TOSCO
Marketing
Company

2000 Crow Canyon Place
Suite 400
San Ramon, CA 94583
925.277.2305
fax: 925.277.2361

**Environmental
Compliance
Department**

November 24, 1999

Mr. Scott O. Seery, CHMM
Alameda County Environmental Health Services
1131 Harbor Bay Parkway
Alameda, CA 94502-6577

Re: Subsurface Investigation Report
Tosco/76 Products Service Station #3292
15008 East 14th Street
San Leandro, CA

Dear Mr. Seery:

Please find attached a copy of a report entitled *Additional Subsurface Investigation for Tosco 76 Branded Facility, San Leandro.* This report summarizes the results of a Geoprobe® investigation conducted at the site on May 7, 1998 as approved by Alameda County Health Care Services (ACHCSA) in their January 16, 1997 letter. This report is part of an agreed upon plan of action (1996) to include a Risk Based Corrective Action study to be conducted by several potential responsible parties in the vicinity of the site. To the best of our knowledge, no additional meetings were held and it is our understanding that Chevron has pursued its own course of action and obtained closure for its site.

Based upon the physical and chemical results obtained in this report, Tosco, through Gettler-Ryan, will perform its own RBCA study for this site. Tosco believes this study can be completed by the first quarter of 2000. Please let me know if this is acceptable to you.

Inspection of the groundwater monitoring data appears to show the hydrocarbon plume to be stable or decreasing in concentration. **We therefore are requesting the site be placed on a semi-annual monitoring schedule.**

On November 15, 1999, the ACHCSA issued Tosco Marketing Company a *Notice of Violation* for failing to provide the results of the approved Geoprobe® investigation in a timely manner. I believe this report fulfills your initial request. Tosco apologizes that the report was not submitted earlier.

Please call me at 925-277-2384 with questions or comments.

Sincerely,

David B. De Witt
Environmental Project Manager

Cc: Doug Lee, Gettler-Ryan

GETTLER-RYAN INC.

ADDITIONAL SUBSURFACE INVESTIGATION REPORT

for

Tosco 76 Branded Facility No. 3292
15008 East 14th Street
San Leandro, California

Report No. 140071.02-1

Prepared for:

Mr. David B. De Witt
Tosco Marketing Company
2000 Crow Canyon Place, Suite 400
San Ramon, California 94583

Prepared by:

Gettler-Ryan Inc.
6747 Sierra Court, Suite J
Dublin, California 94568

Barbara Sieminski
Project Geologist
R.G. 6676

Douglas J. Lee
Project Manager
R.G. 6882

REGISTERED GEOLOGIST
DOUGLAS J. LEE
No. 6882
STATE OF CALIFORNIA

November 24, 1999

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GETTLER-RYAN INC.

ADDITIONAL SUBSURFACE INVESTIGATION REPORT

for

Tosco 76 Branded Facility No. 3292
15008 East 14th Street
San Leandro, California

Report No. 140071.02-1

1.0 INTRODUCTION

This report summarizes the results of an additional subsurface investigation performed at Tosco 76 Branded Facility No. 3292, located at 15008 East 14th Street in San Leandro, California. The work was performed at the request of Tosco Marketing Company (Tosco) to further evaluate soil and groundwater conditions at the subject site. The scope of work included: obtaining required encroachment and drilling permits; advancing four soil borings using a GeoProbe® rig; collecting soil and grab groundwater samples from the borings for chemical and physical analysis; and preparing a report documenting the work. This work was originally proposed in Kaprealian Engineeering, Inc. (KEI) work plan dated November 5, 1996, approved by the Alameda County Health Care Services Agency (ACHCSA) in their letter to Tosco dated January 16, 1997.

2.0 SITE DESCRIPTION

2.1 General

The site is an active service station located on the eastern corner of the intersection of East 14th Street and 150th Avenue in San Leandro, California (Figure 1). Northern and western corners of this intersection formerly were occupied by a Mobil station and a Phillips station, respectively. A Chevron station is located approximately 200 feet southwest of the subject Tosco site. The current Tosco station facilities consist of a station building, four dispenser islands, two fuel underground storage tanks (USTs) that share a common pit in the western corner of the site, and one waste oil tank located near the northeastern side of the station building. Eleven groundwater monitoring wells have been installed to date at the site and in its vicinity to monitor groundwater condition beneath the site. Locations of pertinent site features are shown on Figure 2.

2.2 Geology and Hydrogeology

The subject site is located on the East Bay Plain, approximately 3 miles east of San Francisco Bay and ¾ mile west of San Leandro Hills. The site is a relatively flat, concrete and asphalt covered lot at an elevation of approximately 35 feet above mean sea level. As mapped by Helley and others (1979), soil in the site vicinity consists of late Pleistocene alluvium consisting of weekly consolidated, slightly weathered, poorly sorted, irregularly interbedded clay, silt, sand and gravel. The nearest surface water is San Lorenzo Creek located approximately 1½ mile south of the site.

Previous subsurface investigations indicate that the site is underlain predominantly by silts and clays with minor interbeds of silty and clayey sands to the total depth explored of approximately 21.5 feet below ground surface (bgs) (KEI, 1991 and 1992). Historical groundwater monitoring data from the existing wells, indicate that groundwater flow beneath the site is toward the south to southwest (MPDS, 1997).

2.3 Previous Environmental Investigations

In January 1991, two 10,000-gallon steel gasoline USTs and one 280-gallon steel waste oil USTs were removed from the site under supervision of Kaprealian Engineering Inc.(KEI). The former gasoline USTs were located in the western corner of the site. The former waste oil UST was located east of the station building. One of the gasoline USTs had two ½-inch diameter holes. KEI collected four soil samples from beneath the gasoline USTs at depths of approximately 15 to 16 feet below ground surface (bgs) and one soil sample from beneath the waste oil UST at a depth of approximately 8.25 feet bgs. Upon collection of soil samples the former gasoline UST pit was overexcavated to 17.5 feet bgs to remove hydrocarbon impacted soil. Groundwater was encountered in the gasoline UST pit at the depth of approximately 16.5 feet bgs. Approximately 15,700 gallons of water were pumped from the former gasoline UST pit, and then one groundwater sample was collected for laboratory analyses.

The soil and groundwater samples collected during UST removal activities were analyzed for total petroleum hydrocarbons as gasoline (TPHg) and benzene, toluene, ethylbenzene and xylenes (BTEX). In addition, the soil sample collected from beneath the former waste oil UST was analyzed for total petroleum hydrocarbons as diesel (TPHd), total oil and grease (TOG), volatile organic compounds (VOCs) and the metals cadmium, chromium, lead, nickel and zinc. The soil samples collected from beneath the former gasoline USTs contained TPHg at concentrations ranging from 150 parts per million (ppm) to 2,600 ppm and benzene at concentrations ranging from 1.3 ppm to 7.1 ppm. The soil sample collected from beneath the former waste oil UST did not contain TPHg, TPHd, benzene, VOCs, or metals except 31 ppm of zinc. The groundwater sample collected from the former gasoline UST excavation contained 13,000 parts per billion (ppb) TPHg and 64 ppb benzene.

In February 1991, KEI collected nine soil samples from beneath the former product lines. The samples were collected at depths ranging from 3.5 feet bgs to 7.5 feet bgs. TPHg were detected in three of these samples at the concentrations ranging from 1.2 ppm to 130 ppm. Benzene was detected in four of the nine samples collected from the former product line trenches at the concentrations ranging from 0.0072 ppm to 0.89 ppm. The highest hydrocarbon concentrations were detected in the sample collected from the former product line trench adjacent to the northernmost service island.

In April 1991, KEI installed five on-site groundwater monitoring wells (MW-1 through MW-5) at the site. In May and August 1992, KEI installed six off-site groundwater monitoring wells (MW-6 through MW-11). Groundwater was encountered in the wells at depths ranging from 11.0 to 13.5 feet bgs. The soil samples collected at depths between 9 and 14.5 feet bgs from well borings MW-1, MW-2, MW-3, MW-5, MW-7, MW-8, MW-10 and MW-11 contained TPHg at concentrations up to 620 ppm. Benzene was detected in these soil samples (except samples collected from well boring MW-11) at concentrations up

to 6.8 ppm. The highest hydrocarbon concentrations were detected in the soil samples collected from on-site well borings MW-1 and MW-2 located in the immediate vicinity of the former gasoline USTs, and from off-site well boring MW-7 located upgradient (northwest) of the subject site, but directly downgradient of the former Mobil site. Based on their environmental investigations KEI concluded that significant contamination from the off-site source(s) may be impacting the vicinity of the subject Unocal site both upgradient and downgradient of the Unocal facility.

The site wells have been monitored and sampled on a quarterly basis since May 1991. The maximum hydrocarbon concentrations in the wells ranged from 2,400 parts per billion TPHg and 43 ppb benzene in upgradient off-site well MW-6 to 69,000 ppb TPHg and 1,600 ppb benzene in on-site well MW-5. The highest MTBE concentrations were detected in wells MW-11 (6,400 ppb), MW-1 (5,200 ppb) and MW-5 (2,300 ppb). Hydrocarbon concentrations in the site wells decreased significantly since 1991. During the November 1997 sampling event TPHg concentrations were not detected in the groundwater samples collected from wells MW-4 and MW-6 and ranged from 93 ppb to 4,500 ppb in the groundwater samples collected from wells MW-1 through MW-3 and MW-8 through MW-11. On-site well MW-5 and upgradient off-site well MW-7 contained 20,000 ppb TPHg during this event. During the November 1997 sampling event, benzene concentrations were not detected in the groundwater samples collected from wells MW-4 through MW-6 and ranged from 1.6 ppb to 67 ppb in the samples collected from other site wells. MTBE concentrations were not detected in the groundwater samples collected from wells MW-4, MW-6, MW-8, MW-9 and MW-11, and ranged from 6.2 ppb to 430 ppb in the groundwater samples collected from other site wells during this sampling event. The groundwater flow direction beneath the site has been consistently to the south to southwest.

In May 1995, GR abandoned the oil/water separator at the subject site. The oil/water separator was located in the middle service bay within the station building. One native soil sample was collected from beneath the oil/water separator at a depth of approximately 4.5 feet bgs. Laboratory analytical results for this sample indicated 10 ppm TPHd and 50 ppm TOG. TPHg, BTEX, volatile organic compounds and cadmium were not detected in this sample. Chromium (41 ppm), lead (8 ppm), nickel (46 ppm) and zinc (45 ppm) were present in this sample.

3.0 FIELD WORK

Field work was conducted in accordance with GR's Field Methods and Procedures (Appendix A) and the Site Safety Plan dated May 6, 1998. An encroachment permit (#0492-6SV-2051) was obtained from the California Department of Transportation and a soil boring permit (#98WR188) was obtained from the Alameda County Public Works Agency and Underground Service Alert was notified prior to drilling at the site. Copies of the permits are included in Appendix B.

