# **DOCUMENT TRANSMITTAL**

## THE SUTTON GROUP

Engineering and Environmental Services

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TO:

Ms. Amy Leach

of

**Division of Environmental Protection** 

Alameda Co. Environmental. Health Dept.

DATE

May 17, 1996

PROJECT:

**Gasoline Tank Area Investigation** 

PROJECT No.: 3022.7

SUBJECT:

**DRAFT** Reports for Your Use

INITIATOR: John R. Sutton, PE

With approval of Mr. Mike Cortez of Oro Loma Sanitary District, I transmit for your use a DRAFT copy of "Report of Soil And Ground Water Investigations At The Former site of a 1,000 Gallon Gasoline Tank at the Oro Loma Sanitary District Service Center, San Lorenzo, California."

Please note that the report is presently under review by the District. The purpose of this transmittal is to provide you with advance data for use in evaluating conditions on a nearby property.

The report delay has been due to the two additional field mobilizations in the gasoline tank area. As we have discussed, this was brought about by an erroneous test result which indicated contamination in an area believed to be relatively free of contamination. The additional field and laboratory work confirmed the result to be erroneous.

Should you have questions or comments, please call me, or place a message on my Universal pager at 1-800-501-1570.

Enclosure

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# REPORT of SOIL AND GROUND WATER INVESTIGATIONS

at the former site of a
1,000 GALLON GASOLINE TANK
at the
Oro Loma Sanitary District Service Center
San Lorenzo, California

PREPARED FOR

Mr. Mike Cortez
ORO LOMA SANITARY DISTRICT
2600 Grant Avenue
San Lorenzo, CA 94580

PREPARED BY

THE SUTTON GROUP

LIC. No. 40324

John R. Sutton Civil Engineer No. 40324 Geotechnical Engineer No. 812 expires 12/31/1998

THE SUTTON GROUP Engineering and Environmental Services 51 Shuey Drive, Moraga, CA 94556-2620 phone (510) 631-1688 fax (510) 631-1371

## REPORT

# of

# SOIL AND GROUND WATER INVESTIGATIONS

# at the former site of a 1,000 GALLON GASOLINE TANK

at the

Oro Loma Sanitary District Service Center San Lorenzo, California

# TABLE OF CONTENTS

			<u>Page No.</u>
1.0	INTRODUCTION	J	1
1.1	Statement of Wor		1
1.3	Site Conditions		1
1.4	Regional and Loca	al Hydrogeology	. 1
2.0	SOIL AND GRO	UND WATER INVESTIGATION	2
2.1	Drilling and Soil S		2
2.2	Ground Water Sa		3
2.3	Soil Cuttings and	Collected Water Management	3
3.0	SUBSURFACE (	CONDITIONS	3
3.1	Soil Conditions	•	3
3.2	Ground Water Co	onditions	4
4.0	CHEMICAL AN	ALYSIS OF SAMPLES	4
4.0		am and Procedures	4
4.1 4.2	Analytical Results	e: Soil	4
4.2 4.3	Analytical Results		5
	-		6
5.0	DISCUSSION		v
6.0	CONCLUSIONS	· }	6
7.0	RECOMMENDA	ATIONS	7
	* D GELTIONE		8
8.0	LIMITATIONS		
ŢĄE	BLE 1 S	ummary of Analytical Results, Soil Sample	es
	BLE 2 S	ummary of Analytical Results, Water Sam	ples

#### TABLE OF CONTENTS

Page 2 of 2

FIGURE 1 SITE LOCATION MAP FIGURE 2 PLANT LOCATION MAP FIGURE 3 BORING LOCATIONS

APPENDIX A SOIL CORING AND SAMPLING, AND

GROUND WATER SAMPLING PROCEDURES

APPENDIX B BORING LOGS

APPENDIX C LABORATORY TEST REPORTS

APPENDIX D SUMMARY OF PREVIOUS ANALYTICAL RESULTS

#### REPORT

# of SOIL AND GROUND WATER INVESTIGATIONS

at the former site of a 1,000 GALLON GASOLINE TANK

at the

Oro Loma Sanitary District Service Center San Lorenzo, California

#### INTRODUCTION 1.0

#### Statement of Work 1.1

This soil and ground water investigation was conducted to clarify the horizontal and vertical extent and the severity of gasoline residuals in the soil and groundwater near the former site of a 1,000 gallon, underground, gasoline storage tank. The tank was located adjacent to the Ora Loma Sanitary District (OLSD) Service Center, at 2600 Grant Avenue, San Lorenzo, in unincorporated Alameda County. The site vicinity is shown on Figure 1, and the site location more specifically in relation to the OLSD facilities on Figure 2. A concurrently conducted supplemental investigation of an OLSD diesel tank site is reported separately

Background 1.2

The Work Plan dated January 9, 1996, presented a detailed history of the environmental site history, and tabulates all environmental test data for the site. Work Plan comments by Alameda County Environmental Health Department, Division of Environmental Protection (ACEH), as presented in their letter dated February 1, 1996, requested that we evaluate potential extension of the plume beneath the building(s), and testing for Methyl Tertiary Butyl Ether (MTBE). These requests were discussed with ACEH in advance of the field work and resolved.

#### Site Conditions 1.3

The site vicinity of the OLSD sewage treatment plant facility and adjacent service center is generally level. The grade ranges from elevation 6 to 9 feet above mean sea level (msl). The area on which the OLSD plant was built was at one time bayland with man-made fill placed to raise the site above the Bay Mud. The site at the gasoline tank area is a paved parking lot at approximate elevations 8 to 9 feet msl...

Regional and Local Geology and Hydrology 1.4

The facility lies on the San Francisco Bay margin of the East Bay Plain. The East Bay Plain is a three to five miles wide, gently sloping alluvial plain which falls from the foot of the Oakland Hills, south westward to the San Francisco Bay shore. The local topography comprises a typical filled bay setting with bayland deposits covered with manmade fill material to provide stability for structures sited in the area. Prior to filling, the land was tidal wetlands and mudflats of the East Bay. The bay land, clays known regionally as Bay Mud are about 20 feet thick at the site. Clays and sands extend to significant depth. Bedrock is many hundreds of feet deep beneath the site.

Bay. The bay land, clays known regionally as Bay Mud are about 20 feet thick at the site. Clays and sands extend to significant depth. Bedrock is many hundreds of feet deep beneath the site.

Local hydrogeology consisted of saline groundwater caused by intrusion of bay waters into the shallow brackish aquifers. These aquifers extend down to various levels. Underlying these brackish aquifers at levels from 50 to 500 feet is a groundwater aquifer currently not used by the community.

## 2.0 SOIL AND GROUND WATER INVESTIGATIONS

#### 2.1 Drilling and Soil Sampling

The work was performed in general accordance with the Work Plan. Five borings were planned for the gasoline tank investigation. Two more boring locations were added in the field making a total of seven boring locations drilled. Borings drilled for this investigation were numbered EP-1 through EP-7. It should be noted that on the same date as this gasoline tank investigation, we conducted a supplementary investigation near the location of two former diesel tanks using the same personnel and equipment. Diesel tank area borings were designated EPD-1 and 2.

In their Work Plan Review Letter dated February 1, 1996, ACEH requested that a boring be placed on the north side of the OLSD Maintenance Building to determine the extent of northward plume migration. It was concurred between the writers and ACEH, in advance of the drilling day, that the decision to drill this boring would be based upon field screening results for soil samples from Boring EP-3. Field screening was negative, and thus no additional boring was sited north of the Maintenance Building.

Borings were advanced using Precision Sampling, Inc.'s model XD-2 vibratory hammer drill rig. This low-headroom rig was able to work beneath the wide eaves and position borings close to the sides of the buildings. Based on this rig capability and the knowledge of hydro-geological conditions, it was decided in the field to drill all borings vertically in lieu of angle drilling to collect samples near the building walls. Appendix A provides details of the drilling and sampling procedures.

A drilling permit for the work was provided by Alameda County Drainage and Flood Control District (Zone 7). Boring locations were surveyed by Underground Service Alert (USA) in advance of rig mobilization.

Ground water was found in the range five to eight feet depth below ground. The borings were extended to about 12 feet depth and a temporary well casing was installed to facilitate collection of a ground water sample at each boring location.

Soil samples were collected in three foot drives. Samples were recovered in stainless steel tubes, 1 5/8 inches diameter by six inches long. The samples were observed for discoloration and odor,

and screened with a photo-ionization detector (PID. The majority of samples were field-extruded from the tubes for logging purposes. Selected soil samples were maintained "undisturbed," sealed, and scheduled for chemical analysis. The presence of the man-made fill, crushed quarry stone, hampered sample collection in the upper three to four feet of depth. Supplementary borings were extended adjacent to borings No. EP-2 and EP-3 to provide additional samples for screening and for confirmatory purposes. Boring EP-2A was drilled at the time of initial drilling due to poor sample recovery in the shallow zone. Boring EP-2B was hand auger drilled on April 2, 1996, and borings EP-3A and 3B were drilled by the XD-2 rig on April 18, 1996. Details of the additional drilling are presented below under "Analytical Results, Soils"

A chain-of-custody form was initiated by the sampler on each sampling day and accompanied the samples to the analytical laboratory. All samples collected were delivered under chain-of custody to the District's chemical analysis laboratory.

2.2 Ground Water Sampling

Ground water sampling entailed recovery of water from temporary wells. The one inch diameter temporary wells comprised a five foot long well screen section with .010 inch slots, a threaded base cap and a ten foot long top section of blank casing. A slip cap was set on the casing top and a temporary security seal placed around the casing.

Ground water samples were collected on March 9, 1996. Casings were sounded for water depth prior to sampling. Some of the temporary wells had up to 1.5 feet of silt and or clay after drawing overnight.

The locations of borings, previously drilled borings, test trench excavations, and tank-removal sampling locations, and their summarized chemical test results are presented on. The results of chemical analyses compiled from the two previous investigation phases and the tank removal sampling are summarized in Appendix C.

2.3 Soil Cuttings And Collected Water Management

The soil cuttings were placed on visqueen at a designated location on the site, and transported to the on-site accumulation cell, for eventual disposition by the District. Excess recovered ground water and 1 rinsate from the cleaning temporarily contained in portable tanks, and later, with approval, was discharged into the sanitary sewer system for treatment at the District's POTW.

## 3.0 SUBSURFACE CONDITIONS

#### 3.1 Soil Conditions

The site comprises man-made fill with asphalt surfacing overlying native bayland deposits. The asphalt paving, where present is approximately 2 ½" thick. The man-made fill was typically a

reasonably well graded, crushed stone typical of sub base and base course material, and with relatively high firmness. The fill ranged in total thickness from 2.5 to six feet. Occasionally a brown clay was mixed with the crushed stone. Three of the borings were located in planter areas. The upper 1.5 feet of fill in these three borings was a brown, very clayey sand loam in lieu of the upper quarry stone. Boring EP-7 was outside the limits of the quarry stone fill. A bridging fill of waste building materials, including lumber, has been noted to exist beneath the manmade fill at the contact with the bayland soils.

The bayland soils were often shown to have a peat layer or crusted clay surface, typically brown to black, about one foot thick, and with a noticeable organic odor, overlying the characteristic green to black, moderately to highly plastic, Bay Mud clays. A layer of fine, gray to black sand, which was clean to silty or clayey, and varying in thickness from one to three feet, was noted in five of the seven borings. The top of this sand layer was at from three to six feet depth where found. This layer was typically wet, and often had a pronounced petroleum odor. The layer was bounded on its underside by characteristic green to black Bay Mud type clays to the maximum depth drilled.

#### 3.2 Ground Water Conditions

Ground water depth was typically identified from the appearance of recovered soil samples. Additionally, depth to ground water was measured the day following drilling, prior to collection of the water samples. Ground water ranged from five to seven feet depth in the borings.

#### 4.0 CHEMICAL ANALYSIS OF SAMPLES

#### 4.1 Laboratory Program and Procedures

Samples were analyzed by Sequoia Analytical Laboratory of Redwood City California, under contract to the District. Sequoia is an independent, California EPA-certified hazardous waste testing laboratory (ELAP No. 1210), accredited to perform the analyses in accordance with the San Francisco Bay Regional Water Quality Control Board, and the Alameda County Health Department's Hazardous Materials Program's guidelines for analysis of petroleum fuel releases from underground tanks.

Soil samples from the gasoline tank area were analyzed for total purgeable petroleum hydrocarbons as gasoline, benzene, toluene, ethyl benzene and xylenes using EPA methods 5030, and 8020,) and lead by method 6010, all in accordance with Table 2 of the "Tri-Regional Guidelines, dated August 1990 Additionally, Methyl Tertiary Butyl Ether (MTBE) was added to the analytes list at the recommendation of Alameda County Health.

The ground water samples were analyzed for the same chemical constituents (analytes) as the soil samples.

#### 4.2 Analytical Results: Soil

The soil samples collected from the vadose zone generally were without odor and gave none to low response on the PID. Sample results generally concurred with this. Table 1 is a summary of the laboratory test data for soils. The laboratory reports are included in Appendix C. As stated above, samples from the diesel tank area were collected on the same days and forwarded to the laboratory under the same chain-of custody and request for analysis. The report pages for diesel analysis have been omitted from this document.

Les report dated 6/7/96 Bessel Jank Collection.

Samples were also collected from the sand zone, which underlies the clay cap at the native soils interface. This sand zone generally appears to lie at, or just beneath, the ground water level but was only identified for the first time in this investigation. The results of the sampling from this sand zone concurred with the general plume boundary as interpreted in previous investigations. The sample from Boring EP-2, taken adjacent to the wall of the Engineering Building at 6.5 to 7 feet depth, exhibited a noticeable level of gasoline. This was confirmed in the laboratory. Samples from the clay overlying the sand layer were typically without odor.

The sample result from EP-3 at 3 to 3.5 feet depth result indicated 810 ppm contamination as gasoline while the boring log indicates that there was little sample recovery from the gravel fill in the vadose zone of EP-3 at depths less than four feet, and there was no measurable field PID response. It was concluded that this sample was mis-labeled. The initial conclusion was that the sample was from the previously drilled boring EP-2A. Sample cross referencing did not result in a solution, and so, on April 2, 1996, boring EP-2A was hand-augered in a location less than two feet distant from the EP-2 original location. Samples analyzed from two depths in EP-2B chosen to bracket the original EP-2A sample each resulted in no detection of gasoline. An examination of the soil in the analyzed sample from EP-3 indicated that the soil properties were similar to those of the sand layer that resides beneath the Bay Mud cap, and bore no similarity to the fill soils. On April 18, 1996 the XD-2 rig was remobilized to the site to drill through the paving and gravel fill at EP-3. Two additional borings, EP-3A and EP-3B were drilled within two feet of the original EP-3 location. Soil recovered was field screened with a PID. No measurable reading was obtained. Samples were sent to the laboratory for testing.

# 4.3 Analytical Results: Ground Water

The results of grab ground water sampling concur with previously provided plume boundary information. The results, summarized on Table 2, are in parts per billion (µg/l). The results for "grab" water samples EP-1, 0.51 mg/l, and EP-2, 230 mg/l (230,000 µg/l), and a benzene reading of 23 mg/l indicate that the plume has spread easterly and south easterly beneath the Engineering Building. The sample from EP-5, 64 mg/l, indicates plume approach towards the Grant Avenue boundary.

On the basis of the readings in EP-1 and EP-2, two additional borings, EP-6 and EP-7 were field sited on the distant sides of the Engineering Building from borings EP-1 and EP-2. The intent

was to provide an indication of plume extent. Odor, field screen results and laboratory test results from both additional borings were "non detect" and show that the plume boundary has not approached these borings, and thus must lie beneath the building.

The water sample result from Boring EP-3, near the Maintenance Building, indicates a relatively low level of TPH as gasoline. The benzene level from this grab sample analysis was at the level of regulatory concern, however, grab samples are analyzed unfiltered, and as such, may be exhibiting contamination adherent to particulates in suspension an not true water contamination.

None of the samples exhibited total lead levels of regulatory significance. On this basis, soluble lead analysis was not performed.

The highest result for methyl tertiary butyl ether (MTBE) was 3.9mg/l. This was in a water sample. Soil samples did not indicate presence of MTBE

The analytical results from the investigation are summarized on Tables 1 and 2, for soils and waters respectively. The laboratory report is included in Appendix C. Tabulated analytical results from previous investigations have been included as Appendix D.

#### 5.0 DISCUSSION

The objective of this sampling program was to collect soil and ground water samples to determine the severity and extent of contamination attributable to the leaking tank. More particularly, the investigation results would be used to identify the proper locations for permanent ground water monitoring wells, and to provide exposure source data for input into a health risk assessment that will establish long term clean-up goals for the site. The health risk assessment will be performed according to the procedure in ASTM E-1739, "Standard Guide for Risk-Based Corrective Action (RBCA) Applied at Petroleum Release Sites". This is the procedure recommended by the San Francisco Bay Regional Water Quality Control Board RWQCB in support of the Lawrence Livermore Laboratory report recommendations for action at low risk fuel release sites. This investigation also provided more conclusive data about the lateral extent of ground water contamination in relation to the Maintenance Building the Engineering Building, and the site boundaries.

#### 6.0 CONCLUSIONS

The study confirmed the near-surface geotechnical conditions observed in previous explorations, except for the finding of a pervious, relatively continuous, thin, sand layer immediately beneath the Bay Mud interface. Based on field organic vapor and olfactory indications, this layer appeared to be the significant conduit for ground water-borne contaminant transport.

Analytical results concur with the earlier findings of leaded gasoline contamination in the upper eleven feet of subsurface profile, as previously identified during the May 1995 excavation to remove the tank. Significant contamination, previously adjudged to "extend to less than 10 feet depth", was essentially confirmed to be contained within the shallow sand zone that underlies the clay/peat (former) surficial cap of the Bay Mud deposits. This clay cap, which lies at from 4 to 6 feet below site grade, appears to be an effective barrier containing the gasoline at that depth. Deeper clays may well be confining the gasoline contamination from downward vertical transport.

The study showed that gasoline contamination plume extends, via ground water transport, beneath the west wall of the Engineering Building. The level of gasoline contamination in ground water in boring EP-2, located on the northwest (parking lot) side of the Engineering Building, and boring EP-5, at the entrance to the Engineering Building parking lot, on the Grant Avenue boundary, exceed threshold levels that, prior to RBCA, would trigger further study. Borings sited on the remote sides of the Engineering Building were relatively free of ground water contamination. Likewise, the ground water sample collected near the wall of the Maintenance Building shows a relatively insignificant level of gasoline contamination. The significant direction of ground water movement is to the south east and south, i.e. generally normal to the alignment of Grant Avenue. It is reasonable to conclude that gasoline tainted ground water flowing west toward Grant Avenue would be intercepted by The District's large-diameter, gravity trunk sewers in Grant, The pipes are understood to be bedded in, pervious gravel.

Horizontal contamination boundaries, based on the original subsurface investigations by Levine Fricke in August, 1993, subsequent investigations by The Sutton Group in November 1994, and observations at the time the tank was removed in May, 1995, strongly suggest ground contamination is of limited lateral extent. This is confirmed by the absence of contamination in water samples from borings EP-4 and EP-7

#### 7.0 **RECOMMENDATIONS**

Based on the concentrations of gasoline in soil and ground water samples at boring EP-3, we recommend that no further consideration be given to health risk at the Maintenance Building area.

Based on the concentrations of gasoline indicated in soil and ground water samples at locations EP-2/2A/2B, it is recommended that the RBCA health risk assessment be performed to quantify the potential for health effects on personnel in the north western portion of the Engineering Building. The study should be performed to Tier 2.

Based on the concentrations of gasoline indicated in the ground water sample at location EP-5, the potential for environmental risk. This RBCA assessment should be initially be performed at

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THE SUTTON GROUP

Tier 1. Based on the results it may be appropriate to refine the analysis to Tier 2 to result in an assessment of the need for ground water corrective action. An investigation of the potential presence of, and concentration of gasoline residuals in the sewer pipe backfill should be included.

Should the risk assessment conclude a need for ground water corrective action, it is our recommendation that The District consider what appears to be a more cost effective remedial alternative for the relatively small quantity of fuel-contaminated ground water traveling west across the site to the Grant Avenue property line. The most feasible action at this time, appears to be interception/collection of the west-bound seepage flow, with discharge to the OLSD sewer. Treatment of this limited extent body of tainted water would be by biological treatment in the District's POTW. At this early juncture, this corrective action would appear to be more appropriate than the excavation-and-backfill of the contaminant zone, followed by near-site soil remediation, and biological water treatment, that was recommended prior to discovery of the sand zone discussed here-in.

Following selection of a corrective action, monitoring wells should be located in the vicinities of borings EP-5, EP-7, and SB-4.

#### 8.0 LIMITATIONS

This report has been prepared according to generally accepted geologic, geotechnical and environmental engineering practices. No other warranty, either expressed or implied is made. The analysis, conclusions and recommendations contained herein are based on review of customer-provided data and other available documents relevant to the site conditions. Changes in the information or data gained from any of these sources could result in the need for changes in conclusions and recommendations. If such changes do occur, we should be advised so that we can review this document in light of these changes.

