R.T. NAHAS COMPANY *Since 1917*

REAL ESTATE DEVELOPERS AND INVESTORS

20630 PATIO DRIVE
CASTRO VALLEY, CALIFORNIA 94546
TELEPHONE (415) 538-9600

May 10, 1991

Mr. Scott Seery
Hazardous Materials Specialist
Alameda County Health Care Services
80 Swan Way, Room 220
Oakland, CA 94621

RE: Tien's Unocal Station
20405 Redwood Road, Castro Valley, CA

Dear Scott:

Enclosed is the Third Quarterly Groundwater Monitoring Report for the Unocal 76 Service Station in Castro Valley.

Sincerely,

Randall E. Nahas

Randall E. Nahas

hrs

Enclosure

BSK & ASSOCIATES
JOB No. P90165

THIRD QUARTERLY GROUNDWATER MONITORING REPORT
UNOCAL 76 SERVICE STATION
20405 REDWOOD ROAD
CASTRO VALLEY, CALIFORNIA
MAY 1991

BSK & Associates

BSK & Associates, Geotechnical Consultants, Inc.

Geotechnical Engineering • Engineering Geology • Environmental Engineering • Engineering Laboratories • Chemical Laboratories

May 8, 1991 BSK JOB P90165

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

Attention: Mr. Randy T. Nahas

SUBJECT: Third Quarterly Groundwater Monitoring Report
Unocal 76 Service Station
20405 Redwood Road
Castro Valley, California

Gentlemen:

As requested and authorized, we have performed ground-water monitoring well quarterly sampling on April 2, 1991 at the above-referenced facility. This quarterly report presents the project background, groundwater data obtained during the sampling event, conclusions based on this quarter's data, and recommendations for further action.

BACKGROUND

BSK & Associates installed three groundwater monitoring wells in December 1989, at the Unocal 76 Service Station located at 20405 Redwood Road, Castro Valley, California. The service station location is shown on Figure 1, Vicinity Map. The monitoring facilities were installed in order to comply with the California UST Monitoring requirements of Alternative 6, Subchapter 16, Title 23, California Code of Regulations. Initially, the plan included four monitoring wells with at least one well (MW-1) to be located down-gradient of the existing tank

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☐ Sacramento, California 95829 • 9901 Horn Road, Suite C • Telephone (916) 363-1871, Fax (916) 363-1875

cluster. However, due to the encounter of fuel contamination of soil from approximately 10 to 13 feet below grade, during boring for monitoring well installation, the down-gradient borings (MW-1 and MW-1A) were backfilled with 11-sack cement-sand grout following soil sampling in order to avoid further groundwater contamination. The results of well installations, soil sampling and chemical testing of the soil and water samples were summarized in Our Report P89134, dated February 5, 1990. The installed and attempted groundwater monitoring well locations are shown in Figure 2, Site Plan.

Following our meeting with Eden Managements and Mr. Scott Seery on April 24, 1990, and receipt of the Alameda County Environmental Health letter dated April 24, 1990, we prepared and submitted our Proposal PR90066 to provide quarterly monitoring services for one year, and to assess the extent of soil contamination at the subject site. A Soil Contamination Assessment Work Plan was prepared in accordance with Appendix "A" of the Regional Board Staff Recommendations. The Soil Contamination Assessment was recently completed (see our Report P90165, April 1991).

The first quarterly groundwater monitoring report was submitted on August 30, 1990. The first quarterly report concluded that an apparent unauthorized petroleum release had occurred at the site, based on groundwater data adjacent to, but up-gradient from the UST group. This report also reiterated that a down-gradient well does not exist at the site.

BSK & Associates submitted the second quarterly groundwater monitoring report in January 1991. The second quarterly report verified that motor fuel hydrocarbons were present in groundwater at the site. Benzene and TVH concentrations remained above primary drinking water and informal action levels, respectively.

Review of Subsurface Conditions

The site subsurface soil conditions, as exposed by Borings MW-1A, MW-2, MW-3, and MW-4 of our previous investigation (P89134), consist primarily of silty and sandy clays. Four to five feet of black organic-rich silty clay fill are found immediately below the ground surface, followed by three to five feet of greenish-gray sandy/silty clay native material. In the western portion of the study area, the greenish clay is underlain by seven to eleven feet of yellow-brown sandy clay, grading to a clayey sand with depth. In the eastern portion of the tank area, the sandy clay and clayey sand are split by a six foot layer of silty clay. Light brown silty clay was encountered in each boring between 17 and 24 feet, and continued to the final depth explored. It is apparent from the boring logs that this lower-most clay layer slopes to the northeast. For additional subsurface detail, see Subsurface Profile, Figure 3.

Groundwater was encountered in each boring. In the eastern portion of the site, groundwater was first encountered in Borings MW-2 and MW-3 at 20-1/2 and 19 feet below surface. The water level then stabilized in an open well at approximately 12-1/2 feet in depth. In the western portion of the site, Wells MW-1, MW-1A, and MW-4 encountered an elevated saturated zone between 16 and 17 feet. In MW-1, water was again encountered at 20 feet, with stiff, moist clays separating the saturated zones. Localized groundwater flow has been southwesterly, with a gradient of approximately 1.0 percent.

