SECOR
International Incorporated

REPORT OF SOIL AND GROUNDWATER SAMPLING RESULTS THE HOUSEWIVES MARKET AND RETAIL/OFFICE SPACE 8TH, 9TH, CLAY AND JEFFERSON STREETS OAKLAND, CALIFORNIA

SECOR Job No. 70100-019-03

Prepared For:
The City of Oakland
Public Works Agency
Environmental Services Division
1333 Broadway, Suite 330
Oakland, California 94612

12/3/97

Submitted By:
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December 3, 1997

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1.0 INTRODUCTION

This report presents the results of a soil and groundwater investigation conducted at the Housewives Market and retail/office space located north of 8th Street, south of 9th Street, east of Jefferson Street, and west of Clay Street in Oakland, Alameda County, California (the subject property). The investigation was performed by SECOR International Incorporated (SECOR) for the City of Oakland, Public Works Agency, Environmental Services Division at the request of Mr. Mark Hersh in support of a potential financial transaction regarding the subject property. The purpose of the investigation was to assess whether concentrations of petroleum hydrocarbons or benzene, toluene, ethylbenzene or xylene (BTEX) are present beneath the subject property as a result of former on-site gasoline and/or oil storage activities.

1.1 Background

The subject property is located in a retail/commercial area in the city of Oakland, Alameda County, California. The property is situated west of Clay Street, east of Jefferson Street, north of 8th Street, and south of 9th Street (Figure 1). The subject property consists of three individual, but contiguous buildings, occupied by several retail tenants. The buildings and subject property features are depicted on Figure 2.

The subject property is at an elevation of approximately 33 feet above mean sea level (msl). The area gently slopes to the west-southwest. The nearest water body is the Oakland Inner Harbor, which is part of San Francisco Bay. The Oakland Inner Harbor is located approximately one-half mile south of the subject property. The subject property is located within a large area of regional subsidence and sediment fill known as the San Francisco Bay trough. This trough extends from the Hayward fault westward across Oakland and San Francisco Bay. The bedrock block within this trough has been tilted to the east, causing the maximum subsidence and subsequent maximum accumulation of sediments to occur in the eastern part of the trough within an area including the present City of Oakland. This subsidence and deposition of successive layers of sediments has been occurring since the start of Pleistocene time (about 2 million years ago). Development of the San Francisco Bay trough is directly related to the evolution of the San Andreas fault system, which contains the Hayward and San Andreas faults, as well as other faults to the east. The subject property is directly underlain by three geologic units that are part of the sedimentary fill of the San Francisco Bay trough. These units are (from ground surface down) the Merrit Sand, the San Antonio Formation, and the Alameda Formation. These units are Pleistocene in age (Woodward-Clyde Consultants, 1991).

Based on information gathered during this investigation, groundwater beneath the property is present at depths of 24 to 26 feet below ground surface (bgs) Based on information gathered during the Phase I Environmental Site Assessment (ESA), groundwater beneath the subject property appears generally to flow to the west-southwest towards the Oakland Inner Harbor

A Phase I ESA was performed at the subject property in support of a potential financial transaction regarding the subject property. Results were presented in the report titled Phase I Environmental Site Assessment Report (SECOR, September 10, 1997). Results of the Phase I ESA indicated that two former gasoline stations were present on the subject property (one in the southwest corner and one in the northeast corner) from sometime between 1913 and 1951 to sometime prior to 1957. In addition, several facilities in the vicinity of the subject property have been documented as using chemicals or having had releases of chemicals to soil and/or groundwater. The California Environmental Protection Agency (Cal-EPA) Leaking Underground Storage Tank (LUST) list identified 16 LUST facilities located within one-quarter mile of the subject property. Five of the facilities are located within a one-eight mile radius of the subject property (SECOR, 1997). According to a report prepared by Woodward-Clyde consultants, a gasoline plume was present beneath a former gasoline station, located 1,500 feet northeast and upgradient of the subject property at 901-999 Jefferson Street. The report indicated that up to 26,000 micrograms per liter ($\mu g/\ell$) gasoline was present in the groundwater. The site was granted case closure in December 1996 by the Alameda County Environmental Health Department. Based on its' distance from the subject site and the concentrations found at the 901-999 Jefferson Street site, it is unlikely that the reported soil or groundwater impacts would affect the subject site.

2.0 SCOPE OF WORK

2.1 Pre-field Activities

SECOR obtained a drilling permit from Alameda County prior to conducting field activities. A copy of the approved Permit No. 97WF156 is included in Appendix A. In addition, a Health and Safety Plan (HASP) specific to the site was prepared. Underground Service Alert was notified prior to commencement of field activities so that underground utilities in the vicinity of the borings could be identified and the boring locations modified, if necessary.

2.2 Field Activities

On October 21, 1997, C.U. Survey, a professional utility locating contractor, conducted a survey of the area in the vicinity of the proposed boring locations. After proposed boring locations were cleared of utilities, four boreholes (GP-1, GP-2, GP-3, and GP-4) were advanced by Vironex at the locations shown in Figure 2. Two borings were advanced in the vicinity of each of the former gasoline stations. Boring GP-4 was drilled through the bottom of an abandoned utility vault in the sidewalk in order to reduce impacts to the sidewalk as a result of drilling activities.

Boreholes were advanced to approximately 28 to 32 feet bgs using a truck-mounted direct-push sampler. The borings were continuously cored using a 4-foot long by 1.75-inch inside-diameter core barrel. The soils encountered were logged by a SECOR geologist in an attempt to produce an accurate lithologic and stratigraphic profile for each borehole. Soil samples were collected at approximately 5-foot intervals and were screened in the field for the presence of volatile organic compounds (VOCs) using a photo-ionization detector (PID). Groundwater was encountered at depths ranging from approximately 24 to 26 feet in each of the boreholes. One grab groundwater sample was collected from each borehole by lowering a disposable bailer into each borehole, retrieving the bailer, and dispensing the sample into laboratory supplied glass vials containing hydrochloric acid for sample preservation. Collected soil and groundwater samples were labeled with sample names, the time and date of collection, and placed on ice in an insulated cooler for transport under chain-of-custody to Superior Analytical Laboratory, a California state-certified analytical laboratory. Upon completion of sampling activities, the boreholes were abandoned by backfilling with a bentonite/portland cement mixture completed at the surface with asphalt or concrete to match the existing cover.

Between borings, drilling and sampling equipment contacting subsurface soils was decontaminated by steam cleaning to prevent cross-contamination. Rinsate water generated during field activities was contained and placed into 5-gallon buckets pending disposal. Vironex removed the rinsate and will properly dispose of the material under permit. Two 5-gallon buckets of soil cuttings were generated during sampling activities. The buckets were labeled and left on-site as directed by the City of Oakland.

2.3 Sample Analysis

One groundwater sample from each boring, two soil samples from borings GWP-1, GP-2, and GP-3, and three soil samples from boring GP-4 were analyzed by Superior Analytical Laboratory. The samples were analyzed for a total petroleum hydrocarbons (TPH) scan, and BTEX in accordance with Environmental Protection Agency (EPA) Method 8015 (modified) and EPA Method 8020, respectively.

3.0 RESULTS

3.1 Hydrogeology and Geology

The subsurface was explored to a maximum depth of 32 feet during this investigation. Asphalt and baserock was present in the top 1-foot of borings GP-1, GP-2, and GP-3. Boring GP-4 was drilled through an abandoned television cable vault, set at a depth of approximately 3.5 feet bgs. Beneath the concrete in boring GP-4 and the baserock in borings GP-1, GP-2, and GP-3, the on-site geology consists of a continuous unit of fine-grained sand with trace amounts of silt and clay. Groundwater was observed in the borings at depths ranging from 24 to 26 feet bgs. In all cases, the groundwater was found in an apparently unconfined condition. Boring logs are included in Appendix B.

3.2 Soil Analytical and PID Results

Soil samples collected from boring GP-1 at 10 feet and 20 feet bgs, boring GP-2 at 15 feet and 22 feet bgs, boring GP-3 at 15 feet and 23 feet bgs, and boring GP-4 at 10 feet, 15 feet, and 20 feet bgs were submitted for laboratory analysis. None of the nine soil samples analyzed contained concentrations of BTEX or TPH above laboratory reporting limits. Soil analytical results are summarized in Table 1 and copies of the laboratory analytical reports are included in Appendix C.

Significant levels of organic compounds were not detected by the PID in soil samples collected from borings GP-1, GP-2, or GP-3. In boring GP-4, up to 25 parts per million by volume (ppmv) of organic compounds were detected by the PID, and field personnel noted a petroleum odor at depths starting at 11 feet bgs. The PID readings in boring GP-4 showed an overall increasing trend with depth, and indicated a concentration 550 ppmv at 24 feet bgs, immediately above the water table. In addition, soil samples collected beneath 11 feet bgs appeared stained. PID readings are included on the boring logs (Appendix B).

3.3 Groundwater Analytical Results

Groundwater samples collected from borings GP-1, GP-2, and GP-3 did not contain BTEX above laboratory detection limits. The groundwater sample collected from boring GP-1 contained total petroleum hydrocarbons quantified as motor oil (TPHmo) at a concentration of 670 $\mu g/\ell$. The chromatograms generated from the groundwater sample collected from boring GP-2, located downgradient from boring GP-1, indicated that TPHmo were also present in that sample; however, concentrations were below the laboratory reporting limits of 500 $\mu g/\ell$. The groundwater sample collected from boring GP-4 contained 3,200 $\mu g/\ell$ benzene, 13,000 $\mu g/\ell$ toluene, 13,000 $\mu g/\ell$ ethylbenzene, 53,000 $\mu g/\ell$ xylenes, 100,000 $\mu g/\ell$ TPHmo, and 210,000 $\mu g/\ell$ total petroleum hydrocarbons quantified as mineral spirits (TPHms). The laboratory noted that there was a greater than 25 percent difference for detected ethylbenzene and xylene concentrations between the two GC columns.

The laboratory also noted that high concentrations of gasoline were also present in the sample from boring GP-4, and in order to determine the gasoline concentration, the sample collected from boring GP-4 was additionally analyzed for total volatile petroleum hydrocarbons (TVPH). Results of the TVPH analysis indicated that 1,700,000 $\mu g/\ell$ TVPH quantified as gasoline was present in the sample. These gasoline concentrations indicate a potential for free-phase gasoline product beneath the site. Groundwater analytical results are summarized in Table 2 and laboratory analytical reports are included in Appendix C. Copies of the laboratory chromatograms are presented in Appendix D.

Mineral spirits are characterized by compounds having carbon chain lengths of 8 to 14 carbons (C8 to C14), while gasoline is characterized by carbon chain lengths of 6 to 14 carbons. Due to the similar carbon chain lengths of these two materials, and since no source for mineral spirits impact to the subject property was discovered during the Phase I ESA, SECOR personnel contacted Superior Analytical Laboratory to determine whether the pattern identified in the chromatogram as mineral spirits (for the groundwater sample collected from boring GP-4) could instead be gasoline. Superior Analytical responded to SECOR by stating that although there is a high concentration of gasoline in the sample, a second material with a higher boiling point also appears to be present. The pattern of the chromatogram in the higher boiling point range resembled the pattern of mineral spirits standard used in their analysis. Thus, it appears that both gasoline and mineral spirits range hydrocarbons are present in groundwater at the subject site.

4.0 SUMMARY AND CONCLUSIONS

On October 21, 1997, four soil borings were drilled to depths of 28 to 32 feet bgs on the subject property in the vicinity of the two former gasoline stations. The soils encountered were logged by a SECOR geologist in an attempt to produce an accurate lithologic and stratigraphic profile for each borehole. A total of nine soil samples and four groundwater samples were collected from the borings and submitted to the laboratory for petroleum hydrocarbons and BTEX analysis.

The on-site geology consists of one continuous unit of fine-grained sand with trace amounts of silt and clay, which is interpreted to be Merritt Sand. Groundwater was observed in the borings at depths ranging from 24 to 26 feet bgs. In all cases, the groundwater was found in an apparently unconfined condition.

None of the soil samples submitted for laboratory analysis contained concentrations of petroleum hydrocarbons or BTEX above laboratory reporting limits. Elevated levels of organic compounds were not detected by the PID in soil samples collected from borings GP-1, GP-2, or GP-3. Elevated PID readings were measured in boring GP-4 beginning at 11 feet bgs, and showed an overall increasing trend with depth, to a concentration 550 ppmv at 24 feet bgs, immediately above the water table.

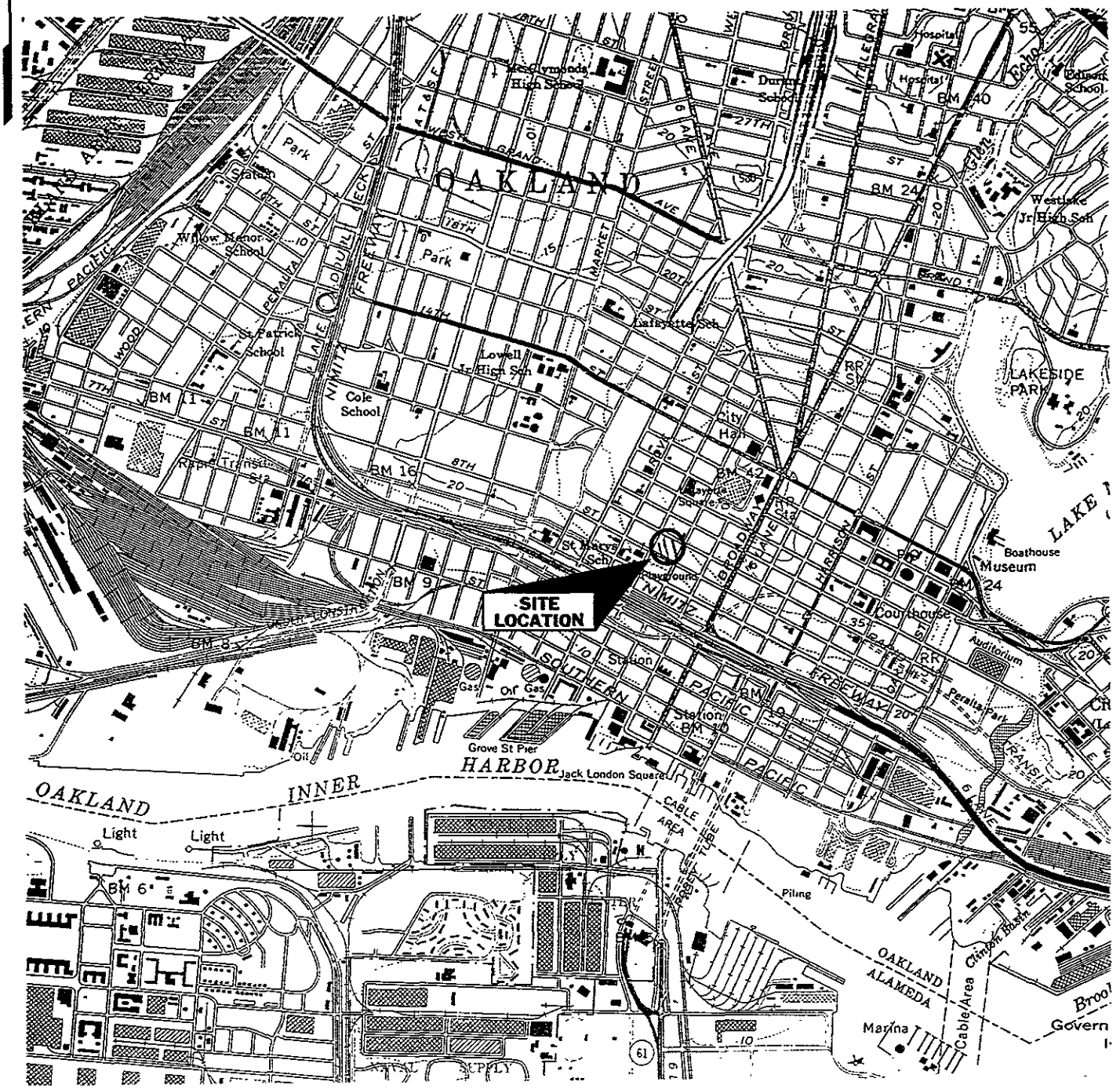
Groundwater samples collected from borings GP-2 and GP-3 did not contain concentrations of BTEX or petroleum hydrocarbons above laboratory reporting limits. The groundwater sample collected from boring GP-1 did not contain detectable concentrations of BTEX; however, the laboratory reported that motor oil was present at 670 $\mu g/\ell$. The groundwater sample collected from boring GP-4 contained concentrations of benzene at 3,200 $\mu g/\ell$, toluene at 13,000 $\mu g/\ell$, ethylbenzene at 13,000 $\mu g/\ell$, xylenes at 53,000 $\mu g/\ell$, gasoline at 1,700,000 $\mu g/\ell$, and TPHms at 210,000 $\mu g/\ell$.