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### GASOLINE TANK AREA **SUMMARY OF ANALYTICAL RESULTS**

## **SOIL SAMPLES**

## SOIL AND GROUNDWATER INVESTIGATION, 19961

BORING	Depth	TPH-GAS	Benzene	Toluene	Ethyl Benzene	Total Xylenes	MTBE	Lead
	feel	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EP-1	6.5-7	4.5	ND	ND	ND	.059	ND	7.7
EP-2	6.5-7	1800	21	120	3.5	180	ND*	16
EP-2B	2.5-3	ND	ND	ND	ND	ND	NA	13
EP-2B	3.1-3.6	ND	ND	ND	ND	ND	NA	ND
EP-3 <sup>2</sup>	3.0-3.5	(810)	(8.7)	(47)	(14)	(72)	NA ·	NA
EP-3	6.5-7	5.3	ND	ND	ND	.036	ND	ND
EP-3A	1.5-2	ND	ND	ND	ND	ND	NA	NA
EP-3B	3.5-4	ND	ND	ND	ND	ND	ND	NA
EP-3B	4.5-5	1.5	ND	ND	ND	0.010	. NA	NA
EP-5	3.5-4	29	1.5	0.24	0.90	2.2	NA	49
EP-6	3.5-4	ND	ND	ND	ND	ND	ND	46
MDL'S		1.0	0.0050	0.0050	0.0050	0.0050	.025-6	5.0

Refer to Laboratory Reports for complete listing of results
 Sample mislabeled. Result erroneous. Refer to report text

#### GASOLINE TANK AREA

#### **SUMMARY OF ANALYTICAL RESULTS**

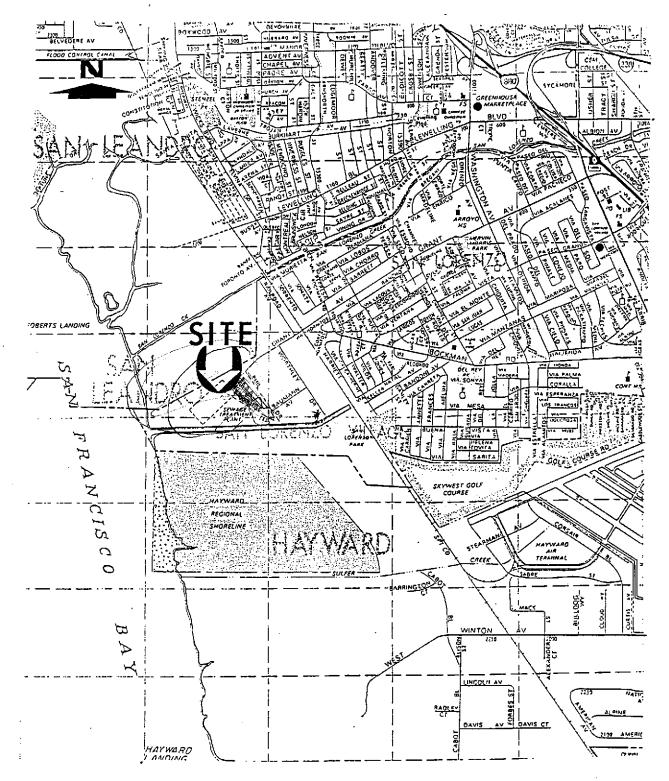
### WATER SAMPLES

BORING	TPH-GAS ug/l	Benzene ug/l	Toluene ug/l	Ethyl Benzene ug/l	Xylenes ug/l	MTBE ug/l	Lead mg/l
EP-1	510*	31*	7.4*	3.8*	15*	19*	ND
EP-2	230,000*	23,000*	47,000*	4,300*	21,000*	3,900*	0.074*
EP-3	210	5.8	2.6	1	3.1	5.4	0.016
EP-4	ND	2.3	0.97	ND	0.59	36	0.015
EP-5	64,000*	8,800*	4,800*	1,100*	4,800*	ND*	ND
EP-6	ND	ND	0.99	ND	1.0	ND	0.019
EP-7	ND	0.53	2.1	0.53	2.9	ND	ND
MDLs*	50	0.50	0,50	0.50	0,50	2.5	0.005

<sup>\*</sup> Indicates detection limits raised due to positive gasoline result. Refer to Laboratory report for detection limits for each noted sample .

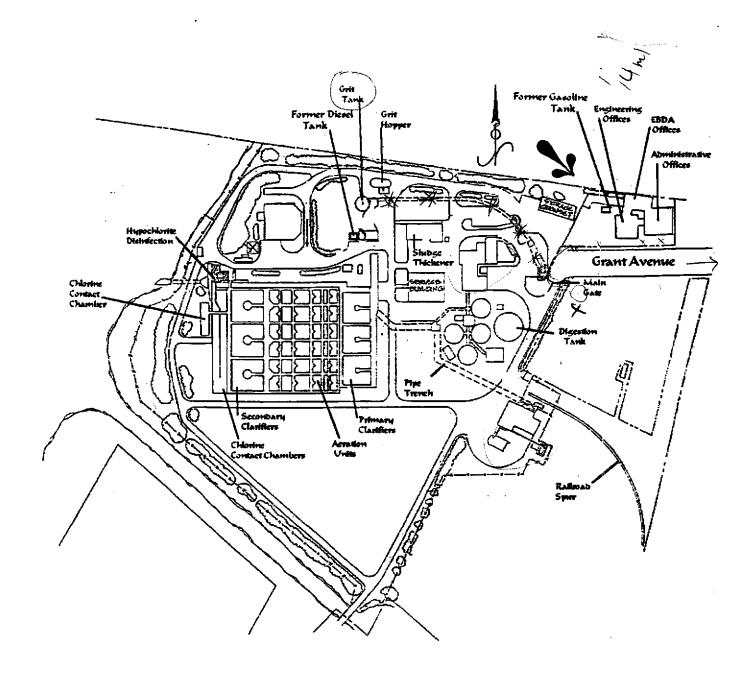
\* Refer to Laboratory Report for complete listing of results

Job No. 3022, Stage 7



SOURCE: THOMAS BROS MAPS, ALAMEDA COUNTY, CALIFORNIA "Scale 1" = 2500 feet

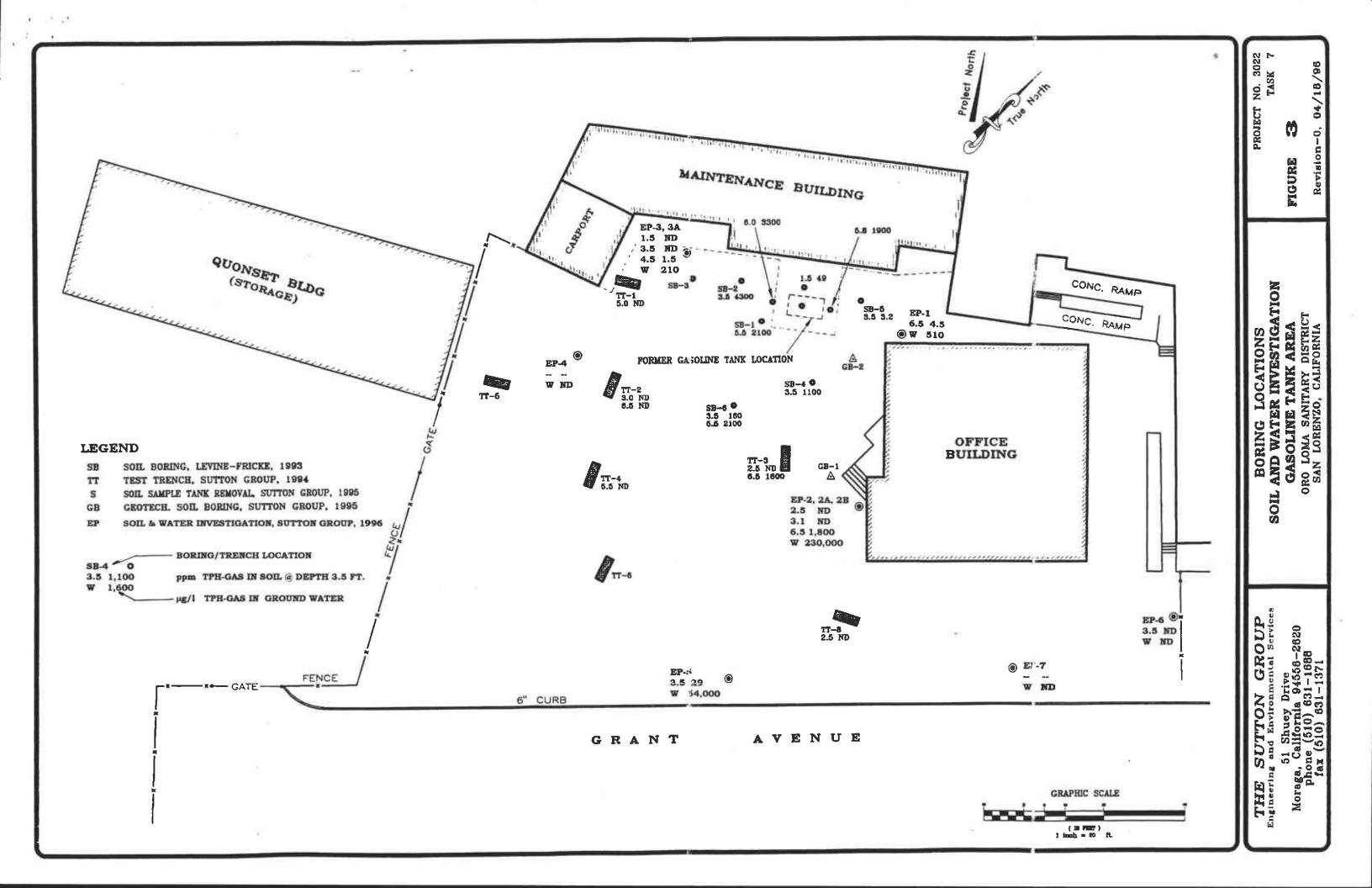
THE SUTTON GROUP	SITE LOCATION MAP	PROJECT NO. 3022
Engineering and Environmental Services	SOIL AND WATER INVESTIGATION	PHASE 7
51 Shuey Drive		FIGURE
Moraga, California 94556-2620	GASOLINE & DIESEL TANK AREAS	1
phone (510) 631-1688	ORO LOMA SANITARY DISTRICT	
fax (510) 631-1371	SAN LORENZO, CALIFORNIA	Revision-0,4/9/96



#### SITE PLAN

#### MAP SOURCE: ORO LOMA SANITARY DISTRICT

THE SUTTON GROUP Engineering and Environmental Services	PLANT LOCATION MAP SOIL AND WATER INVESTIGATION	PROJECT NO. PHASE	3022 <sup>1</sup> 7
51 Shuey Drive Moraga, California 94556-2620	GASOLINE TANK AREA	FIGURE	2
phone (510) 631-1688 fax (510) 631-1371	ORO LOMA SANITARY DISTRICT SAN LORENZO, CALIFORNIA	revision-1.	5/13/96



## APPENDIX A

## SOIL CORING AND SAMPLING, AND GROUND WATER SAMPLING PROCEDURES

Soil cores and ground water samples were obtained for The Sutton Group by PRECISION SAMPLING, INC. (PSI), a soil and ground water sampling company. located in San Rafael, California. PSI uses portable, hydraulically driven soil coring systems to obtain soil and ground water samples for lithologic and chemical analysis. PSI holds California Well Drilling Contractor's (C-57) license No.636387. The Sutton Group will assist PSI in obtaining a drilling permit for the work from Alameda County Drainage and Flood Control District (Zone 7).

#### SOIL CORING PROCEDURES

PSI's difficult access rig, the DA-1, utilizes a hydraulic hammer to drive Enviro-Core™ sampling rods into the ground to collect continuous soil cores. The larger sampling rigs, the XD-1 and MD-1, are mounted on 4-wheel-drive vehicles, and the Enviro-Core™ rods are advanced with vibrators, a hydraulic hammer, or pushed into the ground. With any rig, two nested sampling rods are driven simultaneously; small-diameter inner sampling rods are used to obtain and retrieve the soil cores; the larger diameter (2 ½" OD) outer rods serve as temporary drive casing.

As the Enviro-Core<sup>TM</sup> rods are advanced, soil is driven into a 1-7/8 inch diameter, 3-foot long, sample barrel that is attached to the end of the inner rods, Soil samples are collected in 1<sup>3</sup>/<sub>4</sub>-inch diameter by 6-inch long stainless steel sleeves inside the sample barrel as both rods are advanced. After being driven 3 feet, the inner rods are removed from the borehole with a hydraulic winch The stainless sleeves containing the soil samples are removed from the inner sample barrel, and can then be preserved for chemical analyses or used for lithologic identification. After adding new stainless steel sleeves, the drive sampler and inner rods are then lowered back into the borehole to the previous depth, an additional 3-foot section of Enviro-Core<sup>TM</sup> casing is attached, and the process is repeated until the desired depth is reached.

The use of outer rods prevents sloughing of the formation while the inner rods are withdrawn from the hole. This ensures that the drive sampler will always be sampling soil from the desired interval, rather than potentially contaminated soil that has sloughed in from higher up in the hole

1,000 gallon Gasoline Tank and Diesel Tanks

All drive casing, inner sample barrels, inner rods, and tools will be cleaned with a high-pressure, hot water washer between holes. Sample barrels will be washed with trisodium phosphate and double-rinsed with de-ionized water between samples collected in the same hole. All rinsate from the cleaning will be temporarily contained in 55-gallon drums at the project site and later, with approval, discharged into the sanitary sewer system for treatment at OLSD's POTW.

#### GROUND WATER SAMPLING PROCEDURES

After the targeted water-bearing zone has been penetrated, the sample barrel and inner rods will be removed from the borehole, and the drive casing will be pulled up approximately three feet to allow groundwater to flow into the borehole. A 1-inch-diameter Schedule 40 PVC casing with a five foot section of 0.010" slotted well screen may be installed in the borehole to facilitate the collection of groundwater samples. Threaded sections of PVC are lowered into the borehole inside the drive casing. The drive casing is then pulled up to expose the slotted interval of the PVC. Groundwater samples may then be collected from within the PVC casing with a 1-inch diameter Teflon or stainless steel bailer until adequate sample volume is obtained.

#### BOREHOLE GROUTING

On completion of soil and water sampling, boreholes will be abandoned with a grout mixture of Type II cement with 4% pure sodium bentonite. The grout will be pumped through a 1-inch-diameter grouting tube positioned at the bottom of the boreholes, prior to withdrawing the outer rods.

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Project No. 3022.7

Boring No EP-1

Date Drilled	March 07, 1996	Drilling Company	Precision Sampling, Inc.
Client	Oro Loma Sanitary District	Driller	C. Fricke
Site Name	Mntce Bldg. Gasoline Tank Area	Rig Model	PSI: XD-2
City/Town	San Lorenzo, CA	Drilling Method	Enviropush continuous core
Logged By	J. Sutton	Borehole Diameter	2 1/2"
Surface Elevation	9.7' msl	Sampling Method	Envirocore, 1 5/8" ID x 6" long
Grd Water Depth	5.4 on 3/8/96		liners

Depth (ft)	Graphic Symbol	USCS Symbol	Soil Description	s	ample Loc'n/ Well Details	PID ppm	Remarks
0			Asphalt paving, 2" thick over Fill.				
		GP,	FILL comprises field mixture of crushed			0	
		CL	quarry stone: gray/blue to green, angular, to				
***************************************			1½" size; some with clay (brown, moist)	14 14 14 14 14 14 14 14 14 14 14 14 14 1		1	
5			No odor, soft at 3.5'	X			
				X			
		Pt.	PEAT, black, moist, organic odor @ 6'	X		1	
		CL-CH	CLAY, very sandy(fine) soft, moist,	×			*****************
			gray/green, Bay Mud.	X			
10			@ 8.5 becomes silty, little sand.	x		1	
			slight organic odor in 10 ' sample	×			
				×	1	1	***************************************
	, and the second second		Terminated at 12'.				***************************************
		***************************************		1			
15							
	***************************************		1" dia temporary well with 5' slotted section.			ļ	*****************
			Set at 12 ft depth.		<del> </del>		
		ļ	Casing removed and hole tremie-grouted		<b></b>		
		ļ	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		<b></b>		
		<del>                                     </del>	after water sampling				
		<b></b>			<b></b>	ļ	
					<b></b>	ļ	
		ļ				ļ	,
		ļ			<b></b>	ļ	
	1				<u> </u>	l	

Project No. 3022.7

Boring No EP-2

Date Drilled	March 07, 1996	Drilling Company	Precision Sampling, Inc.
Client	Oro Loma Sanitary District	Driller	C. Fricke
Site Name	Mntce Bldg. Gasoline Tank Area	Rig Model	PSI: XD-2
City/Town	San Lorenzo, CA	Drilling Method	Enviropush continuous core
Logged By	J. Sutton	Borehole Diameter	2 1/2"
Surface Elevation	9.2 msi	Sampling Method	Envirocore, 1 5/8" ID x 6" long
Grd Water Depth	7.1 at time of drilling		liners

Depth (ft)	Graphic Symbol	USCS Symbol	Soil Description		nple Lo /ell Det		PID ppm	Remarks
-		FILL	FILL: SAND very clayey, some gravel, dry to		*			
			moist, brown (SC) garden. @ 0-1.5'*	1				******************
			FILL: SAND, v. gravelly, slightly clayey,	×	*			
		***************************************	blue/gray.(SP-SM to GP-GM) is moist @ 3.2'*	×			5	***************************************
5		Pt	PEAT, black/brown, moist, organic odor.	x			150	*****************
			Contact @ 3.5'	×			- 04.3	
·		SC	SAND, clayey, very moist, petroleum odor 🎉	×	************		250	
48788844444444		CL-CH	CLAY, moderately to highly plastic, sl. sandy,	×			150	
			silty, graygreen BAY MUD	×	***********		5000	******************
10				×	************			**********************
				х				
				************	***********	-		,4.,
		********************	EP-2 terminated @ 12 ft.					
	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	·····	1" dia temporary well with 5' slotted section.		4-04004-04-0	ļ	***********	>1414
			Set at 12 ft depth.			Π		
*************	));{ <b>#</b> p+# <b>p</b> +************************************		Casing removed and hole tremie-grouted					***************************************
			after water sampling	ļ				
	10-40-40-1741-644-64		EP-2A drilled 2' away on 3/7/96, re-sampled	<u> </u>		ļ		
·			4'-7', odorous @ 6-7'	-		1		
			EP-2B hand-augered 2' from EP-2 on 4/2/96,	†		<b></b>		*******************
,			sampled 2.5 -3.5' depth with hand-driver					
			* Log based on hand-auger boring EP-2B	ļ			***************************************	

THE SUTTON GROUP

Project No. 3022.7

Boring No EP-3, 3A, 3B

Date Drilled	March 07, 1996 (EP-3)	Drilling Company	Precision Sampling, Inc.
Client	Oro Loma Sanitary District	Driller	C. Fricke
Site Name	Mntce Bldg. Gasoline Tank Area	Rig Model	PSI: XD-2
City/Town	San Lorenzo, CA	Drilling Method	Enviropush continuous core
Logged By	J. Sutton	Borehole Diameter	2 <b>½</b> "
Surface Elevation	9+/- msl	Sampling Method	Envirocore, 1 5/8" ID x 6" long
Grd Water Depth	7.3 at time of drilling		liners

Depth (ft)	Graphic Symbol	USCS Symbol	Soil Description		nple Loc Vell Deta		PID ppm	Remarks
0		FILL	GRAVEL, sandy, brown/olive/gray, dry.					
			Base-rock/quarry fill(GP-GM)	X			*************	
			, , , , , , , , , , , , , , , , , , ,	×	1			
			PEAT/Organic Clay, Organic Clay, stiff, dry to	X			0	
5		Pt	moist, brown. Interface @ 4'	X			0	
		CL-CH	@5': CLAY, silty, m.plastic, soft, gray/green.	х			0	
*****		SM	@6.8 SAND silty, fine tr.clay, wet, gray	X			1	
*************				×				
***************				X			0	
10				X			***********	******************
		CL-CH	CLAY, mod. to highly plastic, moist,	х			0	
*******			green/black. Softer @ 11'.	х			0	
				X			0	***************************************
-1404 1004 01400 400	***************************************		Boring terminated at 13'.	<u> </u>				
15						*****	4411011411011	**************************************
			1" dia temporary well with 5' slotted section.					
*14114114114141			Set at 12 ft depth.	1				
			Casing removed and hole tremie-grouted	Î		*****		***************************************
			after water sampling					
			EP-3A, 3B drilled 2' away on 4/18/96,	ļ				
*************			EP-3A, drilled to 4,' sampled @1.5 to 2.0'	†				
			EP-3B to 5', sampled @ 3.5-4' and 4.5- 5.0'			*****	***************************************	

THE SUTTON GROUP

Project No. 3022.7

Boring No EP-4

Date Drilled	March 06, 1996	Drilling Company	Precision Sampling, Inc.
Client	Oro Loma Sanitary District	Driller	C. Fricke
Site Name	Mntce Bldg. Gasoline Tank Area	Rig Model	PSI: XD-2
City/Town	San Lorenzo, CA	Drilling Method	Enviropush continuous core
Logged By	J. Sutton	Borehole Diameter	2 1⁄2"
Surface Elevation	msi	Sampling Method	Envírocore, 1 5/8" ID x 6" long
Grd Water Depth	at time of drilling		liners

Depth (ft)	Graphic Symbol	USCS Symbol	Soil Description		Sample Loc'n/ Well Details	PID	Remarks
0		FILL	Asphalt over FILL: GRAVEL, sandy, dry, olive	х			
**************		***************************************	green/gray	×			
***************************************				х		0	
,,,,		***************************************		х			
5		*******************************		Х		0	
		Pt	@5.8 PEAT, very clayey, moist, brown	х			
		SP,	@6.3 SAND, fine, clean to clayey and silty,	X		0	
		SM/SC	wet, gray green	х		0	
-4494414444444				х		0	
10		***************************************	CLAY, silty, mod to highly plastic, stiff, moist,	Х			
		•	gray/green	х		0	
*****************				х			
				х		0	
			Boring terminated at 13'.				
15							
			1" dia temporary well with 5' slotted section.	ļ			,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
		·····	Set at 12 ft depth.	<b>.</b>			
***************************************			Casing removed and hole tremie-grouted				,,
			after water sampling				
						<u></u>	

THE SUTTON GROUP

Project No. 3022.7

Boring No EP-5

Date Drilled	March 07, 1996	Drilling Company	Precision Sampling, Inc.
Client	Oro Loma Sanitary District	Driller	C. Fricke
Site Name	Mntce Bldg. Gasoline Tank Are	Rig Model	PSI: XD-2
City/Town	San Lorenzo, CA	Drilling Method	Enviropush continuous core
Logged By	J. Sutton	Borehole Diameter	2 1⁄2"
Surface Elevation	8.5+/- msl	Sampling Method	Envirocore, 1 5/8" ID x 6" long
Grd Water Depth	6.0 On 3/8/96		liners

Depth (ft)	Graphic Symbol	USCS Symbol	Soil Description		mple Loc'n/ Vell Details	PID ppm	Remarks
0		FILL	Asphalt Paving approx 2" thick over FILL:				
		***************************************	GRAVEL, sandy, olive green/gray. @ 3.'some	x		0	
		***************************************	trash, lumber in PEAT matrix. Org. odor	X		************	*******************
		СН	@3.7CLAY,v.stiff,grn/gray w/fill gravel, peat			0	
5		SP-SM	@ 4.8 SAND, fine, s.silty, v.moist. NO odor	X		0	
				х		0	
		ML	@ 6.8 SILT, sandy, clayey, gray	х		0	***************************************
		CL-CH	CLAY, stiff to very stiff, very moist some	X			
			roots/organics, organic odor	х		0	
10				х		0	
		-	Clay becomes soft to m. stiff, gray green	X		0	
				X		0	
	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		Boring terminated @ 12 ft.				
15							
			1" dia temporary well with 5' slotted section.				
			Set at 12 ft depth.				***************************************
,			Casing removed and hole tremie-grouted				
			after water sampling				********************
							***********
25							

THE SUTTON GROUP

Project No. 3022.7

Boring No EP-6

Date Drilled	March 07, 19	96	Drilling Company	Precision Sampling, Inc.
Client	Oro Loma Sa	nitary District	Driller	C. Fricke
Site Name	Mntce Bldg. (	Basoline Tank Area	Rig Model	PSI: XD-2
City/Town	San Lorenzo,	CA	Drilling Method	Enviropush continuous core
Logged By	J. Sutton		Borehole Diameter	2 1⁄2"
Surface Elevation	9.5+/-	msl	Sampling Method	Envirocore, 1 5/8" ID x 6" long
Grd Water Depth	7.0	0n 3/8/96		liners