Soil petroleum contamination was observed in Borings MW-1 and MW-1A. Drilling into contaminated soils for the construction of a monitoring well presented the potential for groundwater contamination from contaminated drill cuttings. This concern prompted the abandonment of this area as a monitoring well site. In Boring MW-1, Photo-ionization Detector (PID) measurements detected hydrocarbon compounds from 15 to 17 feet. The PID readings were especially high in the saturated zone at 17 feet. In Boring MW-1A, hydrocarbons were detected from 10 to 17 feet and were strongest at 10 feet. Also in MW-1A, oily water was

observed seeping into the open boring at a depth of 15 feet. Small amounts of photo-ionizable compounds were encountered in Borings MW-2, MW-3, and MW-4 as well, but were not considered significant.

BSK & Associates recently completed evaluating the lateral extent of shallow soil contamination at the site, as well as performing limited inquiry regarding the contaminant source(s). For further details, please see BSK Report P90165, dated April 1991.

THIRD QUARTERLY MONITORING ACTIVITIES

General

Quarterly monitoring of Underground Storage Tank (UST) groundwater monitoring wells (MW-2, MW-3, and MW-4) was performed on April 2, 1991. Field procedures and observations are provided in the following text and figures.

Field Work

Three groundwater monitoring wells (MW-2, MW-3 and MW-4) are located adjacent to two 10,000-gallon gasoline USTs and one waste oil UST as shown on Figure 2, Site Plan. The wells were installed and developed in December 1989 (see BSK & Associates Report P89134, dated 2/5/90).

The wells were purged using a PVC hand pump. Five to six well volumes were removed from each well. Purge effluent was field monitored for pH, Conductivity and Temperature during purging, to assess the influx of fresh formational water into the well. Purged water was then transferred to a 55-gallon DOT-approved steel drum for holding. The drum was labeled according to its contents, suspected contaminants, content source, date, etc.

Prior to purging, the depth to water in each well was measured using a Solinst electric sounding tape, marked in twentieths of a foot. The water depth was then extrapolated to the hundredth of a foot increment from the tape. Each well was subsequently examined for floating and sinking immiscible product layers, sheen and odor, using a clean PVC bailer having dual check valves for point source sampling. Groundwater flow direction and gradient data were determined from the depth measurements, and is presented in Figure 4, Groundwater Flow Direction and Gradient.

Upon purge completion, each well was again measured to confirm a minimum of 80% well recovery prior to sampling. Water sampling was then performed with a teflon bailer. Sampling for contaminants was done in the order of their volatility, with the most volatile constituents sampled first. Sampling for contaminants known to have densities greater than water were sampled at the bottom of the well. Each water sample obtained for a specific contaminant, or contaminants, was placed into the appropriate receptacle, sealed, labeled and refrigerated for delivery to our State-certified laboratory.

A Well Field Log was prepared for each well sampled, and records water depth, well volume, water temperature and other data. The Well Field Logs are shown as Figures 5.1 through 5.3.

Site Hydrology

Shallow groundwater conditions at the site have remained essentially steady since December 1989, with minor fluctuations of flow direction, gradient and water depth. Flow direction has been to the southwest, varying 7 degrees during the past year. Gradient has ranged 0.75 percent, from 1.14% to 0.4%. Water depth has varied approximately one-half foot. The approximate depth is 12 feet below the ground surface.

At the time of this sampling, flow direction has become more southerly, to S14°W. Gradient was measured to be 0.7 percent. Groundwater levels have risen approximately 1.5 feet since January 1991.

Conductivity, pH and temperature data are presented in the Well Field Logs, Figures 5.1 through 5.3. Little significant change has occurred in these parameters.

The significant changes in flow direction and water level since January 1991 is likely the result of an influx of groundwater from above-average rainfall during March 1991.

Chemical Analyses

The water samples obtained from Wells MW-2 and MW-3 were analyzed for constituents related to gasoline, since the wells are located adjacent to two 10,000 gallon underground gasoline tanks. The samples were tested for the following contaminants: Total Volatile Hydrocarbons (TVH) and Benzene, Toluene, Xylene and Ethylbenzene (BTXE). Monitoring Well MW-4 was sampled for the following waste-oil related contaminants: TVH, BTXE, Total Petroleum Hydrocarbons as diesel (TPH) and Oil and Grease.

The contaminants tested are those specified by the Tri-Regional Water Quality Control Board Recommendations of August 10, 1990 and listed in the Alameda County Department of Environmental Health letter dated, April 26, 1990 to R.T. Nahas Co. The analyses results are presented in the following tables. The Chemical Test Data Sheets are presented in Appendix "A," Figures A-1 through A-5. Project Chain-of-Custody record is shown as Figure A-6.

WATER ANALYSES

TABLE 1
(Results in ppb)

Sampling Date	Sample Locations	Benzene (1)*	Toluene (100)+	Ethylbenzene (680)*	Xylene (1750)*
April 1991	Well MW-2	640	520	170	790
	Well MW-3	450	270	150	760
	Well MW-4	ND	ND	ND	ND

ND = None Detected

*DHS: Primary Drinking Water Standard (3/89)
+DHS: Action Level

TABLE 2
(Results in ppb)

Sampling Date	Sample Location	TPH (100)*	TVH (100)*	Oil and Grease (100)*
April 1991	Well MW-2	--	4800	--
	Well MW-3	--	3600	--
	Well MW-4	ND	ND	ND

-- = Not Tested
ND = None Detected

*Quantified Action Levels are not provided for these parameters. The amount given is often informally used by regulatory agencies as a threshold value.