Based on the results of the investigation, significant groundwater impacts, consisting of gasoline constituents and mineral spirits are present beneath the northeast corner of the subject property. BTEX concentrations in groundwater in the northeast corner of the subject property exceed maximum contaminant levels (MCLs) for drinking water, and benzene concentrations are above the Draft State Water Resources Control Board's (SWRCB) Policy of Investigation and Cleanup of Petroleum Discharges to Soil and Groundwater (Resolution No. 1021b). Although impacts were not detected in soil samples collected from the area, field personnel noted a strong hydrocarbon odor and the soil appeared to be stained at depths greater than 11 feet in samples collected from GP-4 suggesting the possible presence of an on-site source, possibly an abandoned underground storage tank (UST) affiliated with the former gasoline station. It should be noted, however, that GP-4 appears to be situated on the upgradient corner of the subject property. Therefore, there is some potential that the affected groundwater at this location may be due to an upgradient, off-site source. SECOR is aware that property redevelopment of the subject property may be occurring in the near future. Prior to implementing excavation activities during property redevelopment, SECOR recommends that additional investigation activities in the northeast corner of the property be conducted in an attempt to define the extent of groundwater (and possibly soil) contamination, verify the presence or absence of free-product, and assess whether an abandoned UST is present

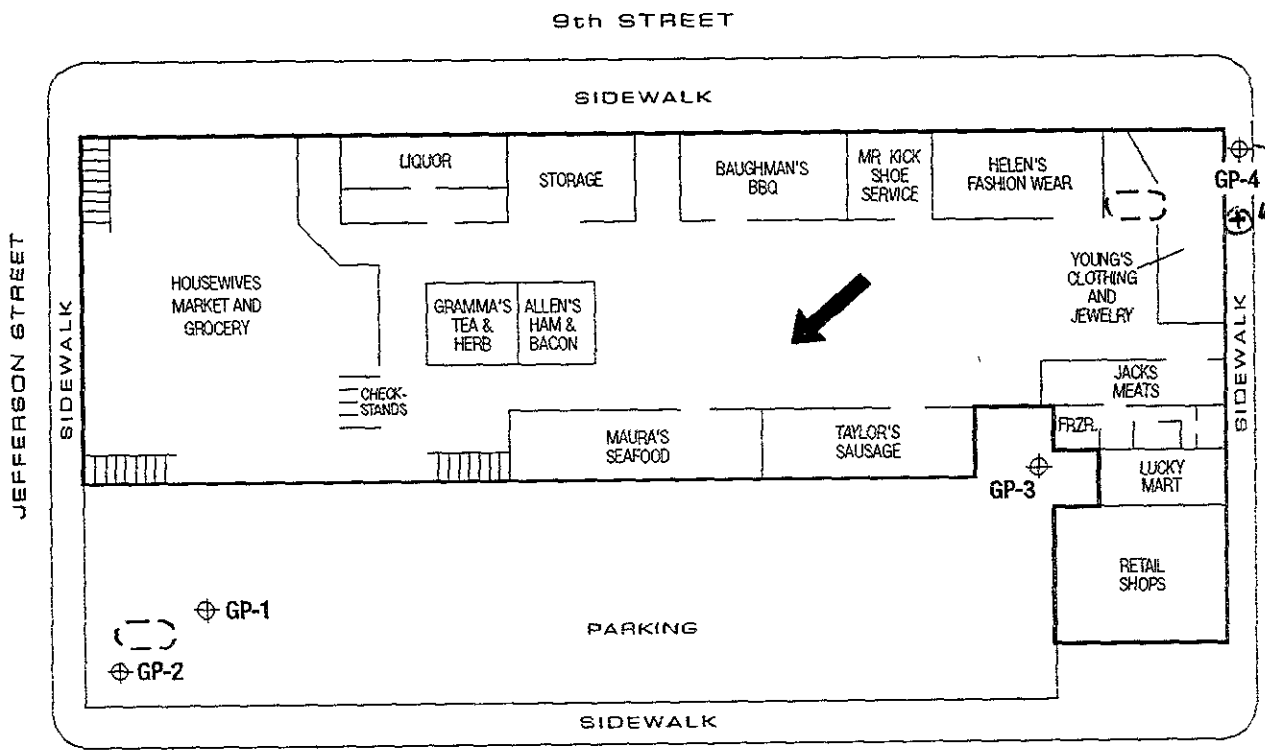
Motor oil detected in the sample collected from boring GP-1 indicates that a release may have occurred in the vicinity of the southwest corner of the subject property. However, soil analytical results and field observations did not suggest an on-site release. The Draft SWRCB's Resolution No. 1021b states that no further regulatory action shall be required if: (1) the source of the discharge has been removed; (2) the maximum concentration of methyl-tertiary-butyl-ether (MTBE) in groundwater affected by the discharge does not exceed 35 $\mu g/\ell$; and (3) the maximum concentration of benzene in groundwater affected by the discharge does not exceed 1 $\mu g/\ell$. Because the USTs on the subject property were operated prior to 1957, before the introduction of MTBE into gasoline, MTBE impact beneath the property from the former USTs is not expected. Benzene was not detected in groundwater samples collected from the southwest corner of the subject property (borings GP-1 and GP-2) above 0.5 $\mu g/\ell$. Therefore, the second criteria of Resolution No. 1021b is met. It is not known whether the former USTs were removed from the subject property. It is therefore recommended that during future property redevelopment activities, the City of Oakland attempt to assess whether an abandoned UST is present in the southwest corner of the subject property.

FIGURES

OAKLAND WEST QUADRANGLE
California
7.5 Minute Series (Topographic)



DRAFTED BY: TS	CHECKED BY GH	Project No. 70100-019-01	Figure 1	*SECOR* 1390 Willow Pass Road Suite 360 Concord, CA 94520
PREP. DATE: 05-13-97	REV. DATE	Oakland Housewives Market 8th, Clay and Jefferson Oakland, California	Site Location Map	
FILE NAME: houswife.f01				



LEGEND

- BUILDING OUTLINE
- APPROXIMATE LOCATION OF FORMER UST'S
- GP-1 BORING LOCATION
- ASSUMED GROUNDWATER FLOW DIRECTION

NOT TO SCALE

DRAFTED BY	CHECKED BY	PROJECT NUMBER	FIGURE NUMBER
PEM	BR	70100-019-02	2
DWG DATE	REV DATE	CLIENT	TITLE
9/30/97	11/7/97	CITY OF OAKLAND	SITE PLAN AND BORING LOCATIONS HOUSEWIVES MARKET OAKLAND, CA
FILE NAME			
ScrOAK801clayBor2*			

SECOR
1390 Willow Pass Road
Suite 360
Concord CA
94520

TABLES

TABLE 1
SUMMARY OF SOIL ANALYTICAL RESULTS
The Housewives Marketplace and Associated Retail/Office Space
8th, 9th, Clay and Jefferson Streets
Oakland, California

Boring		GP-1		GP-2		GP-3		GP-4		
Depth	(feet)	10	20	15	22	15	23	10	15	20
Benzene	(mg/kg)	ND(<0.005)	ND(<0.005)	ND(<0.005)	ND(<0.005)	ND(<0.005)	ND(<0.005)	ND(<0.005)	ND(<0.005)	ND(<0.005)
Toluene	(mg/kg)	ND(<0.005)	ND(<0.005)	ND(<0.005)	ND(<0.005)	ND(<0.005)	ND(<0.005)	ND(<0.005)	ND(<0.005)	ND(<0.005)
Ethylbenzene	(mg/kg)	ND(<0.005)	ND(<0.005)	ND(<0.005)	ND(<0.005)	ND(<0.005)	ND(<0.005)	ND(<0.005)	ND(<0.005)	ND(<0.005)
Xylenes	(mg/kg)	ND(<0.005)	ND(<0.005)	ND(<0.005)	ND(<0.005)	ND(<0.005)	ND(<0.005)	ND(<0.005)	ND(<0.005)	ND(<0.005)
Stoddard	(mg/kg)	ND(<10)	ND(<10)	ND(<10)	ND(<10)	ND(<10)	ND(<10)	ND(<10)	ND(<10)	ND(<10)
Kerosene	(mg/kg)	ND(<10)	ND(<10)	ND(<10)	ND(<10)	ND(<10)	ND(<10)	ND(<10)	ND(<10)	ND(<10)
Jet Fuel	(mg/kg)	ND(<10)	ND(<10)	ND(<10)	ND(<10)	ND(<10)	ND(<10)	ND(<10)	ND(<10)	ND(<10)
Mineral Spirits	(mg/kg)	ND(<10)	ND(<10)	ND(<10)	ND(<10)	ND(<10)	ND(<10)	ND(<10)	ND(<10)	ND(<10)
Diesel	(mg/kg)	ND(<1)	ND(<1)	ND(<1)	ND(<1)	ND(<1)	ND(<1)	ND(<1)	ND(<1)	ND(<1)
Bunker Oil	(mg/kg)	ND(<100)	ND(<100)	ND(<100)	ND(<100)	ND(<100)	ND(<100)	ND(<100)	ND(<100)	ND(<100)
Motor Oil	(mg/kg)	ND(<20)	ND(<20)	ND(<20)	ND(<20)	ND(<20)	ND(<20)	ND(<20)	ND(<20)	ND(<20)
Unknown HC	(mg/kg)	ND(<1)	ND(<1)	ND(<1)	ND(<1)	ND(<1)	ND(<1)	ND(<1)	ND(<1)	ND(<1)
Gasoline	(mg/kg)	ND(<10)	ND(<10)	ND(<10)	ND(<10)	ND(<10)	ND(<10)	ND(<10)	ND(<10)	ND(<10)

Notes
Samples collected October 21, 1997
mg/kg = milligrams per kilograms
ND = below laboratory detection limits (detection limit indicated in parentheses)
HC = hydrocarbons

TABLE 2
SUMMARY OF GROUNDWATER ANALYTICAL RESULTS
The Housewives Marketplace and Associated Retail/Office Space
8th, 9th, Clay and Jefferson Streets
Oakland, California

Boring		GP-1	GP-2	GP-3	GP-4
Benzene	(ug/l)	ND(<0.5)	ND(<0.5)	ND(<0.5)	**3,200**
Toluene	(ug/l)	ND(<0.5)	ND(<0.5)	ND(<0.5)	**13,000**
Ethylbenzene	(ug/l)	ND(<0.5)	ND(<0.5)	ND(<0.5)	**13,000**[1]
Xylenes	(ug/l)	ND(<0.5)	ND(<0.5)	ND(<0.5)	**53,000**[1]
Stoddard	(ug/l)	ND(<50)	ND(<50)	ND(<50)	ND(<10,000)
Kerosene	(ug/l)	ND(<50)	ND(<50)	ND(<50)	ND(<10,000)
Jet Fuel	(ug/l)	ND(<50)	ND(<50)	ND(<50)	ND(<10,000)
Mineral Spirits	(ug/l)	ND(<50)	ND(<50)	ND(<50)	**210,000**
Diesel	(ug/l)	ND(<50)	ND(<50)	ND(<50)	ND(<10,000)
Bunker Oil	(ug/l)	ND(<500)	ND(<500)	ND(<500)	ND(<100,000)
Motor Oil	(ug/l)	**670**	ND(<500)[2]	ND(<500)[2]	ND(<100,000)
Unknown HC	(ug/l)	ND(<50)	ND(<50)	ND(<50)	ND(<10,000)
Gasoline	(ug/l)	ND(<500)[3]	ND(<500)[3]	ND(<500)[3]	**1,700,000**[4]

Notes

Samples collected October 21, 1997

ug/l = micrograms per liter

ND = below laboratory detection limits (detection limit indicated in parentheses)

HC = hydrocarbons

TVPH = Total volatile petroleum hydrocarbons quantified as gasoline

[1] There was a greater than 25% difference for detected concentrations between the two GC columns

[2] Hydrocarbons in the range of motor oil present in the sample however concentrations were below laboratory reporting limits

[3] Analyzed by EPA SW-846 Method 8015M

[4] Analyzed by EPA Method 5030/8015

APPENDIX A

Alameda County Drilling Permit

ALAMEDA COUNTY PUBLIC WORKS AGENCY

WATER RESOURCES SECTION
951 TURNER COURT, SUITE 300, HAYWARD, CA 94545-2651
PHONE (510) 670-6575 ANDREAS GODFREY FAX (510) 670-5262
(510) 670-5248 ALVIN KAN

DRILLING PERMIT APPLICATION

FOR APPLICANT TO COMPLETE

LOCATION OF PROJECT: Oakland city block defined by 8th Street, 9th Street, Clay Street and Jefferson Street. (Map attached)

California Coordinates Source ______ ft. Accuracy ± ____ ft.
CCN ______ ft. CCE ______ ft.
APN ______

CLIENT
Name: Mr. Mark Hesh, City of Oakland, PWA
Address: 1333 Broadway #330A Phone ______
City: Oakland CA Zip 94612

APPLICANT
Name: SECOR Intl. Inc
Fax: (650) 691-9837
Address: 1225 Pear Ave #110 Phone: (650) 691-0131
City: Mountain View CA Zip 94043

TYPE OF PROJECT
Well Construction
- Cathodic Protection ☐
- Water Supply ☐
- Monitoring ☐

Geotechnical Investigation
- General ☐
- Contamination ☒
- Well Destruction ☐

PROPOSED WATER SUPPLY WELL USE
- New Domestic ☐
- Municipal ☐
- Industrial ☐
- Replacement Domestic ☐
- Irrigation ☐
- Other ______ ☐

DRILLING METHOD:
- Mud Rotary ☐
- Cable ☐
- Air Rotary ☐
- Auger ☐
- Other ☒ direct push

DRILLER'S LICENSE NO. 705927 (Vironex)

WELL PROJECTS
Drill Hole Diameter ______ in.
Casing Diameter ______ in.
Surface Seal Depth ______ ft.
Maximum Depth ______ ft.
Number ______

GEOTECHNICAL PROJECTS
Number of Borings 4
Hole Diameter 2 in.
Maximum Depth 20 ft.

ESTIMATED STARTING DATE 10-14-97
ESTIMATED COMPLETION DATE 10-23-97

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

APPLICANT'S SIGNATURE [signature] DATE 10-9-97

FOR OFFICE USE

PERMIT NUMBER 97WR156
WELL NUMBER ______
APN ______

PERMIT CONDITIONS

Circled Permit Requirements Apply

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

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

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

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

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

F. WELL DESTRUCTION
See attached.

G. SPECIAL CONDITIONS

APPROVED [signature] DATE 10/9

Post-it® Fax Note 7673 | Date 11/6 | # of pages 10
To Kirsten | From Mark
Co./Dept. | Fax # | Phone #

Post-it® Fax: To MAR... Fax # 650... ; ...n Kan, ...PWA, ...-5248, # of pages 1

200 SECOR HP

APPENDIX B

Boring Logs

Project: HOUSEWIVES MARKET – EIGHT AND JEFFERSON ST., OAKLAND, CA			Log of Boring/Monitoring Well: **GP-1**
Boring Location: GP-1 (SEE FIGURE 2)	Project No.: 70100-019-03		
Subcontractor and Equipment: VIRONEX/GEOPROBE	Logged By: C.M.	Drawn By: C.C.R.	
Sampling Method: CONTINUOUS CORE	Monitoring Device: OVM 580B		Comments:
Start Date/Time: 10/21/97//0900	Finish Date/Time: 10/21/97//1030		
First Water (bgs): ~25.0 FT.	Stabilized Water Level (bgs): ~25.0 FT.		

Surface Elevation: NA Casing Top Elevation: NA

Sample Number	PID (ppm)	Depth (Feet)	Recovery	USCS Symbol	Water Level	LITHOLOGIC DESCRIPTION (color, grain size, consistency, moisture, other)
		0				ASPHALT AND BASEROCK
		1				YELLOWISH BROWN (10YR 5/8) SAND (SP) with trace silt and clay, medium dense, dry to moist (0,90,5,5)
	0	2				
		3				
		4				
GP-1-5		5				
	0	6				
		7				
		8				
		9				
GP-1-10		10				
	0	11				
		12				
		13				
		14				
GP-1-15		15				
	0	16				
		17				
		18				
		19				
GP-1-20	0	20				
		21				
		22				
		23				@ ~22.5' color change to Light Brownish Gray (10YR 6/2)
		24				
	8	25				
		26				
		27				@ ~25' minor staining
		28				Bottom of boring 28'
		29				
		30				

Boring Abandonment/ Well Construction Details

Cement Grout

199710 241344 X:\LOGS\SWANS\GP-1

SECOR

Reviewed By: _____ Date: _____

Revised By: _____ Date: _____

Project: HOUSEWIVES MARKET – EIGHT AND JEFFERSON ST., OAKLAND, CA			Log of Boring/Monitoring Well: **GP-2**
Boring Location: GP-2 (SEE FIGURE 2)	Project No.: 70100-019-03		
Subcontractor and Equipment: VIRONEX/GEOPROBE	Logged By: C.M.	Drawn By: C.C.R.	
Sampling Method: CONTINUOUS CORE	Monitoring Device: OVM 580B		Comments:
Start Date/Time: 10/21/97//1100	Finish Date/Time: 10/21/97//1200		
First Water (bgs): ~25.0 FT.	Stabilized Water Level (bgs): ~25.0 FT.		

Surface Elevation: NA Casing Top Elevation: NA

Sample Number	PID (ppm)	Depth (Feet)	Recovery	USCS Symbol	Water Level	LITHOLOGIC DESCRIPTION (color, grain size, consistency, moisture, other)
		0				ASPHALT AND BASEROCK
		1				YELLOWISH BROWN (10YR 5/8) SAND (SP) with trace silt, sand is fine-grained, medium dense, moist (0,95,5,0)
	0	3				
GP-2-5		5				
	0	6				
GP-2-10	0	10				
GP-2-15	0	15				
	0	18				
GP-2-22	0	22				
		24				@ ~24' color change
	1	25			▽	
		28				Bottom of boring 28'

Boring Abandonment/ Well Construction Details: Cement Grout

199710 241404 X \\OOS\SWANS\GP-2

SECOR

Reviewed By: _____ Date: _____

Revised By: _____ Date: _____

Project: HOUSEWIVES MARKET – EIGHT AND JEFFERSON ST., OAKLAND, CA			Log of Boring/Monitoring Well: GP-3
Boring Location: GP-3 (SEE FIGURE 2)	Project No.: 70100-019-03		
Subcontractor and Equipment: VIRONEX/GEOPROBE	Logged By: C.M.	Drawn By: C.C.R.	
Sampling Method: CONTINUOUS CORE	Monitoring Device: OVM 580B		Comments:
Start Date/Time: 10/21/97//1300	Finish Date/Time: 10/21/97//1530		
First Water (bgs): ~26.0 FT.	Stabilized Water Level (bgs): ~26.0 FT.		

