CALIFORNIA GEOPHYSICAL GROUP, INC.
12709 Poway Road, Suite 202, Poway, CA 92064 Tel: (619) 486-1323

November 6, 1990

Department of Environmental Health
Alameda County
80 Swan Way Rm 200
Oakland, Ca. 94621

Attn: Mr. Scott Seery

RE: Xtra Oil Co. Service Station, 3495 Castro Valley Blvd., Castro Valley, Cal

QUARTERLY REPORT

3RD. QTR. 1990

During the months of July, August, and September of this year the water levels were measured and water samples were taken by Sequoia Analytical of Redwood City. This information was passed on to us for compilation and review. Table I lists the ground water elevations and gradients, and Table II lists the results of the water analysis taken on the same dates.

TABLE I

WATER TABLE ELEVATIONS

Date	7/20/90	8/23/90	9/27/90
Well No.			
MW-1	166.65	166.48	166.06
MW-2	165.87	165.53	165.16
MW-3	166.00	166.08	165.65
Approx Gradient Ft/ft.	0.0051	0.0050	0.0049

FINDINGS

The hydraulic gradient at this site for the past three months has been to the southeast. It has shifted very little over this entire period. The gradient remained about constant over this period at 0.005 Ft/Ft. Previous reports of the gradient have shown it to be to the East and once to the Northeast. The water table has fallen about 0.5 feet over the quarter, which is expected for this time of year.

TABLE II

CHEMICAL ANALYSIS
REPORTED IN MG/L OR PPM

Sampling Date 7/20/90

Well No.	TPH	Benzene	Toluene	Xylenes	EthylBenzene
MW-1	44	5.1	4.2	9.1	ND
MW-2	86	9.1	14.0	13.0	0.94
MW-3	88	25.0	21.0	14.0	0.61

Sampling Date 8/23/90

Well No.	TPH	Benzene	Toluene	Xylenes	EthylBenzene
MW-1	40	5.3	4.9	6.0	0.35
MW-2	96	8.1	8.4	8.6	1.5
MW-3	220	67.0	46.0	18.0	27.0

Sampling Date 8/27/90

Well No.	TPH	Benzene	Toluene	Xylenes	EthylBenzene
MW-1	28	3.7	3.5	6.5	0.01
MW-2	59	8.4	12.0	9.0	0.88
MW-3	25	7.2	6.4	3.4	0.42

Detection Limits

TPH	Benzene	Toluene	Xylenes	EthylBenzene
0.03	0.0003	0.0003	0.0003	0.0003

The TPH levels have fallen in the wells from August to September after rising between July and August. The levels of Benzene, Toluene, Xylenes, and Ethylbenzene remain above the regulatory thresholds.

CONCLUSIONS

The hydraulic gradient remains in an easterly or southeasterly direction. This places well MW-1 as the up gradient well and MW-2 as the down gradient well.

We feel monthly sampling is not warranted at this site and quarterly sampling should commence. The variance in the data from one month to the next shows little significant change. Please advise us if you agree with this observation.

We find a considerable amount of contaminated water is entering the site at well MW-1. The amount entering is about 1/2 of the amount leaving the site. This fact is disturbing because once we have cleaned up the contamination at this site the ground water migrating on site will remain contaminated and could in fact recontaminate the soil near the capillary fringe thus negating our efforts.

