TOXICHEM Management Systems, Inc.
Environmental & Occupational Health Services
1461 Newport Avenue
San Jose, California 95125
(408) 292-3266 / Fax (408) 298-6591

Exposure Assessment/Estimation
Quantitative Risk Assessments
Industrial Hygiene
Regulatory Compliance Programs
Real Property Environmental Assessments
Compliance Audits
Air Pollution Dispersion Modeling
Hazardous Waste Management
Air Sampling and Analysis

October 16, 1998
Project: BA20

Mr. & Mrs. Jessen & Agnes Calleri
C/O Karen Fineran, Makoff Kinear Counsel, P.C.
20 California Street, Suite 201
San Francsico, California 94111

Re: *Soil and Groundwater Investigation Results*
15995 Washington Avenue
San Lorenzo, California

Dear Ms. Fineran:

This document, prepared on behalf of Jessen and Agnes Calleri, presents the results of a soil and groundwater assessment performed at the referenced site. The scope of work included the installation of five exploratory borings and two groundwater monitoring wells, the collection of soil and groundwater samples, laboratory analyses, and preparation of this document. The work was performed in accordance with the procedures documented in an *Investigation Work Plan*, prepared by Cambria Environmental Technology, Inc., dated November 28, 1995.

This document includes a discussion of the site background, scope of work, findings, conclusions, and recommendations. Tables 1 and 2 present soil and groundwater analytical data, respectively. Table 3 presents analytical data for stockpiled soil. Attachment A presents field and laboratory procedures, boring logs with well construction details, well installation permits, and well elevation survey report. Attachment B presents certified analytical reports and chain-of-custody documentation.

SITE BACKGROUND

Site Description

The site is located on the northwest corner of Washington Avenue and Via Enrico Street in San Lorenzo, California (Figure 1). The facility has been a retail gasoline service

station since approximately 1964. Texaco obtained control over the facility in 1983, but never operated the service station. Texaco removed the fuel underground storage tanks (USTs) in 1983, and contamination was detected. In 1986, the facility was sold and the owner installed three new 10,000-gallon fuel USTs in a common excavation at a new location. Site features are shown on the site plan, Figure 2.

Figure 2 also presents the locations of three groundwater monitoring wells designated MW-1 through MW-3, and six borings designated B-1 through B-3 and SB-1 through SB-3 which were installed during previous site investigations.

SCOPE OF WORK

The soil and groundwater assessment at the site was performed on July 30, 1998. To document the soil and groundwater conditions at the site, the following scope of work was completed:

- **Site Safety Plan and Coordinating Field Activities.** A site specific safety plan was prepared and signed by all field personnel on-site. The site was marked for underground utilities and Underground Service Alert was notified. Field activities were coordinated between the property owner, the business owner, the materials supplier and the drilling company.
- **Permits**. Alameda County Water Conservation District (Zone 7) permits for installing borings and groundwater monitoring wells were obtained prior to field work.
- **Exploratory Borings and Groundwater Monitoring Well Installation.** Exploratory borings SB-A through SB-E and groundwater monitoring wells MW-4 and MW-5 were installed using 8-inch diameter hollow stem auger drill equipment. Wells and borings were advanced to depths between 12 and 20 feet below ground surface (bgs). Boring locations are shown on Figure 2.

  Soil samples were collected every five feet from all well borings and exploratory borings for lithologic logging and laboratory analysis. Field analysis for organic vapor concentrations was performed on all soil samples during drilling using a photo-ionization detector (PID). The PID results are presented on the boring logs in Attachment A. Upon completion of borings SB-A through SB-E grab groundwater samples were collected for laboratory analysis.
- **Well Development and Groundwater Sampling.** On August 5, 1998, wells MW-4 and MW-5 were developed utilizing swab and bailing well

development techniques. Well development field data sheets are included in Attachment A. On August 26, 1998, Blaine Tech Services, Inc., collected depth to groundwater measurements and groundwater samples from wells MW-1 through MW-5.

- **Soil and Groundwater Chemical Analyses.** Selected soil samples from all wells and borings were analyzed in the laboratory for gasoline-range total petroleum hydrocarbons (TPHg), benzene, toluene, ethylbenzene and xylenes (collectively BTEX) and methyl tertiary butyl ether (MTBE). Grab groundwater samples were collected from Borings SB-A through SB-E and from Wells MW-1 through MW-5. Groundwater samples were analyzed for TPHg, BTEX and MTBE.
- **Well Elevation Survey.** Upon completion of the well installation phase of work, groundwater monitoring wells MW-1 through MW-5 were surveyed by a licensed land surveyor to mean sea level. The survey report is included in Attachment A.
- **Stockpiled Soil Disposal.** Approximately 1.5 cubic yards of soil were generated by the drilling activities. The soils were profiled and accepted for disposal by the BFI, Vasco Road Landfill located in Livermore, California under approval number CA40508279801468. On September 1, 1998, the soils were transported to the BFI facility for disposal.

FINDINGS

Subsurface Conditions

Subsurface soil conditions encountered during the activities are presented on the boring logs in Attachment A. From 1 to 8 feet below ground surface (bgs) soils consisted of intermixed horizons of sandy clay, silty clay, clayey silt, silty sand, gravely sand, clayey gravel, and sandy gravel. A clay to silty clay horizon was encountered from approximately 8 feet bgs to the maximum explored depth of 20 feet bgs. Water was first encountered at depths between 10.8 and 16.6 feet bgs and then stabilized at approximately 9.5 feet bgs. Groundwater elevation data collected on September 17, 1998, indicates a westerly groundwater flow direction at a gradient of approximately 0.006. Groundwater elevation data and the calculated direction and gradient of groundwater flow are shown on Figure 3.

Soil Analytical Data

Based on soil analytical data, the presence of petroleum hydrocarbons in soils were detected adjacent to the USTs and pump islands, and behind the station building (Table 1).

In Boring SB-D, located near the pump islands a soil sample collected from a depth of 10 feet bgs contained TPHg at a concentration of 310 parts per million (ppm). With the exception of this detection of TPHg, soil impact was minimal and occurred typically within the depth interval of 5 to 10 feet bgs. Petroleum hydrocarbon concentrations within this interval ranged from near the detection limit to 2.5 ppm.

A maximum concentration of 1.1 ppm benzene was detected in the soil sample collected from Boring SB-D at a depth of 10 feet bgs. A maximum concentration of 16 ppm MTBE was detected in a sample from SB-E at 10 feet bgs.

Groundwater Analytical Data

The results of groundwater analytical data indicate the presence of petroleum hydrocarbons in the groundwater beneath the site (Table 2). Concentrations of TPHg and benzene in groundwater at wells MW-1 through MW-5 and borings SB-A through SB-E are shown on Figure 4.

A maximum TPHg concentration of 6,600 parts per billion (ppb) was detected in the groundwater sample collected from Well MW-5 on the western edge of the property. A maximum benzene concentration of 2,200 ppb was detected in the grab groundwater sample from Boring SB-D, located downgradient from the product dispenser islands.

MTBE was detected in all samples, except Well MW-5, at concentrations ranging from 7.2 ppb in Boring SB-A to 340,000 ppb in Well MW-1. The presence of MTBE was not verified using EPA Method 8260.

CONCLUSIONS

Based on the results of this investigation, the following conclusions are presented:

- Groundwater elevation data collected on September 17, 1998, indicate a westerly groundwater flow direction at a gradient of approximately 0.006. This observed flow direction is in the anticipated direction of regional groundwater flow.
- Petroleum hydrocarbon constituents were detected in groundwater collected from borings SB-A through SB-E and wells MW-1 through MW-5. Based on the initial groundwater sampling event, the lateral extent of petroleum hydrocarbons has not been delineated.

Should you have any questions regarding the contents of this document, please call Toxichem Management Systems, Inc. at (408) 292-3266.

Sincerely,

Toxichem Management Systems, Inc.

Daniel Hernandez
President

Joseph Muzzio
Project Geologist
CEG 1672

Attachments:

Table 1 - Soil Analytical Data
Table 2 - Groundwater Elevation and Analytical Data
Table 3 - Stockpiled Soil Analytical Data

Figure 1 - Site Location Map
Figure 2 - Site Plan
Figure 3 Groundwater Elevation Contour Map, September 17, 1998
Figure 4 TPHg/Benzene Concentration Map, September 17, 1998

Attachment A - Field and Laboratory Procedures, Boring Logs, Well Development Field Notes, and Well Elevation Survey Report
Attachment B - Certified Analytical Reports and Chain-of-Custody Documentation

Table 1
Soil Analytical Data

15595 Washington Avenue
San Lorenzo, California

Sample Number	Date Sampled	TPPH as Gasoline (ppm)	MTBE (ppm)	Benzene (ppm)	Toluene (ppm)	Ethyl-Benzene (ppm)	Xylenes (Total) (ppm)
SB-A-5'	07/30/98	<1.0	<0.025	<0.0050	<0.0050	<0.0050	<0.0050
SB-A-10'	07/30/98	<1.0	<0.025	<0.0050	<0.0050	<0.0050	<0.0050
SB-B-5'	07/30/98	<1.0	4.7	<0.0050	<0.0050	<0.0050	<0.0050
SB-B-10'	07/30/98	<1.0	0.44	0.010	<0.0050	<0.0050	<0.0050
SB-B-15'	07/30/98	<1.0	<0.025	<0.0050	<0.0050	<0.0050	<0.0050
SB-C-5'	07/30/98	<1.0	<0.025	<0.0050	<0.0050	<0.0050	<0.0050
SB-C-10'	07/30/98	<1.0	4.7	<0.0050	<0.0050	<0.0050	<0.0050
SB-D-5'	07/30/98	<1.0	<0.025	<0.0050	<0.0050	<0.0050	<0.0050
SB-D-10'	07/30/98	310 (a)	2.5	[redacted]	<0.12	0.91	1.1
SB-E-6'	07/30/98	1.6 (a)	2.1	0.021	0.024	0.019	0.076
SB-E-10'	07/30/98	2.5 (a)	16	<0.012	<0.012	<0.012	<0.012
MW-4-5'	07/30/98	<1.0	<0.025	<0.0050	<0.0050	<0.0050	<0.0050
MW-4-10'	07/30/98	<1.0	<0.025	0.0069	<0.0050	<0.0050	<0.0050
MW-4-20'	07/30/98	<1.0	<0.025	<0.0050	<0.0050	<0.0050	<0.0050
MW-5-5'	07/30/98	<1.0	<0.025	<0.0050	<0.0050	<0.0050	<0.0050
MW-5-10'	07/30/98	<1.0	<0.025	<0.0050	<0.0050	<0.0050	<0.0050
MW-5-20'	07/30/98	<1.0	<0.025	<0.0050	<0.0050	<0.0050	<0.0050

Notes:

TPPH = total purgeable petroleum hydrocarbons
MTBE = methyl tertiary butyl ether
ppm = parts per million
(a) = laboratory reported as unidentified hydrocarbons C6-C12
< = not detected at or above detection limits

Table 2
Groundwater Elevation and Analytical Data

15995 Washington Avenue
San Lorenzo, California

Sample Number	Date Sampled	Well Elevation (feet, MSL)	Depth to Water (feet, TOC)	Groundwater Elevation (Feet, MSL)	TPPH as Gasoline (ppb)	MTBE (ppb)	Benzene (ppb)	Toluene (ppb)	Ethyl-benzene (ppb)	Xylenes (Total) (ppb)
SB-A	7/30/98	--	14.00	--	<50	7.2	<0.50	<0.50	<0.50	< 0.50
SB-B	7/30/98	--	16.50	--	<50	1,600	0.77	0.51	<0.50	0.78
SB-C	7/30/98	--	11.50	--	<50	13,000	20	<0.50	<0.50	< 0.50
SB-D	7/30/98	--	10.80	--	<50,000	[illegible]	[illegible]	<500	3,300	9,500
SB-E	7/30/98	--	11.80	--	750	15,000	74	4.4	6.5	12
MW-1	8/26/98	22.96	9.30	13.66	<500	340,000	17	<5.0	<5.0	<5.0
MW-2	8/26/98	22.07	8.40	13.67	<500	210,000	<5.0	<5.0	<5.0	<5.0
MW-3	8/26/98	22.74	9.29	13.45	<500	99,000	8.3	<5.0	<5.0	<5.0
MW-4	8/26/98	23.51	9.87	13.64	170	150	2.0	0.74	1.3	1.0
MW-5	8/26/98	23.85	10.51	13.34	6,600 (a)	<250	[illegible]	<50	380	84
EB	08/26/98	--	--	--	<50	<2.5	<0.50	<0.50	<0.50	<0.50

Notes:

* = measured relative to ground surface
ppb = parts per billion
TPPH = total purgeable petroleum hydrocarbons
MTBE = methyl tertiary butyl ether
< = not detected at or above detection limits
EB = equipment blank
MSL = mean sea level
(a) = laboratory reported as unidentified hydrocarbons C6-C12