Surface Elevation: NA Casing Top Elevation: NA

Sample Number	PID (ppm)	Depth (Feet)	Recovery	USCS Symbol	Water Level	LITHOLOGIC DESCRIPTION (color, grain size, consistency, moisture, other)	Boring Abandonment/ Well Construction Details
		0				ASPHALT AND BASEROCK	
		1				DARK BROWN (10YR 5/8) SAND (SP) (FILL) sand is fine-grained, medium dense, moist, pieces of broken brick and wood indicate fill (0,100,0,0)	
	0	4					
GP-3-5	3	5					
		6				YELLOWISH BROWN (10YR 5/8) SAND (SP) with trace silt and clay, sand is fine-grained, medium dense, moist (0,95,5,5)	
	0	9					
GP-3-10		10					
		14					Cement Grout
GP-3-15	0	15					
	0	19				@ ~20' color change	
GP-3-23	0	23					
	0	25					
		30				Bottom of boring 30'	

1997.0 24140 X \LOGS\SWAYS\GP 3

SECOR

Reviewed By _____ Date _____

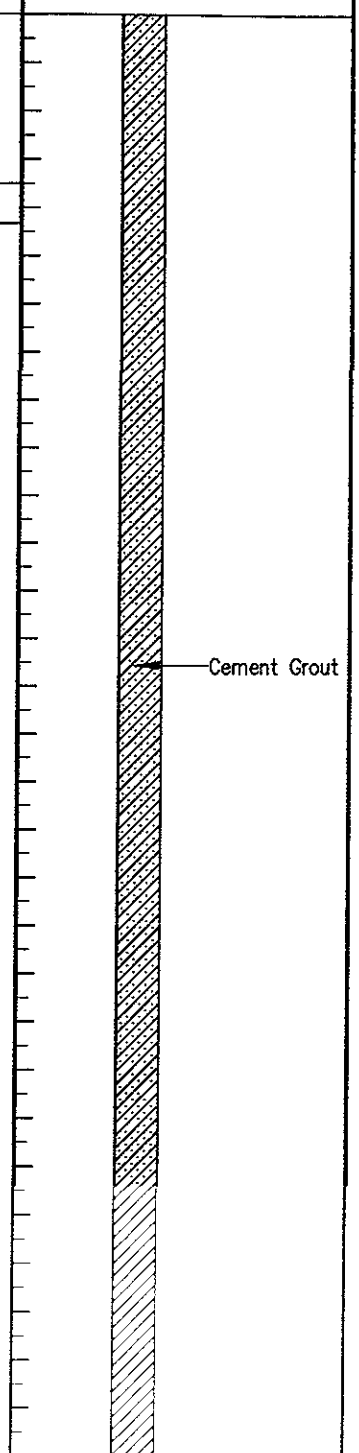
Revised By _____ Date _____

Project: HOUSEWIVES MARKET – EIGHT AND JEFFERSON ST., OAKLAND, CA			Log of Boring/Monitoring Well: GP-4
Boring Location: GP-4 (SEE FIGURE 2)	Project No.: 70100-019-03		
Subcontractor and Equipment: VIRONEX/GEOPROBE	Logged By: C.M.	Drawn By: C.C.R.	
Sampling Method: CONTINUOUS CORE	Monitoring Device: OVM 580B		Comments:
Start Date/Time: 10/21/97//1530	Finish Date/Time: 10/21/97//1700		
First Water (bgs): ~24.5 FT.	Stabilized Water Level (bgs): ~24.5 FT.		

Surface Elevation: NA Casing Top Elevation: NA

Sample Number	PID (ppm)	Depth (Feet)	Recovery	USCS Symbol	Water Level	LITHOLOGIC DESCRIPTION (color, grain size, consistency, moisture, other)
		0				OPEN VAULT (ABANDONED)
		4				THIN CONCRETE BOTTOM OF VAULT
GP-4-5	0	5				YELLOWISH BROWN (10YR 5/8) SAND (SP) with trace silt, sand is fine-grained, medium dense, moist (0,95,5,0)
GP-4-10	0	10				
	25	11				@ ~11.5' staining and odor begins
GP-4-15	8	15				
		18				@ ~18' strong petroleum odor
GP-4-23	510	20				
GP-4-23		23				
	550	24				
	825	28				

Boring Abandonment/ Well Construction Details



199/10 241422 X \LOGS\SWANS\GP-4

SECOR

Revised By: _____ Date: _____

Revised By: _____ Date: _____

Project:	HOUSEWIVES MARKET – EIGHT AND JEFFERSON ST., OAKLAND, CA	Log of Boring/Monitoring Well: GP-4
Boring Location:	GP–4 (SEE FIGURE 2)	Project No.: 70100–019–03

Sample Number	PID (ppm)	Depth (Feet)	Recovery	USCS Symbol	Water Level	LITHOLOGIC DESCRIPTION (color, grain size, consistency, moisture, other)	Boring Abandonment/ Well Construction Details
		30					
		31				Bottom of boring 32'	
		32					
		33					
		34					
		35					
		36					
		37					
		38					
		39					
		40					
		41					
		42					
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		62					
		63					

APPENDIX C

Laboratory Analytical Reports and Chain-of-Custody Records

Superior Analytical Laboratory

SECOR
90 NEW MONTGOMERY ST. #620
SAN FRANCISCO, CA 94105

Attn: MARK BECKER

RECEIVED
NOV 0 3 1997
BY:

Date: October 30, 1997

Laboratory Number : 23400

Project Number/Name : 70100-019-03
Facility/Site : FORMER SWAN'S MARKET
CLAY AND 9TH AND
JEFFERSON AND 8TH
OAKLAND, CA

Dear MARK BECKER:

Attached is Superior Analytical Laboratory report for the samples received on October 22, 1997. This report has been reviewed and approved for release. Reproduction of this report is permitted only in its entirety. Following the cover letter is the Case Narrative detailing sample receipt and analysis. Also enclosed is a copy of the original Chain-of-Custody record confirming receipt of samples.

Please note that any unused portion of the sample will be discarded after November 21, 1997, unless you have requested otherwise.

We appreciate the opportunity to be of service to you. If you have any questions, please contact our Laboratory at (510) 313-0850.

Sincerely,

Afsaneh Salimpour
Project Manager

Sanjay Panda
QA/QC Manager

Superior
Analytical Laboratory

CASE NARRATIVE

SECOR
Project Number/Name: 70100-019-03
Laboratory Number: 23400

Sample Receipt

Eighteen soil samples and
Four water samples were received by
Superior Analytical Laboratory on October 22, 1997.

Cooler temperature was 5.4°C

No abnormalities were noted with sample recieving.

Sample Analysis

The samples were analyzed for methods , 8015M, 8020 and HOLD.

8020/BTXE

P - There is a greater than 25% difference for detected concentration between the two GC columns.

TPHSCAN:

BB - Surrogate was diluted out.

Superior
Analytical Laboratory

SECOR
Attn: MARK BECKER

Project 70100-019-03
Reported on October 28, 1997

Volatile Aromatic Hydrocarbons by EPA SW-846 Method 5030/8020

Chronology

Laboratory Number 23400

Sample ID	Sampled	Received	Extract.	Analyzed	QC Batch	LAB #
GP-1	10/21/97	10/22/97	10/27/97	10/27/97	DJ272.04	01
GP-2	10/21/97	10/22/97	10/27/97	10/27/97	DJ272.04	02
GP-3	10/21/97	10/22/97	10/27/97	10/27/97	DJ272.04	03
GP-4	10/21/97	10/22/97	10/27/97	10/27/97	DJ272.37	04
GP-1 10'	10/21/97	10/22/97	10/24/97	10/24/97	DJ241.04	06
GP-1 20'	10/21/97	10/22/97	10/24/97	10/24/97	DJ241.04	08
GP-2 15'	10/21/97	10/22/97	10/24/97	10/24/97	DJ241.04	11
GP-2 22'	10/21/97	10/22/97	10/24/97	10/24/97	DJ241.04	12
GP-3 15'	10/21/97	10/22/97	10/24/97	10/24/97	DJ241.04	15
GP-3 23'	10/21/97	10/22/97	10/24/97	10/24/97	DJ241.05	16
GP-4 10'	10/21/97	10/22/97	10/24/97	10/24/97	DJ241.05	19
GP-4 15'	10/21/97	10/22/97	10/27/97	10/27/97	DJ271.05	20
GP-4 20'	10/21/97	10/22/97	10/27/97	10/27/97	DJ271.05	21

QC Samples

QC Batch #	QC Sample ID	Type	Ref.	Matrix	Extract.	Analyzed
DJ241.04-01	Method Blank	MB		Soil	10/24/97	10/24/97
DJ241.04-02	Laboratory Spike	LS		Soil	10/24/97	10/24/97
DJ241.04-03	Laboratory Spike Duplicate	LSD		Soil	10/24/97	10/24/97
DJ241.04-04	GP-1 10'	MS	23400-06	Soil	10/24/97	10/24/97
DJ241.04-05	GP-1 10'	MSD	23400-06	Soil	10/24/97	10/24/97
DJ241.05-01	Method Blank	MB		Soil	10/24/97	10/24/97
DJ271.05-01	Method Blank	MB		Soil	10/27/97	10/27/97
DJ271.05-02	Laboratory Spike	LS		Soil	10/27/97	10/27/97
DJ271.05-03	SP-1 A,B,C,D COMPOSITE	MS	23406-14	Soil	10/27/97	10/27/97
DJ271.05-04	SP-1 A,B,C,D COMPOSITE	MSD	23406-14	Soil	10/27/97	10/27/97
DJ272.04-01	Method Blank	MB		Water	10/27/97	10/27/97
DJ272.04-02	Laboratory Spike	LS		Water	10/27/97	10/27/97
DJ272.04-03	Laboratory Spike Duplicate	LSD		Water	10/27/97	10/27/97
DJ272.04-04	GP-1	MS	23400-01	Water	10/27/97	10/27/97
DJ272.04-05	GP-1	MSD	23400-01	Water	10/27/97	10/27/97
DJ272.37-01	Method Blank	MB		Water	10/27/97	10/27/97
DJ241.05-02	Laboratory Spike	LS		Soil	10/24/97	10/24/97
DJ241.05-03	0900 SS8-08-7.5	MS	23397-01	Soil	10/24/97	10/24/97
DJ241.05-04	0900 SS8-08-7.5	MSD	23397-01	Soil	10/24/97	10/24/97
DJ272.37-02	Laboratory Spike	LS		Water	10/27/97	10/27/97
DJ272.37-03	1000 SS33-01a	MS	23397-03	Water	10/27/97	10/27/97
DJ272.37-04	1000 SS33-01a	MSD	23397-03	Water	10/27/97	10/27/97

Superior Analytical Laboratory

SECOR
Attn: MARK BECKER

Project 70100-019-03
Reported on October 28, 1997

Volatile Aromatic Hydrocarbons by EPA SW-846 Method 5030/8020

LAB ID	Sample ID	Matrix	Dil.Factor	Moisture
23400-01	GP-1	Water	1.0	-
23400-02	GP-2	Water	1.0	-
23400-03	GP-3	Water	1.0	-
23400-04	GP-4	Water	1000.0	-

R E S U L T S O F A N A L Y S I S

Compound	23400-01 Conc. ug/L	RL	23400-02 Conc. ug/L	RL	23400-03 Conc. ug/L	RL	23400-04 Conc. ug/L	RL
Benzene	ND	0.5	ND	0.5	ND	0.5	3200	500
Toluene	ND	0.5	ND	0.5	ND	0.5	13000	500
Ethyl Benzene	ND	0.5	ND	0.5	ND	0.5	13000P	500
Xylenes	ND	0.5	ND	0.5	ND	0.5	53000P	500
>> Surrogate Recoveries (%) <<								
Trifluorotoluene (SS)	106		95		88		104	

SECOR
Attn: MARK BECKER

Project 70100-019-03
Reported on October 28, 1997

Volatile Aromatic Hydrocarbons by EPA SW-846 Method 5030/8020

LAB ID	Sample ID	Matrix	Dil.Factor	Moisture
23400-06	GP-1 10'	Soil	1.0	-
23400-08	GP-1 20'	Soil	1.0	-
23400-11	GP-2 15'	Soil	1.0	-
23400-12	GP-2 22'	Soil	1.0	-

R E S U L T S O F A N A L Y S I S

Compound	23400-06 Conc. mg/kg	RL	23400-08 Conc. mg/kg	RL	23400-11 Conc. mg/kg	RL	23400-12 Conc. mg/kg	RL
Benzene	ND	0.005	ND	0.005	ND	0.005	ND	0.005
Toluene	ND	0.005	ND	0.005	ND	0.005	ND	0.005
Ethyl Benzene	ND	0.005	ND	0.005	ND	0.005	ND	0.005
Xylenes	ND	0.005	ND	0.005	ND	0.005	ND	0.005
>> Surrogate Recoveries (%) <<								
Trifluorotoluene (SS)	94		96		95		94	

Superior Analytical Laboratory

SECOR
Attn: MARK BECKER

Project 70100-019-03
Reported on October 28, 1997

Volatile Aromatic Hydrocarbons by EPA SW-846 Method 5030/8020

LAB ID	Sample ID	Matrix	Dil.Factor	Moisture
23400-15	GP-3 15'	Soil	1.0	-
23400-16	GP-3 23'	Soil	1.0	-
23400-19	GP-4 10'	Soil	1.0	-
23400-20	GP-4 15'	Soil	1.0	-

R E S U L T S O F A N A L Y S I S

Compound	23400-15 Conc. mg/kg	RL	23400-16 Conc. mg/kg	RL	23400-19 Conc. mg/kg	RL	23400-20 Conc. mg/kg	RL
Benzene	ND	0.005	ND	0.005	ND	0.005	ND	0.005
Toluene	ND	0.005	ND	0.005	ND	0.005	ND	0.005
Ethyl Benzene	ND	0.005	ND	0.005	ND	0.005	ND	0.005
Xylenes	ND	0.005	ND	0.005	ND	0.005	ND	0.005
>> Surrogate Recoveries (%) <<								
Trifluorotoluene (SS)	93		81		81		85	

SECOR
Attn: MARK BECKER

Project 70100-019-03
Reported on October 28, 1997

Volatile Aromatic Hydrocarbons by EPA SW-846 Method 5030/8020

LAB ID	Sample ID	Matrix	Dil.Factor	Moisture
23400-21	GP-4 20'	Soil	1.0	-

R E S U L T S O F A N A L Y S I S

Compound	23400-21 Conc. mg/kg	RL
Benzene	ND	0.005
Toluene	ND	0.005
Ethyl Benzene	ND	0.005
Xylenes	ND	0.005
>> Surrogate Recoveries (%) <<		
Trifluorotoluene (SS)	82	

Superior Analytical Laboratory

Volatile Aromatic Hydrocarbons by EPA SW-846 Method 5030/8020

Quality Assurance and Control Data

Laboratory Number: 23400
Method Blank(s)

	DJ241.04-01		DJ241.05-01		DJ271.05-01		DJ272.04-01	
	Conc. mg/kg	RL	Conc. mg/kg	RL	Conc. mg/kg	RL	Conc. ug/L	RL
Benzene	ND	0.005	ND	0.005	ND	0.005	ND	0.5
Toluene	ND	0.005	ND	0.005	ND	0.005	ND	0.5
Ethyl Benzene	ND	0.005	ND	0.005	ND	0.005	ND	0.5
Xylenes	ND	0.005	ND	0.005	ND	0.005	ND	0.5
>> Surrogate Recoveries (%) <<								
Trifluorotoluene (SS)	96		74		83		97	

Superior Analytical Laboratory

Volatile Aromatic Hydrocarbons by EPA SW-846 Method 5030/8020

Quality Assurance and Control Data

Laboratory Number: 23400
Method Blank(s)

	DJ272.37-01 Conc. ug/L	 RL
Benzene	ND	0.5
Toluene	ND	0.5
Ethyl Benzene	ND	0.5
Xylenes	ND	0.5
>> Surrogate Recoveries (%) <<		
Trifluorotoluene (SS)	99	

Superior Analytical Laboratory

Volatile Aromatic Hydrocarbons by EPA SW-846 Method 5030/8020

Quality Assurance and Control Data

Laboratory Number: 23400

Compound	Sample conc.	SPK Level	SPK Result	Recovery %	Limits %	RPD %
For Soil Matrix (mg/kg)						
DJ241.04 02 / 03 - Laboratory Control Spikes						
Benzene		0.100	0.097/0.10	97/100	70-125	3
Toluene		0.100	0.10/0.10	100/100	70-125	0
Ethyl Benzene		0.100	0.099/0.10	99/100	70-125	1
Xylenes		0.300	0.30/0.31	100/103	70-125	3
>> Surrogate Recoveries (%) <<						
Trifluorotoluene (SS)				99/98	60-130	
For Soil Matrix (mg/kg)						
DJ271.05 02 / - Laboratory Control Spikes						
Benzene		0.100	0.091	91	70-125	
Toluene		0.100	0.095	95	70-125	
Ethyl Benzene		0.100	0.10	100	70-125	
Xylenes		0.300	0.30	100	70-125	
>> Surrogate Recoveries (%) <<						
Trifluorotoluene (SS)				86	60-130	
For Water Matrix (ug/L)						
DJ272.04 02 / 03 - Laboratory Control Spikes						
Benzene		20	20/21	100/105	75-125	5
Toluene		20	20/20	100/100	75-125	0
Ethyl Benzene		20	20/21	100/105	75-125	5
Xylenes		60	62/63	103/105	75-125	2
>> Surrogate Recoveries (%) <<						
Trifluorotoluene (SS)				102/101	65-130	
For Soil Matrix (mg/kg)						
DJ241.05 02 / - Laboratory Control Spikes						
Benzene		0.100	0.092	92	65-135	

Superior Analytical Laboratory

Volatile Aromatic Hydrocarbons by EPA SW-846 Method 5030/8020

Quality Assurance and Control Data

Laboratory Number: 23400

Compound	Sample conc.	SPK Level	SPK Result	Recovery %	Limits %	RPD %
Toluene		0.100	0.098	98	65-135	
Ethyl Benzene		0.100	0.10	100	65-135	
Xylenes		0.300	0.31	103	65-135	
>> Surrogate Recoveries (%) <<						
Trifluorotoluene (SS)				89	50-150	
For Water Matrix (ug/L)						
DJ272.37 02 / - Laboratory Control Spikes						
Benzene		20	20	100	65-135	
Toluene		20	21	105	65-135	
Ethyl Benzene		20	21	105	65-135	
Xylenes		60	63	105	65-135	
>> Surrogate Recoveries (%) <<						
Trifluorotoluene (SS)				101	50-150	
For Soil Matrix (mg/kg)						
DJ241.04 04 / 05 - Sample Spiked: 23400 - 06						
Benzene	ND	0.100	0.094/0.096	94/96	70-125	2
Toluene	ND	0.100	0.094/0.098	94/98	70-125	4
Ethyl Benzene	ND	0.100	0.096/0.10	96/100	70-125	4
Xylenes	ND	0.300	0.29/0.31	97/103	70-125	6
>> Surrogate Recoveries (%) <<						
Trifluorotoluene (SS)				87/96	60-130	
For Soil Matrix (mg/kg)						
DJ271.05 03 / 04 - Sample Spiked: 23406 - 14						
Benzene	ND	0.100	0.093/0.093	93/93	70-125	0
Toluene	ND	0.100	0.098/0.10	98/100	70-125	2
Ethyl Benzene	ND	0.100	0.10/0.10	100/100	70-125	0
Xylenes	ND	0.300	0.30/0.30	100/100	70-125	0
>> Surrogate Recoveries (%) <<						
Trifluorotoluene (SS)				90/92	60-130	

Volatile Aromatic Hydrocarbons by EPA SW-846 Method 5030/8020

Quality Assurance and Control Data

Laboratory Number: 23400

Compound	Sample conc.	SPK Level	SPK Result	Recovery %	Limits %	RPD %
For Water Matrix (ug/L)						
DJ272.04 04 / 05 - Sample Spiked: 23400 - 01						
Benzene	ND	20	21/20	105/100	75-125	5
Toluene	ND	20	20/20	100/100	75-125	0
Ethyl Benzene	ND	20	21/20	105/100	75-125	5
Xylenes	ND	60	63/62	105/103	75-125	2
>> Surrogate Recoveries (%) <<						
Trifluorotoluene (SS)				100/96	65-130	
For Soil Matrix (mg/kg)						
DJ241.05 03 / 04 - Sample Spiked: 23397 - 01						
Benzene	ND	0.100	0.090/0.090	90/90	65-135	0
Toluene	ND	0.100	0.091/0.096	91/96	65-135	5
Ethyl Benzene	ND	0.100	0.096/0.10	96/100	65-135	4
Xylenes	ND	0.300	0.30/0.30	100/100	65-135	0
>> Surrogate Recoveries (%) <<						
Trifluorotoluene (SS)				87/89	50-150	
For Water Matrix (ug/L)						
DJ272.37 03 / 04 - Sample Spiked: 23397 - 03						
Benzene	ND	20	22/22	110/110	65-135	0
Toluene	ND	20	22/22	110/110	65-135	0
Ethyl Benzene	ND	20	22/22	110/110	65-135	0
Xylenes	ND	60	65/66	108/110	65-135	2
>> Surrogate Recoveries (%) <<						
Trifluorotoluene (SS)				94/99	50-150	

Superior Analytical Laboratory

Narrative:

P - There is a greater than 25% difference for detected concentration between the two GC columns.