3.1 Drilling Activities

On May 7, 1998, a GR geologist observed Fisch Environmental (C57 #683865) drilling two on-site (EB-1 and EB-2) and two off-site (EB-3 and EB-4) soil borings at the location shown on Figure 2. The borings

were drilled to 5 feet bgs using a hand auger, and then advanced to approximately 12 feet bgs using a GeoProbe® rig. Soil samples were collected from the borings continuously from 5 to 12 feet bgs. The GR geologist prepared logs of the borings and screened the soil samples in the field for the presence of volatile organic compounds. Screening data are presented on the boring logs (Appendix B).

Grab groundwater samples were collected from borings EB-1 through EB-4. Upon completion of sample collection the borings were backfilled with neat cement to approximately 5 feet bgs. Soil cuttings generated during hand-augering were placed in the upper five feet of each boring and compacted. Each boring was capped with concrete or asphalt at the surface level.

3.2 Laboratory Analysis

Soil and grab groundwater samples were analyzed for chemical parameters by Sequoia Analytical in Redwood City, California (ELAP #1210) and for physical parameters by PTS Laboratories, Inc. in Santa Fe Springs, CA. The soil and grab groundwater samples were analyzed for TPHg, benzene, toluene, ethylbenzene and xylenes (BTEX) and methyl tertiary-butyl ether (MTBE) by Environmental Protection Agency (EPA) Methods 8015Mod/8020. In addition, selected soil samples collected from borings EB-1 were analyzed for total organic content, bulk density and porosity. The samples collected from these borings were also analyzed for moisture content. Copies of the laboratory analytical reports and chain-of-custody records are included in Appendix C.

4.0 RESULTS

4.1 Subsurface Conditions

Soil encountered in borings EB-1 through EB-4 consisted predominantly of clay, silty clay and clayey sand to a total depth explored of 12 feet bgs. Gravel with sand was encountered in boring EB-1 immediately beneath ground surface and extended to a depth of approximately 3 feet bgs. A clayey sand layer was present in all borings at depths between approximately 5.0 to 10.5 feet bgs. Groundwater was encountered in the borings within the clayey sand layer at depths ranging from 6.15 to 8.50 feet bgs. Detailed descriptions of the subsurface materials encountered during drilling are presented on the boring logs in Appendix B.

4.2 Soil Analytical Results

8015/8020, only

TPHg, BTEX or MTBE were not detected in the soil samples collected just above groundwater from borings EB-1 through EB-4. The unsaturated samples collected from boring EB-1 contained 16.5% to 18.2% moisture. Total organic content for samples collected from boring EB-1 ranged from 350 mg/kg to 8400 mg/kg, porosity ranged from 34.1 % to 39.8%, bulk density ranged from 1.54 to 1.70 grams per cubic centimeter (gm/cc) and grain density ranged from 2.56 to 2.58 gm/cc. Soil chemical analytical data are summarized in Table 1.

4.3 Groundwater Analytical Results

TPHg were detected in the grab groundwater samples collected from borings EB-1 through EB-4 at the concentrations ranging from 140 ppb to 11,000 ppb. The highest TPHg concentration was detected in the grab groundwater sample collected from on-site boring EB-2. Benzene was detected in the grab groundwater samples collected from boring EB-1 (1.0 ppb) and EB-4 (23 ppb). Benzene was not detected in the grab groundwater samples collected from borings EB-2 and EB-3, however, the method detection limit was increased to 10 ppb for the sample collected from boring EB-2. MTBE was detected in the grab groundwater samples collected from borings EB-1 through EB-4 at the concentrations ranging from 3.4 ppb to 300 ppb. Groundwater analytical data are summarized in Table 1.

5.0 CONCLUSIONS AND RECOMMENDATIONS

Based on analytical results from soil samples collected and analyzed during this investigation, it appears that soil in the vicinity of borings EB-1 through EB-4 has not been impacted by petroleum hydrocarbons. Shallow groundwater in the vicinity of borings EB-1 through EB-4 has been impacted by petroleum hydrocarbons.

In August 1996, a meeting was conducted between the ACHCSA and representatives for various responsible parties in the vicinity of East 14th Street, 150th Avenue and Hesperian Blvd (Tosco, Chevron, Mobil and Quality Tune-up)(Figure 2). In this meeting, the ACHCSA proposed a Risk-Based Corrective Action (RBCA) analysis be conducted for the vicinity. The process in which the RBCA analysis would be completed, whether individually or collectively amongst the responsible parties, would be determined and subsequently proposed to the ACHCSA. To our knowledge, no further progress was made with concern to a joint RBCA. In addition, the investigation at the Chevron site, located at 15002 Hesperian Boulevard, was closed on May 9, 1999.

The primary purpose of advancing on-site borings EB-1 and EB-2 was the collection of soil samples for physical testing and use of the resulting data in a joint RBCA analysis . Since the August 1996 meeting, the Chevron site has received case closure, and the efforts of other responsible parties to complete a joint RBCA have not come to fruition. Therefore, GR is proposing to perform a RBCA evaluation for the Tosco site.

Groundwater samples have been collected quarterly at the subject site since May 1991 (35 quarters). The data collected to date show stable or decreasing trends in dissolved hydrocarbon concentrations for all wells. In addition, groundwater flow direction has consistently been toward the south at and in the vicinity of the site. Therefore, GR proposes the monitoring and sampling frequency of all wells be reduced from quarterly to semi-annual. Groundwater sample results from wells MW-3, MW-4 and MW-6 have consistently shown very low to non-detectable concentrations of dissolved hydrocarbons since 1996. Therefore, GR recommends these wells be sampled annually. The results of each semi-annual event will be evaluated and recommendations for continuation or alteration of the semi-annual monitoring and sampling program will be made as warranted.

6.0 REFERENCES

E. J. Helley and others, 1979, Flatland Deposits of the San Francisco Bay Region, California: U.S. Geological Survey Professional Paper 943.

Gettler-Ryan Inc., May 6, 1998, Site Safety Plan for Unocal Service Station #3292, 15008 East 14th Street, San Leandro, California, Job No. 140071.02.

Kaprealian Engineering Inc., October 5, 1992, Continuing Groundwater Investigation and Quarterly Report for Unocal Service Station #3292, 15008 East 14th Street, San Leandro, California, Job No. KEI-P91-0102.R6.

Kaprealian Engineering Inc., November 5, 1996, Work Plan/Proposal for Unocal Service Station #3292, 15008 East 14th Street, San Leandro, California, Job No. KEI-P91-0102.P4.

MPDS Services, Inc., December 4, 1997, Quarterly Data Report for Unocal Service Station #3292, 15008 East 14th Street, San Leandro, California, Job No. MPDS-UN3292-017.

Table 1. Analytical Results - Tosco 76 Branded Facility No. 3292, 15008 East 14th Street, San Leandro, California.

Sample ID	Depth (feet)	Date	TPHg	B	T	E	X	MTBE	Moisture %	Organic Content %	Density Bulk gm/cc	Density Grain gm/cc	Porosity %
			<----------ppm---------->										
Soil Samples													
EB1-5	5.0	05/07/98	--	--	--	--	--	--	18.2	8,400 0.84	1.54	2.56	39.8
EB1-6.5	6.5	05/07/98	--	--	--	--	--	--	16.5	3,600 0.36	1.63	2.58	37.0
EB1-7.5	7.5	05/07/98	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.025	---	---	---	---	---
EB1-9.5	9.5	05/07/98	--	--	--	--	--	--	19.3	350 0.035	1.70	2.57	34.1
EB2-7.5	7.5	05/07/98	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.025	---	---	---	---	---
EB3-7.0	7.0	05/07/98	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.025	---	---	---	---	---
EB4-5.5	5.5	05/07/98	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.025	---	---	---	---	---
			<----------ppb---------->										
Grab Groundwater Samples													
EB-1	---	05/07/98	140	1.0	<0.50	<0.050	<0.050	3.4	---	---	---	---	---
EB-2	---	05/07/98	11,000	<10	<10	370	35	260	---	---	---	---	---
EB-3	---	05/07/98	570	<0.50	<0.50	13	3.2	7.9	---	---	---	---	---
EB-4	---	05/07/98	2,000	23	<2.5	4.0	<2.5	300	---	---	---	---	---

EXPLANATION:

TPHg = Total Petroleum Hydrocarbons as gasoline
MTBE = Methyl t-Butyl Ether
ppm = Parts per million
gm/cc = grams per cubic centimeter
--- = Not analyzed/not applicable

ANALYTICAL METHODS:

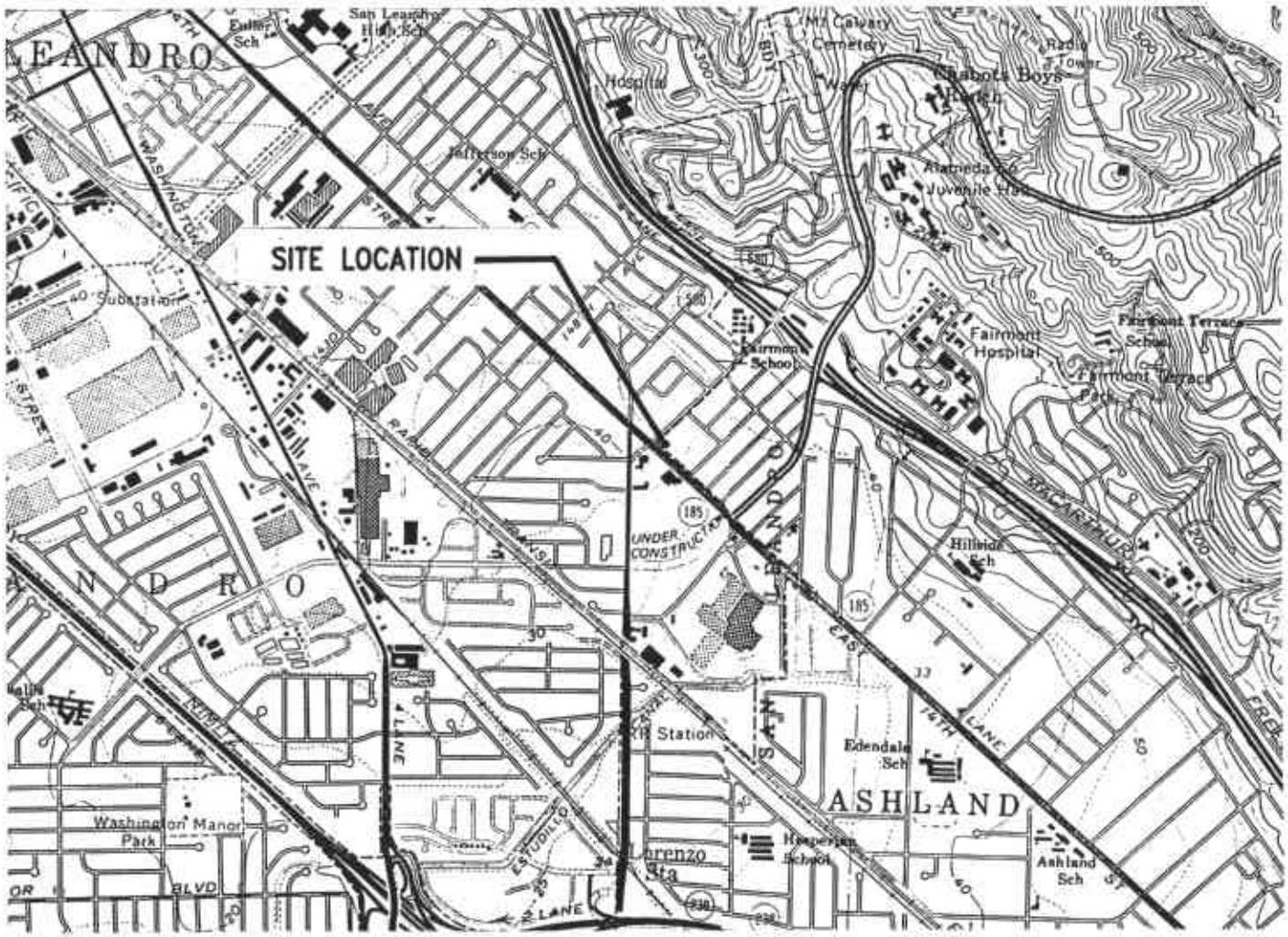
TPHg = EPA Method 8015Mod
Benzene, toluene, ethylbenzene, xylenes, MTBE = EPA Method 8020
Porosity = API RP-40
Density = D-2937
Moisture content = D-2216
Organic Content = Walkley-Black

