EXXON COMPANY, U.S.A.
2300 CLAYTON ROAD, SUITE 1250 • CONCORD, CALIFORNIA 94520
MARKETING DEPARTMENT • ENVIRONMENTAL ENGINEERING

GENE N. ORTEGA
SENIOR ENGINEER
(925) 246-8747
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Cl. STID 4103

File w/ closed LOP case —

February 8, 1999

Mr. Tom Peacock
Alameda County Health Agency Division of Environmental Protection
Department of Environmental Health
1131 Harbor Bay Parkway, 2nd Floor
Alameda, CA 94502

RE: Exxon RAS #7-0210/7840 Amador Valley Boulevard, Dublin, California

Dear Mr. Peacock:

Attached for your review and comment is a report titled ***Baseline Environmental Assessment at Exxon Retail Site 7-0210, 7840 Amador Valley Boulevard, Dublin, California,*** dated January 18, 1999. The report was prepared by EA Engineering, Science and Technology (EA) of Lafayette, California and details the results of an initial environmental investigation undertaken by Exxon prior to potential divestment of the property.

If you have any questions or comments, please contact me at (925) 246-8747.

Sincerely,

Gene Ortega
Senior Engineer

Attachment: EA's Baseline Environmental Assessment Report, dated January 18, 1999

cc Ms. Sandy Campion - Exxon Company, USA
Ms. Kathy Simonelli - Geological Services, Inc.

Baseline Environmental Assessment
Exxon Retail Site 7-0210
7840 Amador Valley Boulevard
Dublin, California

Prepared for

Exxon Company, U.S.A.

Prepared by

EA Engineering, Science, and Technology

January 1999

61602.10.0001

RO 2424

STID 4103

LOP case closed 6/10/97
subsurface investigation in 11 and 12/98 identified
4000 ppb MTBE (method 8260) in B-1

Baseline Environmental Assessment
Exxon Retail Site 7-0210
7840 Amador Valley Boulevard
Dublin, California

Prepared for

Exxon Company, U.S.A.

Prepared by

EA Engineering, Science, and Technology

Ted Moise
email: tmoise@ETICeng.com

January 1999

61602.10.0001

61602.10.0001

Baseline Environmental Assessment
Exxon Retail Site 7-0210
7840 Amador Valley Boulevard
Dublin, California

Prepared for

Exxon Company, U.S.A.
P.O. Box 4032
2300 Clayton Road, Suite 1250
Concord, California 94524-4032

Prepared by

EA Engineering, Science, and Technology
3468 Mt. Diablo Boulevard, Suite B-100
Lafayette, California 94549
(925) 283-7077

Christa G. Marting
Program Manager

1/18/99
Date

Mark C. Peterson, C.E.G. #2085
Senior Geologist

1/18/99
Date

REGISTERED GEOLOGIST
MARK C. PETERSON
No. 2085
CERTIFIED
ENGINEERING
GEOLOGIST
Exp. 3/31/00
STATE OF CALIFORNIA

January 1999

CONTENTS

SITE CONTACTS

Site Name:	Exxon Retail Site 7-0210
Site Address:	7840 Amador Valley Boulevard Dublin, California
Site Business Operator:	Shih Hsiung Hung
Site Business Phone:	(925) 829-7218
Exxon Project Manager:	Marla D. Guensler Exxon Company, U.S.A. 2300 Clayton Road, Suite 1250 Concord, California 94524-4032 (925) 246-8776
Consultant to Exxon:	EA Engineering, Science, and Technology 3468 Mt. Diablo Boulevard, Suite B-100 Lafayette, California 94549 (925) 283-7077
EA Program Manager:	Christa G. Marting
Regulatory Oversight:	Tom Peacock Alameda County Health Agency Division of Environmental Protection Department of Environmental Health 1131 Harbor Bay Parkway, 2nd Floor Alameda, California 94502 (510) 567-6700

1. INTRODUCTION

This document summarizes the results of a baseline environmental subsurface investigation conducted at Exxon Retail Site (RS) 7-0210, an active retail service station located 7840 Amador Valley Boulevard, Dublin, California. EA Engineering, Science, and Technology (EA) was retained by Exxon Company, U.S.A. (Exxon) to install four soil borings onsite. The purpose of the investigation was to determine whether petroleum hydrocarbons are present in soil and groundwater at the site.

1.1 SCOPE OF WORK PERFORMED

The investigation consisted of the following:

- Files were reviewed to determine pertinent site history information.
- Sensitive receptors in the site vicinity were evaluated.
- Four direct drive borings were installed.
- Soil samples were collected and continuously logged to characterize the subsurface lithology. Selected soil samples were analyzed for the presence of petroleum hydrocarbons and methyl t-butyl ether (MTBE).
- A groundwater sample was collected at first-encountered water in each boring and analyzed for petroleum hydrocarbons and MTBE.

2. SITE BACKGROUND

2.1 SITE LOCATION AND LAND USE

Exxon RS 7-0210 is located at 7840 Amador Valley Boulevard in Dublin, California, on the southeast corner of the intersection of Amador Valley Boulevard and Regional Street (Figures 1 and 2), approximately one-half mile west of Interstate 680 and one-half mile north of Interstate 580. The site lies at an elevation of approximately 340 feet. The station has three 12,000-gallon double-walled fiberglass underground storage tanks (USTs) located approximately 40 feet west of the two pump islands. Three former USTs were located between the current tank and pump island locations (Figure 3).

The immediate vicinity of the site is commercial, consisting of shopping malls and parking lots. A Unocal service station with USTs is located on the southwestern corner of the intersection (Figure 2).

2.2 SITE HISTORY

Exxon RS 7-0210 was owned and operated by Texaco until 1988, when it was purchased by Exxon. In February 1990, Exxon replaced product dispensers and installed a vapor recovery system. In October 1991, Exxon replaced three 8,000-gallon single-walled steel USTs with the existing three 12,000-gallon double-walled fiberglass-reinforced plastic (FRP) tanks. The piping was also upgraded to double-walled FRP. The locations of the present and former tanks are indicated in Figure 3. Two 1/4-inch holes were found in the bottom of the regular unleaded tank and one 1/2-inch hole was found in the bottom of the extra unleaded tank when the tanks were removed.

Closure samples were collected from native soils beneath the single-walled steel USTs and at the sidewalls of the tank pit when the tanks were replaced in October 1991 (EA 1991). A maximum concentration of Total Petroleum Hydrocarbons as gasoline (TPH-g) of 1,000 mg/kg and benzene concentration of 1.2 mg/kg were measured in samples collected from the bottom of the southeastern corner of the tank field. Additional soils were excavated down to groundwater (16 feet below ground surface [bgs]), where soil samples were collected; a maximum TPH-g concentration of 300 mg/kg and benzene concentration of 0.68 mg/kg were measured in the sample collected 16 feet bgs in the southeastern corner of the tank field.

Four groundwater monitoring wells were installed in May 1992 (EA 1992) and monitored for petroleum hydrocarbons until June 1995. The monitoring wells were destroyed in April 1996 (EA 1996). Monitoring well destruction was authorized by the Alameda County Health Agency Department of Environmental Health and the Regional Water Quality Control Board in a March 1996 letter to Exxon (ACHA 1996).

2.3 REGIONAL GEOLOGY AND HYDROGEOLOGY

The site is located in the north central part of Alameda County, near the intersection of the Amador and Livermore valleys. These valleys form an L-shaped valley located within the central Coast Ranges California Geomorphic Province.

The Amador Valley slopes generally down to the south toward Alameda Creek near its south end. The Livermore Valley slopes generally westward toward the intersection with the Amador Valley. Materials underlying the site area are Quaternary-age alluvial sediments that were deposited by erosion from upland surfaces bordering the Livermore Valley. These sediments are weakly indurated and consist of interbedded mudstone, sandstone, and pebble conglomerate (Dibblee and Darrow 1981). The pebble conglomerate is a significant regional formation known as the Livermore Gravels that were deposited by a long period of deposition by various drainage courses. In the area of the subject site these sediments are estimated to be as much as several hundred feet thick. Bedrock at depth beneath these sediments consists of Cretaceous-aged deep sea sedimentary fan deposits of the Great Valley Sequence.

The site is located in the Dublin sub-basin, which is the western part of the Livermore Valley groundwater basin (DWR 1963). The unconsolidated to semi-consolidated alluvium in the valley is the main groundwater-bearing zone in the Livermore Valley groundwater basin. Groundwater occurs here under unconfined conditions. The alluvial aquifer is recharged by runoff from adjacent highlands and seepage from local streams. The regional groundwater flow follows the topography, moving from areas of higher elevation to areas of lower elevation. The direction of groundwater flow in the area of the site is generally eastward toward the center of the Amador-Livermore Valley. Most of the drainage into the Amador-Livermore Valley area outlets along the Calaveras fault zone (in the East Bay Hills to the southwest), then west via Niles Canyon across the southern portion of the East Bay Hills (Dibblee and Darrow 1981).

The nearest surface water body to the site is an intermittent creek that drains Martin Canyon, located approximately 0.25 miles to the northwest. Dublin Creek, also an intermittent stream, is located approximately 0.5 miles to the south.

2.4 SENSITIVE RECEPTORS

An Exxon standard Sensitive Receptor Survey was completed for the site and is being submitted under separate cover. Neighboring properties are shown in Figure 2. A site plan including utility vaults on and immediately adjacent to the site is shown in Figure 3. No buildings with basements, subways or tunnels were observed within 1,000 feet of the site. A search of federal, state, and the nearest local public water supply well databases revealed no state wells within 1 mile of the subject property. A federal well is indicated less than 1/8 mile southeast of the site. The well site use was listed as "observation", and the water use was not reported. The well depth is 47 feet and the last depth to water measured was 26.20 feet in 1981. A Dublin-San Ramon Services District municipal well is indicated within 2,000 feet south of the site and was reported to serve 10,001 to 50,000 persons. The location of this well was confirmed by field reconnaissance. A copy of the Environmental Data Resources, Incorporated database search

3. SUBSURFACE INVESTIGATION

In November and December 1998, EA observed the installation of and collected soil samples from four borings at the locations shown in Figure 3, using direct drive techniques. Field methods and procedures are described in EA's protocols, presented in Appendix B. Drill logs are included as Appendix C. All boreholes were grouted to the surface when sampling was completed. Soil samples were submitted for laboratory analysis on the basis of field observations and organic vapor analyzer readings. Groundwater samples were collected from the borings using factory-cleaned disposable polyethylene bailers. All sampling equipment was cleaned with an alconox/deionized water solution and rinsed with deionized water before work began and between each borehole. Soil and groundwater samples were placed in an ice-filled cooler for transport to Sequoia Analytical in Redwood City, California, and analyzed for TPH-g by California EPA-modified EPA Method 8015, and for benzene, toluene, ethylbenzene, and total xylenes (BTEX) and MTBE by EPA Method 8020. All samples were handled and transported under chain of custody.

The borings were installed to a total depth of 20 feet bgs by Vironex (C57 license #705927), using a single cased direct drive sampler. Water was first encountered at approximately 16 to 17 feet bgs in each boring and stabilized to approximately 12 to 13 feet bgs (static water level was not determined for B4).

Soil generated during the investigation was temporarily stored onsite for disposal at an Exxon-approved facility.

4. RESULTS

4.1 SITE GEOLOGY AND HYDROGEOLOGY

The site geology has been evaluated to a depth of 20 feet bgs using data collected during the current investigation. The subsurface is characterized by alluvial sediments consisting of clays, silts, sands, and gravels. The generalized stratigraphy of the site consists of clay and silt to a depth of 16 to 17.5 feet bgs underlain by a sand and gravel lens varying in thickness from 0.5 feet to 1.25 feet. A second clay layer was encountered beneath the sand lens to 20 feet bgs, the total depth explored. A discontinuous sand and gravel lens was encountered in borings B2 and B3, from approximately 7.5 to 9.5 feet bgs, and an isolated lens of clayey gravel was encountered in B3 from 12 to 13 feet bgs. With the exception of boring B3, groundwater was first encountered in the sand and gravel lens, at a depth of approximately 17 feet bgs and stabilized at an average depth of 12.5 feet bgs. Water was first encountered at a depth of approximately 12 feet bgs in B3 and stabilized at 12.6 feet bgs.

