARCO 6143, Los Angeles	
11085 Knott Ave, Suite B		Sampled: 10/14/04
Cypress, CA 90630	Report Number: INJ1016	Received: 10/15/04
Attention: Cathy Sanford		

DATA QUALIFIERS AND DEFINITIONS

ID	Analyte identified by RT & presence of single mass ion
J,DX	EPA Flag - Estimated value,Value < lowest standard (MQL), but > than MDL
PV	Hydrocarbon result partly due to individ. peak(s) in quant. range
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 GRO (C4-C12):

GRO (C4-C12) is quantitated against a gasoline standard. Quantitation begins immediately following the methanol peak.

8015 Analysis EDF Parlabel Cross Reference

Analyte	EDF Parlabel
GRO (C4 - C12)	GROC4C12

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Certification Summary

Del Mar Analytical, Irvine

Method	Matrix	NELAP	CA
EPA 8015B	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.

Del Mar Analytical, Irvine
Wendy Kirkeeng For Chris Roberts
Project Manager

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INJ1016

bp

Chain of Custody Record

Project Name: Q4-2004 Groundwater
BP BU/AR Region/Enfos Segment: BP Retail (Coastal + C. LA)
State or Lead Regulatory Agency: LARWQCB
Requested Due Date (10/28/04): Standard TAT

On-site Time:	Temp:
Off-site Time:	Temp:
Sky Conditions:	
Meteorological Events:	
Wind Speed:	Direction:

Lab Name:	Del Mar Analytical	BP/AR Facility No.:	6143	Consultant/Contractor:	SECOR International, Inc.
Address:	17461 Derian Ave Suite 100	BP/AR Facility Address:	3704 Cahuenga Blvd. N Hollywood	Address:	11085 Knott Avenue, Suite B
	Irvine,California 92614	Site Lat/Long:			Cypress, CA 90630
Lab PM:	Chris Roberts	California Global ID No.:	T0603791973	Consultant/Contractor Project No.:	37BP.U6143.02
Tele/Fax:	949-261-1022 / 949-261-1228	Enfos Project No.:	G09K4-0194	Consultant/Contractor PM:	Cathy Sanford
BP/AR PM Contact:	Roy Thun	(Provision or RCOP (circle one)		Tele/Fax:	714-379-3366
Address:	4 Centerpoint Drive	Phase/WBS:	4 Monitoring Only	Report Type & QC Level:	Standard
	La Palma, Califorina	Sub Phase/Task:	Analytical	E-mail EDD To:	bauchard@secor.com
Tele/Fax:	661-287-3855	Cost Element:	Sub Contracted Cost	Invoice to:	(Consultant or) BP or Atlantic Richfield Co. (circle one)

Lab Bottle Order No:

Item No.	Sample Description	Time	Date	Matrix: Soil/Solid	Matrix: Water/Liquid	Matrix: Air	Laboratory No.	No. of Containers	Preservative: Unpreserved	Preservative: H_2SO_4	Preservative: HNO_3	Preservative: HCl	Preservative: Methanol	Requested Analysis: GRO C4-C12 (8015)	Requested Analysis: BTEX/OXY/ET (8260)	Sample Point Lat/Long and Comments
1	GW-1	0955	10/14		X		INJ1016	4				X		X	X	
2	GW-2	1345	10/14		X			4				X		X	X	
3	GW-3	1240	10/14		X			4				X		X	X	
4	GW-4	1205	10/14		X			4				X		X	X	
5	GW-5	1110	10/14		X			4				X		X	X	
6	GW-6	1020	10/14		X			4				X		X	X	
7	GW-7	1330	10/14		X			4				X		X	X	
8	DUP-6143-20041014	—	10/14		X			4				X		X	X	
9	TB-6143-20041014	—	10/14		X			4				X		X	X	
10																

	Relinquished By / Affiliation	Date	Time	Accepted By / Affiliation	Date	Time
Sampler's Name: Shawn D.						
Sampler's Company: SECOR		10/15	1045	K Sanderman	10/15	1045
Shipment Date:	K Sanderman	10/15	1205			
Shipment Method:						
Shipment Tracking No:				VuBanh	10-15-04	1205

Special Instructions:

Custody Seals In Place Yes ___ No ✓ Temp Blank Yes ___ No ✓ Cooler Temperature on Receipt 7 °F/C Trip Blank Yes ✓ No ___

Distribution: White Copy - Laboratory / Yellow Copy - BP/Atlantic Richfield Co. / Pink Copy - Consultant/Contractor

BP COC Rev. 4 10/1/04