Table 3
Stockpiled Soil Analytical Data

15995 Washington Avenue
San Lorenzo, California

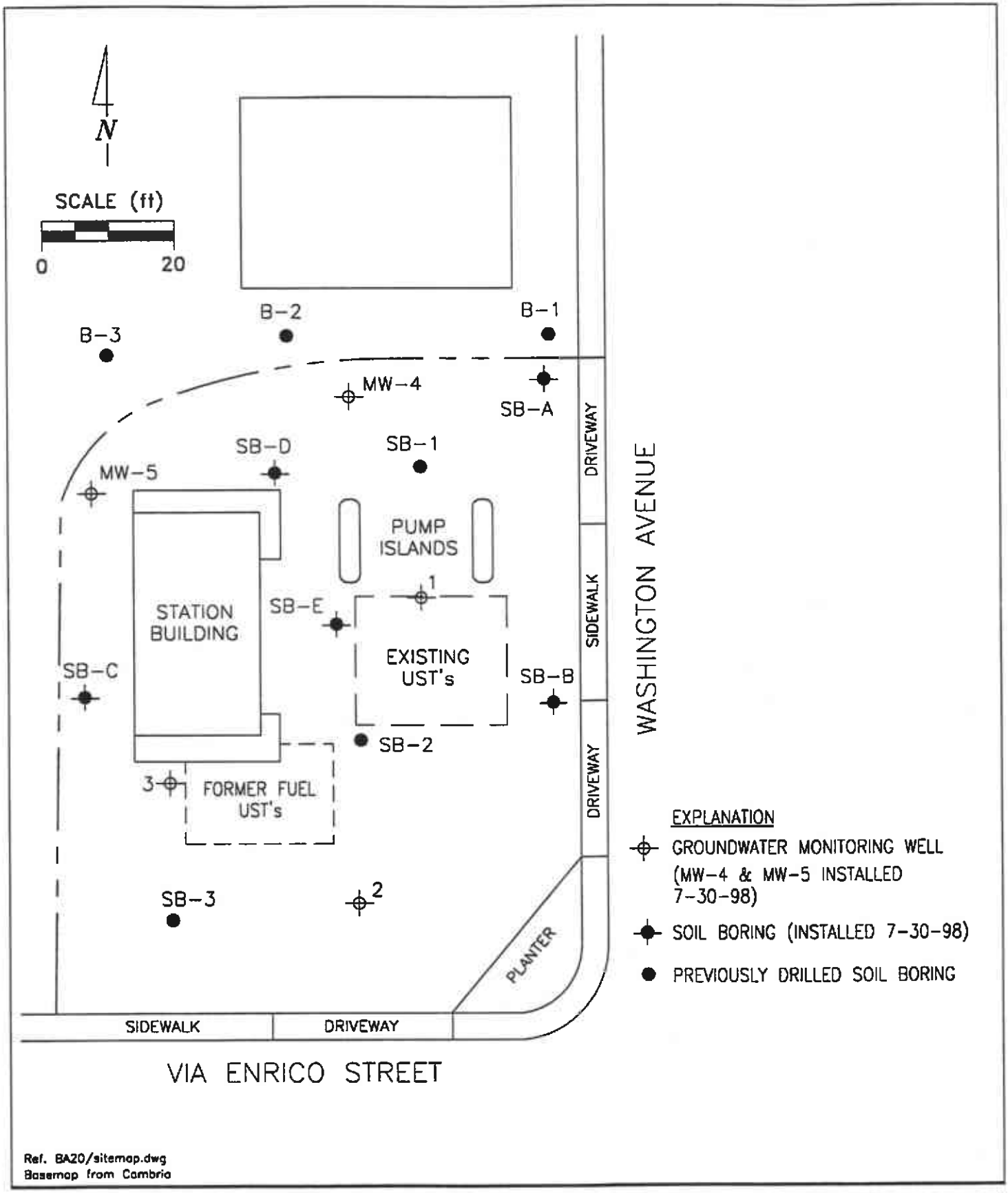
Sample Number	Date Sampled	TPPH as gasoline (ppm)	Benzene (ppm)	Toluene (ppm)	Ethyl Benzene (ppm)	Total Xylenes (ppm)	Lead (ppm)
SP-1	7/30/98	3.4 (a)	<0.0050	0.014	0.038	0.026	20

Notes:

TPPH= total purgeable petroleum hydrocarbons
<= not detected at or above detection limits
ppm= parts per million
(a)= laboratory reported as unidentified hydrocarbons C6-C12

Reference:
THE THOMAS GUIDE
REVISED: 1991

TOXICHEM Management Systems, Inc.	SCALE: 0 FEET 2,200	**SITE LOCATION MAP**	FIGURE 1
	DRAWN BY:	15595 Washington Avenue San Lorenzo, California	PROJECT BA20
	DATE September 3, 1998		



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Basemap from Cambria

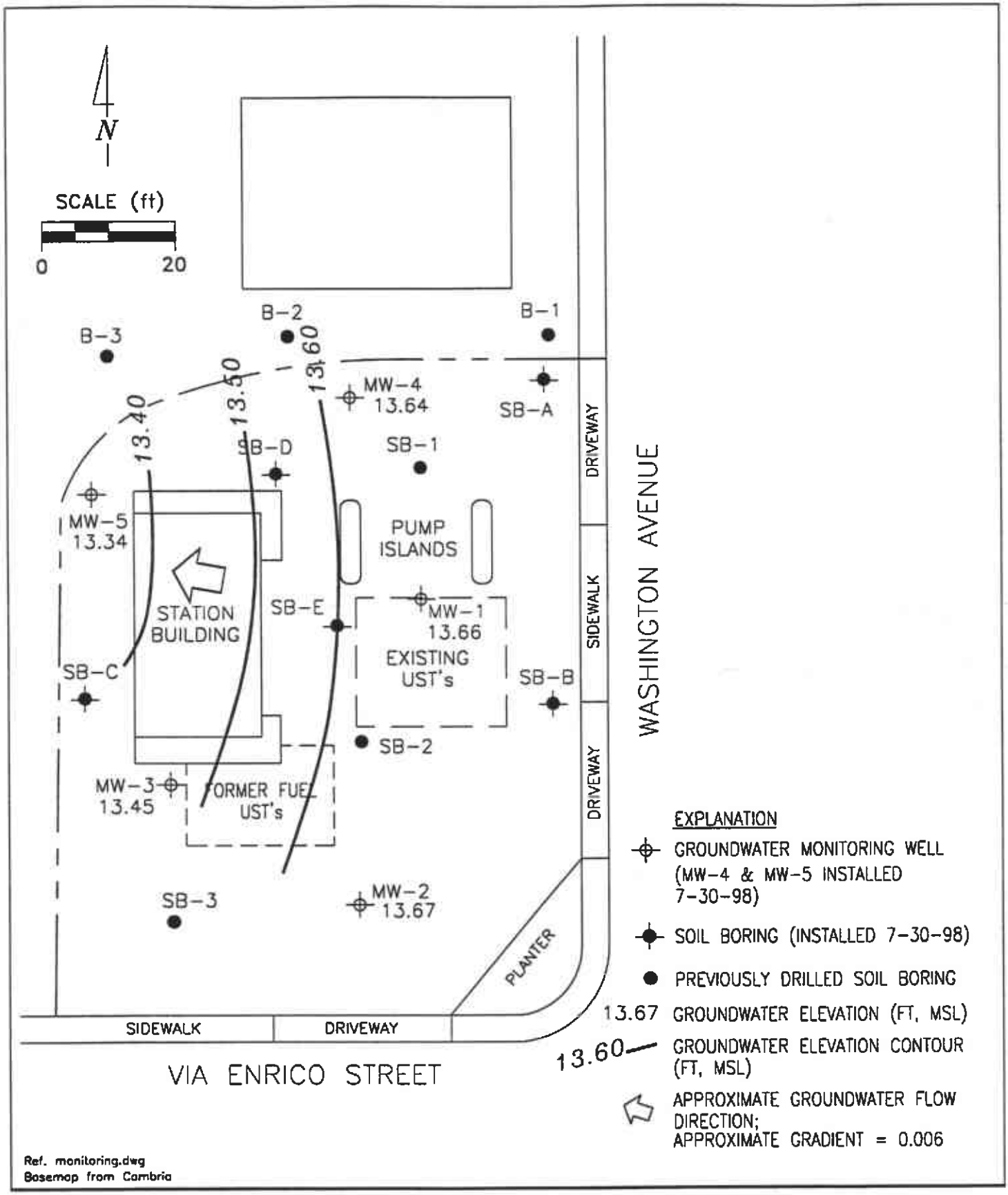
PREPARED BY

TOXICHEM
Management Systems, Inc.

SITE PLAN

15595 Washington Avenue
San Lorenzo, California

FIGURE:
2
PROJECT:
BA20



Ref. monitoring.dwg
Basemap from Cambria

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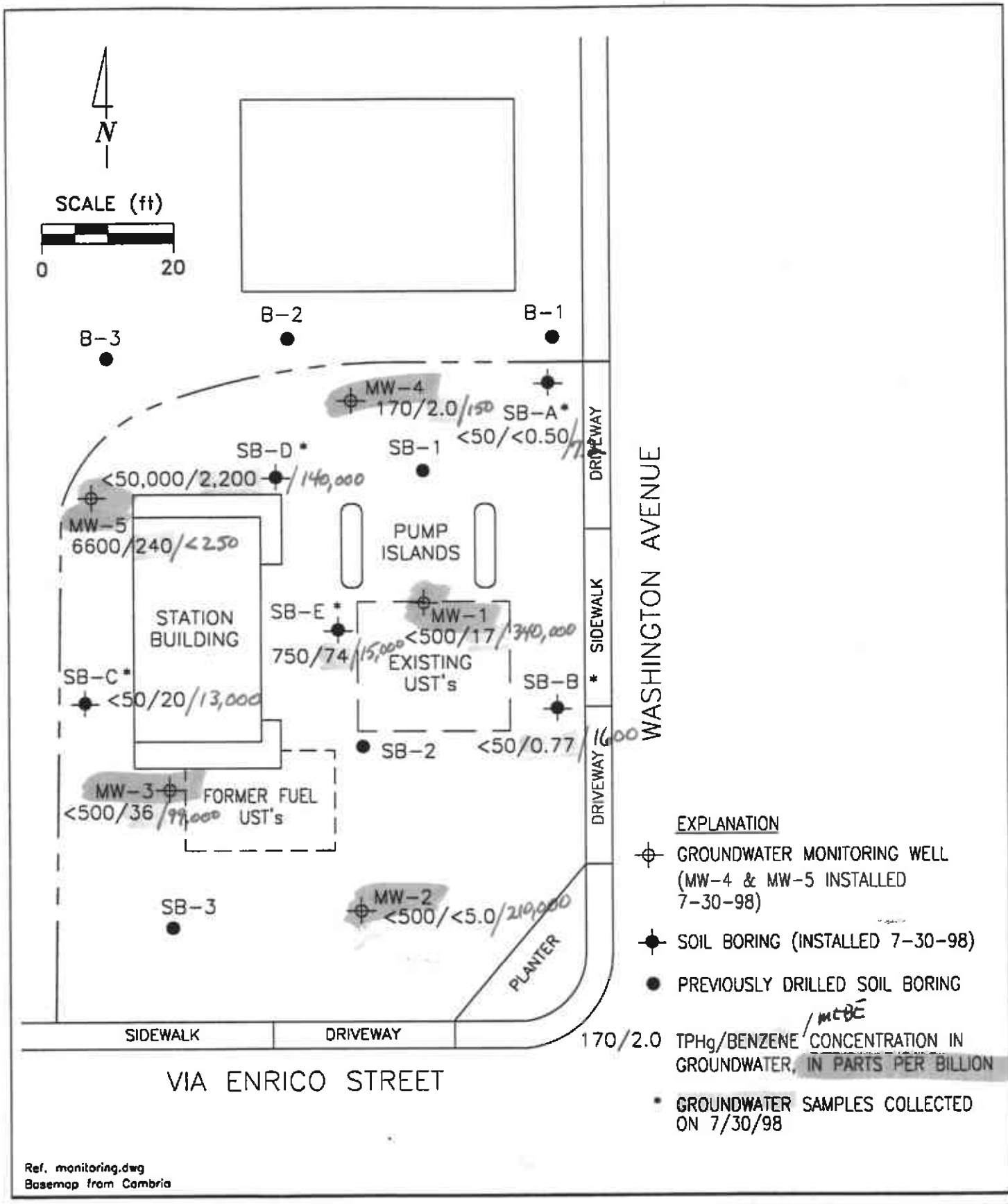
TOXICHEM
Management Systems, Inc.

GROUNDWATER ELEVATION CONTOUR MAP,

Texaco Service Station
15595 Washington Avenue
San Lorenzo, California

FIGURE:
3
PROJECT:
BA20



Ref. monitoring.dwg
Basemap from Cambria

PREPARED BY

TOXICHEM
Management Systems, Inc.

TPHg/BENZENE CONCENTRATION MAP

Texaco Service Station
15595 Washington Avenue
San Lorenzo, California

FIGURE:
4
PROJECT:
BA20

ATTACHMENT A
FIELD AND LABORATORY PROCEDURES, BORING LOGS, WELL DEVELOPMENT FIELD NOTES, AND WELL ELEVATION SURVEY REPORT

ATTACHMENT A
FIELD AND LABORATORY PROCEDURES, BORING LOGS, AND WELL DEVELOPMENT FIELD NOTES

The soil borings were advanced using an 8-inch diameter hollow stem auger drill rig, and split spoon sampling equipment. During drilling, samples were collected every five feet, for laboratory analysis and logged for lithologic description by an RRM, Inc. geologist using the Unified Soil Classification System and standard geologic techniques. The split spoon sampler contains 3 six inch brass liners and is advanced into undisturbed soil every five feet. One brass liner is retained for chemical analysis and capped with Teflon® tape squares and plastic end caps, and then placed in a sealable plastic bag. The soil samples were then placed on ice for transport to a California State-certified laboratory, accompanied by chain-of-custody documentation. Downhole drilling equipment was steam cleaned between borings. Upon completion of soil and groundwater sampling activities each boring was backfilled with cement grout through tremie pipe from the bottom of each boring to the ground surface.

Well Installation and Development

Groundwater monitoring Wells MW-4 and MW-5 were constructed of polyvinyl chloride (PVC) casing with approximately 10 feet of slotted screen casing (see boring logs). Well screen (0.020-inch slot) was packed with a 2/12 sand and then 1 foot of bentonite. A cement surface seal was then poured and each well received a locking cap and a protective vault box. After well completion, wells were developed utilizing the surge block swab technique and then sampled.

Groundwater Sampling

Groundwater samples were collected from the well casings using clean Teflon bailers and appropriate EPA-approved containers. The samples were then labeled, and transported on ice to the laboratory using appropriate chain-of-custody documentation. Sampling equipment was cleaned with tri-sodium phosphate solution between uses.