Historical shallow groundwater flow direction has generally been to the southeast.

4.2 SOIL SAMPLE ANALYTICAL RESULTS

Selected soil samples collected from the four borings were analyzed for TPH-g, BTEX, and MTBE. A summary of soil analytical results is provided in Table 1. The laboratory analytical report and chain-of-custody documentation are provided in Appendix D.

4.3 GROUNDWATER SAMPLE ANALYTICAL RESULTS

Groundwater samples were collected from all four borings and analyzed for TPH-g, BTEX, and MTBE. A summary of analytical results for groundwater samples is provided in Table 2 and Figure 4. The laboratory analytical report and chain-of-custody documentation are provided in Appendix D.

5. FINDINGS

In November and December 1998, EA observed the installation of and collected samples from four borings. Soil and groundwater samples were collected from each boring. The samples were analyzed for petroleum hydrocarbons and MTBE to provide a baseline for environmental conditions of the site.

BTEX was not detected in any of the soil samples collected during the investigation. TPH-g was detected only in the sample collected at a depth of 5 feet bgs from boring B1, at a concentration of 1.0 mg/kg (equal to the laboratory detection limit). MTBE was detected only in the sample collected from B1 at a depth of 15–16 feet bgs, at a concentration of 0.78 mg/kg.

BTEX and TPH-g were not detected above laboratory detection limits in any of the water samples collected during the investigation with the exception of toluene (1.7 μg/L) and TPH-g (100 μg/L), detected in the sample collected from B1. MTBE was detected at a concentration of 4,000 μg/L in the sample collected from B1 and at a concentration of 28 μg/L in the sample collected from B2.

REFERENCES

ACHA (Alameda County Health Agency). 1996. Letter regarding well decommission at Exxon Service Station 7-0210, 7840 Amador Valley Blvd., Dublin 94568. ACHA, Department of Environmental Health, Alameda, California. 18 March.

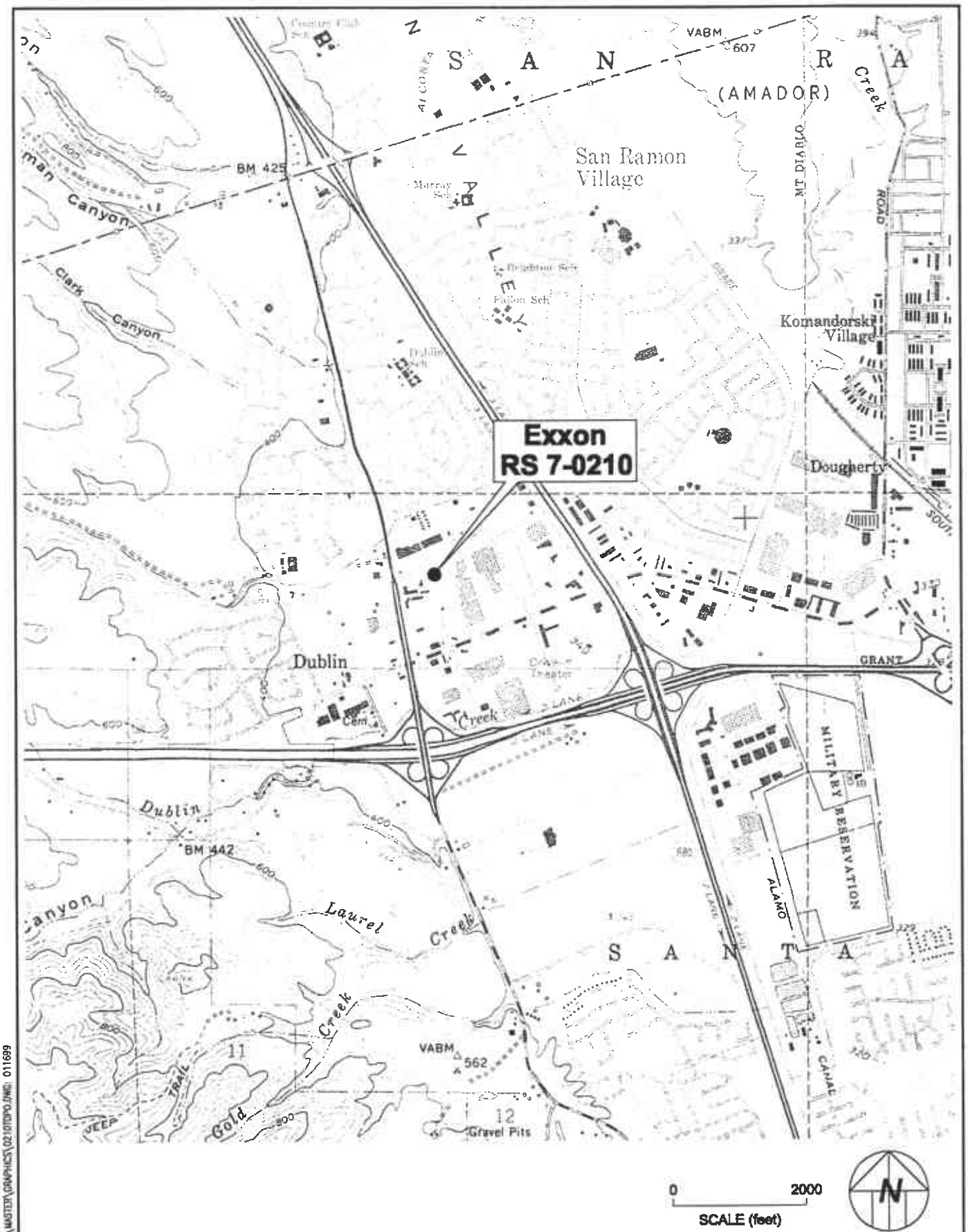
Dibblee, T.W., and R.L. Darrow. 1981. Guidebook to the Regional Geology of the East Bay Hills and the Northern Diablo Range—Livermore Valley Area. USGS Open File Report.

DWR (California Department of Water Resources). 1963. Alameda County Investigation. March.

EA (EA Engineering, Science, and Technology). 1991. Report of Closure Sampling, Exxon Retail Site 7-0210, 7840 Amador Valley Boulevard, Dublin, California. EA, Lafayette, California.

EA (EA Engineering, Science, and Technology). 1992. Report of Well Installation, Exxon Retail Site 7-0210, 7840 Amador Valley Boulevard, Dublin, California. EA, Lafayette, California. August.

EA (EA Engineering, Science, and Technology). 1996. Letter regarding destruction of four groundwater monitoring wells at Exxon RS 7-0210, 7840 Amador Valley Boulevard, Dublin, California (permit number 96255). EA, Lafayette, California. 8 April.



EA ENGINEERING, SCIENCE, AND TECHNOLOGY

Figure 1. Site topography map Exxon RS 7-0210, 7840 Amador Valley Blvd., Dublin, California.

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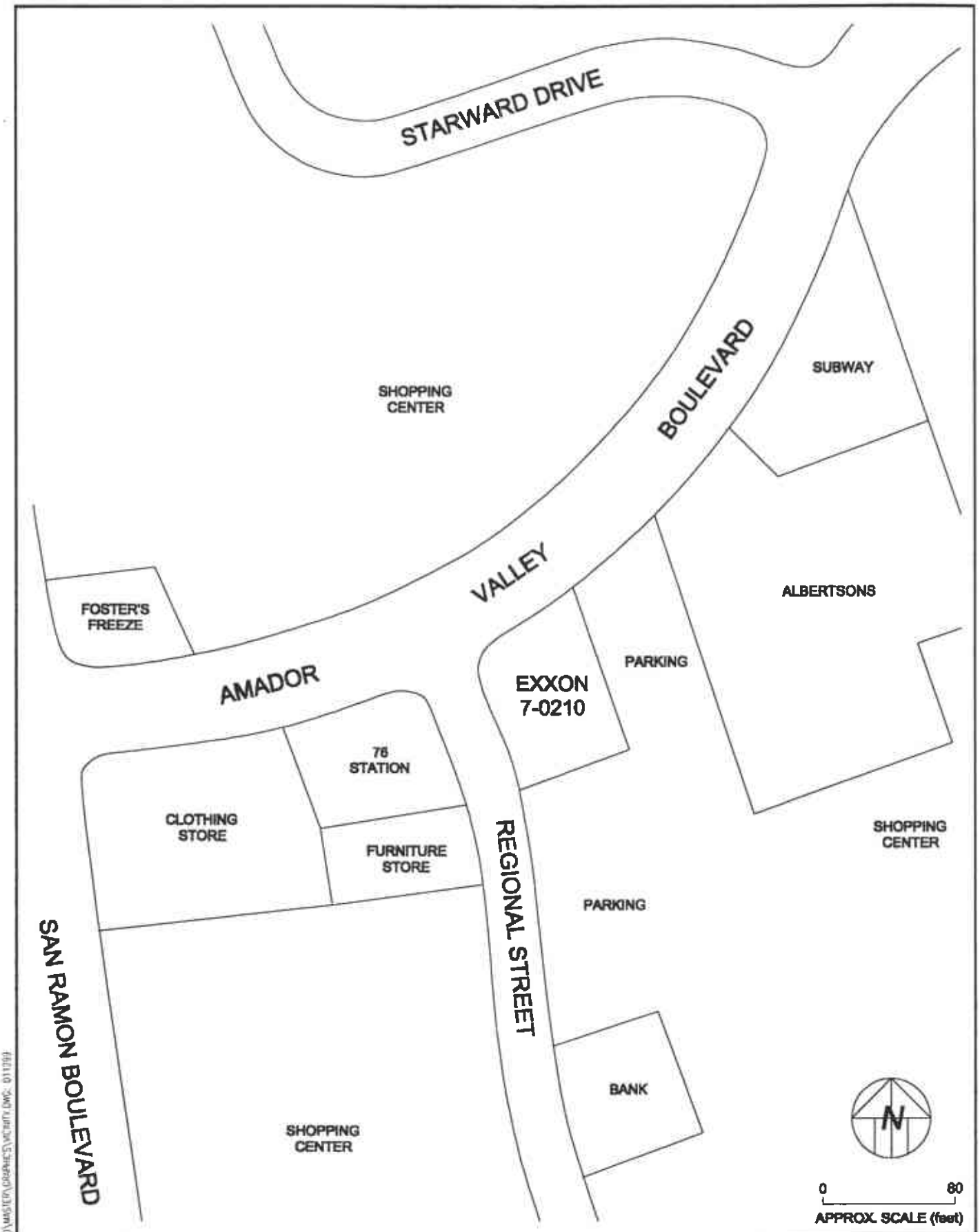

