

Ro-295

R.T. NAHAS COMPANY *Since 1947*

REAL ESTATE DEVELOPERS AND INVESTORS

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October 24, 2003

Mr. Scott Seery
Hazardous Materials Specialist
Alameda County Health Care Services
1131 Harbor Bay Pkwy., Room 250
Oakland, CA 94502

Alameda County
OCT 29 2003
Environmental Health

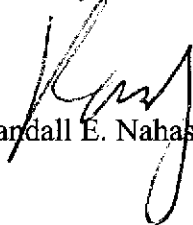
Dear Scott:

Enclosed is the 8th semi-annual groundwater report for the former Unocal 76 service station on Redwood Road in Castro Valley.

While there are still contaminants in the ground and their concentrations are diminishing, I'm having a very difficult time understanding why I continue to spend \$5000+ per year to produce reports that are obviously being filed away in a dead file somewhere in the Alameda County Health Department, the same way they're being dead-filed in our office. If no further remediation is necessary, and we know there are no more pollution generators adding to the plumb, why are we wasting money and time continuing to monitor when we know what the ultimate outcome is? From the thousands and thousands of wells that have been monitored, we should know what the half life of these chemicals are and therefore be able to predict where the concentrations are going and eliminate this waste of money, for us personally, and the State of California.

I am going to ask our consultants to prepare a closure report as soon as possible. If I had come to this conclusion five years ago, I would have saved the State a lot of money. As in the past, I don't expect any response from you, as I have not received any for as long as I can remember. Perhaps a cessation of the monitoring will get somebody's attention.

Sincerely,


Randall E. Nahas

Enclosure
REN/tar

**Report – Eighth Semi-Annual
Groundwater Monitoring
(Third Quarter of 2003)
Former Unocal 76 Service Station
20405 and 20629 Redwood Road
Castro Valley, California**

**Alameda County
OCT 29 2003
Environmental Health**

BSK ASSOCIATES

BSK JOB NO. P92057.3

**Submitted to:
R.T. Nahas Company
Castro Valley, California**

October 21, 2003

October 21, 2003

BSK JOB NO. P92057.3

R. T. Nahas Company/Eden Managements
20630 Patio Drive
Castro Valley, CA 94546

Attention: Mr. Randy T. Nahas

Subject: **Report**
Eighth Semi-Annual Groundwater Monitoring
(Third Quarter of 2003)
Former Unocal 76 Service Station
20405 and 20629 Redwood Road
Castro Valley, California

Dear Mr. Nahas:

As requested and authorized, we have performed groundwater monitoring well sampling at the above-referenced site. This report presents the groundwater data obtained during this and previous sampling events, conclusions based on the data collected during this event, and recommendations for further action. The site location is shown on Figure 1, Vicinity Map. The well locations are shown on Figure 2, Site Plan.

GROUNDWATER MONITORING ACTIVITIES – SEPTEMBER 2003

General

The Eighth semi-annual monitoring of groundwater monitoring wells at the project site (Figure 2, Site Plan) was performed on September 17, 2003. *Groundwater monitoring wells MW-2 and MW-7 could not be accessed during this sampling event as these wells were covered with fill soil and paved over, respectively.* Groundwater monitoring well MW-4 was abandoned during the remediation activities carried out in 1999 by others at the site. The semi-annual sampling schedule – with monitoring activities in the first and third quarter of each year – was requested by Mr. Scott Seery, case officer for the Alameda County Department of Environmental Health (ACDEH), in a letter addressed to the R. T. Nahas Company, dated November 2, 1999. Further, in accordance with Mr. Seery's letter of April 24, 2001, sampling of well MW-5 was discontinued as of the Fourth sampling round. Field procedures and observations are provided in the following text.

Field Work

All wells sampled were purged using an electric submersible pump. Three to four well casing volumes of water were removed from each well. Purge effluent was field monitored for pH, temperature and conductivity during purging to assess the influx of fresh formation water into the well. Purged water was

transferred to 55-gallon, DOT-approved steel drums for holding. Each drum was labeled according to its content, content source, and date of accumulation.

Prior to purging, the depth to water in each well was measured using a Solinst Electric Well Sounder, marked in twentieths of a foot. The water depth was then interpolated to the 0.01 foot increment from the tape. Each well was subsequently checked for floating and sinking immiscible product layers and sheen, using a clear bailer having dual check valves for point-source sampling. The piezometric contour and elevation, and well water elevations, are presented on Figure 3, Groundwater Elevation Contour Map.

Upon purge completion, each well was again measured to confirm a minimum of 80 percent well recovery prior to sampling. Water sampling was then performed with a disposable bailer. Sampling for contaminants was performed in the order of decreasing contaminant volatility. Each water sample was decanted into the appropriate container with preservative (as necessary), sealed, labeled and refrigerated for delivery to our State-certified laboratory.

A Well Field Log was prepared for each well sampled, recording the water depth, well volume, pH, water temperature, conductivity and other data. The Well Field Logs are presented as Figures 4.1 through 4.6.

Site Hydrology

The groundwater level was measured in four (4) wells on September 17, 2003, to assess the flow direction and gradient. On that date, groundwater flow was generally in a direction slightly east of south, with a gradient of 0.012 ft/ft (Figure 3).

Chemical Analyses

Water samples obtained from each of the sampled wells were analyzed for constituents related to gasoline, Total Petroleum Hydrocarbons as Gasoline (TPHg), Benzene, Toluene, Ethylbenzene and Xylene (BTEX) and Methyl-t-Butyl Ether (MTBE).

The contaminants tested for are those specified by ACDEH in their letter dated November 2, 1999. Current and prior analytical results are presented for comparison in Table 1. Records of past and present concentrations of BTEX and MTBE in the groundwater samples from MW-2 and MW-3 are graphically presented on Figures 5 and 6, respectively (*no current data is available for MW-2 as it could not be accessed during this sampling event*). The Chemical Test Data Sheets are presented in Appendix A along with the Project Chain-of-Custody record and QA/QC Summary Report.

CONCLUSIONS AND RECOMMENDATIONS

Conclusions

Compared to the previous results (from the March 2003 sampling event), trace contaminant concentrations associated with gasoline (BTEX compounds) are at lower concentrations in well MW-101, and somewhat lower concentrations in well MW-6. The Total Petroleum Hydrocarbons as Gasoline detected in previous events in well MW-7 probably represents Perchloroethane.

MTBE was detected in wells MW-3, MW-6 and MW-101. The MTBE detected in well W-101 (highest reading) was confirmed using EPA Method 8260 as requested by ACDEH.

Recommendations

Since, with the exception of a trace concentration of MTBE, no Total Petroleum Hydrocarbons as Gasoline and BTEX have been detected in well MW-3 for the last two and one-half years (see Table 1) and the TPH-g detected in previous events in well MW-7 is Perchloroethane-related, as indicated before, we recommend that monitoring and testing of these wells be discontinued. However, the remaining three groundwater monitoring wells (MW-2, MW-101 and MW-6) located at the site should be sampled on a semi-annual basis as requested by ACDEH (letter dated April 24, 2001). The next semi-annual sampling event is scheduled for March 2004.

REPORT DISTRIBUTION

Copies of this report should be submitted to the Alameda County Department of Environmental Health for their review. We are providing you with extra copies for this purpose. We understand that copies of the report may be forwarded by ACDEH to the Regional Water Quality Control Board in Oakland for their review.

Alameda County Department of Environmental Health
1181 Harbor Bay Parkway
Alameda, CA 94502

LIMITATIONS

The findings and conclusions presented in this report are based on field review and observations, and from the limited testing program described in this report. This report has been prepared in accordance with generally accepted methodologies and standards of practice in the area. No other warranties, expressed or implied, are made as to the findings, conclusions and recommendations included in the report.

The findings of this report are valid as of the present. The passage of time, natural processes or human intervention on the property or adjacent property can cause changed conditions which can invalidate the findings and conclusions presented in this report.

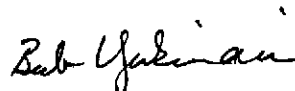
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BSK is pleased to continue to be of service to you during this project. If you have questions concerning the contents of the report, please do not hesitate to contact us.

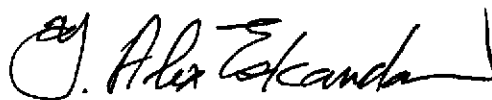
The following are attached and complete this report:

TABLE	1	Summary of Groundwater Analysis
FIGURE	1	Vicinity Map
FIGURE	2	Site Plan
FIGURE	3	Groundwater Elevation Contour Map
FIGURES	4.1-4.6	Well Field Logs
FIGURE	5	BTEX/MTBE Concentrations in Groundwater - MW-2
FIGURE	6	BTEX/MTBE Concentrations in Groundwater - MW-3
Appendix "A"		Laboratory Chemical Test Data Sheets and Project Chain-of-Custody Record (4 pages), and Level II QC Summary Report (7 pages)

Respectfully submitted,
BSK Associates



Bob Yukinari, P.E., G.E.
Senior Project Engineer
C 35720, G.E. 2086



Y. Alex Eskandari, P.E.
Project Manager
C 38101

YAE/BY:by
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Distribution:
R. T. Nahas Company (4 copies)

TABLE 1, SUMMARY OF GROUNDWATER ANALYSIS, Results in ug/L

Sample Date	Well Number	Benzene	Toluene	Ethyl-Benzene	Xylenes	Methyl-t-Butyl Ether	TPH Gasoline	TPH Diesel	Total Oil & Grease	EPA 601
September 2003	MW-2 ***	---	---	---	---	---	---	---	---	---
	MW-3	ND	ND	ND	ND	13	ND	---	---	---
	MW-5 *	---	---	---	---	---	---	---	---	---
	MW-6	ND	ND	ND	ND	440	140	---	---	---
	MW-7 **	---	---	---	---	---	---	---	---	---
	MW-101	150	ND	100	110	850 ¹ /1100 ²	3000	---	---	---
March 2003	MW-2 ***	---	---	---	---	---	---	---	---	---
	MW-3 ***	---	---	---	---	---	---	---	---	---
	MW-5 *	---	---	---	---	---	---	---	---	---
	MW-6	ND	ND	ND	ND	200	61	---	---	---
	MW-7 **	---	---	---	---	---	---	---	---	---
	MW-101	330	ND	440	370	1400 ¹ /840 ²	6300	---	---	---
October 2002	MW-2	ND	ND	ND	ND	280	92	---	---	---
	MW-3	ND	ND	ND	ND	15	ND	---	---	---
	MW-5 *	---	---	---	---	---	---	---	---	---
	MW-6	ND	ND	ND	ND	260	83	---	---	---
	MW-7 **	---	---	---	---	---	---	---	---	---
	MW-101	240	0.74	230	76	1500 ¹ /1400 ²	5200	---	---	---
March 2002	MW-2	2.6	0.31	2	1.7	420	140	---	---	---
	MW-3	ND	ND	ND	ND	26	ND	---	---	---
	MW-5 *	---	---	---	---	---	---	---	---	---
	MW-6	ND	ND	ND	ND	370	91	---	---	---
	MW-7	0.35	ND	0.91	2.2	7.7	280	---	---	---
	MW-101	600	25	1600	3100	1600 ¹ /870 ²	19000	---	---	---
August 2001	MW-2	ND	ND	ND	ND	690 ¹ /820 ²	160	---	---	---
	MW-3	ND	ND	ND	ND	26	ND	---	---	---
	MW-5 *	---	---	---	---	---	---	---	---	---
	MW-6	ND	ND	ND	ND	280 ¹ /350 ²	79	---	---	---
	MW-7	ND	ND	ND	ND	7.3 ¹ /ND ²	800	---	---	---
	MW-101	630	ND	1500	480	1400	12000	---	---	---
March 2001	MW-2	22	1.5	17	27	1300 ¹ /1200 ²	1000	---	---	---
	MW-3	ND	ND	ND	ND	190	ND	---	---	---
	MW-5	ND	ND	ND	ND	ND	ND	---	---	---
	MW-6	ND	ND	ND	ND	440	130	---	---	---
	MW-7	ND	ND	ND	ND	ND	630	---	---	---
	MW-101	1400	62	3400	7700	970	34000	---	---	---