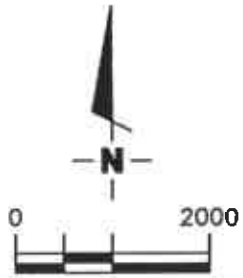
ANALYTICAL LABORATORY:

Sequoia Analytical (ELAP #1210)

GEOTECHNICAL LABORATORY:

PTS Laboratories





Base Map: USGS Topographic Map

Gettler - Ryan Inc.
6747 Sierra Ct., Suite J (925) 551-7555
Dublin, CA 94568

VICINITY MAP
Tosco 76 Branded Facility No. 3292
15008 East 14th Street
San Leandro, California

FIGURE
1

JOB NUMBER	REVIEWED BY	DATE	REVISED DATE
140071		March, 1999	

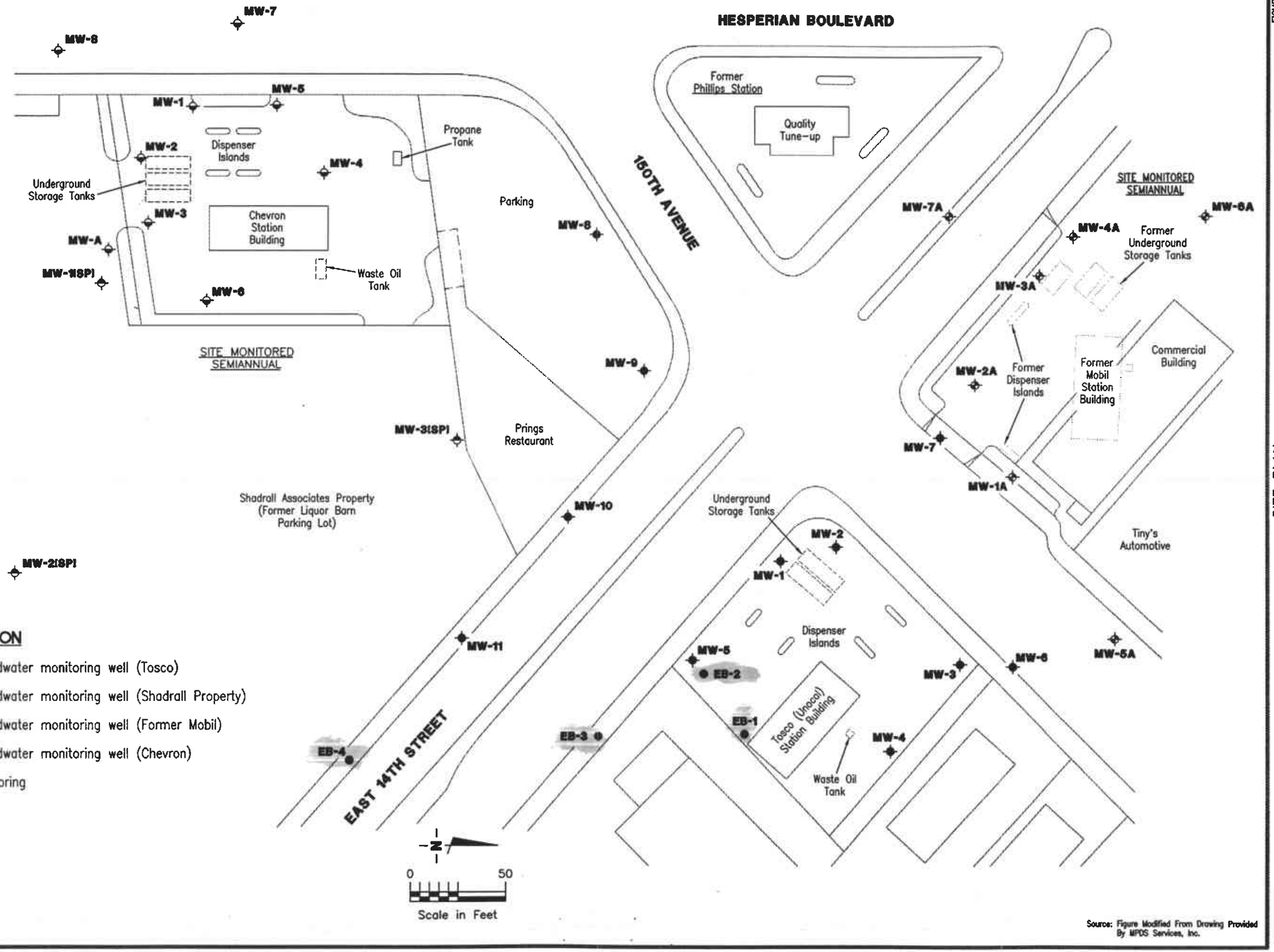


FIGURE 2

SITE PLAN
Tosco 76 Branded Facility No. 3292
15008 East 14th Street
San Leandro, California

REVISED DATE

Gettler - Ryan Inc.
6747 Sierra Ct., Suite J (925) 551-7555
Dublin, CA 94568

JOB NUMBER 140071.02
REVIEWED BY
DATE March, 1999

APPENDIX A

GR FIELD METHODS AND PROCEDURES

GETTLER - RYAN
FIELD METHODS AND PROCEDURES

Site Safety Plan

Field work performed by Gettler-Ryan, Inc. (GR) is conducted in accordance with GR's Health and Safety Plan and the Site Safety Plan. GR personnel and subcontractors who perform work at the site are briefed on the of these plans contents prior to initiating site work. The GR geologist or engineer at the site when the work is performed acts as the Site Safety Officer. GR utilizes a photoionization detector (PID) to monitor ambient conditions as part of the Health and Safety Plan.

Collection of Soil Samples

Exploratory soil borings are drilled by a California-licensed well driller. A GR geologist is present to observe the drilling, collect soil samples for description, physical testing, and chemical analysis, and prepare a log of the exploratory soil boring. Soil samples obtained with a Geoprobe® rig are collected from the soil boring with a split-barrel sampling device fitted with 1-inch-diameter, clean brass or plastic liners. The Geoprobe® drives the sampling device approximately 24 inches, and the filled sampler is then retrieved from the boring. The encountered soil is described using the Unified Soil Classification System (ASTM 2488-84) and the Munsell Soil Color Chart.

After removal from the sampling device, soil samples for chemical analysis are covered on both ends with teflon sheeting or aluminum foil, capped, labeled, and placed in a cooler with blue ice for preservation. A chain-of-custody form is initiated in the field and accompanies the selected soil samples to the analytical laboratory. Samples are selected for chemical analysis based on:

a. depth relative to underground storage tanks and existing ground surface
b. depth relative to known or suspected groundwater
c. presence or absence of contaminant migration pathways
d. presence or absence of discoloration or staining
e. presence or absence of obvious gasoline hydrocarbon odors
f. presence or absence of organic vapors detected by headspace analysis

Field Screening of Soil Samples

A PID is used to perform head-space analysis in the field for the presence of organic vapors from the soil sample. This test procedure involves removing some soil from one of the sample tubes not retained for chemical analysis and immediately covering the end of the tube with a plastic cap. The PID probe is inserted into the headspace inside the tube through a hole in the plastic cap. Head-space screening results are recorded on the boring log. Head-space screening procedures are performed and results recorded as reconnaissance data. GR does not consider field screening techniques to be verification of the presence or absence of hydrocarbons.

Grab Groundwater Sampling

A temporary PVC screen is installed in the boring to facilitate a grab groundwater sample collection if necessary. Samples of groundwater are collected from the surface of the water in each boring using the teflon bailer or a pump. The water samples are decanted into laboratory-supplied containers appropriate for the anticipated analyses. Sample containers are then labeled and promptly placed in chilled storage for transport to the analytical laboratory. A Chain-of-Custody Record is initiated and updated throughout handling of the samples, and accompanies the samples to the laboratory certified by the State of California for analyses requested.

APPENDIX B

WELL INSTALLATION PERMIT AND BORING LOGS

STATE OF CALIFORNIA • DEPARTMENT OF TRANSPORTATION

ENCROACHMENT PERMIT RIDER

TR-0122 (REV 3/92)

Collected by	Permit No. (Original)
	0492-6SV-2051
Rider Fee Paid	Dist/Co/Rte/PM
$140.00	04-Ala-185-3.68/3.69
Date	Rider Number
April 30, 1998	0498-6RW-0690

TO: Gettler-Ryan Inc.
6747 Sierra Court, Suite J
Dublin, CA 94568

ATTN: Clyde J. Galantine
PHONE: (510) 551-7555

, PERMITTEE

In compliance with your request of March 24, 1998, we are hereby amending the above numbered encroachment permit as follows:

Date of completion extended to: No Change.

Reference your project to : install, maintain and monitor two 2" diameter ground water monitoring wells on the west side of State Highway 04-Ala-185, Post Mile 3.68/3.69, at 150th Avenue.

Permission is granted to drill two additional 50 mm (2)" geoprobes for soil investigation at location shown on attached maps.