Field Hydrocarbon Screening Procedures

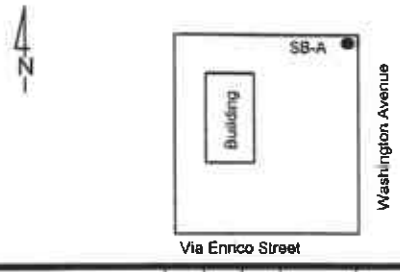
Field hydrocarbon screening procedures consisted of measuring organic vapor concentrations using a photo-ionization detector (PID). The procedure consisted of obtaining approximately 30 grams of soil and placing this soil into a clean container. The

container was then warmed for approximately 20 minutes and the headspace within the jar was tested for organic vapor, measured in parts per million (ppm). The instrument was pre-calibrated prior to use in the field.

Laboratory Analytical Program

Soil and groundwater samples were analyzed for gasoline-range total petroleum hydrocarbons by EPA Method 8015 (modified), and benzene, toluene, ethylbenzene, and xylenes, and methyl tertiary butyl ether by EPA Method 8020. Analyses were performed by a California State-certified laboratory. The results of the analysis for the soil and groundwater samples are documented on the certified analytical reports presented as Attachment B.

WELL/BORING LOCATION MAP



TOXICHEM MANAGEMENT SYSTEMS, INC. | WELL/BORING: [redacted]

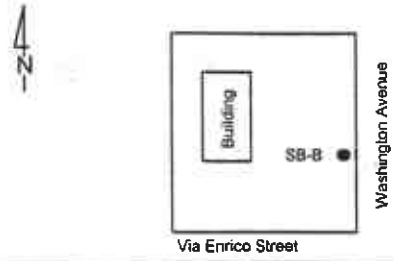
DATE: July 30, 1998	DRILLING METHOD: HSA
PROJECT: BA20	SAMPLING METHOD: split spoon
CLIENT: Equilon	BORING DIAMETER: 8"
LOCATION: 15595 Washington Avenue	BORING DEPTH: 15'
CITY: San Lorenzo	WELL CASING: NA
CO./STATE: Alameda / California	WELL SCREEN: NA
DRILLER: Exploration Geoservices	SAND PACK: NA

WATER LEVEL:			
TIME:			
DATE:			

DESCRIPTION/LOGGED BY: R. Khokhar

WELL/BORING COMPLETION	FIRST	STABILIZED	MOISTURE	DENSITY BLOWS / ft.	FIELD TEST PID (ppm)	SAMPLE NUMBER	DEPTH (FEET)	RECOVERY	SAMPLE INTERVAL	GRAPHIC	USCS SYMBOL	
Grout	☑	▼					1					ASPHALT / BASEROCK
							2				CL	[redacted] dark brown; 70% medium plasticity fines; 30% fine sand; firm; no product odor
							3				SP	[redacted] dark brown; 40% low plasticity fines; 60% fine sand; very loose; no product odor
			DP	4	0	SB-A-5'	5					
							6					
							7					
							8					
							9				CH	[redacted]; greyish brown; 100% high plasticity fines; stiff; mottled; [redacted]; no product odor
			DP	16	0	SB-A-10'	10					
							11					
							12					
							13					
							14					
							15					Bottom of boring 15' below ground surface
							16					
							17					
							18					
							19					
							20					
							21					
							22					

WELL/BORING LOCATION MAP



TOXICHEM MANAGEMENT SYSTEMS, INC. | WELL/BORING [redacted]

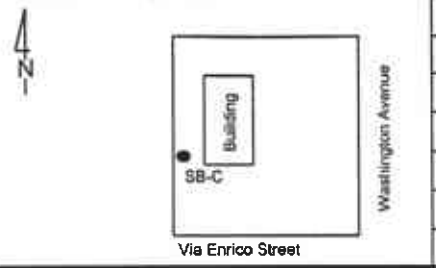
DATE: July 30, 1998	DRILLING METHOD: HSA
PROJECT: BA20	SAMPLING METHOD: split spoon
CLIENT: Equilon	BORING DIAMETER: 8"
LOCATION: 15595 Washington Avenue	BORING DEPTH: 17.5'
CITY: San Lorenzo	WELL CASING: NA
CO./STATE: Alameda / California	WELL SCREEN: NA
DRILLER: Exploration Geoservices	SAND PACK: NA

WATER LEVEL:	16.6'		
TIME:	0903		
DATE:	7/30/98		

DESCRIPTION/LOGGED BY: R. Khokhar

WELL/BORING COMPLETION	FIRST	STABILIZED	MOISTURE	DENSITY BLOWS / ft.	FIELD TEST PID (ppm)	SAMPLE NUMBER	DEPTH (FEET)	RECOVERY	SAMPLE INTERVAL	GRAPHIC	USCS SYMBOL	DESCRIPTION
Cement Grout							1					ASPHALT / BASEROCK
							2				ML	[redacted] dark brown; 100% medium plasticity fines; metal chunks; firm; no product odor
							3				SM	[redacted] dark greenish grey; <10% low plasticity fines; 90% fine sand; very loose; no product odor
			DP	5	16.7	SB-B-5'	4					
							5					
							6					
							7					
							8					
							9				CH	[redacted] dark greenish grey; 100% high plasticity fines; very stiff; mottled; root holes; no product odor
			DP	20	0	SB-B-10'	10					
							11					
							12					
							13					
							14					
			DP	16	0	SB-B-15'	15					@ 15'; as above
	▽						16					
							17					
							18					Bottom of boring 17.5' below ground surface
							19					
							20					
							21					
							22					

WELL/BORING LOCATION MAP



TOXICHEM MANAGEMENT SYSTEMS, INC. | WELL/BORING: SB-[redacted]

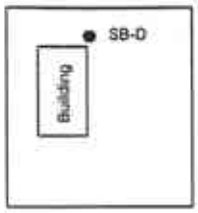
DATE: July 30, 1998	DRILLING METHOD: HSA
PROJECT: BA20	SAMPLING METHOD: split spoon
CLIENT: Equilon	BORING DIAMETER: 8"
LOCATION: 15595 Washington Avenue	BORING DEPTH: 12'
CITY: San Lorenzo	WELL CASING: NA
CO./STATE: Alameda / California	WELL SCREEN: NA
DRILLER: Exploration Geoservices	SAND PACK: NA

WATER LEVEL:	11.5'		
TIME:	1245		
DATE:	7/30/98		

DESCRIPTION/LOGGED BY: R. Khokhar

WELL/BORING COMPLETION	FIRST	STABILIZED	MOISTURE	DENSITY BLOWS / ft.	FIELD TEST PID (ppm)	SAMPLE NUMBER	DEPTH (FEET)	RECOVERY	SAMPLE INTERVAL	GRAPHIC	USCS SYMBOL	DESCRIPTION
Cement Grout							1					ASPHALT / BASEROCK
							2				CL	SANDY CLAY; strong brown; 60% medium plasticity fines; 40% fine sand; stiff; no product odor
							3					
							4				SM	[redacted] dark greenish brown; 30% low plasticity fines; 70% fine sand; no product odor
			DP	7	0	SB-C-6'	5					
							6					
							7					
							8					
							9				CH	[redacted] grey brown; 90% high plasticity fines; 10% fine sand; stiff; no product odor
			DP	11	0	SB-C-10'	10					
							11					
							12					Bottom of boring 12' below ground surface
							13					
							14					
							15					
							16					
							17					
							18					
							19					
							20					
							21					
							22					

WELL/BORING LOCATION MAP



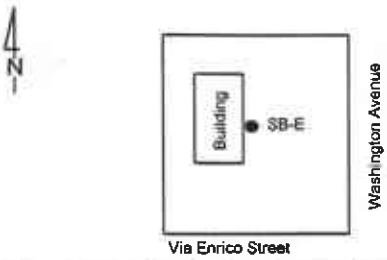
TOXICHEM MANAGEMENT SYSTEMS, INC.	WELL/BORING [redacted]
DATE: July 30, 1998	DRILLING METHOD: HSA
PROJECT: BA20	SAMPLING METHOD: split spoon
CLIENT: Equilon	BORING DIAMETER: 8"
LOCATION: 15595 Washington Avenue	BORING DEPTH: 14'
CITY: San Lorenzo	WELL CASING: NA
CO./STATE: Alameda / California	WELL SCREEN: NA
DRILLER: Exploration Geoservices	SAND PACK: NA

WATER LEVEL:	10.8'		
TIME:	1449		
DATE:	7/30/98		

DESCRIPTION/LOGGED BY: R. Khokhar

WELL/BORING COMPLETION	FIRST	STABILIZED	MOISTURE	DENSITY BLOWS / ft.	FIELD TEST PID (ppm)	SAMPLE NUMBER	DEPTH (FEET)	RECOVERY	SAMPLE INTERVAL	GRAPHIC	USCS SYMBOL	
Cement Grout							1					ASPHALT / BASEROCK
							2				CL	[redacted]- FILL; strong brown; 70% medium plasticity fines; 30% fine sand; car parts; no product odor
							3				GP	SANDY GRAVEL-FILL; 30% fine sand; 70% pea gravel; no product odor
							4					
			DP	7	0	SB-D-5'	5					
							6					
							7					
							8				SM	SILTY SAND; greenish grey; 30% low plasticity fines; 70% fine sand; moderate product odor
							9					
	▽		DP	4	3.6	SB-D-10'	10				CH	SILTY CLAY; dark olive grey; 100% high plasticity fines; grey mottling; root holes common; moderate product odor
							11					
							12					
							13					
							14					Bottom of boring 14' below ground surface
							15					
							16					
							17					
							18					
							19					
							20					
							21					
							22					

WELL/BORING LOCATION MAP



TOXICHEM MANAGEMENT SYSTEMS, INC. | WELL/BORING: SB-E

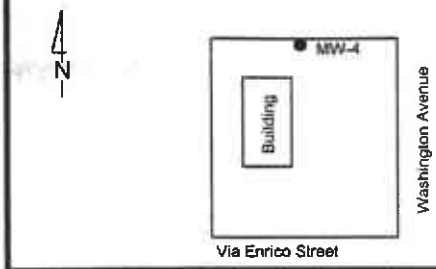
DATE: July 30, 1998	DRILLING METHOD: HSA
PROJECT: BA20	SAMPLING METHOD: split spoon
CLIENT: Equilon	BORING DIAMETER: 8"
LOCATION: 15595 Washington Avenue	BORING DEPTH: 14'
CITY: San Lorenzo	WELL CASING: NA
CO./STATE: Alameda / California	WELL SCREEN: NA
DRILLER: Exploration Geoservices	SAND PACK: NA

WATER LEVEL:	11.8'		
TIME:	1340		
DATE:	7/30/98		

DESCRIPTION/LOGGED BY: R. Khokhar

WELL/BORING COMPLETION	FIRST	STABILIZED	MOISTURE	DENSITY BLOWS / ft.	FIELD TEST PID (ppm)	SAMPLE NUMBER	DEPTH (FEET)	RECOVERY	SAMPLE INTERVAL	GRAPHIC	USCS SYMBOL	
Cement Grout	▽	▼					1					ASPHALT / BASEROCK
							2				CL	[redacted]; dark brown; 80% medium plasticity fines; 20% fine sand; no product odor
							3				GP	SANDY GRAVEL-FILL; 30% fine sand; 70% pea gravel; strong product odor
							4					
			DP		12.8		5					
							6					
							7					
							8				SM	SILTY SAND; olive brown; 30% low plasticity fines; 70% fine sand; loose
							9				CH	[redacted]; gray brown; 100% high plasticity fines; mottled; [redacted] no product odor
	▽		DP	13	0	SB-E-10'	10					
							11					
							12					
							13					
							14					Bottom of boring 14' below ground surface
							15					
							16					
							17					
							18					
							19					
							20					
							21					
							22					

WELL/BORING LOCATION MAP



TOXICHEM MANAGEMENT SYSTEMS, INC.	WELL/BORING: MW-4
DATE: July 30, 1998	DRILLING METHOD: HSA
PROJECT: BA20	SAMPLING METHOD: split spoon
CLIENT: Equilon	BORING DIAMETER: 8"
LOCATION: 15595 Washington Avenue	BORING DEPTH: 20'
CITY: San Lorenzo	WELL CASING: 0-10.0' bgs; 2" pvc
CO./STATE: Alameda / California	WELL SCREEN: 10.0-20.0' bgs; 0.020"
DRILLER: Exploration Geoservices	SAND PACK: 9.5'-20.0'; 2/12

WATER LEVEL:	9.7'		
TIME:	1549		
DATE:	7/30/98		

DESCRIPTION/LOGGED BY: R. Khokhar

WELL/BORING COMPLETION	FIRST	STABILIZED	MOISTURE	DENSITY BLOWS / ft.	FIELD TEST PID (ppm)	SAMPLE NUMBER	DEPTH (FEET)	RECOVERY	SAMPLE INTERVAL	GRAPHIC	USCS SYMBOL	DESCRIPTION
Cement Grout							1					ASPHALT / BASEROCK
							2				CL	[redacted]; strong brown; 60% medium plasticity fines; 40% fine sand; no product odor
							3				SM	[redacted] grey green; 10-40% low plasticity fines; 90-60% fine sand; no product odor
							4				GP	[redacted] yellow; 60% fine-medium sand; 40% pea gravel; no product odor
			DP	6	0	MW-4-5'	5					
							6					
							7					
							8					
							9					
			DP	12	1.6	MW-4-11'	10				CH	[redacted] dark olive brown; 100% high plasticity fines; grey mottling common; stiff; no product odor
							11					
							12					
							13					
							14					
							15					
			DP	9	0	MW-4-16'	16					@ 16'; as above; light olive brown; 15% fine sand
							17					
							18					
							19					@ 20'; as above; yellowish brown
			DP	14	0	MW-4-20'	20					
							21					Bottom of boring 20' below ground surface
							22					

