

R0450

R0450

ENVIRONMENTAL RESOLUTIONS, INC.

MAR 04 2002

TRANSMITTAL

TO: Ms. Eva Chu
Alameda County Health Care Services Agency
Environmental Health Services
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502-6577

DATE: February 27, 2002
PROJECT NUMBER: 224803T8
SUBJECT: Former Tosco Service
Station 0843, 1629 Webster Street,
Alameda, California.

FROM: Paul D. Blank
TITLE: Project Manager

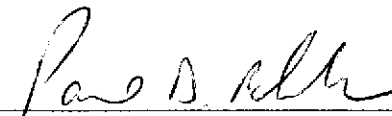
WE ARE SENDING YOU:

COPIES	DATED	DESCRIPTION
1	February 27, 2002	Supplemental Evaluation of Soil and Groundwater

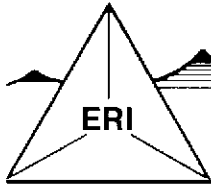
THESE ARE TRANSMITTED as checked below:

- For review and comment Approved as submitted Resubmit ___ copies for approval
- As requested Approved as noted Submit ___ copies for distribution
- For approval Return for corrections Return ___ corrected prints
- For your files For distribution to regulatory agencies

REMARKS: At the request of Tosco Corporation (Tosco), a subsidiary of Phillips Petroleum Company, Environmental Resolutions, Inc. (ERI) is submitting a copy of the above-referenced document directly to your office. Please call me at (415) 382-5988 with questions or comments.


Paul D. Blank, Project Manager

cc: Mr. Dave DeWitt, Phillips 66 Company
Ms. Jolanta Uchman, California Regional Water Quality Control Board - San Francisco Bay Region
ERI Project File 224803T8



Ro-450

ENVIRONMENTAL RESOLUTIONS, INC.

February 27, 2002
ERI 224803.R04

MAR 04 2002

Mr. Dave DeWitt
Phillips 66 Company
2000 Crow Canyon Place, Suite 400
San Ramon, California 94583

Subject: Supplemental Evaluation of Soil and Groundwater, Former Tosco Service
Station 0843, 1629 Webster Street, Alameda, California.

Mr. DeWitt:

At the request of Tosco Corporation (Tosco), a subsidiary of Phillips Petroleum Company, Environmental Resolutions, Inc. (ERI) performed a supplemental environmental investigation at the subject site. The purpose of the work was to further assess the extent of residual hydrocarbons in vadose soil beneath the site.

BACKGROUND

The site is located on the southwestern corner of Webster Street and Pacific Avenue in Alameda, California, as shown on the Site Vicinity Map (Plate 1). The locations of former underground storage tanks (USTs), former dispenser islands, existing groundwater monitoring wells, and other select site features are shown on the Generalized Site Plan (Plate 2). Properties in the vicinity of the site are occupied by residential and commercial developments.

Previous environmental work performed at the site has included:

- Removal of two 10,000-gallon gasoline USTs, one 550-gallon used-oil UST, product lines, and dispensers; and installation of a conductor casing within the former UST cavity backfill (ERI, September 15, 1998);
- Installation of four on-site groundwater monitoring wells (MW1 through MW4) (ERI, April 28, 1999);
- Installation of two off-site groundwater monitoring wells (MW5 and MW6) (ERI, March 7, 2000);
- An underground utility survey (ERI, April 2, 2001);
- An off-site supplemental soil and groundwater evaluation including the advancement of five direct-push soil borings (GP1 through GP5) (ERI July 11, 2001); and,
- Quarterly groundwater monitoring and sampling.

Analyses of groundwater samples collected during quarterly groundwater monitoring and sampling continue to detect dissolved hydrocarbons beneath and in the vicinity of the site.

FIELD WORK

Scope of Work

The purpose of the work was to further assess the extent of residual hydrocarbons in vadose soil beneath the site. The results of previous environmental assessment work indicate that residual concentrations of gasoline hydrocarbons and associated constituents are: 1) present in vadose soil in the vicinity of well MW2, and 2) possibly present in the vicinity of a limited section of the northern wall of the former UST cavity. These conclusions are based on concentrations of residual hydrocarbons detected in a soil sample collected during the installation of well MW2, and a sidewall soil sample collected during UST removal.