Definitions:

ND	=	Not Detected			
RL	=	Reporting Limit			
NA	=	Not Analysed			
RPD	=	Relative Percent Difference			
ug/L	=	parts per billion (ppb)	ug/kg	=	parts per billion (ppb)
mg/L	=	parts per million (ppm)	mg/kg	=	parts per million (ppm)

Superior Analytical Laboratory

SECOR
Attn: MARK BECKER

Project 70100-019-03
Reported on October 30, 1997

Total Volatile Petroleum Hydrocarbons by EPA SW-846 5030/8015M

Chronology

Laboratory Number 23400

Sample ID	Sampled	Received	Extract.	Analyzed	QC Batch	LAB #
GP-4	10/21/97	10/22/97	10/27/97	10/27/97	DJ272.37	04

QC Samples

QC Batch #	QC Sample ID	Type	Ref.	Matrix	Extract.	Analyzed
DJ272.37-05	Method Blank	MB		Water	10/27/97	10/27/97
DJ272.37-02	Laboratory Spike	LS		Water	10/27/97	10/27/97
DJ272.37-03	1000 SS33-01a	MS	23397-03	Water	10/27/97	10/27/97
DJ272.37-04	1000 SS33-01a	MSD	23397-03	Water	10/27/97	10/27/97

SECOR
Attn: MARK BECKER

Project 70100-019-03
Reported on October 30, 1997

Total Volatile Petroleum Hydrocarbons by EPA SW-846 5030/8015M

LAB ID	Sample ID	Matrix	Dil.Factor	Moisture
23400-04	GP-4	Water	1000.0	-

R E S U L T S O F A N A L Y S I S

Compound	23400-04 Conc. ug/L	RL
Gasoline Range	1700000	50000
>> Surrogate Recoveries (%) <<		
4-Bromofluorobenzene	ND	

Superior Analytical Laboratory

Total Volatile Petroleum Hydrocarbons by EPA SW-846 5030/8015M

Quality Assurance and Control Data

Laboratory Number: 23400
Method Blank(s)

	DJ272.37-05 Conc. ug/L	RL
Gasoline Range	ND	50

>> Surrogate Recoveries (%) <<
4-Bromofluorobenzene

Superior
Analytical Laboratory

Total Volatile Petroleum Hydrocarbons by EPA SW-846 5030/8015M

Quality Assurance and Control Data

Laboratory Number: 23400

Compound	Sample conc.	SPK Level	SPK Result	Recovery %	Limits %	RPD %
For Water Matrix (ug/L) DJ272.37 02 / - Laboratory Control Spikes						
Gasoline Range		2000	1900	95	65-135	
For Water Matrix (ug/L) DJ272.37 03 / 04 - Sample Spiked: 23397 - 03						
Gasoline Range	ND	2000	1900/1900	95/95	65-135	0

Definitions:
ND = Not Detected
RL = Reporting Limit
NA = Not Analysed
RPD = Relative Percent Difference
ug/L = parts per billion (ppb)
mg/L = parts per million (ppm)
ug/kg = parts per billion (ppb)
mg/kg = parts per million (ppm)

Superior Analytical Laboratory

SECOR
Attn: MARK BECKER

RECEIVED
NOV 20 1997

Project 70100-019-03
Reported on October 30, 1997
Revised on November 7, 1997

Total Extractable Petroleum Hydrocarbons
by EPA SW-846 Method 8015M

Chronology

Laboratory Number 23400

Sample ID	Sampled	Received	Extract.	Analyzed	QC Batch	LAB #
GP-1	10/21/97	10/22/97	10/24/97	10/25/97	DJ241.02	01
GP-2	10/21/97	10/22/97	10/24/97	10/25/97	DJ241.02	02
GP-3	10/21/97	10/22/97	10/24/97	10/25/97	DJ241.02	03
GP-4	10/21/97	10/22/97	10/24/97	10/27/97	DJ241.02	04
GP-1 10'	10/21/97	10/22/97	10/28/97	10/29/97	DJ281.29	06
GP-1 20'	10/21/97	10/22/97	10/28/97	10/29/97	DJ281.29	08
GP-2 15'	10/21/97	10/22/97	10/28/97	10/29/97	DJ281.29	11
GP-2 22'	10/21/97	10/22/97	10/28/97	10/29/97	DJ281.29	12
GP-3 15'	10/21/97	10/22/97	10/28/97	10/29/97	DJ281.29	15
GP-3 23'	10/21/97	10/22/97	10/28/97	10/29/97	DJ281.29	16
GP-4 10'	10/21/97	10/22/97	10/28/97	10/29/97	DJ281.29	19
GP-4 15'	10/21/97	10/22/97	10/28/97	10/29/97	DJ281.29	20
GP-4 20'	10/21/97	10/22/97	10/28/97	10/29/97	DJ281.29	21

QC Samples

QC Batch #	QC Sample ID	TypeRef.	Matrix	Extract.	Analyzed
DJ241.02-01	Method Blank	MB	Water	10/24/97	10/25/97
DJ241.02-02	Laboratory Spike	LS	Water	10/24/97	10/25/97
DJ241.02-03	Laboratory Spike Duplicate	LSD	Water	10/24/97	10/25/97
DJ241.02-04	1000 SS33-01a	MS 23397-03	Water	10/24/97	10/25/97
DJ241.02-05	1000 SS33-01a	MSD 23397-03	Water	10/24/97	10/25/97
DJ281.29-01	Method Blank	MB	Soil	10/28/97	10/29/97
DJ281.29-02	Laboratory Spike	LS	Soil	10/28/97	10/29/97
DJ281.29-03	Laboratory Spike Duplicate	LSD	Soil	10/28/97	10/29/97
DJ281.29-04	GP-1 10'	MS 23400-06	Soil	10/28/97	10/29/97
DJ281.29-05	GP-1 10'	MSD 23400-06	Soil	10/28/97	10/29/97

Superior Analytical Laboratory

SECOR
Attn: MARK BECKER

Project 70100-019-03
Reported on October 30, 1997
Revised on November 7, 1997

Total Extractable Petroleum Hydrocarbons by EPA SW-846 Method 8015M

LAB ID	Sample ID	Matrix	Dil.Factor	Moisture
23400-01	GP-1	Water	1.0	-
23400-02	GP-2	Water	1.0	-
23400-03	GP-3	Water	1.0	-
23400-04	GP-4	Water	200.0	-

R E S U L T S O F A N A L Y S I S

Compound	23400-01 Conc. ug/L	RL	23400-02 Conc. ug/L	RL	23400-03 Conc. ug/L	RL	23400-04 Conc. ug/L	RL
Stoddard	ND	50	ND	50	ND	50	ND	10000
Kerosene	ND	50	ND	50	ND	50	ND	10000
Jet Fuel	ND	50	ND	50	ND	50	ND	10000
Mineral Spirits	ND	50	ND	50	ND	50	210000	10000
Diesel:	ND	50	ND	50	ND	50	ND	10000
Bunker Oil	ND	500	ND	500	ND	500	ND	100000
Motor Oil	670	500	ND	500	ND	500	ND	100000
Unknown Hydrocarbons	ND	50	ND	50	ND	50	ND	10000
Gasoline:	ND	500	ND	500	ND	500	[redacted]	C6-C14
							1700 000	
>> Surrogate Recoveries (%) <<								
Tetracosane	77		81		84		NDBB	

C8-C14

Superior Analytical Laboratory

SECOR
Attn: MARK BECKER

Project 70100-019-03
Reported on October 30, 1997
Revised on November 7, 1997

Total Extractable Petroleum Hydrocarbons by EPA SW-846 Method 8015M

LAB ID	Sample ID	Matrix	Dil.Factor	Moisture
23400-06	GP-1 10'	Soil	1.0	-
23400-08	GP-1 20'	Soil	1.0	-
23400-11	GP-2 15'	Soil	1.0	-
23400-12	GP-2 22'	Soil	1.0	-

R E S U L T S O F A N A L Y S I S

Compound	23400-06 Conc. mg/kg	RL	23400-08 Conc. mg/kg	RL	23400-11 Conc. mg/kg	RL	23400-12 Conc. mg/kg	RL
Stoddard	ND	10	ND	10	ND	10	ND	10
Kerosene	ND	10	ND	10	ND	10	ND	10
Jet Fuel	ND	10	ND	10	ND	10	ND	10
Mineral Spirits	ND	10	ND	10	ND	10	ND	10
Diesel:	ND	1	ND	1	ND	1	ND	1
Bunker Oil	ND	100	ND	100	ND	100	ND	100
Motor Oil	ND	20	ND	20	ND	20	ND	20
Unknown Hydrocarbons	ND	1	ND	1	ND	1	ND	1
Gasoline:	ND	10	ND	10	ND	10	ND	10
>> Surrogate Recoveries (%) <<								
Tetracosane	84		89		106		93	

Superior Analytical Laboratory

SECOR
Attn: MARK BECKER

Project 70100-019-03
Reported on October 30, 1997
Revised on November 7, 1997

Total Extractable Petroleum Hydrocarbons by EPA SW-846 Method 8015M

LAB ID	Sample ID	Matrix	Dil.Factor	Moisture
23400-15	GP-3 15'	Soil	1.0	-
23400-16	GP-3 23'	Soil	1.0	-
23400-19	GP-4 10'	Soil	1.0	-
23400-20	GP-4 15'	Soil	1.0	-

R E S U L T S O F A N A L Y S I S

Compound	23400-15 Conc. mg/kg	RL	23400-16 Conc. mg/kg	RL	23400-19 Conc. mg/kg	RL	23400-20 Conc. mg/kg	RL
Stoddard	ND	10	ND	10	ND	10	ND	10
Kerosene	ND	10	ND	10	ND	10	ND	10
Jet Fuel	ND	10	ND	10	ND	10	ND	10
Mineral Spirits	ND	10	ND	10	ND	10	ND	10
Diesel:	ND	1	ND	1	ND	1	ND	1
Bunker Oil	ND	100	ND	100	ND	100	ND	100
Motor Oil	ND	20	ND	20	ND	20	ND	20
Unknown Hydrocarbons	ND	1	ND	1	ND	1	ND	1
Gasoline:	ND	10	ND	10	ND	10	ND	10
>> Surrogate Recoveries (%) <<								
Tetracosane	98		97		97		96	

Superior Analytical Laboratory

SECOR
Attn: MARK BECKER

Project 70100-019-03
Reported on October 30, 1997
Revised on November 7, 1997

Total Extractable Petroleum Hydrocarbons
by EPA SW-846 Method 8015M

LAB ID	Sample ID	Matrix	Dil.Factor	Moisture
23400-21	GP-4 20'	Soil	1.0	-

R E S U L T S O F A N A L Y S I S

Compound	23400-21 Conc. mg/kg	RL
Stoddard	ND	10
Kerosene	ND	10
Jet Fuel	ND	10
Mineral Spirits	ND	10
Diesel:	ND	1
Bunker Oil	ND	100
Motor Oil	ND	20
Unknown Hydrocarbons	ND	1
Gasoline:	ND	10
>> Surrogate Recoveries (%) <<		
Tetracosane	99	

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Analytical Laboratory

Total Extractable Petroleum Hydrocarbons
by EPA SW-846 Method 8015M

Quality Assurance and Control Data

Laboratory Number: 23400
Method Blank(s)

	DJ241.02-01		DJ281.29-01	
	Conc. ug/L	RL	Conc. mg/Kg	RL
Stoddard	ND	50	ND	10
Kerosene	ND	50	ND	10
Jet Fuel	ND	50	ND	10
Mineral Spirits	ND	50	ND	10
Diesel:	ND	50	ND	1
Bunker Oil	ND	500	ND	100
Motor Oil	ND	500	ND	20
Unknown Hydrocarbons	ND	50	ND	1
Gasoline:	ND	50	ND	10
>> Surrogate Recoveries (%) <<				
Tetracosane	94		91	

Superior Analytical Laboratory

Total Extractable Petroleum Hydrocarbons
by EPA SW-846 Method 8015M

Quality Assurance and Control Data

Laboratory Number: 23400

Compound	Sample conc.	SPK Level	SPK Result	Recovery %	Limits %	RPD %
		For Water Matrix (ug/L)				
	DJ241.02	02 / 03 - Laboratory Control Spikes				
Diesel:		1000	1320/1400	132/140	55-150	6
>> Surrogate Recoveries (%) <<						
Tetracosane				99/94	65-130	
		For Soil Matrix (mg/Kg)				
	DJ281.29	02 / 03 - Laboratory Control Spikes				
Diesel:		33	38.7/40.4	117/122	55-150	4
>> Surrogate Recoveries (%) <<						
Tetracosane				90/93	60-150	
		For Water Matrix (ug/L)				
	DJ241.02	04 / 05 - Sample Spiked: 23397 - 03				
Diesel:	ND	1111	1430/1490	129/134	55-150	4
>> Surrogate Recoveries (%) <<						
Tetracosane				94/94	65-130	
		For Soil Matrix (mg/Kg)				
	DJ281.29	04 / 05 - Sample Spiked: 23400 - 06				
Diesel:	ND	33	34.3/40.1	104/122	55-150	16
>> Surrogate Recoveries (%) <<						
Tetracosane				82/88	60-150	

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Analytical Laboratory

Narrative:

BB - Surrogate was diluted out.
!- Concentration for Gasoline is reported by method 5030/8015.

Definitions:

ND	=	Not Detected			
RL	=	Reporting Limit			
NA	=	Not Analysed			
RPD	=	Relative Percent Difference			
ug/L	=	parts per billion (ppb)	ug/kg	=	parts per billion (ppb)
mg/L	=	parts per million (ppm)	mg/kg	=	parts per million (ppm)

23400

Chain-of Custody Number:

SECOR Chain-of Custody Record

Field Office: San Francisco
Address: 90 New Montgomery St, Suite 620
San Francisco, CA 94105

☒ Additional documents are attached, and are a part of this Record.

Job Name: Former Swan's Market
Location: Clay & 9th and Jefferson & 8th
Oakland, CA

Project # 70100-019-03 Task #
Project Manager Mark Becker
Laboratory Superior
Turnaround Time Standard / * Hold *

Sampler's Name Charles Meluncon
Sampler's Signature

Analysis Request

Sample ID	Date	Time	Matrix	HCID: Hydrocarbon Scan (8015)	TPHg/BTEX/WTPH-G 8015 (modified)/8020	TPHd/WTPH-D 8015 (modified)	TPH 418.1/WTPH 418.1	Aromatic Volatiles 602/8020	Volatile Organics 624/8240 (GC/MS)	Halogenated Volatiles 601/8010	Semi-volatile Organics 625/8270 (GC/MS)	Pesticides/PCBs 608/8080	Total Lead 7421	Priority Pollutant Metals (13)	TCLP Metals	Comments/ Instructions	Number of Containers
GP-1	10-21-97	10:30	Water	X	X											Hold any unused Sample	4
GP-2		12:00		X	X												4
GP-3		15:00		X	X												4
GP-4		17:30		X	X												4
GP-1, 5'	10-21-97		Soil													*	1
GP-1, 10'																*	1
GP-1, 15'																*	1
GP-1, 20'																*	1
GP-2, 5'																*	1

Special Instructions/Comments:
* Hold pending instructions

Please Initial:
Samples Stored in ice. ✓ 1.4°C
Appropriate containers ✓
Samples preserved
VOA's without headspace
Comments:

Relinquished by:
Sign
Print Charles Meluncon
Company SECOR
Time 20:00 Date 10-21-97

Received by:
Sign
Print EUGENE R. KELLER
Company SSI
Time 17:04 PM Date 10/22/97

Relinquished by:
Sign
Print EUGENE R. KELLER
Company SSI
Time 1PM Date 10/22/97

Received by:
Sign
Print CAE
Company
Time 1300 Date 10/22/97

Sample Receipt
Total no. of containers:
Chain of custody seals:
Rec'd. in good condition/cold:
Conforms to record:

Client:
Client Contact:
Client Phone:

SECOR CUSTRFC Rev 1/95

Date: 10/21/97 Page 1 of 3

23400

Chain-of Custody Number:

SECOR Chain-of Custody Record

Field Office: San Francisco
Address: 90 New Montgomery St. Suite 620
San Francisco, CA 94105

☑ Additional documents are attached, and are a part of this Record.