Depth (ft)	Graphic Symbol	USCS Symbol	Soil Description		nple Loc'n/ Vell Details	PID ppm	Remarks
0		FILL	FILL, SAND and GRAVEL , brown, (garden)	х			
				×		***********	***************************************
		CL-CH	CLAY, organics, roots, black/green moist.	×		**********	***************************************
		SP-SM	@ 3.7SAND, fine, to medium, moist, brown to	X		0	
5			olive. NO odor	×		0	
			becomes wet at 6.5'.	×		0	
		CL-CH	CLAY, mod. to high plasticity, m.stiff, very	×		0	
			moist gray green	х		0	
				×		0	
10				x			
							,48,,4814814844844
			Boring terminated @ 12 ft.				
15							
			1" dia temporary well with 5' slotted section.				
			Set at 12 ft depth.			4-1	
			Casing removed and hole tremie-grouted				
			after water sampling				
	***************************************						4774444

THE SUTTON GROUP

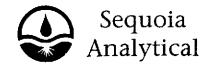
Project No. 3022.7

Boring No EP-7

Date Drilled	March 07, 19	96	Drilling Company	Precision Sampling, Inc.
Client	Oro Loma Sa	initary District	Driller	C. Fricke
Site Name	Mntce Bldg. (	Gasoline Tank Area	Rig Model	PSI: XD-2
City/Town	San Lorenzo,	CA	Drilling Method	Enviropush continuous core
Logged By	J. Sutton		Borehole Diameter	2 1/2"
Surface Elevation	9.8+/-	msl	Sampling Method	Envirocore, 1 5/8" ID x 6" long
Grd Water Depth	5.4	0n 3/8/96		liners

Depth (ft)	Graphic Symbol	USCS Symbol	Soil Description		mple Loc'n/ Well Details	PID	Remarks
0		FILL	SAND, clayey, gravelly Root zone in upper				
***************		***************************************	1.5' (Garden)	х			***************************************
*,**,		CL-CH	CLAY, w/ PEAT, v.stiff, roots, green/gray	x			
		***************************************	SILT, sandy, clayey, dry to moist, brown	X		0	
5				х		0	
		SP	SAND, fine, clean to very silty, moist, brown,	x		0	
			gray	X		0	*************
			becomes wet at 6.			0	************
				×		0	41:41141 <i>:4</i> 1:41:41
10		CL-CH	CLAY, mod. to high plasticity, soft to med.	х			
			Stiff, very moist gray green, root zone @	X		0	
***************************************			10-11', brown	X			***************************************
			Boring terminated @ 12 ft.				
15			distance and well with E' clotted costion	+	<del>                                     </del>		
		 	1" dia temporary well with 5' slotted section.				*****
			Set at 12 ft depth.			ļ	
			Casing removed and hole tremie-grouted	<u> </u>		<b></b>	***************************************
			after water sampling				
. "							
*****							
4.45448444444		<u> </u>					
*************		<u></u>					

THE SUTTON GROUP



Redwood City, CA 94063 Walnut Creek, CA 94598

(415) 364-9600 (510) 988-9600 (916) 921-9600 FAX (415) 364-9233 FAX (510) 988-9673 FAX (916) 921-0100

The Sutton Group 51 Shuey Drive

Client Project ID: Matrix:

Fuel Tanks Liquid

Moraga, CA 94556-2620

Attention: John Sutton, PE

Work Order #:

9603514 01,03

Reported:

Mar 15, 1996

#### **QUALITY CONTROL DATA REPORT**

Analyte:	Benzene	Toluene	Ethyl	Xylenes
			Benzene	
	GC031196BTEX07A	GC031196BTEX07A	GC031196BTEX07A	GC031196BTEX07A
Analy. Method:		EPA 8020	EPA 8020	EPA 8020
Prep. Method:	EPA 5030	EPA 5030	EPA 5030	EPA 5030
Analyst:	D. Jirsa	D. Jirsa	D. Jirsa	D. Jirsa
MS/MSD #:		960332706	960332706	960332706
Sample Conc.:		N.D.	N.D.	N.D.
Prepared Date:		3/11/96	3/11/96	3/11/96
Analyzed Date:		3/11/96	3/11/96	3/11/96
nstrument I.D.#:	GCHP7	GCHP7	GCHP7	GCHP7
Conc. Spiked:	10 μg/L	10 μg/L	10 μg/L	30 µg/L
Result:	11	11	11	31
MS % Recovery:	110	110	110	103
Dup. Result:	11	11	11	31
MSD % Recov.:	110	110	110	103
RPD:	0.0	0.0	0.0	0.0
RPD Limit:	0-50	0-50	0-50	0-50
LCS #:	BLK031196	BLK031196	BLK031196	BLK031196

LCS #:	BLK031196	BLK031196	BLK031196	BLK031196
Prepared Date:	3/11/96	3/11/96	3/11/96	3/11/96
Analyzed Date:	3/11/96	3/11/96	3/11/96	3/11/96
instrument I.D.#:	GCHP7	GCHP7	GCHP7	GCH <del>P7</del>
Conc. Spiked:	10 μg/L	10 μg/L	10 μg/L	30 μg/L
LCS Result:	9.0	9.0	9.0	27
LCS % Recov.:	90	90	90	90

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

SEQUOIA ANALYTICAL

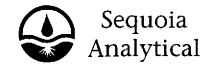
Jim Heider Project Manager Please Note:

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

9603514.TTT <1>





680 Chesapeake Drive 404 N. Wiget Lane 819 Striker Avenue, Suite 8

Redwood City, CA 94063 Walnut Creek, CA 94598 Sacramento, CA 95834

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The Sutton Group 51 Shuey Drive

Client Project ID: Fuel Tanks Matrix:

Moraga, CA 94556-2620

Liquid

Attention: John Sutton, PE Work Order #:

02

Reported: Mar 15, 1996

#### **QUALITY CONTROL DATA REPORT**

9603514

Analyte:	Benzene	Toluene	Ethyl	Xylenes	
			Benzene		
QC Batch#:	GC031296BTEX07A	GC031296BTEX07A	GC031296BTEX07A	GC031296BTEX07A	
Analy. Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020	
Prep. Method:	EPA 5030	EPA 5030	EPA 5030	EPA 5030	
Analyst:	D. Jirsa	D. Jirsa	D. Jirsa	D. Jirsa	
MS/MSD #:	960333903	960333903	960333903	960333903	
Sample Conc.:	N.D.	N.D.	N.D.	N.D.	
Prepared Date:	3/12/96	3/12/96	3/12/96	3/12/96	
Analyzed Date:	3/12/96	3/12/96	3/12/96	3/12/96	
nstrument I.D.#:	GCHP7	GCHP7	GCHP7	GCHP7	
Conc. Spiked:	10 μg/L	10 μg/L	10 μg/L	30 μg/L	
Result:	9.9	10	9.9	30	
MS % Recovery:	99	100	99	100	
Dup. Result:	11	11	11	34	
MSD % Recov.:	110	110	110	113	
RPD:	11	9.5	11	13	
RPD Limit:	0-50	0-50	<b>0</b> -50	0-50	

LCS #:	BLK031296	BLK031296	BLK031296	BLK031296
Prepared Date:	3/12/96	3/12/96	3/12/96	3/12/96
Analyzed Date:	3/12/96	3/12/96	3/12/96	3/12/96
Instrument I.D.#:	GCHP7	GCHP7	GCHP7	GCHP7
Conc. Spiked:	10 μg/L	10 μg/L	10 μg/L	30 <i>µ</i> g/L
LCS Result:	10	10	10	31
LCS % Recov.:	100	100	100	103

. [	MS/MSD					-
١	LCS	70-130	70-130	70-130	70-130	
Į	Control Limits					

SEQUOIA ANALYTICAL

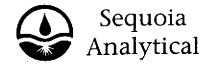
Jim Heider Project Manager Please Note:

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

9603514.TTT <2>





680 Chesapeake Drive 404 N. Wiget Lane 819 Striker Avenue, Suite 8

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(415) 364-9600 (510) 988-9600 (916) 921-9600 FAX (415) 364-9233 FAX (510) 988-9673 FAX (916) 921-0100

The Sutton Group 51 Shuey Drive

Client Project ID: **Fuel Tanks** 

Matrix:

Solid

Moraga, CA 94556-2620

Attention: John Sutton, PE

Work Order #: 9603514 04-06

Reported: Mar 15, 1996

#### **QUALITY CONTROL DATA REPORT**

	<del>-</del> .	E.I. I		
Benzene	Toluene		Xylenes	
00004000BTEVEY	CCAAAAACDTEVEVA	· · · <del>-</del> - · · · ·	CONTRACTIVE	
EPA 5030	EPA 5030	EPA 5030	EPA 5030	<u></u>
D. Jirsa	D. Jirsa	D. Jirsa	D. Jirsa	
960358101	960358101	960358101	960358101	
N.D.	N.D.	N.D.	N.D.	
3/12/96	3/12/96	3/12/96	3/12/96	
3/12/96	3/12/96	3/12/96	3/12/96	
GCHP1	GCHP1	GCHP1	GCHP1	
0.20 mg/Kg	0.20 mg/Kg	0.20 mg/Kg	0.60 mg/Kg	
0.15	0.15	0.16	0.47	
75	75	80	78	
0.13	0.14	0.14	0.41	
65	70	70	68	
14	6.9	13	14	
0-50	0-50	0-50	0-50	
BLK031296	BLK031296	BLK031296	BLK031296	
3/12/96 .	3/12/96	3/12/96	3/12/96	
3/12/96	3/12/96	3/12/96	3/12/96	
GCHP1	GCHP1	GCHP1	GCHP1	
0.20 mg/Kg	0.20 mg/Kg	0.20 mg/Kg	0.60 <b>mg</b> /Kg	
0.18	0.18	0.18	0.56	
90	90	90	93	
	960358101 N.D. 3/12/96 3/12/96 GCHP1 0.20 mg/Kg  0.15 75  0.13 65  14 0-50  BLK031296 3/12/96 3/12/96 GCHP1 0.20 mg/Kg	GC031296BTEXEXA EPA 8020 EPA 5030  D. Jirsa 960358101 N.D. 3/12/96 3/12/96 GCHP1 0.20 mg/Kg  0.15 75  0.13 0.14 65 70  14 69 0-50  BLK031296 3/12/96 3/12/96 3/12/96 3/12/96 3/12/96 0.15 75 0.13 0.14 65 70  14 6.9 0-50  BLK031296 BLK031296 3/12/96 3/12/96 3/12/96 3/12/96 3/12/96 3/12/96 GCHP1 0.20 mg/Kg  0.18  0.18	GC031296BTEXEXA GC031296BTEXEXA GC031296BTEXEXA EPA 8020 EPA 8020 EPA 5030  D. Jirsa D. Jirsa D. Jirsa 960358101 960358101 960358101 960358101 N.D. N.D. N.D. N.D. 3/12/96 3/12/96 3/12/96 3/12/96 3/12/96 3/12/96 GCHP1 GCHP1 GCHP1 O.20 mg/Kg 0.20 mg/Kg 0.50 0.50  BLK031296 BLK031296 BLK031296 3/12/96 3/12/96 3/12/96 GCHP1 GCHP1 O.50 0.50  BLK031296 BLK031296 BLK031296 GCHP1 GCHP1 O.50 0.50  BLK031296 3/12/96 3/12/96 3/12/96 GCHP1 GCHP1 O.50 0.50  BLK031296 BLK031296 BLK031296 GCHP1 G	Benzene   GC031296BTEXEXA   GC031296BTEXEXA   GC031296BTEXEXA   EPA 8020   EPA 8020   EPA 8020   EPA 8020   EPA 8020   EPA 8030   EPA 5030   EPA 5030

SEQUOIA ANALYTICAL

m Heider

MS/MSD LCS

**Control Limits** 

Project Manager

Please Note:

50-150

50-150

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.

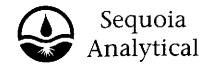
50-150

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

9603514.TTT <3>



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Redwood City, CA 94063 Walnut Creek, CA 94598 (415) 364-9600 (510) 988-9600 (916) 921-9600

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he Sutton Group 51 Shuey Drive Moraga, CA 94556-2620

Attention: John Sutton, PE

Client Proj. ID: Fuel Tanks Sample Descript: EP-3-WC Matrix: LIQUID

Analysis Method: 8015Mod/8020 Lab Number: 9603514-01

Sampled: 03/08/96 Received: 03/08/96

Analyzed: 03/11/96 Reported: 03/13/96

QC Batch Number: GC031196BTEX07A

strument ID: GCHP07

## Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	De	tection Limit ug/L	Sample Results ug/L
TPPH as Gas	***************************************		210
_Methyl t-Butyl Ether	**************	2.5	<b>5.4</b>
Benzene	*****************	0.50	5.8
<b>D</b> oluene		0.50	2.6
Ethyl Benzene	************	0.50	0.53
_Xylenes (Total)	**************	0.50	
hromatògram Pattern:			Gas
Surrogates	Con	trol Limits %	% Recovery
rifluorotoluene	70	130	119

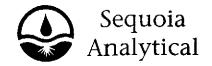
tes reported as N.D. were not present above the stated limit of detection.

QUOIA ANALYTICAL - ELAP #1210

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The Sutton Group 51 Shuey Drive Moraga, CA 94556-2620

Attention: John Sutton, PE

Client Proj. ID: Fuel Tanks Sample Descript: EP-1-WC

Matrix: LIQUID

Analysis Method: 8015Mod/8020

Lab Number: 9603514-02

Sampled: 03/08/96 Received: 03/08/96

Analyzed: 03/12/96 Reported: 03/13/96

QC Batch Number: GC031296BTEX07A

istrument ID: GCHP07

#### Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	De	Sample Results ug/L		
TPPH as Gas		125		510
_Methyl t-Butyl Ether	************	6.2		10
Benzene	***************************************	1.2		21
Toluene		1.2		7.4
Ethyl Benzene		1.2		3.8
_Xylenes (Total)	*************	1.2		15
Chromatogram Pattern:	***************************************			Gas
Surrogates	Con	ntro! Limits %	9/	6 Recovery
Trifluorotoluene	70		130	79

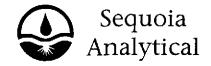
ytes reported as N.D. were not present above the stated limit of detection.

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The Sutton Group 51 Shuey Drive Moraga, CA 94556-2620

Client Proj. ID: Fuel Tanks Sample Descript: EP-2-WC Matrix: LIQUID

Sampled: 03/08/96 Received: 03/08/96

Attention: John Sutton, PE

Analysis Method: 8015Mod/8020 Lab Number: 9603514-03

Analyzed: 03/11/96 Reported: 03/13/96

C Batch Number: GC031196BTEX07A

strument ID: GCHP07

# Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

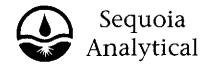
Analyte	De	tection Limit ug/L	Sa	ample Results ug/L
TPPH as Gas	*************	50000	****************	230000
_Methyl t-Butyl Ether	***********	2500		3900
Benzene	**************	500		23000
oluene	************	500		47000
Ethyl Benzene	*************	500		4300
_Xylenes (Total) _	***************************************	500		21000
hromatogram Pattern:	•••••		**************	Gas
Surrogates	Cor	ntrol Limits %	% F	Recovery
Trifluorotoluene	70		130	86

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

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The Sutton Group 51 Shuey Drive Moraga, CA 94556-2620

Attention: John Sutton, PE

Client Proj. ID: Fuel Tanks Sample Descript: EP1 6.5-7 Matrix: SOLID

Analysis Method: 8015Mod/8020

Lab Number: 9603514-04

Sampled: 03/07/96 Received: 03/08/96 Extracted: 03/12/96

Analyzed: 03/12/96 Reported: 03/13/96

QC Batch Number: GC031296BTEXEXA strument ID: GCHP22

## Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	De	tection Limit mg/Kg		Sample Results mg/Kg
TPPH as Gas Methyl t-Butyl Ether Benzene Foluene Ethyl Benzene Xylenes (Total)		1.0 0.025 0.0050 0.0050 0.0050 <b>0.0050</b>		4.5 N.D. N.D. N.D. N.D. O.059
Chromatogram Pattern:  Gas & Unidentified HC			**************	+ <c7< th=""></c7<>
Surrogates rifluorotoluene	<b>Con</b> 70	trol Limits %	130	Recovery 102

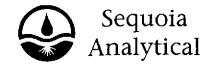
rtes reported as N.D. were not present above the stated limit of detection.

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he Sutton Group 1 Shuey Drive Moraga, CA 94556-2620

ttention: John Sutton, PE

Client Proj. ID: Fuel Tanks Sample Descript: EP2 6.5-7 Matrix: SOLID Fuel Tanks

Analysis Method: 8015Mod/8020 Lab Number: 9603514-05

Sampled: 03/07/96 Received: 03/08/96 Extracted: 03/12/96 Analyzed: 03/12/96 Reported: 03/13/96

QC Batch Number: GC031296BTEXEXA estrument ID: GCHP22

## Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte		ection Limit ng/Kg	Sample Results mg/Kg
TPPH as Gas Methyl t-Butyl Ether	•••••••••	<b>300</b> 7.5	1800 N.D.
enzene oluene	***************************************	1.5	21
Ethyl Benzene Xylenes (Total)	***************************************	1.5	
hromatogram Pattern:	****************	1.5	
Surrogates	Cont	rol Limits %	% Recovery
Trifluorotoluene	70	130	98

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

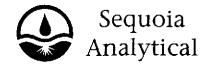
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The Sutton Group 51 Shuey Drive Moraga, CA 94556-2620

Attention: John Sutton, PE

Client Proj. ID: Fuel Tanks Sample Descript: EP3 6.5-7 Matrix: SOLID

Analysis Method: 8015Mod/8020

Lab Number: 9603514-06

Sampled: 03/07/96 Received: 03/08/96 Extracted: 03/12/96

Analyzed: 03/12/96 Reported: 03/13/96

QC Batch Number: GC031296BTEXEXA

strument ID: GCHP22

## Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	De	tection Limit mg/Kg		Sample Results mg/Kg
TPPH as Gas Methyl t-Butyl Ether Benzene Toluene Ethyl Benzene Xylenes (Total) Chromatogram Pattern:		1.0 0.025 0.0050 0.0050 0.0050 0.0050		5.3 N.D. N.D. N.D. N.D. 0.036
Bas & Unidentified HC	••••••			+ < C7
Surrogates Frifluorotoluene	<b>Cor</b> 70	ntrol Limits %	130	6 Recovery 102

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

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<b>W</b>		Saheave	DIIVO	Theuwood Only,	OV 94000 -	(413) 004-3000	177 (710)	, 00- 0200

- ☐ 819 Striker Ave., Suite 8 Sacramento, CA 95834 (916) 921-9600 FAX (916) 921-0100
- 404 N. Wiget Lane Walnut Creek, CA 94598 (510) 988-9600 FAX (510) 988-9673

Company Name: Th	e Suttone	<sub>1</sub>		, e		Project N	lame:	Fu	ol Ta	nke	3					7
	Shuey D			····	<u> </u>	Billing A			<del></del>		OL	SD				
City: Moraga	State: (		<del></del>	Zip Code: (	4556	<u> </u>								Loni	ENED 94580	7
Telephone: 570 6				510631		P.O. #:	. <del>~</del>	<u> </u>							7.1	
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2. EP-3-WC	3/2/96,0915		3	2 x 40 9	, (	X	Х	- X					()		TEHR TAT ON MTBG SEB JIM	-15
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5. EP 6 - WA	38/16 1007		3	14.566	bill wi	X	The same	'X`	P. L.	,	1 AV	\ <u>i</u>	à		Hold he MTBE	
6. EP7-WA	3/8/76 1025		3	1x212				:X®	. ,1	().表情	直開		Barrie.	si si	Holdiffic MTBE	
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CHAIN OF GOO			P	oject Na	me:	Fuel -	TANKS				
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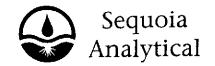
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Report To: The Suffe	- Group	Sample	ુ ક	atha		QC Data					Level (	) (	Level	B 🔾 Level A	
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Were Samples Received in Good Condition? Di Yes Di No.

Samples on ice? Q Yes Q No Method of Shipment\_

Page \_\_ of \_\_



680 Chesapeake Drive 404 N. Wiget Lane 404 N. Wiget Lane Walnut Creek, CA 94598 819 Striker Avenue, Suite 8 Sacramento, CA 95834

Redwood City, CA 94063

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FAX (415) 364-9233 FAX (510) 988-9673 FAX (916) 921-0100

The Sutton Group Client Proj. ID: Fuel Tanks
51 Shuey Drive
Moraga, CA 94556-2620 Lab Proj. ID: 9603520

Sampled: 03/08/96 Received: 03/08/96 Received: 03/08/96

Analyzed: see below

Attention:

John Sutton, PE

Reported: 03/22/96

#### LABORATORY ANALYSIS

Analyte	Units	Date Analyzed	Detection Limit	Sample Results
Lab No: 9603520-01 Sample Desc : <b>LIQUID,EP4-W1</b>			- Control of the Cont	1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -
Lead	mg/L	03/18/96	0.0050	0.015
.ab No: 9603520-02 Sample Desc : <b>LIQUID,EP6-W</b>				
Lead	mg/L	03/18/96	0.0050	0.019
Lab No: 9603520-03 Sample Desc : LIQUID,EP7-W				
Lead	mg/L	03/18/96	0.0050	N.D.
Lab No: 9603520-04 Sample Desc : LIQUID,EP5-W			The second secon	
Lead	mg/L	03/18/96	0.0050	N.D.
Lab No: 9603520-05 ample Desc : <b>LIQUID,EPD-2</b>				
Total Dissolved Solids	mg/L	03/11/96	1.0	1900
ab No: 9603520-06 ample Desc : <b>LIQUID,EPD-1</b>				
Total Dissolved Solids	mg/L	03/11/96	1.0	21000
ab No: 9603520-07 Sample Desc : <b>LIQUID,MW-</b> 1				
Total Dissolved Solids	mg/L	03/11/96	1.0	6200

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

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The Sutton Group 51 Shuey Drive Moraga, CA 94556-2620

Client Proj. ID: Fuel Tanks Sampled: 03/08/96 Received: 03/08/96 Analyzed: see below

John Sutton, PE

Attention:

Lab Proj. ID: 9603520

Reported: 03/22/96

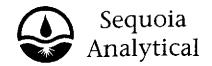
#### LABORATORY ANALYSIS

Analyte	Units	Date Analyzed	Detection Limit	Sample Results
Lab No: 9603520-15 Sample Desc : LIQUID,EP3-W				
Lead	mg/L	03/18/96	0.0050	0.016
Lab No: 9603520-16 Sample Desc : LIQUID,EP1-W				
Lead	mg/L	03/18/96	0.0050	N.D.
lab No: 9603520-17 Sample Desc : LIQUID,EP2-W		- 0.00 <u>0, p.1100</u>		
Lead	mg/L	03/18/96	0.0500	0.074

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

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The Sutton Group 51 Shuey Drive Moraga, CA 94556-2620

Attention: John Sutton, PE

Client Proj. ID: Fuel Tanks Sample Descript: EP4-W1

Matrix: LIQUID

Analysis Method: EPA 8020 Lab Number: 9603520-01

Sampled: 03/08/96 Received: 03/08/96

Analyzed: 03/12/96 Reported: 03/22/96

OC Batch Number: GC031296BTEX17A

hstrument ID: GCHP17

### Methyl t-Butyl Ether (MTBE)

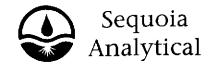
Analyte **Detection Limit** Sample Results ug/L ug/L Methyl t-Butyl Ether 2.5 36 Surrogates **Control Limits %** % Recovery Trifluorotoluene 130 96

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

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Redwood City, CA 94063 Walnut Creek, CA 94598 (415) 364-9600 (510) 988-9600 (916) 921-9600 FAX (415) 364-9233 FAX (510) 988-9673 FAX (916) 921-0100

The Sutton Group 51 Shuey Drive Moraga, CA 94556-2620

Client Proj. ID: **Fuel Tanks** Sample Descript: EP4-W1 Matrix: LIQUID

Sampled: 03/08/96 Received: 03/08/96

Attention: John Sutton, PE

Analysis Method: 8015Mod/8020 Lab Number: 9603520-01

Analyzed: 03/12/96 Reported: 03/22/96

QC Batch Number: GC031296BTEX17A

strument ID: GCHP17

### Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

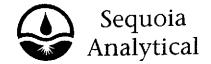
Analyte	De	etection Limit ug/L	s	ample Results ug/L
TPPH as Gas Benzene Foluene Ethyl Benzene Xylenes (Total) Chromatogram Pattern:		50 <b>0.50</b> <b>0.50</b> 0.50 <b>0.50</b>		N.D. 2.3 0.97 N.D. 0.59
urrogates Trifluorotoluene	<b>C</b> o 70	ntrol Limits %	130	Recovery 96

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

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The Sutton Group 51 Shuey Drive Moraga, CA 94556-2620

Client Proj. ID: Sample Descript: EP6-W Matrix: LIQUID

D: Fuel Tanks Sampled: 03/08/96 Received: 03/08/96

Attention: John Sutton, PE

Analysis Method: EPA 8020 Lab Number: 9603520-02

Analyzed: 03/12/96 Reported: 03/22/96

QC Batch Number: GC031296BTEX17A

pstrument ID: GCHP17

Methyl t-Butyl Ether (MTBE)

Sample Results ug/L

Methyl t-Butyl Ether

2.5

ug/L

**Detection Limit** 

N.D.