Except as amended, all other terms and provisions of the original permit shall remain in effect.

APPROVED:

Harry Y. Yahata, District Director

BY:

G. J. Battaglini, District Permit Engineer

ALAMEDA COUNTY PUBLIC WORKS AGENCY

WATER RESOURCES SECTION
951 TURNER COURT, SUITE 300, HAYWARD, CA 94545-2651
PHONE (510) 670-5575 ANDREAS GODFREY FAX (510) 670-5262
(510) 670-5248 ALVIN KAN

DRILLING PERMIT APPLICATION

FOR APPLICANT TO COMPLETE

LOCATION OF PROJECT 15008 E. 14th Street
San Leandro, California
Unocal SS# 3292

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

CLIENT
Name Tosco Marketing Company
Address 2000 Crow Canyon Place Phone (925) 277-2321
City San Ramon Zip 94583

APPLICANT
Name Gettler-Ryan Inc.
Barbara Sieminski Fax (925) 551-7888
Address 6747 Sierra Ct, Ste J Phone (925) 551-7555
City Dublin Zip 94568

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 ☑ GeoProbe

DRILLER'S LICENSE NO. C57 683865

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 1.5 in.
- Maximum Depth 15 ft.

ESTIMATED STARTING DATE 05/07/98
ESTIMATED COMPLETION DATE 05/07/98

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

APPLICANT'S SIGNATURE [signature] DATE 04/30/98

FOR OFFICE USE

PERMIT NUMBER 98WR188
WELL NUMBER ______
APN ______

PERMIT CONDITIONS

Circled Permit Requirements Apply

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

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

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

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

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

F. WELL DESTRUCTION
See attached.

G. SPECIAL CONDITIONS

APPROVED [signature] DATE 5/5/98

Gettler-Ryan, Inc.

Log of Boring EB-1

PROJECT: *Tosco 76 Facility #3292*	LOCATION: *15008 East 14th Street, San Leandro, CA*
GR PROJECT NO.: *140071.02*	SURFACE ELEVATION: *ft. MSL*
DATE STARTED: *05/07/98*	WL (ft. bgs): *8.5* DATE: *05/07/98* TIME: *12:45*
DATE FINISHED: *05/07/98*	WL (ft. bgs): DATE: TIME:
DRILLING METHOD: *2 in. GeoProbe*	TOTAL DEPTH: *12.0 Feet*
DRILLING COMPANY: *Fisch Environmental*	GEOLOGIST: *Barbara Sieminski*

DEPTH feet	PID (ppm)	BLOWS/FT. *	SAMPLE NUMBER	SAMPLE INT.	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION	REMARKS
							PAVEMENT - asphalt.	
						GW	GRAVEL WITH SAND (GW) - dark yellowish brown (10YR 4/4), moist; 70% angular fine to coarse gravel, 25% fine to coarse sand, 5% clay.	Boring backfilled with neat cement from the bottom to 5 feet below ground surface (bgs), soil cuttings from 5 feet bgs to ground surface, and capped with concrete.
						CL	CLAY (CL) - very dark brown (10YR 3/3), moist, medium plasticity; 95% clay, 5% fine sand.	
5	0		EB1-5			ML-CL	CLAYEY SILT (ML-CL) - dark brown (10YR 3/3), moist, low plasticity; 40% silt, 40% clay, 20% fine sand.	
	0		EB1-6.5			ML/SM	SANDY SILT (ML/SM) - dark brown (10YR 4/3), moist; 50% silt, 40% fine to coarse sand, 10% clay.	
	0		EB1-7.5				▽ Becomes saturated at 8.5 feet.	
	0		EB1-9.5					
10						CL	CLAY (CL) - dark gray (5Y 4/1), saturated, medium plasticity; 95% clay , 5% fine to coarse sand; carbonate nodules.	
	0.6						Bottom of boring at 12 feet.	
15							(* = not applicable - boring advanced using direct-push technology)	
20								

JOB NUMBER: *140071.02*

Gettler-Ryan, Inc.

Log of Boring EB-2

PROJECT: *Tosco 76 Facility #3292*	LOCATION: *15008 East 14th Street, San Leandro, CA*
GR PROJECT NO.: *140071.02*	SURFACE ELEVATION: *ft. MSL*
DATE STARTED: *05/07/98*	WL (ft. bgs): *7.9* DATE: *05/07/98* TIME: *10:45*
DATE FINISHED: *05/07/98*	WL (ft. bgs): DATE: TIME:
DRILLING METHOD: *2 in. GeoProbe*	TOTAL DEPTH: *12.0 Feet*
DRILLING COMPANY: *Fisch Environmental*	GEOLOGIST: *Barbara Sieminski*

DEPTH feet	PID (ppm)	BLOWS/FT. *	SAMPLE NUMBER	SAMPLE INT.	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION	REMARKS
							PAVEMENT - asphalt.	Boring backfilled with neat cement from the bottom to 5 feet below ground surface (bgs), soil cuttings from 5 feet bgs to ground surface, and capped with concrete.
						CL	SANDY CLAY (CL) - very dark grayish brown (10YR 3/2), moist, low plasticity; 70% clay, 30% fine to coarse sand.	
						CL	CLAY (CL) - very dark brown (10YR 2/2), moist, medium plasticity; 95% clay, 5% fine sand.	
5	0					ML-CL	CLAYEY SILT (ML-CL) - dark brown (10YR 3/3), moist, low plasticity; 40% silt, 40% clay, 20% fine sand.	
	0					SM/ML	SILTY SAND (SM) - dark brown (10YR 4/3), moist; 55% fine sand, 35% silt, 10% clay.	
	0		EB2-7.5				▽ Color changes to olive gray (5Y 5/2), becomes saturated at 7.9 feet.	
	1.6							
10						CL	SANDY CLAY (CL) - olive gray (5Y 5/2), saturated, low plasticity; 70% clay, 30% fine sand.	
						SC		
	9.8					CL	CLAYEY SAND (SC) - olive gray (5Y 5/2), saturated; 60% fine sand, 40% clay.	
							CALY (CL) - dark grayish brown (2.5Y 4/2) mottled gray (2.5Y 4/0), saturated, medium plasticity; 95% clay, 5% fine sand.	
							Bottom of boring at 12 feet.	
15							(* = not applicable - boring advanced using direct-push technology)	
20								

JOB NUMBER: *140071.02*

Gettler-Ryan, Inc.

Log of Boring EB-3

PROJECT: *Tosco 76 Facility #3292*	LOCATION: *15008 East 14th Street, San Leandro, CA*
GR PROJECT NO.: *140071.02*	SURFACE ELEVATION: *ft. MSL*
DATE STARTED: *05/07/98*	WL (ft. bgs): *7.65* DATE: *05/07/98* TIME: *13:45*
DATE FINISHED: *05/07/98*	WL (ft. bgs): DATE: TIME:
DRILLING METHOD: *2 in. GeoProbe*	TOTAL DEPTH: *12.0 Feet*
DRILLING COMPANY: *Fisch Environmental*	GEOLOGIST: *Barbara Sieminski*

DEPTH feet	PID (ppm)	BLOWS/FT. *	SAMPLE NUMBER	SAMPLE INT.	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION	REMARKS
							PAVEMENT - asphalt.	Boring backfilled with neat cement from the bottom to 5 feet below ground surface (bgs), soil cuttings from 5 feet bgs to ground surface, and capped with concrete.
						CL	GRAVELLY CLAY (CL) - very dark grayish brown (10YR 3/2), moist, low plasticity; 50% clay, 40% well rounded fine gravel, 10% fine to coarse sand.	
						CL	CLAY (CL) - very dark brown (10YR 3/3), moist, medium plasticity; 95% clay, 5% fine sand.	
						ML-CL	CLAYEY SILT (ML-CL) - dark brown (10YR 3/3), moist, low plasticity; 40% silt, 40% clay, 20% fine sand.	
5	0					ML/SM	SANDY SILT (ML/SM) - light olive brown (2.5Y 5/4) mottled strong brown (7.5YR 4/6), moist; 45% silt, 45% fine to coarse sand, 10% clay.	
	0							
	0		EB3-7				▽ Becomes saturated at 7.65 feet.	
	0					ML-CL	CLAYEY SILT WITH SAND (ML-CL) - dark yellowish brown (10YR 4/3), saturated, low plasticity; 40% silt, 40% clay, 20% fine sand.	
10						CL	CLAY (CL) - dark gray (5Y 4/1), saturated, medium plasticity; 95% clay , 5% fine to coarse sand.	
	0.3							
							Bottom of boring at 12 feet.	
15							(* = not applicable - boring advanced using direct-push technology)	
20								

JOB NUMBER: *140071.02*

Gettler-Ryan, Inc.

Log of Boring EB-4

PROJECT: *Tosco 76 Facility #3292*	LOCATION: *15008 East 14th Street, San Leandro, CA*
GR PROJECT NO.: *140071.02*	SURFACE ELEVATION: *ft. MSL*
DATE STARTED: *05/07/98*	WL (ft. bgs): *6.15* DATE: *05/07/98* TIME: *14:40*
DATE FINISHED: *05/07/98*	WL (ft. bgs): DATE: TIME:
DRILLING METHOD: *2 in. GeoProbe*	TOTAL DEPTH: *12.0 Feet*
DRILLING COMPANY: *Fisch Environmental*	GEOLOGIST: *Barbara Sieminski*

DEPTH feet	PID (ppm)	BLOWS/FT. *	SAMPLE NUMBER	SAMPLE INT.	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION	REMARKS
							PAVEMENT - asphalt.	Boring backfilled with neat cement from the bottom to 5 feet below ground surface (bgs), soil cuttings from 5 feet bgs to ground surface, and capped with concrete.
						CL	CLAY (CL) - very dark brown (10YR 2/2), damp, low plasticity; 70% clay, 20% silt, 10% fine sand.	
5	0		EB4-5.5			ML-CL	CLAYEY SILT (ML-CL) - dark brown (10YR 3/3), damp, low plasticity; 50% silt, 40% clay, 10% fine sand.	
	0					ML/SM	SANDY SILT (ML/SM) - dark brown (10YR 5/3), saturated, medium plasticity; 45% silt, 45% fine sand, 10% clay.	
	0							
10						CL	CLAY (CL) - dark grayish brown (2.5Y 4/2), saturated, medium plasticity; 90% clay, 10% fine sand.	
	0.6						Color changes to olive gray (5Y 5/2), sand decreases to 5% at 11 feet.	
							Bottom of boring at 12 feet.	
15							(* = not applicable - boring advanced using direct-push technology)	
20								