TABLE 1, SUMMARY OF GROUNDWATER ANALYSIS, Results in ug/L

Sample Date	Well Number	Benzene	Toluene	Ethyl-Benzene	Xylenes	Methyl-t-Butyl Ether	TPH Gasoline	TPH Diesel	Total Oil & Grease	EPA 601
September 2000	MW-2	0.89	ND	1	0.65	620	180	---	---	---
	MW-3	ND	ND	ND	ND	98	ND	---	---	---
	MW-5	ND	ND	ND	ND	ND	ND	---	---	---
	MW-6	ND	ND	ND	ND	170	54	---	---	---
	MW-7	3	0.32	13	27	ND	770	---	---	---
	MW-101	1100	35	2900	400	1600 ¹ /1800 ²	12000	---	---	---
March 2000	MW-2	14	0.92	16	24	1400	560	---	---	---
	MW-3	0.61	ND	ND	ND	240	96	---	---	---
	MW-5	ND	ND	ND	ND	ND	ND	---	---	---
	MW-6	ND	0.49	ND	ND	260	78	---	---	---
	MW-7	890	ND	ND	ND	ND	ND	---	---	---
	MW-101	2500	490	4300	10000	2400 ¹ /1400 ²	40000	---	---	---
November 1997	MW-2	6.8	0.64	4.7	8.2	1200	360	---	---	---
	MW-3	1.7	1.4	2.3	8.3	65	62	---	---	---
	MW-4	ND	ND	ND	ND	ND	ND	ND	---	---
	MW-5	ND	ND	ND	ND	ND	ND	ND	---	---
	MW-6	ND	ND	ND	ND	9	ND	ND	---	---
	MW-7	---	---	---	---	---	---	---	---	---
April 1997	MW-2	23	1.6	21	31.4	1800	470	---	---	---
	MW-3	7.3	ND	3.3	5.4	230	120	---	---	---
	MW-4	ND	ND	ND	ND	ND	ND	ND	---	---
	MW-5	ND	ND	ND	ND	ND	ND	---	---	---
	MW-6	ND	ND	ND	ND	ND	ND	---	---	---
	MW-7	---	---	---	---	---	---	---	---	---
October 1996	MW-2	9.4	0.5	7.2	9.4	1400	180	---	---	---
	MW-3	3.8	1.5	2.1	6.8	55	79	---	---	---
	MW-4	ND	ND	ND	ND	ND	ND	ND	---	---
	MW-5	ND	ND	ND	ND	ND	ND	---	---	---
	MW-6	ND	ND	ND	ND	17	ND	---	---	---
	MW-7	---	---	---	---	---	---	---	---	---
April 1996	MW-2	41	2.8	27	50	---	690	---	---	---
	MW-3	8.4	1.6	4.7	14	---	170	---	---	---
	MW-4	ND	ND	ND	ND	---	ND	ND	---	---
	MW-5	ND	ND	ND	ND	---	ND	---	---	---
	MW-6	2.9	2.9	ND	ND	---	ND	---	---	---
	MW-7	ND	ND	ND	ND	---	---	---	---	---

TABLE 1, SUMMARY OF GROUNDWATER ANALYSIS, Results in ug/L

Sample Date	Well Number	Benzene	Toluene	Ethyl-Benzene	Xylenes	Methyl-t-Butyl Ether	TPH Gasoline	TPH Diesel	Total Oil & Grease	EPA 601
October 1995	MW-2	7.4	ND	5.1	5.5	---	450	---	---	---
---	MW-3	9	3.9	8.5	34	---	340	---	---	---
---	MW-4	ND	ND	ND	ND	---	ND	ND	---	---
---	MW-5	ND	ND	ND	ND	---	ND	---	---	---
---	MW-6	ND	ND	ND	ND	---	ND	---	---	---
---	MW-7	ND	ND	ND	ND	---	---	---	---	---
September 1995	MW-101	170	94	150	710	---	9400	---	---	---
---	---	---	---	---	---	---	---	---	---	---
April 1995	MW-2	72	2.8	47	22	---	480	---	---	---
---	MW-3	26	0.6	40	19	---	450	---	---	---
---	MW-4	ND	ND	ND	ND	---	ND	ND	ND	---
---	MW-5	ND	ND	ND	ND	---	ND	---	---	---
---	MW-6	ND	ND	ND	ND	---	ND	---	---	---
---	MW-7	ND	ND	ND	ND	---	---	---	---	---
January 1995	MW-2	48	2.8	15	27	---	440	---	---	---
---	MW-3	26	0.6	14	45	---	250	---	---	---
---	MW-4	ND	ND	ND	ND	---	ND	ND	2000	---
October 1994	MW-2	2.8	ND	2.9	1.8	---	97	---	---	---
---	MW-3	0.9	ND	ND	ND	---	ND	---	---	---
---	MW-4	ND	36	ND	1.3	---	70	ND	ND	---
---	MW-5	ND	71	0.4	1.7	---	87	---	---	---
---	MW-6	0.4	140	0.5	2.3	---	160	---	---	---
July 1994	MW-2	14	0.7	5.8	12	---	180	---	---	---
---	MW-3	7.2	0.4	1.6	4.6	---	52	---	---	---
---	MW-4	ND	0.6	ND	ND	---	ND	86	ND	---
April 1994	MW-2	23	1.1	8.2	17	---	270	---	---	---
---	MW-3	17	1	4.9	24	---	62	---	---	---
---	MW-4	ND	ND	ND	0.4	---	ND	ND	ND	---
---	MW-5	ND	0.4	ND	1	---	ND	---	---	---
---	MW-6	ND	0.3	ND	0.4	---	ND	---	---	---
---	MW-7	ND	ND	ND	ND	---	3603	---	---	---
January 1994	MW-2	13	3.4	4.9	9.2	---	130	---	---	---
---	MW-3	5.5	2.1	2.6	14	---	69	---	---	---
---	MW-7	ND	ND	ND	ND	---	3303	---	---	---

TABLE 1, SUMMARY OF GROUNDWATER ANALYSIS, Results in ug/L

Sample Date	Well Number	Benzene	Toluene	Ethyl-Benzene	Xylenes	Methyl-t-Butyl Ether	TPH Gasoline	TPH Diesel	Total Oil & Grease	EPA 601
October 1993	MW-2	4	ND	2.3	3.1	---	98	---	---	---
---	MW-3	5	ND	0.6	1.2	---	ND	---	---	---
---	MW-4	0.4	ND	ND	0.4	---	ND	ND	ND	Tetrachloroethene 0.7 Trichloroethene 0.9
---	MW-5	ND	ND	ND	ND	---	ND	---	---	---
---	MW-6	ND	ND	ND	ND	---	ND	---	---	---
---	MW-7	ND	ND	ND	0.7	---	3603	---	---	---
July 1993	MW-2	17	1.1	6	12	---	220	---	---	---
---	MW-3	24	11	14	82	---	330	---	---	---
---	MW-4	ND	ND	ND	ND	---	ND	ND	1000	---
---	MW-5	ND	ND	ND	ND	---	ND	---	---	---
---	MW-6	ND	ND	ND	ND	---	ND	---	---	---
---	MW-7	ND	ND	ND	ND	---	6803	---	---	---
March 1993	MW-2	110	32	67	28	---	720	---	---	1,2-Dichloroethane 0.6
---	MW-3	32	0.9	64	13	---	330	---	---	---
---	MW-4	ND	ND	ND	ND	---	ND	ND	ND	ND
---	MW-5	ND	ND	ND	ND	---	ND	---	---	Tetrachloroethane 0.8
---	MW-6	ND	ND	ND	ND	---	ND	---	---	Tetrachloroethane 3.5
---	MW-7	ND	ND	ND	ND	---	8303	---	---	Tetrachloroethene 3,700
---	---	---	---	---	---	---	---	21543	21543	Trichloroethene 210
January 1993	MW-2	11	5.1	1.4	6.3	---	170	---	---	---
---	MW-3	1.2	1	0.6	4.1	---	ND	---	---	---
---	MW-4	ND	ND	ND	ND	---	ND	ND	ND	---
---	MW-5	ND	ND	ND	ND	---	ND	---	---	---
---	MW-6	ND	ND	ND	ND	---	ND	---	---	---
---	MW-7	ND	ND	ND	ND	---	19003	---	---	---
November 1992	MW-7	---	---	---	---	---	27003	ND	---	Chlorobenzene 2.0 Chloroform 2.0
---	---	---	---	---	---	---	---	---	---	cis-1,2-Dichloroethene 180
---	---	---	---	---	---	---	---	---	---	trans-1,2-Dichloroethene 1.5
---	---	---	---	---	---	---	---	---	---	Tetrachloroethene 14,000
---	---	---	---	---	---	---	---	---	---	Trichloroethene 660
October 1992	MW-2	2.3	ND	2.3	3	---	ND	---	---	---
---	MW-3	2.1	ND	ND	0.3	---	ND	---	---	---
---	MW-4	ND	ND	ND	ND	---	ND	120	ND	---
---	MW-5	ND	0.4	ND	ND	---	ND	---	---	---
---	MW-6	ND	ND	ND	ND	---	ND	---	---	---
---	MW-7	ND	ND	ND	ND	---	39003	---	---	---

TABLE 1, SUMMARY OF GROUNDWATER ANALYSIS, Results in ug/L

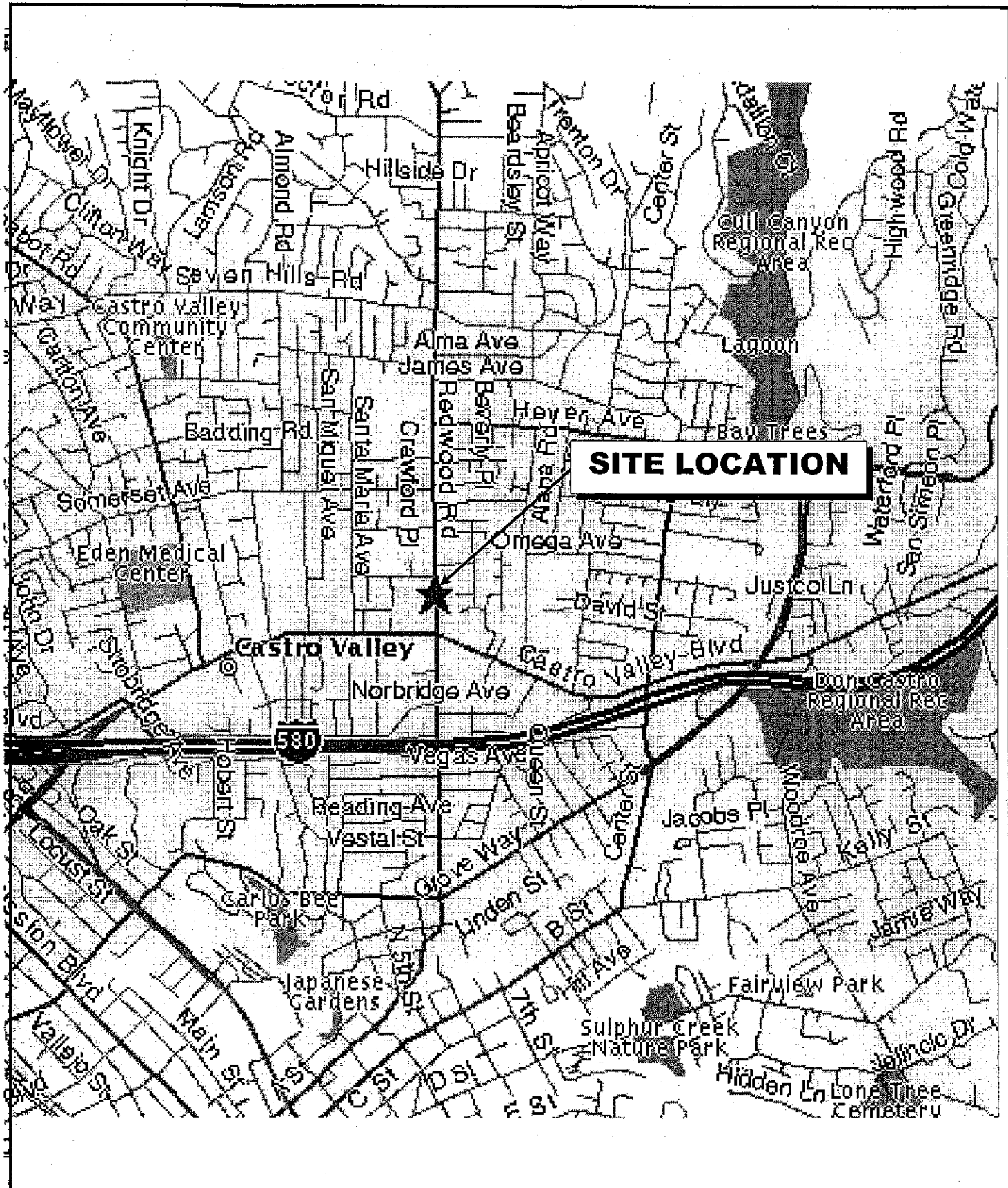
Sample Date	Well Number	Benzene	Toluene	Ethyl-Benzene	Xylenes	Methyl-t-Butyl Ether	TPH Gasoline	TPH Diesel	Total Oil & Grease	EPA 601
July 1992	MW-2	10	ND	0.6	2.3	---	84	---	---	---
---	MW-3	1.3	0.4	ND	1.3	---	ND	---	---	---
---	MW-5	ND	ND	ND	ND	---	ND	---	---	---
---	MW-6	ND	ND	ND	ND	---	ND	---	---	---
---	MW-7	ND	ND	ND	ND	---	8303	---	---	---
April 1992	MW-2	70	0.3	15	7	---	300	---	---	---
---	MW-3	1	0.4	ND	0.9	---	ND	---	---	---
---	MW-4	ND	ND	ND	ND	---	ND	ND	ND	---
---	MW-5	ND	ND	ND	ND	---	ND	---	---	---
---	MW-6	ND	0.3	ND	ND	---	ND	---	---	---
---	MW-7	0.4	0.3	0.3	0.9	---	13003	---	---	---
January 1992	MW-2	480	870	160	860	---	5200	---	---	---
---	MW-3	4	10	2	8	---	60	---	---	---
October 1991	MW-2	2.9	ND	2.5	6	---	170	---	---	---
---	MW-3	ND	ND	ND	ND	---	ND	ND	ND	---
---	MW-4	ND	ND	ND	ND	---	ND	ND	ND	---
July 1991	MW-2	14	1	17	8	---	220	---	---	---
---	MW-3	14	14	33	8	---	220	---	---	---
April 1991	MW-2	640	520	170	790	---	4800	---	---	---
---	MW-3	450	270	150	760	---	3600	---	---	---
---	MW-4	ND	ND	ND	ND	---	ND	ND	ND	---
January 1991	MW-2	50	33	22	110	---	430	---	---	---
---	MW-3	29	3.3	9.7	34	---	110	---	---	---
August 1990	MW-2	21	3.9	7.2	28	---	180	---	---	---
---	MW-3	55	3.8	20	59	---	290	---	---	---
---	MW-4	ND	ND	ND	ND	---	ND	ND	ND	---
MCL		1	150	700	1750	NA	NA	NA	NA	Chlorobenzene - NA Chloroform - NA cis-1,2-Dichloroethene 6.0 trans-1,2-Dichloroethene 10.0 1,2-Dichloroethane 0.5 Tetrachloroethene 5.0 Trichloroethene 5.0