Phillips requested this information be collected to prepare a work plan for remedial excavation, to be implemented during property improvements scheduled to occur within the next few years. ERI prepared and submitted a *Work Plan for Supplemental Soil Evaluation* (Work Plan), dated October 9, 2001, to the Alameda County Health Care Services Agency (the County). The County approved the Work Plan in a letter dated October 18, 2001 (Attachment A). ERI obtained a drilling permit from Alameda County Public Works Agency (Public Works) prior to beginning field work (Attachment B). ERI and subcontractors performed the evaluation in general accordance with the Work Plan, and in strict accordance with the Public Works permit, a site-specific Health and Safety Plan that was kept on site during field operations, and ERI's field protocol (Attachment C).

Soil Borings

On December 4, 2001, ERI observed Gregg Drilling & Testing, Inc. (Gregg) of Martinez, California, advance twelve 2-inch diameter direct-push soil borings (GP6 through GP17). The locations of the borings are shown on Plate 2. Borings GP6 through GP11, GP13, GP14, and GP17 were advanced to approximately 8 feet below ground surface (bgs). Borings GP12, GP15, and GP16 were advanced to approximately 16 feet bgs. The borings were continuously cored, and samples were collected at approximately 4-foot intervals and from directly above first encountered groundwater in borings GP6 through GP17. Groundwater samples were collected from borings GP14 through GP16 at a depth of approximately 7 feet bgs using a Hydropunch® (or similar) discrete sampling device.

ERI's geologist identified the soil samples collected from the borings using visual and manual methods, and classified the samples using the Unified Soil Classification System (Attachment D). Descriptions of the materials encountered are presented on the boring logs (Attachment D).

Analytical Methods

ERI submitted soil samples collected from borings GP6 through GP17 to Sequoia Analytical Laboratories, Inc. (Sequoia), a California state-certified laboratory, under Chain-of-Custody protocol. Select soil samples were analyzed for total petroleum hydrocarbons as gasoline (TPHg); benzene, toluene, ethylbenzene, and total xylenes (BTEX), and methyl tertiary butyl ether (MTBE) using the methods listed in Table 1. The laboratory analysis reports and Chain-of-Custody records are provided in Attachment E.

ERI submitted groundwater samples collected from borings GP14 through GP16 to Sequoia under Chain-of-Custody protocol. The groundwater samples were analyzed for TPHg, BTEX, and MTBE using the laboratory methods listed in Table 2. The laboratory analysis reports and Chain-of-Custody records are provided in Attachment E.

RESULTS OF INVESTIGATION

Site Geology

Sediments encountered in borings GP6 through GP17 consisted primarily of fine-grained sand. Groundwater was encountered at approximately 6.5 to 7.5 feet bgs in the borings.

Soil Conditions

Results of laboratory analyses of soil samples collected from borings GP6 through GP17 are summarized in Table 1.

Groundwater Conditions

Results of laboratory analyses of groundwater samples collected from borings GP14 through GP16 are summarized in Table 2.

WASTE DISPOSAL

Approximately 2 cubic feet of soil were generated during direct-push sampling. Based on the results of laboratory analyses of the composite sample of stockpiled soil, which did not detect gasoline hydrocarbons or hazardous levels of lead, ERI, with the approval of Tosco and the property owner, spread the soil over an unpaved portion of the property.

CONCLUSIONS

The results of this evaluation indicate that the extent of residual hydrocarbons detected during previous investigations is limited. Based on the data collected during this evaluation, it is ERI's opinion that remedial action of residual gasoline hydrocarbons at this site is not warranted.

LIMITATIONS

This report was prepared in accordance with generally accepted standards of environmental practice in California at the time this investigation was performed. This investigation was conducted solely for the purpose of evaluating environmental conditions of the soil and groundwater with respect to petroleum hydrocarbons and gasoline-related constituents.

ERI recommends that signed copies of this report be forwarded to:

Ms. Eva Chu
Alameda County Health Care Services Agency
Environmental Health Services
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502-6577

Ms. Jolanta Uchman
California Regional Water Quality Control Board
San Francisco Bay Region
1515 Clay Street, Suite 1400
Oakland, California 94612

Please call Mr. Paul D. Blank, ERI's project manager for this site, at (415) 382-5988 with questions regarding this report.