Job Name: Former Swan's Market
Location:

Project # 70100-019-03 Task #
Project Manager: Mark Becker
Laboratory: Superior
Turnaround Time: * Hold / Standard

Sampler's Name: Charles McLaurin
Sampler's Signature:

Sample ID	Date	Time	Matrix
GP-2, 10'	10-21-97		Soil
GP-2, 15'			
GP-2, 22'			
GP-3, 5'			
GP-3, 10'			
GP-3, 15'			
GP-3, 23'			
GP-4, 5'			
GP-4, 7.5'			
GP-4, 10'			

Analysis Request

HCID	TPHg/BTEX/WTPH-G 8015 (modified)/8020	TPHd/WTPH-D 8015 (modified)	TPH 418.1/WTPH 418.1	Aromatic Volatiles 602/8020	Volatile Organics 624/8240 (GC/MS)	Halogenated Volatiles 601/8010	Semi-volatile Organics 625/8270 (GC/MS)	Pesticides/PCBs 608/8080	Total Lead 7421	Priority Pollutant Metals (13)	TCLP Metals			Comments/ Instructions	Number of Containers
														*	1
														*	1
														*	1
														*	1
														*	1
														*	1
														*	1
														*	1
														*	1
														*	1

Special Instructions/Comments:
* Hold pending instructions

Please bill
Samples Standardized 5.4°C
Appropriate containers ✓
Samples preserved
VOA's without headspace
Comments:

Relinquished by:
Sign
Print Charles McLaurin
Company SECOR
Time 20:00 Date 10-21-97

Received by:
Sign
Print Eugene R. Eberle
Company SAL
Time 12:04 Date 10/22/97

Relinquished by:
Sign
Print Eugene R. Eberle
Company SAL
Time 17 Date 10/22/97

Received by:
Sign
Print
Company
Time 13:00 Date 10/22/97

Sample Receipt
Total no. of containers:
Chain of custody seals:
Rec'd. in good condition/cold:
Conforms to record:

Client:
Client Contact:
Client Phone:

SECOR CUSTREC Rev 1/95

Date: 10/21/97 Page 2 of 3

2400

Chain-of Custody Number:

SECOR Chain-of Custody Record

Field Office: San Francisco
Address: 90 New Montgomery St, Suite 620
San Francisco, CA 94105

☐ Additional documents are attached, and are a part of this Record.

Job Name: Former Swan's Market
Location:

Project # 70100-019-03 Task #
Project Manager Mark Becker
Laboratory Sytech
Turnaround Time * Hold/Standard

Sampler's Name Charles Melancon
Sampler's Signature

Sample ID	Date	Time	Matrix	HCID	TPHg/BTEX/WTPH-G 8015 (modified)/8020	TPHd/WTPH-D 8015 (modified)	TPH 418.1/WTPH 418.1	Aromatic Volatiles 602/8020	Volatile Organics 624/8240 (GC/MS)	Halogenated Volatiles 601/8010	Semi-volatile Organics 625/8270 (GC/MS)	Pesticides/PCBs 608/8080	Total Lead 7421	Priority Pollutant Metals (13)	TCLP Metals			Comments/ Instructions	Number of Containers
SP-4, 15'	10-21-97		Soil															*	1
SP-4, 20'	↓		↓															*	1
SP-4, 23'																		*	1

Special Instructions/Comments:
* Hold pending instructions
Please Initial:
Samples Stored in ice. ✓ 5.9°C
Appropriate containers ✓
Samples preserved
VOA's without headspace
Comments:

Relinquished by:
Sign
Print Charles Melancon
Company SECOR
Time 1030 Date 10-21-97

Received by:
Sign
Print
Company
Time 1730 Date 10/22

Relinquished by:
Sign
Print EUGENE L. EVANS
Company SOL
Time 1 PM Date 10/22/97

Received by:
Sign
Print
Company
Time 10/22/97 Date 1000

Sample Receipt
Total no. of containers:
Chain of custody seals:
Rec'd. in good condition/cold:
Conforms to record:

Client:
Client Contact:
Client Phone:

(SECOR CUSTRC Rev 1995)

Date: 10/21/97 Page 3 of 3

23400

Chain-of Custody Number:

SECOR Chain-of Custody Record

Field Office: San Francisco
Address: 90 New Montgomery St, Suite 620
San Francisco, CA 94105

☒ Additional documents are attached, and are a part of this Record.

Job Name: Former Swan's Market
Location: Clay and Jefferson & 5th
Oakland, CA

Project # 70100-019-03 Task #
Project Manager Mark Becker
Laboratory Superior
Turnaround Time Standard / * Hold *

Sampler's Name Charles Meloncon
Sampler's Signature Charles Meloncon

Analysis Request

Sample ID	Date	Time	Matrix	Hold Hydrocarbon Scan (8015)	TPH/BTEX Modified (8020)	TPH/MTBE/BTEX Modified (8020)	TPH/MTBE/TPH-D 8015 (modified)	TPH 418.1/WTPH 418.1	Aromatic Volatiles 602/8020	Volatile Organics 624/8240 (GC/MS)	Halogenated Volatiles 601/8010	Semi-volatile Organics 625/8270 (GC/MS)	Pesticides/PCBs 608/8080	Total Lead 7421	Priority Pollutant Metals (13)	TCLP Metals			Comments/ Instructions	Number of Containers
GP-1	10-21-97	10:30	Water	X	X															4
GP-2		12:00		X	X														Hold any unused sample	4
GP-3				X	X															4
GP-4		17:30		X	X															4
GP-1, 5'	10-21-97		Soil	X	X														*	1
GP-1, 10'				X	X														*	1
GP-1, 15'																			*	1
GP-1, 20'				X	X														*	1
GP-2, 5'																			*	1

Special Instructions/Comments:
* Hold pending instructions

Relinquished by:	Received by:	Sample Receipt
Sign	Sign	Total no. of containers:
Print Charles Meloncon	Print	Chain of custody seals:
Company SECOR	Company	Rec'd. in good condition/cold:
Time 20:00 Date 10-21-97	Time 12:00 Date 10/22/97	Conforms to record:
Relinquished by:	Received by:	Client:
Sign	Sign	Client Contact:
Print EUGENE N. KEOUGH	Print	Client Phone:
Company SOL	Company	
Time 1PM Date 10/22/97	Time Date 10/22/97	

SECOR CUSTTREC A.ec, Ltd.

Date: 10/21/97 Page 1 of 3

23400

Chain-of Custody Number:

SECOR Chain-of Custody Record

Field Office: San Francisco
Address: 90 New Montgomery St, Suite 620
San Francisco, CA 94105

☑ Additional documents are attached, and are a part of this Record.

Job Name: Former Swan's Market
Location:

Project # 20100-019-03 Task #
Project Manager Mark Becker
Laboratory Superior
Turnaround Time * Hold / Standard

Sampler's Name Charles Mahaney
Sampler's Signature

Sample ID	Date	Time	Matrix	TPH SCAN 8015M	TPH GASOLINE/BTEX/MTBE 8015 (modified)/8020	TPH-D/WTPH-D 8015 (modified)	TPH 418.1/WTPH 418.1	Aromatic Volatiles 602/8020	Volatile Organics 624/8240 (GC/MS)	Halogenated Volatiles 601/8010	Semi-volatile Organics 625/8270 (GC/MS)	Pesticides/PCBs 608/8080	Total Lead 7421	Priority Pollutant Metals (13)	TCLP Metals			Comments/ Instructions	Number of Containers
SP-2, 10'	10-21-97		Soil						X									*	1
SP-2, 15'				X	X													*	1
SP-2, 20'				X	X													*	1
SP-3, 5'																		*	1
SP-3, 10'																		*	1
SP-3, 15'				X	X													*	1
SP-3, 23'				X	X													*	1
SP-4, 5'																		*	1
SP-4, 7.5'																		*	1
SP-4, 10'				X	X													*	1

Special Instructions/Comments:
* Hold pending instructions

Relinquished by:		Received by:	
Sign		Sign	
Print	Charles Mahaney	Print	Eugene Lowe
Company	SECOR	Company	SAI
Time	20:00	Date	10-21-97
Time	12:40 PM	Date	10/22/97
Relinquished by:		Received by:	
Sign		Sign	
Print	EUGENE F. LOWE	Print	
Company	SAI	Company	
Time	1PM	Date	10/22/97
Time	1:00	Date	10/22/97

Sample Receipt
Total no. of containers:
Chain of custody seals:
Rec'd. in good condition/cold:
Conforms to record:

Client:
Client Contact:
Client Phone:

SECOR OUSTREC Rev 1/95

Date: 10/21/97 Page 2 of 3

23400

Chain-of Custody Number:

SECOR Chain-of Custody Record

Field Office: San Francisco
Address: 90 New Montgomery St. Suite 820
San Francisco, CA 94105

☐ Additional documents are attached, and are a part of this Record.

Job Name: Former Swan's Market
Location:

Project # 70100-019-03 Task #
Project Manager Mark Becker
Laboratory Superior
Turnaround Time * Hold/Standard

Sampler's Name Charles Melanson
Sampler's Signature

Analysis Request

Sample ID	Date	Time	Matrix	TPH Scan 8015M	TPH/BTEX/MTBE 8015 (modified)/8020	TPH/WTPH-D 8015 (modified)	TPH 418.1/WTPH 418.1	Aromatic Volatiles 602/8020	Volatile Organics 624/8240 (GC/MS)	Halogenated Volatiles 601/8010	Semi-volatile Organics 625/8270 (GC/MS)	Pesticides/PCBs 608/8080	Total Lead 7421	Priority Pollutant Metals (13)	TCLP Metals			Comments/ Instructions	Number of Containers
GP-4, 15'	10-21-97		Soil	X	X													*	1
GP-4, 20'				X	X													*	1
GP-4, 23'																		*	1

10/21/97

Special Instructions/Comments:
* Hold pending instructions

Relinquished by:		Received by:	
Sign		Sign	
Print	Charles Melanson	Print	[illegible]
Company	SECOR	Company	SAI
Time	[illegible] Date 10-21-97	Time 12:07pm Date	12:04
Relinquished by:		Received by:	
Sign		Sign	
Print	EUGENE R. EVANS	Print	
Company	SAI	Company	
Time 1pm Date	10/22/97	Time	Date 10/22/97

Sample Receipt
Total no. of containers:
Chain of custody seals:
Rec'd. in good condition/cold:
Conforms to record:

Client:
Client Contact:
Client Phone:

SECOR CUSTREC Rev. 1/93

Date: 10/21/97 Page 3 of 3

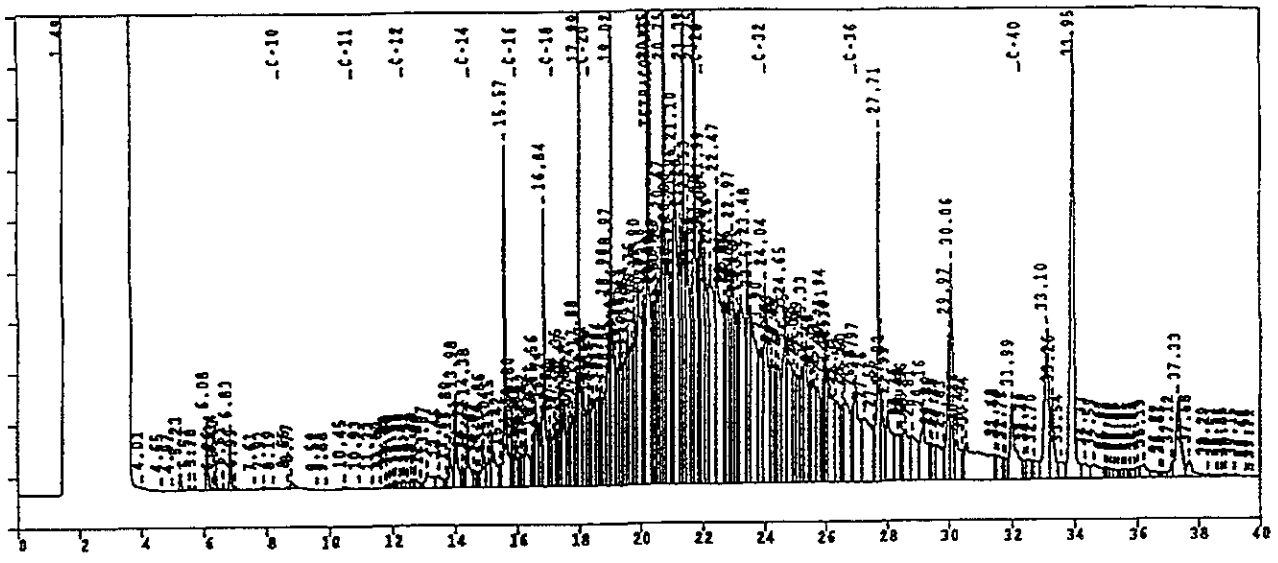
10/22/97 WED 08:42 FAX 415 691 9837 SECOR →→→ SAN FRANSICO 004

10/22/97 WED 08:42 FAX 415 691 9837

APPENDIX D

Laboratory Chromatograms

File=C:\DS\TPH1\10239702.64R Date printed=10-25-1997 Time= 14:41:15
Sample Name=SAW1-DJ24102-64-23400-01
0.0 to 40.0 min. Low Y=42.0 High Y=120.0 mv Span=78.0



********** SUPERIOR ANALYTICAL MARTINEZ LAB **********

SAMPLE ID: SAW1-DJ24102-64-23400-01
RUN DATE: OCT 25, 1997 13:57:25
SEQ FILE NAME: Q56516C6b#2207
METHOD: C:\DS\TPH1\TPH1.MET
CALIB.: C:\DS\TPH1\TPH1.CAL

DATA FILE: C:\DS\TPH1\10239702.64R
OPERATOR: AK
INSTRUMENT: 2843A19682
SAMPLE WT/VOL: 450
DILUTION: 1

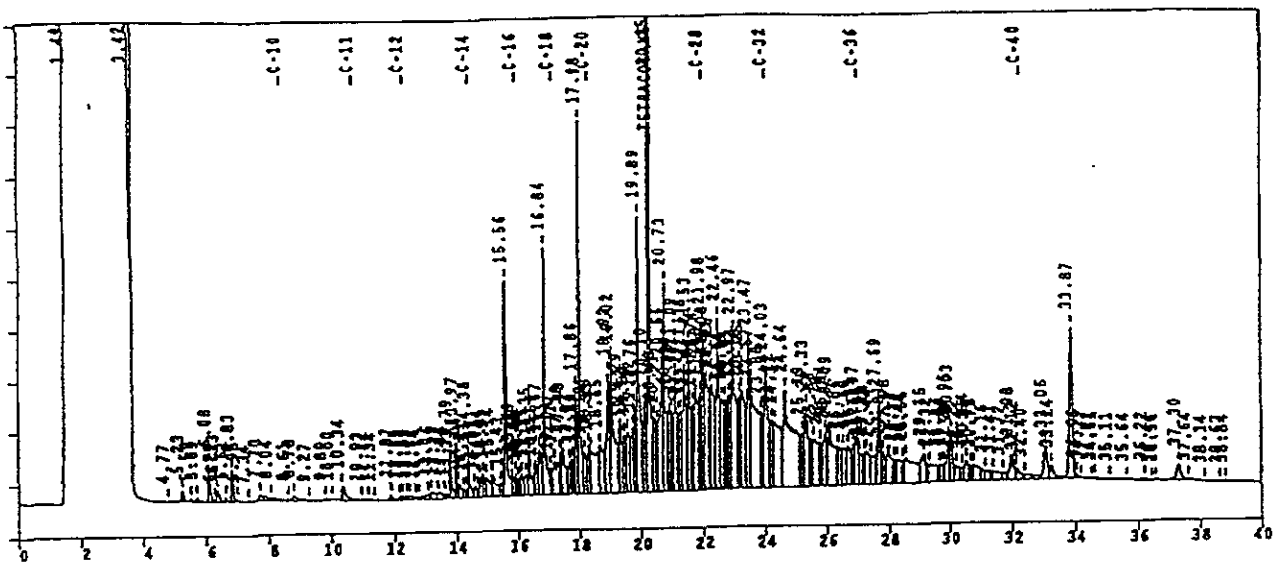
Peak #	Ret Time (min)	Peak Area	Peak Name	Concentration mg/l
17	8.193	935	C-10	0.0190
23	10.930	3184	C-11	0.0600
31	12.297	8610	C-12	0.1537
44	14.381	50527	C-14	0.9019
54	15.914	33062	C-16	0.6383
65	17.175	59866	C-18	1.3336
75	18.281	69982	C-20	2.2691
96	20.249	3232224	TETRACOSANE	63.2655
113	21.987	271278	C-28	9.8337
127	24.040	296231	C-32	10.7182
148	26.974	176373	C-36	6.4398
174	32.364	18203	C-40	7.1214

Recovery - TETRACOSANE : 77%

Compound	Start	End	Total Area	I&S Area	Adj Area	Amount/ng	Conc/ppm
WASH. DIESEL	12.30	20.30	7233517	2962591	4270926	140.11	0.31
DIESEL	8.36	21.00	9527128	2962591	6564537	178.82	0.40
AK102	8.36	21.00	9527128	2962591	6564537	178.82	0.40
8100	8.36	22.00	11946457	2962591	8983866	244.18	0.54
BUNKER-C (FO#6)	8.00	28.00	18634310	2962591	15671719	670.18	1.49
JET FUEL	4.00	18.00	2121021	0	2121021	62.06	0.14
KEROSINE	6.00	18.00	2103367	0	2103367	54.68	0.12
MOTOR OIL	14.00	31.00	19605882	2962591	16643291	300.13	0.67
AK103	21.00	27.00	8396951	0	8396951	245.14	0.54
STODDARD	4.50	16.00	904740	0	904740	27.49	0.06
MINERAL SPIRITS	4.50	14.50	445131	0	445131	18.33	0.04
GASOLINE	3.80	16.00	905043	0	905043	158.51	0.35