TABLE 1, SUMMARY OF GROUNDWATER ANALYSIS, Results in ug/L

Sample Date	Well Number	Benzene	Toluene	Ethyl- Benzene	Xylenes	Methyl-t-Butyl Ether	TPH Gasoline	TPH Diesel	Total Oil & Grease	EPA 601
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NOTES:

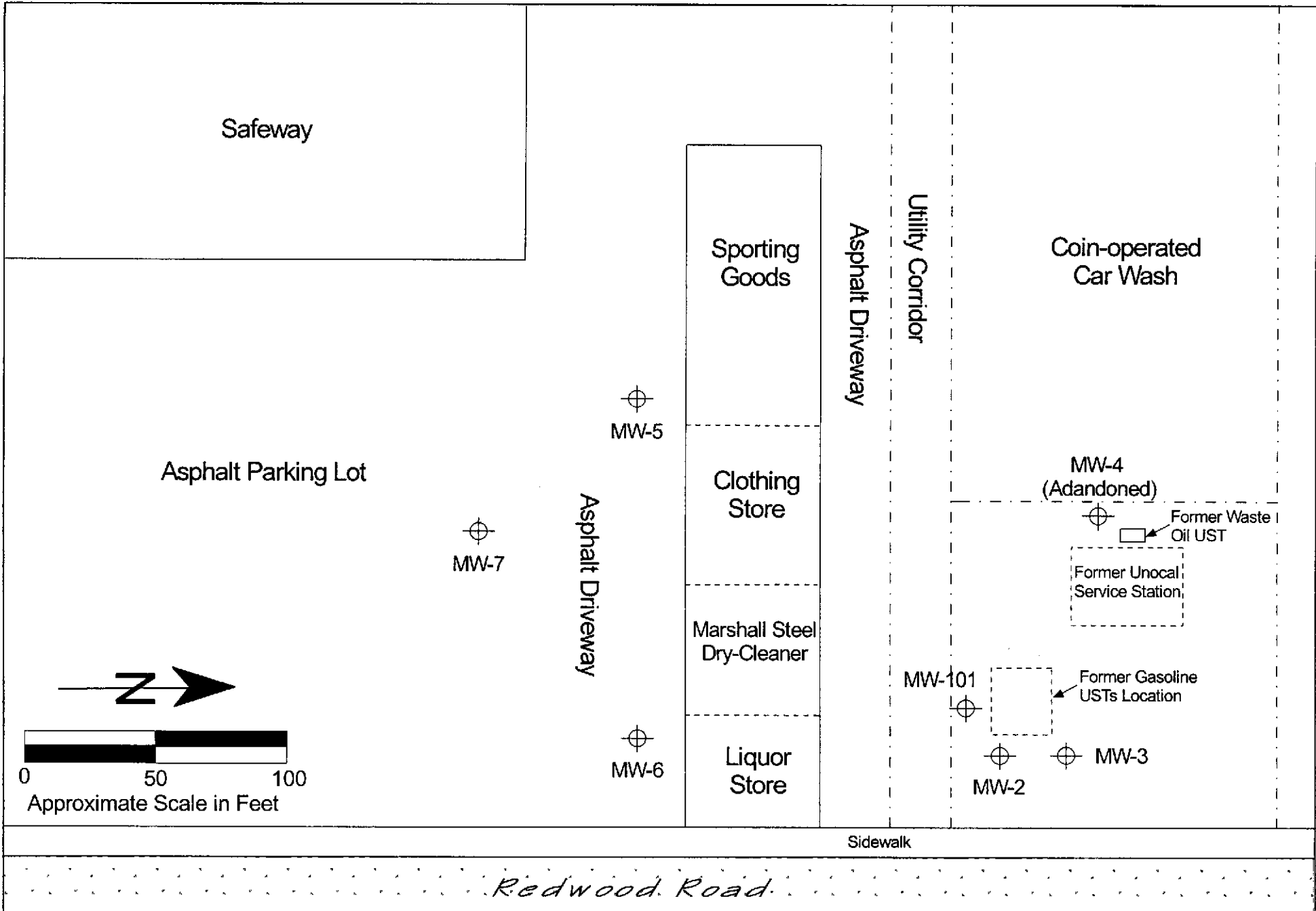
- ND = None Detected
- = Not Analyzed
- * = Water level sounding only. No sampling.
- ** = Unable to sample. Well box has been paved over.
- *** = Unable to sample. Well covered with pile of construction material.
- NA = Not Available
- 1 = MTBE by EPA 8015 / 8020
- 2 = MTBE by EPA 8260
- 3 = TPHg values serve to demonstrate the presence of Perchloroethane.
- MCL = Maximum Contaminant Level from California Code of Regulations, Title 22, Article 5.5.



Semi-Annual Groundwater Monitoring Report
 Former Unocal 76 Service Station
 20405 and 20629 Redwood Road
 Castro Valley, California

VICINITY MAP
 FIGURE 1
 BSK Job No. P92057.3





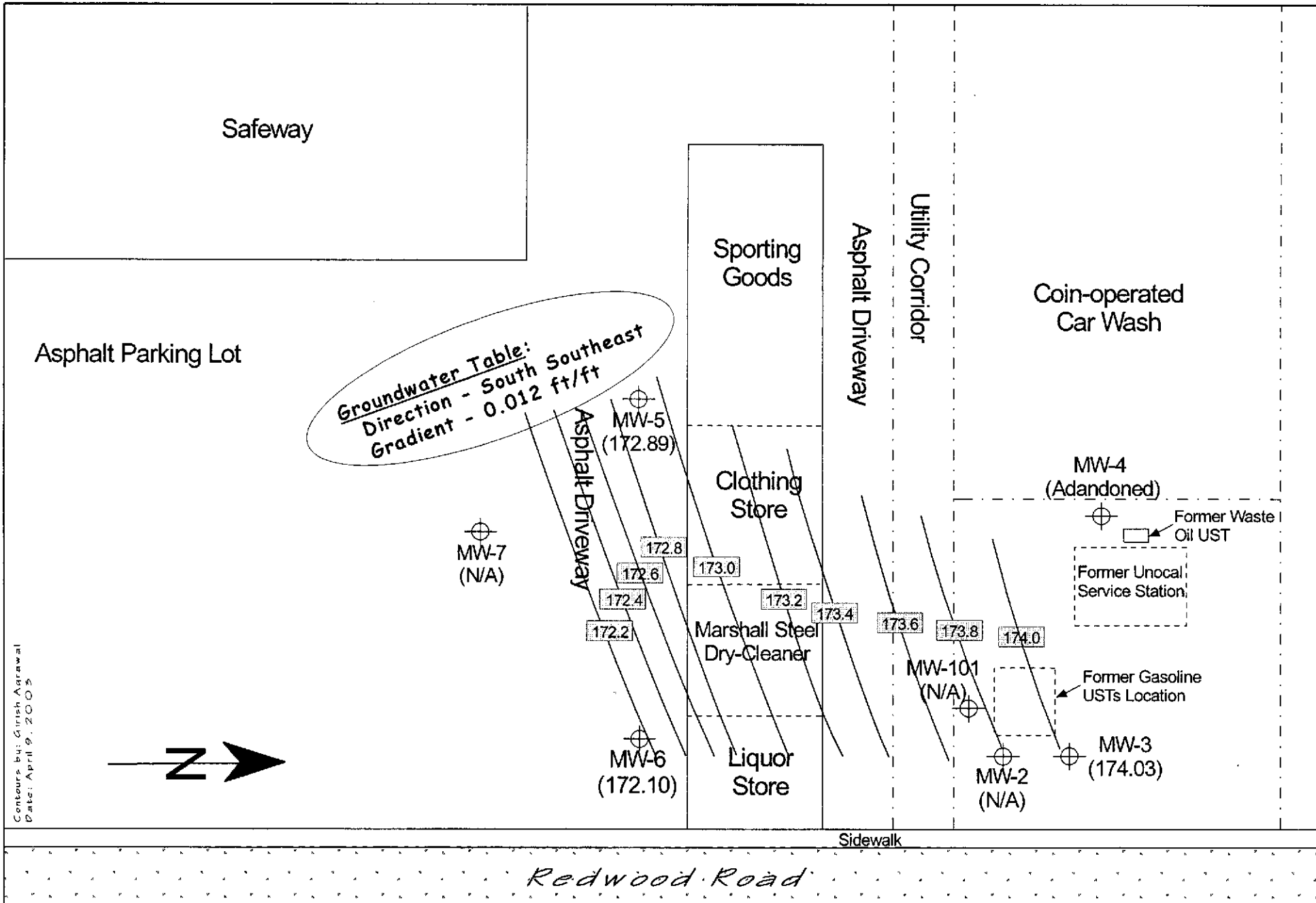
LEGEND

⊕ Groundwater Monitoring Well Location & Designation

Semi-Annual Groundwater Monitoring Report
 Former Unocal 76 Service Station
 20405 and 20629 Redwood Road
 Castro Valley, California


BSK Job No. P92057.3
 SITE PLAN
 FIGURE 2







Contours by: Girish Agrawal
 Date: April 9, 2003

LEGEND

 Groundwater Monitoring Well (Groundwater Elevation)

 Groundwater Elevation Contour in feet above MSL


 0 50 100
 Approximate Scale in Feet

BSK Job No. P92057.3
GROUNDWATER ELEVATION CONTOUR MAP
SEPTEMBER 2003
FIGURE 3



WELL FIELD LOG

Well Observation: **Date:** 09/17/2003
Sample Collection: **Date:**

Project Name: Groundwater Monitoring
Location: Nahas/Former Union 76
Personnel: WDP
Weather: Sunny, Warm

WELL INFORMATION:

Well Number	MW-2	Date Purged	N/A
Depth to Water - feet(TOC)	—	Purge Method	
Well Depth (feet)	28.85		
Water Volume (gallons)	—	Purge Begin	
Reference Elevation - feet(TOC)	+183.47	Purge End	
Groundwater Elevation (feet)	—	Purge Rate	
Measurement Technique	Solinst Electric Well Sounder		

IMMISCIBLE LAYERS:

Top:
Bottom:
Detection Method:
Collection Method:

WELL DEVELOPMENT/PURGE DATA:

TIME	VOLUME REMOVED (gallons)	ELECTRICAL CONDUCTIVITY (micromhos)	pH	TEMP. (°F)	COLOR/COMMENTS

SAMPLE COLLECTION DATA**Sampling Equipment:**

TIME	ANALYSIS	AMOUNT/CONTAINER USED	SAMPLE INTERVAL

Field Notes: Sampling not possible — well covered with soil and can not be located.