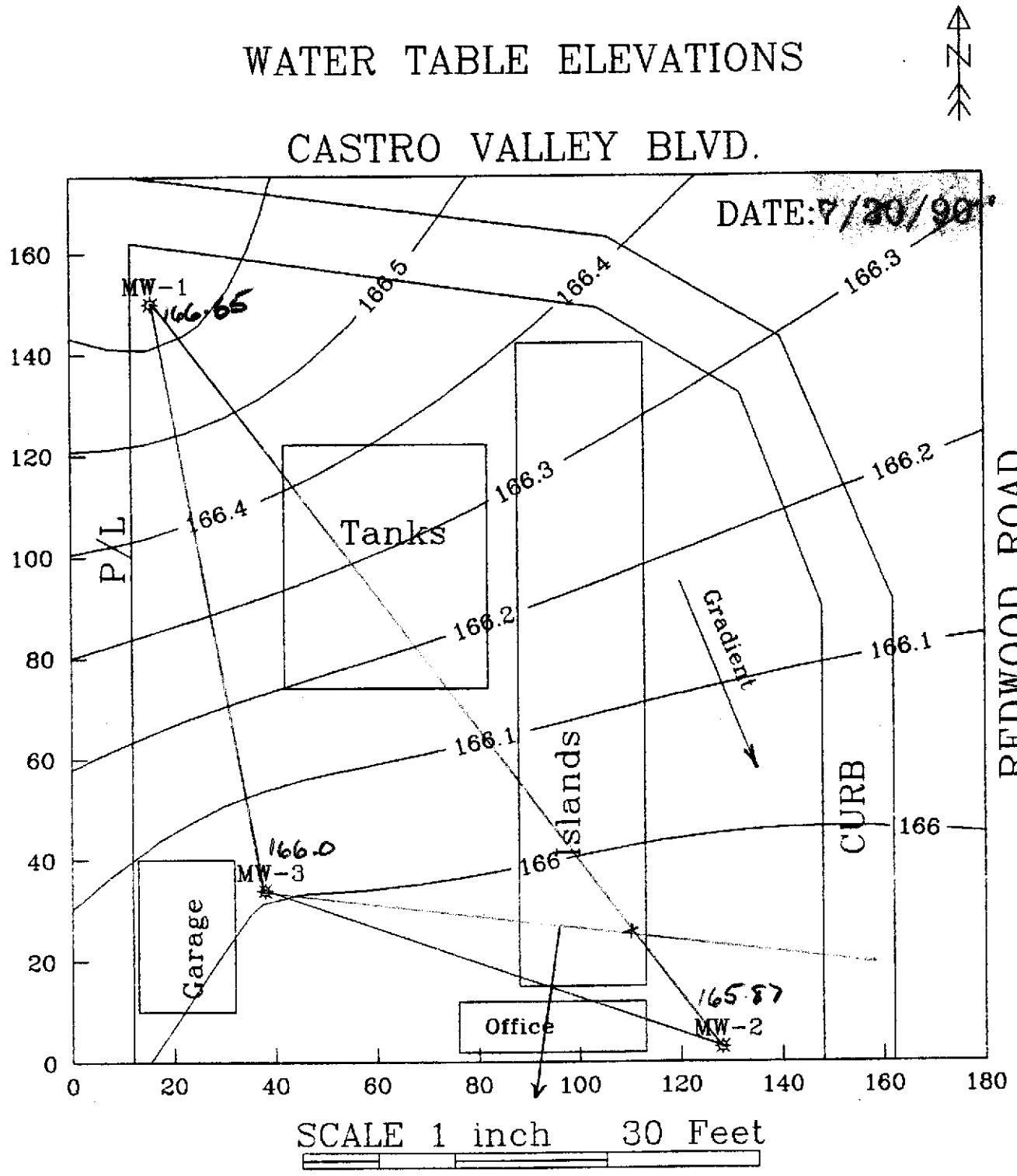
We plan to investigate further where this contamination is coming from. If your office can be of assistance please contact us.