Reviewed by: _____ Date: 10/27/97

File=C:\DS\TPH1\10239702.65R Date printed=10-25-1997 Time= 15:30:10
Sample Name=SAW1-DJ24102-65-23400-02
0.0 to 40.0 min. Low Y=42.0 High Y=120.0 mv Span=78.0



********** SUPERIOR ANALYTICAL MARTINEZ LAB **********

SAMPLE ID: SAW1-DJ24102-65-23400-02
RUN DATE: OCT 25, 1997 14:46:18
SEQ FILE NAME: Q565223Bb#2208
METHOD: C:\DS\TPH1\TPH1.MET
CALIB.: C:\DS\TPH1\TPH1.CAL

DATA FILE: C:\DS\TPH1\10239702.65R
OPERATOR: AK
INSTRUMENT: 2843A19682
SAMPLE WT/VOL: 450
DILUTION: 1

Peak #	Ret Time (min)	Peak Area	Peak Name	Concentration mg/l
16	8.609	2605	C-10	0.0530
22	10.932	1393	C-11	0.0263
27	12.219	3091	C-12	0.0552
42	14.377	23969	C-14	0.4275
52	15.912	11131	C-16	0.2148
62	17.043	15864	C-18	0.3531
72	18.280	34164	C-20	1.1098
84	20.248	3199267	TETRACOSANE	62.6204
100	21.982	117203	C-28	4.2990
115	24.030	159181	C-32	5.8198
130	26.972	58994	C-36	2.1738
159	32.122	16393	C-40	6.4132

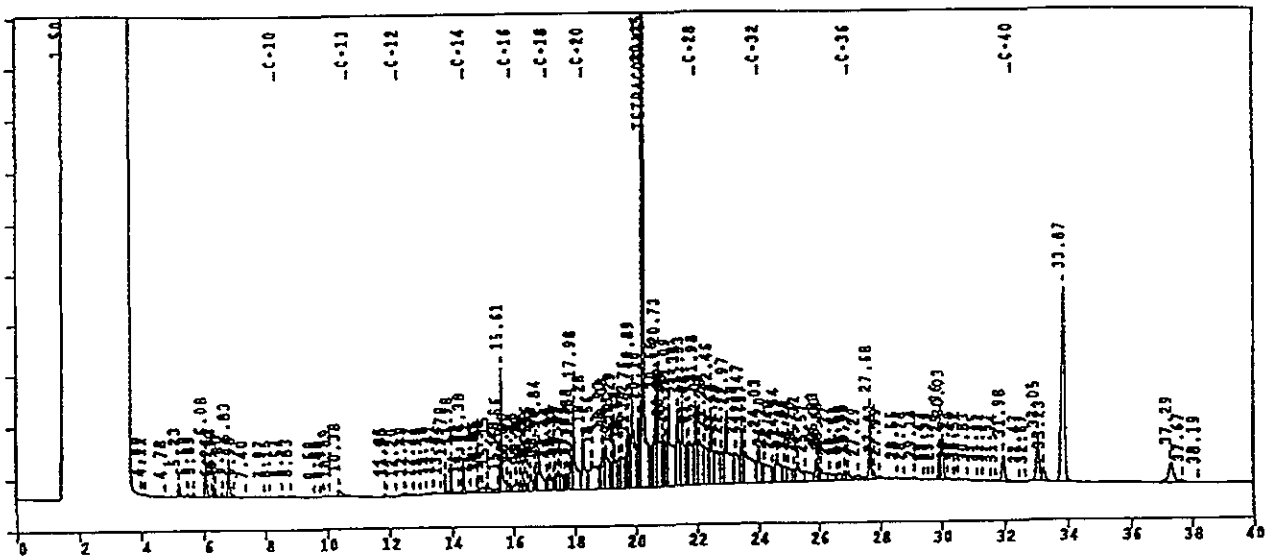
Recovery - TETRACOSANE : 81%

Compound	Start	End	Total Area	I&S Area	Adj Area	Amount/ng	Conc/ppm
WASH. DIESEL	12.30	20.30	5311863	3088847	2223016	72.93	0.16
DIESEL	8.36	21.00	5861261	3088847	2772414	75.52	0.17
AK102	8.36	21.00	5861261	3088847	2772414	75.52	0.17
8100	8.36	22.00	6691798	3088847	3602951	97.93	0.22
BUNKER-C (FO#6)	8.00	28.00	10011337	3088847	6922490	296.03	0.66
JET FUEL	4.00	18.00	1266066	0	1266066	37.05	0.08
KEROSINE	6.00	18.00	1252919	0	1252919	32.57	0.07
MOTOR OIL	14.00	31.00	10367912	3088847	7279065	131.27	0.29
AK103	21.00	27.00	3823899	0	3823899	111.63	0.25
STODDARD	4.50	16.00	558222	0	558222	16.96	0.04
MINERAL SPIRITS	4.50	14.50	269161	0	269161	11.09	0.02
GASOLINE	3.80	16.00	558222	0	558222	97.77	0.22

NO Below RL

Reviewed by: _____ Date: 10/27/97

File=C:\DS\TPH1\10239702.66R Date printed=10-25-1997 Time= 16:19:11
Sample Name=SAW1-DJ24102-66-23400-03
0.0 to 40.0 min. Low Y=42.0 High Y=120.0 mv Span=78.0



********** SUPERIOR ANALYTICAL MARTINEZ LAB **********

SAMPLE ID: SAW1-DJ24102-66-23400-03
RUN DATE: OCT 25, 1997 15:35:14
SEQ FILE NAME: Q5652DB2b#2209
METHOD: C:\DS\TPH1\TPH1.MET
CALIB.: C:\DS\TPH1\TPH1.CAL

DATA FILE: C:\DS\TPH1\10239702.66R
OPERATOR: AK
INSTRUMENT: 2843A19682
SAMPLE WT/VOL: 450
DILUTION: 1

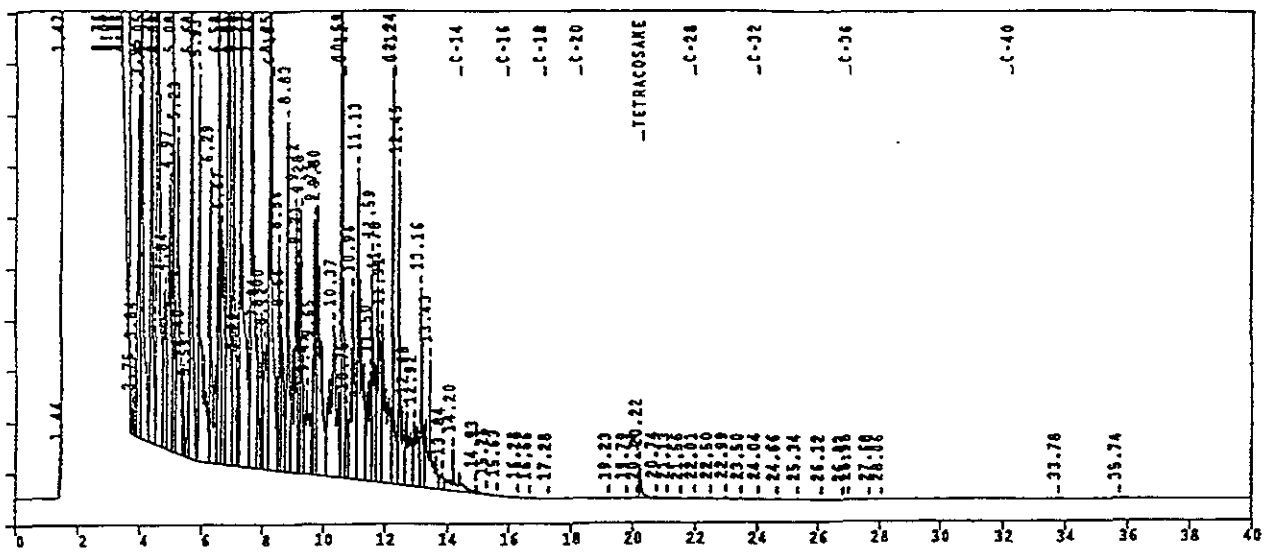
Peak #	Ret Time (min)	Peak Area	Peak Name	Concentration mg/l
18	8.540	1614	C-10	0.0329
27	12.205	592	C-12	0.0106
38	14.379	12409	C-14	0.2213
48	15.914	4601	C-16	0.0888
58	17.113	7342	C-18	0.1634
69	18.278	46275	C-20	1.5022
81	20.248	3332306	TETRACOSANE	65.2244
91	21.981	59965	C-28	2.2094
101	24.027	43550	C-32	1.6067
117	26.960	9430	C-36	0.3488
139	32.470	266	C-40	0.1041

Recovery - TETRACOSANE : 84%

Compound	Start	End	Total Area	I&S Area	Adj Area	Amount/ng	Conc/ppm
WASH. DIESEL	12.30	20.30	4215327	3221681	993646	32.60	0.07
DIESEL	8.36	21.00	4456459	3221681	1234778	33.64	0.07
AK102	8.36	21.00	4456459	3221681	1234778	33.64	0.07
8100	8.36	22.00	4870047	3221681	1648366	44.80	0.10
BUNKER-C (FO#6)	8.00	28.00	5837888	3221681	2616207	111.88	0.25
JET FUEL	4.00	18.00	552842	0	552842	16.18	0.04
KEROSINE	6.00	18.00	538022	0	538022	13.99	0.03
MOTOR OIL	14.00	31.00	5845390	3221681	2623709	47.31	0.11 — NO
AK103	21.00	27.00	1310672	0	1310672	38.26	0.09
STODDARD	4.50	16.00	247202	0	247202	7.51	0.02
MINERAL SPIRITS	4.50	14.50	145543	0	145543	5.99	0.01
GASOLINE	3.80	16.00	247935	0	247935	43.42	0.10

Reviewed by: _____ Date: 10/27/97

File=C:\DS\TPH1\10279702.15R Date printed=10-27-1997 Time= 22:29:32
Sample Name=SAW1-DJ24102-15-23400-04
0.0 to 40.0 min. Low Y=42.0 High Y=120.0 mv Span=78.0



********** SUPERIOR ANALYTICAL MARTINEZ LAB **********

SAMPLE ID: SAW1-DJ24102-15-23400-04 DATA FILE: C:\DS\TPH1\10279702.15R
RUN DATE: OCT 27, 1997 21:44:35 OPERATOR: AK
SEQ FILE NAME: Q5682744b#2231 INSTRUMENT: 2843A19682
METHOD: C:\DS\TPH1\TPH1.MET SAMPLE WT/VOL: 450
CALIB.: C:\DS\TPH1\TPH1.CAL DILUTION: 200

Peak #	Ret Time (min)	Peak Area	Peak Name	Concentration mg/l
34	8.245	637941	C-10	13.2547
47	10.749	43356	C-11	0.8178
54	12.240	164103	C-12	2.9427
61	14.197	62676	C-14	1.1191
67	17.276	960	C-18	0.0214
71	20.224	25201	TETRACOSANE	0.4933
75	22.008	2530	C-28	0.0936
79	24.044	2983	C-32	0.1104
84	26.984	719	C-36	0.0266
Recovery - TETRACOSANE		: 117%		

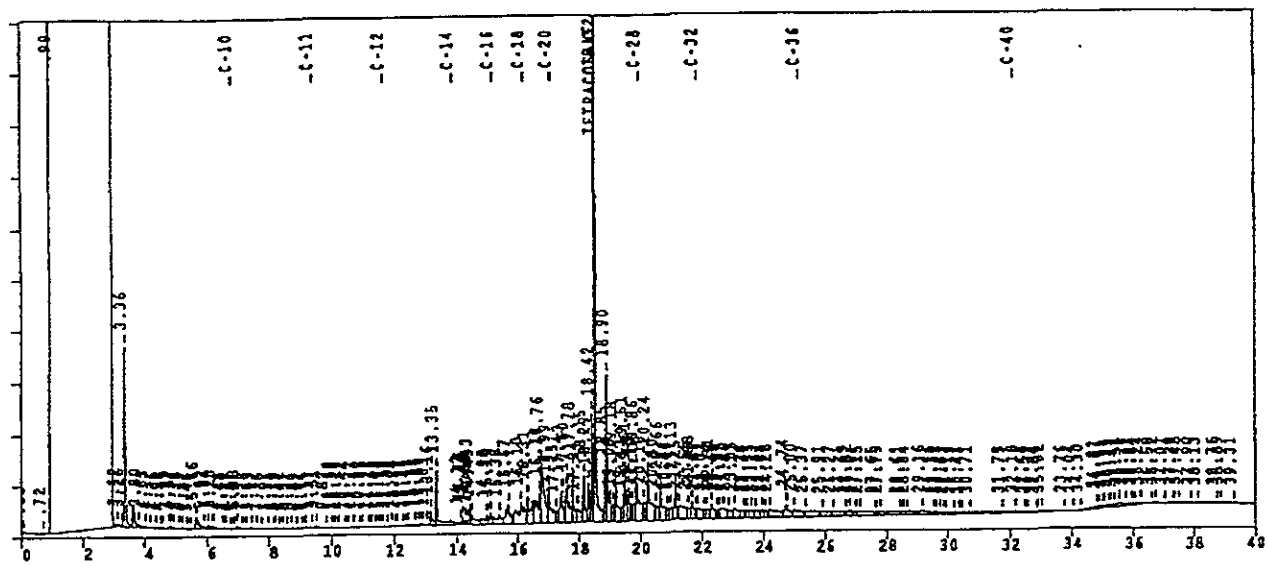
Compound	Start	End	Total Area	I&S Area	Adj Area	Amount/ng	Conc/ppm
WASH. DIESEL	12.30	20.30	762043	22392	739651	19.65	8.74
DIESEL	8.36	21.00	4695863	22392	4673471	101.51	45.11
AK102	8.36	21.00	4695863	22392	4673471	101.51	45.11
8100	8.36	22.00	4699700	22392	4677308	101.38	45.06
BUNKER-C (FO#6)	8.00	28.00	5507585	22392	5485193	234.57	104.25
JET FUEL	4.00	18.00	12142013	0	12142013	355.29	157.91
KEROSINE	6.00	18.00	8644699	0	8644699	224.74	99.88
MOTOR OIL	14.00	31.00	126300	22392	103908	1.87	0.83
AK103	21.00	27.00	24874	0	24874	0.73	0.32
STODDARD	4.50	16.00	11307927	0	11307927	343.55	152.69
MINERAL SPIRITS	4.50	14.50	11299881	0	11299881	465.40	206.85
GASOLINE	3.80	16.00	12403169	0	12403169	2172.26	965.45

Reviewed by: _____ Date: 10/28/97

File=C:\DS\TPH4\10279729.49R Date printed=10-29-1997 Time= 05:29:56

Sample Name=SAS1-DJ28129-49-23400-06

0.0 to 40.0 min. Low Y=7.982 High Y=87.982 mv Span=80.0



********** SUPERIOR ANALYTICAL MARTINEZ LAB **********

SAMPLE ID: SAS1-DJ28129-49-23400-06
RUN DATE: Oct 29, 1997 05:27:32
SEQ FILE NAME: 10279729.SEQ #4
METHOD: C:\DS\TPH4\TPH4.MET
CALIB.: C:\DS\TPH4\TPH4.CAL

DATA FILE: C:\DS\TPH4\10279729.49R
OPERATOR: AK
INSTRUMENT: 2921A24592--GC 29
SAMPLE WT/VOL: 15
DILUTION: 1

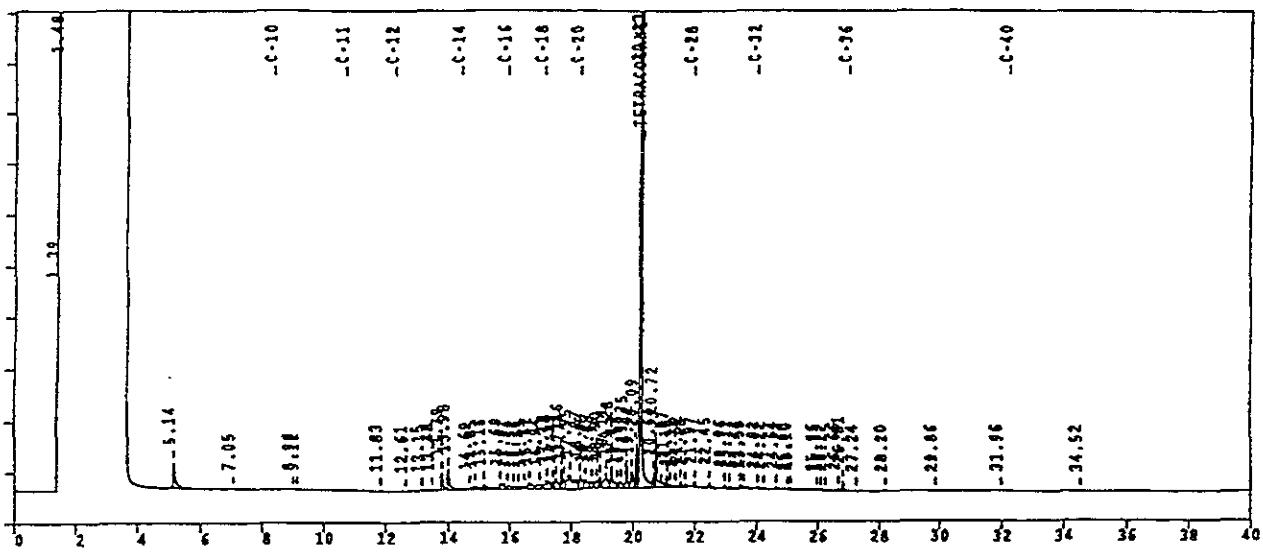
Peak #	Ret Time (min)	Peak Area	Peak Name	Concentration mg/l
27	6.768	172	C-10	0.0039
45	9.374	396	C-11	0.0081
63	11.617	584	C-12	0.0119
78	14.128	1753	C-14	0.0330
86	15.095	8198	C-16	0.1464
89	16.097	52068	C-18	0.9294
93	16.991	33815	C-20	0.6529
102	18.516	2885297	TETRACOSANE	63.5501
112	19.860	48217	C-28	1.7782
124	21.854	20741	C-32	0.7666
142	25.000	23464	C-36	0.8670
167	32.177	5789	C-40	0.9449