CONCLUSIONS AND RECOMMENDATIONS

Conclusions

On the basis of our findings to date, an unauthorized fuel release to soil and groundwater has occurred at the site, in the vicinity of the two 10,000-gallon underground gasoline storage tanks.

Contaminants associated with gasoline have increased dramatically in Monitoring Wells MW-2 and MW-3 since the last quarterly sampling event (January 1991). Now, in addition to Benzene, Xylene and Toluene concentrations exceed primary drinking water standards. Total hydrocarbon concentration also continues to exceed informal action levels.

The cause of these increases in contaminant concentrations is likely related to the heavy precipitation experienced during March 1991. Rising groundwater has likely intercepted contaminants concentrated at the capillary fringe. In addition, surface runoff may have entered the gasoline tank backfill at the fill ports; if the backfill contains a significant quantity of gasoline from overspill or other incident, the vertical migration of runoff through the backfill could result in mobilization and introduction of fuel to the groundwater.

Recently performed precision testing of the tanks and associated plumbing was reported to have revealed no leakage in the current system. However, a possible pipe leak was repaired in the early 1980's, and a large overspill was reported in 1987. In addition, the fill ports for the gasoline tanks do not have overspill protection, thereby providing a pathway for spills here to enter the tank backfill and local surrounding soils.

Recommendations

With respect to the obtained field data, and conclusions presented, the recommendations provided in our recently completed soil contaminant assessment report, P90165, April 1991, are considered appropriate at this time.

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 ACEH to the Regional Water Quality Control Board in Oakland for their review.

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.

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

The following are attached and complete this report:

FIGURE 1	Vicinity Map/Site Plan
FIGURE 2	Site Plan
FIGURE 3	Subsurface Profile
FIGURE 4	Groundwater Flow Direction and Gradient
FIGURES 5.1 through 5.3	Well Field Logs

APPENDIX "A"

FIGURES A-1 through A-5	Second Quarterly Laboratory Chemical Test Data Sheets
FIGURE A-6	Project Chain-of-Custody Record

Respectfully submitted,

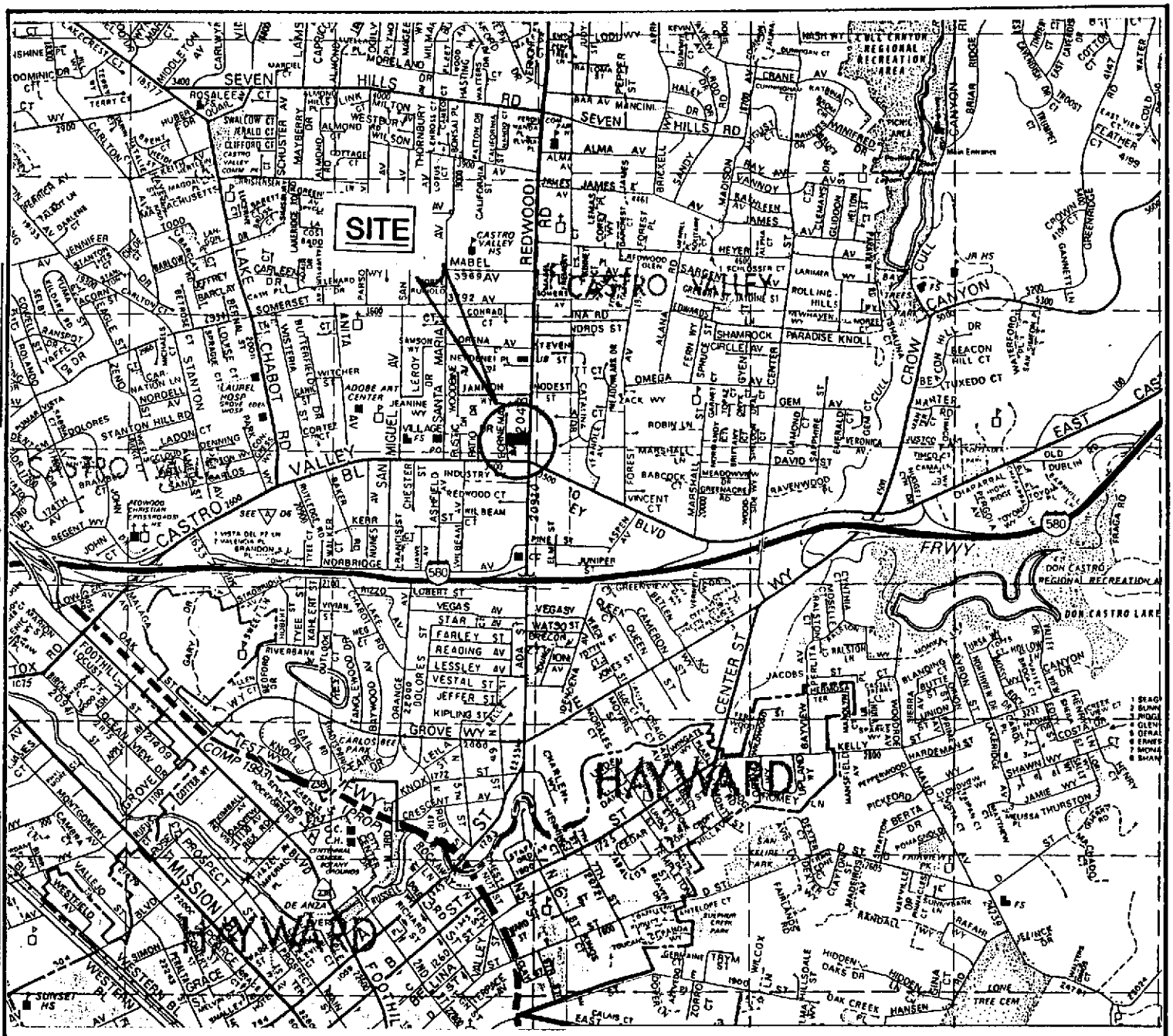
BSK & Associates

Alex Y. Eskandari, P.E.
Manager - Geotechnical Services
C.E. #038101, R.E.A. #01528