Yours truly,

John Cussen
Cal. Reg. Environmental Assessor #1979

Gilein Steensma
Cal. Reg. Geophycist #946

WATER TABLE ELEVATIONS



$\frac{\Delta El.\ (H-m)}{\Delta El\ \ (H-L)} = \frac{x}{Dist\ H \to L}$

$\frac{166.65 - 166.00}{166.65 - 165.87} = \frac{0.65}{0.78}(188) = x$

$x = 157'$

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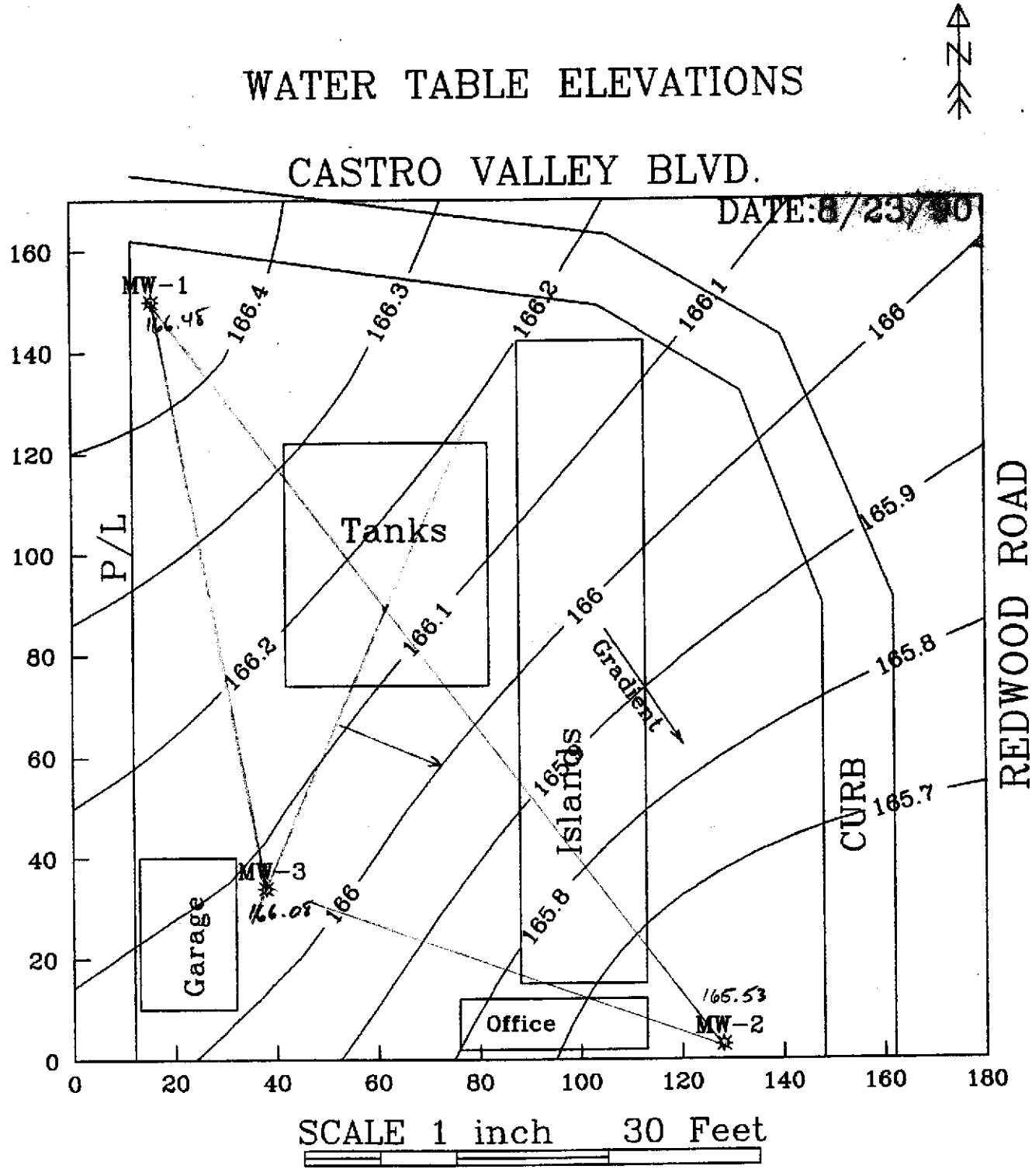
SCALE	DATE	
CHK'D		