APPENDIX C

LABORATORY ANALYTICAL REPORTS AND CHAIN-OF-CUSTODY RECORDS

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (650) 364-9600, FAX (650) 364-9233
404 N. Wiget Lane, Walnut Creek, CA 94598, (510) 988-9600, FAX (510) 988-9673
819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100
1455 McDowell Blvd. North, Ste. D, Petaluma, CA 94954, (707) 792-1865, FAX (707) 792-0342

Gettler Ryan/Geostrategies
6747 Sierra Court Suite J
Dublin, CA 94568

Attention: Doug Lee

Client Proj. ID: Unocal 3292, 14007.02
Sample Descript: EB1-7.5
Matrix: SOLID
Analysis Method: 8015Mod/8020
Lab Number: 9805743-01

Sampled: 05/07/98
Received: 05/11/98
Extracted: 05/15/98
Analyzed: 05/20/98
Reported: 05/27/98

QC Batch Number: GC051598BTEXEXA
Instrument ID: GCHP07

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

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

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	111
4-Bromofluorobenzene	60	140	91

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

SEQUOIA ANALYTICAL - ELAP #1210

Tod Granicher
Project Manager

Sequoia Analytical

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

Gettler Ryan/Geostrategies	Client Proj. ID: Unocal 3292, 140071.02	Sampled: 05/07/98
6747 Sierra Court Suite J	Sample Descript: EB2-7.5	Received: 05/11/98
Dublin, CA 94568	Matrix: SOLID	Extracted: 05/15/98
	Analysis Method: 8015Mod/8020	Analyzed: 05/20/98
Attention: Doug Lee	Lab Number: 9805743-02	Reported: 05/27/98

QC Batch Number: GC051598BTEXEXA
Instrument ID: GCHP07

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

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

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	109
4-Bromofluorobenzene	60	140	83

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

SEQUOIA ANALYTICAL - ELAP #1210

Tod Granicher
Project Manager

Sequoia Analytical

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Gettler Ryan/Geostrategies	Client Proj. ID: Unocal 3292, 140071.02	Sampled: 05/07/98
6747 Sierra Court Suite J	Sample Descript: EB3-7.0	Received: 05/11/98
Dublin, CA 94568	Matrix: SOLID	Extracted: 05/15/98
	Analysis Method: 8015Mod/8020	Analyzed: 05/20/98
Attention: Doug Lee	Lab Number: 9805743-03	Reported: 05/27/98

QC Batch Number: GC051598BTEXEXA
Instrument ID: GCHP07

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

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

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	105
4-Bromofluorobenzene	60	140	90

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

SEQUOIA ANALYTICAL - ELAP #1210

Tod Granicher
Project Manager

Sequoia Analytical

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Gettler Ryan/Geostrategies	Client Proj. ID: Unocal 3292, 140071.02	Sampled: 05/07/98
6747 Sierra Court Suite J	Sample Descript: EB4-5.5	Received: 05/11/98
Dublin, CA 94568	Matrix: SOLID	Extracted: 05/15/98
	Analysis Method: 8015Mod/8020	Analyzed: 05/20/98
Attention: Doug Lee	Lab Number: 9805743-04	Reported: 05/27/98

QC Batch Number: GC051598BTEXEXA
Instrument ID: GCHP07

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

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

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	107
4-Bromofluorobenzene	60	140	77

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

SEQUOIA ANALYTICAL - ELAP #1210

Tod Granicher
Project Manager

Sequoia Analytical

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Gettler Ryan/Geostrategies	Client Proj. ID: Unocal 3292, 140071.02	Sampled: 05/07/98
6747 Sierra Court Suite J	Sample Descript: EB-1	Received: 05/11/98
Dublin, CA 94568	Matrix: LIQUID	
	Analysis Method: 8015Mod/8020	Analyzed: 05/20/98
Attention: Doug Lee	Lab Number: 9805743-05	Reported: 05/27/98

QC Batch Number: GC052098BTEX06A
Instrument ID: GCHP06

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	**50**	**140**
Methyl t-Butyl Ether	**2.5**	**3.4**
Benzene	**0.50**	**1.0**
Toluene	0.50	N.D.
Ethyl Benzene	0.50	N.D.
Xylenes (Total)	0.50	N.D.
Chromatogram Pattern:		**GAS**

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	98

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

SEQUOIA ANALYTICAL - ELAP #1210

Tod Granicher
Project Manager

Sequoia Analytical

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

Gettler Ryan/Geostrategies	Client Proj. ID: Unocal 3292, 140071.02	Sampled: 05/07/98
6747 Sierra Court Suite J	Sample Descript: EB-2	Received: 05/11/98
Dublin, CA 94568	Matrix: LIQUID	
	Analysis Method: 8015Mod/8020	Analyzed: 05/21/98
Attention: Doug Lee	Lab Number: 9805743-06	Reported: 05/27/98

QC Batch Number: GC052198BTEX02A
Instrument ID: GCHP02

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	**1000**	**10000**
Methyl t-Butyl Ether	**50**	**260**
Benzene	10	N.D.
Toluene	10	N.D.
Ethyl Benzene	**10**	**370**
Xylenes (Total)	**10**	**35**
Chromatogram Pattern:		**GAS**

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	97

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

SEQUOIA ANALYTICAL - ELAP #1210

Tod Granicher
Project Manager

Sequoia Analytical

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

Gettler Ryan/Geostrategies	Client Proj. ID: Unocal 3292, 140071.02	Sampled: 05/07/98
6747 Sierra Court Suite J	Sample Descript: EB-3	Received: 05/11/98
Dublin, CA 94568	Matrix: LIQUID	
	Analysis Method: 8015Mod/8020	Analyzed: 05/21/98
Attention: Doug Lee	Lab Number: 9805743-07	Reported: 05/27/98

QC Batch Number: GC052198BTEX02A
Instrument ID: GCHP02

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	**50**	**570**
Methyl t-Butyl Ether	**2.5**	**7.9**
Benzene	0.50	N.D.
Toluene	0.50	N.D.
Ethyl Benzene	**0.50**	**13**
Xylenes (Total)	**0.50**	**3.2**
Chromatogram Pattern:		**GAS**

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	107

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

SEQUOIA ANALYTICAL - ELAP #1210

Tod Granicher
Project Manager

Sequoia Analytical

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Gettler Ryan/Geostrategies	Client Proj. ID: Unocal 3292, 140071.02	Sampled: 05/07/98
6747 Sierra Court Suite J	Sample Descript: EB-4	Received: 05/11/98
Dublin, CA 94568	Matrix: LIQUID	
	Analysis Method: 8015Mod/8020	Analyzed: 05/21/98
Attention: Doug Lee	Lab Number: 9805743-08	Reported: 05/27/98

QC Batch Number: GC052198BTEX02A
Instrument ID: GCHP02

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	**250**	**2000**
Methyl t-Butyl Ether	**12**	**300**
Benzene	**2.5**	**23**
Toluene	2.5	N.D.
Ethyl Benzene	**2.5**	**4.0**
Xylenes (Total)	2.5	N.D.
Chromatogram Pattern:		**GAS**

Surrogates	**Control Limits %**		**% Recovery**
Trifluorotoluene	70	130	112

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

SEQUOIA ANALYTICAL - ELAP #1210

Tod Granicher
Project Manager

Sequoia Analytical

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Gettler Ryan/Geostrategies
6747 Sierra Court, Ste. J
Dublin, CA 94568
Attention: Doug Lee

Client Project ID: Unocal 3292, 140071.02

QC Sample Group: 9805743

Reported: May 31, 1998

QUALITY CONTROL DATA REPORT

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

QC Batch #: GC051598BTEXEXA

Sample No.:	GS9805703-1
Date Prepared:	5/15/98
Date Analyzed:	5/18/98
Instrument I.D.#:	GCHP1
Sample Conc., mg/Kg:	N.D.
Conc. Spiked, mg/Kg:	5.0
Matrix Spike, mg/Kg:	5.1
% Recovery:	102
Matrix Spike Duplicate, mg/Kg:	5.6
% Recovery:	112
Relative % Difference:	9.3
RPD Control Limits:	0-25

LCS Batch#: GSBLK051598A

Date Prepared:	5/15/98
Date Analyzed:	5/18/98
Instrument I.D.#:	GCHP1
Conc. Spiked, mg/Kg:	5.0
Recovery, mg/Kg:	5.3
LCS % Recovery:	106

Percent Recovery Control Limits:

MS/MSD	60-140
LCS	70-130

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

SEQUOIA ANALYTICAL

Tod Granicher
Project Manager

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

Sequoia Analytical

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Gettler Ryan/Geostrategies
6747 Sierra Court, Ste. J
Dublin, CA 94568
Attention: Doug Lee

Client Project ID: Unocal 3292, 140071.02

QC Sample Group: 9805743

Reported: May 31, 1998

QUALITY CONTROL DATA REPORT

Matrix:	Liquid
Method:	EPA 8015
Analyst:	R. Geckler
ANALYTE	Gasoline

QC Batch #: GC052098BTEX06A

Sample No.:	9805C13-02
Date Prepared:	5/20/98
Date Analyzed:	5/20/98
Instrument I.D.#:	GCHP-06
Sample Conc., ug/L:	N.D.
Conc. Spiked, ug/L:	250
Matrix Spike, ug/L:	180
% Recovery:	72
Matrix Spike Duplicate, ug/L:	200
% Recovery:	80
Relative % Difference:	11
RPD Control Limits:	0-25

LCS Batch#: GC052098BTEX06A

Date Prepared:	5/20/98
Date Analyzed:	5/20/98
Instrument I.D.#:	GCHP-06
Conc. Spiked, ug/L:	250
LCS Recovery, ug/L:	220
LCS % Recovery:	88

Percent Recovery Control Limits:

MS/MSD	60-140
LCS	70-130

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

SEQUOIA ANALYTICAL

Tod Granicher
Project Manager

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

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (650) 364-9600, FAX (650) 364-9233
404 N. Wiget Lane, Walnut Creek, CA 94598, (510) 988-9600, FAX (510) 988-9673
819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100
1455 McDowell Blvd. North, Ste. D, Petaluma, CA 94954, (707) 792-1865, FAX (707) 792-0342

Gettler Ryan/Geostrategies
6747 Sierra Court, Ste. J
Dublin, CA 94568
Attention: Doug Lee

Client Project ID: Unocal 3292, 140071.02

QC Sample Group: 9805743

Reported: May 31, 1998

QUALITY CONTROL DATA REPORT

Matrix:	Liquid			
Method:	EPA 8020			
Analyst:	C. Demartini			
ANALYTE	Benzene	Toluene	Ethylbenzene	Xylenes
QC Batch #:	GC052198BTEX02A			
Sample No.:	GW9805C13-3			
Date Prepared:	5/21/98	5/21/98	5/21/98	5/21/98
Date Analyzed:	5/21/98	5/21/98	5/21/98	5/21/98
Instrument I.D.#:	GCHP02	GCHP02	GCHP02	GCHP02
Sample Conc., ug/L:	N.D.	N.D.	N.D.	N.D.
Conc. Spiked, ug/L:	10	10	10	30
Matrix Spike, ug/L:	8.2	8.0	8.2	25
% Recovery:	82	80	82	83
Matrix Spike Duplicate, ug/L:	8.1	7.9	8.1	25
% Recovery:	81	79	81	83
Relative % Difference:	1.2	1.3	1.2	0.0
RPD Control Limits:	0-25	0-25	0-25	0-25