WELL/BORING LOCATION MAP

TOXICHEM MANAGEMENT SYSTEMS, INC.	WELL/BORIN[redacted]
DATE: July 30, 1998	DRILLING METHOD: HSA
PROJECT: BA20	SAMPLING METHOD: split spoon
CLIENT: Equilon	BORING DIAMETER: 8"
LOCATION: 15595 Washington Avenue	BORING DEPTH: 20'
CITY: San Lorenzo	WELL CASING: 0-10.0' bgs; 2" pvc
CO./STATE: Alameda / California	WELL SCREEN: 10.0-20.0' bgs; 0.020"
DRILLER: Exploration Geoservices	SAND PACK: 9.5'-20.0'; 2/12

WATER LEVEL:	9.3'		
TIME:	1800		
DATE:	7/30/98		

DESCRIPTION/LOGGED BY: R. Khokhar

WELL/BORING COMPLETION	FIRST	STABILIZED	MOISTURE	DENSITY BLOWS / ft.	FIELD TEST PID (ppm)	SAMPLE NUMBER	DEPTH (FEET)	RECOVERY	SAMPLE INTERVAL	GRAPHIC	USCS SYMBOL	DESCRIPTION
Cement Grout							1					ASPHALT / BASEROCK
							2				GC	CL[redacted] light brown; 30% medium plasticity fines; 30% fine-coarse sand; 40% gravel; no product odor
							3					
							4					
			DP	4	0	MW-5-5'	5				SM	SILTY SAND[redacted] medium brown; 30% low plasticity fines; 70% fine sand; roots; no product odor
							6					
							7					
							8					
							9					
			DP	11	0	MW-5-10'	10				CH	[redacted] dark brownish grey; 100% high plasticity fines; [redacted] holes; mottled; no product odor
							11					
							12					
							13				ML	SANDY SILT[redacted] green; 70% low plasticity fines; 30% fines sand; moderate product odor
							14					
							15					
			DP	15	0	MW-5-16'	16				CH	[redacted] dark greenish grey; 100% high plasticity fines; root holes; mottled; no product odor
							17					
							18					
							19					@ 20'; as above; occasional gravel; light brown
			DP	16	0	MW-5-20'	20					
							21					Bottom of boring 20' below ground surface
							22					

FIELD DATA

DEPTH TO GROUNDWATER/SEPARATE-PHASE HYDROCARBON REMOVAL FORM

DATE: 8/5/98 SITE ADDRESS: 15595 WASHINGTON ST

STATION/PROJECT NO.: BA20 CITY/COUNTY/STATE: SAN LORENZO, AL, CA FIELD TECH.: RK

PROBE TYPE
☐ Oil/Water Interface Probe
☒ Other: _____

Dtw Ord.	Well ID	Time (2400 hr)	Total Depth (feet)	First Depth to Water (feet) TOB/TOC	Second Depth to Water (feet) TOB/TOC	SPH Depth (feet) TOB/TOC	SPH Thickness (feet)	SEPARATE-PHASE HYDROCARBON (SPH) QUALITATIVE DESCRIPTION									Well Integrity Notes
								COLOR				VISCOSITY			LIQUID REMOVED		
								Clear	Light	Dark	Other	Light	Medium	Heavy	SPH	Water	
	1		~~19.3~~	9.02	9.26												
	2			8.20	8.53												
	3			9.08	9.34												
	MW-4		19.3	8.63	10.01												
	MW-5		19.3	10.24	10.77												

Comments/Notes: 1 Full Drum ONSITE

SIGNATURE: Ron Kell

RRM, Inc.

FIELD DATA

WELL DEVELOPMENT FORM

GENERAL INFORMATION

DATE: 8/5/98 WELL ID: MW5

STATION/PROJECT NO.: BA 20

SITE ADDRESS: 15595 WASHINGTON AVE.

CITY: SAN LORENZO

COUNTY/STATE: ALAMEDA / CA

FIELD TECHNICIAN: R. KHOKHAR

WELL CONSTRUCTION INFORMATION

WELL DIAMETER: 2"

WELL MATERIAL: PVC

WELL TOTAL DEPTH: 20'

SCREEN INTERVAL: 10' - 20'

FILTER PACK INTERVAL: 9.5 - 20'

FILTER PACK MATERIAL: 2/12 SAND

WELL DEVELOPMENT SUMMARY

ESTIMATED PURGE VOLLUME (gal.): 20

ACTUAL PURGE VOLLUME (gal.): _____

WELL TYPE: ☑ Groundwater Monitoring Well ☐ Groundwater Extraction Well ☐ Sparge/Dual Purpose Well ☐ Other: _____

WELL DEVELOPMENT METHOD: ☐ Submersible Pump ☑ Bailer ☑ Surge Block/Swab ☐ Other: _____

WELL DEVELOPMENT DATA

TIME		DEPTH		GALLONS		MEASUREMENTS				NOTES:
Start	End	to Water	to Bottom	Pumped	Total	pH	Conductivity	Temperature	Turbidity	
1055		10.24	19.3	0	0	6.08	2170	76.0	Heavy	
1059				5	5	6.01	1740	73.3	"	
1105				5	10	6.83	1710	71.9	"	
1110				5	15	6.96	1590	72.9	"	
1115				5	20	6.77	1550	72.5	"	
										SAMPLE COLLECTED
										AFTER DEVELOPMENT

SIGNATURE: _____

RRM, Inc.

FIELD DATA

WELL DEVELOPMENT FORM

GENERAL INFORMATION

DATE: 8/5/98 WELL ID: MW-4

STATION/PROJECT NO.: BA 20

SITE ADDRESS: 15595 WASHINGTON AVE.

CITY: SAN LORENZO

COUNTY/STATE: ALAMEDA / CA

FIELD TECHNICIAN: R. KHOKHAR

WELL CONSTRUCTION INFORMATION

WELL DIAMETER: 2"

WELL MATERIAL: PVC

WELL TOTAL DEPTH: 20'

SCREEN INTERVAL: 10' - 20'

FILTER PACK INTERVAL: 9.5 - 20'

FILTER PACK MATERIAL: 2/12 SAND

WELL DEVELOPMENT SUMMARY

ESTIMATED PURGE VOLUME (gal.): 20

ACTUAL PURGE VOLUME (gal.): 20

WELL TYPE: ☑ Groundwater Monitoring Well ☐ Groundwater Extraction Well ☐ Sparge/Dual Purpose Well ☐ Other:

WELL DEVELOPMENT METHOD: ☐ Submersible Pump ☑ Bailer ☑ Surge Block/Swab ☐ Other:

WELL DEVELOPMENT DATA

TIME		DEPTH		GALLONS		MEASUREMENTS				NOTES:
Start	End	to Water	to Bottom	Pumped	Total	pH	Conductivity	Temperature	Turbidity	
1020		9.63	19.3	0	0	6.26	1653	82.3	Heavy	
1027				5	5	5.91	1250	76.9	"	
1033				5	10	5.96	1138	74.6	"	
1038				5	15	5.95	1098	74.2	Mod	
1043				5	20	5.96	1148	74.4	"	
		9.93								WELL SAMPLED
										AFTER DEVELOPMENT

SIGNATURE:

RRM, Inc.

Virgil Chavez Land Surveying
312 George Street, Suite 200
Vallejo, California 94590
(707) 553-2476 • Fax (707) 553-8698

September 30, 1998
Project No. 1664-00

Erika Wolski
Blaine Tech Services
1680 Rogers Avenue
San Jose, Ca. 95112

Subject: Monitoring Well Survey
Shell Service Station
15595 Washington Ave.
San Lorenzo, Ca.

Dear Erika:

This is to confirm that we have proceeded at your request to survey the ground water monitoring wells located at the above referenced location. The survey was performed September 29, 1998. Our findings are shown in the table below. The benchmark for the survey was an Alameda County benchmark, being a cut "T" in the top of curb at the southeast curb return, at the southeast corner of Grant & Via Alamitos.
Benchmark Elevation = 21.807' MSL.

Monitoring Well No.	Rim Elevation	Top of Casing Elevation
MW - 1	23.25'	22.96'
MW - 2	22.51'	22.07'
MW - 3	23.36'	22.74'
MW - 4	23.84'	23.51'
MW - 5	24.37'	23.89'

Measurements taken at approximate north side of top of box, top of casings were marked at location of measurements.

Sincerely,

Virgil D. Chavez, PLS 6323

Texaco
15595 Washington Street, San Lorenzo, CA

Well Number	Date Gauged	Elevation of Groundwater (feet, MSL)	Date Sampled	TPHg (ppb)	Benzene (ppb)
MW-1	08/26/98	13.66	08/26/98	<500	17
MW-2	08/26/98	13.67	08/26/98	<500	<5.0
MW-3	08/26/98	13.45	08/26/98	<500	36
MW-4	08/26/98	13.64	08/26/98	170	2.0
MW-5	08/26/98	13.34	08/26/98	6600	240

Map Order

GWC

Gas/Benzene Concentration

(see attached map)

BA20

ALAMEDA COUNTY PUBLIC WORKS AGENCY

WATER RESOURCES SECTION
951 TURNER COURT, SUITE 300, HAYWARD, CA 94545-2651
PHONE (510) 670-5575 ANDREAS GODFREY FAX (510) 670-5262
(510) 670-5240 ALVIN KAN

DRILLING PERMIT APPLICATION

FOR APPLICANT TO COMPLETE

LOCATION OF PROJECT 15595 Washington Ave. San Lorenzo, CA

California Coordinate Source _____ ft. Accuracy _____ ft.
CCN _____ of CCS _____ ft.
APN _____

CLIENT
Name Equilon Enterprises LLC
Address 10B Cutting Blvd. Phone _____
City Richmond Zip 94804

APPLICANT
Name Joe Muzzio / RRM, INC.
Fax 831-475-8849
Address 3912 Portola Dr. Suite B Phone 831-475-8841
City Santa Cruz Zip 95062

TYPE OF PROJECT

Well Construction		Geotechnical Investigation	
Cathodic Protection	☐	General	☐
Water Supply	☐	Contamination	☒
Monitoring	☒	Well Destruction	☐

PROPOSED WATER SUPPLY WELL USE

New Domestic	☐	Replacement Domestic	☐
Municipal	☐	Irrigation	☐
Industrial	☐	Other _____	☐

DRILLING METHOD:

Mud Rotary	☐	Air Rotary	☐	Auger	☒
Cable	☐	Other	☐		

DRILLER'S LICENSE NO. # 494288

WELL PROJECTS
Drill Hole Diameter 8 in. Maximum
Casing Diameter 2 in. Depth 25 ft.
Surface Seal Depth 5 ft. Number 2

GEOTECHNICAL PROJECTS
Number of Borings 5 Maximum
Hole Diameter 8 in. Depth 12 ft.

ESTIMATED STARTING DATE 7/30/98
ESTIMATED COMPLETION DATE 7/30/98

I hereby agree to comply with all requirements of this permit and Alameda County Ordinance No. 73-68.

APPLICANT'S SIGNATURE _____ DATE 7/15/98

FOR OFFICE USE

PERMIT NUMBER 98WR303
WELL NUMBER _____
APN _____

PERMIT CONDITIONS

Circled Permit Requirements Apply

(A.) GENERAL
1. A permit application should be submitted so as to arrive at the ACPWA office five days prior to proposed starting date.
(2.) Submit to ACPWA within 60 days after completion of permitted work the original Department of Water Resources Water Well Drillers Report or equivalent for well projects, or drilling logs and location sketch for geotechnical projects.
(3.) Permit is void if project not begun within 90 days of approval date.

B. WATER SUPPLY WELLS
1. Minimum surface seal thickness is two inches of cement grout placed by tremie.
2. Minimum seal depth is 50 feet for municipal and industrial wells or 20 feet for domestic and irrigation wells unless a lesser depth is specially approved.

(C.) GROUNDWATER MONITORING WELLS INCLUDING PIEZOMETERS
1. Minimum surface seal thickness is two inches of cement grout placed by tremie.
2. Minimum seal depth for monitoring wells is the maximum depth practicable or 20 feet.

(D.) GEOTECHNICAL
Backfill bore hole with compacted cuttings or heavy bentonite and upper two feet with compacted material. In areas of known or suspected contamination, tremied cement grout shall be used in place of compacted cuttings.