WELL FIELD LOG

Well Observation: X Date: 09/17/2003
 Sample Collection: X Date: 09/17/2003

Project Name: Groundwater Monitoring
Location: Nahas/Former Union 76
Personnel: WDP
Weather: Sunny, Warm

WELL INFORMATION:

Well Number	MW-3	Date Purged	09/17/2003
Depth to Water - feet(TOC)	10.00	Purge Method	Electric Submersible Pump
Well Depth (feet)	28.85		
Water Volume (gallons)	3.07	Purge Begin	18:37
Reference Elevation - feet(TOC)	+184.03	Purge End	18:55
Groundwater Elevation (feet)	174.03	Purge Rate	0.70 gpm
Measurement Technique	Solinst Electric Well Sounder		

IMMISCIBLE LAYERS:

Top: None Observed
Bottom: None Observed
Detection Method: Visual
Collection Method: Bailer

WELL DEVELOPMENT/PURGE DATA:

TIME	VOLUME REMOVED (gallons)	ELECTRICAL CONDUCTIVITY (micromhos)	pH	TEMP. (°C)	COLOR/COMMENTS
18:42	3	584	6.35	19.4	Clear, No Odor
18:47	6	574	6.40	18.6	'
18:52	9	581	6.40	18.3	'
18:55	12	576	6.36	18.4	'

SAMPLE COLLECTION DATA

Sampling Equipment: Electric submersible pump

TIME	ANALYSIS	AMOUNT/CONTAINER USED	SAMPLE INTERVAL
18:55	BTEX/MTBE & TPHg	4-40 ml glass VOA's with HCl	

WELL FIELD LOG

Well Observation: X Date: 09/17/2003
 Sample Collection: X Date: 09/17/2003

Project Name: Groundwater Monitoring
 Location: Nahas/Former Union 76
 Personnel: WDP
 Weather: Sunny, Warm

WELL INFORMATION:

Well Number	MW-101	Date Purged	09/17/2003
Depth to Water - feet(FOC)	9.80	Purge Method	Electric Submersible Pump
Well Depth (feet)	29.50		
Water Volume (gallons)	19.2	Purge Begin	19:18
Reference Elevation - feet(FOC)	--	Purge End	19:50
Groundwater Elevation (feet)	--	Purge Rate	1.9 gpm
Measurement Technique	Solinst Electric Well Sounder		

IMMISCIBLE LAYERS:

Top: Odor, No Sheen Observed
 Bottom: None Observed
 Detection Method: Visual
 Collection Method: Bailer

WELL DEVELOPMENT/PURGE DATA:

TIME	VOLUME REMOVED (gallons)	ELECTRICAL CONDUCTIVITY (micromhos)	pH	TEMP. (°C)	COLOR/COMMENTS
19:26	13	507	6.35	19.2	Clear, With Oder
19:35	26	502	6.36	19.5	"
19:44	39	529	6.35	18.8	"
19:50	57	525	6.34	19.1	"

SAMPLE COLLECTION DATA

Sampling Equipment: Electric Submersible Pump

TIME	ANALYSIS	AMOUNT/CONTAINER USED	SAMPLE INTERVAL
19:50	BTEX/MTBE & TPHg	4-40 ml glass VOA's with HCl	

Field Notes:

WELL FIELD LOG

Well Observation: X Date: 09/17/2003
 Sample Collection: Date:

Project Name: Groundwater Monitoring
 Location: Nahas/Former Union 76
 Personnel: WDP
 Weather: Sunny, Cool

WELL INFORMATION:

Well Number	MW-5	Date Purged	N/A
Depth to Water - feet(IOC)	11.03	Purge Method	—
Well Depth (feet)	34.5	Purge Begin	—
Water Volume (gallons)	--	Purge End	—
Reference Elevation - feet(IOC)	+183.92	Purge Rate	—
Groundwater Elevation (feet)	172.89		
Measurement Technique	Solinst Electric Well Sounder		

IMMISCIBLE LAYERS:

Top:
 Bottom:
 Detection Method:
 Collection Method:

WELL DEVELOPMENT/PURGE DATA:

TIME	VOLUME REMOVED (gallons)	ELECTRICAL CONDUCTIVITY (micromhos)	pH	TEMP. (°F)	COLOR/COMMENTS

SAMPLE COLLECTION DATA

Sampling Equipment:

TIME	ANALYSIS	AMOUNT/CONTAINER USED	SAMPLE INTERVAL

Field Notes: Groundwater Level Reading Only

WELL FIELD LOG

Well Observation: X Date: 09/17/2003
 Sample Collection: X Date: 09/17/2003

Project Name: Groundwater Monitoring
Location: Nahas/Former Union 76
Personnel: WDP
Weather: Sunny, Cool

WELL INFORMATION:

Well Number	MW-6	Date Purged	09/17/2003
Depth to Water - feet(FOC)	11.50	Purge Method	Electric Submersible Pump
Well Depth (feet)	26.78		
Water Volume (gallons)	2.49	Purge Begin	17:45
Reference Elevation - feet(FOC)	+183.60	Purge End	18:02
Groundwater Elevation (feet)	172.10	Purge Rate	1.0 gpm
Measurement Technique	Solinst Electric Well Sounder		

IMMISCIBLE LAYERS:

Top: None Observed
 Bottom: None Observed
 Detection Method: Visual
 Collection Method: Bailer

WELL DEVELOPMENT/PURGE DATA:

TIME	VOLUME REMOVED (gallons)	ELECTRICAL CONDUCTIVITY (micromhos)	pH	TEMP. (°C)	COLOR/COMMENTS
17:50	3.0	535	7.17	21.0	Cloudy, No Odor
17:55	6.0	559	6.63	20.2	Clear, No Odor
18:00	9.0	574	6.39	20.1	Clear
18:02	9.5	579	6.30	20.0	Clear

SAMPLE COLLECTION DATA

Sampling Equipment: Electric Submersible Pump

TIME	ANALYSIS	AMOUNT/CONTAINER USED	SAMPLE INTERVAL
18:02	BTEX/MTBE & TPHg	4-40 ml glass VOA,s with HCl	

Field Notes:

WELL FIELD LOG

Well Observation: X Date: 09/17/2003
 Sample Collection: Date:

Project Name: Groundwater Monitoring
 Location: Nahas/Former Union 76
 Personnel: WDP
 Weather: Sunny, Cool

WELL INFORMATION:

Well Number	MW-7	Date Purged	N/A
Depth to Water - feet(TOC)	—	Purge Method	—
Well Depth (feet)	28.0		
Water Volume (gallons)	—	Purge Begin	
Reference Elevation - feet(TOC)	+182.42	Purge End	
Groundwater Elevation (feet)	—	Purge Rate	
Measurement Technique	Solinst Electric Well Sounder		

IMMISCIBLE LAYERS:

Top:
 Bottom:
 Detection Method:
 Collection Method:

WELL DEVELOPMENT/PURGE DATA:

TIME	VOLUME REMOVED (gallons)	ELECTRICAL CONDUCTIVITY (micromhos)	pH	TEMP. (°C)	COLOR/COMMENTS

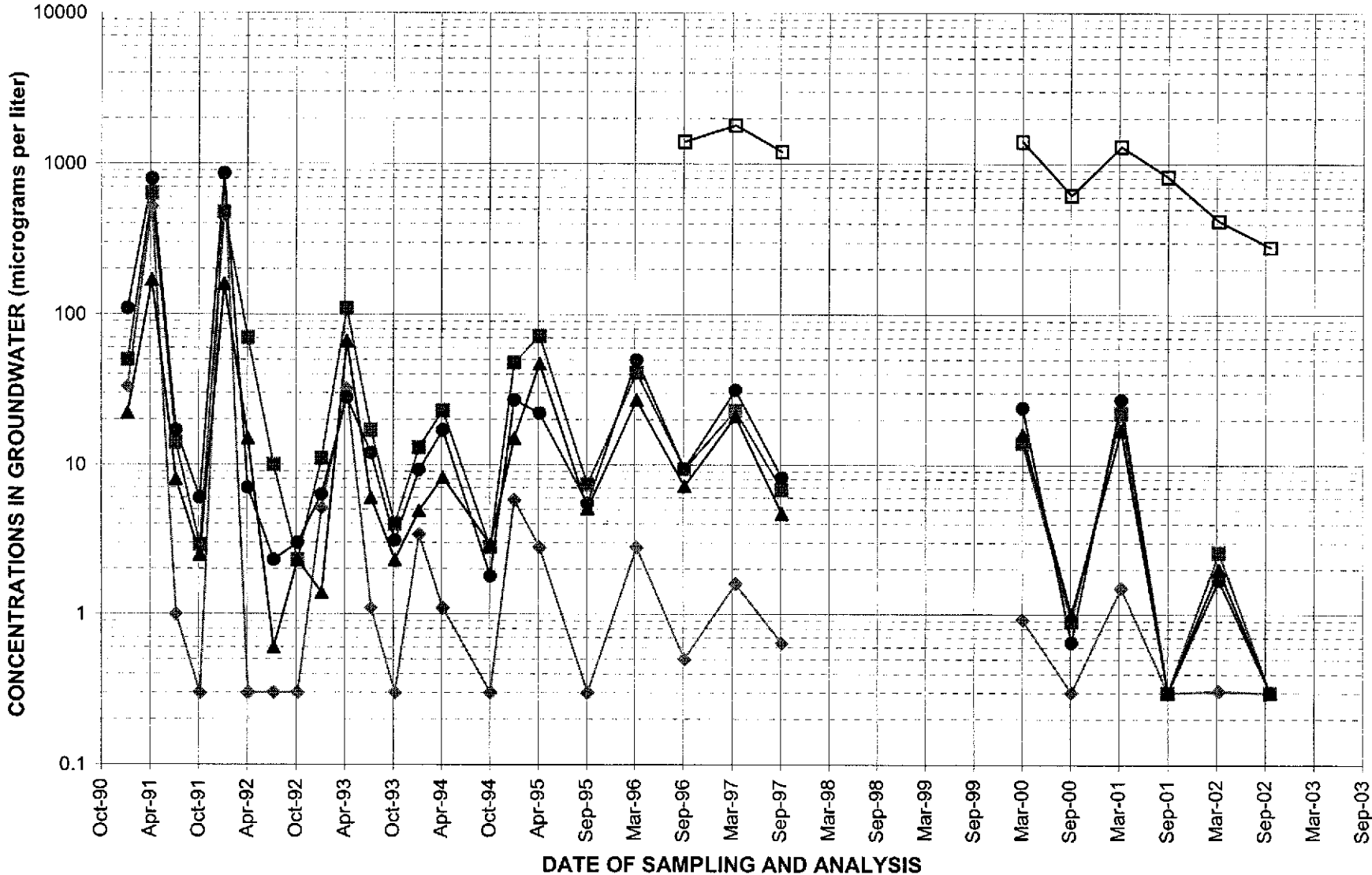
SAMPLE COLLECTION DATA

Sampling Equipment:

TIME	ANALYSIS	AMOUNT/CONTAINER USED	SAMPLE INTERVAL

Field Notes: Unable to sample - well has been paved over (?)