Surrogates Trifluorotoluene

Analyte

Control Limits % 70

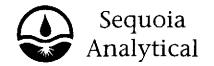
130

% Recovery 94

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

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The Sutton Group 51 Shuey Drive Moraga, CA 94556-2620

Client Proj. ID: Fuel Tanks Sample Descript: EP6-W

Sampled: 03/08/96 Received: 03/08/96

Attention: John Sutton, PE

Matrix: LIQUID Analysis Method: 8015Mod/8020 Lab Number: 9603520-02

Analyzed: 03/12/96 Reported: 03/22/96

QC Batch Number: GC031296BTEX17A

strument ID: GCHP17

## Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

Analyte	Detection Limit ug/L	Sa	mple Results ug/L
TPPH as Gas Benzene Toluene Ithyl Benzene Xylenes (Total) Chromatogram Pattern:	50 0.50 		N.D. N.D. 0.99 N.D. 1.0
urrogates Trifluorotoluene	Control Limits % 70	% R 130	ecovery 94

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

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The Sutton Group 51 Shuey Drive Moraga, CA 94556-2620

Client Proj. ID: Fuel Tanks Sample Descript: EP7-W Matrix: LIQUID

Sampled: 03/08/96 Received: 03/08/96

Attention: John Sutton, PE

Analysis Method: EPA 8020 Lab Number: 9603520-03

Analyzed: 03/12/96 Reported: 03/22/96

QC Batch Number: GC031296BTEX17A

hstrument ID: GCHP17

Methyl t-Butyl Ether (MTBE)

Analyte

**Detection Limit** ug/L

Sample Results ug/L

Methyl t-Butyl Ether

2.5

N.D.

Surrogates rifluorotoluene **Control Limits %** 

130

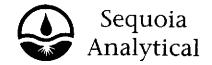
% Recovery

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

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The Sutton Group 51 Shuey Drive Moraga, CA 94556-2620

Client Proj. ID: Fuel Tanks Sample Descript: EP7-W Matrix: LIQUID

Sampled: 03/08/96 Received: 03/08/96

Attention: John Sutton, PE

Analysis Method: 8015Mod/8020 Lab Number: 9603520-03

Analyzed: 03/12/96 Reported: 03/22/96

QC Batch Number: GC031296BTEX17A instrument ID: GCHP17

# Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

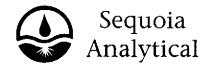
Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas Benzene Toluene Ethyl Benzene Xylenes (Total) Chromatogram Pattern:	0.50	N.D. 0.53 
Surrogates Trifluorotoluene	Control Limits % 70 130	% Recovery 90

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

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The Sutton Group 51 Shuey Drive Moraga, CA 94556-2620 Client Proj. ID: Fuel Tanks Sample Descript: EP5-W Matrix: LIQUID

Sampled: 03/08/96 Received: 03/08/96

Attention: John Sutton, PE

Analysis Method: EPA 8020 Lab Number: 9603520-04

Analyzed: 03/12/96 Reported: 03/22/96

OC Batch Number: GC031296BTEX17A

strument ID: GCHP17

Methyl t-Butyl Ether (MTBE)

**Detection Limit** 

Sample Results ug/L

Methyl t-Butyl Ether

N.D.

Surrogates rifluorotoluene

Analyte

**Control Limits %** 

ug/L

500

130

% Recovery 90

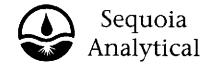
alytes reported as N.D. were not present above the stated limit of detection.

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The Sutton Group 51 Shuey Drive  Client Proj. ID: Fuel Tanks Sample Descript: EP5-W Matrix: LIQUID

Sampled: 03/08/96 Received: 03/08/96

Attention: John Sutton, PE

Analysis Method: 8015Mod/8020 Lab Number: 9603520-04

Analyzed: 03/12/96 Reported: 03/22/96

QC Batch Number: GC031296BTEX17A Instrument ID: GCHP17

### Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

Analyte	De	tection Limit ug/L		San	nple Results ug/L
TPPH as Gas	**********	10000			64000
Benzene		100			8800
Toluene		100			4800
Ethyl Benzene		100			1100
Xylenes (Total)		100			4800
Chromatogram Pattern:			•••••		Gas
Surrogates	Con	itrol Limits %	1	% Re	covery
Trifluorotoluene	70		130		<del>9</del> Ó

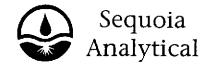
ytes reported as N.D. were not present above the stated limit of detection.

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The Sutton Group Client Proj. ID 51 Shuey Drive Sample Desc Moraga, CA 94556-2620

Fuel Tanks Client Proj. ID: Sample Descript: EPD-2 Matrix: LIQUID Analysis Method: EPA 8270

Lab Number: 9603520-05

Sampled: 03/08/96 Received: 03/08/96 Extracted: 03/12/96 Analyzed: 03/20/96 Reported: 03/22/96

Attention: John Sutton, PE

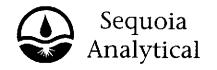
QC Batch Number: MS0308968270EXA

strument ID: H5

Semivolatile Organics (EPA 8270)

Analyte	Detection Limit ug/L	Sample Results ug/L
Acenaphthene	5.0	N.D.
_Acenaphthylene	5.0	N.D.
Anthracene	5.0	N.D.
Penzoic Acid	10	N.D.
Benzo(a)anthracene	5.0	N.D.
_Benzo(b)fluoranthene	5.0	N.D.
enzo(k)fluoranthene	5.0	N.D.
enzo(g,h,i)perylene	5.0	N.D.
Benzo(a)pyrene	5.0	N.D.
Benzyl alcohol	5.0	N.D.
lis(2-chloroethoxy)methane	5.0	N.D.
is(2-chloroethyl)ether	5.0	N.D.
Bis(2-chloroisopropyl)ether	5.0	N.D.
Bis(2-ethylhexyl)phthálate	10	N.D.
B-Bromophenyl phenyl ether	5.0	N.D.
utyl benzyl phthalate	5.0	N.D.
4-Chloroaniline	10	N.D.
2-Chloronaphthalene	5.0	N.D.
Chloro-3-methylphenol	5.0	N.D.
Chlorophenol	5.0	N.D.
4-Chlorophenyl phenyl ether	5.0	N.D.
Chrysene	5.0	N.D.
■benzo(a,h)anthracene	5.0	N.D.
benzofuran	5.0	N.D.
טו-n-butyl phthalate	10	N.D.
1,2-Dichlorobenzene	5.0	N.D.
B-Dichlorobenzene	5.0	N.D.
4-Dichlorobenzene	5.0	N.D.
5,3-Dichlorobenzidine	10	N.D.
2,4-Dichlorophenol	5.0	N.D.
ethyl phthalate	5.0	N.D.
4-Dimethylphenol	5.0	N.D.
methyl phthalate	5.0	N.D.
4,6-Dinitro-2-methylphenol	10	N.D.
1-Dinitrophenol	10	N.D.
1-Dinitrotoluene	5.0	N.D.





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The Sutton Group 51 Shuey Drive Moraga, CA 94556-2620

Attention: John Sutton, PE

Client Proj. ID: Fuel Tanks Sample Descript: EPD-2 Matrix: LIQUID Analysis Method: EPA 8270

Lab Number: 9603520-05

Sampled: 03/08/96 Received: 03/08/96 Extracted: 03/12/96 Analyzed: 03/20/96 Reported: 03/22/96

QC Batch Number: MS0308968270EXA

strument ID: H5

Analyte	Detection Limit ug/L	Sample Results ug/L
	<b>49</b> / <b>2</b>	ug/L
2,6-Dinitrotoluene	5.0	N.D.
Di-n-octyl phthalate	5.0	N.D.
Fluoranthene	5.0	N.D.
Fluorene	5.0	N.D.
lexachlorobenzene	5.0	N.D.
Hexachlorobutadiene	5.0	N.D.
Hexachlorocyclopentadiene	10	N.D.
lexachloroethane	5.0	N.D.
ndeno(1,2,3-cd)pyrene	5.0	N.D.
sophorone	5.0	N.D.
2-Methylnaphthalene	5.0	N.D.
-Methylphenol	5.0	N.D.
-Methylphenol	5.0	N.D.
-Naphthalene	5.0	N.D.
2-Nitroaniline	10	N.D.
	10	N.D.
-Nitroaniline	10	N.D.
n∜itrobenzene	5.0	N.D.
2-Nitrophenol	5.0	N.D.
Nitrophenol	10	N.D.
Nitrosodiphenylamine	5.0	N.D.
¬Nitroso-di-n-propylamine	5.0	N.D.
Pentachlorophenol	10	N.D.
inenanthrene	5.0	N.D.
nenol	5.0	N.D.
-yrene	5.0	N.D.
1,2,4-Trichlorobenzene	5.0	N.D.
4,5-Trichlorophenol	10	N.D.
4,6-Trichlorophenol	5.0	N.D.

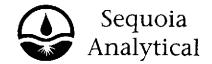
Surrogates Control Limits % % Recovery Fluorophenol 21 110 48 henol-d5 10 110 34 itrobenzene-d5 35 114 74 2-Fluorobiphenyl 43 81 116 4.6-Tribromophenol 10 123 108 Terphenyl-d14 33 141 110

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

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The Sutton Group 51 Shuey Drive Moraga, CA 94556-2620

Attention: John Sutton, PE

Client Proj. ID: Fuel Tanks Sample Descript: EPD-2

Matrix: LIQUID

Analysis Method: EPA 8015 Mod Lab Number: 9603520-05

Sampled: 03/08/96 Received: 03/08/96 Extracted: 03/11/96 Analyzed: 03/13/96 Reported: 03/22/96

QC Batch Number: GC0311960HBPEXX

strument ID: GCHP5B

# Total Extractable Petroleum Hydrocarbons (TEPH)

Analyte	Detection Limit ug/L	S	ample Results ug/L
TEPH as Diesel Chromatogram Pattern:	50		210
Inidentified HC	•••••		C9-C24
Surrogates n-Pentacosane (C25)	Control Limits % 50	150	Recovery 120

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

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The Sutton Group 51 Shuey Drive Moraga, CA 94556-2620

Client Proj. ID: Fuel Tanks Sample Descript: EPD-2 Matrix: LIQUID

Sampled: 03/08/96 Received: 03/08/96

Attention: John Sutton, PE

Analysis Method: EPA 8020 Lab Number: 9603520-05

Analyzed: 03/12/96 Reported: 03/22/96

QC Batch Number: GC031296BTEX17A

nstrument ID: GCHP17

#### **BTEX Distinction**

Analyte	Detection Limit ug/L	Sample Results ug/L
, Benzene	0.50	N.D.
Toluene	0.50	N.D.
Ethyl benzene	0.50	N.D.
Xylénes (Total)	0.50	N.D.
Surrogates	Control Limits %	% Recovery
Frifluorotoluene	70 130	95

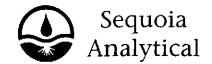
ytes reported as N.D. were not present above the stated limit of detection.

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The Sutton Group Client Proj. ID: Fi 51 Shuey Drive Moraga, CA 94556-2620

Attention: John Sutton, PE

Fuel Tanks Sample Descript: EPD-1

Matrix: LIQUID Analysis Method: EPA 8270 Lab Number: 9603520-06

Sampled: 03/08/96 Received: 03/08/96 Extracted: 03/13/96

Analyzed: 03/18/96 Reported: 03/22/96

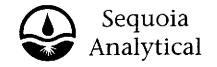
QC Batch Number: MS0308968270EXA

strument ID: H5

#### Semivolatile Organics (EPA 8270)

Analyte	Detection Limit ug/L	Sample Results ug/L
Acenaphthene	5.0	N.D.
Acenaphthylene	5.0	N.D.
Anthracene	5.0	N.D.
Benzoic Acid	10	N.D.
Benzo(a)anthracene	5.0	N.D.
▲Benzo(b)fluoranthene	5.0	N.D.
Benzo(k)fluoranthene	5.0	N.D.
Benzo(g,h,i)perylene	5.0	N.D.
Benzo(a) pyrene	5.0	N.D.
_Benzyl`alcohol	5.0	N.D.
Bis(2-chloroethoxy)methane	5.0	N.D.
Bis(2-chloroethyl)ether	5.0	N.D.
Bis(2-chloroisopropyl)ether	5.0	N.D.
Bis(2-ethylhexyl)phthalate	10	N.D.
Bromophenyl phenyl ether	5.0	N.D.
Butyl benzyl phthalate	5.0	N.D.
4-Chloroaniline	10	N.D.
_2-Chloronaphthalene	5.0	N.D.
Chloro-3-methylphenol	5.0	N.D.
Chlorophenol	5.0	N.D.
4-Chlorophenyl phenyl ether	5.0	N.D.
Chrysene	5.0	N.D.
ibenzo(a,h)anthracene	5.0	N.D.
Bibenzofuran	5.0	N.D.
Di-n-butyl phthalate	10	N.D.
1,2-Dichlorobenzene	5.0	N.D.
3-Dichlorobenzene	5.0	N.D.
4-Dichlorobenzene	5.0	N.D.
3,3-Dichlorobenzidine	10	N.D.
2,4-Dichlorophenol	5.0	N.D.
ethyl phthalate	5.0	N.D.
4-Dimethylphenol	5.0	N.D.
Dimethyl phthalate	5.0	N.D.
4,6-Dinitro-2-methylphenoi	10	N.D.
4-Dinitrophenol	10	N.D.
4-Dinitrotoluene	5.0	N.D.

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The Sutton Group 51 Shuey Drive Moraga, CA 94556-2620

Attention: John Sutton, PE

Client Proj. ID: Fuel Tanks Sample Descript: EPD-1

Matrix: LIQUID

Analysis Method: EPA 8270 Lab Number: 9603520-06

Sampled: 03/08/96 Received: 03/08/96

Extracted: 03/13/96 Analyzed: 03/18/96 Reported: 03/22/96

QC Batch Number: MS0308968270EXA

strument ID: H5

Analyte	Detection Limit	Sample Results
<u> 2</u>	ug/L	ug/L
2,6-Dinitrotoluene	5.0	N.D.
Di-n-octyl phthalate	5.0	N.D.
Fluoranthene	5.0	N.D.
Fluorene	5.0	N.D.
Hexachlorobenzene	5.0	N.D.
Hexachlorobutadiene	5.0	N.D.
Hexachlorocyclopentadiene	10	N.D.
Hexachloroethane	5.0	N.D.
ndeno(1,2,3-cd)pyrene	5.0	N.D.
Tsophorone	5.0	N.D.
_2-Methylnaphthalene	5.0	N.D.
-Methylphenol	5.0	N.D.
# - Methylphenol	5.0	N.D.
Naphthalene	5.0	N.D.
2-Nitroaniline	10	N.D.
-Nitroaniline	10	N.D.
-Nitroaniline	10	N.D.
Nitrobenzene	5.0	N.D.
2-Nitrophenol	5.0	N.D.
-Nitrophenol	10	N.D.
-Nitrosodiphenylamine	5.0	N.D.
n-Nitroso-di-n-propylamine	5.0	N.D.
Pentachlorophenol	10	N.D.
henanthrene	5.0	N.D.
henol	5.0	N.D.
yrene	5.0	N.D.
1,2,4-Trichlorobenzene	5.0	N.D.
4,5-Trichlorophenol	10	N.D.
4,6-Trichlorophenol	5.0	N.D.

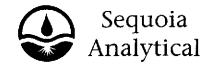
Surrogates	Control Limits %		% Recovery
-Fluorophenol	21	110	49
henol-d5	10	110	33
Nitrobenzene-d5	35	114	75
2-Fluorobiphenyl	43	116	77
#,4,6-Tribromophenol	10	123	101
Terphenyl-d14	33	141	100

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

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The Sutton Group 51 Shuey Drive Moraga, CA 94556-2620

Attention: John Sutton, PE

Client Proj. ID: Fuel Tanks Sample Descript: EPD-1

Matrix: LIQUID

Analysis Method: EPA 8015 Mod

Lab Number: 9603520-06

Sampled: 03/08/96 Received: 03/08/96

Extracted: 03/11/96 Analyzed: 03/13/96 Reported: 03/22/96

C Batch Number: GC0311960HBPEXX

strument ID: GCHP5B

# Total Extractable Petroleum Hydrocarbons (TEPH)

Analyte	Detection Limit ug/L		Sample Results ug/L
TEPH as Diesel Chromatogram Pattern:	50		340
Inidentified HC	***************************************	•••••	C9-C24
Surrogates n-Pentacosane (C25)	Control Limits % 50	% 150	Recovery 105

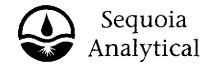
tes reported as N.D. were not present above the stated limit of detection.

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The Sutton Group 51 Shuey Drive Moraga, CA 94556-2620

Attention: John Sutton, PE

Client Proj. ID: **Fuel Tanks** Sample Descript: EPD-1

Matrix: LIQUID

Analysis Method: EPA 8020 Lab Number: 9603520-06

Sampled: 03/08/96 Received: 03/08/96

Analyzed: 03/12/96 Reported: 03/22/96

্রC Batch Number: GC031296BTEX17A

strument ID: GCHP17

#### **BTEX Distinction**

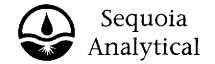
Analyte	Detection Limit ug/L	Sample Results ug/L
Benzene Toluene Ethyl benzene Kylenes (Total)	0.50 •••••••••••••••••••••••••••••••••••	N.D. <b>0.76</b> N.D. N.D.
Surrogates rifluorotoluene	Control Limits % 130	% Recovery 95

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

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he Sutton Group 51 Shuey Drive Moraga, CA 94556-2620

): Fuel Tanks Client Proj. ID: Sample Descript: MW-1 Matrix: LIQUID

Sampled: 03/08/96 Received: 03/08/96 Extracted: 03/13/96 Analyzed: 03/18/96

ttention: John Sutton, PE

Analysis Method: EPA 8270 Lab Number: 9603520-07

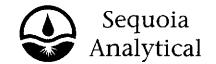
Reported: 03/22/96

QC Batch Number: MS0308968270EXA

strument ID: H5

### Semivolatile Organics (EPA 8270)

Analyte	Detection Limit ug/L	Sample Results ug/L
Acenaphthene Acenaphthylene Inthracene enzoic Acid Benzo(a)anthracene	5.0 5.0 5.0 10 5.0	N.D. N.D. N.D. N.D. N.D.
Renzo(b)fluoranthene enzo(k)fluoranthene lenzo(g,h,i)perytene Benzo(a)pyrene Benzyl alcohol	5.0 5.0 5.0 5.0 5.0	N.D. N.D. N.D. N.D. N.D.
is(2-chloroethoxy)methane is(2-chloroethyl)ether Bis(2-chloroisopropyl)ether Bis(2-ethylhexyl)phthalate Bromophenyl phenyl ether	5.0 5.0 5.0 <b>10</b>	N.D. N.D. N.D. 11 N.D.
Lutyl benzyl phthalate 4-Chloroaniline 2-Chloronaphthalene Chloro-3-methylphenol Chlorophenol	5.0 10 5.0 5.0	N.D. N.D. N.D. N.D.
4-Chlorophenyl phenyl ether Chrysene benzo(a,h)anthracene benzofuran	5.0 5.0 5.0 5.0 5.0	N.D. N.D. N.D. N.D. N.D.
Di-n-butyl phthalate 1,2-Dichlorobenzene 3-Dichlorobenzene 4-Dichlorobenzene 3,3-Dichlorobenzidine	10 5.0 5.0 5.0 10	N.D. N.D. N.D. N.D. N.D.
2.4-Dichlorophenol Lethyl phthalate LH-Dimethylphenol Dimethyl phthalate 4.6-Dinitro-2-methylphenol L1-Dinitrophenol	5.0 5.0 5.0 5.0 10 10	N.D. N.D. N.D. N.D. N.D.
4-Dinitrotoluene	5.0	N.D. N.D.