Recovery - TETRACOSANE = 84%

Compound	Start	End	Total Area	I&S Area	Adj Area	Amount/ng	Conc/ppm
WASH. DIESEL	11.69	18.67	3435744	2851318	584426	10.88	0.73
KEROSINE	6.00	18.00	537485	0	537485	9.71	0.65
MOTOR OIL	14.00	32.00	4365300	2851318	1513982	19.41	1.29
AK103	19.55	25.18	601814	0	601814	16.97	1.13
MINERAL SPIRITS	4.00	10.00	50028	0	50028	1.17	0.08
AK102	6.71	19.50	3599898	2851318	748580	11.33	0.76
8100	6.81	20.00	3719414	2851318	868096	13.13	0.88
DIESEL	6.81	19.50	3599726	2851318	748408	11.34	0.76
JET FUEL	4.00	17.50	477169	0	477169	8.17	0.54
BUNKER OIL (FO	9.00	24.00	4133109	2851318	1281791	66.79	4.45
STODDARD	3.00	14.00	192644	0	192644	3.32	0.22
GASOLINE	3.30	12.00	139339	0	139339	18.77	1.25
HYD. OIL	10.00	34.00	4440422	2851318	1589104	14.57	0.97

Reviewed by: PT Date: 10/29/97

File=C:\DS\TPH1\10289702.31R Date printed=10-29-1997 Time= 09:35:18
Sample Name=SAS1-DJ28129-31-23400-08
0.0 to 40.0 min. Low Y=42.0 High Y=120.0 mv Span=78.0



********** SUPERIOR ANALYTICAL MARTINEZ LAB **********

SAMPLE ID: SAS1-DJ28129-31-23400-08 DATA FILE: C:\DS\TPH1\10289702.31R
RUN DATE: OCT 29, 1997 09:53:17 OPERATOR: AK
SEQ FILE NAME: Q56A238Eb#2269 INSTRUMENT: 2843A19682
METHOD: C:\DS\TPH1\TPH1.MET SAMPLE WT/VOL: 15
CALIB.: C:\DS\TPH1\TPH1.CAL DILUTION: 1

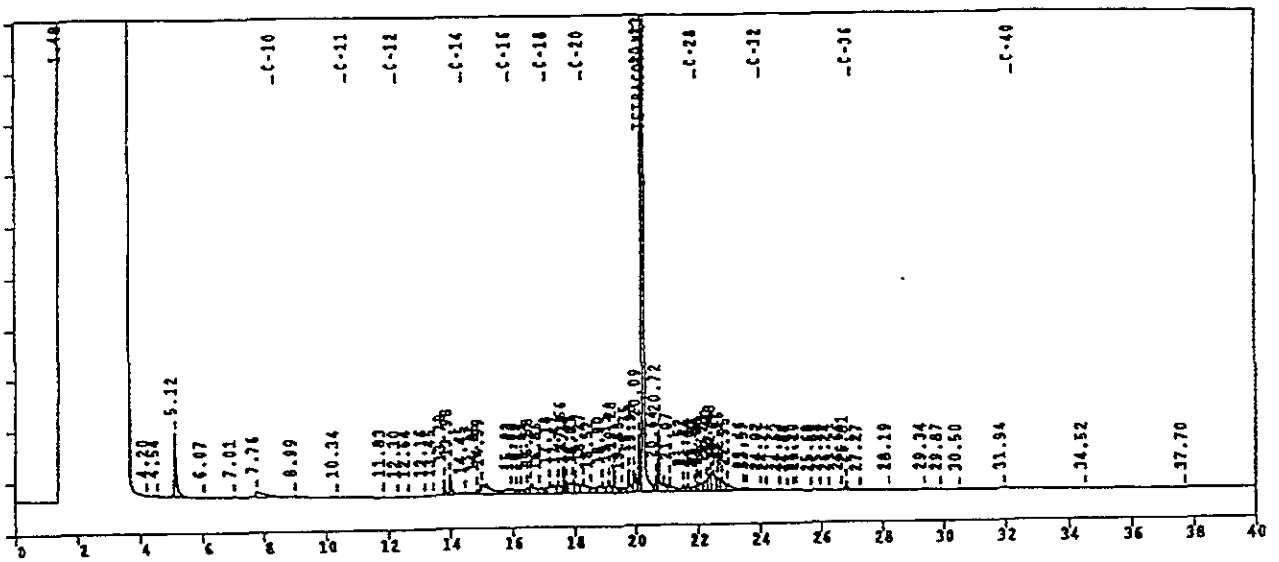
Peak #	Ret Time (min)	Peak Area	Peak Name	Concentration mg/l
17	15.910	4767	C-16	0.0920
23	17.180	12945	C-18	0.2881
29	18.273	12388	C-20	0.4028
41	20.229	3412619	TETRACOSANE	66.7964
49	21.970	2225	C-28	0.0823
55	24.019	1501	C-32	0.0556
64	26.807	4847	C-36	0.1794

Recovery - TETRACOSANE : 89%

Compound	Start	End	Total Area	I&S Area	Adj Area	Amount/ng	Conc/ppm
WASH. DIESEL	12.30	20.30	3677952	3397532	280420	7.45	0.50
DIESEL	8.36	21.00	3718023	3397532	320491	6.96	0.46
AK102	8.36	21.00	3718023	3397532	320491	6.96	0.46
8100	8.36	22.00	3731318	3397532	333786	7.23	0.48
BUNKER-C (FO#6)	8.00	28.00	3755670	3397532	358138	15.32	1.02
JET FUEL	4.00	18.00	181594	0	181594	5.31	0.35
KEROSINE	6.00	18.00	161055	0	161055	4.19	0.28
MOTOR OIL	14.00	31.00	3729435	3397532	331903	5.99	0.40
AK103	21.00	27.00	36884	0	36884	1.08	0.07
STODDARD	4.50	16.00	78169	0	78169	2.37	0.16
MINERAL SPIRITS	4.50	14.50	49519	0	49519	2.04	0.14
GASOLINE	3.80	16.00	78169	0	78169	13.69	0.91

Reviewed by: _____ Date: 10/29/97

File=C:\DS\TPH1\10289702.32R Date printed=10-29-1997 Time= 10:24:10
Sample Name=SAS1-DJ28129-32-23400-11
0.0 to 40.0 min. Low Y=42.0 High Y=120.0 mv Span=78.0



********** SUPERIOR ANALYTICAL MARTINEZ LAB **********

SAMPLE ID: SAS1-DJ28129-32-23400-11
RUN DATE: OCT 29, 1997 10:42:11
SEQ FILE NAME: Q56A2F04b#2270
METHOD: C:\DS\TPH1\TPH1.MET
CALIB.: C:\DS\TPH1\TPH1.CAL

DATA FILE: C:\DS\TPH1\10289702.32R
OPERATOR: AK
INSTRUMENT: 2843A19682
SAMPLE WT/VOL: 15
DILUTION: 1

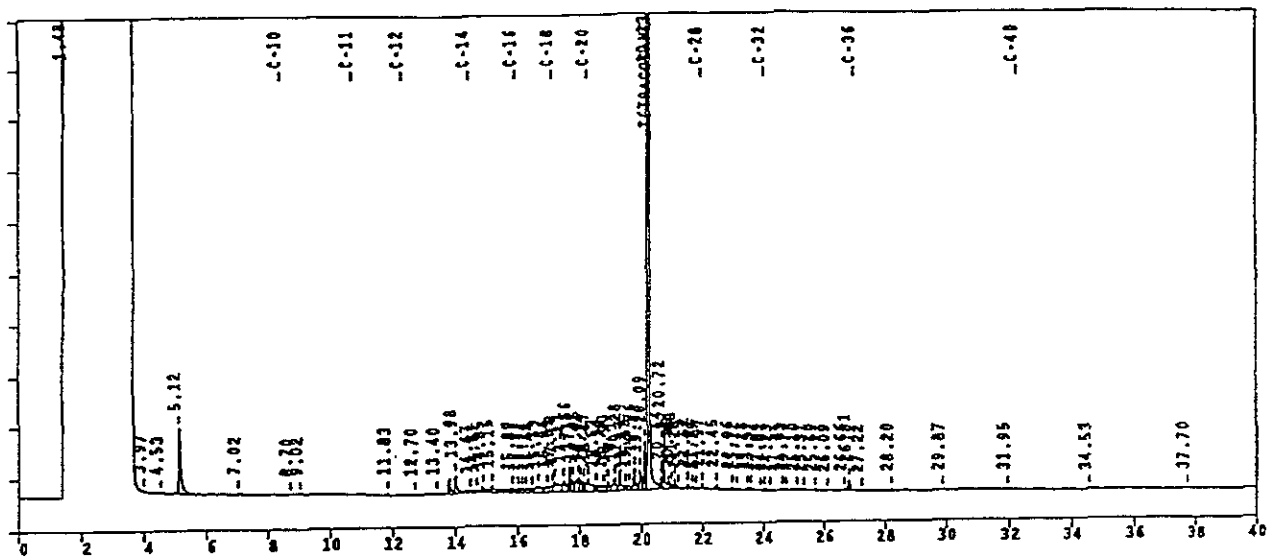
Peak #	Ret Time (min)	Peak Area	Peak Name	Concentration mg/l
11	12.299	639	C-12	0.0114
17	14.454	3645	C-14	0.0650
20	15.928	14604	C-16	0.2819
26	17.179	20990	C-18	0.4672
32	18.274	21781	C-20	0.7080
41	20.231	4094961	TETRACOSANE	80.1522
48	21.964	5928	C-28	0.2194
58	24.015	1227	C-32	0.0454
68	26.812	5512	C-36	0.2040

Recovery - TETRACOSANE : 106%

Compound	Start	End	Total Area	I&S Area	Adj Area	Amount/ng	Conc/ppm
WASH. DIESEL	12.30	20.30	4401859	4074011	327848	8.71	0.58
DIESEL	8.36	21.00	4463065	4074011	389054	8.45	0.56
AK102	8.36	21.00	4463065	4074011	389054	8.45	0.56
8100	8.36	22.00	4497280	4074011	423269	9.17	0.61
BUNKER-C (FO#6)	8.00	28.00	4622709	4074011	548698	23.46	1.56
JET FUEL	4.00	18.00	268664	0	268664	7.86	0.52
KEROSINE	6.00	18.00	226099	0	226099	5.88	0.39
MOTOR OIL	14.00	31.00	4591388	4074011	517377	9.33	0.62
AK103	21.00	27.00	157779	0	157779	4.61	0.31
STODDARD	4.50	16.00	156569	0	156569	4.76	0.32
MINERAL SPIRITS	4.50	14.50	107887	0	107887	4.44	0.30
GASOLINE	3.80	16.00	156958	0	156958	27.49	1.83

Reviewed by: PT Date: 10/29/97

File=C:\DS\TPH1\10289702.33R Date printed=10-29-1997 Time= 11:12:55
Sample Name=SAS1-DJ28129-33-23400-12
0.0 to 40.0 min. Low Y=42.0 High Y=120.0 mv Span=78.0



********** SUPERIOR ANALYTICAL MARTINEZ LAB **********

SAMPLE ID: SAS1-DJ28129-33-23400-12
RUN DATE: OCT 29, 1997 11:30:55
SEQ FILE NAME: Q56A3A70b#2271
METHOD: C:\DS\TPH1\TPH1.MET
CALIB.: C:\DS\TPH1\TPH1.CAL

DATA FILE: C:\DS\TPH1\10289702.33R
OPERATOR: AK
INSTRUMENT: 2843A19682
SAMPLE WT/VOL: 15
DILUTION: 1

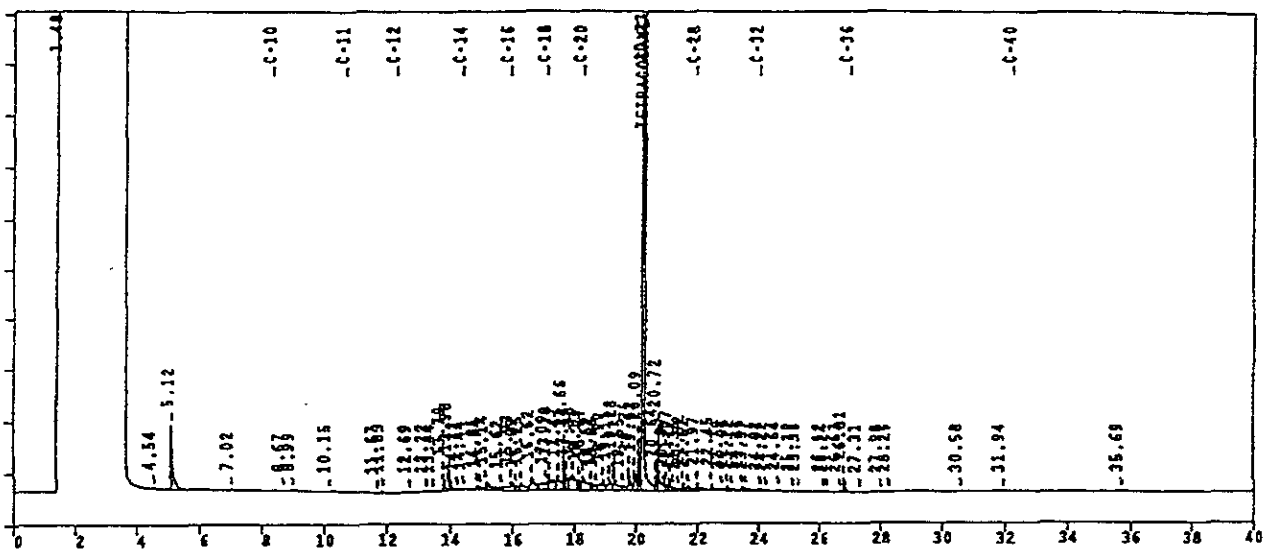
Peak #	Ret Time (min)	Peak Area	Peak Name	Concentration mg/l
12	14.473	3408	C-14	0.0608
17	15.995	4405	C-16	0.0850
23	17.094	5438	C-18	0.1210
31	18.274	20648	C-20	0.6712
42	20.233	3597981	TETRACOSANE	70.4246
51	21.974	1822	C-28	0.0674
58	24.020	1501	C-32	0.0555
67	26.811	5991	C-36	0.2217

Recovery - TETRACOSANE 93%

Compound	Start	End	Total Area	I&S Area	Adj Area	Amount/ng	Conc/ppm
WASH. DIESEL	12.30	20.30	3887682	3582080	305602	8.12	0.54
DIESEL	8.36	21.00	3929824	3582080	347744	7.55	0.50
AK102	8.36	21.00	3929824	3582080	347744	7.55	0.50
8100	8.36	22.00	3942593	3582080	360513	7.81	0.52
BUNKER-C (FO#6)	8.00	28.00	3969507	3582080	387427	16.57	1.10
JET FUEL	4.00	18.00	219006	0	219006	6.41	0.43
KEROSINE	6.00	18.00	176319	0	176319	4.58	0.31
MOTOR OIL	14.00	31.00	3936208	3582080	354128	6.39	0.43
AK103	21.00	27.00	38336	0	38336	1.12	0.07
STODDARD	4.50	16.00	115736	0	115736	3.52	0.23
MINERAL SPIRITS	4.50	14.50	82892	0	82892	3.41	0.23
GASOLINE	3.80	16.00	116498	0	116498	20.40	1.36

Reviewed by: _____ Date: 10/29/97

File=C:\DS\TPH1\10289702.34R Date printed=10-29-1997 Time= 12:01:42
Sample Name=SAS1-DJ28129-34-23400-15
0.0 to 40.0 min. Low Y=42.0 High Y=120.0 mv Span=78.0



********** SUPERIOR ANALYTICAL MARTINEZ LAB **********

SAMPLE ID: SAS1-DJ28129-34-23400-15 DATA FILE: C:\DS\TPH1\10289702.34R
RUN DATE: OCT 29, 1997 12:19:39 OPERATOR: AK
SEQ FILE NAME: Q56A45DCb#2272 INSTRUMENT: 2843A19682
METHOD: C:\DS\TPH1\TPH1.MET SAMPLE WT/VOL: 15
CALIB.: C:\DS\TPH1\TPH1.CAL DILUTION: 1

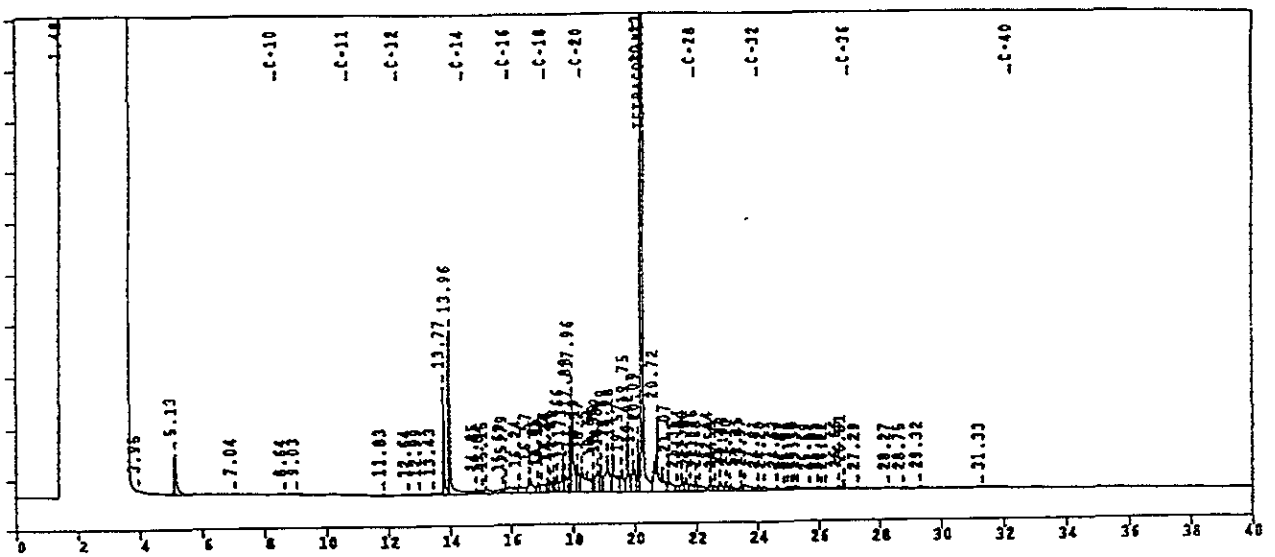
Peak #	Ret Time (min)	Peak Area	Peak Name	Concentration mg/l
16	14.442	1381	C-14	0.0246
21	15.927	14265	C-16	0.2753
25	17.092	17051	C-18	0.3795
32	18.274	21511	C-20	0.6992
42	20.231	3790647	TETRACOSANE	74.1957
51	21.971	11758	C-28	0.4349
58	24.021	2562	C-32	0.0948
66	26.812	7191	C-36	0.2661