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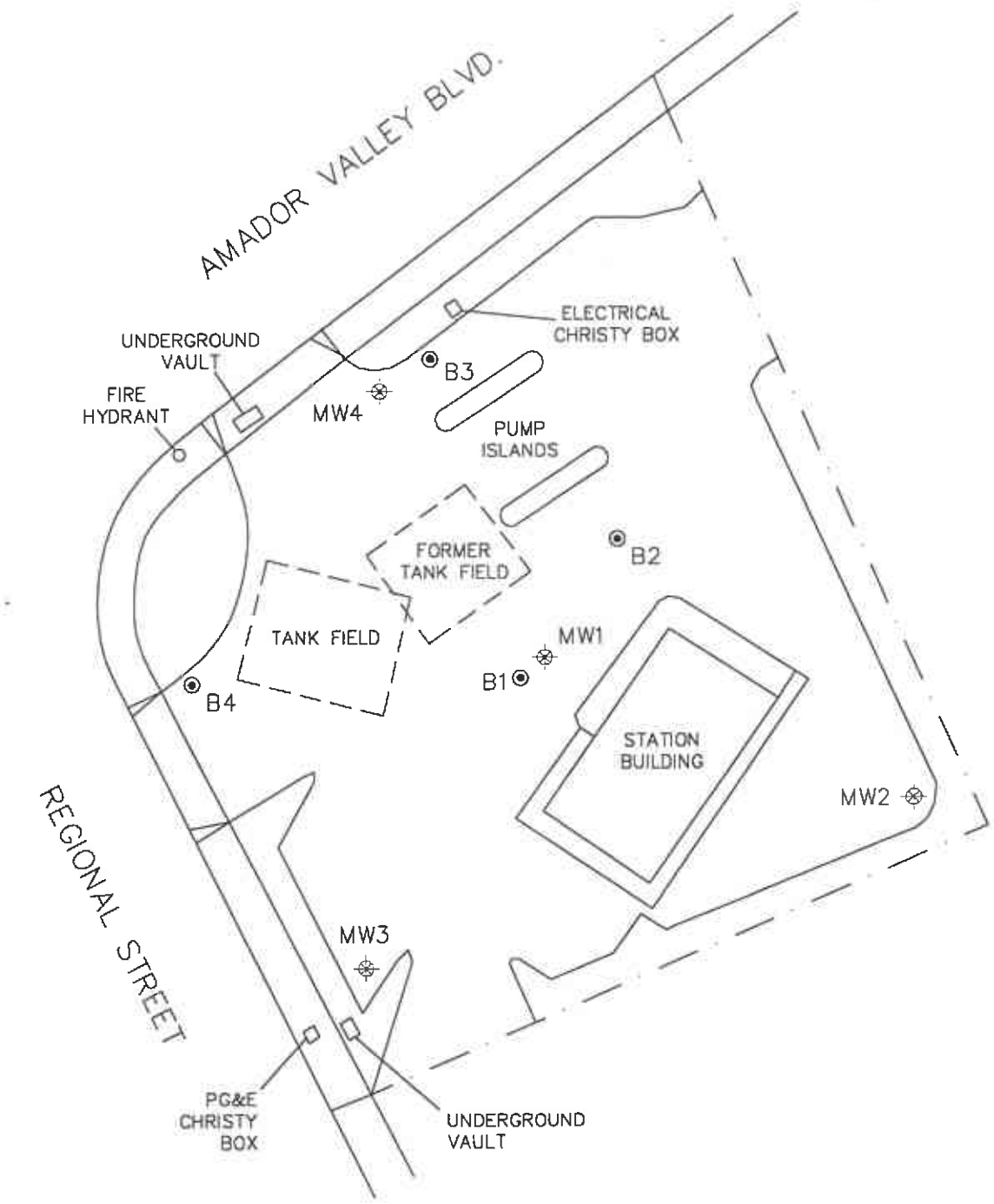
Figure 2. Site vicinity map
Exxon RS 7-0210
7840 Amador Valley Boulevard
Dublin, California



SOIL BORING

DESTROYED MONITORING WELL (ABANDONED)

0 40

SCALE (feet)

N

EA ENGINEERING, SCIENCE, AND TECHNOLOGY

Figure 3. Site plan
Exxon RS 7-0210
7840 Amador Valley Blvd.,
Dublin, California

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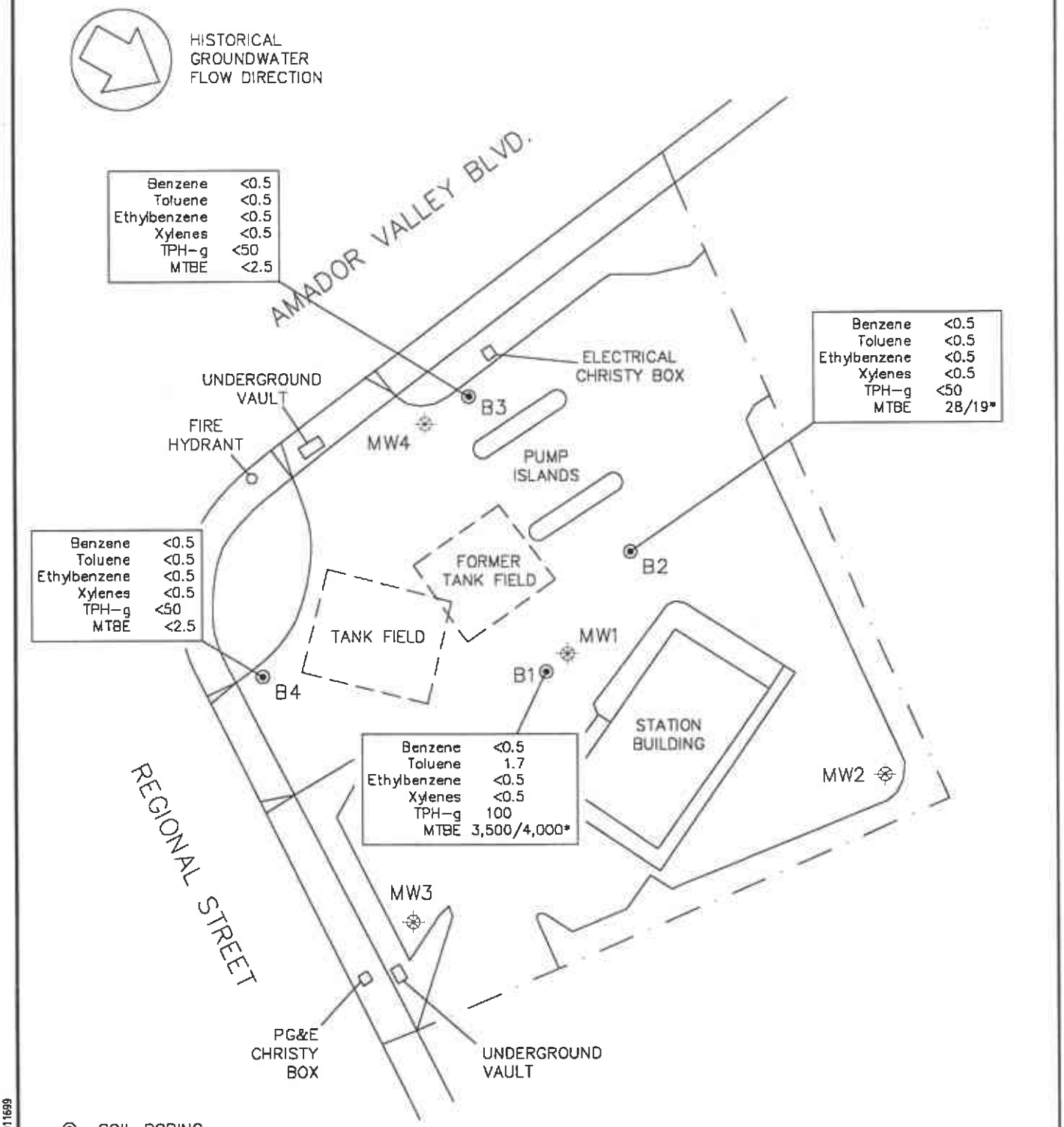

EA ENGINEERING, SCIENCE, AND TECHNOLOGY

Figure 4. Site plan showing analytical results for groundwater samples, 3 December 1998, Exxon RS 7-0210, 7840 Amador Valley Blvd., Dublin, California.

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TABLE 1 SOIL SAMPLE ANALYTICAL RESULTS, EXXON RS 7-0210, 7840 AMADOR VALLEY BLVD., DUBLIN, CALIFORNIA, NOVEMBER AND DECEMBER 1998

Sample ID	Date	Sample Depth (ft bgs)	Concentration (mg/kg)					
			Benzene	Toluene	Ethyl-benzene	Xylenes	TPH-g	MTBE
B1	11/16/98	5	<0.0050	<0.0050	<0.0050	<0.0050	1.0	<0.025
	12/03/98	10-11	<0.0050	<0.0050	<0.0050	<0.0050	<1.0	<0.025
	12/03/98	15-16	<0.0050	<0.0050	<0.0050	<0.0050	<1.0	0.78
B2	11/16/98	5	<0.0050	<0.0050	<0.0050	<0.0050	<1.0	<0.025
	12/03/98	10-11	<0.0050	<0.0050	<0.0050	<0.0050	<1.0	<0.025
	12/03/98	14-15	<0.0050	<0.0050	<0.0050	<0.0050	<1.0	<0.025
B3	11/16/98	5	<0.0050	<0.0050	<0.0050	<0.0050	<1.0	<0.025
	12/03/98	10-11	<0.0050	<0.0050	<0.0050	<0.0050	<1.0	<0.025
	12/03/98	12-12.5	<0.0050	<0.0050	<0.0050	<0.0050	<1.0	<0.025
	12/03/98	19-20	<0.0050	<0.0050	<0.0050	<0.0050	<1.0	<0.025
B4	11/16/98	5	<0.0050	<0.0050	<0.0050	<0.0050	<1.0	<0.025
	12/03/98	8-9	<0.0050	<0.0050	<0.0050	<0.0050	<1.0	<0.025
	12/03/98	15-16	<0.0050	<0.0050	<0.0050	<0.0050	<1.0	<0.025

ft bgs Feet below ground surface.
TPH-g Total Petroleum Hydrocarbons as gasoline.
MTBE Methyl t-butyl ether.
mg/kg Milligrams per kilogram.

TABLE 2 GROUNDWATER SAMPLE ANALYTICAL RESULTS, EXXON RS 7-0210, 7840 AMADOR VALLEY BLVD., DUBLIN, CALIFORNIA, DECEMBER 1998

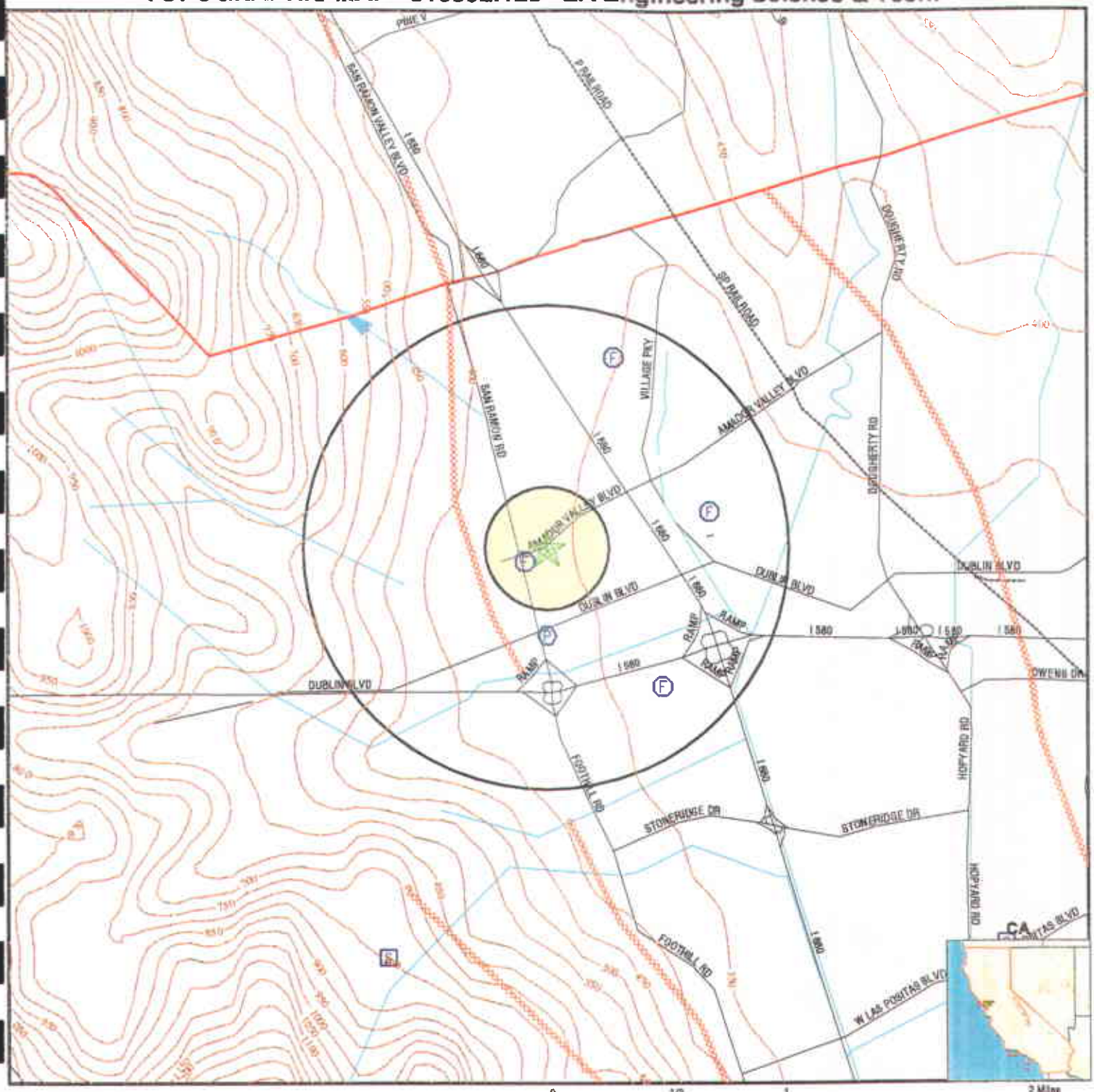
Sample ID	Date	Concentration (ug/L) Benzene	Toluene	Ethyl-benzene	Xylenes	TPH-g	MTBE
B1	12/03/98	<0.5	1.7	<0.5	<0.5	100	3,500 4,000 a
B2	12/03/98	<0.5	<0.5	<0.5	<0.5	<50	28 19 a
B3	12/03/98	<0.5	<0.5	<0.5	<0.5	<50	<2.5
B4	12/03/98	<0.5	<0.5	<0.5	<0.5	<50	<2.5

a Confirmatory value, by EPA Method 8260.
TPH-g Total Petroleum Hydrocarbons as gasoline.
MTBE Methyl t-butyl ether.
ug/L Micrograms per liter.