E. CATHODIC
Fill hole above anode zone with concrete placed by tremie.

F. WELL DESTRUCTION
See attached.

G. SPECIAL CONDITIONS

APPROVED _____ DATE 7/27/98

** TOTAL PAGE.02 **

** TOTAL PAGE.02 **

ATTACHMENT B
CERTIFIED ANALYTICAL REPORTS AND CHAIN-OF-CUSTODY DOCUMENTATION

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (650) 364-9600, FAX (650) 364-9233
404 N. Wiget Lane, Walnut Creek, CA 94598, (925) 988-9600, FAX (925) 988-9673
819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100
1455 McDowell Blvd. North, Ste. D, Petaluma, CA 94954, (707) 792-1865, FAX (707) 792-0342

RRM, Inc.	Client Proj. ID: Texaco - BA20(Toxichem)	Sampled: 07/30/98
3912 Portola Dr., #8	Sample Descript: SB-A-5'	Received: 07/31/98
Santa Cruz, CA 95062	Matrix: SOLID	Extracted: 08/07/98
	Analysis Method: 8015Mod/8020	Analyzed: 08/09/98
Attention: Joe Muzzio	Lab Number: 9807J76-01	Reported: 08/14/98

QC Batch Number: GC080798BTEXEXC
Instrument ID: GCHP07

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas	1.0	N.D.
Methyl t-Butyl Ether	0.025	N.D.
Benzene	0.0050	N.D.
Toluene	0.0050	N.D.
Ethyl Benzene	0.0050	N.D.
Xylenes (Total)	0.0050	N.D.
Chromatogram Pattern:		

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	88
4-Bromofluorobenzene	60	140	65

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

SEQUOIA ANALYTICAL - ELAP #1210

Peggy Penner
Project Manager

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (650) 364-9600, FAX (650) 364-9233
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1455 McDowell Blvd. North, Ste. D, Petaluma, CA 94954, (707) 792-1865, FAX (707) 792-0342

RRM, Inc.	Client Proj. ID: Texaco - BA20(Toxichem)	Sampled: 07/30/98
3912 Portola Dr., #8	Sample Descript: SB-A-10'	Received: 07/31/98
Santa Cruz, CA 95062	Matrix: SOLID	Extracted: 08/07/98
	Analysis Method: 8015Mod/8020	Analyzed: 08/09/98
Attention: Joe Muzzio	Lab Number: 9807J76-02	Reported: 08/14/98

QC Batch Number: GC080798BTEXEXC
Instrument ID: GCHP07

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas	1.0	N.D.
Methyl t-Butyl Ether	0.025	N.D.
Benzene	0.0050	N.D.
Toluene	0.0050	N.D.
Ethyl Benzene	0.0050	N.D.
Xylenes (Total)	0.0050	N.D.
Chromatogram Pattern:		

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	84
4-Bromofluorobenzene	60	140	71

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

SEQUOIA ANALYTICAL - ELAP #1210

for

Peggy Penner
Project Manager

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (650) 364-9600, FAX (650) 364-9233
404 N. Wiget Lane, Walnut Creek, CA 94598, (925) 988-9600, FAX (925) 988-9673
819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100
1455 McDowell Blvd. North, Ste. D, Petaluma, CA 94954, (707) 792-1865, FAX (707) 792-0342

RRM, Inc.	Client Proj. ID: Texaco - BA20(Toxichem)	Sampled: 07/30/98
3912 Portola Dr., #8	Sample Descript: SB-B-5'	Received: 07/31/98
Santa Cruz, CA 95062	Matrix: SOLID	Extracted: 08/07/98
	Analysis Method: 8015Mod/8020	Analyzed: 08/09/98
Attention: Joe Muzzio	Lab Number: 9807J76-03	Reported: 08/14/98

QC Batch Number: GC080798BTEXEXC
Instrument ID: GCHP07

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas	1.0	N.D.
Methyl t-Butyl Ether	**0.025**	**4.7**
Benzene	0.0050	N.D.
Toluene	0.0050	N.D.
Ethyl Benzene	0.0050	N.D.
Xylenes (Total)	0.0050	N.D.
Chromatogram Pattern:		

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	85
4-Bromofluorobenzene	60	140	68

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

SEQUOIA ANALYTICAL - ELAP #1210

for

Peggy Penner
Project Manager

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (650) 364-9600, FAX (650) 364-9233
404 N. Wiget Lane, Walnut Creek, CA 94598, (925) 988-9600, FAX (925) 988-9673
819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100
1455 McDowell Blvd. North, Ste. D, Petaluma, CA 94954, (707) 792-1865, FAX (707) 792-0342

RRM, Inc.	Client Proj. ID: Texaco - BA20(Toxichem)	Sampled: 07/30/98
3912 Portola Dr., #8	Sample Descript: SB-B-10'	Received: 07/31/98
Santa Cruz, CA 95062	Matrix: SOLID	Extracted: 08/07/98
	Analysis Method: 8015Mod/8020	Analyzed: 08/09/98
Attention: Joe Muzzio	Lab Number: 9807J76-04	Reported: 08/14/98

QC Batch Number: GC080798BTEXEXC
Instrument ID: GCHP07

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas	1.0	N.D.
Methyl t-Butyl Ether	**0.025**	**0.44**
Benzene	**0.0050**	**0.010**
Toluene	0.0050	N.D.
Ethyl Benzene	0.0050	N.D.
Xylenes (Total)	0.0050	N.D.
Chromatogram Pattern:		

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	80
4-Bromofluorobenzene	60	140	65

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

SEQUOIA ANALYTICAL - ELAP #1210

for

Peggy Penner
Project Manager

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (650) 364-9600, FAX (650) 364-9233
404 N. Wiget Lane, Walnut Creek, CA 94598, (925) 988-9600, FAX (925) 988-9673
819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100
1455 McDowell Blvd. North, Ste. D, Petaluma, CA 94954, (707) 792-1865, FAX (707) 792-0342

RRM, Inc.	Client Proj. ID: Texaco - BA20(Toxichem)	Sampled: 07/30/98
3912 Portola Dr., #8	Sample Descript: SB-B-15'	Received: 07/31/98
Santa Cruz, CA 95062	Matrix: SOLID	Extracted: 08/07/98
	Analysis Method: 8015Mod/8020	Analyzed: 08/09/98
Attention: Joe Muzzio	Lab Number: 9807J76-05	Reported: 08/14/98

QC Batch Number: GC080798BTEXEXC
Instrument ID: GCHP07

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas	1.0	N.D.
Methyl t-Butyl Ether	0.025	N.D.
Benzene	0.0050	N.D.
Toluene	0.0050	N.D.
Ethyl Benzene	0.0050	N.D.
Xylenes (Total)	0.0050	N.D.
Chromatogram Pattern:		

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	81
4-Bromofluorobenzene	60	140	69

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

SEQUOIA ANALYTICAL - ELAP #1210

for

Peggy Penner
Project Manager

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (650) 364-9600, FAX (650) 364-9233
404 N. Wiget Lane, Walnut Creek, CA 94598, (925) 988-9600, FAX (925) 988-9673
819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100
1455 McDowell Blvd. North, Ste. D, Petaluma, CA 94954, (707) 792-1865, FAX (707) 792-0342

RRM, Inc.
3912 Portola Dr., #8
Santa Cruz, CA 95062

Attention: Joe Muzzio

Client Proj. ID: Texaco - BA20(Toxichem)
Sample Descript: SB-C-5'
Matrix: SOLID
Analysis Method: 8015Mod/8020
Lab Number: 9807J76-06

Sampled: 07/30/98
Received: 07/31/98
Extracted: 08/07/98
Analyzed: 08/09/98
Reported: 08/14/98

QC Batch Number: GC080798BTEXEXC
Instrument ID: GCHP07

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas	1.0	N.D.
Methyl t-Butyl Ether	0.025	N.D.
Benzene	0.0050	N.D.
Toluene	0.0050	N.D.
Ethyl Benzene	0.0050	N.D.
Xylenes (Total)	0.0050	N.D.
Chromatogram Pattern:		

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	83
4-Bromofluorobenzene	60	140	71

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

SEQUOIA ANALYTICAL - ELAP #1210

for

Peggy Penner
Project Manager

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (650) 364-9600, FAX (650) 364-9233
404 N. Wiget Lane, Walnut Creek, CA 94598, (925) 988-9600, FAX (925) 988-9673
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1455 McDowell Blvd. North, Ste. D, Petaluma, CA 94954, (707) 792-1865, FAX (707) 792-0342

RRM, Inc.	Client Proj. ID: Texaco - BA20(Toxichem)	Sampled: 07/30/98
3912 Portola Dr., #8	Sample Descript: SB-C-10'	Received: 07/31/98
Santa Cruz, CA 95062	Matrix: SOLID	Extracted: 08/07/98
	Analysis Method: 8015Mod/8020	Analyzed: 08/09/98
Attention: Joe Muzzio	Lab Number: 9807J76-07	Reported: 08/14/98

QC Batch Number: GC080798BTEXEXC
Instrument ID: GCHP07

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas	1.0	N.D.
Methyl t-Butyl Ether	**0.025**	**4.7**
Benzene	0.0050	N.D.
Toluene	0.0050	N.D.
Ethyl Benzene	0.0050	N.D.
Xylenes (Total)	0.0050	N.D.
Chromatogram Pattern:		

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	86
4-Bromofluorobenzene	60	140	62

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

SEQUOIA ANALYTICAL - ELAP #1210

Peggy Penner
Project Manager

Sequoia Analytical

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RRM, Inc.	Client Proj. ID: Texaco - BA20(Toxichem)	Sampled: 07/30/98
3912 Portola Dr., #8	Sample Descript: SB-D-5'	Received: 07/31/98
Santa Cruz, CA 95062	Matrix: SOLID	Extracted: 08/07/98
	Analysis Method: 8015Mod/8020	Analyzed: 08/12/98
Attention: Joe Muzzio	Lab Number: 9807J76-08	Reported: 08/14/98

QC Batch Number: GC080798BTEXEXC
Instrument ID: GCHP07

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas	1.0	N.D.
Methyl t-Butyl Ether	0.025	N.D.
Benzene	0.0050	N.D.
Toluene	0.0050	N.D.
Ethyl Benzene	0.0050	N.D.
Xylenes (Total)	0.0050	N.D.
Chromatogram Pattern:		

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	76
4-Bromofluorobenzene	60	140	81

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

SEQUOIA ANALYTICAL - ELAP #1210

Peggy Penner
Project Manager

Sequoia Analytical

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RRM, Inc.	Client Proj. ID: Texaco - BA20(Toxichem)	Sampled: 07/30/98
3912 Portola Dr., #8	Sample Descript: SB-D-10'	Received: 07/31/98
Santa Cruz, CA 95062	Matrix: SOLID	Extracted: 08/07/98
	Analysis Method: 8015Mod/8020	Analyzed: 08/10/98
Attention: Joe Muzzio	Lab Number: 9807J76-09	Reported: 08/14/98

QC Batch Number: GC080798BTEXEXC
Instrument ID: GCHP22

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas	**25**	**310**
Methyl t-Butyl Ether	**0.62**	**2.5**
Benzene	**0.12**	**1.1**
Toluene	0.12	N.D.
Ethyl Benzene	**0.12**	**0.91**
Xylenes (Total)	**0.12**	**1.1**
Chromatogram Pattern:		**C6-C12**

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	134 Q
4-Bromofluorobenzene	60	140	41 Q

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

SEQUOIA ANALYTICAL - ELAP #1210

for

Peggy Penner
Project Manager

Sequoia Analytical

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RRM, Inc.	Client Proj. ID: Texaco - BA20(Toxichem)	Sampled: 07/30/98
3912 Portola Dr., #8	Sample Descript: SB-E-6'	Received: 07/31/98
Santa Cruz, CA 95062	Matrix: SOLID	Extracted: 08/07/98
	Analysis Method: 8015Mod/8020	Analyzed: 08/12/98
Attention: Joe Muzzio	Lab Number: 9807J76-10	Reported: 08/14/98

QC Batch Number: GC080798BTEXEXC
Instrument ID: GCHP18

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas	1.0	1.6
Methyl t-Butyl Ether	0.025	2.1
Benzene	0.0050	0.021
Toluene	0.0050	0.024
Ethyl Benzene	0.0050	0.019
Xylenes (Total)	0.0050	0.076
Chromatogram Pattern:		C6-C12

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	98
4-Bromofluorobenzene	60	140	93

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

SEQUOIA ANALYTICAL - ELAP #1210

Peggy Penner
Project Manager

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (650) 364-9600, FAX (650) 364-9233
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1455 McDowell Blvd. North, Ste. D, Petaluma, CA 94954, (707) 792-1865, FAX (707) 792-0342

RRM, Inc.	Client Proj. ID: Texaco - BA20(Toxichem)	Sampled: 07/30/98
3912 Portola Dr., #8	Sample Descript: SB-E-10'	Received: 07/31/98
Santa Cruz, CA 95062	Matrix: SOLID	Extracted: 08/07/98
	Analysis Method: 8015Mod/8020	Analyzed: 08/10/98
Attention: Joe Muzzio	Lab Number: 9807J76-11	Reported: 08/14/98

QC Batch Number: GC080798BTEXEXC
Instrument ID: GCHP07

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas	**2.5**	**2.5**
Methyl t-Butyl Ether	**0.062**	**16**
Benzene	0.012	N.D.
Toluene	0.012	N.D.
Ethyl Benzene	0.012	N.D.
Xylenes (Total)	0.012	N.D.
Chromatogram Pattern:		**C6-C12**

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	78
4-Bromofluorobenzene	60	140	25 Q

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

SEQUOIA ANALYTICAL - ELAP #1210

Peggy Penner
Project Manager

Sequoia Analytical

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RRM, Inc.	Client Proj. ID: Texaco - BA20(Toxichem)	Sampled: 07/30/98
3912 Portola Dr., #8	Sample Descript: MW-5-20'	Received: 07/31/98
Santa Cruz, CA 95062	Matrix: SOLID	Extracted: 08/07/98
	Analysis Method: 8015Mod/8020	Analyzed: 08/08/98
Attention: Joe Muzzio	Lab Number: 9807J76-17	Reported: 08/14/98

QC Batch Number: GC080798BTEXEXC
Instrument ID: GCHP22

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas	1.0	N.D.
Methyl t-Butyl Ether	0.025	N.D.
Benzene	0.0050	N.D.
Toluene	0.0050	N.D.
Ethyl Benzene	0.0050	N.D.
Xylenes (Total)	0.0050	N.D.
Chromatogram Pattern:		

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	96
4-Bromofluorobenzene	60	140	89

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

SEQUOIA ANALYTICAL - ELAP #1210

Peggy Penner
Project Manager

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (650) 364-9600, FAX (650) 364-9233
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1455 McDowell Blvd. North, Ste. D, Petaluma, CA 94954, (707) 792-1865, FAX (707) 792-0342

RRM, Inc.	Client Proj. ID: Texaco - BA20(Toxichem)	Sampled: 07/30/98
3912 Portola Dr., #8	Sample Descript: MW-4-5'	Received: 07/31/98
Santa Cruz, CA 95062	Matrix: SOLID	Extracted: 08/07/98
	Analysis Method: 8015Mod/8020	Analyzed: 08/10/98
Attention: Joe Muzzio	Lab Number: 9807J76-12	Reported: 08/14/98

QC Batch Number: GC080798BTEXEXC
Instrument ID: GCHP07

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas	1.0	N.D.
Methyl t-Butyl Ether	0.025	N.D.
Benzene	0.0050	N.D.
Toluene	0.0050	N.D.
Ethyl Benzene	0.0050	N.D.
Xylenes (Total)	0.0050	N.D.
Chromatogram Pattern:		

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	78
4-Bromofluorobenzene	60	140	73

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

SEQUOIA ANALYTICAL - ELAP #1210

for

Peggy Penner
Project Manager

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (650) 364-9600, FAX (650) 364-9233
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1455 McDowell Blvd. North, Ste. D, Petaluma, CA 94954, (707) 792-1865, FAX (707) 792-0342