LCS Batch#:	GAWBLK052198A			
Date Prepared:	5/21/98	5/21/98	5/21/98	5/21/98
Date Analyzed:	5/21/98	5/21/98	5/21/98	5/21/98
Instrument I.D.#:	GCHP02	GCHP02	GCHP02	GCHP02
Conc. Spiked, ug/L:	10	10	10	30
LCS Recovery, ug/L:	8.4	8.2	8.5	26
LCS % Recovery:	84	82	85	87

Percent Recovery Control Limits:

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

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

SEQUOIA ANALYTICAL

Tod Granicher
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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Gettler Ryan/Geostrategies	Client Proj. ID: Unocal 3292, 140071.02	Received: 05/11/98
6747 Sierra Court Suite J		
Dublin, CA 94568	Lab Proj. ID: 9805743	Reported: 05/27/98
Attention: Doug Lee		

LABORATORY NARRATIVE

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

SEQUOIA ANALYTICAL

Tod Granicher
Project Manager

UNOCAL 76

☑ 680 Chesapeake Drive • Redwood City, CA 94063 • (415) 364-9600
☐ 819 Striker Ave., Suite 8 • Sacramento, CA 95834 • (916) 921-9600
☐ 404 N. Wiget Lane • Walnut Creek, CA 94598 • (510) 988-9600
☐ 18939 120th Ave., N.E., Suite 101 • Bothell, WA 98011 • (206) 481-9200
☐ East 11115 Montgomery, Suite B • Spokane, WA 99206 • (509) 924-9200
☐ 15055 S.W. Sequoia Pkwy, Suite 110 • Portland, OR 97222 • (503) 624-9800

Consultant Company: Gettler-Ryan Inc.	Project Name: 140071.02
Address: 6747 Sierra Ct, Ste J	UNOCAL Project Manager: Edward Ralston
City: Dublin State: CA Zip Code: 94568	AFE #:
Telephone: (925) 551-7555 FAX #: (925) 551-7888	Site #, City, State: #3292, 15008 E. 14th Street, San Leandro
Report To: Doug Lee Sampler: B. Sieminski	QC Data: ☑ Level D (Standard) ☐ Level C ☐ Level B ☐ Level A

Turnaround Time: ☑ 10 Work Days ☐ 5 Work Days ☐ 3 Work Days ☐ 2 Work Days ☐ 1 Work Day ☐ 2-8 Hours

☐ Drinking Water ☐ Waste Water ☑ Other

CODE: ☐ Misc. ☑ Detect. ☐ Eval. ☐ Remed. ☐ Demol. ☐ Closure

Analyses Requested 9805743

Client Sample I.D.	Date/Time Sampled	Matrix Desc.	# of Cont.	Cont. Type	Laboratory Sample #	TPH gas/BTEX/MTBE	Comments
1. EB1-7.5	05/07/98	S	1	2" tube	1	X	
2. EB2-7.5	05/07/98	S	1	"	2	X	
3. EB3-7.0	05/07/98	S	1	"	3	X	
4. EB4-5.5	05/07/98	S	1	"	4	X	
5. EB-1	05/07/98	W	3	VOA	5	X	
6. EB-2	05/07/98	W	3	"	6	X	
7. EB-3	05/07/98	W	3	"	7	X	
8. EB-4	05/07/98	W	3	"	8	X	
9.							
10.							

Relinquished By: Barbara Sieminski	Date: 05/11/98	Time: 10:30	Received By: [signature]	Date: 5/11/98	Time: 10:30
Relinquished By: [signature]	Date: 5/11/98	Time:	Received By:	Date:	Time:
Relinquished By:	Date:	Time:	Received By Lab: [signature]	Date: 5/11/98	Time: 1159

Were Samples Received in Good Condition? ☐ Yes ☐ No Samples on Ice? ☐ Yes ☐ No Method of Shipment _____ Page __ of __

To be completed upon receipt of report:

1) Were the analyses requested on the Chain of Custody reported? ☐ Yes ☐ No If no, what analyses are still needed? _____

2) Was the report issued within the requested turnaround time? ☐ Yes ☐ No If no, what was the turnaround time? _____

Approved by: _____ Signature: _____ Company: _____ Date: _____

Pink - Client

Yellow - Laboratory

White - Laboratory

PTS Laboratories, Inc.

Geotechnical Services

8100 Secura Way • Santa Fe Springs • CA 90670
Phone (562) 907-3607 • Fax (562) 907-3610

June 15, 1998

Mr. Doug Lee
Gettler Ryan
6747 Sierra Ct. Suite J
Dublin, CA 94568

Re: 140071.02
PTS File: 28222

Dear Mr. Lee:

Enclosed are final data for samples submitted from your Project #140071.02. All analyses were performed by applicable ASTM, EPA or API. Samples will be retained for 30 days before disposal unless other arrangements are made.

We appreciate the opportunity to be of service and trust these data will prove beneficial in the development of this project. Please feel free to call myself or Larry Kunkel, District Manager, should you have any questions or require additional information.

Sincerely,

PTS Laboratories, Inc.

Rick Young
Project Manager

LK/vk

encl.

PHYSICAL PROPERTIES DATA

(METHODOLOGY: ASTM D2216, EPA 9045, ASTM D2937, API RP40, EPA 9100, Walkley Black)

PROJECT NAME: TOSCO 76 FACILITY # 3292
PROJECT NO: 140071.02

SAMPLE ID.	DEPTH, ft.	SAMPLE ORIENT. (1)	MOISTURE CONTENT (% wt)	SOIL pH	DENSITY BULK (g/cc)	DENSITY GRAIN (g/cc)	EFFECTIVE POROSITY, % Vb	25.0 PSI CONFINING STRESS: NATIVE STATE EFFECTIVE PERMEABILITY TO WATER (millidarcy)	25.0 PSI CONFINING STRESS: NATIVE STATE EFFECTIVE HYDRAULIC CONDUCTIVITY (cm/s)	TOTAL ORGANIC CONTENT mg/kg
EB1-5	N/A	V	18.2	6.70	1.54	2.56	39.8	0.167	1.62E-07	8400
EB1-6.5	N/A	V	16.5	6.68	1.63	2.58	37.0	0.269	2.63E-07	3600
EB1-9.5	N/A	V	19.3	6.68	1.70	2.57	34.1	0.499	4.84E-07	350

(1) Sample Orientation: H = Horizontal; V = Vertical

Vb = Bulk Volume, cc
Pv = Pore Volume, cc
ND = Not Detected

PTS Laboratories, Inc.

Gettler-Ryan, Inc.
PTS File No: 28222

PARTICLE SIZE SUMMARY

(METHODOLOGY: ASTM D4464)

PROJECT NAME: Tosco 76 Facility #3292
PROJECT NO: 140071.02

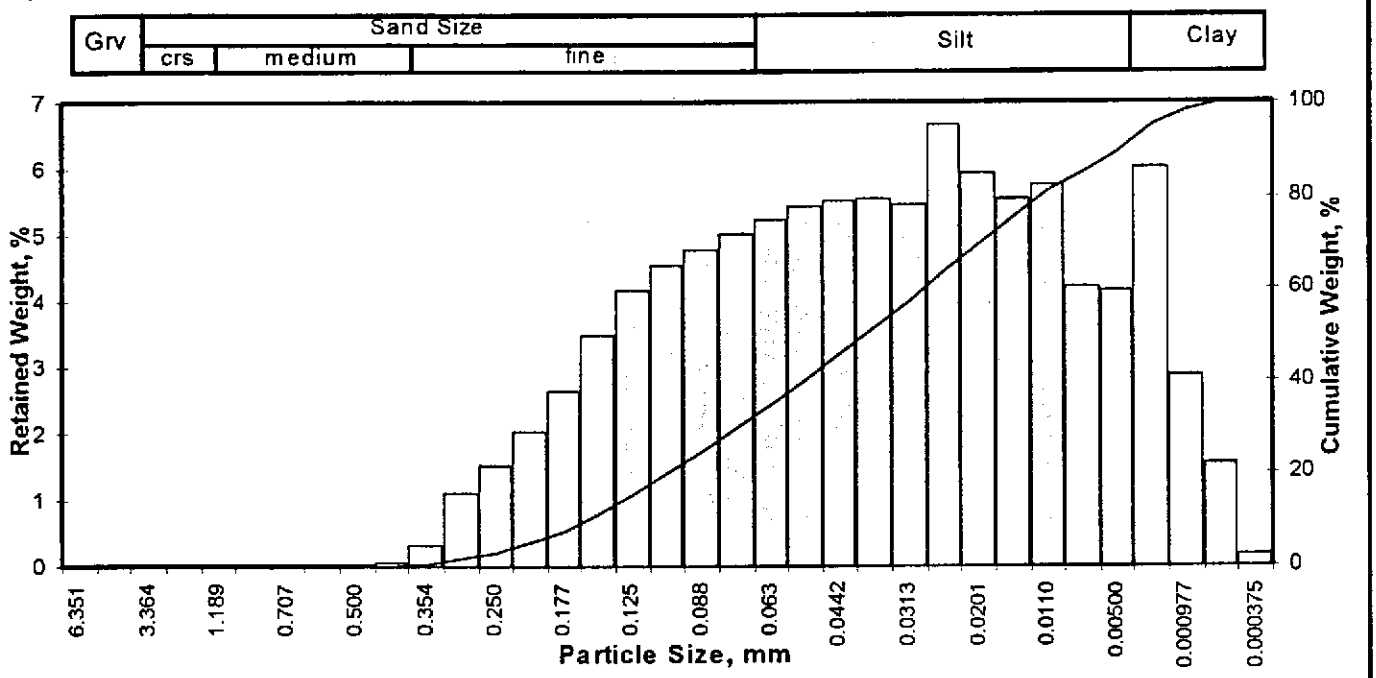
Sample ID	Depth, ft.	Description USCS/ASTM (1)	Median Grain Size mm	Particle Size Distribution, wt. percent						Silt & Clay
				Gravel	Sand Size			Silt	Clay	
					Coarse	Medium	Fine			
EB1-9.5	9.5-10	Silt	0.034	0.00	0.00	0.82	26.29	61.13	11.76	72.89
EB1-6.5	6.5-7	Silt	0.037	0.00	0.00	1.75	26.28	60.59	11.37	71.96
EB1-5	5-5.5	Silt	0.039	0.00	0.00	0.07	29.70	59.60	10.63	70.23

(1) based on Mean from Trask

PTS Laboratories, Inc.