WATER TABLE ELEVATIONS



$\frac{H-m}{H-L} = \frac{x}{D\ H \to L}$

$\frac{0.40}{0.95}(188) = x$

$x = 79$

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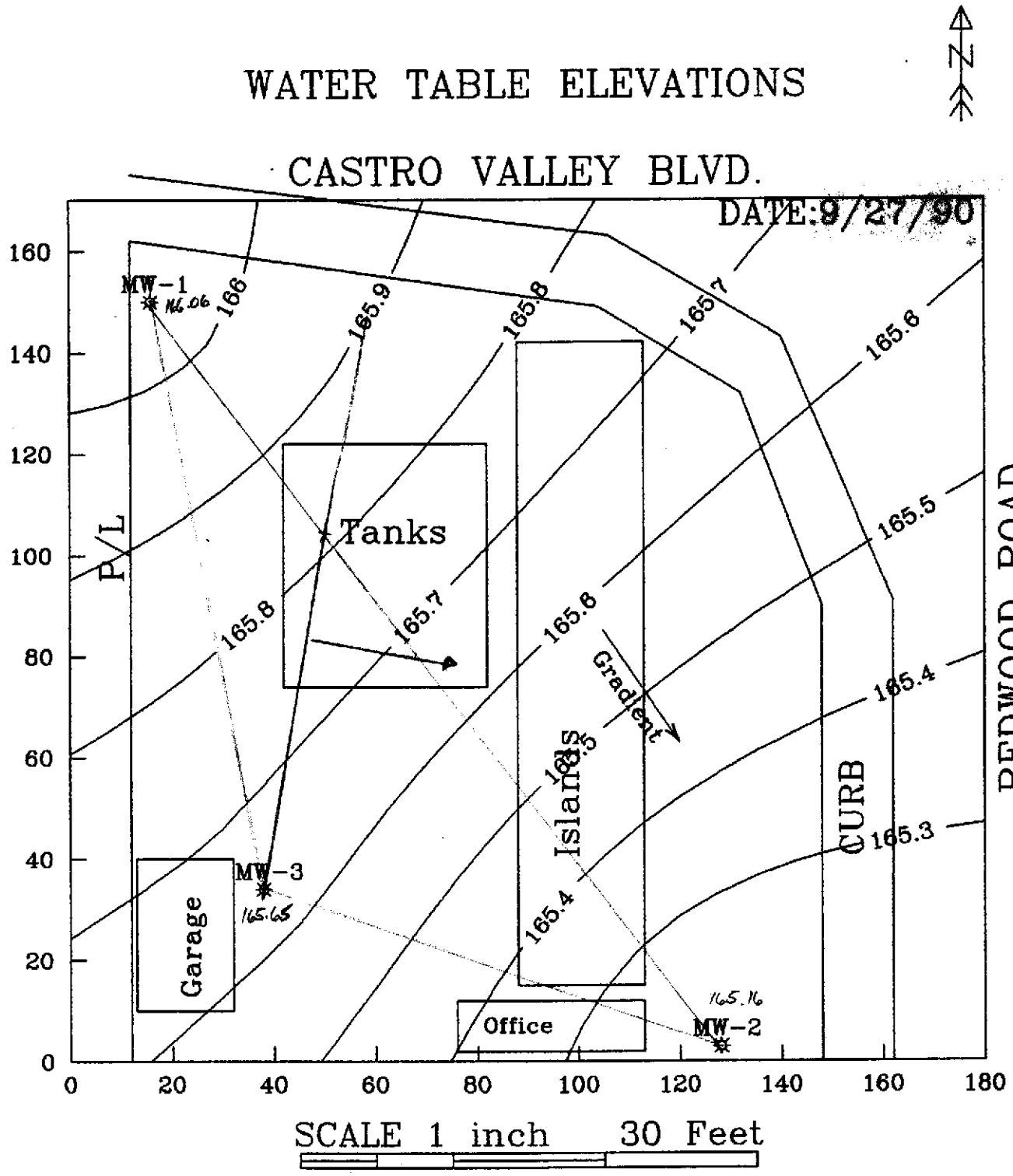
SCALE	DATE	
CHK'D		

WATER TABLE ELEVATIONS



$\frac{H-M}{H-L} = \frac{X}{D:\ H \to L}$

$\frac{0.41}{0.90}(188) = X$

$X = 85.6 \sim 86'$

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SCALE	DATE	
CHK'D		

SEQUOIA ANALYTICAL

680 Chesapeake Drive • Redwood City, CA 94063
(415) 364-9600 • FAX (415) 364-9233

Xtra Oil Company	Client Project ID:	Castro Valley	Sampled:	Jul 20, 1990
2307 Pacific Avenue	Matrix Descript:	Water	Received:	Jul 20, 1990
Alameda, CA 94501	Analysis Method:	EPA 3510/8015	Extracted:	Aug 1, 1990
Attention: Ted Simas	First Sample #:	007-3927 C	Analyzed:	Aug 3, 1990
			Reported:	Aug 6, 1990