Tim W. Berger, R.E.A. 02336
Project Geologist

AYE/TWB:hhc
(MISC6.A19)

Distribution:
R.T. Nahas Co. (5 copies)



CHECKED BY

DATE

BY

VICINITY MAP

THIRD QUARTERLY
GROUNDWATER MONITORING REPORT
UNOCAL 76 SERVICE STATION
20405 REDWOOD ROAD
CASTRO VALLEY, CALIFORNIA

BSK Job No. P90165
May 1991
FIGURE: 1

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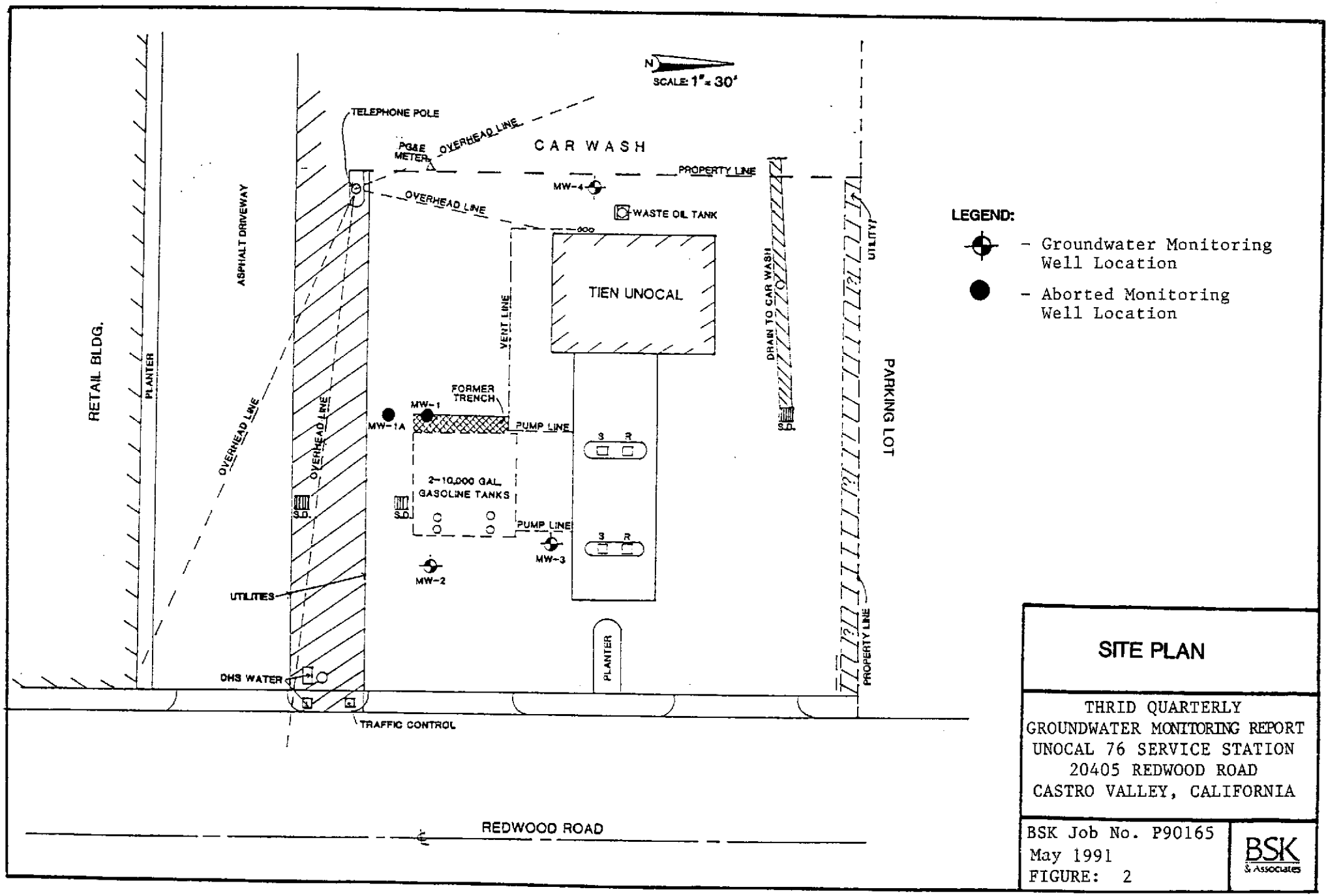