Particle Size Analysis - ASTM D4464M

Client:	Gettler-Ryan, Inc.	**PTS File No:**	28222
Project:	Tosco 76 Facility #3292	**Sample ID:**	EB1-5
Project No:	140071	**Depth, ft:**	5-5.5



Opening		Phi of	U.S.	Sample Weight,	Incremental Weight,	Cumulative Weight,
Inches	Millimeters	Screen	No.	grams	percent	percent
0.2500	6.351	-2.67	1/4	0.00	0.00	0.00
0.1873	4.757	-2.25	4	0.00	0.00	0.00
0.1324	3.364	-1.75	6	0.00	0.00	0.00
0.0787	2.000	-1.00	10	0.00	0.00	0.00
0.0468	1.189	-0.25	16	0.00	0.00	0.00
0.0331	0.841	0.25	20	0.00	0.00	0.00
0.0278	0.707	0.50	25	0.00	0.00	0.00
0.0234	0.595	0.75	30	0.00	0.00	0.00
0.0197	0.500	1.00	35	0.00	0.00	0.00
0.0166	0.420	1.25	40	0.06	0.06	0.07
0.0139	0.354	1.50	45	0.31	0.31	0.38
0.0117	0.297	1.75	50	1.12	1.12	1.50
0.0098	0.250	2.00	60	1.54	1.54	3.04
0.0083	0.210	2.25	70	2.03	2.03	5.07
0.0070	0.177	2.50	80	2.65	2.65	7.72
0.0059	0.149	2.75	100	3.51	3.51	11.23
0.0049	0.125	3.00	120	4.17	4.17	15.40
0.0041	0.105	3.25	140	4.56	4.56	19.96
0.0035	0.088	3.50	170	4.79	4.79	24.75
0.0029	0.074	3.75	200	5.02	5.02	29.77
0.0025	0.063	4.00	230	5.24	5.24	35.01
0.0021	0.053	4.25	270	5.43	5.43	40.44
0.00174	0.0442	4.50	325	5.53	5.53	45.97
0.00146	0.0372	4.75	400	5.56	5.56	51.53
0.00123	0.0313	5.00	450	5.46	5.46	56.99
0.000986	0.0250	5.32	500	6.68	6.68	63.67
0.000790	0.0201	5.64	635	5.95	5.95	69.62
0.000615	0.0156	6.00		5.56	5.56	75.18
0.000435	0.0110	6.50		5.76	5.76	80.94
0.000308	0.00781	7.00		4.25	4.25	85.19
0.000197	0.00500	7.65		4.18	4.18	89.37
0.000077	0.00195	9.00		6.02	6.02	95.39
0.000038	0.000977	10.00		2.88	2.88	98.27
0.000019	0.000488	11.00		1.57	1.57	99.84
0.000015	0.000375	11.38		0.16	0.16	100.00
TOTALS				100.00	100.00	100.00

Cumulative Weight Percent greater than			
Weight	Phi	Particle Size	
percent	Value	Inches	Millimeters
5	2.24	0.0083	0.211
10	2.66	0.0062	0.158
16	3.03	0.0048	0.122
25	3.51	0.0034	0.088
40	4.23	0.0021	0.053
50	4.68	0.0015	0.039
60	5.14	0.0011	0.028
75	5.99	0.0006	0.016
84	6.86	0.0003	0.009
90	7.79	0.0002	0.005
95	8.91	0.0001	0.002

Measure	Trask	Inman	Folk-Ward
Median, phi	4.68	4.68	4.68
Median, in.	0.0015	0.0015	0.0015
Median, mm	0.039	0.039	0.039
Mean, phi	4.27	4.95	4.86
Mean, in.	0.0020	0.0013	0.0014
Mean, mm	0.052	0.032	0.034
Sorting	0.424	1.914	1.968
Skewness	0.953	0.139	0.204
Kurtosis	0.234	0.743	1.104
Grain Size Description (ASTM-USCS Scale)		Silt (based on Mean from Trask)	

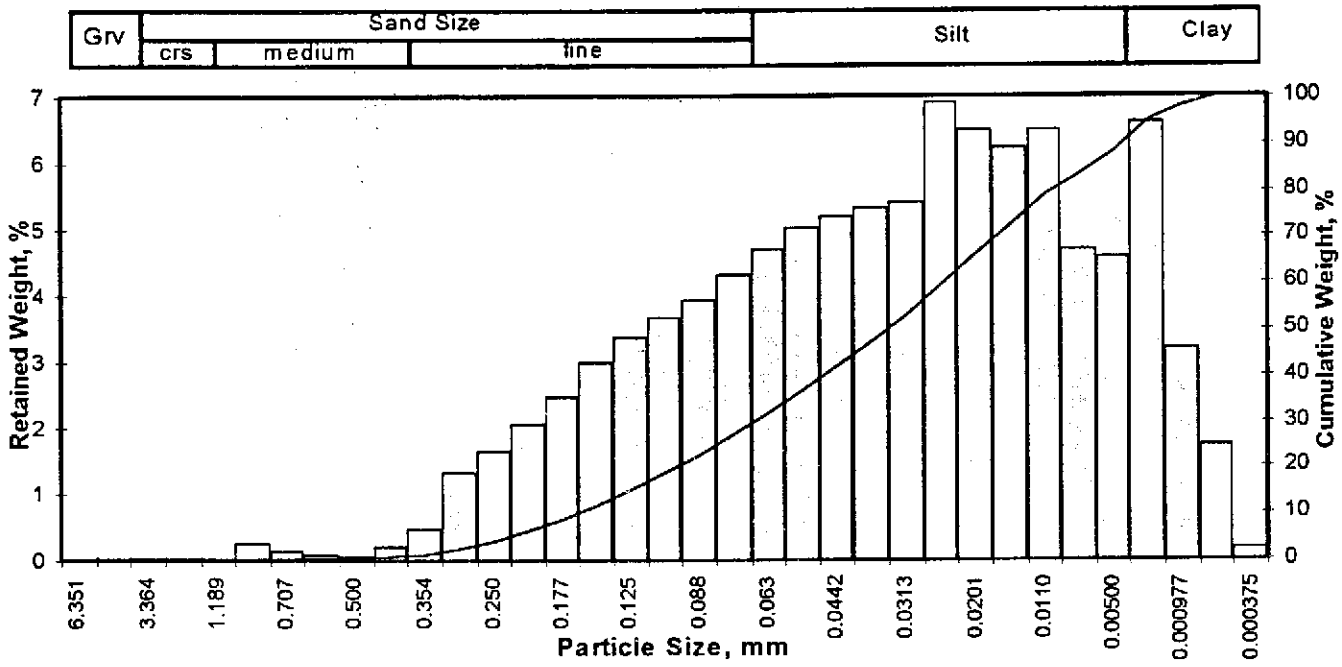
Description	Retained on Sieve #	Weight Percent
Gravel	4	0.00
Coarse Sand	10	0.00
Medium Sand	40	0.07
Fine Sand	200	29.70
Silt	>0.005 mm	59.60
Clay	<0.005 mm	10.63
	Total	100

Phone: (562) 907-3607
Fax: (562) 907-3610

PTS Laboratories, Inc.

Particle Size Analysis - ASTM D4464M

Client:	Gettler-Ryan, Inc.	**PTS File No:**	28222
Project:	Tosco 76 Facility #3292	**Sample ID:**	EB1-9.5
Project No:	140071	**Depth, ft:**	9.5-10



Opening		Phi of	U.S.	Sample Weight,	Incremental Weight,	Cumulative Weight,
Inches	Millimeters	Screen	No.	grams	percent	percent
0.2500	6.351	-2.67	1/4	0.00	0.00	0.00
0.1873	4.757	-2.25	4	0.00	0.00	0.00
0.1324	3.364	-1.75	6	0.00	0.00	0.00
0.0787	2.000	-1.00	10	0.00	0.00	0.00
0.0468	1.189	-0.25	16	0.04	0.04	0.04
0.0331	0.841	0.25	20	0.28	0.28	0.32
0.0278	0.707	0.50	25	0.14	0.14	0.46
0.0234	0.595	0.75	30	0.08	0.08	0.54
0.0197	0.500	1.00	35	0.07	0.07	0.61
0.0166	0.420	1.25	40	0.21	0.21	0.82
0.0139	0.354	1.50	45	0.48	0.48	1.30
0.0117	0.297	1.75	50	1.31	1.31	2.61
0.0098	0.250	2.00	60	1.66	1.66	4.27
0.0083	0.210	2.25	70	2.07	2.07	6.34
0.0070	0.177	2.50	80	2.48	2.48	8.82
0.0059	0.149	2.75	100	2.99	2.99	11.81
0.0049	0.125	3.00	120	3.38	3.38	15.19
0.0041	0.105	3.25	140	3.67	3.67	18.85
0.0035	0.088	3.50	170	3.94	3.94	22.79
0.0029	0.074	3.75	200	4.32	4.32	27.11
0.0025	0.063	4.00	230	4.72	4.72	31.83
0.0021	0.053	4.25	270	5.03	5.03	36.86
0.00174	0.0442	4.50	325	5.21	5.21	42.07
0.00146	0.0372	4.75	400	5.32	5.32	47.39
0.00123	0.0313	5.00	450	5.40	5.40	52.79
0.000986	0.0250	5.32	500	6.92	6.92	59.71
0.000790	0.0201	5.64	635	6.49	6.49	66.20
0.000615	0.0156	6.00		6.24	6.24	72.44
0.000435	0.0110	6.50		6.51	6.51	78.94
0.000308	0.00781	7.00		4.72	4.72	83.66
0.000197	0.00500	7.65		4.58	4.58	88.24
0.000077	0.00195	9.00		6.63	6.63	94.87
0.000038	0.000977	10.00		3.20	3.20	98.07
0.000019	0.000488	11.00		1.75	1.75	99.82
0.000015	0.000375	11.38		0.18	0.18	100.00
TOTALS				100.02	100.00	100.00

Cumulative Weight Percent greater than			
Weight	Phi	Particle Size	
percent	Value	Inches	Millimeters
5	2.09	0.0093	0.235
10	2.60	0.0065	0.165
16	3.06	0.0047	0.120
25	3.63	0.0032	0.081
40	4.40	0.0019	0.047
50	4.87	0.0013	0.034
60	5.33	0.0010	0.025
75	6.20	0.0005	0.014
84	7.05	0.0003	0.008
90	8.00	0.0002	0.004
95	9.04	0.0001	0.002