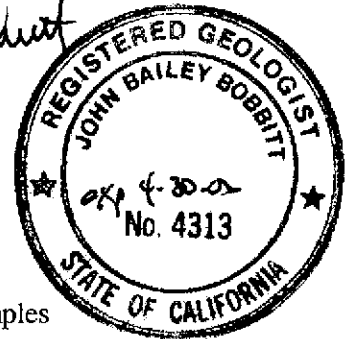
Sincerely,
Environmental Resolutions, Inc.



Robert A. Saur
Senior Staff Geologist



John B. Bobbitt
R.G. 4313



Attachments: References

- Table 1: Results of Laboratory Analyses of Soil Samples
- Table 2: Results of Laboratory Analyses of Groundwater Samples

- Plate 1: Site Vicinity Map
- Plate 2: Generalized Site Plan

- Attachment A: Regulatory Correspondence
- Attachment B: Permit
- Attachment C: Field Protocol
- Attachment D: Unified Soil Classification System, Symbol Key, and Boring Logs
- Attachment E: Laboratory Analysis Reports and Chain-of-Custody Records

REFERENCES

Environmental Resolutions, Inc. September 15, 1998. Underground Storage Tank, Associated Piping, and Dispenser Removal at Former Tosco 76 Service Station 0843, 1629 Webster Street, Alameda, California. ERI 224832.R01.

Environmental Resolutions, Inc. April 28, 1999. Evaluation of Soil and Groundwater at Former Tosco 76 Service Station 0843, 1629 Webster Street, Alameda, California. ERI 224803.R01.

Environmental Resolutions, Inc. March 7, 2000. Supplemental Evaluation of Groundwater, Former Tosco 76 Service Station 0843, 1629 Webster Street, Alameda, California. ERI 224803.R02.

Environmental Resolutions, Inc. April 2, 2001. Underground Utility Survey and Work Plan for Supplemental Evaluation of Soil and Groundwater, Former Tosco 76 Service Station 0843, 1629 Webster Street, Alameda, California. ERI 224803.W03.

Environmental Resolutions, Inc. July 11, 2001. Supplemental Evaluation of Soil and Groundwater, Former Tosco 76 Service Station 0843, 1629 Webster Street, Alameda, California. ERI 224803.R03.

Environmental Resolutions, Inc. October 9, 2001. Work Plan for Supplemental Soil Evaluation, Former Tosco 76 Service Station 0843, 1629 Webster Street, Alameda, California. ERI 224803.W04.

TABLE 1
RESULTS OF LABORATORY ANALYSES OF SOIL SAMPLES
Former Tosco Service Station 0843
1629 Webster Street
Alameda, California
(Page 1 of 1)

Sample Designation	Depth (feet bgs)	Date Sampled	TPHg	B	T	E	X	MTBE
			<.....ppm.....>					
Soil Boring Samples								
S-6.5-GP6	6.5	12/04/01	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.050
S-6.5-GP7	6.5	12/04/01	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.050
S-6-GP8	6	12/04/01	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.050
S-6-GP9	6	12/04/01	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.050
S-6.5-GP10	6.5	12/04/01	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.050
S-6.5-GP11	6.5	12/04/01	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.050
S-6-GP12	6	12/04/01	<1.0	<0.0050	<0.0050	0.010	0.015	<0.050
S-12-GP12	12	12/04/01	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.050
S-6.5-GP13	6.5	12/04/01	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.050
S-12-GP13	12	12/04/01	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.050
S-7-GP14	7	12/04/01	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.050
S-6-GP15	6	12/04/01	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.050
S-16-GP15	16	12/04/01	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.050
S-6.5-GP16	6.5	12/04/01	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.050
S-12-GP16	12	12/04/01	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.050
S-6.5-GP17	6.5	12/04/01	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.050

Notes:

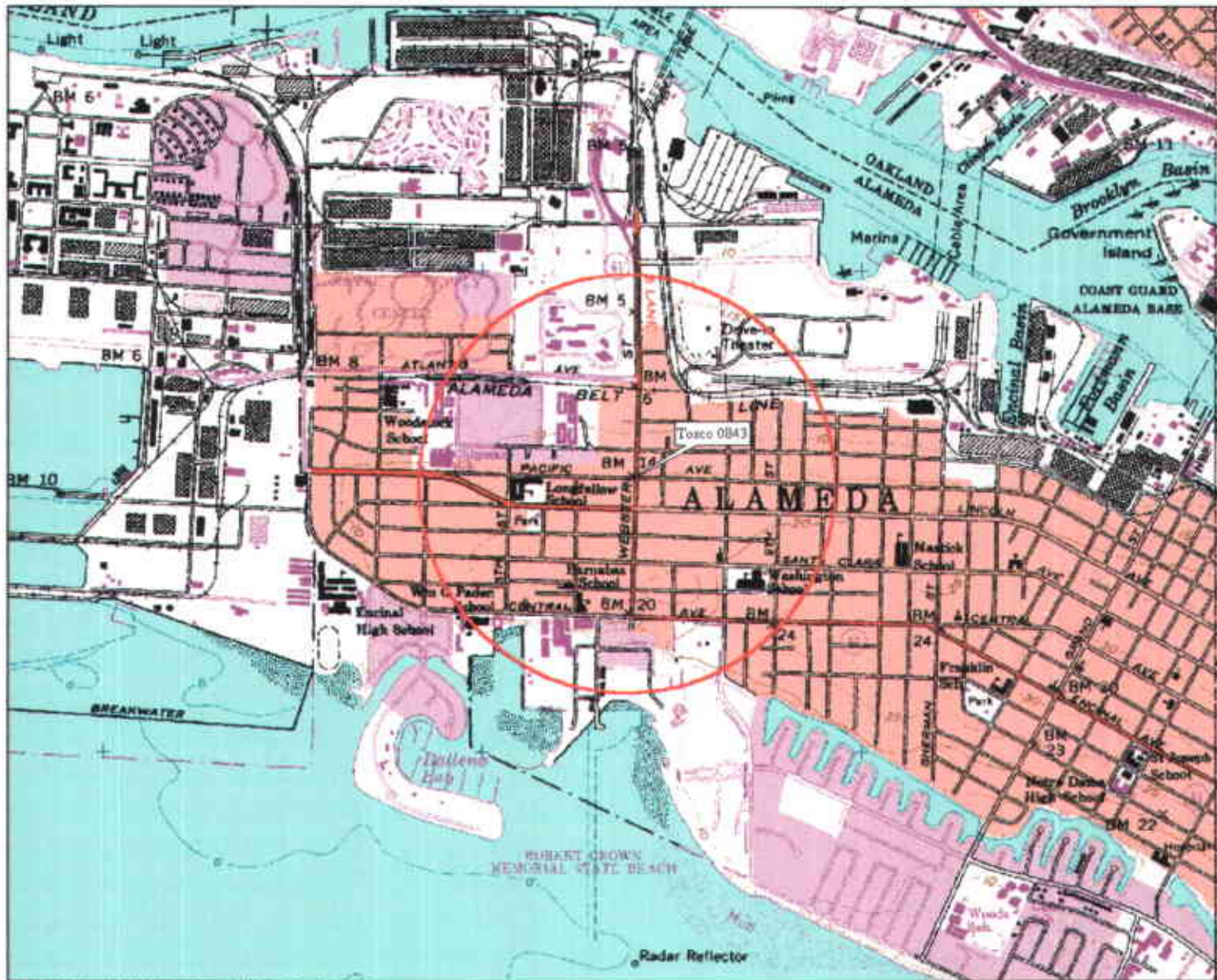
- S-6.5-GP6 = Soil sample-depth-boring number.
- TPHg = Total petroleum hydrocarbons as gasoline analyzed using EPA Method 8015M.
- BTEX = Benzene, toluene, ethylbenzene, and total xylenes analyzed using EPA Method 8020.
- MTBE = Methyl tertiary butyl ether analyzed using EPA Method 8020.
- bgs = Below ground surface.
- ppm = Parts per million.
- < = Less than the stated laboratory reporting limit.