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The Sutton Group 51 Shuey Drive Moraga, CA 94556-2620

Attention: John Sutton, PE

Client Proj. ID: Fuel Tanks Sample Descript: MW-1

Matrix: LIQUID

Analysis Method: EPA 8015 Mod Lab Number: 9603520-07

Sampled: 03/08/96 Received: 03/08/96 Extracted: 03/11/96 Analyzed: 03/13/96

Reported: 03/22/96

QC Batch Number: GC0311960HBPEXX

strument ID: GCHP5B

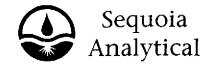
### Total Extractable Petroleum Hydrocarbons (TEPH)

_Analyte	Detection Limit ug/L	:	Sample Results ug/L
TEPH as Diesel Chromatogram Pattern:	50	***************************************	. 240
Chromatogram Pattern: Inidentified HC			. C9-C24
Surrogates g-Pentacosane (C25)	Control Limits % 50	150	Recovery 144

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

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he Sutton Group 51 Shuey Drive Moraga, CA 94556-2620 Client Proj. ID: Fuel Tanks Sample Descript: MW-1 Matrix: LIQUID

Sampled: 03/08/96 Received: 03/08/96

Attention: John Sutton, PE

Analysis Method: EPA 8020 Lab Number: 9603520-07

Analyzed: 03/12/96 Reported: 03/22/96

QC Batch Number: GC031296BTEX17A strument ID: GCHP17

#### **BTEX Distinction**

Analyte	Detection Limit ug/L	Sample Results ug/L	
Benzene Toluene Ithyl benzene Lylenes (Total)	0.50 0.50 0.50 0.50	N.D. N.D. N.D. N.D.	
furrogates rifluorotoluene	Control Limits % 70 130	% Recovery 92	

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

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The Sutton Group 51 Shuey Drive Moraga, CA 94556-2620

Attention: John Sutton, PE

Client Proj. ID: Fuel Tanks Sample Descript: EP3 3-3.5

Matrix: SOLID

Analysis Method: 8015Mod/8020 Lab Number: 9603520-08

Sampled: 03/07/96 Received: 03/08/96

Extracted: 03/13/96 Analyzed: 03/14/96 Reported: 03/22/96

C Batch Number: GC031396BTEXEXB

strument ID: GCHP22

### Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

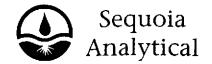
Analyte		ection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas Benzene Joluene Lithyl Benzene Xylenes (Total) Chromatogram Pattern:		0.50 0.50 0.50 0.50	
Surrogates Trifluorotoluene	<b>Cont</b> 70	rol Limits % 130	% Recovery 88

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

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The Sutton Group 51 Shuey Drive Moraga, CA 94556-2620

Attention: John Sutton, PE

Client Proj. ID: Fuel Tanks Sample Descript: EP5 3.5-4

Matrix: SOLID

Analysis Method: 8015Mod/8020

Lab Number: 9603520-09

Sampled: 03/07/96 Received: 03/08/96

Extracted: 03/13/96 Analyzed: 03/14/96 Reported: 03/22/96

QC Batch Number: GC031396BTEXEXB

strument ID: GCHP18

# Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

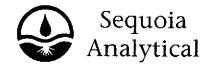
Analyte	De	etection Limit mg/Kg	Sa	ample Results mg/Kg
TPPH as Gas		10		29
Benzene	***************	0.050		1.5
Toluene	**************	0.050		0.24
thyl Benzene	***********	0.050		0.90
Xylenes (Total) Chromatogram Pattern:	**********	0.050	*	2.2
Chiomatogram Pattern.	*************		**************	Gas
Burrogates		ntrol Limits %	% F	Recovery
Trifluorotoluene	70		130	203 Q

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

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The Sutton Group 51 Shuey Drive Moraga, CA 94556-2620

Attention: John Sutton, PE

Client Proj. ID: Fuel Tanks Sample Descript: EP6 3.5-4

Matrix: SOLID

Analysis Method: 8015Mod/8020

Lab Number: 9603520-10

Sampled: 03/07/96 Received: 03/08/96

Extracted: 03/13/96 Analyzed: 03/14/96

Reported: 03/22/96

C Batch Number: GC031396BTEXEXB

strument ID: GCHP22

# Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

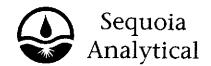
Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas Benzene Toluene Ethyl Benzene Xylenes (Total) Chromatogram Pattern:	1.0 0.0050 0.0050 0.0050 0.0050	N.D. N.D. N.D. N.D. N.D.
Surrogates Trifluorotoluene	<b>Control Limits %</b> 70 130	% Recovery 110

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

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The Sutton Group 51 Shuey Drive Moraga, CA 94556-2620

Client Proj. ID: Fuel Tanks Sample Descript: EPD1 3.5-4 Matrix: SQLID

Sampled: 03/07/96 Received: 03/08/96 Extracted: 03/11/96 Analyzed: 03/13/96 Reported: 03/22/96

Attention: John Sutton, PE

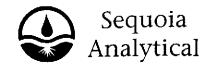
Analysis Method: EPA 8270 Lab Number: 9603520-11

C Batch Number: MS0311968270EXA

strument ID: H5

# Semivolatile Organics (EPA 8270)

Analyte	Detection Limit ug/Kg	Sample Results ug/Kg
Acenaphthene	250	N.D.
Acenaphthylene	250	N.D.
nthracene	250	N.D.
enzoic Acid	500	N.D.
Benzo(a)anthracene	250	N.D.
Benzo(b)fluoranthene	250	N.D.
enzo(k)fluoranthene	250	N.D.
■enzo(g,h,i)perylene	250	N.D.
Benzo(a)pyrene	250	N.D.
∠enzyl alcohol	250	N.D.
sis(2-chloroethoxy)methane	250	N.D.
sis(2-chloroethyl)ether	250	N.D.
Bis(2-chloroisopropyl)ether	250	N.D.
Bis(2-ethylhexyl)phthalate	500	N.D.
-Bromophenyl phenyl ether	250	N.D.
utyl benzyl phthalaté	250	N.D.
4-Chloroaniline	500	N.D.
2-Chloronaphthalene	250	N.D.
Chloro-3-methylphenoi	250	N.D.
Chlorophenol	250	N.D.
4-Chlorophenyl phenyl ether	250	N.D.
<u>hrysene</u>	250	N.D.
benzo(a,h)anthracene	250	N.D.
benzofuran	250	N.D.
Di-n-butyl phthalate	500	N.D.
1.2-Dichlorobenzene	250	N.D.
3-Dichlorobenzene	250	N.D.
4-Dichlorobenzene	250	N.D.
3,3-Dichlorobenzidine	500	N.D.
2,4-Dichlorophenol	250	N.D.
ethyl phthalate	250	N.D.
4-Dimethylphenol	250	N.D.
Dimethyl phthalate	250	N.D.
4,6-Dinitro-2-methylphenol	500	N.D.
4-Dinitrophenol	500	N.D.
4-Dinitrotoluene	250	N.D.



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he Sutton Group 51 Shuey Drive Moraga, CA 94556-2620

Client Proj. ID: Fuel Tanks Sample Descript: EPD1 3.5-4 Matrix: SOLID

Received: 03/08/96 Extracted: 03/11/96 Analyzed: 03/13/96

ttention: John Sutton, PE

Analysis Method: EPA 8270 Lab Number: 9603520-11

Reported: 03/22/96

Sampled: 03/07/96

QC Batch Number: MS0311968270EXA

trument ID: H5

Analyte	Detection Limit ug/Kg	Sample Results ug/Kg
.6-Dinitrotoluene	250	N.D.
Di-n-octyl phthalate	250	N.D.
Fluoranthene	250	N.D.
<b>T</b> uorene	250	N.D.
exachlorobenzene	250	N.D.
Hexachlorobutadiene	250	N.D.
Hexachlorocyclopentadiene	500	N.D.
exachloroethane	250	N.D.
deno(1,2,3-cd)pyrene	250	N.D.
Tsophorone	250	N.D.
2-Methylnaphthalene	250	N.D.
Methylphenol	250	N.D.
Methylphenol	250	N.D.
Naphthalene	250	N.D.
2-Nitroaniline	500	N.D.
Nitroaniline	500	N.D.
Nitroaniline	500	N.D.
Mitrobenzene	250	N.D.
2-Nitrophenol	250	N.D.
Nitrophenol	500	N.D.
Nitrosodiphenylamine	250	N.D.
N-Nitroso-di-n-propylamine	250	N.D.
Pentachlorophenol	500	N.D.
<b>P</b> enanthrene	250	N.D.
jenol	250	N.D.
<b>Fy</b> rene	250	N.D.
1,2,4-Trichlorobenzene	250	N.D.
34,5-Trichlorophenol	500	N.D.
,6-Trichlorophenol	250	N.D.
-		

Sunogates	Control L	ımıts %	% Recovery
Fluorophenol	25	121	7 <b>8</b>
jenol-d5	24	113	85
Nitrobenzene-d5	23	120	76
2-Fluorobiphenyl	30	115	82
#4.6-Tribromophenol	19	122	87
Ferphenyl-d14	18	137	83

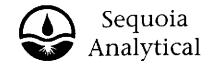
halytes reported as N.D. were not present above the stated limit of detection.

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The Sutton Group 51 Shuey Drive Moraga, CA 94556-2620

Attention: John Sutton, PE

Client Proj. ID: Fuel Tanks Sample Descript: EPD1 3.5-4 Matrix: SOLID

Analysis Method: EPA 8020 Lab Number: 9603520-11

Sampled: 03/07/96 Received: 03/08/96 Extracted: 03/13/96 Analyzed: 03/14/96

Reported: 03/22/96

QC Batch Number: GC031396BTEXEXB

strument ID: GCHP22

#### **BTEX Distinction**

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
Benzene Toluene Ethyl benzene Kylenes (Total)	0.0050 0.0050 0.0050 <b>0.0050</b>	N.D. N.D. N.D. <b>0.0056</b>
Surrogates rifluorotoluene	Control Limits % 130	% Recovery 110

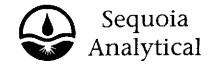
rtes reported as N.D. were not present above the stated limit of detection.

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The Sutton Group 51 Shuey Drive Moraga, CA 94556-2620

Client Proj. ID: Fuel Tanks Sample Descript: EPD1 3.5-4 Matrix: SOLID

Sampled: 03/07/96 Received: 03/08/96 Extracted: 03/11/96

Attention: John Sutton, PE

Analysis Method: EPA 8015 Mod Lab Number: 9603520-11

Analyzed: 03/12/96 Reported: 03/22/96

QC Batch Number: GC0310960HBPEXA

strument ID: GCHP4B

# Total Extractable Petroleum Hydrocarbons (TEPH)

Analyte	Detection Limit mg/Kg	;	Sample Results mg/Kg
TEPH as Diesel Chromatogram Pattern:	1.0		. 1.8
Chromatogram Pattern: Unidentified HC	•••••••••••••••••••••••••••••••••••••••		. C12-C24
Surrogates n-Pentacosane (C25)	Control Limits % 50	150	Recovery 109

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

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The Sutton Group 51 Shuey Drive Moraga, CA 94556-2620

Attention: John Sutton, PE

Client Proj. ID: Fuel Tanks Sample Descript: EPD1 6.5-7 Matrix: SOLID Analysis Method: EPA 8270 Lab Number: 9603520-12

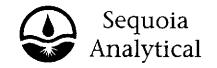
Sampled: 03/07/96 Received: 03/08/96 Extracted: 03/11/96 Analyzed: 03/13/96 Reported: 03/22/96

QC Batch Number: MS0311968270EXA

strument ID: H5

# Semivolatile Organics (EPA 8270)

Analyte	Detection Limit ug/Kg	Sample Results ug/Kg
Acenaphthene	250	N.D.
Acenaphthylene	250	N.D.
nthracene	250	N.D.
enzoic Acid	500	N.D.
Benzo(a)anthracene	250	N.D.
_Benzo(b)fluoranthene	250	N.D.
enzo(k)fluoranthene	250	N.D.
enzo(g,h,i)perylene	250	N.D.
Benzo(a)pyrene	250	N.D.
Benzyl alcohol	250	N.D.
is(2-chloroethoxy)methane	250	N.D.
is(2-chloroethyl)ether	250	N.D.
Bis(2-chloroisopropyl)ether	250	N.D.
Bis(2-ethylhexyl)phthalate	500	N.D.
Bromophenyl phenyl ether	250	N.D.
utyl benzyl phthalate	250	N.D.
4-Chloroaniline	500	N.D.
2-Chloronaphthalene	250	N.D.
Chloro-3-methylphenol	250	N.D.
Chlorophenol	250	N.D.
4-Chlorophenyl phenyl ether	250	N.D.
Chrysene	250	N.D.
benzo(a,h)anthracene	250	N.D.
benzofuran	250	N.D.
Di-n-butyl phthalate	500	N.D.
1,2-Dichlorobenzene	250	N.D.
3-Dichlorobenzene	250	N.D.
4-Dichlorobenzene	250	N.D.
3,3-Dichlorobenzidine	500	N.D.
2,4-Dichlorophenol	250	N.D.
ethyl phthalate	250	N.D.
4-Dimethylphenol	250	N.D.
methyl phthalate	250	N.D.
4,6-Dinitro-2-methylphenol	500	N.D.
★4-Dinitrophenol	500	N.D.
4-Dinitrotoluene	250 250	N.D.



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The Sutton Group 51 Shuey Drive Moraga, CA 94556-2620

Client Proj. ID: Fuel Tanks Sample Descript: EPD1 6.5-7 Matrix: SOLID

Sampled: 03/07/96 Received: 03/08/96 Extracted: 03/11/96 Analyzed: 03/13/96 Reported: 03/22/96

Attention: John Sutton, PE

Analysis Method: EPA 8270 Lab Number: 9603520-12

QC Batch Number: MS0311968270EXA

strument ID: H5

Analyte	Detection Limit ug/Kg	Sample Results ug/Kg
,6-Dinitrotoluene	250	N.D.
Di-n-octyl phthalate	250	N.D.
Fluoranthene	250	N.D.
Fluorene	250	N.D.
Hexachlorobenzene	250	N.D.
Hexachlorobutadiene	250	N.D.
_Hexachlorocyclopentadiene	500	N.D.
lexachloroethane	<b>25</b> 0	N.D.
ndeno(1,2,3-cd)pyrene	250	N.D.
Isophorone	250	N.D.
2-Methylnaphthalene	250	N.D.
Methylphenol	250	N.D.
-Methylphenol	250	N.D.
Naphthalene	250	N.D.
2-Nitroaniline	500	N.D.
-Nitroaniline	500	N.D.
Nitroaniline	500	N.D.
Nitrobenzene	250	N.D.
2-Nitrophenol	250	N.D.
Nitrophenol	500	N.D.
-Nitrosodiphenylamine	250	N.D.
N-Nitroso-di-n-propylamine	250	N.D.
Pentachlorophenol	500	N.D.
nenanthrene	250	N.D.
henol	250	N.D.
ryrene	250	N.D.
1,2,4-Trichlorobenzene	250	N.D.
★4,5-Trichlorophenol	500	N.D.
4,6-Trichlorophenol	250	N.D.

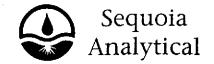
Surrogates	Control L	imits %	% Recovery
Fluorophenol	25	121	79
henol-d5	24	113	83
Vitrobenzene-d5	23	120	75
2-Fluorobiphenyl	30	115	83
4.6-Tribromophenol	19	122	91
Terphenyl-d14	18	137	80

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

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The Sutton Group 51 Shuey Drive Moraga, CA 94556-2620

Client Proj. ID: Fuel Tanks Sample Descript: EPD1 6.5-7 Matrix: SOLID

Sampled: 03/07/96 Received: 03/08/96 Extracted: 03/13/96 Analyzed: 03/14/96 Reported: 03/22/96

Attention: John Sutton, PE

Analysis Method: EPA 8020 Lab Number: 9603520-12

QC Batch Number: GC031396BTEXEXB

strument ID: GCHP22

#### **BTEX Distinction**

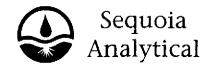
Detection Limit mg/Kg	Sample Results mg/Kg
0.0050	N.D.
Control Limits %	% Recovery
70 130	106
	mg/Kg  0.0050 0.0050 0.0050 0.0050 Control Limits %

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

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he Sutton Group § 51 Shuey Drive Moraga, CA 94556-2620

kttention: John Sutton, PE

Client Proj. ID: Fuel Tanks Sample Descript: EPD1 6.5-7

Matrix: SOLID Analysis Method: EPA 8015 Mod Lab Number: 9603520-12

Sampled: 03/07/96 Received: 03/08/96 Extracted: 03/11/96 Analyzed: 03/12/96 Reported: 03/22/96

QC Batch Number: GC0310960HBPEXA

strument ID: GCHP4B

Total Extractable Petroleum Hydrocarbons (TEPH)

**Detection Limit** mg/Kg

Sample Results mg/Kg

TEPH as Diesel Chromatogram Pattern:

**Analyte** 

1.0

N.D.

Surrogates n-Pentacosane (C25)

Control Limits %

150

% Recovery 82

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

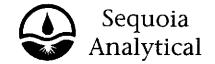
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ELAP #1210

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The Sutton Group 51 Shuey Drive Moraga, CA 94556-2620

Client Proj. ID: Fuel Tanks Sample Descript: EPD2 3.5-4 Matrix: SOLID

Sampled: 03/07/96 Received: 03/08/96 Extracted: 03/11/96 Analyzed: 03/13/96

Attention: John Sutton, PE

Analysis Method: EPA 8270 Analysis Metrics. \_. Lab Number: 9603520-13

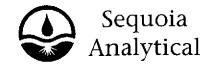
Reported: 03/22/96

QC Batch Number: MS0311968270EXA

strument ID: H5

### Semivolatile Organics (EPA 8270)

Analyte	Detection Limit ug/Kg	Sample Results ug/Kg
Acenaphthene	250	N.D.
_Acenaphthylene	250	N.D.
Anthracené	250	N.D.
Benzoic Acid	500	N.D.
Benzo(a)anthracene	250	N.D.
_Benzo(b)fluoranthene	250	N.D.
Benzo(k)fluoranthene	250	N.D.
Benzo(g,h,i)perylene	250	N.D.
Benzo(a) pyrene	250	N.D.
_Benzyl alcohol	250	N.D.
Bis(2-chloroethoxy)methane	250	N.D.
Bis(2-chloroethyl)ether	250	N.D.
Bis(2-chloroisopropyl)ether	250	N.D.
_Bis(2-ethylhexyl)phthalate	500	N.D.
Bromophenyl phenyl ether	250	N.D.
Butyl benzyl phthalate	250	N.D.
4-Chloroaniline	500	N.D.
2-Chioronaphthalene	250	N.D.
Chioro-3-methylphenol	250	N.D.
Chiorophenol	250	N.D.
4-Chlorophenyl phenyl ether	250	N.D.
Chrysene	250	N.D.
benzo(a,h)anthracene	250	N.D.
ibenzofuran	250	N.D.
Di-n-butyl phthalate	500	N.D.
1,2-Dichlorobenzene	250	N.D.
3-Dichlorobenzene	250	N.D.
4-Dichlorobenzene	250	N.D.
3,3-Dichlorobenzidine	500	N.D.
2,4-Dichlorophenol	250	N.D.
eiethyl phthalate	250	N.D.
4-Dimethylphenol	250	N.D.
Timethyl phthalate	250	N.D.
4,6-Dinitro-2-methylphenol	500	N.D.
	500	N.D.
4-Dinitrotoluene	250	N.D.
		14.2.



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The Sutton Group 51 Shuey Drive

Moraga, CA 94556-2620

Attention: John Sutton, PE

Client Proj. ID: Fuel Tanks Sample Descript: EPD2 3.5-4

Matrix: SOLID

Analysis Method: EPA 8270 Lab Number: 9603520-13

Sampled: 03/07/96 Received: 03/08/96

Extracted: 03/11/96 Analyzed: 03/13/96 Reported: 03/22/96

C Batch Number: MS0311968270EXA

strument ID: H5

Analyte	Detection Limit ug/Kg	Sample Results ug/Kg
2,6-Dinitrotoluene	250	N.D.
Di-n-octyl phthalate	250 250	N.D.
_Fluoranthene	250 250	N.D.
Fluorene	250 250	N.D.
Hexachlorobenzene	250 250	N.D.
Hexachlorobutadiene	250 250	N.D.
Hexachlorocyclopentadiene	500	N.D.
Hexachloroethane	250	N.D.
ndeno(1,2,3-cd)pyrene	250	N.D.
Isophorone	250	N.D.
_2-Methylnaphthalene	250	N.D.
-Methylphenol	250	N.D.
-Methylphenol	250	N.D.
Naphthalene	250	N.D.
2-Nitroaniline	500	N.D.
-Nitroaniline	500	N.D.
-Nitroaniline	500	N.D.
Nitrobenzene	250	N.D.
_2-Nitrophenol	250	N.D.
-Nitrophenol	500	N.D.
-Nitrosodiphenylamine	250	N.D.
N-Nitroso-di-n-propylamine	250	N.D.
Pentachlorophenol	500	N.D.
henanthrene	250	N.D.
henol	250	N.D.
Pyrene	250	N.D.
<u>1</u> ,2,4-Trichlorobenzene	250	N.D.
4,5-Trichlorophenol	500	N.D.
4,6-Trichlorophenol	250	N.D.
•		

Fluorophenol 25 121 72 henol-d5 24 113 81 Nitrobenzene-d5 23 120 71 2-Fluorobiphenyl 30 115 76 4,6-Tribromophenol 19 122 79 Terphenyl-d14 18 79 137

Control Limits %

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

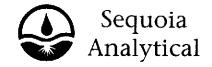
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<u>Surrogates</u>

Page:

% Recovery



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The Sutton Group 51 Shuey Drive Moraga, CA 94556-2620 Client Proj. ID: Fuel Tanks Sample Descript: EPD2 3.5-4 Matrix: SOLID

Sampled: 03/07/96 Received: 03/08/96 Extracted: 03/13/96 Analyzed: 03/14/96

Attention: John Sutton, PE

Analysis Method: EPA 8020 Lab Number: 9603520-13

Reported: 03/22/96

QC Batch Number: GC031396BTEXEXB

strument ID: GCHP18

#### **BTEX Distinction**

_Analyte	Detection Limit mg/Kg	Sample Results mg/Kg	
Benzene	0.0050	N.D.	
Toluene	0.0050	N.D.	
Ithyl benzene	0.0050	N.D.	
Iylenes (Total)	0.0050	N.D.	
<b>Surrogates</b>	Control Limits %	% Recovery	
rifluorotoluene	70 130	90	

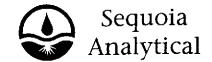
tes reported as N.D. were not present above the stated limit of detection.