Appendix A

Database Search Site Vicinity Map

TOPOGRAPHIC MAP - 310602.12s - EA Engineering Science & Tech.



0 1/2 1 2 Miles

- Major Roads
- Contour Lines
- Waterways
- Earthquake Fault Lines
- Earthquake epicenter, Richter 5 or greater
- Closest Federal Well in quadrant
- Closest State Well in quadrant
- Closest Public Water Supply Well
- Closest Hydrogeological Data
- Oil, gas or related wells

TARGET PROPERTY:	RS 7-0210	CUSTOMER:	EA Engineering Science & Tech.
ADDRESS:	7840 Amador Valley Blvd	CONTACT:	Chris Gervais
CITY/STATE/ZIP:	Dublin CA 94568	INQUIRY #:	310602.12s
LAT/LONG:	37.7072 / 121.9344	DATE:	November 10, 1998 9:24 am

Appendix B

Protocols for Installation, Sampling, and Abandonment of Soil Borings

PROTOCOLS FOR INSTALLATION, SAMPLING, AND ABANDONMENT OF SOIL BORINGS

SOIL CORING PROCEDURES

Prior to drilling, all boreholes will be cleared of underground utilities to 8 feet below ground surface by SAF-r-DIG of Oakland, California. A 12 to 14 inch diameter circle will be cut in the surface cover at each boring location. Each borehole will then be cleared using a vacuum excavation system. The system consists of an air lance, used to disturb native soil by injecting compressed air, and a vacuum, used to simultaneously remove the soil.

Soil and groundwater samples will be collected for lithologic and chemical analysis using a direct driven soil coring system. A hydraulic hammer will drive sampling rods into the ground to collect continuous soil cores.

As the rods are advanced, soil is driven into an approximately 1.5-inch-diameter sample barrel. Soil samples are collected in sleeves inside the sample barrel. After being driven 2 to 4 feet, the sampler is removed from the borehole. The sleeves containing the soil samples are removed from the sample barrel, and can then be preserved for chemical analyses or used for lithologic identification. After adding new sleeves, the drive sampler is then lowered back into the borehole to the previous depth and the process is repeated until the desired depth is reached.

All drive casing, sample barrels, and tools will be cleaned with Alconox or equivalent detergent and deionized water between each sample interval.

GROUNDWATER SAMPLING PROCEDURES

After the targeted water-bearing zone has been penetrated, the sample barrel will be removed from the borehole. Depending on lithology encountered, either a grab groundwater sample will be collected directly from the borehole or temporary PVC well screen will be placed in the borehole to ensure that the formation does not cave in. Groundwater samples may then be collected with a bailer, peristaltic pump, bladder pump, or inertial pump until adequate sample volume is obtained.

BOREHOLE GROUTING

On completion of soil and water sampling, boreholes will be abandoned with a cement grout containing less than 5 percent pure sodium bentonite. The grout will be pumped through a grouting tube positioned at the bottom of the boreholes.

Appendix C

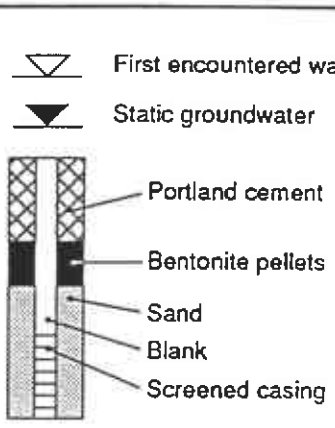
Soil Boring Logs

EA ENGINEERING, SCIENCE, AND TECHNOLOGY

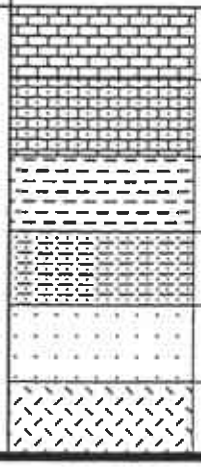
UNIFIED SOIL CLASSIFICATION SYSTEM AND SYMBOLS USED ON EA DRILL LOGS

Major Divisions					Typical Names
COARSE-GRAINED SOILS more than half is coarser than No. 200 sieve	GRAVELS more than half coarse fraction is larger than No. 4 sieve size	clean gravels with little or no fines	GW		Well graded gravels with or without sand, little or no fines.
			GP		Poorly graded gravels with or without sand, little or no fines.
		gravels with over 12% fines	GM		Silty gravels, silty gravels with sand.
			GC		Clayey gravels, clayey gravels with sand.
	SANDS more than half coarse fraction is smaller than No. 4 sieve size	clean sands with little or no fines	SW		Well graded sands with or without gravel, little or no fines.
			SP		Poorly graded sands with or without gravels, little or no fines.
		sands with over 12% fines	SM		Silty sands with or without gravel.
			SC		Clayey sands with or without gravel.
FINE-GRAINED SOILS more than half is finer than No. 200 sieve	SILTS AND CLAYS liquid limit 50% or less		ML		Inorganic silts and very fine sands, rock flour, silts with sands and gravels.
			CL		Inorganic clays of low to medium plasticity, clays with sands and gravels, lean clays.
			OL		Organic silts or clays of low plasticity.
	SILTS AND CLAYS liquid limit greater than 50%		MH		Inorganic silts, micaceous or diatomacious, fine sandy or silty soils, elastic silts.
			CH		Inorganic clays of high plasticity, fat clays.
			OH		Organic silts or clays of medium to high plasticity.
HIGHLY ORGANIC SOILS			Pt		Peat and other highly organic soils.

SYMBOLS



DRILL LOG ROCK TYPES



EA ENGINEERING, SCIENCE, AND TECHNOLOGY

LOG OF SOIL BORING

B1

CLIENT	PROJECT NUMBER	LOCATION
Exxon Company, USA	7-0210	7840 Amador Valley Blvd., Dublin, CA

DRILLING AND SAMPLING METHODS: Geoprobe 5400 Rig; 4 Foot Macro-Core Sampler

				DRILLING START	DRILLING FINISH
Water Level	12.95'				
Time	0900			TIME 0820	TIME 0845
Date	12/3/98			DATE 12/3/98	DATE 12/3/98
Reference	Ground Surface				

SURFACE CONDITIONS: Asphalt (4")

DESCRIPTION by: D. Conkle

Feet Driven	Feet Recovered	Blows/6" Sampler	OVA Reading	WELL DETAIL	DEPTH (feet)	GRAPHIC LOG	
					0		Asphalt. Borehole cleared to 8 feet by Saf-R-Dig.
					1		
					2	ML	
					3		
					4		
					5		CLAYEY SILT: with some fine sand, soft, low plasticity, slightly moist.
					6	ML	
					7		
					8		
4	4				9		SILTY CLAY: with random gravel up to 1 inch in diameter, very dark gray (10YR 3/1), firm, stiff, moderate plasticity, moist.
			0.4		10	CL	
					11		
					12		Increase in sand and gravel with depth.
4	4				13		
					14		SILTY CLAY WITH SAND: <30% fine sand and gravel, dark gray (2.5Y 4/1), firm, moderate plasticity, moist.
			8.0		15	CL	
					16		
4	3				17	GC	CLAYEY GRAVEL WITH SAND: <15% fine to coarse sand, gravel up to 1 inch in diameter, subangular, wet.
					18	CL	LEAN CLAY: with sand, <10% fine sand, dark grayish brown (2.5Y 4/2), soft to firm, moderate plasticity, moist.
			12.5		19		
					20		*Borehole terminated @ 20 feet bgs.*

EA ENGINEERING, SCIENCE, AND TECHNOLOGY

LOG OF SOIL BORING

B2

CLIENT	PROJECT NUMBER	LOCATION
Exxon Company, USA	7-0210	7840 Amador Valley Blvd., Dublin, CA

DRILLING AND SAMPLING METHODS: Geoprobe 5400 Rig; 4 Foot Macro-Core Sampler

				DRILLING START	DRILLING FINISH
Water Level	12.30'				
Time	1215			TIME 1140	TIME 1210
Date	12/3/98			DATE 12/3/98	DATE 12/3/98
Reference	Ground Surface				

SURFACE CONDITIONS: Asphalt (4")

DESCRIPTION by: B. Howell

Feet Driven	Feet Recovered	Blows/6" Sampler	OVA Reading	WELL DETAIL	DEPTH (feet)	GRAPHIC LOG	
					0		Asphalt. Borehole cleared to 8 feet by Saf-R-Dig.
					1		
					2	CL	
					3		
					4		
					5		
					6	CL	SILTY CLAY: with clasts of light brown fine sand, minor gravel ranging from 0.75-1 inch in diameter, dark gray (N3) to black, medium stiff, dry.
					7		
					8		
4	4		0.9		9	SM	SAND: with clay, fine sand, gray green (5GY 4/1).
			0.9		10		
					11	CL	CLAY: gray green (10Y 2.5/1), stiff, medium plasticity.
					12		
4	4				13		Sandstone pebble stringer at 13 feet.
					14		
					15	CL	CLAY: with gravel up to 0.25 inch in diameter, light brown (2.5Y 6/2) with white veins, medium plasticity, damp.
					16		
4	4		1.0		17	SC	CLAYEY SAND: with gravel.
					18		
					19	CL	CLAY: with minor fine gravel, light brown, medium to high plasticity. 3 inch stringer of fine gravel at 19 feet bgs.
					20		*Borehole terminated @ 20 feet bgs.*

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EA ENGINEERING, SCIENCE, AND TECHNOLOGY

LOG OF SOIL BORING

B3

CLIENT	PROJECT NUMBER	LOCATION
Exxon Company, USA	7-0210	7840 Amador Valley Blvd., Dublin, CA

DRILLING AND SAMPLING METHODS: Geoprobe 5400 Rig, 4 Foot Macro-Core Sampler

				DRILLING START	DRILLING FINISH
Water Level	12.60'				
Time	1115			TIME 1040	TIME 1105
Date	12/3/98			DATE 12/3/98	DATE 12/3/98
Reference	Ground Surface				

SURFACE CONDITIONS: Concrete (5.5")

DESCRIPTION by: D. Conkle

Feet Driven	Feet Recovered	Blows/6" Sampler	OVA Reading	WELL DETAIL	DEPTH (feet)	GRAPHIC LOG	DESCRIPTION
					0		Concrete. Borehole cleared to 8 feet by Saf-R-Dig.
					1		
					2	CL	
					3		
					4		
					5		SILTY CLAY: with minor fine sand, soft, non-plastic, dry.
					6	CL	
					7		
4	4		0.5		8	GW/GM	WELL GRADED GRAVEL WITH SILT AND SAND: well graded sand, gravel up to 0.4 inch in diameter, loose, weak cementation, moist.
					9		
					10		SILTY CLAY: with <5% coarse sand, very dark gray with white veins, stiff, firm, low to moderate plasticity, moist.
					11	CL	
					12		
4	4		0.8		13	GC	CLAYEY GRAVEL WITH SAND: well graded sand (predominately medium to coarse) gravel up to 0.8 inch in diameter, subrounded, medium plastic fines, wet.
					14	CL	SANDY CLAY: approximately 30% fine to medium sand, random coarse sand, grayish brown (10YR 5/2), firm, low plasticity, moist.
			0.4		15		
					16		
4	4				17		
			0.6		18	SM	SILTY SAND: poorly graded coarse sand, weak cementation, subangular to subrounded, non-plastic, wet.
					19	CL	LEAN CLAY WITH SAND: <15% fine to medium sand, grayish brown (2.5Y 5/2), soft, moderate plasticity, very moist.
					20		*Borehole terminated @ 20 feet bgs.*