BTEX/MTBE CONCENTRATIONS IN GROUNDWATER (MW-2)



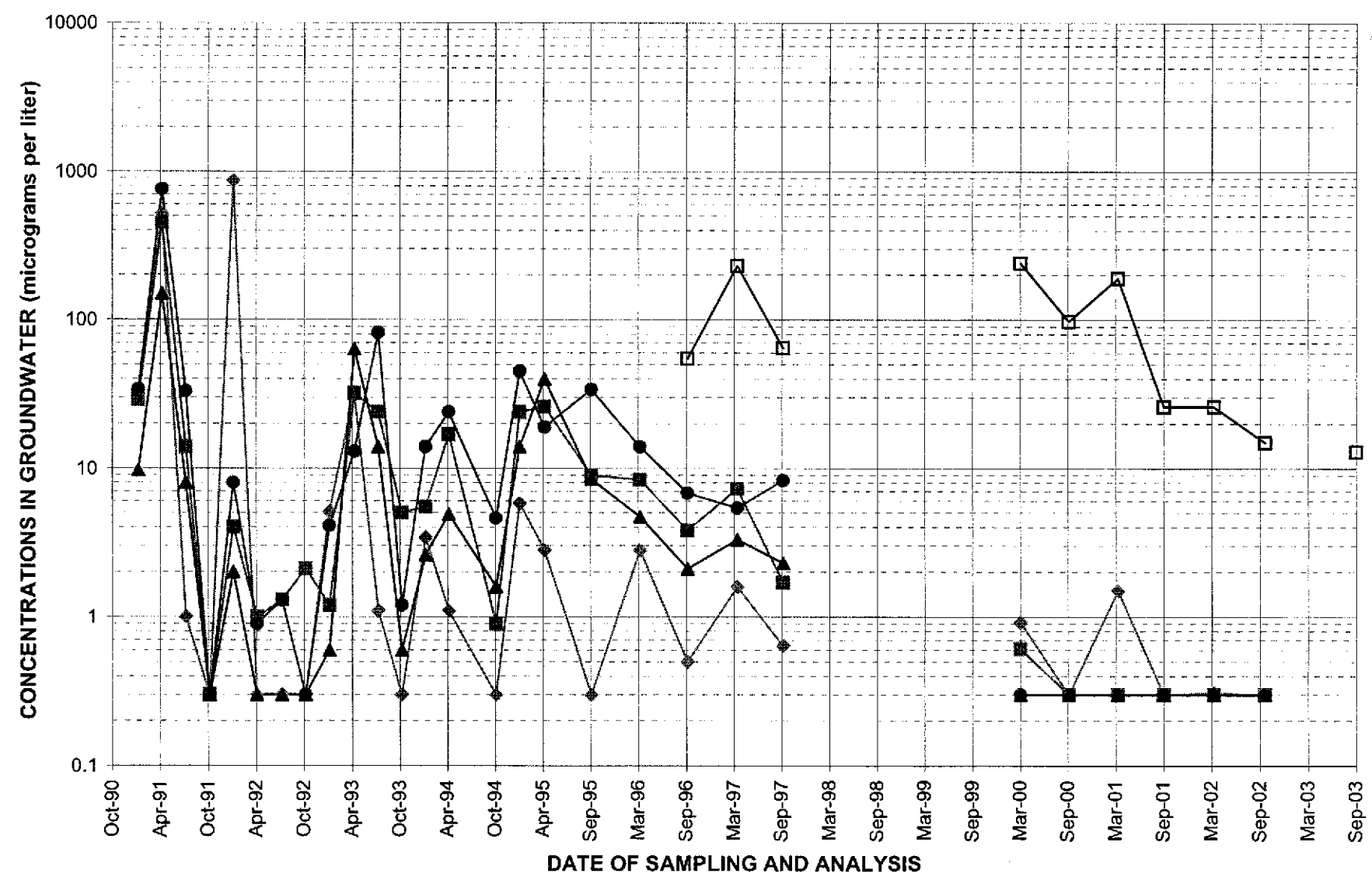
◆ Toluene ■ Benzene ● Xylene ▲ Ethylbenzene □ MTBE

Semi-Annual Groundwater Monitoring Report
Former Unocal 76 Service Station
20405 and 20629 Redwood Road
Castro Valley, California

SEPTEMBER 2003
FIGURE 5
BSK Job No. P92057.3

BSK

BTEX/MTBE CONCENTRATIONS IN GROUNDWATER (MW-3)



◆ Toluene
 ■ Benzene
 ● Xylene
 ▲ Ethylbenzene
 □ MTBE

Semi-Annual Groundwater Monitoring Report
 Former Unocal 76 Service Station
 20405 and 20629 Redwood Road
 Castro Valley, California

SEPTEMBER 2003
 FIGURE 6
 BSK Job No. P92057.3



APPENDIX "A"

**CHEMICAL TEST DATA SHEETS
AND
PROJECT CHAIN-OF-CUSTODY RECORD
(4 PAGES)
AND
LEVEL II QA/QC SUMMARY REPORT
(7 PAGES)**

BSK-Pleasanton

OCT 21 2003

RECEIVED

Cover Letter

10/10/2003

Alex Y. Eskandari
BSK and Associates - Pleasanton
1181 Quarry Lane Suite 300
Pleasanton, CA 94566

BSK Submission Number: 2003091180

Dear Alex Y. Eskandari:

BSK Analytical Laboratories adheres to a quality assurance plan that has been approved by the State of California Department of Health Services. Our Environmental Laboratory Accreditation Program (ELAP) certification number is 1180.

BSK Analytical Laboratories has prepared this certificate of analysis in response to your request for analytical services. All information was taken from your Chain of Custody or related correspondence. BSK completed all sample handling and analytical procedures within the Laboratory's standard acceptability criteria with any exceptions noted below.

Sample Comments

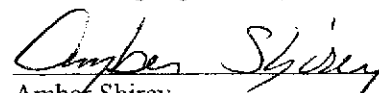
Submission	Order	Test / Analyte	Comment
2003091180	369272	Methyl-t-Butyl Ether	MTBE result determined by single point calibration.

If additional clarification of any information is required, please contact your Client Services Representative, Amber Shirey at (800)877-8310 or (559)497-2888.

Sincerely,

BSK Analytical Laboratories

Authorizing Signature(s)



Amber Shirey
Client Services Representative



Cynthia Hamilton
QA/QC Supervisor



BSK ANALYTICAL LABORATORIES

Alex Y. Eskandari
BSK and Associates - Pleasanton
1181 Quarry Lane Suite 300
Pleasanton, CA 94566

Certificate of Analysis ELAP Certificate #1180

Report Issue Date: 10/10/2003

BSK Submission #: 2003091180

BSK Sample ID #: 369272

Project ID: P920573

Project Desc: Nahas/ Union 76

Submission Comments:

Sample Type: Liquid

Date Sampled: 09/17/2003

Sample Description: MW-6

Time Sampled: 0602

Sample Comments:

Date Received: 09/18/2003

Organics

Analyte	Method	Result	Units	PQL	Dilution	DLR	Prep Date	Analysis Date
TPH as Gasoline	EPA 8015(M)	140	µg/L	50	1	50	09/30/03	09/30/03
Methyl-t-Butyl Ether	EPA 8015/8020	440	µg/L	5	1	5	09/30/03	09/30/03
Benzene	EPA 8020	ND	µg/L	0.3	1	0.3	09/30/03	09/30/03
Ethylbenzene	EPA 8020	ND	µg/L	0.3	1	0.3	09/30/03	09/30/03
Toluene	EPA 8020	ND	µg/L	0.3	1	0.3	09/30/03	09/30/03
Total Xylenes	EPA 8020	ND	µg/L	0.3	1	0.3	09/30/03	09/30/03

Surrogate

Fluorobenzene	EPA 8020	94.0	% Rec	-	1	N/A	09/30/03	09/30/03
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LUFT Comments

TPH as Gasoline Individual peaks inconsistent with fuel fingerprint

mg/L: Milligrams/Liter (ppm)

mg/Kg: Milligrams/Kilogram (ppm)

µg/L: Micrograms/Liter (ppb)

µg/Kg: Micrograms/Kilogram (ppb)

%Rec: Percent Recovered (surrogates)

PQL: Practical Quantitation Limit

DLR: Detection Limit for Reporting
: PQL x Dilution

ND: None Detected at DLR

H: Analyzed outside of hold time

P: Preliminary result

S: Suspect result. See Cover Letter for comments.

E: Analysis performed by External laboratory.

See External Laboratory Report attachments.

Report Authentication Code:



Page 1 of 3

BSK ANALYTICAL LABORATORIES

Alex Y. Eskandari
 BSK and Associates - Pleasanton
 1181 Quarry Lane Suite 300
 Pleasanton, CA 94566

Certificate of Analysis ELAP Certificate #1180

Report Issue Date: 10/10/2003

BSK Submission #: 2003091180

BSK Sample ID #: 369273

Project ID: P920573

Project Desc: Nahas/ Union 76

Submission Comments:

Sample Type: Liquid

Date Sampled: 09/17/2003

Sample Description: MW-3

Time Sampled: 0655

Sample Comments:

Date Received: 09/18/2003

Organics

Analyte	Method	Result	Units	PQL	Dilution	DLR	Prep Date	Analysis Date
TPH as Gasoline	EPA 8015(M)	ND	µg/L	50	1	50	09/30/03	09/30/03
Methyl-t-Butyl Ether	EPA 8015/8020	13	µg/L	5	1	5	09/30/03	09/30/03
Benzene	EPA 8020	ND	µg/L	0.3	1	0.3	09/30/03	09/30/03
Ethylbenzene	EPA 8020	ND	µg/L	0.3	1	0.3	09/30/03	09/30/03
Toluene	EPA 8020	ND	µg/L	0.3	1	0.3	09/30/03	09/30/03
Total Xylenes	EPA 8020	ND	µg/L	0.3	1	0.3	09/30/03	09/30/03

Surrogate

Fluorobenzene	EPA 8020	85.5	% Rec	-	1	N/A	09/30/03	09/30/03
---------------	----------	------	-------	---	---	-----	----------	----------

mg/L: Milligrams/Liter (ppm)
 mg/Kg: Milligrams/Kilogram (ppm)
 µg/L: Micrograms/Liter (ppb)
 µg/Kg: Micrograms/Kilogram (ppb)
 %Rec: Percent Recovered (surrogates)

PQL: Practical Quantitation Limit
 DLR: Detection Limit for Reporting
 : PQL x Dilution
 ND: None Detected at DLR

H: Analyzed outside of hold time
 P: Preliminary result
 S: Suspect result. See Cover Letter for comments.
 E: Analysis performed by External laboratory.
 See External Laboratory Report attachments.

Report Authentication Code:



BSK ANALYTICAL LABORATORIES

Alex Y. Eskandari
 BSK and Associates - Pleasanton
 1181 Quarry Lane Suite 300
 Pleasanton, CA 94566

Certificate of Analysis ELAP Certificate #1180

Report Issue Date: 10/10/2003

BSK Submission #: 2003091180

BSK Sample ID #: 369274

Project ID: P920573

Project Desc: Nahas/ Union 76

Submission Comments:

Sample Type: Liquid
 Sample Description: MW-101
 Sample Comments:

Date Sampled: 09/17/2003
 Time Sampled: 0750
 Date Received: 09/18/2003

Organics

Analyte	Method	Result	Units	PQL	Dilution	DLR	Prep Date	Analysis Date	
TPH as Gasoline	EPA 8015(M)	3000	µg/L	50	10	500	10/01/03	10/01/03	
Methyl-t-Butyl Ether	EPA 8015/8020	850	µg/L	5	10	50	10/01/03	10/01/03	
Benzene	EPA 8020	150	µg/L	0.3	10	3.0	10/01/03	10/01/03	
Ethylbenzene	EPA 8020	100	µg/L	0.3	10	3.0	10/01/03	10/01/03	
Toluene	EPA 8020	ND	µg/L	0.3	10	3.0	10/01/03	10/01/03	
Total Xylenes	EPA 8020	110	µg/L	0.3	10	3.0	10/01/03	10/01/03	
Methyl-t-Butyl Ether	EPA 8260	1100	µg/L	5	25	120	10/09/03	10/09/03 H	
Surrogate									
Fluorobenzene	EPA 8020	97.3	% Rec	-	10	N/A	10/01/03	10/01/03	

mg/L: Milligrams/Liter (ppm)
 mg/Kg: Milligrams/Kilogram (ppm)
 µg/L: Micrograms/Liter (ppb)
 µg/Kg: Micrograms/Kilogram (ppb)
 %Rec: Percent Recovered (surrogates)

PQL: Practical Quantitation Limit
 DLR: Detection Limit for Reporting
 : PQL x Dilution
 ND: None Detected at DLR

H: Analyzed outside of hold time
 P: Preliminary result
 S: Suspect result. See Cover Letter for comments.
 E: Analysis performed by External laboratory.
 See External Laboratory Report attachments.