SITE PLAN

THRID QUARTERLY
GROUNDWATER MONITORING REPORT
UNOCAL 76 SERVICE STATION
20405 REDWOOD ROAD
CASTRO VALLEY, CALIFORNIA

BSK Job No. P90165
May 1991
FIGURE: 2

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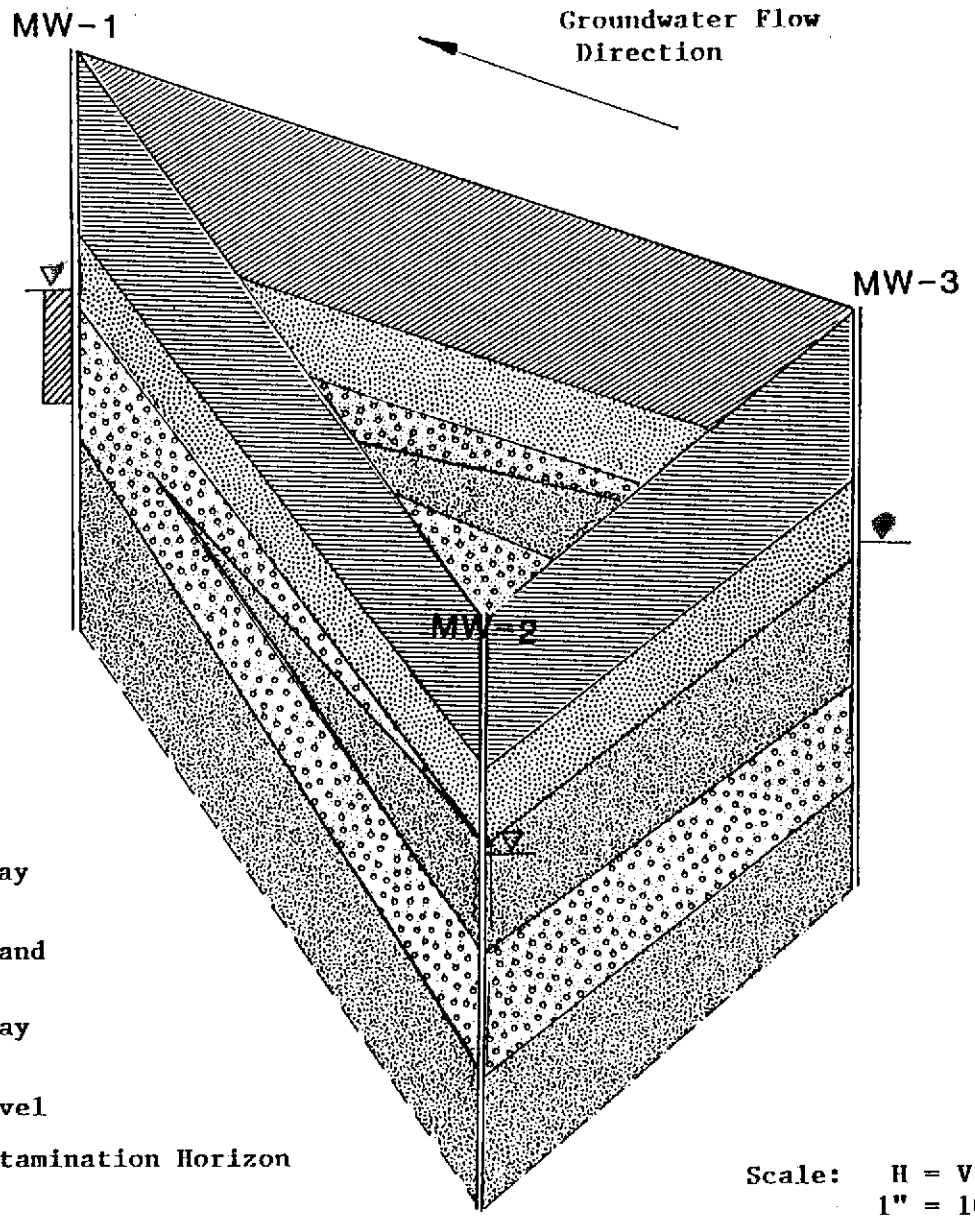

LEGEND:

- Clay
- Sandy Clay
- Clayey Sand
- Silty Clay
- Water Level
- Soil Contamination Horizon

Scale: H = V
1" = 10'