Measure	Trask	Inman	Folk-Ward
Median, phi	4.87	4.87	4.87
Median, in.	0.0013	0.0013	0.0013
Median, mm	0.034	0.034	0.034
Mean, phi	4.40	5.05	4.99
Mean, in.	0.0019	0.0012	0.0012
Mean, mm	0.047	0.030	0.031
Sorting	0.410	1.996	2.051
Skewness	0.972	0.090	0.145
Kurtosis	0.209	0.741	1.109
Grain Size Description (ASTM-USCS Scale)		Silt (based on Mean from Trask)	

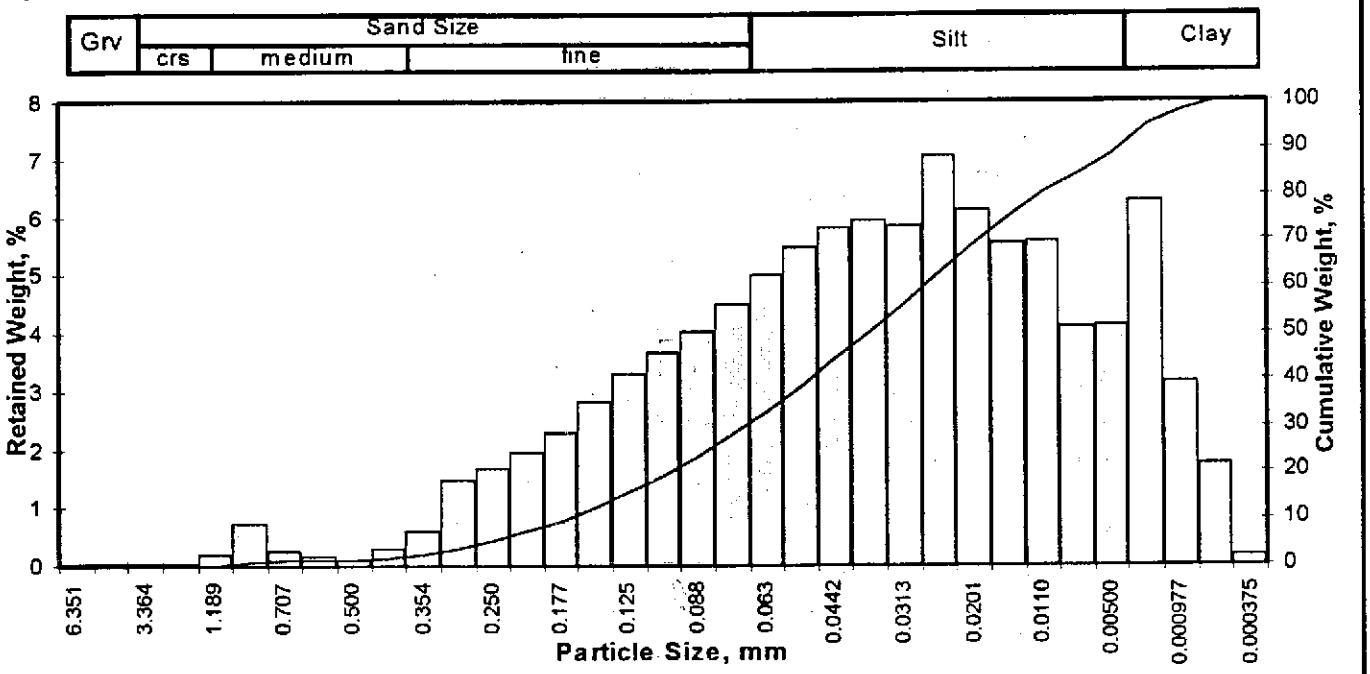
Description	Retained on Sieve #	Weight Percent
Gravel	4	0.00
Coarse Sand	10	0.00
Medium Sand	40	0.82
Fine Sand	200	26.29
Silt	>0.005 mm	61.13
Clay	<0.005 mm	11.76
	Total	100

Phone: (562) 907-3607
Fax: (562) 907-3610

PTS Laboratories, Inc.

Particle Size Analysis - ASTM D4464M

Client:	Gettler-Ryan, Inc.	**PTS File No:**	28222
Project:	Tosco 76 Facility #3292	**Sample ID:**	EB1-6.5
Project No:	140071	**Depth, ft:**	6.5-7



Opening		Phi of	U.S.	Sample Weight,	Incremental Weight,	Cumulative Weight,
Inches	Millimeters	Screen	No.	grams	percent	percent
0.2500	6.351	-2.67	1/4	0.00	0.00	0.00
0.1873	4.757	-2.25	4	0.00	0.00	0.00
0.1324	3.364	-1.75	6	0.00	0.00	0.00
0.0787	2.000	-1.00	10	0.00	0.00	0.00
0.0468	1.189	-0.25	16	0.20	0.20	0.20
0.0331	0.841	0.25	20	0.73	0.73	0.93
0.0278	0.707	0.50	25	0.28	0.28	1.20
0.0234	0.595	0.75	30	0.15	0.15	1.36
0.0197	0.500	1.00	35	0.11	0.11	1.46
0.0166	0.420	1.25	40	0.29	0.29	1.75
0.0139	0.354	1.50	45	0.59	0.59	2.34
0.0117	0.297	1.75	50	1.47	1.47	3.81
0.0098	0.250	2.00	60	1.68	1.68	5.49
0.0083	0.210	2.25	70	1.94	1.94	7.43
0.0070	0.177	2.50	80	2.27	2.27	9.70
0.0059	0.149	2.75	100	2.83	2.83	12.53
0.0049	0.125	3.00	120	3.30	3.30	15.83
0.0041	0.105	3.25	140	3.68	3.68	19.51
0.0035	0.088	3.50	170	4.03	4.03	23.54
0.0029	0.074	3.75	200	4.49	4.49	28.04
0.0025	0.063	4.00	230	5.01	5.01	33.05
0.0021	0.053	4.25	270	5.48	5.48	38.53
0.00174	0.0442	4.50	325	5.81	5.81	44.34
0.00146	0.0372	4.75	400	5.94	5.94	50.28
0.00123	0.0313	5.00	450	5.85	5.85	56.13
0.000986	0.0250	5.32	500	7.06	7.06	63.19
0.000790	0.0201	5.64	635	6.11	6.11	69.30
0.000615	0.0156	6.00		5.54	5.54	74.84
0.000435	0.0110	6.50		5.58	5.58	80.42
0.000308	0.00781	7.00		4.09	4.09	84.51
0.000197	0.00500	7.65		4.12	4.12	88.63
0.000077	0.00195	9.00		6.30	6.30	94.93
0.000038	0.000977	10.00		3.15	3.15	98.08
0.000019	0.000488	11.00		1.74	1.74	99.82
0.000015	0.000375	11.38		0.18	0.18	100.00
TOTALS				99.99	100.00	100.00

Cumulative Weight Percent greater than			
Weight	Phi	Particle Size	
percent	Value	Inches	Millimeters
5	1.93	0.0104	0.263
10	2.53	0.0068	0.174
16	3.01	0.0049	0.124
25	3.58	0.0033	0.084
40	4.31	0.0020	0.050
50	4.74	0.0015	0.037
60	5.18	0.0011	0.028
75	6.01	0.0006	0.015
84	6.94	0.0003	0.008
90	7.94	0.0002	0.004
95	9.02	0.0001	0.002

Measure	Trask	Inman	Folk-Ward
Median, phi	4.74	4.74	4.74
Median, in.	0.0015	0.0015	0.0015
Median, mm	0.037	0.037	0.037
Mean, phi	4.34	4.97	4.90
Mean, in.	0.0019	0.0013	0.0013
Mean, mm	0.050	0.032	0.034
Sorting	0.430	1.963	2.057
Skewness	0.960	0.120	0.164
Kurtosis	0.201	0.807	1.195
Grain Size Description (ASTM-USCS Scale)		Silt (based on Mean from Trask)	

Description	Retained on Sieve #	Weight Percent
Gravel	4	0.00
Coarse Sand	10	0.00
Medium Sand	40	1.75
Fine Sand	200	26.28
Silt	>0.005 mm	60.59
Clay	<0.005 mm	11.37
	Total	100

Phone: (562) 907-3607 Fax: (562) 907-3610

DATE PTS FILE # 28222 CHAIN OF CUSTODY RECORD PAGE 1 OF 1

PTS Laboratories, Inc.
8100 Secura Way
Santa Fe Springs, CA 90670
Ph: (310) 907-3607 • Fax: (310) 907-3610

COMPANY: GETTLER-RYAN INC. PROJECT MANAGER: DOUG LEE
PROJECT NAME: TOSCO 76 FACILITY #3292 FAX NUMBER: (925) 551-7888
PROJECT NUMBER: 140071.02 PHONE NUMBER: (925) 551-7555
SITE LOCATION: 15005 E. 14TH STREET, SAN LEANDRO, CA ADDRESS:
SAMPLER SIGNATURE: Barbara Sieminski

ANALYSIS REQUEST

SAMPLE ID NUMBER	DATE	TIME	DEPTH, FT	PHYSICAL PROPERTIES PACKAGE, API RP40	MOISTURE CONTENT, ASTM D2216	POROSITY, API RP40	GRAIN DENSITY, API RP40	BULK DENSITY, ASTM D2937	AIR PERMEABILITY, API RP40	SPECIFIC RETENTION/YEILD ASTM D425	CATION EXCHANGE CAPACITY, EPA 9080	SOIL pH, EPA 9045	GRAIN SIZE: DRY, 400 MESH	GRAIN SIZE: WET/DRY, 20 MICRON	GRAIN SIZE: LASER, 1 MICRON + SIEVE	HYDRAULIC CONDUCTIVITY, EPA 9100, API RP40	TOC, WALKLEY - BLACK	PERMEABILITY V - ASTM D5084	NUMBER OF SAMPLES
EB1-5	5/7/98		5-5.5		X	X		X				X			X		X	X	
EB1-6.5	↓		6.5-7		↓	↓		X				↓			↓		↓	↓	
EB1-9.5	↓		9.5-10		↓	↓		X				↓			↓		↓	↓	

PO#:
SPECIAL HANDLING: 24 HOURS 5 DAYS; 72 HOURS NORMAL; OTHER
SAMPLE CONDITIONS: RECEIVED ON ICE YES/NO; SEALED YES/NO; OTHER YES/NO
COMMENTS

1. RELINQUISHED BY	2. RECEIVED BY	3. RELINQUISHED BY	4. RECEIVED BY
Barbara Sieminski			
COMPANY: Gettler-Ryan Inc	COMPANY: GETTLER-RYAN INC.	COMPANY: GETTLER-RYAN INC.	COMPANY: PTS Labs
DATE: 05/08/98 TIME: 1710 PM	DATE: 5-8-98 TIME: 1:10 PM	DATE: 5-8-98 TIME: 3:00 PM	DATE: 5/27/98 TIME: 0946