EA ENGINEERING, SCIENCE, AND TECHNOLOGY

LOG OF SOIL BORING

B4

CLIENT	PROJECT NUMBER	LOCATION
Exxon Company, USA	7-0210	7840 Amador Valley Blvd., Dublin, CA

DRILLING AND SAMPLING METHODS: Geoprobe 5400 Rig; 4 Foot Macro-Core Sampler

				DRILLING START	DRILLING FINISH
Water Level	17.50'				
Time	0955			TIME 0940	TIME 1000
Date	12/3/98			DATE 12/3/98	DATE 12/3/98
Reference	Ground Surface				

SURFACE CONDITIONS: Asphalt (7")

DESCRIPTION by: D. Conkle

Feet Driven	Feet Recovered	Blows/6" Sampler	OVA Reading	WELL DETAIL	DEPTH (feet)	GRAPHIC LOG	DESCRIPTION
					0		Asphalt. Borehole cleared to 8 feet by Saf-R-Dig.
					1	CL	
					2		
					3		
					4		
					5	CL	SILTY CLAY: dark brown (10YR 3/3), soft, low plasticity, dry.
					6		
					7	SC/	SANDY CLAY/CLAYEY SAND: >30% fine to medium sand, random coarse sand, dark grayish brown (10YR 4/2), soft moderate plasticity, moist.
4	4				8	CL	
					9		
			0.1		10	CL	SILTY CLAY: with <10% fine sand, black (2.5Y 2.5/1), firm stiff, moist.
					11		
					12		
4	4				13	CL	SILTY CLAY: with sand and random gravel up to 0.4 inch in diameter, light olive brown (2.5Y 5/2) with white mottling/veins, firm, low plasticity, moist.
					14		
			0.5		15		
					16	CL	
4	3.5				17		
					18	SC	CLAYEY SAND WITH GRAVEL: well graded sand (predominately medium), gravel up to 0.2 inch in diameter, wet.
					19	CL	LEAN CLAY WITH SAND: <10% fine to medium sand and random gravel up to 0.4 inch in diameter, dark grayish brown (10YR 4/2), firm, moderate plasticity.
			0.4		20		*Borehole terminated @ 20 feet bgs.*

Appendix D

Laboratory Analytical Reports

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

EA Engineering Science & Tech
3468 Mt Diablo Blvd Ste B100
Lafayette, CA 94549

Attention: Christa Marting

Client Proj. ID: Exxon RS7-0210
Sample Descript: B1,5',RS0210
Matrix: SOLID
Analysis Method: 8015Mod/8020
Lab Number: 9812192-01

Sampled: 11/16/98
Received: 11/19/98
Extracted: 11/24/98
Analyzed: 11/30/98
Reported: 12/05/98

QC Batch Number: GC112498BTEXEXB
Instrument ID: GCHP31

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/Kg	Sample Results ug/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	100
4-Bromofluorobenzene	60	140	76

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

SEQUOIA ANALYTICAL - ELAP #1210

Mei Mei Shin
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

EA Engineering Science & Tech	Client Proj. ID: Exxon RS7-0210	Sampled: 11/16/98
3468 Mt Diablo Blvd Ste B100	Sample Descript: B1,5',RS0210	Received: 11/19/98
Lafayette, CA 94549	Matrix: SOLID	Extracted: 11/30/98
	Analysis Method: EPA 8015 Mod	Analyzed: 12/02/98
Attention: Christa Marting	Lab Number: 9812192-01	Reported: 12/05/98

QC Batch Number: GC1130980HBPEXB
Instrument ID: GCHP4A

Total Extractable Petroleum Hydrocarbons (TEPH)

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TEPH as Diesel	1.0	1.1
Chromatogram Pattern:		
Unidentified HC		C9-C24

Surrogates	Control Limits %		% Recovery
n-Pentacosane (C25)	50	150	79

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

SEQUOIA ANALYTICAL - ELAP #1210

Mei Mei Shin
Project Manager

Sequoia Analytical

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EA Engineering Science & Tech	Client Proj. ID: Exxon RS7-0210	Sampled: 11/16/98
3468 Mt Diablo Blvd Ste B100	Sample Descript: B2,5'RS0210	Received: 11/19/98
Lafayette, CA 94549	Matrix: SOLID	Extracted: 11/24/98
	Analysis Method: 8015Mod/8020	Analyzed: 11/30/98
Attention: Christa Marting	Lab Number: 9812192-02	Reported: 12/05/98

QC Batch Number: GC112498BTEXEXB
Instrument ID: GCHP22

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/Kg	Sample Results ug/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	90
4-Bromofluorobenzene	60	140	93

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

SEQUOIA ANALYTICAL - ELAP #1210

Mei Mei Shin
Project Manager

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EA Engineering Science & Tech
3468 Mt Diablo Blvd Ste B100
Lafayette, CA 94549

Attention: Christa Marting

Client Proj. ID: Exxon RS7-0210
Sample Descript: B2,5'RS0210
Matrix: SOLID
Analysis Method: EPA 8015 Mod
Lab Number: 9812192-02

Sampled: 11/16/98
Received: 11/19/98
Extracted: 11/30/98
Analyzed: 12/02/98
Reported: 12/05/98

QC Batch Number: GC1130980HBPEXB
Instrument ID: GCHP4A

Total Extractable Petroleum Hydrocarbons (TEPH)

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TEPH as Diesel	1.0	1.1
Chromatogram Pattern:		
Unidentified HC		C9-C24

Surrogates	Control Limits %		% Recovery
n-Pentacosane (C25)	50	150	74

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

SEQUOIA ANALYTICAL - ELAP #1210

Mei Mei Shin
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

EA Engineering Science & Tech	Client Proj. ID: Exxon RS7-0210	Sampled: 11/16/98
3468 Mt Diablo Blvd Ste B100	Sample Descript: B3,5'RS0210	Received: 11/19/98
Lafayette, CA 94549	Matrix: SOLID	Extracted: 11/24/98
	Analysis Method: 8015Mod/8020	Analyzed: 11/30/98
Attention: Christa Marting	Lab Number: 9812192-03	Reported: 12/05/98

QC Batch Number: GC112498BTEXEXB
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	86
4-Bromofluorobenzene	60	140	97

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

SEQUOIA ANALYTICAL - ELAP #1210

Mei Mei Shin
Project Manager

Sequoia Analytical

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EA Engineering Science & Tech	Client Proj. ID: Exxon RS7-0210	Sampled: 11/16/98
3468 Mt Diablo Blvd Ste B100	Sample Descript: B3,5'RS0210	Received: 11/19/98
Lafayette, CA 94549	Matrix: SOLID	Extracted: 11/30/98
	Analysis Method: EPA 8015 Mod	Analyzed: 12/02/98
Attention: Christa Marting	Lab Number: 9812192-03	Reported: 12/05/98

QC Batch Number: GC1130980HBPEXB
Instrument ID: GCHP4

Total Extractable Petroleum Hydrocarbons (TEPH)

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TEPH as Diesel	1.0	2.1
Chromatogram Pattern:		
Unidentified HC		C9-C24

Surrogates	Control Limits %		% Recovery
n-Pentacosane (C25)	50	150	90

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

SEQUOIA ANALYTICAL - ELAP #1210

Mei Mei Shin
Project Manager

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (650) 364-9600, FAX (650) 364-9233
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EA Engineering Science & Tech	Client Proj. ID: Exxon RS7-0210	Sampled: 11/16/98
3468 Mt Diablo Blvd Ste B100	Sample Descript: B4,5'RS0210	Received: 11/19/98
Lafayette, CA 94549	Matrix: SOLID	Extracted: 11/24/98
	Analysis Method: 8015Mod/8020	Analyzed: 11/30/98
Attention: Christa Marting	Lab Number: 9812192-04	Reported: 12/05/98

QC Batch Number: GC112498BTEXEXB
Instrument ID: GCHP7

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	110
4-Bromofluorobenzene	60	140	76

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

SEQUOIA ANALYTICAL - ELAP #1210

Mei Mei Shin
Project Manager

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EA Engineering Science & Tech
3468 Mt Diablo Blvd Ste B100
Lafayette, CA 94549

Attention: Christa Marting

Client Proj. ID: Exxon RS7-0210
Sample Descript: B4,5'RS0210
Matrix: SOLID
Analysis Method: EPA 8015 Mod
Lab Number: 9812192-04

Sampled: 11/16/98
Received: 11/19/98
Extracted: 11/30/98
Analyzed: 12/02/98
Reported: 12/05/98

QC Batch Number: GC1130980HBPEXB
Instrument ID: GCHP4A

Total Extractable Petroleum Hydrocarbons (TEPH)

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TEPH as Diesel	1.0	1.3
Chromatogram Pattern:		
Unidentified HC		C9-C24

Surrogates	Control Limits %		% Recovery
n-Pentacosane (C25)	50	150	97

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

SEQUOIA ANALYTICAL - ELAP #1210

Mei Mei Shin
Project Manager

Sequoia Analytical

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EA ENGINEERING
3468 Mt. Diablo Blvd., Ste B100
Lafayette, CA 94549
Attention: Christa Marting

Client Project ID: EXXON RS7-0210

QC Sample Group: 9812192

Reported: Dec 5, 1998

QUALITY CONTROL DATA REPORT

Matrix:	Solid
Method:	EPA 8015M
Analyst:	G.WARDLE
ANALYTE	Diesel

QC Batch #: GC1130980HBPEXB

Sample No.:	9811D88-4
Date Prepared:	11/30/98
Date Analyzed:	12/2/98
Instrument I.D.#:	GCHP4B
Sample Conc., mg/Kg:	1.0 mg/Kg
Conc. Spiked, mg/Kg:	17
Matrix Spike, mg/Kg:	16
% Recovery:	88
Matrix Spike Duplicate, mg/Kg:	16
% Recovery:	88
Relative % Difference:	0.0
RPD Control Limits:	0-50

LCS Batch#: BLK113098BS

Date Prepared:	11/30/98
Date Analyzed:	12/2/98
Instrument I.D.#:	GCHP4B
Conc. Spiked, mg/Kg:	17
Recovery, mg/Kg:	13
LCS % Recovery:	76

Percent Recovery Control Limits:

MS/MSD	50-150
LCS	60-140

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

SEQUOIA ANALYTICAL

Mei Mei Shin
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.

Sequoia Analytical

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EA ENGINEERING
3468 Mt. Diablo Blvd., Ste B100
Lafayette, CA 94549
Attention: Christa Marting

Client Project ID: EXXON RS7-0210

QC Sample Group: 9812192

Reported: Dec 5, 1998

QUALITY CONTROL DATA REPORT

Matrix: Solid
Method: EPA 8020
Analyst: G.P.

ANALYTE	Benzene	Toluene	Ethylbenzene	Xylenes
QC Batch #: GC112498BTEXEXB				
Sample No.: 9811D88-1				
Date Prepared:	11/24/98	11/24/98	11/24/98	11/24/98
Date Analyzed:	11/24/98	11/24/98	11/24/98	11/24/98
Instrument I.D.#:	GCHP07	GCHP07	GCHP07	GCHP07
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:	0.21	0.20	0.21	0.61
% Recovery:	105	100	105	102
Matrix Spike Duplicate, mg/Kg:	0.21	0.21	0.21	0.64
% Recovery:	105	105	105	107
Relative % Difference:	0.0	4.9	0.0	4.8
RPD Control Limits:	0-25	0-25	0-25	0-25

LCS Batch#: GC112498BTEXEXB				
Date Prepared:	11/24/98	11/24/98	11/24/98	11/24/98
Date Analyzed:	11/24/98	11/24/98	11/24/98	11/24/98
Instrument I.D.#:	GCHP07	GCHP07	GCHP07	GCHP07
Conc. Spiked, mg/Kg:	0.20	0.20	0.20	0.60
Recovery, mg/Kg:	0.21	0.21	0.21	0.61
LCS % Recovery:	105	105	105	102

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.