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JThe Sutton Group ∶51 Shuey Drive ≟Moraga, CA 94556-2620 Client Proj. ID: Fuel Tanks Sample Descript: EPD2 3.5-4

Matrix: SOLID Analysis Method: EPA 8015 Mod Lab Number: 9603520-13 Sampled: 03/07/96 Received: 03/08/96 Extracted: 03/11/96 Analyzed: 03/12/96 Reported: 03/22/96

C Batch Number: GC0310960HBPEXA

strument ID: GCHP4B

Attention: John Sutton, PE

# Total Extractable Petroleum Hydrocarbons (TEPH)

Analyte 1	Detection Limi mg/Kg	t	Sample Results mg/Kg
TEPH as Diesel	1.0	******	5.4
Chromatogram Pattern: Unidentified HC			C12-C24
Surrogates	Control Limits 9	%	% Recovery
n-Pentacosane (C25)	50	150	104

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

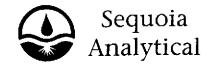
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he Sutton Group 51 Shuey Drive Moraga, CA 94556-2620

ktention: John Sutton, PE

Client Proj. ID: Fuel Tanks Sample Descript: EPD2 6-6.5

Matrix: SOLID

Analysis Method: EPA 8270 Lab Number: 9603520-14

Sampled: 03/07/96 Received: 03/08/96 Extracted: 03/11/96

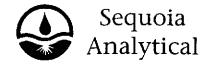
Analyzed: 03/13/96 Reported: 03/22/96

C Batch Number: MS0311968270EXA

trument ID: H5

# Semivolatile Organics (EPA 8270)

Analyte	Detection Limit ug/Kg	Sample Results ug/Kg
Acenaphthene	250	N.D.
<b>≜</b> cenaphthylene	250	N.D.
nthracene	<b>25</b> 0	N.D.
enzoic Acid	500	N.D.
Benzo(a)anthracene	250	N.D.
enzo(b)fluoranthene	250	N.D.
enzo(k)fluoranthene	250	N.D.
enzo(g,h,i)perylene	250	N.D.
Benzo(a)pyrene	250	N.D.
Renzyl alcohol	250	N.D.
is(2-chloroethoxy)methane	250	N.D.
s(2-chloroethyl)ether	250	N.D.
Bis(2-chloroisopropyl)ether	250	N.D.
Bis(2-ethylhexyl)phthalate	500	N.D.
Bromophenyl phenyl ether	250	N.D.
Lutyl benzyl phthalate	250	N.D.
4-Chloroaniline	500	N.D.
2-Chloronaphthalene	250	N.D.
Chloro-3-methylphenol	250	N.D.
Chlorophenol	250	N.D.
4-Chlorophenyl phenyl ether	250	N.D.
Chrysene	250	N.D.
benzo(a,h)anthracene	250	N.D.
benzofuran	250	N.D.
Di-n-butyl phthalate	500	N.D.
1_2-Dichlorobenzene	250	N.D.
B-Dichlorobenzene	250	N.D.
4-Dichlorobenzene	250	N.D.
3,3-Dichlorobenzidine	500	N.D.
2_4-Dichlorophenol	250	N.D.
ethyl phthalate	250	N.D.
#-Dimethylphenol	250	N.D.
Dimethyl phthalate	250	N.D.
4.6-Dinitro-2-methylphenol	500	N.D.
4-Dinitrophenol	500	<b>N.</b> D.
4-Dinitrotoluene	250	N.D.



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he Sutton Group 51 Shuey Drive Moraga, CA 94556-2620

ttention: John Sutton, PE

Client Proj. ID: Fuel Tanks Sample Descript: EPD2 6-6.5

Matrix: SOLID

Analysis Method: EPA 8270 Lab Number: 9603520-14

Sampled: 03/07/96 Received: 03/08/96 Extracted: 03/11/96

Analyzed: 03/13/96 Reported: 03/22/96

C Batch Number: MS0311968270EXA

strument ID: H5

	Detection Limit ug/Kg	Sample Results ug/Kg
,6-Dinitrotoluene	250	N.D.
Di-n-octyl phthalate	250	N.D.
<u>F</u> luoranthene	250	N.D.
luorene	250	N.D.
exachlorobenzene	250	N.D.
Hexachlorobutadiene	250	N.D.
<u>H</u> exachlorocyclopentadiene	· 500	N.D.
exachloroethane	250	N.D.
deno(1,2,3-cd)pyrene	250	N.D.
Tsophorone	250	N.D.
2-Methylnaphthalene	250	N.D.
Methylphenol	250	N.D.
Methylphenol	250	N.D.
Naphthalene	250	N.D.
2-Nitroaniline	500	N.D.
Nitroaniline	500	N.D.
Nitroaniline	500	N.D.
Nitrobenzene	250	N.D.
2-Nitrophenol	250	N.D.
Nitrophenol	500	N.D.
Nitrosodiphenylamine	250	N.D.
N-Nitroso-di-n-propylamine	250	N.D.
Pentachlorophenol	500	N.D.
menanthrene	250	N.D.
nenol	250	N.D.
ryrene	250	N.D.
1,2,4-Trichlorobenzene	250	N.D.
4,5-Trichlorophenol	500	N.D.
4,6-Trichlorophenol	250	N.D.

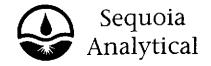
Surrogates	Control Limits %		% Recovery	
Fluorophenol	25	121	75	
nenol-d5	24	113	84	
Nitrobenzene-d5	23	120	73	
2-Fluorobiphenyl	30	115	80	
#1,6-Tribromophenol	19	122	83	
Terphenyl-d14	18	137	83	

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

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he Sutton Group 51 Shuey Drive Moraga, CA 94556-2620

ttention: John Sutton, PE

Client Proj. ID: Fuel Tanks Sample Descript: EPD2 6-6.5 Matrix: SOLID

Analysis Method: EPA 8020 Lab Number: 9603520-14

Sampled: 03/07/96 Received: 03/08/96 Extracted: 03/13/96 Analyzed: 03/14/96 Reported: 03/22/96

QC Batch Number: GC031396BTEXEXB

trument ID: GCHP18

#### **BTEX Distinction**

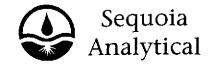
∆nalyte	Detection Limit mg/Kg	Sample Results mg/Kg
Benzene Toluene thyl benzene ylenes (Total)	0.0050 0.0050 0.0050 0.0050	N.D. N.D. N.D. N.D.
Surrogates ifluorotoluene	Control Limits % 70 130	% Recovery 89

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

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The Sutton Group 51 Shuey Drive Moraga, CA 94556-2620

Client Proj. ID: Fuel Tanks Sample Descript: EPD2 6-6.5

Matrix: SOLID

Analysis Method: EPA 8015 Mod

Lab Number: 9603520-14

Sampled: 03/07/96 Received: 03/08/96 Extracted: 03/11/96

Analyzed: 03/12/96 Reported: 03/22/96

QC Batch Number: GC0310960HBPEXA

strument ID: GCHP5B

Attention: John Sutton, PE

# Total Extractable Petroleum Hydrocarbons (TEPH)

_Analyte	Detection Lim mg/Kg	it	Sample Results mg/Kg
TEPH as Diesel Chromatogram Pattern:	1.0		4.1
Inidentified HC		* * * * * * * *	C9-C24
Surrogates	Control Limits 50	% 150	% Recovery 101

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

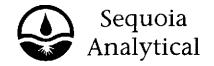
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51 Shuey Drive

Moraga, CA 94556-2620 Attention:

The Sutton Group Client Proj. ID: Fuel Tanks

Received: 03/08/96

Lab Proj. ID: 9603520 John Sutton, PE

Reported: 03/22/96

#### LABORATORY NARRATIVE

Q note: High surrogate recovery on sample 9603520-09 due to matrix interference.

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The Sutton Group 51 Shuey Drive

Client Project ID:

**Fuel Tanks** 

Moraga, CA 94556-2620

Matrix: Liquid

Attention: John Sutton, PE

Work Order #: 9603520

-01-04, 15-17

Reported:

Mar 22, 1996

## QUALITY CONTROL DATA REPORT

Analyte:

Lead

QC Batch#: ME0314967000MDA Analy, Method: EPA 239.2 Prep. Method: EPA 3020

Analyst:

J. Smith

MS/MSD #: Sample Conc.:

960366001 0.016

Prepared Date:

3/14/96 3/15/96

Analyzed Date: Instrument I.D.#: Conc. Spiked:

MV1 0.050 mg/L

Result:

0.046

MS % Recovery:

60

Dup. Result: MSD % Recov.: 0.048 64

RPD:

RPD Limit:

4.3

0-30

LCS #:

BLK031496

Prepared Date: Analyzed Date:

N/A 3/18/96

nstrument I.D.#:

MV1 0.050 mg/L

Conc. Spiked:

LCS Result: LCS % Recov.:

0.051 101

MS/MSD

LCS

75-125

**Control Limits** 

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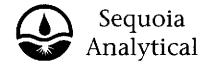
lim Heider Project Manager Please Note:

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

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The Sutton Group 51 Shuey Drive Client Project ID:

Fuel Tanks

Moraga, CA 94556-2620

Attention: John Sutton, PE

Matrix: Liquid

Work Order #: 960

9603520-05-07

Reported: Mar 22, 1996

## **QUALITY CONTROL DATA REPORT**

Analyte:	Total Dissolved	Diesel
	Solid	
QC Batch#:	IN031196160100A	GC0311960HBPEXX
Analy. Method:	EPA 160.1	EPA 8015M
Prep. Method:	N/A	EPA 3520
Analysti	P. Chin	) kalatan
Analyst:	S. Chin	J. Minkel

Analyst:	S. Chin	J. Minkel
MS/MSD #:	960328812	960337701
Sample Conc.:	400	550
Prepared Date:	3/11/96	3/11/96
Analyzed Date:	3/11/96	3/13/96
Instrument I.D.#:	Manual	GCHP4
Conc. Spiked:	500 mg/L	1000 μg/L
Populti	050	4000

Result:	950	1200
MS % Recovery:	110	65
Dup. Result:	830	910
MSD % Recov.:	86	36
RPD:	13	28

RPD:	13	28	
RPD Limit:	0-30	0-50	
			0000000

LC5 #:	BLK031196	BLK031196
Prepared Date:	3/11/96	3/11/96
Analyzed Date:	3/11/96	3/12/96
Instrument I.D.#:	Manual	GCHP4
Conc. Spiked:	500 mg/L	1000 µg/L
LCS Result:	480	930
LCS % Recov.:	96	93

MS/MSD	70-130	
LCS	80-120	38-122
Control Limits		

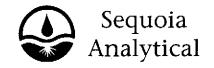
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Jim Heider 4 Project Manager Please Note:

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

9603520.SSS <2>



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The Sutton Group 51 Shuey Drive

Moraga, CA 94556-2620

Client Project ID:

Fuel Tanks

Liquid

Attention: John Sutton, PE

Work Order #:

Matrix:

9603520-01-07

Reported:

Mar 22, 1996

## **QUALITY CONTROL DATA REPORT**

Analyte:	Benzene	Toluene	Ethyl	Xylenes
			Benzene	
QC Batch#:	GC031296BTEX17A	GC031296BTEX17A	GC031296BTEX17A	GC031296BTEX17A
Analy. Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Prep. Method:	EPA 5030	EPA 5030	EPA 5030	EPA 5030
Analyst:	J. Woo	J. <b>Wo</b> o	J. Woo	J. Woo
MS/MSD #:	960309703	960309703	960309703	960309703
Sample Conc.:	N.D.	N.D.	N.D.	N.D.
Prepared Date:		3/12/96	3/12/96	3/12/96
Analyzed Date:		, ,	3/12/96	3/12/96
Instrument I.D.#:	3/12/96 GCHP17	3/12/96 GCHP17	3/12/96 GCHP17	3/12/96 GCHP17
Conc. Spiked:	10 μg/L	10 μg/L	10 μg/L	30 μg/L
Result:	10	10	9.9	30
MS % Recovery:	100	100	99	100
Dup. Result:	9.6	9.8	9.8	29
MSD % Recov.:	96	98	98	97
. ממח.	4.4	0.0	10	2.4
RPD:	4.1	2.0	1.0	3.4
RPD Limit:	0-50	0-50	0-50	0-50
LCS #:	BLK031296	BLK031296	BLK031296	BLK031296
Prepared Date:	3/12/96	3/12/96	3/12/96	3/12/96

LCS #:	BLK031296	BLK031296	BLK031296	BLK031296	
Prepared Date:	3/12/96	3/12/96	3/12/96	3/12/96	
Analyzed Date:	3/12/96	3/12/96	3/12/96	3/12/96	
Instrument I.D.#:	GCHP17	GCHP17	GCHP17	GCHP17	
Conc. Spiked:	10 μg/L	10 μg/L	10 µg/L	30 μg/L	
LCS Result:	9.7	9.6	9.7	29	
LCS % Recov.:	97	96	97	97	
Ī					
MS/MSD LCS	70-130	70-130	70-130	70-130	
Control Limits					

SEQUOIA ANALYTICAL

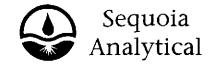
Jim Heider Project Manager Please Note:

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

9603520.SSS <3>





Redwood City, CA 94063 Walnut Creek, CA 94598 Sacramento, CA 95834 (415) 364-9600 (510) 988-9600 (916) 921-9600 FAX (415) 364-9233 FAX (510) 988-9673 FAX (916) 921-0100

The Sutton Group 51 Shuey Drive Client Project ID: Fuel Tanks

Matrix:

Solid

Moraga, CA 94556-2620 Attention: John Sutton, PE

Work Order #:

9603520-08-14

Reported:

Mar 22, 1996

#### **QUALITY CONTROL DATA REPORT**

		GOALITTOON	IINUL DATA NI	EPONI
Analyte:	Benzene	Toluene	Ethyl	Xylenes
			Benzene	
	GC031396BTEXEXB	GC031396BTEXEXB	GC031396BTEXEXB	GC031396BTEXEXB
Analy. Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Prep. Method:	EPA 5030	EPA 5030	EPA 5030	EPA 5030
Analyst:	M. Otte	M. Otte	M. Otte	M. Otte
MS/MSĎ #:		960366802	960366802	960366802
Sample Conc.:		N.D.	N.D.	N.D.
Prepared Date:	3/13/96	3/13/96	3/13/96	3/13/96
Analyzed Date:		3/13/96	3/13/96	3/13/96
Instrument I.D.#:		GCHP1	GCHP1	GCHP1
Conc. Spiked:	0.20 mg/Kg	0.20 mg/Kg	0.20 mg/Kg	0.60 mg/Kg
Result:	0.14	0.15	0.15	0.45
MS % Recovery:	70	75	. 75	75
Dup. Result:	0.16	0.16	0.16	0.48
MSD % Recov.:	80	80	80	80
RPD:	13	6.5	6.5	6.5
RPD Limit:	0-50	0-50	0-50	0-50
LCS #:	BLK031396	BLK031396	BLK031396	BLK031396
Prepared Date:	3/13/96	3/13/96	3/13/96	3/13/96
Analyzed Date:	3/13/96	3/13/96	3/13/96	3/13/96
Instrument I.D.#:	GCHP1	GCHP1	GCHP1	GCHP1
Conc. Spiked:	0.20 mg/Kg	0.20 mg/Kg	0.20 mg/Kg	0.60 mg/Kg
LCS Result:	0.18	0.19	0.19	0.57
LCS % Recov.:	90	95	95	95
MS/MSD	<del></del>			
LCS	<b></b>			<u> </u>
Control Limits	50-150	50-150	50-150	50-150

SEQUOIA ANALYTICAL

Jim Heider Project Manager Please Note:

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9603520.SSS <4>





Redwood City, CA 94063 Walnut Creek, CA 94598 Sacramento, CA 95834

(415) 364-9600 (510) 988-9600 (916) 921-9600

FAX (415) 364-9233 FAX (510) 988-9673 FAX (916) 921-0100

The Sutton Group 51 Shuey Drive

Client Project ID: Matrix:

Fuel Tanks

Moraga, CA 94556-2620

Attention: John Sutton, PE

Solid

Work Order #: 9603520-11-14 Reported:

Mar 22, 1996

#### QUALITY CONTROL DATA REPORT

Analyte:

Diesel

QC Batch#: GC0310960HBPEXA Analy. Method:

**EPA 8015M** 

Prep. Method:

EPA 3550

Analyst:

J. Minkel

MS/MSD #: Sample Conc.: 960348212 5000 3/10/96

Prepared Date: Analyzed Date:

3/11/96

Instrument I.D.#: Conc. Spiked:

GCHP5 25 mg/Kg

Result:

MS % Recovery:

Dup. Result: MSD % Recov.:

RPD: RPD Limit:

LCS #:

BLK031196

Prepared Date: **Analyzed Date:**  3/11/96 3/12/96

Instrument I.D.#:

GCHP5

Conc. Spiked:

25 mg/Kg

LCS Result: LCS % Recov.:

20 80

MS/MSD

LCS

38-122

Control Limits

Matrix interference

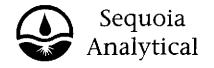
SEQUOIA ANALYTICAL

Jim Heider Project Manager Please Note:

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9603520.SSS <5>



Redwood City, CA 94063 Walnut Creek, CA 94598 Sacramento, CA 95834 (415) 364-9600 (510) 988-9600 (916) 921-9600 FAX (415) 364-9233 FAX (510) 988-9673 FAX (916) 921-0100

The Sutton Group 51 Shuey Drive Client Project ID: Matrix:

Work Order #:

Fuel Tanks Liquid

Moraga, CA 94556-2620 Attention: John Sutton, PE

9603520-05-07

Reported: Mar 22, 1996

## **QUALITY CONTROL DATA REPORT**

Analyte:	Phenol	2-Chlorophenol	1,4-Dichloro benzene	N-Nitroso-Di- N-propylamine	
QC Batch#:	MS0308968270EXA	MS0308968270EXA	MS0308968270EXA	MS0308968270EXA	
Analy. Method:	EPA 8270	EPA 8270	EPA 8270	EPA 8270	
Prep. Method:	EPA 3510	EPA 3510	EPA 3510	EPA 3510	
Analyst:	E. Manuel	E. Manuel	E. Manuel	E. Manuel	
MS/MSĎ#:	960332601	960332601	960332601	960332601	
Sample Conc.:	N.D.	N.D.	N.D.	N.D.	
Prepared Date:	3/8/96	3/8/96	3/8/96	3/8/96	
Analyzed Date:	3/12/96	3/12/96	3/12/96	3/12/96	
nstrument I.D.#:	H5	H5	H5	H5	
Conc. Spiked:	200 μg/L	200 μg/L	200 μg/L	200 μg/L	
Result:	81	140	120	160	
MS % Recovery:	41	70	60	80	
Dup. Result:	80	140	120	150	
MSD % Recov.:	40	70	60	75	
RPD:	1.2	0.0	0.0	6.5	
RPD Limit:	0-50	0-50	0-50	0-50	

LCS #:	BLK030896	BLK030896	BLK030896	BLK030896	
Prepared Date:	3/8/96	3/8/96	3/8/96	3/8/96	
Analyzed Date:	3/12/96	3/12/96	3/12/96	3/12/96	
Instrument I.D.#:	H5	H5	H5	H5	
Conc. Spiked:	200 μg/L	200 μg/L	200 µg/L	200 μg/L	
LCS Result:	86	150	120	170	
LCS % Recov.:	43	75	60	85	
MS/MSD	15 115	20.120	20.120	20.120	

MS/MSD					
1 7					
LCS	15-115	30-120	30-120	30-120	
. 6				* * *	
Control Limits					
Q 011111 01 2.1111110					

SEQUOIA ANALYTICAL

Jim Heider Project Manager Please Note:

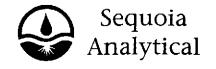
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\*\* MS = Matrix Spike, MSD = MS Duplicate, RPD = Relative % Difference

Page 1 of 3

9603520.SSS <6>





Redwood City, CA 94063 Walnut Creek, CA 94598 Sacramento, CA 95834

(415) 364-9600 (510) 988-9600 (916) 921-9600 FAX (415) 364-9233 FAX (510) 988-9673 FAX (916) 921-0100

The Sutton Group 51 Shuey Drive

Moraga, CA 94556-2620 Attention: John Sutton, PE Client Project ID: Fuel Tanks

Matrix: L

Liquid

Work Order #:

9603520-05-07

Reported: Mar

Mar 22, 1996

## **QUALITY CONTROL DATA REPORT**

Analyte:	1,2,4-Trichloro	4-Chloro-3	Acenaphthene	4-Nitrophenol	
	benzene	Methylphenol			
QC Batch#:	MS0308968270EXA	MS0308968270EXA	MS0308968270EXA	MS0308968270EXA	
Analy. Method:	EPA 8270	EPA 8270	EPA 8270	EPA 8270	
Prep. Method:	EPA 3510	EPA 3510	EPA 3510	EPA 3510	
Analyst:	E. Manuel	E. Manuel	E. Manuel	E. Manuel	
MS/MSD #:	960332601	960332601	960332601	960332601	
Sample Conc.:	N.D.	N.D.	N.D.	N.D.	
Prepared Date:	3/8/96	3/8/96	3/8/96	3/8/96	
Analyzed Date:	3/12/96	3/12/96	3/12/96	3/12/96	
Instrument I.D.#:	H5	H5	H5	H5	
Conc. Spiked:	200 μg/L	200 μg/L	200 μg/L	200 μg/L	
Result:	110	130	130	70	
MS % Recovery:	55	65	65	35	
Dup. Result:	110	130	130	65	
MSD % Recov.:	55	65	65	33	
RPD:	0.0	0.0	0.0	7.4	
RPD Limit:	0-50	0-50	0-50	0-50	

	LCS #:	BLK030896	BLK030896	BLK030896	BLK030896
د	Prepared Date:	3/8/96	3/8/96	3/8/96	3/8/96
	Analyzed Date:	3/12/96	3/12/96	3/12/96	3/12/96
<b>**</b>	Instrument I.D.#:	H5	H5	H5	H5
	Conc. Spiked:	200 μg/L	200 μg/L	200 μg/L	200 μg/L
	LCS Result: LCS % Recov.:	120 60	140 70	140 70	66 33
	MS/MSD LCS Control Limits	40-120	30-120	50-140	20-120

SEQUOIA ANALYTICAL

Jim Heider Project Manager Please Note:

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Page 2 of 3

9603520.SSS <7>





Redwood City, CA 94063 Walnut Creek, CA 94598 Sacramento, CA 95834 (415) 364-9600 (510) 988-9600 (916) 921-9600 FAX (415) 364-9233 FAX (510) 988-9673 FAX (916) 921-0100

The Sutton Group 51 Shuey Drive Client Project ID:

Work Order #:

Fuel Tanks Liquid

Moraga, CA 94556-2620

Attention: John Sutton, PE

Matrix: Liqu

9603520-05-07

Reported:

Mar 22, 1996

## **QUALITY CONTROL DATA REPORT**

Analyte:	2,4-Dinitro-	Pentachloro-	Pyrene	
	toluene	phenol		
QC Batch#:	MS0308968270EXA	MS0308968270EXA	MS0308968270EXA	
Analy. Method:	EPA 8270	EPA 8270	EPA 8270	
Prep. Method:	EPA 3510	EPA 3510	EPA 3510	
Analyst:	E. Manuel	E. Manuel	E. Manuel	
MS/MSD #:	960332601	960332601	960332601	
Sample Conc.:	N.D.	N.D.	N.D.	
Prepared Date:	3/8/96	3/8/96	3/8/96	
Analyzed Date:	3/12/96	3/12/96	3/12/96	
Instrument I.D.#:	H5	H5	, H5	
Conc. Spiked:	200 μg/L	200 μg/L	200 μg/L	
Result:	130	140	140	
MS % Recovery:	65	70	70	
Dup. Result:	120	140	130	
MSD % Recov.:	60	70	65	
RPD:	8.0	0.0	7.4	
RPD Limit:	0-50	0-50	0-50	

-	LCS #:	BLK030896	BLK030896	BLK030896
<b>≟</b> P	repared Date:	3/8/96	3/8/96	3/8/96
A	nalyzed Date:	3/12/96	3/12/96	3/12/96
Inst	trument I.D.#:	H5	H5	H5
	Conc. Spiked:	200 μg/L	200 μg/L	200 μg/L
	LCS Result:	140	140	140
L	.CS % Recov.:	70	70	70
j				
	MS/MSD			