RRM, Inc.	Client Proj. ID: Texaco - BA20(Toxichem)	Sampled: 07/30/98
3912 Portola Dr., #8	Sample Descript: MW-4-10'	Received: 07/31/98
Santa Cruz, CA 95062	Matrix: SOLID	Extracted: 08/07/98
	Analysis Method: 8015Mod/8020	Analyzed: 08/10/98
Attention: Joe Muzzio	Lab Number: 9807J76-13	Reported: 08/14/98

QC Batch Number: GC080798BTEXEXC
Instrument ID: GCHP07

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas	1.0	N.D.
Methyl t-Butyl Ether	0.025	N.D.
Benzene	**0.0050**	**0.0069**
Toluene	0.0050	N.D.
Ethyl Benzene	0.0050	N.D.
Xylenes (Total)	0.0050	N.D.
Chromatogram Pattern:		

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	78
4-Bromofluorobenzene	60	140	80

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

SEQUOIA ANALYTICAL - ELAP #1210

Peggy Penner
Project Manager

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (650) 364-9600, FAX (650) 364-9233
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1455 McDowell Blvd. North, Ste. D, Petaluma, CA 94954, (707) 792-1865, FAX (707) 792-0342

RRM, Inc.	Client Proj. ID: Texaco - BA20(Toxichem)	Sampled: 07/30/98
3912 Portola Dr., #8	Sample Descript: MW-4-20	Received: 07/31/98
Santa Cruz, CA 95062	Matrix: SOLID	Extracted: 08/07/98
	Analysis Method: 8015Mod/8020	Analyzed: 08/08/98
Attention: Joe Muzzio	Lab Number: 9807J76-14	Reported: 08/14/98

QC Batch Number: GC080798BTEXEXC
Instrument ID: GCHP22

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas	1.0	N.D.
Methyl t-Butyl Ether	0.025	N.D.
Benzene	0.0050	N.D.
Toluene	0.0050	N.D.
Ethyl Benzene	0.0050	N.D.
Xylenes (Total)	0.0050	N.D.
Chromatogram Pattern:		

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	104
4-Bromofluorobenzene	60	140	95

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

SEQUOIA ANALYTICAL - ELAP #1210

for

Peggy Penner
Project Manager

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (650) 364-9600, FAX (650) 364-9233
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RRM, Inc.	Client Proj. ID: Texaco - BA20(Toxichem)	Sampled: 07/30/98
3912 Portola Dr., #8	Sample Descript: MW-5-5'	Received: 07/31/98
Santa Cruz, CA 95062	Matrix: SOLID	Extracted: 08/07/98
	Analysis Method: 8015Mod/8020	Analyzed: 08/08/98
Attention: Joe Muzzio	Lab Number: 9807J76-15	Reported: 08/14/98

QC Batch Number: GC080798BTEXEXC
Instrument ID: GCHP22

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas	1.0	N.D.
Methyl t-Butyl Ether	0.025	N.D.
Benzene	0.0050	N.D.
Toluene	0.0050	N.D.
Ethyl Benzene	0.0050	N.D.
Xylenes (Total)	0.0050	N.D.
Chromatogram Pattern:		

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	97
4-Bromofluorobenzene	60	140	91

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

SEQUOIA ANALYTICAL - ELAP #1210

for

Peggy Penner
Project Manager

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (650) 364-9600, FAX (650) 364-9233
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1455 McDowell Blvd. North, Ste. D, Petaluma, CA 94954, (707) 792-1865, FAX (707) 792-0342

RRM, Inc.	Client Proj. ID: Texaco - BA20(Toxichem)	Sampled: 07/30/98
3912 Portola Dr., #8	Sample Descript: MW-5-10'	Received: 07/31/98
Santa Cruz, CA 95062	Matrix: SOLID	Extracted: 08/07/98
	Analysis Method: 8015Mod/8020	Analyzed: 08/08/98
Attention: Joe Muzzio	Lab Number: 9807J76-16	Reported: 08/14/98

QC Batch Number: GC080798BTEXEXC
Instrument ID: GCHP22

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas	1.0	N.D.
Methyl t-Butyl Ether	0.025	N.D.
Benzene	0.0050	N.D.
Toluene	0.0050	N.D.
Ethyl Benzene	0.0050	N.D.
Xylenes (Total)	0.0050	N.D.
Chromatogram Pattern:		

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	99
4-Bromofluorobenzene	60	140	90

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

SEQUOIA ANALYTICAL - ELAP #1210

Peggy Penner
Project Manager

Sequoia Analytical

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RRM, Inc.
3912 Portola Dr., #8
Santa Cruz
Attention: Joe Muzzio

Client Project ID: Texaco - BA20(Toxichem)

QC Sample Group: 9807J76-01-17

Reported: Aug 14, 1998

QUALITY CONTROL DATA REPORT

Matrix:	Solid			
Method:	EPA 8020			
Analyst:	G. PESHINA			
ANALYTE	Benzene	Toluene	Ethylbenzene	Xylenes
QC Batch #:	GC080798BTEXEXC			
Sample No.:	GS9807J76-17			
Date Prepared:	8/7/98	8/7/98	8/7/98	8/7/98
Date Analyzed:	8/9/98	8/9/98	8/9/98	8/9/98
Instrument I.D.#:	GCHP7	GCHP7	GCHP7	GCHP7
Sample Conc., mg/Kg:	N.D.	N.D.	N.D.	N.D.
Conc. Spiked, mg/Kg:	0.20	0.20	0.20	0.60
Matrix Spike, mg/Kg:	0.23	0.23	0.23	0.71
% Recovery:	115	115	115	118
Matrix Spike Duplicate, mg/Kg:	0.23	0.23	0.23	0.71
% Recovery:	115	115	115	118
Relative % Difference:	0.0	0.0	0.0	0.0
RPD Control Limits:	0-25	0-25	0-25	0-25

LCS Batch#:	GSBLK080798C			
Date Prepared:	8/7/98	8/7/98	8/7/98	8/7/98
Date Analyzed:	8/9/98	8/9/98	8/9/98	8/9/98
Instrument I.D.#:	GCHP7	GCHP7	GCHP7	GCHP7
Conc. Spiked, mg/Kg:	0.20	0.20	0.20	0.60
Recovery, mg/Kg:	0.25	0.25	0.25	0.77
LCS % Recovery:	125	125	125	128

Percent Recovery Control Limits:

MS/MSD	60-140	60-140	60-140	60-140
LCS	70-130	70-130	70-130	70-130

Quality Assurance Statement: All standard operating procedures and quality control requirements have been met.

Please Note:

The LCS is a control sample of known, interferent free matrix that is analyzed using the same reagents, preparation, and analytical methods employed for the samples. The matrix spike is an aliquot of sample fortified with known quantities of specific compounds and subjected to the entire analytical procedure. If the recovery of analytes from the matrix spike does not fall within specified control limits due to matrix interference, the LCS recovery is to be used to validate the batch.

SEQUOIA ANALYTICAL

Peggy Penner
Project Manager

Sequoia Analytical

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RRM, Inc.
3912 Portola Dr., #8
Santa Cruz, CA 95062
Attention: Joe Muzzio

Client Proj. ID: Texaco - BA20(Toxichem)
Lab Proj. ID: 9807J76

Received: 07/31/98
Reported: 08/14/98

LABORATORY NARRATIVE

In order to properly interpret this report, it must be reproduced in its entirety. This report contains a total of 21 pages including the laboratory narrative, sample results, quality control, and related documents as required (cover page, COC, raw data, etc.).

Low #Q - Low surrogate recovery due to dilution.
#Q - Surrogate coelution was confirmed.

SEQUOIA ANALYTICAL

for

Peggy Penner
Project Manager

Chain of Custody

9807J76

Remediation Risk Management, Inc.
P.O. Box 1362, Aptos, California 95001
Phone: (408) 662-9454 Fax (408) 688-9266

PROJECT No. BA20 (Toxichem)

Facility No.

Facility Address: 15595 Washington Ave; San Lorenzo

Billing Refence Number: Equilon (Texaco)

CLIENT engineer:

RRM Point of Contact: Joe Muzzio

Sampler: Raj Khokhar

Laboratory Name: Sequoia

Sample I.D.	Cont. No.	Container Size (ml)	Sample Preserv.	Matrix (W=water, S=soil, A=air)	Type (G=grab, D=disc, C=comp.)	Sampling Date	Sampling Time	BTEX/ VPHgas (8015/ 8020)	TPH Diesel (8015)	Oil and Grease (5520)	Total Dislvd. Metals	VOC (EPA 624/ 8240)	SVOC (EPA 627/ 8270)	HVOC (EPA 601/ 8010)	TPHg	BTEX			Comments:
SB-A-5'	1	Brass	—	Soil	G	7/30/98	0950								✓	✓			
SB-A-10'	2	↓		↓	↓	↓	NA								↓	↓			
SB-B-5'	3						0830												
SB-B-10'	4						NA												
SB-B-15'	5						0850												
SB-C-5'	6						1230												
SB-C-10'	7						1246												
SB-D-5'	8						1430												
SB-D-10'	9	↓		↓	↓	↓	1435								↓	↓			

Condition of Sample:

Temperature Received:

Mail original Analytical Report to:

RRM
Atten:
P.O. Box 1362
Aptos, California 95001

Turnaround Time:

- Priority Rush (1 day) ☐
- Rush (2 days) ☐
- Expedited (5 days) ☐
- Standard (10 days) ☐
- As Contracted ☑

Relinquished by	Date	Time	Received by	Date	Time
Raj Khokhar	7/30/98	1030	Dynamex 443 Boon	7-31-98	1035
443 Boon	7-31-98	1235			
			Received by laboratory	7/31/98	15:00

Chain of Custody

9807J76

Remediation Risk Management, Inc.
P.O. Box 1362, Aptos, California 95001
Phone: (408) 662-9454 Fax (408) 688-9266

PROJECT No. BA20 (Toxichem)

Facility No.

Facility Address: 15595 Washington Ave; San Lorenzo

Billing Refence Number: Equilon (Texaco)

CLIENT engineer:

RRM Point of Contact: Joe Muzzio

Sampler: Raj Khokhar

Laboratory Name: Sequoia

Sample I.D.	Cont. No.	Container Size (ml)	Sample Preserv.	Matrix (W=water, S=soil, A=air)	Type (G=grab, D=disc., C=comp.)	Sampling Date	Sampling Time	BTEX/ VPHgas (8015/ 8020)	TPH Diesel (8015)	Oil and Grease (5520)	Total Dislvd. Metals	VOC (EPA 624/ 8240)	SVOC (EPA 627/ 8270)	HVOC (EPA 601/ 8010)	TPHs	BTEX			Comments:
SB-E-6'	10	Brass		Soil	G	7/30/98	NA								✓	✓			
SB-E-10'	11						1342								✓	✓			
MW-4-5'	12						1525								✓	✓			
MW-4-10'	13						1545								✓	✓			
MW-4-16'							1545	Hold											
MW-4-20'	14						1552								✓	✓			
MW-5-5'	15						1700								✓	✓			
MW-5-10'	16						1713								✓	✓			
MW-5-15'							1725	Hold											
MW-5-20'	17	↓		↓	↓	↓	1730								✓	✓			

Condition of Sample:

Temperature Received:

Mail original Analytical Report to:

RRM
Atten:
P.O. Box 1362
Aptos, California 95001

Turnaround Time:

- Priority Rush (1 day) ☐
- Rush (2 days) ☐
- Expedited (5 days) ☐
- Standard (10 days) ☐
- As Contracted ☒

Relinquished by	Date	Time	Received by	Date	Time
Raj Khokhar	7/30/98	10:30	Dynamic 443 Bean	7-31-98	1035 AM
Relinquished by	Date	Time	Received by	Date	Time
443 Bean	7-31-98	1255			
Relinquished by	Date	Time	Received by	Date	Time
Relinquished by	Date	Time	Received by laboratory	Date	Time

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (650) 364-9600, FAX (650) 364-9233
404 N. Wiget Lane, Walnut Creek, CA 94598, (925) 988-9600, FAX (925) 988-9673
819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100
1455 McDowell Blvd. North, Ste. D, Petaluma, CA 94954, (707) 792-1865, FAX (707) 792-0342

RRM, Inc.
3912 Portola Dr., #8
Santa Cruz, CA 95062

Attention: Joe Muzzio

Client Proj. ID: Texaco, BAZO (Toxichem)
Sample Descript: SB-A
Matrix: LIQUID
Analysis Method: 8015Mod/8020
Lab Number: 9807J91-01

Sampled: 07/30/98
Received: 07/31/98

Analyzed: 08/13/98
Reported: 08/25/98

QC Batch Number: GC081398BTEX02A
Instrument ID: GCHP2

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	50	N.D.
Methyl t-Butyl Ether	**2.5**	**7.2**
Benzene	0.50	N.D.
Toluene	0.50	N.D.
Ethyl Benzene	0.50	N.D.
Xylenes (Total)	0.50	N.D.
Chromatogram Pattern:		

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	116

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

SEQUOIA ANALYTICAL - ELAP #1271

Peggy Penner
Project Manager

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (650) 364-9600, FAX (650) 364-9233
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1455 McDowell Blvd. North, Ste. D, Petaluma, CA 94954, (707) 792-1865, FAX (707) 792-0342

RRM, Inc.	Client Proj. ID: Texaco, BAZO (Toxichem)	Sampled: 07/30/98
3912 Portola Dr., #8	Sample Descript: SB-B	Received: 07/31/98
Santa Cruz, CA 95062	Matrix: LIQUID	
	Analysis Method: 8015Mod/8020	Analyzed: 08/13/98
Attention: Joe Muzzio	Lab Number: 9807J91-02	Reported: 08/25/98

QC Batch Number: GC081398BTEX02A
Instrument ID: GCHP2

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	50	N.D.
Methyl t-Butyl Ether	**2.5**	[illegible]
Benzene	**0.50**	**0.77**
Toluene	**0.50**	**0.51**
Ethyl Benzene	0.50	N.D.
Xylenes (Total)	**0.50**	**0.78**
Chromatogram Pattern:		