SUBSURFACE PROFILE

BSK Job No. P90165
May 1991
FIGURE: 3

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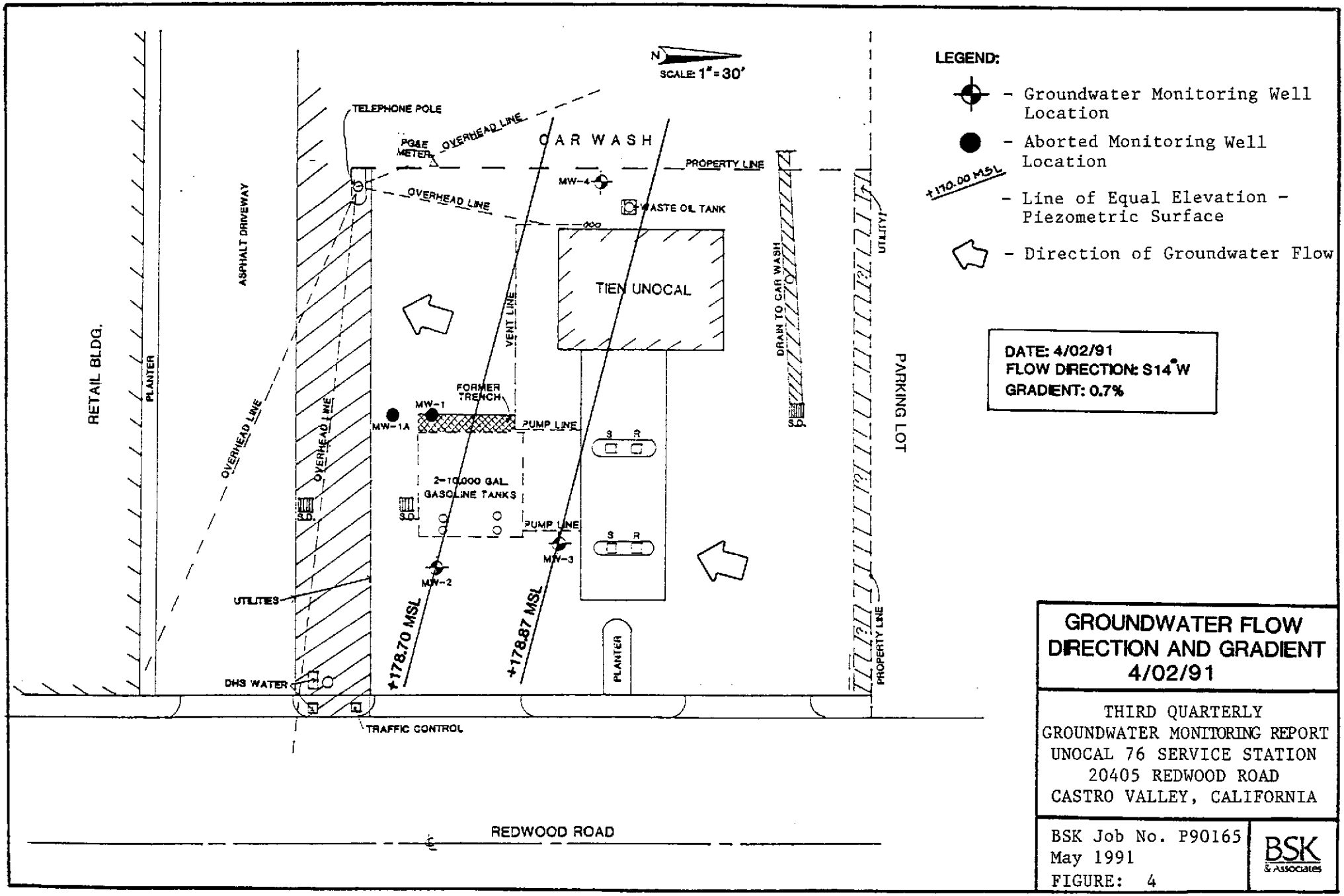
CHECKED BY
DATE
BY



GROUNDWATER FLOW DIRECTION AND GRADIENT 4/02/91

THIRD QUARTERLY
GROUNDWATER MONITORING REPORT
UNOCAL 76 SERVICE STATION
20405 REDWOOD ROAD
CASTRO VALLEY, CALIFORNIA

BSK Job No. P90165
May 1991
FIGURE: 4

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Project No.: P90165
Date: April 1991
Figure No.: 5.1

WELL FIELD LOG

WELL DEVELOPMENT: ____ Date: ____
SAMPLE COLLECTION: X Date: 4/02/91

PROJECT NAME AND LOCATION: Unocal 76, Service Station
20405 Redwood Road, Castro Valley, CA 94546

PERSONNEL: M. Cline
WEATHER: Clear

WELL INFORMATION:

Well No.: MW-2
Depth to Water: [redacted] Feet
Well Depth: 30 Feet
Water Volume: 3.2 Gallons
Reference Elevation: +188.60' MSL
Groundwater Elevaton: +178.70' MSL
Measurement Technique: Electric Well Sounder

Date Purged: [redacted]
Purge Method: PVC Bailer
Purge Begin: 11:47
End Purge: 12:19
Purge Rate: 0.4 G.P.M.

IMMISCIBLE LAYERS:

Top: None observed, Hydrocarbon odor
BOTTOM: None observed, [redacted] odor
Detection Method: Visual; olfactory
Collection Method: Clear PVC Bailer

WELL DEVELOPMENT/PURGE DATA:

TIME	VOLUME REMOVED (gallons)	ELECTRICAL CONDUCTIVITY (Ec/Range)	pH	TEMP. (F°)	COLOR/COMMENTS
11:55	3	887	7.6	79.3	
12:04	6	812	6.6	76.3	
12:11	9	779	6.3	75.6	
12:19	12	766	6.2	75.1	

SAMPLE COLLECTION DATA:

Sampling Equipment: Teflon point-source bailer

TIME	ANALYSIS	AMOUNT/CONTAINER USED	SAMPLE INTERVAL
12:25	TVH & BTXE	2 40 ML. Vials with HCL	11 Feet

Field Observations: ____

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Project No.: P90165
Date: April 1991
Figure No.: 5.2

WELL FIELD LOG

WELL DEVELOPMENT: ____ Date: ____
SAMPLE COLLECTION: X Date: 4/02/91

PROJECT NAME AND LOCATION: Unocal 76 Service Station
20405 Redwood Road, Castro Valley, CA 94546

PERSONNEL: M. Cline
WEATHER: Clear

WELL INFORMATION:

Well No.: [redacted]
Depth to Water: [redacted]
Well Depth: 30 Feet
Water Volume: 3.2 Gallons
Reference Elevation: +189.02 MSL
Groundwater Elevaton: +178.87 MSL
Measurement Technique: Electric Well Sounder

Date Purged: 4/02/91
Purge Method: PVC Bailer
Purge Begin: 13:06
End Purge: 13:30
Purge Rate: 0.5 GPM

IMMISCIBLE LAYERS:

Top: None observed, no odor
BOTTOM: Rust colored particles, slight indistinct odor
Detection Method: Visual; olfactory
Collection Method: Clear PVC Bailer

WELL DEVELOPMENT/PURGE DATA:

TIME	VOLUME REMOVED (gallons)	ELECTRICAL CONDUCTIVITY (Ec/Range)	pH	TEMP. (F°)	COLOR/COMMENTS
13:12	3	823	7.7	73.6	
13:18	6	685	6.4	75.2	
13:24	9	718	6.2	73.7	
13:30	12	703	6.3	72.6	

SAMPLE COLLECTION DATA:

Sampling Equipment: Teflon point-source bailer

TIME	ANALYSIS	AMOUNT/CONTAINER USED	SAMPLE INTERVAL
13:35	TVH & BTXE	2 40 ML Vials with HCL	11 Feet

Field Observations: ____

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Project No.: P90165
Date: April 1991
Figure No.: 5.3

WELL FIELD LOG

WELL DEVELOPMENT: ____ Date: ____
SAMPLE COLLECTION: X Date: 4/02/91

PROJECT NAME AND LOCATION: Unocal 76 Service Station
20405 Redwood Road, Castro Valley, CA 94546

PERSONNEL: M. Cline
WEATHER: Clear

WELL INFORMATION:

Well No.: MW-4
Depth to Water: 10.75 Feet
Well Depth: 25 Feet
Water Volume: 2.3 Gallons
Reference Elevation: +189.70' MSL
Groundwater Elevaton: +178.95' MSL
Measurement Technique: Electric Well Sounder

Date Purged: 4/02/91
Purge Method: PVC Bailer
Purge Begin: 10:45
End Purge: 11:04
Purge Rate: 0.4 G.P.M.

IMMISCIBLE LAYERS:

Top: None observed, no odor BOTTOM: 1 Feet Clay-colloids, no odor
Detection Method: Visual; olfactory
Collection Method: Clear, PVC Bailer

WELL DEVELOPMENT/PURGE DATA:

TIME	VOLUME REMOVED (gallons)	ELECTRICAL CONDUCTIVITY (Ec/Range)	pH	TEMP. (F°)	COLOR/COMMENTS
10:50	2	613	8.7	70.7	
10:54	4	597	7.9	70.6	
10:59	6	603	7.5	72.3	
11:04	8	597	7.1	71.5	

SAMPLE COLLECTION DATA:

Sampling Equipment: Teflon point-source bailer

TIME	ANALYSIS	AMOUNT/CONTAINER USED	SAMPLE INTERVAL
11:10	BTXE	2 50 ML Vials with HCL	11 Feet
11:13	TPH as Diese	1 1000 ML Flask	11 Feet
11:18	Oil & Grease	1 1000 ML Flask with H_2 SO_4	11 Feet

Field Observations: ____

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APPENDIX "A"

THIRD QUARTERLY LABORATORY CHEMICAL TEST DATA SHEETS

BSK
& Associates

BSK Analytical Laboratories

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FIGURE: A-1

BSK-Pleasanton
R.T. Nahas

Report Issue Date: 04/24/91
Date Received: 04/02/91
Project Number: P90165

Lab Number	Date Sampled	Client's Sample Description	Date Analyzed
Ch911607-4	04/02/91	1225 hrs. MW-2 #1	04/10/91

Water Analyses for BTXE and TVH

Results Reported in Micrograms per Liter (ug/L)

Compound	Results	Detection Limit (DLR)
Benzene	640	5.0
Toluene	520	5.0
Ethylbenzene	170	5.0
Total Xylene Isomers	790	5.0
Total Volatile Hydrocarbons	4800	500

Method: BTXE-EPA 8020 TVH-EPA 8015M

DLR: Detection Limit For the Purposes of Reporting

Cynthia Pigman,
QA/QC Supervisor

Michael Brechmann,
Organics Supervisor

R051890

BSK Analytical Laboratories

FIGURE: A-2

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R.T. Nahas

Report Issue Date: 04/24/91
Date Received: 04/02/91
Project Number: P90165

Lab Number	Date Sampled	Client's Sample Description	Date Analyzed
Ch911607-5	04/02/91	1335 hrs. MW-3 #1	04/10/91

Water Analyses for BTXE and TVH

Results Reported in Micrograms per Liter (ug/L)

Compound	Results	Detection Limit (DLR)
Benzene	450	0.5
Toluene	270	0.5
Ethylbenzene	150	0.5
Total Xylene Isomers	760	0.5
Total Volatile Hydrocarbons	3600	50.00

Method: BTXE-EPA 8020 TVH-EPA 8015M

DLR: Detection Limit For the Purposes of Reporting

Cynthia Pigman,
QA/QC Supervisor

Michael Brechmann,
Organics Supervisor

R051890

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FIGURE: A-3

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BSK-Pleasanton
R.T. Nahas

Report Issue Date: 04/24/91
Date Received: 04/02/91
Project Number: P90165

Lab Number	Date Sampled	Client's Sample Description	Date Analyzed
Ch911607-1	04/02/91	1110 hrs. MW-4 #1	04/10/91

Analyses for BTEX[1] in Liquids

Results Reported in Micrograms per Liter (µg/L)

Compound	Method DLR[2]	Results
Benzene	0.5	ND
Toluene	0.5	ND
Ethylbenzene	0.5	ND
Xylene	0.5	ND
DLR Multiplier[3]		1

[1]Analyses by EPA Method 8020. Prepared by EPA Method 5030.