TABLE 2
RESULTS OF LABORATORY ANALYSES OF GROUNDWATER SAMPLES
Former Tosco Service Station 0843
1629 Webster Street
Alameda, California
(Page 1 of 1)

Sample Designation	Depth (feet bgs)	Date Sampled	TPHg <.....ppb.....>	B	T	E	X	MTBE
Soil Boring Samples								
W-7-GP14	7	12/04/01	<50	<0.50	<0.50	<0.50	<0.50	6.4/5.1a
W-7-GP15	7	12/04/01	<50	<0.50	<0.50	<0.50	<0.50	<2.5
W-7-GP16	7	12/04/01	<50	<0.50	<0.50	<0.50	<0.50	<2.5


Notes:

- W-7-GP14 = Water sample-depth-boring number.
- TPHg = Total petroleum hydrocarbons as gasoline analyzed using EPA Method 8015M.
- BTEX = Benzene, toluene, ethylbenzene, and total xylenes analyzed using EPA Method 8020.
- MTBE = Methyl tertiary butyl ether analyzed using EPA Method 8020.
- a = MTBE analyzed using EPA Method 8260B.
- bgs = Below ground surface.
- ppb = Parts per billion.
- < = Less than the stated laboratory reporting limit.



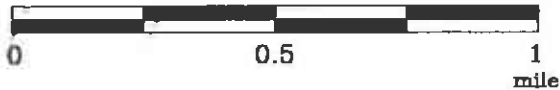
3-D TopoQuads Copyright © 1999 DeLorme Tompkins, ME 04064 Source Date: 08/04 59 02 Scale: 1 : 24,000 Contour: 10' Datum: WGS84

EXPLANATION

 1/2-mile radius circle



APPROXIMATE SCALE



SOURCE:
Modified from a map
provided by
DeLorme 3-D TopoQuads

SITE VICINITY MAP

Former Tosco Service Station 0843
1629 Webster Street
Alameda, California

PROJECT NO.