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	118

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

SEQUOIA ANALYTICAL - ELAP #1271

Peggy Penner
Project Manager

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (650) 364-9600, FAX (650) 364-9233
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1455 McDowell Blvd. North, Ste. D, Petaluma, CA 94954, (707) 792-1865, FAX (707) 792-0342

RRM, Inc.	Client Proj. ID: Texaco, BAZO (Toxichem)	Sampled: 07/30/98
3912 Portola Dr., #8	Sample Descript: SB-C	Received: 07/31/98
Santa Cruz, CA 95062	Matrix: LIQUID	
	Analysis Method: 8015Mod/8020	Analyzed: 08/13/98
Attention: Joe Muzzio	Lab Number: 9807J91-03	Reported: 08/25/98

QC Batch Number: GC081398BTEX02A
Instrument ID: GHCP2

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	50	N.D.
Methyl t-Butyl Ether	**2.5**	**13000**
Benzene	**0.50**	**20**
Toluene	0.50	N.D.
Ethyl Benzene	0.50	N.D.
Xylenes (Total)	0.50	N.D.
Chromatogram Pattern:		

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	117

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

SEQUOIA ANALYTICAL - ELAP #1271

Peggy Penner
Project Manager

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (650) 364-9600, FAX (650) 364-9233
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RRM, Inc.
3912 Portola Dr., #8
Santa Cruz, CA 95062

Attention: Joe Muzzio

Client Proj. ID: Texaco, BAZO (Toxichem)
Sample Descript: SB-D
Matrix: LIQUID
Analysis Method: 8015Mod/8020
Lab Number: 9807J91-04

Sampled: 07/30/98
Received: 07/31/98

Analyzed: 08/13/98
Reported: 08/25/98

QC Batch Number: GC081398BTEX02A
Instrument ID: GCHP2

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	50000	N.D.
Methyl t-Butyl Ether	**2500**	**140000**
Benzene	**500**	**2200**
Toluene	500	N.D.
Ethyl Benzene	**500**	**3300**
Xylenes (Total)	**500**	**9500**
Chromatogram Pattern:		

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	116

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

SEQUOIA ANALYTICAL - ELAP #1271

Peggy Penner
Project Manager

Sequoia Analytical

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RRM, Inc.
3912 Portola Dr., #8
Santa Cruz, CA 95062

Attention: Joe Muzzio

Client Proj. ID: Texaco, BAZO (Toxichem)
Sample Descript: SB-E
Matrix: LIQUID
Analysis Method: 8015Mod/8020
Lab Number: 9807J91-05

Sampled: 07/30/98
Received: 07/31/98

Analyzed: 08/13/98
Reported: 08/25/98

QC Batch Number: GC081398BTEX02A
Instrument ID: GCHP2

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	250	750
Methyl t-Butyl Ether	12	[redacted]
Benzene	2.5	74
Toluene	2.5	4.4
Ethyl Benzene	2.5	6.5
Xylenes (Total)	2.5	12
Chromatogram Pattern:		Gas

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	103

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

SEQUOIA ANALYTICAL - ELAP #1271

Peggy Penner
Project Manager

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (650) 364-9600, FAX (650) 364-9233
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RRM, Inc.
3912 Portola Dr., #8
Santa Cruz, CA 95062
Attention: Joe Muzzio

Client Project ID: Texaco, BAZO (Toxichem)
Matrix: Liquid
Work Order #: 9807J91 -01-05

Reported: Aug 27, 1998

QUALITY CONTROL DATA REPORT

Analyte:	Benzene	Toluene	Ethyl Benzene	Xylenes	BTEX as TPH
QC Batch#:	GC081398802002A	GC081398802002A	GC081398802002A	GC081398802002A	GC081398802002A
Analy. Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020	EPA 8015M
Prep. Method:	EPA 5030	EPA 5030	EPA 5030	EPA 5030	EPA 5030
Analyst:	C. Westwater	C. Westwater	C. Westwater	C. Westwater	C. Westwater
MS/MSD #:	8080055	8080055	8080055	8080055	8080055
Sample Conc.:	N.D.	N.D.	N.D.	N.D.	N.D.
Prepared Date:	8/13/98	8/13/98	8/13/98	8/13/98	8/13/98
Analyzed Date:	8/13/98	8/13/98	8/13/98	8/13/98	8/13/98
Instrument I.D.#:	HP2	HP2	HP2	HP2	HP2
Conc. Spiked:	20 µg/L	20 µg/L	20 µg/L	60 µg/L	330 µg/L
Result:	19	18	19	55	310
MS % Recovery:	95	90	95	92	94
Dup. Result:	21	20	20	61	320
MSD % Recov.:	105	100	100	102	97
RPD:	10	10.5	5.1	10.3	3.2
RPD Limit:	0-20	0-20	0-20	0-20	0-50
LCS #:	LCS081398	LCS081398	LCS081398	LCS081398	LCS081398
Prepared Date:	8/13/98	8/13/98	8/13/98	8/13/98	8/13/98
Analyzed Date:	8/13/98	8/13/98	8/13/98	8/13/98	8/13/98
Instrument I.D.#:	HP2	HP2	HP2	HP2	HP2
Conc. Spiked:	20 µg/L	20 µg/L	20 µg/L	60 µg/L	330 µg/L
LCS Result:	21	20	20	61	320
LCS % Recov.:	105	100	100	102	97
MS/MSD Control Limits	60-140	60-140	60-140	60-140	60-140
LCS Control Limits	70-130	70-130	70-130	70-130	

SEQUOIA ANALYTICAL
Elap #1271

Peggy Penner
Project Manager

Please Note:
The LCS is a control sample of known, interferent-free matrix that is analyzed using the same reagents, preparation, and analytical methods employed for the samples. The matrix spike is an aliquot of sample fortified with known quantities of specific compounds and subjected to the entire analytical procedure. If the recovery of analytes from the matrix spike does not fall within specified control limits due to matrix interference, the LCS recovery is to be used to validate the batch.

** MS = Matrix Spike, MSD = MS Duplicate, RPD = Relative % Difference

Sequoia Analytical

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RRM, Inc.
3912 Portola Dr., #8
Santa Cruz, CA 95062
Attention: Joe Muzzio

Client Proj. ID: Texaco, BAZO (Toxichem)

Lab Proj. ID: 9807J91

Received: 07/31/98

Reported: 08/25/98

LABORATORY NARRATIVE

In order to properly interpret this report, it must be reproduced in its entirety. This report contains a total of 7 pages including the laboratory narrative, sample results, quality control, and related documents as required (cover page, COC, raw data, etc.).

SEQUOIA ANALYTICAL

Peggy Penner
Project Manager

Chain of Custody

9807J91

Remediation Risk Management, Inc.
P.O. Box 1362, Aptos, California 95001
Phone: (408) 662-9454 Fax (408) 688-9266

PROJECT No. BAZO (Toxichem)

Facility No. —

Facility Address: 15595 Washington St. San Lorenzo

Billing Refence Number: Equilon (Texaco)

CLIENT engineer: ~~Joe Muzzio~~

RRM Point of Contact: Joe Muzzio

Sampler: Raj Khokhar

Laboratory Name: Sequoia

Sample I.D.	Cont. No.	Container Size (ml)	Sample Preserv.	Matrix (W-water, S-soil, A-air)	Type (G-grab, D-disc., C-comp.)	Sampling Date	Sampling Time	BTEX/ VPHgas (8015/ 8020)	TPH Diesel (8015)	Oil and Grease (5520)	Total Dislvd. Metals	VOC (EPA 624/ 8240)	SVOC (EPA 627/ 8270)	HVOC (EPA 601/ 8010)	Comments:
SB-A 01	4	VOA	HCL	W	G	7/30/98	10:10	X							
SB-B 02	3	↓	↓	↓	↓	↓	0900	X							
SB-C 03	4						1250	X							
SB-D 04	4						1440	X							
SB-E 05	4						1400	X							

Condition of Sample:

Temperature Received:

Mail original Analytical Report to:

RRM
Atten:
P.O. Box 1362
Aptos, California 95001

Turnaround Time:

- Priority Rush (1 day) ☐
- Rush (2 days) ☐
- Expedited (5 days) ☐
- Standard (10 days) ☐
- As Contracted ☒

Relinquished by	Date	Time	Received by	Date	Time
Raj Khokhar	7/31/98	10:30	Dynamex 443 Bacon	7-31-98	1035 Am
Relinquished by	Date	Time	Received by	Date	Time
Dynamex 443	7-31-98	1255			
Relinquished by	Date	Time	Received by	Date	Time
Relinquished by	Date	Time	Received by laboratory	Date	Time
			Jeri Downs	7/31	1300

Sequoia Analytical

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1455 McDowell Blvd. North, Ste. D, Petaluma, CA 94954, (707) 792-1865, FAX (707) 792-0342

RRM, Inc.
3912 Portola Dr., #8
Santa Cruz, CA 95062

Attention: Joe Muzzio

Client Proj. ID: Texaco BAZO (Toxichem)

Lab Proj. ID: 9807J13

Sampled: 07/30/98
Received: 07/31/98
Analyzed: see below

Reported: 08/12/98

LABORATORY ANALYSIS

Analyte	Units	Date Analyzed	Detection Limit	Sample Results
Lab No: 9807J13-01				
Sample Desc : SOLID,SP-1				
Lead by ICP	mg/Kg	08/05/98	5.0	20

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

SEQUOIA ANALYTICAL - ELAP #1210

for

Mike Gregory
Project Manager

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (650) 364-9600, FAX (650) 364-9233
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1455 McDowell Blvd. North, Ste. D, Petaluma, CA 94954, (707) 792-1865, FAX (707) 792-0342

RRM, Inc.	Client Proj. ID: Texaco BAZO (Toxichem)	Sampled: 07/30/98
3912 Portola Dr., #8	Sample Descript: SP-1	Received: 07/31/98
Santa Cruz, CA 95062	Matrix: SOLID	Extracted: 08/06/98
	Analysis Method: 8015Mod/8020	Analyzed: 08/07/98
Attention: Joe Muzzio	Lab Number: 9807J13-01	Reported: 08/12/98

QC Batch Number: GC080698BTEXEXB
Instrument ID: GCHP18

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas	**1.0**	**3.4**
Benzene	0.0050	N.D.
Toluene	**0.0050**	**0.014**
Ethyl Benzene	**0.0050**	**0.038**
Xylenes (Total)	**0.0050**	**0.026**
Chromatogram Pattern:		**C6-C12**

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	122
4-Bromofluorobenzene	60	140	87

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

SEQUOIA ANALYTICAL - ELAP #1210

for

Mike Gregory
Project Manager

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (650) 364-9600, FAX (650) 364-9233
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1455 McDowell Blvd. North, Ste. D, Petaluma, CA 94954, (707) 792-1865, FAX (707) 792-0342

RRM, Inc.
3912 Portola Dr., #8
Santa Cruz, CA 95062
Attention: Joe Muzzio

Client Project ID: Texaco BAZO (Toxichem)

QC Sample Group: 9807J13-01

Reported: Aug 16, 1998

QUALITY CONTROL DATA REPORT

Matrix:	Solid
Method:	EPA 8015
Analyst:	G. PESHINA
ANALYTE	Gasoline

QC Batch #: GC080698BTEXEXB

Sample No.:	GS9807G40-1
Date Prepared:	8/6/98
Date Analyzed:	8/7/98
Instrument I.D.#:	GCHP1
Sample Conc., mg/Kg:	N.D.
Conc. Spiked, mg/Kg:	5.0
Matrix Spike, mg/Kg:	4.5
% Recovery:	90
Matrix Spike Duplicate, mg/Kg:	4.5
% Recovery:	90
Relative % Difference:	0.0
RPD Control Limits:	0-25

LCS Batch#: GSBLK080698B

Date Prepared:	8/6/98
Date Analyzed:	8/7/98
Instrument I.D.#:	GCHP1
Conc. Spiked, mg/Kg:	5.0
Recovery, mg/Kg:	5.1
LCS % Recovery:	102

Percent Recovery Control Limits:

MS/MSD	60-140
LCS	70-130

Quality Assurance Statement: All standard operating procedures and quality control requirements have been met.

Please Note:
The LCS is a control sample of known, interferent free matrix that is analyzed using the same reagents, preparation, and analytical methods employed for the samples. The matrix spike is an aliquot of sample fortified with known quantities of specific compounds and subjected to the entire analytical procedure. If the recovery of analytes from the matrix spike does not fall within specified control limits due to matrix interference, the LCS recovery is to be used to validate the batch.