[2]Method Detection Limit For the Purposes of Reporting. Exceptional sample conditions or matrix interferences may result in higher detection limits.

[3]Sample DLR = Method DLR x DLR Multiplier

ND: None Detected

Cynthia Pigman, QA/QC Supervisor

Michael Brechmann, Organics Supervisor

R412190BTEXL.R

BSK Analytical Laboratories

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FIGURE: A-4

BSK-Pleasanton
R.T. Nahas

Report Issue Date: 04/24/91
Date Received: 04/02/91
Project Number: P90165

Lab Number	Date Sampled	Client's Sample Description	Date Analyzed
Ch911607-2	04/02/91	1113 hrs. MW-4 #2	04/11/91

Analyses for TPH as Diesel[1] in Liquids

Results Reported in Micrograms per Liter (µg/L)

	Method DLR[2]	Results
TPH(D)	100	ND
DLR Multiplier[3]		1

[1]Total Petroleum Hydrocarbons as Diesel by Method DHS GC/FID.

[2]Method Detection Limit For the Purposes of Reporting. Exceptional sample conditions or matrix interferences may result in higher detection limits.

[3]Sample DLR = Method DLR x DLR Multiplier

ND: None Detected

Cynthia Pigman, QA/QC Supervisor

Michael Brechmann, Organics Supervisor

RO 991TPHDL.R

BSK Analytical Laboratories

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FIGURE: A-5

BSK-Pleasanton
R.T. Nahas

Report Issue Date: 04/24/91
Date Received: 04/02/91
Project Number: P90165

Lab Number	Date Sampled	Client's Sample Description	Date Analyzed
Ch911607-3	04/02/91	1118 hrs. MW-4 #3	04/08/91

Total Oil & Grease in Liquid

Results Reported in Milligrams per Liter(mg/L)

Analyte	Results	DLR
Total Oil and Grease.....	ND	1

Analyses performed by SM 503B/413.2
ND: None Detected
DLR: Detection Limit For the Purposes of Reporting

Cynthia Pigman
QA/QC Supervisor

Michael J. Brechmann
Organics Supervisor

[illegible]2390ogw

BSK Log Number 1607

ANALYSIS REQUEST/CHAIN OF CUSTODY RECORD

1000-1945

Client Name: R.T. Nahas Castro Valley	Project or P.O.#: P90165
Address: 1183 Quarry Lane	Phone #: (415) 462-4000
City, State, Zip: Pleasanton	Report, attention: Tim Berger

Lab Use Only in this section: CK

Analysis required: TVH & BTXE; TPH as Diesel; Oil & Grease; BTXE; Hazardous sample Special handling required

4-16-91

Date sampled	Time sampled	Type (See key below)	Sampled by / Sample description	Number of containers	Lab Sample number	Sample Seals (See key below)	TVH & BTXE	TPH as Diesel	Oil & Grease	BTXE	Hazardous sample Special handling required	Remarks
4-2-91	11:10	L	M. Cline / MW-4 #1	2x40	-1	P			X			2x40ml VOA
	11:13		MW-4 #2	1x1000	-2	A		X				1x1L
	11:18		MW-4 #3	1x1000	-3	↓			X			↓
	12:25		MW-2 #1	2x40	-4	P	X					2x40ml VOA
↓	13:35	↓	MW-3 #1	2x40	-5	↓	X					↓

IMPORTANT NOTICE: No samples will be analyzed without an authorized signature in this section.

I am hereby requesting BSK's Normal Chain-of-Custody Procedures for the above samples. I understand that these procedures are generally consistent with those outlined in the U.S. E.P.A. SW 846 and that there is no extra charge for this service.

By: Marty Cli
Authorized Signature

I am hereby requesting BSK's Formal Chain-of-Custody Procedures for the above samples. I understand that these procedures are generally consistent with those outlined in U.S. EPA Contract Laboratory Program Statement of Work, Section F, and that there is a charge of $50.00 per work order or $5.00 a bottle, whichever is greater.

By: _____
Authorized Signature

	Signature	Print Name	Company	Date	Time
Relinquished by	Marty Cli	Martin Cline	BSK & Assoc. Pleasanton	4-2-91	14:48
Received by	Cecil Harris	C. Harris	BSK Lab	4-2-91	1524
Relinquished by					
Received by					
Relinquished by					
Received by					

BSK & Associates Chemical Laboratories

1414 Stanislaus Street Fresno, California 93706

Telephone (209) 485-8310 • Fax (209) 485-7427

KEY: Type: AQ–Aqueous SL–Sludge SO–Soil PE–Petroleum OT–Other
Seals: P–Present A–Absent B–Broken
DISTRIBUTION: WHITE, CANARY - LABORATORY PINK - ORIGINATOR
Note:
Samples are discarded 14 days after results are reported unless other arrangements are made.
Hazardous samples will be returned to client or disposed of at client expense.

FIGURE: A-6