∤ MS/M\$D			-
LCS	40-130	30-110	5 <del>5</del> -115
Control Limits			

SEQUOIA ANALYTICAL

Jim Heider Project Manager Please Note:

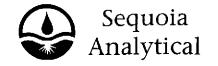
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Page 3 of 3

9603520.SSS <8>





Redwood City, CA 94063 Walnut Creek, CA 94598 Sacramento, CA 95834

(415) 364-9600 (510) 988-9600 (916) 921-9600 FAX (415) 364-9233 FAX (510) 988-9673 FAX (916) 921-0100

The Sutton Group 51 Shuey Drive

Client Project ID:

Fuel Tanks

Matrix:

Solid

Moraga, CA 94556-2620 Attention: John Sutton, PE

Work Order #:

9603520-11-14

Reported:

Mar 22, 1996

# **QUALITY CONTROL DATA REPORT**

Analyte:	Phenol	2-Chlorophenol	1,4-Dichloro	N-Nitroso-Di-	
i			benzene	N-propylamine	
	MS0311968270EXA	MS0311968270EXA	MS0311968270EXA	MS0311968270EXA	
Analy. Method:	EPA 8270	EPA 8270	EPA 8270	EPA 8270	
Prep. Method:	EPA 3550	EPA 3550	EPA 3550	EPA 3550	
Analyst:	E. Manuel	E. Manuel	E. Manuel		···
MS/MSD #:	960354611	960354611		E. Manuel	
Sample Conc.:	900354611 N.D.	960354611 N.D.	960354611	960354611	
Prepared Date:	3/11/96		N.D.	N.D.	
Analyzed Date:		3/11/96	3/11/96	3/11/96	
Instrument I.D.#:	3/12/96	3/12/96	3/12/96	3/12/96	
	H5	H5	H5	H5	
Conc. Spiked:	3300 μg/Kg	3300 μg/Kg	3300 µg/Kg	3300 μg/Kg	
Result:	3300	2900	2600	3300	
MS % Recovery:	100	88	79	100	
Dup. Result:	3100	2800	2300	3300	
MSD % Recov.:	94	85	70	100	
RPD:	6.3	3.5	12	0.0	
RPD Limit:	0-50	0-50	0-50	0.50	
LCS#:	BLK031196	BLK031196	BLK031196	BLK031196	
Prepared Date:	3/11/96	3/11/96	3/11/96	3/11/96	
Analyzed Date:	3/12/96	3/12/96	3/12/96	3/12/96	
nstrument I.D.#:	H5	H5	H5	H5	
Conc. Spiked:	3300 μg/Kg	3300 µg/Kg	3300 μg/Kg	3300 μg/Kg	
LCS Result:	3300	3000	2700	0500	
LCS % Recov.:	100	91		3500	
200 /01100041.	100	ЭI	82	106	
MS/MSD					
LCS	35-120	30-120	30-120	30-120	

SEQUOIA ANALYTICAL

Jim Heider Project Manager

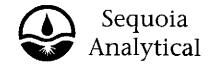
**Control Limits** 

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\*\* MS = Matrix Spike, MSD = MS Duplicate, RPD = Relative % Difference Page 1 of 3

9603520.SSS <9>



Redwood City, CA 94063 Walnut Creek, CA 94598 Sacramento, CA 95834

(415) 364-9600 (510) 988-9600 (916) 921-9600 FAX (415) 364-9233 FAX (510) 988-9673 FAX (916) 921-0100

The Sutton Group 51 Shuey Drive Client Project ID: Fuel Tanks

Matrix:

Solid

Moraga, CA 94556-2620 Attention: John Sutton, PE

Work Order #: 96

9603520-11-14

Reported: Mar 22, 1996

## **QUALITY CONTROL DATA REPORT**

Analyte:	1,2,4-Trichloro benzene	4-Chloro-3 Methylphenol	Acenaphthene	4-Nitrophenol
QC Batch#:	MS0311968270EXA	MS0311968270EXA	MS0311968270EXA	MS0311968270EXA
Aпаly. Method:	EPA 8270	EPA 8270	EPA 8270	EPA 8270
Prep. Method:	EPA 3550	EPA 3550	EPA 3550	EPA 3550
Analyst:	E. Manuel	E. Manuel	E. Manuel	E. Manuel
MS/MSD #:	960354611	960354611	960354611	960354611
Sample Conc.:	N.D.	N.D.	N.D.	N.D.
Prepared Date:	3/11/96	3/11/96	3/11/96	3/11/96
Analyzed Date:	3/12/96	3/12/96	3/12/96	3/12/96
Instrument I.D.#:	H5	, H5	H5	H5
Conc. Spiked:	3300 μg/Kg	3300 μg/Kg	3300 μg/Kg	3300 μg/Kg
Result:	2400	2700	2700	3200
MS % Recovery:	73	82	82	97
Dup. Result:	2300	2800	2700	3100
MSD % Recov.:	70	85	82	94
RPD:	4.3	3.6	0.0	3.2
RPD Limit:	0-50	0-50	0-50	0-50
LCS #:	BLK031196	BLK031196	BLK031196	BLK031196

l) LCS #:	BLK031196	BLK031196	BLK031196	BLK031196	
Prepared Date:	3/11/96	3/11/96	· 3/11/96	3/11/96	
Analyzed Date:	3/12/96	3/12/96	3/12/96	3/12/96	
Instrument I.D.#:	H5	<b>H</b> 5	H5	H5	
Conc. Spiked:	3300 μg/Kg	3300 μg/Kg	3300 μg/Kg	3300 µg/Kg	
LCS Result:	2600	2700	2800	3200	
LCS % Recov.:	79	82	85	97	
MS/MSD		·		<u></u>	

	MS/MSD LCS Control Limits	40-120	40-120	50-140	20-120	
_						

SEQUOIA ANALYTICAL

Jim Heider Project Manager Please Note:

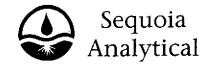
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Page 2 of 3

9603520.SSS < 10 >





Redwood City, CA 94063 Walnut Creek, CA 94598 Sacramento, CA 95834

(415) 364-9600 (510) 988-9600 (916) 921-9600

FAX (415) 364-9233 FAX (510) 988-9673 FAX (916) 921-0100

The Sutton Group 51 Shuey Drive

Client Project ID:

Fuel Tanks

Matrix:

Solid

Moraga, CA 94556-2620 Attention: John Sutton, PE

Work Order #:

9603520-11-14

Reported:

Mar 22, 1996

# **QUALITY CONTROL DATA REPORT**

Analyte:	2,4-Dinitro-	Pentachloro-	Pyrene
	toluene	phenol	
	MS0311968270EXA	MS0311968270EXA	MS0311968270EXA
Analy. Method:	EPA 8270	EPA 8270	EPA 8270
Prep. Method:	EPA 3550	EPA 3550	EPA 3550
Analyst:	E. Manuel	E. Manuel	E. Manuel
MS/MSD #:	960354611	960354611	960354611
Sample Conc.:	N.D.	N.D.	N.D.
Prepared Date:	3/11/96	3/11/96	3/11/96
Analyzed Date:	3/12/96	3/12/96	3/12/96
Instrument I.D.#:	H5	H5	H5
Conc. Spiked:	3300 µg/Kg	3300 μg/Kg	3300 µg/Kg
Result:	2500	2900	2700
MS % Recovery:	76	88	82
Dup. Result:	2400	2600	2700
MSD % Recov.:	73	79	82
RPD:	4.1	11	0.0
RPD Limit:	0-50	0-50	0-50

LCS #:	BLK031196	BLK031196	BLK031196	
Prepared Date:	3/11/96	3/11/96	3/11/96	
Analyzed Date:	3/12/96	3/12/96	3/12/96	
instrument I.D.#:	H5	H5	H5	
Conc. Spiked:	3300 μg/Kg	3300 <b>μg/K</b> g	3300 μg/Kg	
LCS Result:	2500	2800	2800	
LCS % Recov.:	76	85	85	
1				
MS/MSD LCS	40-130	30-110	50-115	

SEQUOIA ANALYTICAL

Control Limits

Jim Heider Project Manager Please Note:

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Page 3 of 3

9603520.SSS <11>

Company Name:	re Suttone	JITU)			T/T	Project I	Vame:	Fu	elti	me	3				
Address: 51	Shugy D	rive			E	Billing A	ddress	s ( if di	feren	<b>:</b>	OL	SD	)		
City: Moraga	State:	CA.			14556	,2	60	0	G					èΩÆ	NED 9458
elephone: 570 6			FAX #:	51063	1-(37( F	P.O. #:									
Report To: The Su		Sample	r: Su	Hrn		C Data	a: 🕲 L	evel [	) (Stand	dard) (	⊒ Leve	el C	☐ Lev	/el B	☐ Level A/
	orking Days 🔲	3 Workin 2 Workin 24 Hours	g Days	<b>п2-8 н</b> о	□ Wa	nking W aste Wa ner	ter 🌶	J/4				ses Re	quested		
Client Sample I.D.	Date/Time Sampled	Matrix Desc.	# of Cont.	Cont. Type 2× VuA.	Sequoia's Sample #	1	(1) X	\$\langle \( \langle \)			) () ()				Comments
1. EP4-WI	3/8/96,0900		3	1x4lPle	1	X		Х							1111 for MYB
2. EP-3 WC	4-1-			* 4 * * * * * * * * * * * * * * * *	$f^{L_{f}^{*}}$	X	Х	Х				,			TEHE THE OF
3. E 1-7 WIC	7/16			IX/2L P	· K.	X'	Х	Х						Ĭ,	Hieoco j
4. EP2-WC	3/8/96 0950		3	1XZLPI	17	X	x	X				•	)		
5. EP6-WA	3/8/16 1007		3	14/6F 51	2	Χ		X							Made mer
6. EP7-WA	13 8 Mb 1025	·	3	ADV XS	3	Х		Х							Hald the nite
7.EP5 - WA	13/3/16 1000		3	IX'ZLIY	4	X		X							
8.EPD-2	3/8/96 1140		7	2 X V O A 2 X V L A	5				X	X	X				· · · · · · · · · · · · · · · · · · ·
9.EPD-1	3/8/96 1130		7	2 X VJA 2 X VZL A	G				Χ	Х	Х		_		·
10. MW-1	3/3/16 1220		4	2 x VaA 2 x 2 L A	7				X	Х	Х	-			
Relinquished By:	Munau	人,	Date	38/16	Time: 1元ぬ	Rece	ived E	y:M	wit	a.t.l.	Com	Da	ate:3/(7	96	Time: 41.25
Relinquished By: 2	Min 1 16	r All	Date	3/8/96	Time:5 10		ived E			<u>.</u>	·	Da	ate:		Time:
Relinquished By:		; ,	Date		Time:	Rece	ived E	By Lab		W.			ate:3/8/9		Time: /7/0

	SEQUOIA ANALYTICAL	ij
<b>S</b>	CHAIN OF CUSTODY	

4.6	-580 Criesapeake Drive • Hedwood City, CA 94063 • (415) 364-9600 FAX (415) 364-9233
	819 Striker Ave., Suite 8 • Sacramento, CA 95834 • (916) 921-9600 FAX (916) 921-0100
	404 N. Wiget Lane • Walnut Creek, CA 94598 • (510) 988-9600 FAX (510) 988-9673

Company Name: -Tl	1: Satton	Gumo				F	Project N	lame:		Fu.	1 7	معاد						7
Address: 51 Shary Dane							Billing Address (if different): (ユレッカ									1		
N1							2000 Chenst Ave SAN Local 20 94590											
Telephone: 510 6	21 - 109.5		FAX #:	1510 (c)			P.O. #:									٦ ټ		
Report To: The Satt	luis Group	Sample	. " "t	1:01:2			QC Data	ı: 🖵 L	_evel (	) (Stand	dard)	Lev	el C	<u> </u>	_evel E		Level A	- Client
Turnaround 10 Working Days 3 Working Days 2-8 Hours					Wa	ste Wa	ter 🖊				Analy	ses Re	equesto	ed		7	Pink P	
Client Sample I.D.	Date/Time Sampled	Matrix Desc.	# of Cont.	Cont. Type	Sequoi Sample		/6			// /						/c	omments	
1. EP10 65-7	3/7 0820	Suil	1	Tube	,			-		S						Hestal.	Angelo S	Joia
2. EP1@95-10	317 0930	Soil	/	Tube							<i>'</i>						+ TO FAX	Sequoia
3. EPZACLS-7	3/7 1040	501/	1	Tubic												174747	A Ping	Yellow -
4. EP3@ 3-3.5	1	Sail	ı	Tube	جر ا		,									24 -10		\ \
5. E03@ 6.5-1	3/7 1045	Soil	1	Tubé			Fig. 4.											
6.EP3@ 7.5-8	3/7 11/5	Soil	j	Tuse										7. p.2				<u> </u>
7.EP4@ 6.5-7	317 1150	501		Tube	9												(	oia
8. EP 5 @ 3.5 -4	3/1 1300	50,1	ŀ	Tulos														Sequoia
9 EP5 @ 6-6.5	317 1330	Socil	1	Tube													,	White -
10. EP6@ 3.5-4	317 1415	801	ł	Tubá	10												V	⋛
Relinquished By:	RMoney	-	Date	: 3/9/916	Time: ເລ	دىن	Rece	ived E	3y Me	ud.	nd A	e 34	D	ate: 3	-8-96	Time: 4	4:25	]
Relinquished By: 💋	West of Me	de	Date	3-8-96	Time: 5	10	Rece	ived E	Зу:	v	<del>:7 /</del>		D	ate:		Time:		
Relinquished By: Date: Time:					Rece	ived E	3y Lat	s: / L	-/l_	٠ .		المنظم)	8/96	Time: /	7//			

73	CHAIN OF CUSTODY	
V	CHAIN OF CUSTODY	

80 apea rive two two (41 4-92 1063 1063 1065) 3 10600 (41 1064 1065)
819 Striker Ave., Suite 8 • Sacramento, CA 95834 • (916) 921-9600 FAX (916) 921-0100
404 N. Wiget Lane • Walnut Creek, CA 94598 • (510) 988-9600 FAX (510) 988-9673

Company Name: The bullons	MC WWG()				Project l	Vame:		= 1, 1	Tix	ىلا. ئ			<del>:</del>		$\neg$
Address: 31 Shucy Daile					Billing A	ddress						17771221			
City: Market State	: CA		Zip Code: ၂۰	1550e	Zoon steast Adv continues 10000										
Telephone: 동네 - 6일( - 46성용					P.O. #:										
Report To: The Suffee Greens	Sample	r: 🕹	utton		QC Data	a: 🚨 L	evel [	) (Stand	iard)	☐ Lev	el C	Q١	_evel B	☐ Level A	
_	3 Workin 2 Workin 24 Hours	g Days	□ 2 - 8 Hour	□ N	Drinking Water Analyses Requested Waste Water							i			
Client Date/Time Sample I.D. Sampled	Matrix Desc.	# of Cont.	Cont. Type	Sequoia's Sample #		<u>,;;}/</u>								Comments	\$
1. EPG@ 35-4 3/7 2615	5001	١	Tulsi											Hold maples	
2.570 62-7 317 3040	Swil	١	Tubi			ļ <del></del>				,				Sattle to Trey	
3.EPD1 @ 35-4 317 1550	1108	1	Tube	<u>lı</u>						<u> </u>	<u></u>			many to	
4.EPO1@65-7 37 1550	Sil	t	-توابد آ	12		ļ						ļ		by du	
5.EPD 2@ 3.5-4 311 1615	Soil	١	-T.ub_	13			ļ 			ļ					
6. EPD 20 6-6-5 317 1620	Sail	١	T.ulse	14						ļ					_
7.EPO Z @ 9.5-10 3/7 1640	Sail	1	Tubi			ļ		<u> </u>						(	
8.										ļ	ļ	<u> </u>		·	
9.	-							<u> </u>		ļ					:
10.															
Relinquished By:	<u> </u>	Date	: 2/2/ <sub>15</sub> Ti	me: ১৭ ১	) Rec	eived E	3y:///	1.25/.	rel Ta	leca	ם	ate: 3-	1-96	Time: (/ '> ==	
Relinquished By:	9 11/2	Date	: 3-8.9 Ti				•					Date:		Time:	
Relinquished By:		Date	: Ti	ime:	Rec	eived E	By Lab	):	/. //		[	Date: گر	12/10	Time: 174	

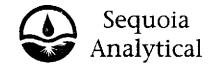
Were Samples Received in Good Condition? • Yes • No

Page \_\_ of \_\_

Company Name: TM	e Suttone	olgul)			<i>171</i> P	roject N	lame:	Fu	elta	nke	3				
Address: 51 S	shugy D	rile			В	Billing A	ddress	(if dif	ferent	): (	OL	SD			
city: Moraga	/ I			Zip Code:	14556	2	60	0	A	الريم	-X	ار کے	Bul	الماه	ENEW 94581
relephone: 570 6					1-(37( P	P.O. #:									/
Report To: The Sw						QC Data	: <b>國</b> L	evel D	(Stand	lard)	Leve	I C	🔾 Le	vel B	☐ Level A / ,
	king Days 🔲 :	3 Working 2 Working 24 Hours	g Days_	□2-8H0 603520	☐ Wa	ste Wa ner	ter	7/4				13	uested		
Client Sample I.D.	Date/Time Sampled	Matrix Desc.	# of Cont.	Cont. Type	Sequoia's Sample #	/3	\$5)\ \ \ 	J (4)	18/		9/4	<u>(*)</u>			Comments
1. EP4-WI	3/8/96,0900		3	1x+lph	. 1	×		Х							Hold for MYB
2. EP-3-WC	1./1			1 X X L 1 1 1	15	X	Х	Х							TEHR THE OF
3. E 1.7 WIC	P.16			ZX VOA	K	X	X	X						$\overline{1}$	Hieran 1
4. E. P 2 - WC	3/8/96 0950		3	2 X VOA	17	X	×	X						)(	4
5. E.P. 6 - WA	3/8/16 1407		3	14/66 PL	2	Χ		X						•	Maria mer
6. EP7-WA J	3/8/16 1025		3	1XV2LPI	3	X		Х							Hald fig AITE
7.EP5-WA	3/3/96 1000		3	ADV XS	4	X		X							
8.EPD-2	3/9/96 1140		4	ZXVUA ZXVLA	5				Х	Х	X	-			
	3/8/96 1130		4	2 x V2 L A	6				Х	Х	χ				
	313/16 1220		4	2×10A 2×2LA	7				X	Х	Χ				•
Relinquished By: 1	Munum	人,	Date	:38/16	Time: 1らぬ	Rece	eived E	y M	w.Z	11.12	Ce M	Da	ite:2/	796	Time: 4.125
Relinquished By: 2	See .	c Al	Date	:3/8/96	Time: 5 10	Rece	eived E	Ву:		<u> </u>	, <b>,</b> ,,,,,,,,	Da	ite:		Time:
Relinquished By:	<del></del>	; ;	Date	1	Time:	Rece	aived F	By Lab				ח	ate;}/8/	161	Time: /7/0

	SEQUOIA ANALYTICAL CHAIN OF CUSTODY	1
<b>3</b>	CHAIN OF CUSTODY	

ompany Name: Th	. Sutt	un (	J GUWN		·		Project N	ame:		Fue 1	TNI	1 <u>ks</u>					
ddress: 51 Sh							Billing Ad	dress	( if diffe	erent):	(	7 <u>r~</u>	7				
ty: Marking		State:	CA		Zip Code: 1	4556 ·	2600	$\zeta_{\Lambda a}^{\dagger}$	460	NO	١	<u>_</u>	111	لسن بازقر	050	7-41	90
elephone: 510 63		د!		-AX #:	510 631		P.O. #:	_									
eport To: The Satt			Sampler	14,50	las		OC Data	Le	evel D	(Standa					evel B	١٠	_evel_A
urnaround			3 Working 2 Working 24 Hours	ı Davs	23 520			er				Analys	es Hed	ueste			<u> </u>
Client Sample I.D.	Date/T Samp	ime	Matrix Desc.	# of Cont.	Cont. Type	Sequoia's Sample #		7								<u>/ c</u>	omments
EP10 65-7	3/7 08	320	Yen	1	Tuba	· · · · · · · · · · · · · · · · · · ·		\$		٠						Hestal	Alteria
EP1095-10			S>1 (	,	Tube.			<u></u>									S TO FAX
LEPZA@LS-7			Sui/	1	Tube									·		THE TANK	
EP3@ 3-35			Sect	1	Tubic	8		<u> </u>							<del> </del>	54 : 40	
5. EP3@ 6.5-1		10 45	85:1	1	Tuloc								<u> </u>				
SEP3@ 7.5-8			Sail	,	- ت <sub>ادران</sub> چ										<u> </u>		<del> </del>
7. EPy@ 6.5-7			Soil	1	Tube	9									ļ		<del> </del>
3. EP 5 @ 3.5 · 4		1300	Soil	1	Taloè			<u> </u>					<u> </u>		<u> </u>		-
9. EP5 @ 6-65		1330	Sail	1	Tuba		_	<del> </del>	<u> </u>			ļ	-				<del></del>
10. EP6@ 3.5-4		ामार्ज	[63]	(	Tuloi	10											
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Relinquished By:			ch.	Dat	e: 3 - 8 - 16	Time: 57	O Rec	eived	Ву:		<del>73 +</del>			)ate:		Time:	· · · ·
Relinquished By:	<u> </u>		, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	Dat	e:	Time:	Red	eived	By Lab	): <i>[ ]</i>	Z/I			Date⊱ <sup>(</sup>	18/17	Time:	1711



680 Chesapeake Drive 404 N. Wiget Lane 819 Striker Avenue, Suite 8 Sacramento, CA 95834

Redwood City, CA 94063 Walnut Creek, CA 94598

(415) 364-9600 (510) 988-9600 (916) 921-9600

FAX (415) 364-9233 FAX (510) 988-9673 FAX (916) 921-0100

The Sutton Group 51 Shuey Drive Moraga, CA 94556-2620

Client Proj. ID: Gas Tank Area Sample Descript: EP2B @ 2.5-3' Matrix: SOLID

Sampled: 04/02/96 Received: 04/03/96 Extracted: 04/04/96 Analyzed: 04/04/96

Reported: 04/09/96

Attention: John Sutton, PE

Analysis Method: 8015Mod/8020 Lab Number: 9604180-01

QC Batch Number: GC040496BTEXEXB

Instrument ID: GCHP18

# Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

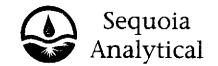
Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas Methyl t-Butyl Ether Benzene Toluene Ethyl Benzene Xylenes (Total)	1.0 0.025 0.0050 0.0050 0.0050 0.0050	N.D. N.D. N.D. N.D. N.D. N.D.
Surrogates Trifluorotoluene	Control Limits % 70 130	% Recovery 81

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

SEQUOIA ANALYTICAL -ELAP #1210

Claudia Hirotsu Project Manager

Page:



680 Chesapeake Drive 404 N. Wiget Lane

Redwood City, CA 94063 Walnut Creek, CA 94598 819 Striker Avenue, Suite 8 Sacramento, CA 95834