SEQUOIA ANALYTICAL

Mei Mei Shin
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.

Redwood City, CA 94063
(415) 364-9600 • FAX (415) 364-9233
P.O. Box 2180, Houston, TX 77002-7426

CHAIN OF CUSTODY

Consultant's Name: EA ; Engineering, Science & Technology			Page 1 of 1
Address: 3468 Mt. Diablo Blvd, Suite B-100 Lafayette, CA 94549			Site Location: Concord & Dublin, CA
Project #:	Consultant Project #:		Consultant Work Release #:
Project Contact: Christa Marting	Phone #: (925) 283-7077		Laboratory Work Release #:
EXXON Contact: Marla Guensler	Phone #: (925) 246-8776		EXXON RAS #: RS7-0205, RS7-0210
Sampled by (print): NICK CABEDEKI	Sampler's Signature:		
Shipment Method:	Air Bill #:		

TAT: ☐ 24 hr ☐ 48 hr ☐ 72 hr ☐ 96 hr ☐ Standard (10 day)

ANALYSIS REQUIRED 98 2 192

Sample Description	Collection Date	Collection Time	Matrix Soil/Water/Air	Prsv	# of Cont.	Sequoia's Sample #	TPH/Gas BTEX/ 8015/ 8020, + MTBE	TPH/ Diesel EPA 8015	TRPH S.M. 5520			Temperature: ____ Inbound Seal: Yes No Outbound Seal: Yes No
~~98-11-007~~												
B1, 5', RS0205	11/16/98	1005	SOIL	NONE	1	01	✓	✓				
B2, 5', RS 0205	11/16/98	1100	SOIL	NONE	1	02	✓	✓				
B2, 8', RS 0205	11/16/98	1123	SOIL	NONE	1	03	✓	✓				
B3, 5', RS 0205	11/16/98	1232	SOIL	NONE	1	04	✓	✓				
B1, 5', RS 0210	11/16/98	1500	SOIL	NONE	1	01	✓	✓				01
B2, 5', RS 0210	11/16/98	1523	SOIL	NONE	1	02	✓	✓				
B3, 5', RS 0210	11/16/98	1634	SOIL	NONE	1	03	✓	✓				
B4, 5', RS 0210	11/16/98	1748	SOIL	NONE	1	04	✓	✓				

RELINQUISHED BY / AFFILIATION	Date	Time	ACCEPTED / AFFILIATION	Date	Time	Additional Comments
EA	11/16/98	1951	Jeff Bommarito / Sequoia	11/16/98	11:00	
Jeff Bommarito Sequoia	11/18/98		Noelle Lane / Sequoia	11/19/98	1355	

Pink - Client
Yellow - Sequoia
White - Sequoia

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

EA Engineering Science & Tech
3468 Mt Diablo Blvd Ste B100
Lafayette, CA 94549
Attention: Christa Marting

Client Proj. ID: Exxon RS7-0210

Lab Proj. ID: 9812192

Received: 11/19/98

Reported: 12/05/98

LABORATORY NARRATIVE

In order to properly interpret this report, it must be reproduced in its entirety. This report contains a total of 12 pages including the laboratory narrative, sample results, quality control, and related documents as required (cover page, COC, raw data, etc.).

SEQUOIA ANALYTICAL

Mei Mei Shin
Project Manager

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (650) 364-9600, FAX (650) 364-9233
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EA Engineering Science & Tech
3468 Mt Diablo Blvd Ste B100
Lafayette, CA 94549

Attention: Christa Marting

Client Proj. ID: Exxon 7-0210, 6160210.0001
Sample Descript: B1,10-11'
Matrix: SOLID
Analysis Method: 8015Mod/8020
Lab Number: 9812259-01

Sampled: 12/03/98
Received: 12/04/98
Extracted: 12/07/98
Analyzed: 12/11/98
Reported: 12/16/98

QC Batch Number: GC120798BTEXEXA
Instrument ID: GCHP31

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	102
4-Bromofluorobenzene	60	140	83

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

SEQUOIA ANALYTICAL - ELAP #1210

for

Mei Mei Shin
Project Manager

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (650) 364-9600, FAX (650) 364-9233
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EA Engineering Science & Tech
3468 Mt Diablo Blvd Ste B100
Lafayette, CA 94549

Attention: Christa Marting

Client Proj. ID: Exxon 7-0210, 6160210.0001
Sample Descript: B1,15-16'
Matrix: SOLID
Analysis Method: 8015Mod/8020
Lab Number: 9812259-02

Sampled: 12/03/98
Received: 12/04/98
Extracted: 12/07/98
Analyzed: 12/14/98
Reported: 12/16/98

QC Batch Number: GC120798BTEXEXA
Instrument ID: GCHP31

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**	**0.78**
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	95
4-Bromofluorobenzene	60	140	80

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

SEQUOIA ANALYTICAL - ELAP #1210

for

Mei Mei Shin
Project Manager

Sequoia Analytical

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EA Engineering Science & Tech
3468 Mt Diablo Blvd Ste B100
Lafayette, CA 94549

Attention: Christa Marting

Client Proj. ID: Exxon 7-0210, 6160210.0001
Sample Descript: B4,8-9'
Matrix: SOLID
Analysis Method: 8015Mod/8020
Lab Number: 9812259-03

Sampled: 12/03/98
Received: 12/04/98
Extracted: 12/07/98
Analyzed: 12/11/98
Reported: 12/16/98

QC Batch Number: GC120798BTEXEXA
Instrument ID: GCHP31

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	98
4-Bromofluorobenzene	60	140	82

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

SEQUOIA ANALYTICAL - ELAP #1210

for

Mei Mei Shin
Project Manager

Sequoia Analytical

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819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100

EA Engineering Science & Tech	Client Proj. ID: Exxon 7-0210, 6160210.0001	Sampled: 12/03/98
3468 Mt Diablo Blvd Ste B100	Sample Descript: B4,15-16'	Received: 12/04/98
Lafayette, CA 94549	Matrix: SOLID	Extracted: 12/07/98
	Analysis Method: 8015Mod/8020	Analyzed: 12/11/98
Attention: Christa Marting	Lab Number: 9812259-04	Reported: 12/16/98

QC Batch Number: GC120798BTEXEXA
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	89
4-Bromofluorobenzene	60	140	92

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

SEQUOIA ANALYTICAL - ELAP #1210

for

Mei-Mei Shin
Project Manager

Sequoia Analytical

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819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100

EA Engineering Science & Tech	Client Proj. ID: Exxon 7-0210, 6160210.0001	Sampled: 12/03/98
3468 Mt Diablo Blvd Ste B100	Sample Descript: B3,10-11'	Received: 12/04/98
Lafayette, CA 94549	Matrix: SOLID	Extracted: 12/07/98
	Analysis Method: 8015Mod/8020	Analyzed: 12/11/98
Attention: Christa Marting	Lab Number: 9812259-05	Reported: 12/16/98

QC Batch Number: GC120798BTEXEXA
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	92
4-Bromofluorobenzene	60	140	98

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

SEQUOIA ANALYTICAL - ELAP #1210

for

Mei Mei Shin
Project Manager

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (650) 364-9600, FAX (650) 364-9233
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EA Engineering Science & Tech
3468 Mt Diablo Blvd Ste B100
Lafayette, CA 94549

Attention: Christa Marting

Client Proj. ID: Exxon 7-0210, 6160210.0001
Sample Descript: B3,12-12.5'
Matrix: SOLID
Analysis Method: 8015Mod/8020
Lab Number: 9812259-06

Sampled: 12/03/98
Received: 12/04/98
Extracted: 12/07/98
Analyzed: 12/14/98
Reported: 12/16/98

QC Batch Number: GC120798BTEXEXA
Instrument ID: GCHP31

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	93
4-Bromofluorobenzene	60	140	80

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

SEQUOIA ANALYTICAL - ELAP #1210

for

Mei Mei Shin
Project Manager

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (650) 364-9600, FAX (650) 364-9233
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EA Engineering Science & Tech	Client Proj. ID: Exxon 7-0210, 6160210.0001	Sampled: 12/03/98
3468 Mt Diablo Blvd Ste B100	Sample Descript: B3,19-20'	Received: 12/04/98
Lafayette, CA 94549	Matrix: SOLID	Extracted: 12/07/98
	Analysis Method: 8015Mod/8020	Analyzed: 12/11/98
Attention: Christa Marting	Lab Number: 9812259-07	Reported: 12/16/98

QC Batch Number: GC120798BTEXEXA
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	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	94
4-Bromofluorobenzene	60	140	63

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

SEQUOIA ANALYTICAL - ELAP #1210

for

Mehrnaz Shin
Project Manager

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

EA Engineering Science & Tech	Client Proj. ID: Exxon 7-0210, 6160210.0001	Sampled: 12/03/98
3468 Mt Diablo Blvd Ste B100	Sample Descript: B2,10-11'	Received: 12/04/98
Lafayette, CA 94549	Matrix: SOLID	Extracted: 12/07/98
	Analysis Method: 8015Mod/8020	Analyzed: 12/14/98
Attention: Christa Marting	Lab Number: 9812259-08	Reported: 12/16/98

QC Batch Number: GC120798BTEXEXA
Instrument ID: GCHP31

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	84

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

SEQUOIA ANALYTICAL - ELAP #1210

for

Mei Mei Shin
Project Manager

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

EA Engineering Science & Tech	Client Proj. ID: Exxon 7-0210, 6160210.0001	Sampled: 12/03/98
3468 Mt Diablo Blvd Ste B100	Sample Descript: B2,14-15'	Received: 12/04/98
Lafayette, CA 94549	Matrix: SOLID	Extracted: 12/07/98
	Analysis Method: 8015Mod/8020	Analyzed: 12/08/98
Attention: Christa Marting	Lab Number: 9812259-09	Reported: 12/16/98

QC Batch Number: GC120798BTEXEXA
Instrument ID: GCHP7

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	108
4-Bromofluorobenzene	60	140	66

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

SEQUOIA ANALYTICAL - ELAP #1210

for

Mei Mei Shin
Project Manager

Sequoia Analytical

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EA Engineering Science & Tech
3468 Mt Diablo Blvd Suite B100
Lafayette, CA 94549
Attention: Christa Marting

Client Project ID: Exxon 7-0210, 6160210.0001

QC Sample Group: 9812259-01-09

Reported: Dec 16, 1998

QUALITY CONTROL DATA REPORT

Matrix:	Solid
Method:	EPA 8015
Analyst:	R.GECKLER
ANALYTE	Gasoline

QC Batch #: GC120798BTEXEXA

Sample No.:	9812259-9
Date Prepared:	12/7/98
Date Analyzed:	12/7/98
Instrument I.D.#:	GCHP18
Sample Conc., mg/Kg:	N.D.
Conc. Spiked, mg/Kg:	5.0
Matrix Spike, mg/Kg:	5.8
% Recovery:	116
Matrix Spike Duplicate, mg/Kg:	4.3
% Recovery:	86
Relative % Difference:	30
RPD Control Limits:	0-25

LCS Batch#: GC120798BTEXEXA

Date Prepared:	12/7/98
Date Analyzed:	12/7/98
Instrument I.D.#:	GCHP18
Conc. Spiked, mg/Kg:	5.0
Recovery, mg/Kg:	4.9
LCS % Recovery:	98

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

Mei Mei Shin
Project Manager

Sequoia Analytical
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Redwood City, CA 94063
(650) 364-9600 • FAX (650) 364-9233

EXXON COMPANY, U.S.A.