Report Authentication Code:



BSK ANALYTICAL LABORATORIES

1414 Stanislaus Street Fresno, CA 93706-1623
 (559) 497-2888, 800 877-8310 (559) FAX 485-6935

2003091180 09/18/2003
 BSK P TAT: Standard
 918011

Analyses Request Chain of Custody

Requested Analyses

Client Name <i>VAHAS/Inion 76</i>	Report Attention: <i>Alex Eskander?</i>	Phone # <i>(905) 462-4000</i>
Address <i>60 BSK - Pleasanton</i>	Project, Quote or PO # <i>P900573</i>	FAX # <i>925 462-6283</i>
City, State, Zip <i>Castro Valley, CA</i>	Copy to:	System #

LAB use only			Date Sampled	Time Sampled	Sampled by: <i>Warren D Parnett</i>	Comment or Station Code
Sample #	Type	Cont.	Sample Description/Location			
<i>1</i>	<i>G</i>	<i>3</i>	<i>9/17/03</i>	<i>6:00</i>	<i>MW-6</i>	<i>9109272</i>
<i>2</i>	<i>G</i>	<i>4</i>	<i>↓</i>	<i>6:55</i>	<i>MW-3</i>	<i>↓ 73</i>
<i>3</i>	<i>G</i>	<i>4</i>	<i>↓</i>	<i>7:50</i>	<i>MW-101</i>	<i>↓ 74</i>
<i>* = The Highest Hit confirm by EPA 8260</i>						

*PH-G
 BTEX
 MTBE**

- confirm MTBE Hs

Matrix Type: L - Liquid S - Solid G - Gas
 Type of Hazards Associated with Samples:

Additional Services:
 Rush Priority: 2 Day 5 Day
 QC Data package, Level II, III or IV (circle one)
 Formal Chain of Custody

Additional Services / Charges Authorized By: _____
 (Signature)

Payment Received with Delivery
 Date: _____ Amount \$ _____
 Check # _____ Initials _____
 Receipt # _____

Signature	Print Name	Company	Date	Time
<i>[Signature]</i>				
<i>[Signature]</i>				
<i>[Signature]</i>	<i>Warren D Parnett</i>	<i>BSK-LB</i>	<i>9/18/03</i>	<i>0942</i>
<i>[Signature]</i>		<i>BSK</i>	<i>9/18/03</i>	<i>0942</i>

Notice: Payment for services rendered as noted herein are due in full within 30 days from when invoiced. If not so paid, account balances are deemed delinquent. Delinquent balances are subject to monthly service/re-billing charges and interest calculated at 1 1/2% per month, 18% per annum. BSK & Associates shall be entitled to recover on delinquent accounts, costs of collections, including attorneys' fees incurred prior to or in litigation whether concluded by judgment, settlement, compromise, or otherwise. The person signing for the Client/Company expressly acknowledges that they are either the Client or authorized agent of the Client.

BSK ANALYTICAL LABORATORIES

QC Summary Report

10/14/2003



BSK Submission : 2003091180
 Client : BSK and Associates - Pleasanto
 Date Submitted : 09/18/2003
 Project ID : P920573
 Project Desc : Nahas/ Union 76

BSK StarLims Run #: 61977



Instrument ID: GCI
 Method Number: BTEX_LL

Analyst Initials: IMTIAZA

Analyte Results

Analyte	QC Type	Matrix Spike ID	Result	Units	% Rec or RPD	Spike RPD	Spk Conc	Matrix Conc	UCL	LCL	Date	
Benzene	LCS	N/A	9.8435	µg/L	98		10	ND	130	70	09/30/03	Acceptable
Ethylbenzene	LCS	N/A	9.5873	µg/L	95		10	ND	130	70	09/30/03	Acceptable
Methyl-t-Butyl Ether	LCS	N/A	40.7392	µg/L	101		40	ND	130	70	09/30/03	Acceptable
Toluene	LCS	N/A	9.7928	µg/L	97		10	ND	130	70	09/30/03	Acceptable
Total Xylenes	LCS	N/A	28.8767	µg/L	96		30	ND	130	70	09/30/03	Acceptable
Benzene	LCSD	N/A	9.9033	µg/L	99	0.61	10	ND	130	70	09/30/03	Acceptable
Ethylbenzene	LCSD	N/A	9.7703	µg/L	97	1.9	10	ND	130	70	09/30/03	Acceptable
Methyl-t-Butyl Ether	LCSD	N/A	40.1039	µg/L	100	1.6	40	ND	130	70	09/30/03	Acceptable
Toluene	LCSD	N/A	9.6140	µg/L	96	1.9	10	ND	130	70	09/30/03	Acceptable
Total Xylenes	LCSD	N/A	29.3939	µg/L	97	1.8	30	ND	130	70	09/30/03	Acceptable
Benzene	RBLK	N/A	0	µg/L	< 0.3				0.3	N/A	09/30/03	Acceptable
Ethylbenzene	RBLK	N/A	0	µg/L	< 0.3				0.3	N/A	09/30/03	Acceptable
Methyl-t-Butyl Ether	RBLK	N/A	0	µg/L	< 5				5	N/A	09/30/03	Acceptable
Toluene	RBLK	N/A	0	µg/L	< 0.3				0.3	N/A	09/30/03	Acceptable
Total Xylenes	RBLK	N/A	0	µg/L	< 0.3				0.3	N/A	09/30/03	Acceptable
TPH as Gasoline	RBLK	N/A	0	µg/L	< 50				50	N/A	09/30/03	Acceptable

Surrogate Results

Analyte	QC Type	Surr. Result	UCL	LCL	Date	
Fluorobenzene	LCS	N/A 89.1 % Rec	89.3	130	70	09/30/03 Acceptable
Fluorobenzene	LCSD	N/A 98.0 % Rec	89.3	130	70	09/30/03 Acceptable
Fluorobenzene	RBLK	N/A 89.3 % Rec	N/A	N/A	09/30/03	Acceptable

BSK StarLims Run #: 61978



Instrument ID: GCI
 Method Number: BTEX_LL

Analyst Initials: IMTIAZA

Analyte Results

Analyte	QC Type	Matrix Spike ID	Result	Units	% Rec or RPD	Spike RPD	Spk Conc	Matrix Conc	UCL	LCL	Date	
Benzene	LCS	N/A	9.9854	µg/L	99		10	ND	130	70	10/01/03	Acceptable
Ethylbenzene	LCS	N/A	9.7137	µg/L	97		10	ND	130	70	10/01/03	Acceptable
Methyl-t-Butyl Ether	LCS	N/A	43.6815	µg/L	109		40	ND	130	70	10/01/03	Acceptable
Toluene	LCS	N/A	9.9695	µg/L	99		10	ND	130	70	10/01/03	Acceptable
Total Xylenes	LCS	N/A	29.6931	µg/L	98		30	ND	130	70	10/01/03	Acceptable
Benzene	LCSD	N/A	10.0062	µg/L	100	0.2	10	ND	130	70	10/01/03	Acceptable
Ethylbenzene	LCSD	N/A	9.7732	µg/L	97	0.62	10	ND	130	70	10/01/03	Acceptable
Methyl-t-Butyl Ether	LCSD	N/A	43.1160	µg/L	107	1.3	40	ND	130	70	10/01/03	Acceptable
Toluene	LCSD	N/A	9.7573	µg/L	97	2.1	10	ND	130	70	10/01/03	Acceptable

%Rec: Percent Recovered
 RPD: Relative Percent Difference
 UCL: Upper Control Limit
 LCL: Lower Control Limit
 LCS: Laboratory Control Sample
 LCSD: Laboratory Control Sample Duplicate

Parent Sample: Sample used as background matrix for MS/MSD
 OOS-High: QC Result Above UCL
 OOS-Low: QC Result Below LCL
 MS: Matrix Spike
 MSD: Matrix Spike Duplicate
 RBLK: Reagent (Method) Blank

BSK ANALYTICAL LABORATORIES

QC Summary Report

10/14/2003



BSK Submission : 2003091180
 Client : BSK and Associates - Pleasanto
 Date Submitted : 09/18/2003
 Project ID : P920573
 Project Desc : Nahas/ Union 76

BSK StarLims Run #: 61978



Instrument ID: GCI
 Method Number: BTEX_LL

Analyst Initials: IMTIAZA

Analyte Results

Analyte	QC Type	Matrix Spike ID	Result	Units	% Rec or RPD	Spike RPD	Spk Conc	Matrix Conc	UCL	LCL	Date	
Total Xylenes	LCS	N/A	29.8674	µg/L	99	0.59	30	ND	130	70	10/01/03	Acceptable
Benzene	RBLK	N/A	0	µg/L	< 0.3				0.3	N/A	10/01/03	Acceptable
Ethylbenzene	RBLK	N/A	0	µg/L	< 0.3				0.3	N/A	10/01/03	Acceptable
Methyl-t-Butyl Ether	RBLK	N/A	0	µg/L	< 5				5	N/A	10/01/03	Acceptable
Toluene	RBLK	N/A	0	µg/L	< 0.3				0.3	N/A	10/01/03	Acceptable
Total Xylenes	RBLK	N/A	0	µg/L	< 0.3				0.3	N/A	10/01/03	Acceptable
TPH as Gasoline	RBLK	N/A	0	µg/L	< 50				50	N/A	10/01/03	Acceptable

Surrogate Results

Analyte	QC Type	Surr. Result	UCL	LCL	Date		
Fluorobenzene	LCS	N/A 97.5 % Rec	86.3	130	70	10/01/03	Acceptable
Fluorobenzene	LCS	N/A 97.2 % Rec	86.3	130	70	10/01/03	Acceptable
Fluorobenzene	RBLK	N/A 86.3 % Rec	N/A	N/A	N/A	10/01/03	Acceptable

BSK StarLims Run #: 62386



Instrument ID: VGCMS2
 Method Number: 8260

Analyst Initials: CHERYLC

Analyte Results

Analyte	QC Type	Matrix Spike ID	Result	Units	% Rec or RPD	Spike RPD	Spk Conc	Matrix Conc	UCL	LCL	Date	
1,1-Dichloroethene	LCS	N/A	9.0	µg/L	72		12.5	ND	111.4	72.8	10/09/03	OOS-Low
Benzene	LCS	N/A	12.9	µg/L	103		12.5	ND	118	84	10/09/03	Acceptable
Chlorobenzene	LCS	N/A	13.3	µg/L	106		12.5	ND	117.8	83.6	10/09/03	Acceptable
Toluene	LCS	N/A	13.1	µg/L	104		12.5	ND	119.2	76.4	10/09/03	Acceptable
Trichloroethene (TCE)	LCS	N/A	13.1	µg/L	104		12.5	ND	121.9	83.8	10/09/03	Acceptable
1,1-Dichloroethene	LCS	N/A	9.2	µg/L	73	2.1	12.5	ND	111.4	72.8	10/09/03	Acceptable
Benzene	LCS	N/A	12.8	µg/L	102	0.78	12.5	ND	118	84	10/09/03	Acceptable
Chlorobenzene	LCS	N/A	13.3	µg/L	106	0.0	12.5	ND	117.8	83.6	10/09/03	Acceptable
Toluene	LCS	N/A	12.4	µg/L	99	5.4	12.5	ND	119.2	76.4	10/09/03	Acceptable
Trichloroethene (TCE)	LCS	N/A	13.7	µg/L	109	4.4	12.5	ND	121.9	83.8	10/09/03	Acceptable
1,1,1,2-Tetrachloroethane	LDUP	372279	0	µg/L	N/A			ND	30	N/A	10/09/03	Acceptable
1,1,1-Trichloroethane	LDUP	372279	0	µg/L	N/A			ND	30	N/A	10/09/03	Acceptable
1,1,2,2-Tetrachloroethane	LDUP	372279	0	µg/L	N/A			ND	30	N/A	10/09/03	Acceptable
1,1,2-Trichloroethane	LDUP	372279	0	µg/L	N/A			ND	30	N/A	10/09/03	Acceptable
1,1-Dichloro-2-propanone	LDUP	372279	0	µg/L	N/A			ND	30	N/A	10/09/03	Acceptable
1,1-Dichloroethane	LDUP	372279	0	µg/L	N/A			ND	30	N/A	10/09/03	Acceptable
1,1-Dichloroethene	LDUP	372279	0	µg/L	N/A			ND	30	N/A	10/09/03	Acceptable
1,1-Dichloropropene	LDUP	372279	0	µg/L	N/A			ND	30	N/A	10/09/03	Acceptable