Recovery - TETRACOSANE : 98%

Compound	Start	End	Total Area	I&S Area	Adj Area	Amount/ng	Conc/ppm
WASH. DIESEL	12.30	20.30	4101815	3770323	331492	8.81	0.59
DIESEL	8.36	21.00	4153298	3770323	382975	8.32	0.55
AK102	8.36	21.00	4153298	3770323	382975	8.32	0.55
8100	8.36	22.00	4188283	3770323	417960	9.06	0.60
BUNKER-C (FO#6)	8.00	28.00	4239874	3770323	469551	20.08	1.34
JET FUEL	4.00	18.00	248755	0	248755	7.28	0.49
KEROSINE	6.00	18.00	206799	0	206799	5.38	0.36
MOTOR OIL	14.00	31.00	4214672	3770323	444349	8.01	0.53
AK103	21.00	27.00	85826	0	85826	2.51	0.17
STODDARD	4.50	16.00	107682	0	107682	3.27	0.22
MINERAL SPIRITS	4.50	14.50	72306	0	72306	2.98	0.20
GASOLINE	3.80	16.00	107682	0	107682	18.86	1.26

Reviewed by: _____ Date: 10/29/97

File=C:\DS\TPH1\10289702.35R Date printed=10-29-1997 Time= 12:50:28
Sample Name=SAS1-DJ28129-35-23400-16
0.0 to 40.0 min. Low Y=42.0 High Y=120.0 mv Span=78.0



********** SUPERIOR ANALYTICAL MARTINEZ LAB **********

SAMPLE ID: SAS1-DJ28129-35-23400-16
RUN DATE: OCT 29, 1997 13:08:22
SEQ FILE NAME: Q56A5146b#2273
METHOD: C:\DS\TPH1\TPH1.MET
CALIB.: C:\DS\TPH1\TPH1.CAL

DATA FILE: C:\DS\TPH1\10289702.35R
OPERATOR: AK
INSTRUMENT: 2843A19682
SAMPLE WT/VOL: 15
DILUTION: 1

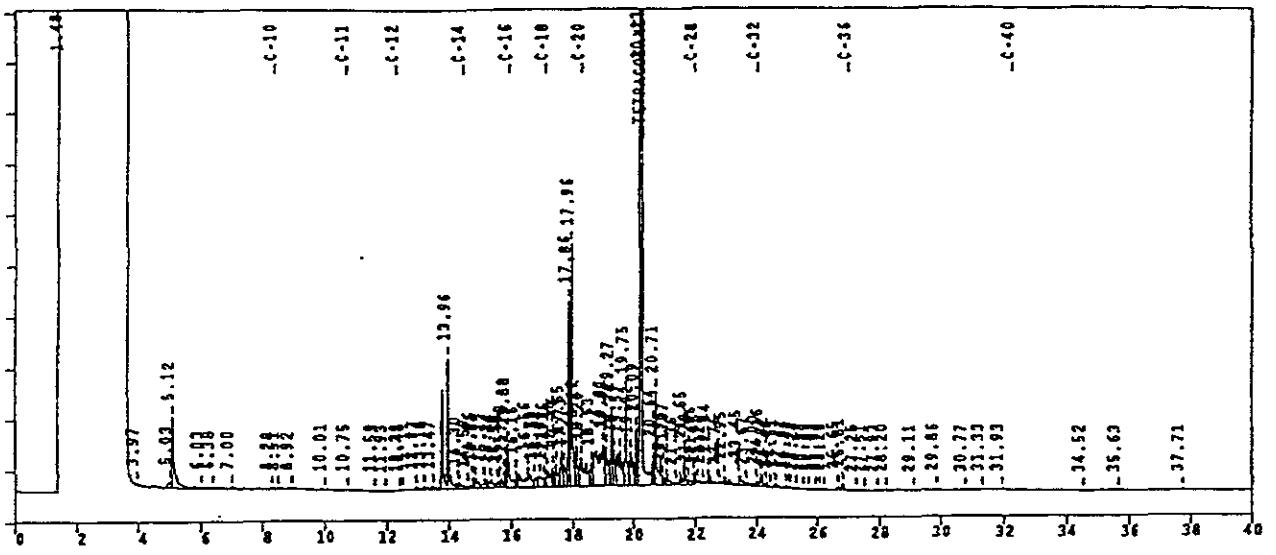
Peak #	Ret Time (min)	Peak Area	Peak Name	Concentration mg/l
17	15.790	21568	C-16	0.4163
22	17.174	8651	C-18	0.1925
31	18.267	54954	C-20	1.7832
41	20.233	3749358	TETRACOSANE	73.3876
48	21.965	8293	C-28	0.3068
57	24.009	4862	C-32	0.1799
70	26.813	4653	C-36	0.1722

Recovery - TETRACOSANE 97%

Compound	Start	End	Total Area	I&S Area	Adj Area	Amount/ng	Conc/ppm
WASH. DIESEL	12.30	20.30	4457162	3711599	745563	19.81	1.32
DIESEL	8.36	21.00	4539643	3711599	828044	17.99	1.20
AK102	8.36	21.00	4539643	3711599	828044	17.99	1.20
8100	8.36	22.00	4607872	3711599	896273	19.43	1.30
BUNKER-C (FO#6)	8.00	28.00	4721910	3711599	1010311	43.20	2.88
JET FUEL	4.00	18.00	444958	0	444958	13.02	0.87
KEROSINE	6.00	18.00	415810	0	415810	10.81	0.72
MOTOR OIL	14.00	31.00	4599184	3711599	887585	16.01	1.07
AK103	21.00	27.00	179385	0	179385	5.24	0.35
STODDARD	4.50	16.00	212275	0	212275	6.45	0.43
MINERAL SPIRITS	4.50	14.50	162578	0	162578	6.70	0.45
GASOLINE	3.80	16.00	213415	0	213415	37.38	2.49

Reviewed by: PT Date: 10/29/97

File=C:\DS\TPH1\10289702.37R Date printed=10-29-1997 Time= 14:28:15
Sample Name=SAS1-DJ28129-37-23400-20
0.0 to 40.0 min. Low Y=42.0 High Y=120.0 mv Span=78.0



********** SUPERIOR ANALYTICAL MARTINEZ LAB **********

SAMPLE ID: SAS1-DJ28129-37-23400-20 DATA FILE: C:\DS\TPH1\10289702.37R
RUN DATE: OCT 29, 1997 14:46:05 OPERATOR: AK
SEQ FILE NAME: Q56A682Eb#2275 INSTRUMENT: 2843A19682
METHOD: C:\DS\TPH1\TPH1.MET SAMPLE WT/VOL: 15
CALIB.: C:\DS\TPH1\TPH1.CAL DILUTION: 1

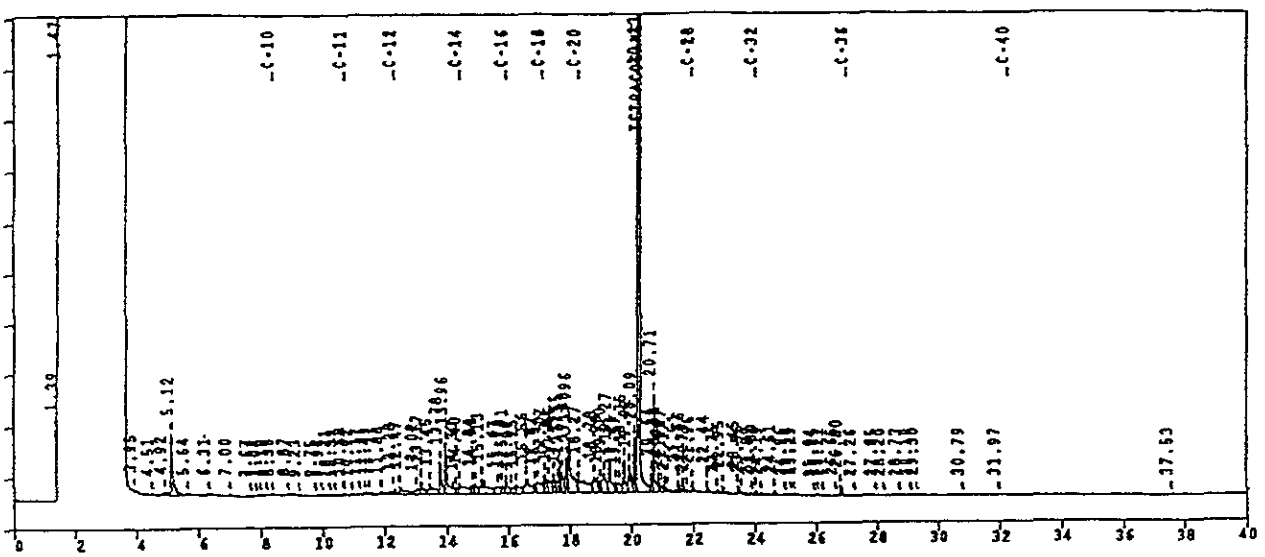
Peak #	Ret Time (min)	Peak Area	Peak Name	Concentration mg/l
8	8.281	1671	C-10	0.0340
12	10.752	583	C-11	0.0110
15	12.395	683	C-12	0.0122
21	14.298	9331	C-14	0.1664
30	15.877	31493	C-16	0.6080
35	17.092	5434	C-18	0.1209
44	18.264	51842	C-20	1.6825
54	20.231	3731819	TETRACOSANE	73.0443
62	21.959	5514	C-28	0.2041
70	24.002	3446	C-32	0.1275
84	26.806	3435	C-36	0.1271

Recovery - TETRACOSANE : 96%

Compound	Start	End	Total Area	I&S Area	Adj Area	Amount/ng	Conc/ppm
WASH. DIESEL	12.30	20.30	4690445	3687225	1003220	26.66	1.78
DIESEL	8.36	21.00	4776354	3687225	1089129	23.66	1.58
AK102	8.36	21.00	4776354	3687225	1089129	23.66	1.58
8100	8.36	22.00	4817045	3687225	1129820	24.49	1.63
BUNKER-C (FO#6)	8.00	28.00	4889494	3687225	1202269	51.41	3.43
JET FUEL	4.00	18.00	603715	0	603715	17.67	1.18
KEROSINE	6.00	18.00	549059	0	549059	14.27	0.95
MOTOR OIL	14.00	31.00	4781464	3687225	1094239	19.73	1.32
AK103	21.00	27.00	107930	0	107930	3.15	0.21
STODDARD	4.50	16.00	270923	0	270923	8.23	0.55
MINERAL SPIRITS	4.50	14.50	181518	0	181518	7.48	0.50
GASOLINE	3.80	16.00	271849	0	271849	47.61	3.17

Reviewed by: PT Date: 10/28/97

File=C:\DS\TPH1\10289702.38R Date printed=10-29-1997 Time= 15:17:06
Sample Name=SAS1-DJ28129-38-23400-21
0.0 to 40.0 min. Low Y=42.0 High Y=120.0 mv Span=78.0



********** SUPERIOR ANALYTICAL MARTINEZ LAB **********

SAMPLE ID: SAS1-DJ28129-38-23400-21 DATA FILE: C:\DS\TPH1\10289702.38R
RUN DATE: OCT 29, 1997 15:34:58 OPERATOR: AK
SEQ FILE NAME: Q56A73A3b#2276 INSTRUMENT: 2843A19682
METHOD: C:\DS\TPH1\TPH1.MET SAMPLE WT/VOL: 15
CALIB.: C:\DS\TPH1\TPH1.CAL DILUTION: 1

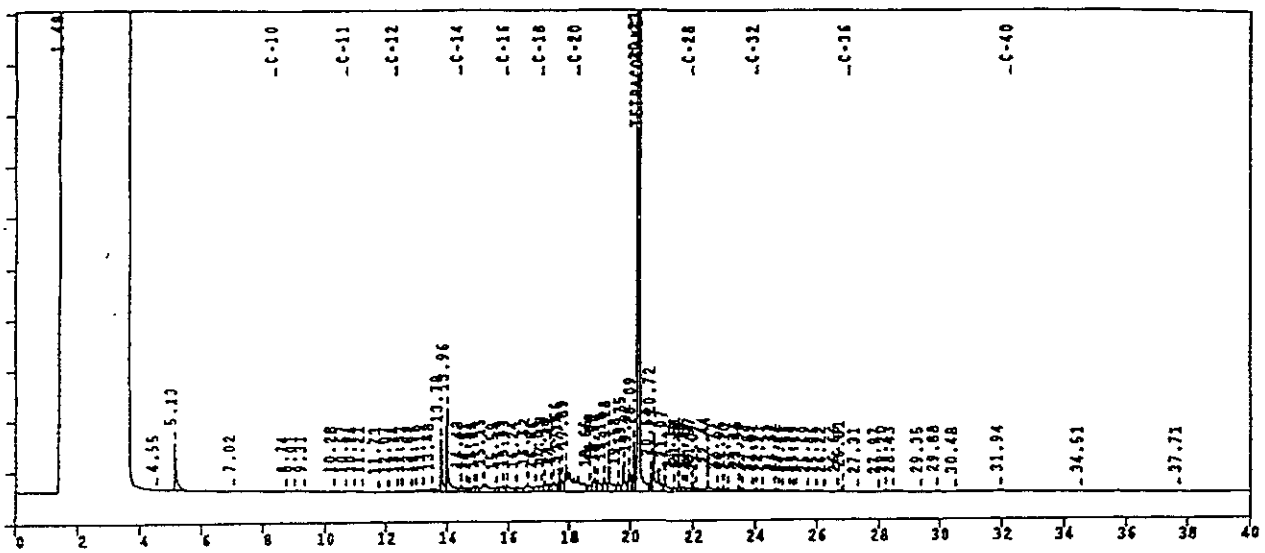
Peak #	Ret Time (min)	Peak Area	Peak Name	Concentration mg/l
14	8.358	392	C-10	0.0080
21	10.677	2431	C-11	0.0458
27	12.277	7032	C-12	0.1255
35	14.397	23503	C-14	0.4192
41	15.909	13026	C-16	0.2514
47	17.171	14613	C-18	0.3252
55	18.267	44425	C-20	1.4423
65	20.229	3826575	TETRACOSANE	74.8989
75	21.960	3076	C-28	0.1138
82	24.003	2849	C-32	0.1054
92	26.800	5225	C-36	0.1934

Recovery - TETRACOSANE : 99%

Compound	Start	End	Total Area	I&S Area	Adj Area	Amount/ng	Conc/ppm
WASH. DIESEL	12.30	20.30	4455705	3800385	655320	17.41	1.16
DIESEL	8.36	21.00	4536590	3800385	736205	15.99	1.07
AK102	8.36	21.00	4536590	3800385	736205	15.99	1.07
8100	8.36	22.00	4563288	3800385	762903	16.54	1.10
BUNKER-C (FO#6)	8.00	28.00	4605130	3800385	804745	34.41	2.29
JET FUEL	4.00	18.00	525427	0	525427	15.37	1.02
KEROSINE	6.00	18.00	481631	0	481631	12.52	0.83
MOTOR OIL	14.00	31.00	4478689	3800385	678304	12.23	0.82
AK103	21.00	27.00	65971	0	65971	1.93	0.13
STODDARD	4.50	16.00	291310	0	291310	8.85	0.59
MINERAL SPIRITS	4.50	14.50	210129	0	210129	8.65	0.58
GASOLINE	3.80	16.00	292726	0	292726	51.27	3.42

Reviewed by: PT Date: 10/29/97

File=C:\DS\TPH1\10289702.36R Date printed=10-29-1997 Time= 13:39:49
Sample Name=SAS1-DJ28129-36-23400-19
0.0 to 40.0 min. Low Y=42.0 High Y=120.0 mv Span=78.0



********** SUPERIOR ANALYTICAL MARTINEZ LAB **********

SAMPLE ID: SAS1-DJ28129-36-23400-19 DATA FILE: C:\DS\TPH1\10289702.36R
RUN DATE: OCT 29, 1997 13:57:13 OPERATOR: AK
SEQ FILE NAME: Q56A5CBAb#2274 INSTRUMENT: 2843A19682
METHOD: C:\DS\TPH1\TPH1.MET SAMPLE WT/VOL: 15
CALIB.: C:\DS\TPH1\TPH1.CAL DILUTION: 1

Peak #	Ret Time (min)	Peak Area	Peak Name	Concentration mg/l
9	10.667	370	C-11	0.0070
14	12.342	1480	C-12	0.0264
22	14.426	6648	C-14	0.1185
30	15.928	12036	C-16	0.2323
34	17.092	7454	C-18	0.1659
50	20.231	3751922	TETRACOSANE	73.4377
58	21.966	5106	C-28	0.1890
67	24.009	3139	C-32	0.1162
79	26.813	3545	C-36	0.1312

Recovery - TETRACOSANE : 97%

Compound	Start	End	Total Area	I&S Area	Adj Area	Amount/ng	Conc/ppm
WASH. DIESEL	12.30	20.30	4194466	3725883	468583	12.45	0.83
DIESEL	8.36	21.00	4252301	3725883	526418	11.43	0.76
AK102	8.36	21.00	4252301	3725883	526418	11.43	0.76
8100	8.36	22.00	4295731	3725883	569848	12.35	0.82
BUNKER-C (FO#6)	8.00	28.00	4370788	3725883	644905	27.58	1.84
JET FUEL	4.00	18.00	368393	0	368393	10.78	0.72
KEROSINE	6.00	18.00	334932	0	334932	8.71	0.58
MOTOR OIL	14.00	31.00	4292759	3725883	566876	10.22	0.68
AK103	21.00	27.00	116586	0	116586	3.40	0.23
STODDARD	4.50	16.00	200265	0	200265	6.08	0.41
MINERAL SPIRITS	4.50	14.50	133438	0	133438	5.50	0.37
GASOLINE	3.80	16.00	200265	0	200265	35.07	2.34

Reviewed by: _____ Date: 10/29/97