TOTAL PETROLEUM FUEL HYDROCARBONS (EPA 8015)

Sample Number	Sample Description	High B.P. Hydrocarbons µg/L (ppb)
007-3927	MW-1	44,000
007-3928	MW-2	86,000
007-3929	MW-3	88,000

Detection Limits:	50

High Boiling Point Hydrocarbons are quantitated against a diesel fuel standard.
Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL

[signature]

[illegible] McBirney

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Xtra Oil Company	Client Project ID:	Castro Valley		Sampled:	Jul 20, 1990
2307 Pacific Avenue	Matrix Descript:	Water		Received:	Jul 20, 1990
Alameda, CA 94501	Analysis Method:	EPA 5030/8020		Analyzed:	Aug 3, 1990
Attention: Ted Simas	First Sample #:	007-3927	A-B	Reported:	Aug 6, 1990

BTEX DISTINCTION (EPA 8020)

Sample Number	Sample Description	Benzene ug/L (ppb)	Toluene ug/L (ppb)	Ethyl Benzene ug/L (ppb)	Xylenes ug/L (ppb)
007-3927	MW-1	5,100	4,200	N.D.	9,100
007-3928	MW-2	9,100	14,000	940	13,000
007-3929	MW-3	25,000	21,000	610	14,000
Detection Limits:		**0.30**	**0.30**	**0.30**	**0.30**

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL

Maile A. McBirney
Project Manager

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Xtra Oil Company	Client Project ID:	Castro Valley Station	Sampled:	Aug 23, 1990
2307 Pacific Avenue	Matrix Descript:	Water	Received:	Aug 23, 1990
Alameda, CA 94501	Analysis Method:	EPA 5030/8015/8020	Analyzed:	Aug 27, 1990
Attention: Ted Simas	First Sample #:	008-4152 A-B	Reported:	Sep 12, 1990

TOTAL PETROLEUM FUEL HYDROCARBONS with BTEX DISTINCTION (EPA 8015/8020)

Sample Number	Sample Description	Low/Medium B.P. Hydrocarbons µg/L (ppb)	Benzene µg/L (ppb)	Toluene µg/L (ppb)	Ethyl Benzene µg/L (ppb)	Xylenes µg/L (ppb)
0084152 A-B	MW-1	40,000	5,000	4,900	350	6,000
0084153 A-B	MW-2	96,000	8,100	8,400	1,500	8,600
0084154 A-B	MW-3	220,000	67,000	46,000	27,000	18,000
Detection Limits:		**30**	**0.30**	**0.30**	**0.30**	**0.30**

Low to Medium Boiling Point Hydrocarbons are quantitated against a gasoline standard.
Analytes reported as N.D. were not present above the stated limit of detection.

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Maile A. McBirney
Project Manager

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680 Chesapeake Drive • Redwood City, CA 94063
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Xtra Oil Company	Client Project ID:	Shell/Castro Valley	Sampled:	Sep 27, 1990
2307 Pacific Avenue	Matrix Descript:	Water	Received:	Sep 27, 1990
Alameda, CA 94501	Analysis Method:	EPA 5030/8015/8020	Analyzed:	Oct 1, 1990
Attention: Ted Simas	First Sample #:	009-3687 A-B	Reported:	Oct 5, 1990

TOTAL PETROLEUM FUEL HYDROCARBONS with BTEX DISTINCTION (EPA 8015/8020)

Sample Number	Sample Description	Low/Medium B.P. Hydrocarbons µg/L (ppb)	Benzene µg/L (ppb)	Toluene µg/L (ppb)	Ethyl Benzene µg/L (ppb)	Xylenes µg/L (ppb)
009-3687	MW-1	28,000	3,700	3,500	10	6,500
009-3688	MW-2	59,000	8,400	12,000	880	9,000
009-3689	MW-3	25,000	7,200	6,400	420	3,400
Detection Limits:		**30**	**0.30**	**0.30**	**0.30**	**0.30**

Low to Medium Boiling Point Hydrocarbons are quantitated against a gasoline standard.
Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL

Maile A. McBirney
Project Manager