P.O. Box 2180, Houston, TX 77002-7426

CHAIN OF CUSTODY

Dublin

Consultant's Name: EA Engineering Science and Technology			Page 1 of 2
Address: 3468 Mt. Diablo Blvd, Suite B-100 Lafayette		Site Location: 7840 Amada Valley Blvd
Project #:	Consultant Project #: 0616 0210. 0001	Consultant Work Release #: 19828593
Project Contact: Christa Martiny	Phone #: (925) 283-7077	Laboratory Work Release #:
EXXON Contact: Marla Gronski	Phone #: (925) 246-8776	EXXON RAS #: 7-0210
Sampled by (print): Diana Conkle	Sampler's Signature: Diana Conkle	
Shipment Method: lab pick up	Air Bill #:	

TAT: ☐ 24 hr ☐ 48 hr ☒ 72 hr ☐ 96 hr ☐ Standard (10 day)

ANALYSIS REQUIRED

Sample Description	Collection Date	Collection Time	Matrix Soil/Water/Air	Prsv	# of Cont.	Sequoia's Sample #	TPH/Gas BTEX/ MTBE 8015/ 8020	TPH/ Diesel EPA 8015	TRPH S.M. 5520			Temperature: _____ Inbound Seal: Yes No Outbound Seal: Yes No
98-12-257						actual						
B1, 10-11' ✓	12-3-98	0830	Soil	N	1	01	X					
B1, 19-20' ✓		0855			1							HOLD
B1, 15-16' ✓		0845			1	02	X					
B4, ~~10-11'~~ 8-9' ✓ DC.		0950			1	03	X					
B4, 15-16' ✓		~~1000~~ 1000 DC.			1	04	X					
B4, 19-20' ✓		1005			1							HOLD
B3, 10-11' ✓		1050			1	05	X					
B3, 12-12.5' ✓		1050			1	06	X					
B3, 19-20' ✓		1105			1	07	X					

RELINQUISHED BY / AFFILIATION	Date	Time	ACCEPTED / AFFILIATION	Date	Time	Additional Comments
Diana Conkle / EA	12-3-98	1555	Sequoia	12/4	1045	
Sequoia	12/4/98					
			Diana Conkle / Sequoia	12/4	1351	

Pink - Client
Yellow - Sequoia
White - Sequoia

Sequoia Analytical
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Redwood City, CA 94063
(650) 364-9600 • FAX (650) 364-9233

EXXON COMPANY, U.S.A.

P.O. Box 2180, Houston, TX 77002-7426

CHAIN OF CUSTODY

Dublin

Consultant's Name: EA Engineering, Science, and Technology			**Page** 2 of 2
Address: 3468 Mt. Diablo Blvd., Suite B-100 Lafayette			**Site Location:** 7840 Amador Valley Blvd
Project #:	**Consultant Project #:** 61602l0.0001		**Consultant Work Release #:** 19828593
Project Contact: Christa Martley	**Phone #:** (925) 283-7077		**Laboratory Work Release #:**
EXXON Contact: Marla Guensler	**Phone #:** (925) 246-8776		**EXXON RAS #:** 7 0210
Sampled by (print): Diana Conkle	**Sampler's Signature:** Diana Conkle		
Shipment Method: lab pick up	**Air Bill #:**		

TAT: ☐ 24 hr ☐ 48 hr ☒ 72 hr ☐ 96 hr ☐ Standard (10 day)

ANALYSIS REQUIRED

Sample Description	Collection Date	Collection Time	Matrix Soil/Water/Air	Prsv	# of Cont.	Sequoia's Sample #	TPH/Gas BTEX/ MTBE 8015/ 8020	TPH/ Diesel EPA 8015	TRPH S.M. 5520			Temperature:_____ Inbound Seal: Yes No Outbound Seal: Yes No
B2, 10-11' ✓	12-3-98	1150	Soil	No	1	->	X					
B2, 14-15' ✓	↓	1200	↓	↓	1	->	X					
B2, 19-20' ✓	↓	1205	↓	↓	1							HOLD

RELINQUISHED BY / AFFILIATION	Date	Time	ACCEPTED / AFFILIATION	Date	Time	Additional Comments
Diana Conkle / EA	12-3-98	1555	Sequoia	12/4	1045	
Sequoia	12.4.98					
			Sequoia	14	1357	

Pink - Client
Yellow - Sequoia
White - Sequoia

Sequoia Analytical

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EA Engineering Science & Tech
3468 Mt Diablo Blvd Ste B100
Lafayette, CA 94549
Attention: Christa Marting

Client Proj. ID: Exxon 7-0210, 6160210.0001

Lab Proj. ID: 9812259

Received: 12/04/98

Reported: 12/16/98

LABORATORY NARRATIVE

In order to properly interpret this report, it must be reproduced in its entirety. This report contains a total of 13 pages including the laboratory narrative, sample results, quality control, and related documents as required (cover page, COC, raw data, etc.).

SEQUOIA ANALYTICAL

for

Mei Mei Shin
Project Manager

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (650) 364-9600, FAX (650) 364-9233
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EA Engineering Science & Tech
3468 Mt Diablo Blvd Ste B100
Lafayette, CA 94549

Attention: Christa Marting

Client Proj. ID: Exxon 7-0210, 6160210.0001
Sample Descript: B1
Matrix: LIQUID
Analysis Method: 8015Mod/8020
Lab Number: 9812261-01

Sampled: 12/03/98
Received: 12/04/98

Analyzed: 12/07/98
Reported: 12/10/98

QC Batch Number: GC120798BTEX30A
Instrument ID: GCHP30

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	**50**	**100**
Methyl t-Butyl Ether	**250**	**3500**
Benzene	0.50	N.D.
Toluene	**0.50**	**1.7**
Ethyl Benzene	0.50	N.D.
Xylenes (Total)	0.50	N.D.
Chromatogram Pattern:		**gas**

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	102

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

SEQUOIA ANALYTICAL - ELAP #1210

Rebecca Stait

Mei Mei Shin
Project Manager

Sequoia Analytical

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EA Engineering Science & Tech
3468 Mt Diablo Blvd Ste B100
Lafayette, CA 94549

Attention: Christa Marting

Client Proj. ID: Exxon 7-0210, 6160210.0001
Sample Descript: B1
Matrix: LIQUID
Analysis Method: EPA 8260
Lab Number: 9812261-01

Sampled: 12/03/98
Received: 12/04/98

Analyzed: 12/09/98
Reported: 12/10/98

QC Batch Number: MS120898MTBEF2A
Instrument ID: F2

Methyl t-Butyl Ether (MTBE)

Analyte	Detection Limit ug/L	Sample Results ug/L
Methyl t-Butyl Ether	66	4000

Surrogates	Control Limits %		% Recovery
1,2-Dichloroethane-d4	76	114	91

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

SEQUOIA ANALYTICAL - ELAP #1210

Rebecca Stuart

Mei Mei Shin
Project Manager

Sequoia Analytical

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Lafayette, CA 94549

Attention: Christa Marting

Client Proj. ID: Exxon 7-0210, 6160210.0001
Sample Descript: B4
Matrix: LIQUID
Analysis Method: 8015Mod/8020
Lab Number: 9812261-02

Sampled: 12/03/98
Received: 12/04/98

Analyzed: 12/07/98
Reported: 12/10/98

QC Batch Number: GC120798BTEX03A
Instrument ID: GCHP03

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	96

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

SEQUOIA ANALYTICAL - ELAP #1210

Rebecca J Stratt

Mei Mei Shin
Project Manager

Sequoia Analytical

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EA Engineering Science & Tech
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Lafayette, CA 94549

Attention: Christa Marting

Client Proj. ID: Exxon 7-0210, 6160210.0001
Sample Descript: B3
Matrix: LIQUID
Analysis Method: 8015Mod/8020
Lab Number: 9812261-03

Sampled: 12/03/98
Received: 12/04/98

Analyzed: 12/07/98
Reported: 12/10/98

QC Batch Number: GC120798BTEX30A
Instrument ID: GCHP30

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	88

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

SEQUOIA ANALYTICAL - ELAP #1210

Rebecca J. Strait

Mei Mei Shin
Project Manager

Sequoia Analytical

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EA Engineering Science & Tech
3468 Mt Diablo Blvd Ste B100
Lafayette, CA 94549

Attention: Christa Marting

Client Proj. ID: Exxon 7-0210, 6160210.0001
Sample Descript: B2
Matrix: LIQUID
Analysis Method: 8015Mod/8020
Lab Number: 9812261-04

Sampled: 12/03/98
Received: 12/04/98

Analyzed: 12/07/98
Reported: 12/10/98

QC Batch Number: GC120798BTEX30A
Instrument ID: GCHP30

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**	**28**
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	84

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

SEQUOIA ANALYTICAL - ELAP #1210

Rebecca J. Stuart

Mei Mei Shin
Project Manager

Sequoia Analytical

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Lafayette, CA 94549

Attention: Christa Marting

Client Proj. ID: Exxon 7-0210, 6160210.0001
Sample Descript: B2
Matrix: LIQUID
Analysis Method: EPA 8260
Lab Number: 9812261-04

Sampled: 12/03/98
Received: 12/04/98

Analyzed: 12/09/98
Reported: 12/10/98

QC Batch Number: MS120898MTBEF2A
Instrument ID: F2

Methyl t-Butyl Ether (MTBE)

Analyte	Detection Limit ug/L	Sample Results ug/L
Methyl t-Butyl Ether	2.0	19

Surrogates	Control Limits %		% Recovery
1,2-Dichloroethane-d4	76	114	90

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

SEQUOIA ANALYTICAL - ELAP #1210

Rebecca Stuart

Mei Mei Shin
Project Manager

Sequoia Analytical

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EA Engineering Science & Tech
3468 Mt Diablo Blvd Ste B100
Lafayette, CA 94549
Attention: Christa Marting

Client Project ID: Exxon 7-0210, 6160210.0001

QC Sample Group: 9812261-02

Reported: Dec 10, 1998

QUALITY CONTROL DATA REPORT

Matrix:	Liquid				
Method:	EPA 8020				
Analyst:	MM				
ANALYTE	Benzene	Toluene	Ethylbenzene	Xylenes	
QC Batch #:	GC120798BTEX03A				
Sample No.:	GW9812056-4				
Date Prepared:	12/7/98	12/7/98	12/7/98	12/7/98	
Date Analyzed:	12/7/98	12/7/98	12/7/98	12/7/98	
Instrument I.D.#:	GCHP03	GCHP03	GCHP03	GCHP03	
Sample Conc., ug/L:	N.D.	N.D.	N.D.	N.D.	
Conc. Spiked, ug/L:	10	10	10	30	
Matrix Spike, ug/L:	8.0	8.2	8.5	26	
% Recovery:	80	82	85	87	
Matrix Spike Duplicate, ug/L:	7.3	7.5	7.7	24	
% Recovery:	73	75	77	80	
Relative % Difference:	9.2	8.9	9.9	8.4	
RPD Control Limits:	0-25	0-25	0-25	0-25	

LCS Batch#:	GC120798BTEX03A			
Date Prepared:	12/7/98	12/7/98	12/7/98	12/7/98
Date Analyzed:	12/7/98	12/7/98	12/7/98	12/7/98
Instrument I.D.#:	GCHP03	GCHP03	GCHP03	GCHP03
Conc. Spiked, ug/L:	10	10	10	30
LCS Recovery, ug/L:	8.7	9.1	9.3	28
LCS % Recovery:	87	91	93	93

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.

SEQUOIA ANALYTICAL

Rebecca J Strait

Rebecca Strait
Project Manager

Please Note:
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EA Engineering Science & Tech
3468 Mt Diablo Blvd Ste B100
Lafayette, CA 94549
Attention: Christa Marting

Client Project ID: Exxon 7-0210, 6160210.0001

QC Sample Group: 9812261-01,03-04

Reported: Dec 10, 1998

QUALITY CONTROL DATA REPORT

Matrix:	Liquid			
Method:	EPA 8020			
Analyst:	MM			
ANALYTE	Benzene	Toluene	Ethylbenzene	Xylenes
QC Batch #:	GC120798BTEX30A			
Sample No.:	GW9811158-2			
Date Prepared:	12/7/98	12/7/98	12/7/98	12/7/98
Date Analyzed:	12/7/98	12/7/98	12/7/98	12/7/98
Instrument I.D.#:	GCHP30	GCHP30	GCHP30	GCHP30
Sample Conc., ug/L:	N.D.	N.D.	N.D.	N.D.
Conc. Spiked, ug/L:	10	10	10	30
Matrix Spike, ug/L:	11	11	10	31
% Recovery:	110	110	100	103
Matrix Spike Duplicate, ug/L:	12	11	11	32
% Recovery:	120	110	110	107
Relative % Difference:	8.7	0.0	9.5	3.8
RPD Control Limits:	0-25	0-25	0-25	0-25

LCS Batch#:	GC120798BTEX30A			
Date Prepared:	12/7/98	12/7/98	12/7/98	12/7/98
Date Analyzed:	12/7/98	12/7/98	12/7/98	12/7/98
Instrument I.D.#:	GCHP30	GCHP30	GCHP30	GCHP30
Conc. Spiked, ug/L:	10	10	10	30
LCS Recovery, ug/L:	11	10	10	30
LCS % Recovery:	110	100	100	100

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.