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The Sutton Group 51 Shuey Drive Moraga, CA 94556-2620

Client Proj. ID: Gas Tank Area Sample Descript: EP2B @ 3.1-3.6 Matrix: SOLID Analysis Method: 8015Mod/8020

Sampled: 04/02/96 Received: 04/03/96 Extracted: 04/04/96

Attention: John Sutton, PE

Lab Number: 9604180-02

Analyzed: 04/05/96 Reported: 04/09/96

QC Batch Number: GC040496BTEXEXB

Instrument ID: GCHP18

# Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas Methyl t-Butyl Ether Benzene Toluene Ethyl Benzene Xylenes (Total)	1.0 0.025 0.0050 0.0050 0.0050 0.0050	N.D. N.D. N.D. N.D. N.D. N.D.
Surrogates Trifluorotoluene	Control Limits % 70 130	% Recovery 88

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

SEQUOIA ANALYTICAL -

Claudia Hirotsu

Project Manager

Page:





Redwood City, CA 94063 Walnut Creek, CA 94598 Sacramento, CA 95834 (415) 364-9600 (510) 988-9600 (916) 921-9600 FAX (415) 364-9233 FAX (510) 988-9673 FAX (916) 921-0100

The Sutton Group 51 Shuey Drive Client Project ID:

Gas Tank Area

Matrix:

Solid

Moraga, CA 94556-2620 Attention: John Sutton, PE

Work Order #: 9604180 -01

Reported:

Apr 10, 199€

# **QUALITY CONTROL DATA REPORT**

Analyte:	Beryllium	Cadmium	Chromium	Nickel	
QC Batch#:	ME0404966010MDE	ME0404966010MDE	ME0404966010MDE	ME0404966010MDE	
Analy. Method:		EPA 6010	EPA 6010	EPA 6010	
Prep. Method:		EPA 3050	EPA 3050	EPA 3050	
Analyst:	S. O'Donnell	C. OlDanasii	0.00	0.00	
MS/MSD #:		S. O'Donnell 9603L0901	S. O'Donnell	S. O'Donneil	
Sample Conc.:		9603L0901 N.D.	9603L0901 9.8	9603L0901	
Prepared Date:		4/4/96	*	14	
Analyzed Date:		• •	4/4/96	4/4/96	
nstrument I.D.#:		4/5/96 MTJA2	4/5/96 MTJA2	4/5/96	
Conc. Spiked:				MTJA2	
Conc. Spikeu.	100 mg/Kg	100 mg/Kg	100 mg/Kg	100 mg/Kg	
Result:		94	110	110	
MS % Recovery:	98	94	100	96	
Dup. Resuit:	99	96	110	110	
MSD % Recov.:		96	100	96	
RPD:	1.0	2.1	0.0	0.0	
RPD Limit:		0-30	0.30	0.30	
	3 33	7.00	<b></b>	<b>5</b>	
LCS #:	BL <b>K040496</b>	BLK040496	BLK <b>040496</b>	BLK040496	
Prepared Date:	4/4/96	4/4/96	4/4/96	4/4/96	
Analyzed Date:		4/5/96	4/5/96	4/5/96	
nstrument I.D.#:		MTJA2	MTJA2	MTJA2	
Conc. Spiked:	100 mg/Kg	1 <b>00</b> mg/Kg	100 mg/Kg	100 mg/Kg	
LCS Result:	100	100	100	100	
LCS % Recov.:	100	100	100	100	
	150	100		100	
MS/MSD					<u> </u>
LCS	75-125	75-125	75-125	75-125	
Control Limits	, 0 , 20	/ U= 16U <sub>1</sub>	, <del>(- 120</del>	15-125	

**SEQUOIA ANALYTICAL** 

Claudia Hirotsu
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

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680 Chesapeake Drive 404 N. Wiget Lane

819 Striker Avenue, Suite 8 Sacramento, CA 95834

Redwood City, CA 94063 Walnut Creek, CA 94598

(415) 364-9600 (510) 988-9600 (916) 921-9600 FAX (415) 364-9233 FAX (510) 988-9673 FAX (916) 921-0100

The Sutton Group 51 Shuey Drive

Client Project ID:

Gas Tank Area

Matrix:

Solid

Moraga, CA 94556-2620 Attention: John Sutton, PE

Work Order #:

9604180-01, 02

Reported: Apr 10, 1996

## **QUALITY CONTROL DATA REPORT**

Analyte:	Benzene	Toluene	Ethyl	Xylenes	_
	GC040496BTEXEXB	GC040496BTEXEXB	Benzene GC040496BTEXEXB	GC040496BTEXEXB	
Analy. Method: Prep. Method:	EPA 8020 EPA 5030	EPA 8020 EPA 5030	EPA 8020 EPA 5030	EPA 8020 EPA 5030	
Analyst:	D. Jirsa	D. Jirsa	D !!	D #	· · · · · · · · · · · · · · · · · · ·
MS/MSD #:	9603H7203	D. Jirsa 9603H7203	D. Jirsa 9603H7203	D. Jirsa 9603H7203	
Sample Conc.:	N.D.	N.D.	N.D.	N.D.	
Prepared Date:	4/4/96	4/4/96	4/4/96	4/4/96	
Analyzed Date:	4/4/96	4/4/96	4/4/96	4/4/96	
strument I.D.#:	GCHP1	GCHP1	GCHP1	GCHP1	
Conc. Spiked:	0. <b>20 mg</b> /Kg	0.20 mg/Kg	0.20 mg/Kg	0.60 mg/Kg	
Result:	0.19	0.19	0.19	0.58	
MS % Recovery:	95	95	95	97	
Dup. Resuit:	0.18	0.19	0.19	0.56	
MSD % Recov.:	90	95	95	93	
RPD:	5.4	0.0	0.0	3.5	
RPD Limit:	0-50	0-50	0-50	0-50	

LCS #:	BLK040496	BLK040496	BLK040496	BLK040496
Prepared Date:	4/4/96	4/4/96	4/4/96	4/4/96
Analyzed Date:	4/4/96	4/4/96	4/4/96	4/4/96
Instrument I.D.#:	GCHP1	GCHP1	GCHP1	GCHP1
Conc. Spiked:	0. <b>20</b> mg/Kg	0.20 mg/Kg	0.20 mg/Kg	0.60 mg/Kg
LCS Result:	0.18	0.19	0.19	0.55
LCS % Recov.:	90	95	95	92

MS/MSD LCS	<u> </u>		<del></del>		·
Control Limits	50-150	50-150	50-150	50-150	

**SEQUOIA ANALYTICAL** 

Claudia Hirotsu 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

Company Name:	11e Sv	MON	FRO	UP			Project	Name	: ,		> -	[A.J.	C />	a F	 A.			$\Box$
Address: 5	SIMEY	/ 7	DLUG				Billing A	ddres	s ( if d	ifferen				i		< N	MARIN	<del>-</del>
City: Monw	State:	<u>c¥</u>		Zip Code:	94	556					,				MT			٦
Telephone: 510	631 16	हर्	FAX #:	510 63	11	371	P.O. #:					二人		-	127.12	7		
Report To: Jolf	SUTTON	Sample	<u>r: ⊆</u>	<u>∠uπon</u>			QC Data	a: 🔼 (	Level I	D (Stan	dard)	□ Lev	el C		Level E	3	Level A	_
Turnaround ☐ 10 W	,			□2-8H	ours		nking V				<del></del>	Analy	ses Re	equest	eď			······································
— · ···•		2 Workin 24 Hours		160418	۵	⊔ Wa   ⊠ Otl	iste Wa her	iter	40/1		*/			//	//	//		(13
Client Sample I.D.	Date/Time Sampled	Matrix Desc.	# of Cont.	Cont. Type	S	equoia's ample #	/	<b>1</b> 5/,		(B)	//		//	/	//		Comments	
1. EP2B@2.5-3°	11196 M	Soil		746 AV	.5	<u> </u>	X	X	X							Cur	ffnio.	7
2.EP2B@3-1-3-1	412196 1130AM	901L	1	EL KARSI	0	2	X	X									4	
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3.					-					_								
7.																	r .	],
3																		
9.														:	-			
10.							;											7

Were Samples Received in Good Condition? ☐ Yes ☐ No

Samples on Ice? ™ Yes □ No Method of Shipment\_

Page \_\_l of \_\_l

Date: 1 3 % Time:



680 Chesapeak . Drive 404 N. Wiget Lane

Redwood City, CA 94063 Walnut Creek, CA 94598 819 Striker Avenue, Suite 8 Sacramento, CA 95834

(415) 364-9600 (510) 988-9600 (916) 921-9600 FAX (415) 364-9233 FAX (510) 988-9673 FAX (916) 921-0100

The Sutton Group 51 Shuey Drive Moraga, CA 94556-2620

Client Proj. ID:

Sampled: 04/07/96

Lab Proj. ID: 9604642

Received: 03/08/96 Analyzed: see below

Reported: 04/12/96

Attention:

John Sutton, PE

# LABORATORY ANALYSIS

Fuel Tanks

Analyte	Units	Date Analyzed	Detection Limit	Sample Results
Lab No: 9604642-01 Sample Desc : <b>SOLID,EP1 6.5-7</b>			<u> </u>	
Lead	mg/Kg	04/11/96	5.0	7.7
Lab No: 9604642-02 Sample Desc : <b>SOLID,EP2 6.5-7</b>				
Lead	mg/Kg	04/11/96	5.0	16
Lab No: 9604642-03 Sample Desc : <b>SOLID,EP3 6.5-7</b>				
Lead	mg/Kg	04/11/96	5.0	13
Lab No: 9604642-04 Sample Desc : <b>SOLID,EP3 3-3.5</b>				
Lead	mg/Kg	04/11/96	5.0	11
Lab No: 9604642-05 Sample Desc : <b>SOLID,EP5 3.5-4</b>				
Lead	mg/Kg	04/11/96	5.0	49
Lab No: 9604642-06 Sample Desc : <b>SOLID,EP6 3.5-4</b>				
Lead	mg/Kg	04/11/96	5.0	46

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

SEQUOIA ANALYTICAL - ELAP #1210

Claudia Hirotsu Project Manager

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The Sutton Group 51 Shuey Drive

Client Project ID: Matrix:

Fuel Tanks

Solid

Moraga, CA 4556-2620 Attention: John Sutton, PE

Work Order #:

9604642 01-

01-06

Reported: Apr 12, 199

# **QUALITY CONTROL DATA REPORT**

			THOU DATA RE	
Analyte:	Beryllium	Cadmium	Chromium	Nickel
QC Batch#:	Me0410966010MDE	Me0410966010MDE	Me0410966010MDE	Me0410966010MDE
Analy. Method:		EPA 6010	EPA 6010	EPA 6010
Prep. Method:	EPA 3050	EPA 3050	EPA 3050	EPA 3050
Analyst:	C. Medefesser	0.44-4.4		
MS/MSD #:		C. Medefesser	C. Medefesser	C. Medefesser
Sample Conc.:	N.D.	960441001	<b>96044</b> 1001	960441001
Prepared Date:	4/10/96	5.7	87	41
Analyzed Date:	- •	4/10/96	4/10/96	4/10/98
Instrument i.D.#:	4/11/96	4/11/96	4/11/96	4/11/96
Conc. Spiked:	MTJA2	MTJA2	MTJA2	MTJA2
Colic. Spikeu:	100 mg/Kg	100 mg/Kg	1 <b>00 mg/K</b> g	100 mg/Kg
Result:	91	93	150	130
MS % Recovery:	91	87	63	89
Dup. Result:	92	94	400	
MSD % Recov.:	92		180	130
	72	88	93	89
RPD:	1.1	1.1	18	0.0
RPD Limit:	0-30	0-30	0-30	0-30
LCS #:	BLK041096	BLK041096	BLK041096	BLK <b>0</b> 41096
Prepared Date:	4/10/96	4/10/96	4/10/96	4 /40 /00
Analyzed Date:	4/11/96	4/11/96	- •	4/10/96
Instrument I.D.#:	MTJA2	MTJA2	4/11/96	4/11/96
Conc. Spiked:	100 mg/Kg		MTJA2	MTJA2
o o i o o piitozi	ioo mg/ng	100 mg/Kg	1 <b>00 m</b> g/Kg	100 mg/Kg
LCS Result:	100	100	100	100
LCS % Recov.:	100	100	100	100
		. 20	100	100
MS/MSD		<u> </u>		
LCS	75-125	75 405	75 400	
Control Limits	V-140	75-125	75-125	75-125
AAHHAI FIIIIII		·		

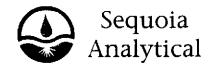
**SEQUOIA ANALYTICAL** 

Člaudia Hirotsu 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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The Sutton Group 51 Shuey Drive Moraga, CA 94556-2620 Client Proj. ID: OLSD Gas Tank Area Sample Descript: EB3B @ 3.5-4.0 Matrix: SOLID

Analysis Method: 8015Mod/8020

Lab Number: 9604F39-01

Sampled: 04/18/96 Received: 04/19/96 Extracted: 04/29/96 Analyzed: 04/30/96 Reported: 05/02/96

Attention: John Sutton

QC Batch Number: GC042996BTEXEXC

Instrument ID: GCHP18

# Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

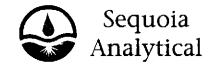
Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas	1.0	N.D.
Methyl t-Butyl Ether	0.025	N.D.
Benzene	0.0050	N.D.
Toluene	0.0050	N.D.
Ethyl Benzene	0.0050	N.D.
Xylenes (Total)	0.0050	N.D.
Surrogates Trifluorototuene	Control Limits % 70 130	% Recovery 86

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

SEQUOIA ANALYTICAL - ELAP #1210

Claudia Hirotsu Project Manager

Page:



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The Sutton Group 51 Shuey Drive Moraga, CA 94556-2620 Client Proj. ID: OLSD Gas Tank Area Sample Descript: EB3B @ 4.5-5.0 Matrix: SOLID Sampled: 04/18/96 Received: 04/19/96 Extracted: 04/29/96 Analyzed: 04/30/96

Attention: John Sutton

Analysis Method: 8015Mod/8020 Lab Number: 9604F39-02

Reported: 05/02/96

QC Batch Number: GC042996BTEXEXC Instrument ID: GCHP18

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

Analyte		ction Limit ng/Kg	Sample Results mg/Kg
TPPH as Gas Benzene Toluene Ethyl Benzene Xylenes (Total) Chromatogram Pattern:		1.0 0.0050 0.0050 0.0050 0.0050	1.5 N.D. N.D. N.D. 0.010
Weathered Gas	••••••		C6-C12
Surrogates Trifluorotoluene	Conti 70	ol Limits %	% Recovery 110

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

SEQUOIA ANALYTICAL - ELAP #1210

Claudia Hirotsu Project Manager

Page:



Redwood City, CA 94063 Walnut Creek, CA 94598 Sacramento, CA 95834 (415) 364-9600 (510) 988-9600 (916) 921-9600 FAX (415) 364-9233 FAX (510) 988-9673 FAX (916) 921-0100

The Sutton Group
51 Shuey Drive
Moraga, CA 94556-2620

Client Proj. ID: OLSD Gas Tank Area Sample Descript: EB3A @ 1.5-2.0 Matrix: SOLID

Sampled: 04/18/96 Received: 04/19/96 Extracted: 04/29/96 Analyzed: 04/30/96 Reported: 05/02/96

Attention: John Sutton

Analysis Method: 8015Mod/8020 Lab Number: 9604F39-03

QC Batch Number: GC042996BTEXEXC

Instrument ID: GCHP18

# Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas Benzene Toluene Ethyl Benzene Xylenes (Total)	1.0 0.0050 0.0050 0.0050 0.0050	N.D. N.D. N.D. N.D. N.D.
Surrogates Trifluorotoluene	Control Limits % 130	% Recovery 88

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

SEQUOIA ANALYTICAL - ELAP #1210

Claudia Hirotsu Project Manager

Page:



Redwood City, CA 94063 Walnut Creek, CA 94598 Sacramento, CA 95834 (415) 364-9600 (510) 988-9600 (916) 921-9600 FAX (415) 364-9233 FAX (510) 988-9673 FAX (916) 921-0100

The Sutton Group 51 Shuey Drive Client Project ID:

OLSD Gas Tank Area

01

Matrix:

Solid

Moraga, CA 94556-2620 Attention: John Sutton

Work Order #:

9604F39

Reported:

May 3, 1996

## **QUALITY CONTROL DATA REPORT**

Analyte:	Benzene	Toluene	Ethyl	Xylenes
			Benzene	
	GC042996BTEXEXC	GC042996BTEXEXC	GC042996BTEXEXC	GC042996BTEXEXC
Analy. Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Prep. Method:	EPA 5030	EPA 5030	EPA 5030	EPA 5030
Analyst:	E. Cunanan	E. Cunanan	E. Cunanan	E. Cunanan
MS/MSD #:	960412702	960412702	960412702	960412702
Sample Conc.:	N.D.	N.D.	N.D.	N.D.
Prepared Date:	4/29/96	4/29/96	4/29/96	4/29/96
Analyzed Date:	4/29/96	4/29/96	4/29/96	4/29/96
Instrument I.D.#:	GCHP1	GCHP1	GCHP1	GCHP1
Conc. Spiked:	0. <b>20</b> mg/Kg	0.20 mg/Kg	0.20 mg/Kg	0.60 mg/Kg
Result:	0.16	0.17	0.17	0.52
MS % Recovery:	80	85	85	87
Dup. Resuit:	0.17	0.17	0.18	0.54
MSD % Recov.:	85	85	90	90
RPD:	6.1	0.0	5.7	3.8
RPD Limit:	0-50	0-50	0-50	0-50
LCS #:	BLK042996	BLK042996	BLK042996	BLK042996
Prepared Date:	4/29/96	4/29/96	4/29/96	4/29/96
Analyzed Date:	4/29/96	4/29/96	4/29/96	4/29/96
Instrument I.D.#:	GCHP1	GCHP1	GCHP1	GCHP1
Conc. Spiked:	0.20 mg/Kg	0.20 mg/Kg	0. <b>20</b> mg/Kg	0. <b>60</b> mg/Kg
LCS Result:	0.18	0.18	0.18	0.54
LCS % Recov.:	90	90	90	90
MS/MSD				
LCS Control Limits	50-150	50-150	50-150	50-150

**SEQUOIA ANALYTICAL** 

NULLL (JUL FOR Claudia Hirotsu 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 Splke, MSD=MS Duplicate, RPD=Relative % Difference

9604F39.SSS <1>

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City: MORAGA	State:			Zip Code:	94551			10 (			1					945		
Telephone: 57() 6	31-1688	,	FAX #:	20-631	-137	F	P.O. #:			/								
Report To: かみん Si	t to out	Sample	r: Uu	るのが			QC Data	ı: <b>K</b> L	.evel [	) (Stape	dard)	☐ Leve	el C		_evel E	3 🗆	Level A	
	rking Days 🔲	3 Workin 2 Workin 24 Hours	g Days	1609F3		☐ Wa	nking W iste Wa ier	ter	No.			Analy	ses Re	quest	ed "	6ULF	39	
Client Sample I.D.	Date/Time Sampled	Matrix Desc.	# of Cont.	Cont. Type	ľ	mple#	1	5 60	200		//				//		Comment	ts
1.EP38@3.5-4.0	4/10 @ las	SOIL	1	Tube	01	A												
2.EP3B@4.5-50	1/18@ 102r	Sole	1_	Tube	a	1		NØ			1	ļ.						
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Relinquished By: //	Mechael W.	1	Date	:4-14-96	Time:	1:40	Rece	ived B	y Lab	3	36	met.		ate:4	119/9	Time:	1351	•

TABLE 1
ANALYTICAL RESULTS FOR SOILS & WATERS

GASOLINE TANK AREA 1993 INVESTIGATION ANALYTICAL RESULTS FOR SOILS

BORING	DEPTH Ft.	TPH-GAS	Benzene	Toluene	Ethyl Benzene	Xylenes	LEAD,Tota
	Г.	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
SB1	5.5	2,100	23	200	55	330	NA
SB2	3.5	4,300	14	250	130	680	NA.
SB4	3.5	1,100	11	51	39	210	NA
SB5	3.5	3.2	0.25	ND	0.27	0.83	NA
SB6	3.5	160	2.8	14	5.9	26	NA
SB6	5.5	2,100	14	210	80	430	NA.
SB6	7.5	1,500	4.8	120	61	340	NA NA
MDLs*	SOIL, mg/kg	0.2	0.005	0.005	0.005	0.005	5
			ANALYTICAL RESU	LTS FOR WATER	s		
		mg/l	mg/l	mg/l	mg/l	mg/l	mg/l
SB3	GW	0.12	0.0007	ND	ND	ND	NA
SB4	GW	1,600	27	39	4.2	22	NA NA
SB5	GW	1,100	8	29	4.2	20	NA NA
MDLs*	WATER,mg/kg	0.05	0,0005	0.0005	0.0005	0.0005	NA

Job No. 3022, Stage 7

TABLE 2

ANALYTICAL RESULTS FOR SOILS

GASOLINE TANK AREA
1994 INVESTIGATION

ENCH No	DEPTH	TPH-GAS	Benzene	Toluene	Ethyl Benzene	Xylenes	LEAD,Total	LEAD, Soi
	Ft.	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
					- <del></del>			
TT-1	4.5-5.0	ND	ND	ND	ND	ND	57	1.8
TT-2	2.5-3.0	ND	ND	ND	ND	0.007	ND	
TT-2	6.0-6.5	ND	ND	ND	ND	ND	21	
TT-2	7.0-7.5	ND	0.015	ND	ND	0.015	15	
TT-3	2.0-2.5	ND	ND	ND	ND	ND	ND	
TT-3	3.5-4.0	160	4.7	25	4.6	22	31	5.3
1T-3	6.0-6.5	1600	8.8	77	25	130	7.4	
TT-4	5.0-5.5	ND	ND	0.009	ND	0.008	9.3	
TT-5	2.5-3.0	ND	ND	ND	ND	ND	ND	_
TT-5	5.5-6.0	ND	ND	ND	ND	ND	37	0.2
TT-8	2.0-2.5	ND	ND	ND	ND	ND	ND	·-
MDLs*		1.0	0.005	0.005	0.005	0.005	5	0.1

Job No. 3022, Stage7

TABLE 3
TANK REMOVAL ANALYTICAL RESULTS

# GASOLINE TANK AREA TEST RESULTS FOR SOILS

SAMPLE	LOCATION	DEPTH	TPH-GAS	Benzene	Toluene	Ethyl Benzene	Xylenes	LEAD, Total	LEAD, Sol.
ID		Ft.	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
<b>S</b> 1	East End of Tank Pit	5.8	1,900	7.1	57	39	190	18	NA
\$2	West End of Tank Pit	6	3,300	37	18	61	350	260	6.4
\$3	Center of Tank Pit	11.5	43	0.3	0.56	0.41	1.7	ND	NA
\$4	Island: beneath fuel pipe	1.5	49	0.25	0.28	0.45	2.6	15	NA
MDLs*			0.2	0.005	0.005	0.005	0.005	5	0.1
* Refer to La	aboratory Report for complete i	isting of results	5						

Job No. 3022, Stage 7