%Rec: Percent Recovered
 RPD: Relative Percent Difference
 UCL: Upper Control Limit
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 LCS: Laboratory Control Sample
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BSK ANALYTICAL LABORATORIES

QC Summary Report

10/14/2003



BSK Submission : **2003091180**
 Client : **BSK and Associates - Pleasanto**
 Date Submitted : **09/18/2003**
 Project ID : **P920573**
 Project Desc : **Nahas/ Union 76**

BSK StarLims Run #: 62386



Instrument ID: **VGCMS2**

Analyst Initials: **CHERYLC**

Method Number: **8260**

Analyte Results

Analyte	QC Type	Matrix Spike ID	Result	Units	% Rec or RPD	Spike RPD	Spk Conc	Matrix Conc	UCL	LCL	Date	
1,2,3-Trichlorobenzene	LDUP	372279	0	µg/L	N/A			ND	30	N/A	10/09/03	Acceptable
1,2,3-Trichloropropane	LDUP	372279	0	µg/L	N/A			ND	30	N/A	10/09/03	Acceptable
1,2,4-Trichlorobenzene	LDUP	372279	0	µg/L	N/A			ND	30	N/A	10/09/03	Acceptable
1,2,4-Trimethylbenzene	LDUP	372279	95.7	µg/L	4			100	30	N/A	10/09/03	Acceptable
1,2-Dibromo-3-chloropropane (DBCP)	LDUP	372279	0	µg/L	N/A			ND	30	N/A	10/09/03	Acceptable
1,2-Dibromoethane	LDUP	372279	0	µg/L	N/A			ND	30	N/A	10/09/03	Acceptable
1,2-Dichlorobenzene	LDUP	372279	0	µg/L	N/A			ND	30	N/A	10/09/03	Acceptable
1,2-Dichloroethane	LDUP	372279	0	µg/L	N/A			ND	30	N/A	10/09/03	Acceptable
1,2-Dichloropropane	LDUP	372279	0	µg/L	N/A			ND	30	N/A	10/09/03	Acceptable
1,3,5-Trimethylbenzene	LDUP	372279	26.9	µg/L	N/A			ND	30	N/A	10/09/03	Acceptable
1,3-Dichlorobenzene	LDUP	372279	0	µg/L	N/A			ND	30	N/A	10/09/03	Acceptable
1,3-Dichloropropane	LDUP	372279	0	µg/L	N/A			ND	30	N/A	10/09/03	Acceptable
1,4-Dichlorobenzene	LDUP	372279	0	µg/L	N/A			ND	30	N/A	10/09/03	Acceptable
1-Chlorobutane	LDUP	372279	0	µg/L	N/A			ND	30	N/A	10/09/03	Acceptable
2,2-Dichloropropane	LDUP	372279	0	µg/L	N/A			ND	30	N/A	10/09/03	Acceptable
2-Butanone	LDUP	372279	138	µg/L	N/A			ND	30	N/A	10/09/03	Acceptable
2-Chlorotoluene	LDUP	372279	0	µg/L	N/A			ND	30	N/A	10/09/03	Acceptable
2-Hexanone	LDUP	372279	0	µg/L	N/A			ND	30	N/A	10/09/03	Acceptable
3-Chloropropene	LDUP	372279	0	µg/L	N/A			ND	30	N/A	10/09/03	Acceptable
4-Chlorotoluene	LDUP	372279	0	µg/L	N/A			ND	30	N/A	10/09/03	Acceptable
4-Methyl-2-pentanone	LDUP	372279	0	µg/L	N/A			ND	30	N/A	10/09/03	Acceptable
Acetone	LDUP	372279	753	µg/L	11			670	30	N/A	10/09/03	Acceptable
Benzene	LDUP	372279	0	µg/L	N/A			ND	30	N/A	10/09/03	Acceptable
Bromobenzene	LDUP	372279	0	µg/L	N/A			ND	30	N/A	10/09/03	Acceptable
Bromochloromethane	LDUP	372279	0	µg/L	N/A			ND	30	N/A	10/09/03	Acceptable
Bromodichloromethane	LDUP	372279	0	µg/L	N/A			ND	30	N/A	10/09/03	Acceptable
Bromoform	LDUP	372279	0	µg/L	N/A			ND	30	N/A	10/09/03	Acceptable
Bromomethane	LDUP	372279	0	µg/L	N/A			ND	30	N/A	10/09/03	Acceptable
Carbon Disulfide	LDUP	372279	0	µg/L	N/A			ND	30	N/A	10/09/03	Acceptable
Carbontetrachloride	LDUP	372279	0	µg/L	N/A			ND	30	N/A	10/09/03	Acceptable
Chlorobenzene	LDUP	372279	0	µg/L	N/A			ND	30	N/A	10/09/03	Acceptable
Chloroethane	LDUP	372279	0	µg/L	N/A			ND	30	N/A	10/09/03	Acceptable
Chloroform	LDUP	372279	0	µg/L	N/A			ND	30	N/A	10/09/03	Acceptable
Chloromethane	LDUP	372279	0	µg/L	N/A			ND	30	N/A	10/09/03	Acceptable
cis-1,2-Dichloroethene	LDUP	372279	0	µg/L	N/A			ND	30	N/A	10/09/03	Acceptable
cis-1,3-Dichloropropene	LDUP	372279	0	µg/L	N/A			ND	30	N/A	10/09/03	Acceptable
Dibromochloromethane	LDUP	372279	0	µg/L	N/A			ND	30	N/A	10/09/03	Acceptable

%Rec: Percent Recovered
 RPD: Relative Percent Difference
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Parent Sample: Sample used as background matrix for MS/MSD
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 MS: Matrix Spike
 MSD: Matrix Spike Duplicate
 RBLK: Reagent (Method) Blank

BSK ANALYTICAL LABORATORIES

QC Summary Report

10/14/2003



BSK Submission : 2003091180
 Client : BSK and Associates - Pleasanto
 Date Submitted : 09/18/2003
 Project ID : P920573
 Project Desc : Nahas/ Union 76

BSK StarLims Run #: 62386



Instrument ID: VGCMS2

Analyst Initials: CHERYLC

Method Number: 8260

Analyte Results

Analyte	QC Type	Matrix Spike ID	Result	Units	% Rec or RPD	Spike RPD	Spk Conc	Matrix Conc	UCL	LCL	Date	
Dibromomethane	LDUP	372279	0	µg/L	N/A			ND	30	N/A	10/09/03	Acceptable
Dichlorodifluoromethane	LDUP	372279	0	µg/L	N/A			ND	30	N/A	10/09/03	Acceptable
Diethyl ether	LDUP	372279	0	µg/L	N/A			ND	30	N/A	10/09/03	Acceptable
Ethylbenzene	LDUP	372279	5.60	µg/L	N/A			ND	30	N/A	10/09/03	Acceptable
Ethylmethacrylate	LDUP	372279	0	µg/L	N/A			ND	30	N/A	10/09/03	Acceptable
Hexachlorobutadiene	LDUP	372279	0	µg/L	N/A			ND	30	N/A	10/09/03	Acceptable
Hexachloroethane	LDUP	372279	0	µg/L	N/A			ND	30	N/A	10/09/03	Acceptable
Iodomethane	LDUP	372279	0	µg/L	N/A			ND	30	N/A	10/09/03	Acceptable
Isopropylbenzene	LDUP	372279	0	µg/L	N/A			ND	30	N/A	10/09/03	Acceptable
m,p-Xylenes	LDUP	372279	20.8	µg/L	N/A			ND	30	N/A	10/09/03	Acceptable
Methyl-t-Butyl Ether	LDUP	372279	0	µg/L	N/A			ND	30	N/A	10/09/03	Acceptable
Methylacrylate	LDUP	372279	0	µg/L	N/A			ND	30	N/A	10/09/03	Acceptable
Methylene Chloride	LDUP	372279	0	µg/L	N/A			ND	30	N/A	10/09/03	Acceptable
Methylmethacrylate	LDUP	372279	0	µg/L	N/A			ND	30	N/A	10/09/03	Acceptable
n-Butylbenzene	LDUP	372279	0	µg/L	N/A			ND	30	N/A	10/09/03	Acceptable
n-Propylbenzene	LDUP	372279	14.6	µg/L	N/A			ND	30	N/A	10/09/03	Acceptable
Naphthalene	LDUP	372279	13.7	µg/L	N/A			ND	30	N/A	10/09/03	Acceptable
Nitrobenzene	LDUP	372279	0	µg/L	N/A			ND	30	N/A	10/09/03	Acceptable
o-Xylene	LDUP	372279	9.20	µg/L	N/A			ND	30	N/A	10/09/03	Acceptable
p-Isopropyltoluene	LDUP	372279	5.80	µg/L	N/A			ND	30	N/A	10/09/03	Acceptable
Pentachloroethane	LDUP	372279	0	µg/L	N/A			ND	30	N/A	10/09/03	Acceptable
sec-Butylbenzene	LDUP	372279	0	µg/L	N/A			ND	30	N/A	10/09/03	Acceptable
Styrene	LDUP	372279	0	µg/L	N/A			ND	30	N/A	10/09/03	Acceptable
tert-Butylbenzene	LDUP	372279	0	µg/L	N/A			ND	30	N/A	10/09/03	Acceptable
Tetrachloroethene (PCE)	LDUP	372279	0	µg/L	N/A			ND	30	N/A	10/09/03	Acceptable
Toluene	LDUP	372279	31.3	µg/L	N/A			ND	30	N/A	10/09/03	Acceptable
trans-1,2-Dichloroethene	LDUP	372279	0	µg/L	N/A			ND	30	N/A	10/09/03	Acceptable
trans-1,3-Dichloropropene	LDUP	372279	0	µg/L	N/A			ND	30	N/A	10/09/03	Acceptable
Trichloroethene (TCE)	LDUP	372279	0	µg/L	N/A			ND	30	N/A	10/09/03	Acceptable
Trichlorofluoromethane	LDUP	372279	0	µg/L	N/A			ND	30	N/A	10/09/03	Acceptable
Vinyl Chloride	LDUP	372279	0	µg/L	N/A			ND	30	N/A	10/09/03	Acceptable
1,1,1,2-Tetrachloroethane	RBLK	N/A	0	µg/L	< 5				5	N/A	10/09/03	Acceptable
1,1,1-Trichloroethane	RBLK	N/A	0	µg/L	< 5				5	N/A	10/09/03	Acceptable
1,1,2,2-Tetrachloroethane	RBLK	N/A	0	µg/L	< 5				5	N/A	10/09/03	Acceptable
1,1,2-Trichloroethane	RBLK	N/A	0	µg/L	< 5				5	N/A	10/09/03	Acceptable
1,1-Dichloro-2-propanone	RBLK	N/A	0	µg/L	< 25				25	N/A	10/09/03	Acceptable
1,1-Dichloroethane	RBLK	N/A	0	µg/L	< 5				5	N/A	10/09/03	Acceptable

%Rec: Percent Recovered
 RPD: Relative Percent Difference
 UCL: Upper Control Limit
 LCL: Lower Control Limit
 LCS: Laboratory Control Sample
 LCSD: Laboratory Control Sample Duplicate

Parent Sample: Sample used as background matrix for MS/MSD
 OOS-High: QC Result Above UCL
 OOS-Low: QC Result Below LCL
 MS: Matrix Spike
 MSD: Matrix Spike Duplicate
 RBLK: Reagent (Method) Blank

BSK ANALYTICAL LABORATORIES

QC Summary Report

10/14/2003



BSK Submission : 2003091180
 Client : BSK and Associates - Pleasanto
 Date Submitted : 09/18/2003
 Project ID : P920573
 Project Desc : Nahas/ Union 76