SEQUOIA ANALYTICAL

Rebecca Strait

Rebecca Strait
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.

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E.A. Engineering Science & Tech.
3468 Mt. Diablo Blvd., Ste. B-100
Lafayette, CA 94549
Attention: Christa Marting

Client Project ID: Exxon 7-0210, 6160210.0001
Matrix: Liquid
Work Order #: 9812261 01, 04
Reported: Jan 5, 1999

QUALITY CONTROL DATA REPORT

Analyte:	MTBE
QC Batch#:	MS120998MTBEF2A
Analy. Method:	EPA 8260
Prep. Method:	

Analyst:	L. Duong
MS/MSD #:	981218604
Sample Conc.:	N.D.
Prepared Date:	12/5/98
Analyzed Date:	12/5/98
Instrument I.D.#:	F2
Conc. Spiked:	50 µg/L
Result:	39
MS % Recovery:	78
Dup. Result:	41
MSD % Recov.:	82
RPD:	5.0
RPD Limit:	0-25

LCS #:	LCS120998
Prepared Date:	12/9/98
Analyzed Date:	12/9/98
Instrument I.D.#:	F2
Conc. Spiked:	50 µg/L
LCS Result:	41
LCS % Recov.:	82

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

SEQUOIA ANALYTICAL

Mei Mei Shin
Project Manager

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

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EXXON COMPANY, U.S.A.

P.O. Box 2180, Houston, TX 77002-7426

CHAIN OF CUSTODY

Consultant's Name: EA Engineering — Page 1 of 1

Address: 3468 Mt. Diablo Blvd Ste B-100 Lafayette — Site Location: Dublin

Project #: ~~06-0210-0001~~ — Consultant Project #: 6160210.0601 — Consultant Work Release #: 19828593

Project Contact: Christa Martins — Phone #: 925) 283-7077 — Laboratory Work Release #:

EXXON Contact: Marla Carnesale — Phone #: 925) 246-8776 — EXXON RAS #: 7-0210

Sampled by (print): Bill Howell — Sampler's Signature: Bill Howell

Shipment Method: lab pick up — Air Bill #:

TAT: ☐ 24 hr ☐ 48 hr ☒ 72 hr for Dianeconke ☐ 96 hr ☐ Standard (10 day)

(X) ANALYSIS REQUIRED

Sample Description	Collection Date	Collection Time	Matrix Soil/Water/Air	Prsv	# of Cont.	Sequoia's Sample #	TPH/Gas BTEX/ 8015/ 8020 MTBE	TPH/ Diesel EPA 8015	TRPH S.M. 5520			Temperature: Inbound Seal: Yes No Outbound Seal: Yes No
98-12-261												
B1	12-3-98	0850	Water	HCl	3	01	✓					
B4	12-3-98	10:10		HCl	3	02	✓					Confirm highest MTBE by 8260
B3	12-3-98	11:20		HCl	3	03	✓					
B2	12-3-98	1225	↓	HCl	3	04	✓					

RELINQUISHED BY / AFFILIATION	Date	Time	ACCEPTED / AFFILIATION	Date	Time	Additional Comments
Bill Howell	12/3/98	17:00	SEQUOIA	12/4	1045	
SEQUOIA	12.4.98					
			Sequoia	12/4	1557	

Pink - Client
Yellow - Sequoia
White - Sequoia

Sequoia Analytical

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EA Engineering Science & Tech
3468 Mt Diablo Blvd Ste B100
Lafayette, CA 94549
Attention: Christa Marting

Client Proj. ID: Exxon 7-0210, 6160210.0001

Lab Proj. ID: 9812261

Received: 12/04/98

Reported: 12/10/98

LABORATORY NARRATIVE

In order to properly interpret this report, it must be reproduced in its entirety. This report contains a total of 1 pages including the laboratory narrative, sample results, quality control, and related documents as required (cover page, COC, raw data, etc.).

MTBE Note: The sample 9812261-01 was analyzed twice for MTBE. MTBE is reported from the QC batch GC120898BTEX03A.

SEQUOIA ANALYTICAL

Mei Mei Shin
Project Manager

Sequoia Analytical

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EA Engineering Science & Tech
3468 Mt Diablo Blvd Ste B100
Lafayette, CA 94549

Attention: Christa Marting

Client Proj. ID: Exxon 7-0210, 6160210.0001

Lab Proj. ID: 9812379

Sampled: 12/03/98
Received: 12/07/98
Analyzed: see below

Reported: 12/16/98

LABORATORY ANALYSIS

Analyte	Units	Date Analyzed	Detection Limit	Sample Results
Lab No: 9812379-01				
Sample Desc : **SOLID,Drum Comp**				
Lead by ICP	**mg/Kg**	**12/09/98**	**5.0**	**6.7**

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

SEQUOIA ANALYTICAL - ELAP #1210

for

Mei Mei Shin
Project Manager

Sequoia Analytical

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

EA Engineering Science & Tech	Client Proj. ID: Exxon 7-0210, 6160210.0001	Sampled: 12/03/98
3468 Mt Diablo Blvd Ste B100	Sample Descript: Drum Comp	Received: 12/07/98
Lafayette, CA 94549	Matrix: SOLID	Extracted: 12/08/98
	Analysis Method: 8015Mod/8020	Analyzed: 12/14/98
Attention: Christa Marting	Lab Number: 9812379-01	Reported: 12/16/98

QC Batch Number: GC120898BTEXEXB
Instrument ID: GCHP18

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas	1.0	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	86
4-Bromofluorobenzene	60	140	71

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

SEQUOIA ANALYTICAL - ELAP #1210

for

Mel MeiShin
Project Manager

Sequoia Analytical

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EA Engineering Science & Tech
3468 Mt Diablo Blvd Suite B100
Lafayette, CA 94549
Attention: Christa Marting

Client Project ID: Exxon 7-0210, 6160210.0001

QC Sample Group: 9812379-01

Reported: Dec 16, 1998

QUALITY CONTROL DATA REPORT

Matrix: Solid
Method: EPA 8020
Analyst: R.GECKLER

ANALYTE	Benzene	Toluene	Ethylbenzene	Xylenes
QC Batch #:	GC120898BTEXEXB			
Sample No.:	9812376-2			
Date Prepared:	12/8/98	12/8/98	12/8/98	12/8/98
Date Analyzed:	12/8/98	12/8/98	12/8/98	12/8/98
Instrument I.D.#:	GCHP22	GCHP22	GCHP22	GCHP22
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:	0.20	0.19	0.19	0.55
% Recovery:	100	95	95	92
Matrix Spike Duplicate, mg/Kg:	0.21	0.20	0.20	0.57
% Recovery:	105	100	100	95
Relative % Difference:	4.9	5.1	5.1	3.2
RPD Control Limits:	0-25	0-25	0-25	0-25

LCS Batch#:	GC120898BTEXEXB			
Date Prepared:	12/8/98	12/8/98	12/8/98	12/8/98
Date Analyzed:	12/8/98	12/8/98	12/8/98	12/8/98
Instrument I.D.#:	GCHP22	GCHP22	GCHP22	GCHP22
Conc. Spiked, mg/Kg:	0.20	0.20	0.20	0.60
Recovery, mg/Kg:	0.23	0.22	0.21	0.63
LCS % Recovery:	115	110	105	105

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.

SEQUOIA ANALYTICAL

for Mel Shin
Project Manager

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E.A. Engineering Science & Tech.
3468 Mt. Diablo Blvd., Ste. B-100
Lafayette, CA 94549
Attention: Christa Marting

Client Project ID: Exxon 7-0210, 6160210.0001
Matrix: Solid
Work Order #: 9812379 01
Reported: Dec 21, 1998

QUALITY CONTROL DATA REPORT

Analyte:	Beryllium	Cadmium	Chromium	Nickel
QC Batch#:	ME1208986010MDE	ME1208986010MDE	ME1208986010MDE	ME1208986010MDE
Analy. Method:	EPA 6010	EPA 6010	EPA 6010	EPA 6010
Prep. Method:	EPA 3050	EPA 3050	EPA 3050	EPA 3050
Analyst:	Dave/LaBarron	Dave/LaBarron	Dave/LaBarron	Dave/LaBarron
MS/MSD #:	981237901	981237901	981237901	981237901
Sample Conc.:	N.D.	N.D.	27	35
Prepared Date:	12/8/98	12/8/98	12/8/98	12/8/98
Analyzed Date:	12/9/98	12/9/98	12/9/98	12/9/98
Instrument I.D.#:	MTJA5	MTJA5	MTJA5	MTJA5
Conc. Spiked:	50 mg/Kg	50 mg/Kg	50 mg/Kg	50 mg/Kg
Result:	37	37	66	68
MS % Recovery:	74	74	78	66
Dup. Result:	46	46	71	74
MSD % Recov.:	92	92	88	78
RPD:	22	22	7.3	8.5
RPD Limit:	0-20	0-20	0-20	0-20
LCS #:	BLK120898	BLK120898	BLK120898	BLK120898
Prepared Date:	12/8/98	12/8/98	12/8/98	12/8/98
Analyzed Date:	12/9/98	12/9/98	12/9/98	12/9/98
Instrument I.D.#:	MTJA5	MTJA5	MTJA5	MTJA5
Conc. Spiked:	50 mg/Kg	50 mg/Kg	50 mg/Kg	50 mg/Kg
LCS Result:	49	49	50	50
LCS % Recov.:	98	98	100	100
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

Mei Mei Shin
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
680 Chesapeake Dr.
Redwood City, CA 94063
(650) 364-9600 • FAX (650) 364-9233

EXXON COMPANY, U.S.A.

P.O. Box 2180, Houston, TX 77002-7426

CHAIN OF CUSTODY

9812379

Dublin Blvd.

Consultant's Name: EA Engineering, Science, and Technology		Page 1 of 1
Address: 3468 Mt. Diablo Blvd., Suite B-100 Lafayette CA		**Site Location:** 7840 Amador Valley
Project #:	**Consultant Project #:** 616 0210. 0001	**Consultant Work Release #:** 19828593
Project Contact: Christa Matthy	**Phone #:** (925) 283-7077	**Laboratory Work Release #:**
EXXON Contact: Marla Guensler	**Phone #:** (925) 246-8776	**EXXON RAS #:** 7-0210
Sampled by (print): Diana Conkle	**Sampler's Signature:** D Conkle	
Shipment Method: lab pick up	**Air Bill #:**	

TAT: ☐ 24 hr ☐ 48 hr ☒ 72 hr ☐ 96 hr ☐ Standard (10 day)

Sample Description	Collection Date	Collection Time	Matrix Soil/Water/Air	Prsv	# of Cont.	Sequoia's Sample #	ANALYSIS REQUIRED: TPH/Gas BTEX/ 8015/ 8020	TPH/ Diesel EPA 8015	TRPH S.M. 5520	total Lead		Temperature: Inbound Seal: Yes No Outbound Seal: Yes No
Drum Comp	12-3-98		Soil	NO	1	01	✓			✓		* if TPHg concentration is greater than 50 mg/kg run 8010

RELINQUISHED BY / AFFILIATION	Date	Time	ACCEPTED / AFFILIATION	Date	Time	Additional Comments
Diana Conkle / EA	12-7-98	1030	SEQUOIA	12/7	1205	
SEQUOIA	12-7-98					
				12/8	1427	

Pink - Client
Yellow - Sequoia
White - Sequoia

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

EA Engineering Science & Tech
3468 Mt Diablo Blvd Ste B100
Lafayette, CA 94549
Attention: Christa Marting

Client Proj. ID: Exxon 7-0210, 6160210.0001
Lab Proj. ID: 9812379

Received: 12/07/98
Reported: 12/16/98

LABORATORY NARRATIVE

In order to properly interpret this report, it must be reproduced in its entirety. This report contains a total of 6 pages including the laboratory narrative, sample results, quality control, and related documents as required (cover page, COC, raw data, etc.).

SEQUOIA ANALYTICAL

for

Mei Mei Shin
Project Manager