SEQUOIA ANALYTICAL

Kayvan Kimyai
Project Manager

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (650) 364-9600, FAX (650) 364-9233
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RRM, Inc.
3912 Portola Drive, #8
Santa Cruz, CA 95062
Attention: Joe Muzzio

Client Project ID: Texaco BAZO (Toxichem)
Matrix: Solid
Work Order #: 9807J13 -01

Reported: Aug 28, 1998

QUALITY CONTROL DATA REPORT

Analyte:	Beryllium	Cadmium	Chromium	Nickel
QC Batch#:	ME0805986010MDE	ME0805986010MDE	ME0805986010MDE	ME0805986010MDE
Analy. Method:	EPA 6010	EPA 6010	EPA 6010	EPA 6010
Prep. Method:	EPA 3050	EPA 3050	EPA 3050	EPA 3050
Analyst:	C. Caoile	C. Caoile	C. Caoile	C. Caoile
MS/MSD #:	9807J1301	9807J1301	9807J1301	9807J1301
Sample Conc.:	N.D.	N.D.	31	32
Prepared Date:	8/5/98	8/5/98	8/5/98	8/5/98
Analyzed Date:	8/5/98	8/5/98	8/5/98	8/5/98
Instrument I.D.#:	MTJA5	MTJA5	MTJA5	MTJA5
Conc. Spiked:	50 mg/Kg	50 mg/Kg	50 mg/Kg	50 mg/Kg
Result:	43	43	73	76
MS % Recovery:	86	86	84	88
Dup. Result:	43	43	72	73
MSD % Recov.:	86	86	82	82
RPD:	0.0	0.0	1.4	4.0
RPD Limit:	0-20	0-20	0-20	0-20
LCS #:	LCS080598	LCS080598	LCS080598	LCS080598
Prepared Date:	8/5/98	8/5/98	8/5/98	8/5/98
Analyzed Date:	8/5/98	8/5/98	8/5/98	8/5/98
Instrument I.D.#:	MTJA5	MTJA5	MTJA5	MTJA5
Conc. Spiked:	50 mg/Kg	50 mg/Kg	50 mg/Kg	50 mg/Kg
LCS Result:	48	46	47	47
LCS % Recov.:	96	92	94	94
MS/MSD Control Limits	80-120	80-120	80-120	80-120
LCS Control Limits	80-120	80-120	80-120	80-120

SEQUOIA ANALYTICAL

Mike Gregory
Project Manager

Please Note:
The LCS is a control sample of known, interferent-free matrix that is analyzed using the same reagents, preparation, and analytical methods employed for the samples. The matrix spike is an aliquot of sample fortified with known quantities of specific compounds and subjected to the entire analytical procedure. If the recovery of analytes from the matrix spike does not fall within specified control limits due to matrix interference, the LCS recovery is to be used to validate the batch.

** MS = Matrix Spike, MSD = MS Duplicate, RPD = Relative % Difference

Chain of Custody

Remediation Risk Management, Inc.
P.O. Box 1362, Aptos, California 95001
Phone: (408) 662-9454 Fax (408) 688-9266

PROJECT No. BA20 (TOXICHEM)

Facility No.

Facility Address: 15595 Washington St. San Leandro

Billing Refence Number: Equilon (Texaco)

CLIENT engineer: ~~Joe Muzzio~~

RRM Point of Contact: Joe Muzzio

Sampler: Raj Khokhar

Laboratory Name: Sequoia

Sample I.D.	Cont. No.	Container Size (ml)	Sample Preserv.	Matrix (W=water, S=soil, A=air)	Type (G=grab, D=disc., C=comp.)	Sampling Date	Sampling Time	BTEX/ VPHgas (8015/ 8020)	TPH Diesel (8015)	Oil and Grease (5520)	Total Dislvd. Metals	VOC (EPA 624/ 8240)	SVOC (EPA 627/ 8270)	HVOC (EPA 601/ 8010)	Total Lead
1- SP-1	1		—	S		7/30/98		X							X

9807J13

Comments:

9807J13

Condition of Sample:

Temperature Received:

Mail original Analytical Report to:

RRM
Atten:
P.O. Box 1362
Aptos, California 95001

Turnaround Time:

- Priority Rush (1 day) ☐
- Rush (2 days) ☐
- Expedited (5 days) ☐
- Standard (10 days) ☐
- As Contracted ☒

Relinquished by	Date	Time	Received by	Date	Time
Raj Khokhar	7/31/98	10:30	Dynamex 443 Bean	7-31-98	1035 am
443 Bean	7-31-98	1255			
Relinquished by	Date	Time	Received by	Date	Time
Relinquished by	Date	Time	Received by laboratory	Date	Time
				7/31/98	1300

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (650) 364-9600, FAX (650) 364-9233
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819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100
1455 McDowell Blvd. North, Ste. D, Petaluma, CA 94954, (707) 792-1865, FAX (707) 792-0342

RRM, Inc.	Client Proj. ID: Texaco BAZO (Toxichem)	Received: 07/31/98
3912 Portola Dr., #8 Santa Cruz, CA 95062	Lab Proj. ID: 9807J13	Reported: 08/12/98
Attention: Joe Muzzio		

LABORATORY NARRATIVE

In order to properly interpret this report, it must be reproduced in its entirety. This report contains a total of 7 pages including the laboratory narrative, sample results, quality control, and related documents as required (cover page, COC, raw data, etc.).

SEQUOIA ANALYTICAL

Mike Gregory
Project Manager

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (650) 364-9600, FAX (650) 364-9233
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Blaine Tech Services
1680 Rogers Avenue
San Jose, CA 95112

Attention: Fran Thig

Client Proj. ID: Texaco 15595 Washington
Sample Descript: MW-1
Matrix: LIQUID
Analysis Method: 8015Mod/8020
Lab Number: 9808G63-01

Sampled: 08/26/98
Received: 08/27/98

Analyzed: 08/31/98
Reported: 09/03/98

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/l	Sample Results ug/l
TPPH as Gas	500	N.D.
Methyl [redacted]	5000	17
Benzene	5.0	N.D.
Toluene	5.0	N.D.
Ethyl Benzene	5.0	N.D.
Xylenes (Total)	5.0	N.D.
Chromatogram Pattern:		

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	93

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

SEQUOIA ANALYTICAL - ELAP #1648

Peggy Penrier
Project Manager

Sequoia Analytical

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1400 McDowell Blvd. North, Ste. D, Petaluma, CA 94954, (707) 792-1865, FAX (707) 792-0342

Blaine Tech Services	Client Proj. ID: Texaco 15595 Washington	Sampled: 08/26/98
1680 Rogers Avenue	Sample Descript: MW-2	Received: 08/27/98
San Jose, CA 95112	Matrix: LIQUID	
	Analysis Method: 8015Mod/8020	Analyzed: 09/31/98
Attention: Fran Thie	Lab Number: 9808G53-02	Reported: 09/03/98

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	500	N.D.
Methyl t-Butyl Ether	25	[redacted]
Benzene	5.0	N.D.
Toluene	5.0	N.D.
Ethyl Benzene	5.0	N.D.
Xylenes (Total)	5.0	N.D.
Chromatogram Pattern:		

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	93

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

SEQUOIA ANALYTICAL - ELAP #1849

Peggy Rettner
Project Manager

Sequoia Analytical

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1400 McDowell Blvd. North, Ste. D, Petaluma, CA 94954, (707) 792-1865, FAX (707) 792-0342

Blaine Tech Services
1680 Rogers Avenue
San Jose, CA 95112

Attention: Fran Thie

Client Proj. ID: Texaco 15595 Washington
Sample Descript: MW-3
Matrix: LIQUID
Analysis Method: 8015Mod/8020
Lab Number: 9808G56-03

Sampled: 08/26/98
Received: 08/27/98

Analyzed: 08/31/98
Reported: 09/03/98

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	500	N.D.
Methyl t-Butyl Ether	5000	39
Benzene	5.0	N.D.
Toluene	5.0	N.D.
Ethyl Benzene	5.0	N.D.
Xylenes (Total)	5.0	N.D.
Chromatogram Pattern:		

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	90

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

SEQUOIA ANALYTICAL - ELAP #1849

Peggy Perkins
Project Manager

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (650) 364-9600, FAX (650) 364-9233
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Blaine Tech Services
1680 Rogers Avenue
San Jose, CA 95112

Attention: Fran This

Client Proj. ID: Texaco 15595 Washington
Sample Descript: MW-4
Matrix: LIQUID
Analysis Method: 8015Mod/8020
Lab Number: 9808G53-04

Sampled: 08/26/98
Received: 08/27/98

Analyzed: 08/31/98
Reported: 09/03/98

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	50	170
Methyl t-Butyl Ether	2.5	[redacted]
Benzene	0.50	2.0
Toluene	0.50	0.74
Ethyl Benzene	0.50	1.3
Xylenes (Total)	0.50	1.0
Chromatogram Pattern:		Gas

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	100

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

SEQUOIA ANALYTICAL - ELAP #1649

Peggy Perner
Project Manager

Sequoia Analytical

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Blaine Tech Services
1680 Rogers Avenue
San Jose, CA 95112

Attention: Fran Thie

Client Proj. ID: Texaco 16595 Washington
Sample Descript: MW-6
Matrix: LIQUID
Analysis Method: 8015Mod/8020
Lab Number: 9608G53-05

Sampled: 08/26/96
Received: 08/27/96

Analyzed: 08/31/96
Reported: 09/03/96

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	8000	[illegible]
Methyl t-Butyl Ether	250	N.D.
Benzene	50	240
Toluene	50	N.D.
Ethyl Benzene	50	380
Xylenes (Total)	50	84
Chromatogram Pattern:		C6-C12

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	97

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

SEQUOIA ANALYTICAL - ELAP #1648

Peggy Pepper
Project Manager

Sequoia Analytical

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Blaine Tech Services
1680 Rogers Avenue
San Jose, CA 95112

Attention: Fran This

Client Proj. ID: Texaco 15595 Washington
Sample Descript: EB
Matrix: LIQUID
Analysis Method: 8015Mod/8020
Lab Number: 9806G53-06

Sampled: 06/26/98
Received: 06/27/98

Analyzed: 06/31/98
Reported: 06/03/98

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	50	N.D.
Methyl t-Butyl Ether	2.5	N.D.
Benzene	0.50	N.D.
Toluene	0.50	N.D.
Ethyl Benzene	0.50	N.D.
Xylenes (Total)	0.50	N.D.
Chromatogram Pattern:		

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	90

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

SEQUOIA ANALYTICAL - ELAP #1640

Peggy Pepper
Project Manager

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (650) 364-9600, FAX (650) 364-9233
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Blaine Tech Services, Inc.
1680 Rogers Ave.
San Jose, CA 95112
Attention: Fran Thie

Client Project ID: Texaco 15696 Washington
Matrix: Liquid
Work Order #: 9808G53 -01-06
Reported: Sep 3, 1998

QUALITY CONTROL DATA REPORT

Analyte:	Benzene	Toluene	Ethyl Benzene	Xylenes
QC Batch#:	080510	080510	080510	080510
Analy. Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Prep. Method:	EPA 5030	EPA 5030	EPA 5030	EPA 5030
Analyst:	L. Hall	L. Hall	L. Hall	L. Hall
LCS/LCSD #:	LCS083198	LCS083198	LCS083198	LCS083198
Sample Conc.:	N.D.	N.D.	N.D.	N.D.
Prepared Date:	8/31/98	8/31/98	8/31/98	8/31/98
Analyzed Date:	8/31/98	8/31/98	8/31/98	8/31/98
Instrument I.D.#:	-	-	-	-
Conc. Spiked:	20 µg/L	20 µg/L	20 µg/L	20 µg/L
Result:	18	17	17	18
LCS % Recovery:	90	85	85	90
Dup. Result:	17	16	16	17
LCSD % Recov.:	85	80	80	85
RPD:	5.7	6.1	6.1	5.7
RPD Limit:	0-25	0-25	0-25	0-25

MS/MSD LCS Control Limits	60-120	60-120	60-120	60-120

SEQUOIA ANALYTICAL
Elap #1210

Peggy Penner
Project Manager

Please Note:
The LCS is a control sample of known, interferent-free matrix that is analyzed using the same reagents, preparation, and analytical methods employed for the samples. The matrix spike is an aliquot of sample fortified with known quantities of specific compounds and subjected to the entire analytical procedure. If the recovery of analytes from the matrix spike does not fall within specified control limits due to matrix interference, the LCS recovery is to be used to validate the batch.

** MS = Matrix Spike, MSD = MS Duplicate, RPD = Relative % Difference

9808G53.BLA <1>

SEQUOIA ANALYTICAL
CHAIN OF CUSTODY

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464 N. Wiget Lane • Walnut Creek, CA 94598 • (510) 988-9600 FAX (510) 988-9673

Company Name: TANK DOCS
Address: Texaco Loc.# 6248B0329 16545 Washington
City: San Lorenzo State: Zip Code:
Telephone: (510)236-3541 FAX #: (510)237-7821
Report To: Blaine Tech Sampler:

Project Name:
Billing Address (if different): 108 Cutting Boulevard
Richmond, California 94804
PO #: 980826-43
QC Data: ☐ Level D (Standard) ☐ Level C ☐ Level B ☐ Level A

Turnaround Time: ☒ 10 Working Days ☐ 7 Working Days ☐ 5 Working Days ☐ 3 Working Days ☐ 2 Working Days ☐ 24 Hours ☐ 2 - 8 Hours

980826G53

☐ Drinking Water ☐ Waste Water ☐ Other

Analyses Requested

Client Sample I.D.	Date/Time Sampled	Matrix Desc.	# of Cont.	Cont. Type	Sequoia's Sample #	TPH-G/BTEX	TPH Diesel	O&G/TRPH (418.1)	Nitrate	Sulfate	Total Sulfide	Comments
1. MW-1	8/27/98/1135	W	3	VOA	01	X						
2. MW-2	/ 1155		3	VOA	02	X						
3. MW-3	/ 1220		3	VOA	03	X						
4. MW-4	/ 1245		3	VOA	04	X						
5. MW-5	/ 1310		3	VOA	05	X						
6. B2	/ 1330		3	VOA	06	X						
7.												
8.												
9.												
10.												

Relinquished By:	Date: 8/27/98	Time: 12:12	Received By:	Date: 8/27/98	Time: 12:12
Relinquished By:	Date: 8/27/98	Time:	Received By:	Date:	Time:
Relinquished By:	Date:	Time:	Received By Lab:	Date: 8/27/98	Time: 13:32

White - Sequoia Yellow - Sequoia Pink - Client

Sequoia Analytical

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Blaine Tech Services
1680 Rogers Avenue
San Jose, CA 95112
Attention: Fran This

Client Proj. ID: Texaco 15595 Washington
Lab Proj. ID: 9808G53

Received: 08/27/98
Reported: 09/03/98

LABORATORY NARRATIVE

In order to properly interpret this report, it must be reproduced in its entirety. This report contains a total of 8 pages including the laboratory narrative, sample results, quality control, and related documents as required (cover page, COC, raw data, etc.).

Joe Muzzio:

FAXed analytical —

A complete Pckage will be mailed to me AS soon AS it is available.

Note MW-1 DRO to be reFAXed to me

Regards —

DMW

SEQUOIA ANALYTICAL

Peggy Penner
Project Manager