BSK StarLims Run #: 62386



Instrument ID: VGCMS2

Analyst Initials: CHERYLC

Method Number: 8260

Analyte Results

Analyte	QC Type	Matrix Spike ID	Result	Units	% Rec or RPD	Spike RPD	Spk Conc	Matrix Conc	UCL	LCL	Date
1,1-Dichloroethene	RBLK	N/A	0	µg/L	< 5				5	N/A	10/09/03 <i>Acceptable</i>
1,1-Dichloropropene	RBLK	N/A	0	µg/L	< 5				5	N/A	10/09/03 <i>Acceptable</i>
1,2,3-Trichlorobenzene	RBLK	N/A	0	µg/L	< 5				5	N/A	10/09/03 <i>Acceptable</i>
1,2,3-Trichloropropane	RBLK	N/A	0	µg/L	< 5				5	N/A	10/09/03 <i>Acceptable</i>
1,2,4-Trichlorobenzene	RBLK	N/A	0	µg/L	< 5				5	N/A	10/09/03 <i>Acceptable</i>
1,2,4-Trimethylbenzene	RBLK	N/A	0	µg/L	< 5				5	N/A	10/09/03 <i>Acceptable</i>
1,2-Dibromo-3-chloropropane (DBCP)	RBLK	N/A	0	µg/L	< 5				5	N/A	10/09/03 <i>Acceptable</i>
1,2-Dibromoethane	RBLK	N/A	0	µg/L	< 5				5	N/A	10/09/03 <i>Acceptable</i>
1,2-Dichlorobenzene	RBLK	N/A	0	µg/L	< 5				5	N/A	10/09/03 <i>Acceptable</i>
1,2-Dichloroethane	RBLK	N/A	0	µg/L	< 5				5	N/A	10/09/03 <i>Acceptable</i>
1,2-Dichloropropane	RBLK	N/A	0	µg/L	< 5				5	N/A	10/09/03 <i>Acceptable</i>
1,3,5-Trimethylbenzene	RBLK	N/A	0	µg/L	< 5				5	N/A	10/09/03 <i>Acceptable</i>
1,3-Dichlorobenzene	RBLK	N/A	0	µg/L	< 5				5	N/A	10/09/03 <i>Acceptable</i>
1,3-Dichloropropane	RBLK	N/A	0	µg/L	< 5				5	N/A	10/09/03 <i>Acceptable</i>
1,4-Dichlorobenzene	RBLK	N/A	0	µg/L	< 5				5	N/A	10/09/03 <i>Acceptable</i>
1-Chlorobutane	RBLK	N/A	0	µg/L	< 5				5	N/A	10/09/03 <i>Acceptable</i>
2,2-Dichloropropane	RBLK	N/A	0	µg/L	< 5				5	N/A	10/09/03 <i>Acceptable</i>
2-Butanone	RBLK	N/A	0	µg/L	< 25				25	N/A	10/09/03 <i>Acceptable</i>
2-Chlorotoluene	RBLK	N/A	0	µg/L	< 5				5	N/A	10/09/03 <i>Acceptable</i>
2-Hexanone	RBLK	N/A	0	µg/L	< 25				25	N/A	10/09/03 <i>Acceptable</i>
3-Chloropropene	RBLK	N/A	0	µg/L	< 5				5	N/A	10/09/03 <i>Acceptable</i>
4-Chlorotoluene	RBLK	N/A	0	µg/L	< 5				5	N/A	10/09/03 <i>Acceptable</i>
4-Methyl-2-pentanone	RBLK	N/A	0	µg/L	< 25				25	N/A	10/09/03 <i>Acceptable</i>
Acetone	RBLK	N/A	0	µg/L	< 25				25	N/A	10/09/03 <i>Acceptable</i>
Benzene	RBLK	N/A	0	µg/L	< 5				5	N/A	10/09/03 <i>Acceptable</i>
Bromobenzene	RBLK	N/A	0	µg/L	< 5				5	N/A	10/09/03 <i>Acceptable</i>
Bromochloromethane	RBLK	N/A	0	µg/L	< 5				5	N/A	10/09/03 <i>Acceptable</i>
Bromodichloromethane	RBLK	N/A	0	µg/L	< 5				5	N/A	10/09/03 <i>Acceptable</i>
Bromoform	RBLK	N/A	0	µg/L	< 5				5	N/A	10/09/03 <i>Acceptable</i>
Bromomethane	RBLK	N/A	0	µg/L	< 5				5	N/A	10/09/03 <i>Acceptable</i>
Carbon Disulfide	RBLK	N/A	0	µg/L	< 5				5	N/A	10/09/03 <i>Acceptable</i>
Carbontetrachloride	RBLK	N/A	0	µg/L	< 5				5	N/A	10/09/03 <i>Acceptable</i>
Chlorobenzene	RBLK	N/A	0	µg/L	< 5				5	N/A	10/09/03 <i>Acceptable</i>
Chloroethane	RBLK	N/A	0	µg/L	< 5				5	N/A	10/09/03 <i>Acceptable</i>
Chloroform	RBLK	N/A	0	µg/L	< 5				5	N/A	10/09/03 <i>Acceptable</i>
Chloromethane	RBLK	N/A	0	µg/L	< 5				5	N/A	10/09/03 <i>Acceptable</i>
cis-1,2-Dichloroethene	RBLK	N/A	0	µg/L	< 5				5	N/A	10/09/03 <i>Acceptable</i>

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 RPD: Relative Percent Difference
 UCL: Upper Control Limit
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Parent Sample: Sample used as background matrix for MS/MSD
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 MSD: Matrix Spike Duplicate
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BSK ANALYTICAL LABORATORIES

QC Summary Report

10/14/2003



BSK Submission : 2003091180
 Client : BSK and Associates - Pleasanto
 Date Submitted : 09/18/2003
 Project ID : P920573
 Project Desc : Nahas/ Union 76

BSK StarLims Run #: 62386



Instrument ID: VGCMS2

Analyst Initials: CHERYLC

Method Number: 8260

Analyte Results

Analyte	QC Type	Matrix Spike ID	Result	Units	% Rec or RPD	Spike RPD	Spk Conc	Matrix Conc	UCL	LCL	Date	
cis-1,3-Dichloropropene	RBLK	N/A	0	µg/L	< 5				5	N/A	10/09/03	Acceptable
Dibromochloromethane	RBLK	N/A	0	µg/L	< 5				5	N/A	10/09/03	Acceptable
Dibromomethane	RBLK	N/A	0	µg/L	< 5				5	N/A	10/09/03	Acceptable
Dichlorodifluoromethane	RBLK	N/A	0	µg/L	< 5				5	N/A	10/09/03	Acceptable
Diethyl ether	RBLK	N/A	0	µg/L	< 5				5	N/A	10/09/03	Acceptable
Ethylbenzene	RBLK	N/A	0	µg/L	< 5				5	N/A	10/09/03	Acceptable
Ethylmethacrylate	RBLK	N/A	0	µg/L	< 5				5	N/A	10/09/03	Acceptable
Hexachlorobutadiene	RBLK	N/A	0	µg/L	< 5				5	N/A	10/09/03	Acceptable
Hexachloroethane	RBLK	N/A	0	µg/L	< 5				5	N/A	10/09/03	Acceptable
Iodomethane	RBLK	N/A	0	µg/L	< 5				5	N/A	10/09/03	Acceptable
Isopropylbenzene	RBLK	N/A	0	µg/L	< 5				5	N/A	10/09/03	Acceptable
m,p-Xylenes	RBLK	N/A	0	µg/L	< 5				5	N/A	10/09/03	Acceptable
Methyl-t-Butyl Ether	RBLK	N/A	0	µg/L	< 5				5	N/A	10/09/03	Acceptable
Methylacrylate	RBLK	N/A	0	µg/L	< 5				5	N/A	10/09/03	Acceptable
Methylene Chloride	RBLK	N/A	0	µg/L	< 25				25	N/A	10/09/03	Acceptable
Methylmethacrylate	RBLK	N/A	0	µg/L	< 5				5	N/A	10/09/03	Acceptable
n-Butylbenzene	RBLK	N/A	0	µg/L	< 5				5	N/A	10/09/03	Acceptable
n-Propylbenzene	RBLK	N/A	0	µg/L	< 5				5	N/A	10/09/03	Acceptable
Naphthalene	RBLK	N/A	0	µg/L	< 5				5	N/A	10/09/03	Acceptable
Nitrobenzene	RBLK	N/A	0	µg/L	< 25				25	N/A	10/09/03	Acceptable
o-Xylene	RBLK	N/A	0	µg/L	< 5				5	N/A	10/09/03	Acceptable
p-Isopropyltoluene	RBLK	N/A	0	µg/L	< 5				5	N/A	10/09/03	Acceptable
Pentachloroethane	RBLK	N/A	0	µg/L	< 5				5	N/A	10/09/03	Acceptable
sec-Butylbenzene	RBLK	N/A	0	µg/L	< 5				5	N/A	10/09/03	Acceptable
Styrene	RBLK	N/A	0	µg/L	< 5				5	N/A	10/09/03	Acceptable
tert-Butylbenzene	RBLK	N/A	0	µg/L	< 5				5	N/A	10/09/03	Acceptable
Tetrachloroethene (PCE)	RBLK	N/A	0	µg/L	< 5				5	N/A	10/09/03	Acceptable
Toluene	RBLK	N/A	0	µg/L	< 5				5	N/A	10/09/03	Acceptable
trans-1,2-Dichloroethene	RBLK	N/A	0	µg/L	< 5				5	N/A	10/09/03	Acceptable
trans-1,3-Dichloropropene	RBLK	N/A	0	µg/L	< 5				5	N/A	10/09/03	Acceptable
Trichloroethene (TCE)	RBLK	N/A	0	µg/L	< 5				5	N/A	10/09/03	Acceptable
Trichlorofluoromethane	RBLK	N/A	0	µg/L	< 5				5	N/A	10/09/03	Acceptable
Vinyl Chloride	RBLK	N/A	0	µg/L	< 5				5	N/A	10/09/03	Acceptable

Run Comments

Recovery of one LCS low for 1,1DCE; data accepted based on duplicate LCS.

%Rec: Percent Recovered
 RPD: Relative Percent Difference
 UCL: Upper Control Limit
 LCL: Lower Control Limit
 LCS: Laboratory Control Sample
 LCSD: Laboratory Control Sample Duplicate

Parent Sample: Sample used as background matrix for MS/MSD
 OOS-High: QC Result Above UCL
 OOS-Low: QC Result Below LCL
 MS: Matrix Spike
 MSD: Matrix Spike Duplicate
 RBLK: Reagent (Method) Blank

BSK ANALYTICAL LABORATORIES

QC Summary Report

10/14/2003



BSK Submission : 2003091180
Client : BSK and Associates - Pleasanto
Date Submitted : 09/18/2003
Project ID : P920573
Project Desc : Nahas/ Union 76

BSK StarLims Run #: 62386



Instrument ID: VGCMS2

Analyst Initials: CHERYLC

Method Number: 8260

Surrogate Results

Analyte	QC Type	Surr. Result	UCL	LCL	Date
Bromofluorobenzene	LCS	N/A 101.5 % Rec	100	130	70 10/09/03 <i>Acceptable</i>
Dibromofluoromethane	LCS	N/A 83.8 % Rec	90	130	70 10/09/03 <i>Acceptable</i>
Toluene-d8	LCS	N/A 99.8 % Rec	100	130	70 10/09/03 <i>Acceptable</i>
Bromofluorobenzene	LCSD	N/A 100.8 % Rec	100	130	70 10/09/03 <i>Acceptable</i>
Dibromofluoromethane	LCSD	N/A 98.1 % Rec	90	130	70 10/09/03 <i>Acceptable</i>
Toluene-d8	LCSD	N/A 98.9 % Rec	100	130	70 10/09/03 <i>Acceptable</i>
Bromofluorobenzene	LDUP	372279 166 % Rec	171	130	70 10/09/03 <i>OOS-High</i>
Dibromofluoromethane	LDUP	372279 99 % Rec	70	130	70 10/09/03 <i>Acceptable</i>
Toluene-d8	LDUP	372279 86 % Rec	85	130	70 10/09/03 <i>Acceptable</i>
Bromofluorobenzene	RBLK	N/A 103 % Rec	N/A	N/A	10/09/03 <i>Acceptable</i>
Dibromofluoromethane	RBLK	N/A 90 % Rec	N/A	N/A	10/09/03 <i>Acceptable</i>
Toluene-d8	RBLK	N/A 102 % Rec	N/A	N/A	10/09/03 <i>Acceptable</i>

Approved by: Cynthia Hamilton

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RPD: Relative Percent Difference
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LCS: Laboratory Control Sample
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Parent Sample: Sample used as background matrix for MS/MSD
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