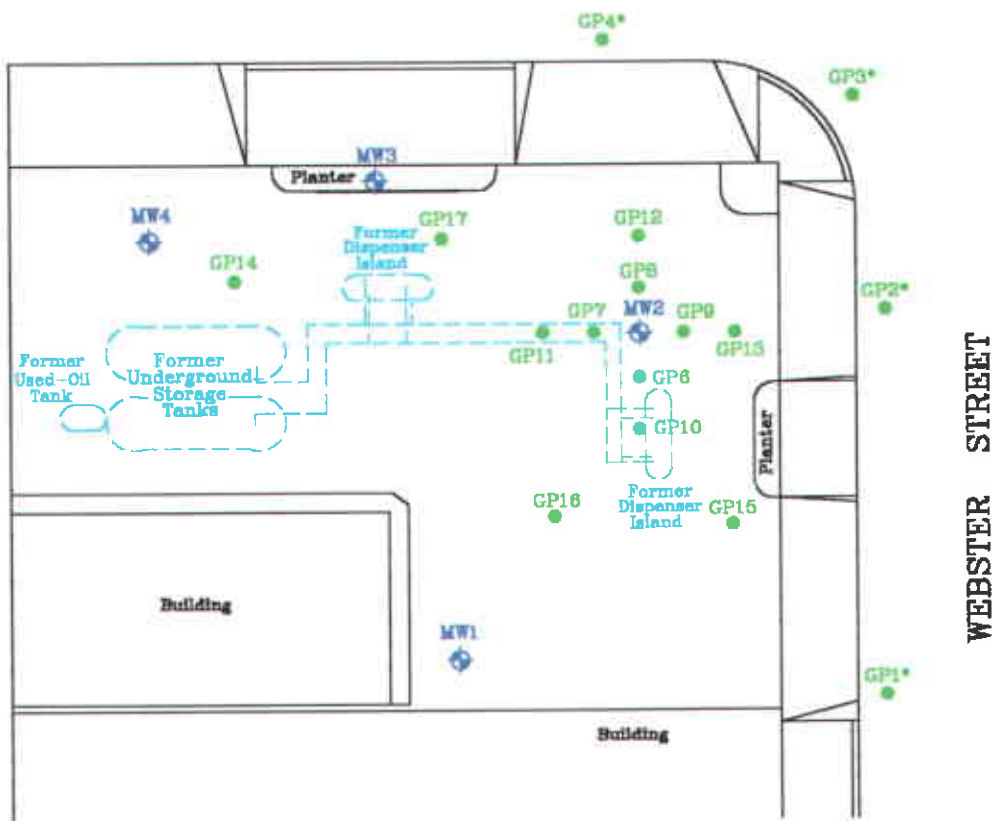
2248

PLATE

1



PACIFIC AVENUE



APPROXIMATE SCALE



SOURCE:
Modified from a map
provided by
Morrow Surveying

FN 22480002

EXPLANATION

- MW4 Groundwater Monitoring Well
- GP17 Direct-Push Soil Boring

• Drilled on May 23, 2001



GENERALIZED SITE PLAN

FORMER TOSCO SERVICE STATION 0843
1629 Webster Street
Alameda, California

PROJECT NO.

2248

PLATE

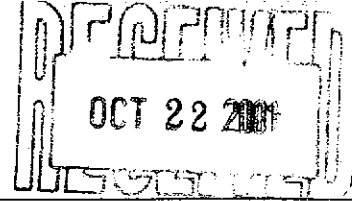
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February 7, 2008

ATTACHMENT A
REGULATORY CORRESPONDENCE

ALAMEDA COUNTY
HEALTH CARE SERVICES

AGENCY
DAVID J. KEARS, Agency Director



ENVIRONMENTAL HEALTH SERVICES
ENVIRONMENTAL PROTECTION
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577
(510) 567-6700
FAX (510) 337-9335

RO0000450

October 18, 2001

2248 03T8

Mr. David DeWitt
Phillips 66 Co.
2000 Crow Canyon Place, Suite 400
San Ramon, CA 94583

RE: Work Plan Approval for Former 76 SS #0843, 1629 Webster Street, Alameda, CA

Dear Mr. DeWitt:

I have completed review of ERI's October 2001 *Work Plan for Supplemental Soil Evaluation*, prepared for the above reference site. The proposal to advance soil borings in the vicinity of the former fuel tank pit and by Well MW-2 is acceptable. Field work should commence within 90 days of the date of this letter. Please provide 72 hours advance notice of field activities.

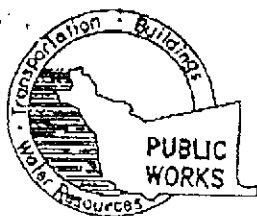
If you have any questions, I can be reached at (510) 567-6762.

eva chu
Hazardous Materials Specialist

c: Paul Blank, ERI, 73 Digital Dr, Suite 100, Novato, CA 94949-5791

ATTACHMENT B

PERMIT



ALAMEDA COUNTY PUBLIC WORKS AGENCY

WATER RESOURCES SECTION

399 ELMHURST ST. HAYWARD CA. 94544-1395

PHONE (510) 670-5534 MARLON MAGALLANES/FRANK CODD (510) 670-5783

FAX (510) 782-1939

DRILLING PERMIT APPLICATION

FOR APPLICANT TO COMPLETE

LOCATION OF PROJECT Former Tosco 765 S. 0843
1629 Webster Street
Alameda, CA

CLIENT
Name Tosco Corporation, Dave DeWitt
Address 3000 Crow Canyon Place Phone 925-277-2384
City San Ramon, CA Zip 94583

APPLICANT
Name Environmental Resolutions Inc.
Rob Saur Fax 415-382-1856
Address 73 Digital Dr. Ste 100 Phone 415-322-3591
City Novato, CA 94949 Zip 94949

TYPE OF PROJECT

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

PROPOSED WATER SUPPLY WELL USE

- New Domestic Replacement Domestic
- Municipal Irrigation
- Industrial Other

DRILLING METHOD:

- Mud Rotary Air Rotary Auger
- Cable Other Direct Push

DRILLER'S NAME Gregg Drilling & Testing Inc.

DRILLER'S LICENSE NO. C57 # 485165

WELL PROJECTS

Drill Hole Diameter _____ in. Maximum _____

Casing Diameter _____ in. Depth _____ ft.

Surface Seal Depth _____ ft. Owner's Well Number _____

GEOTECHNICAL PROJECTS

Number of Borings 10 Maximum _____

Hole Diameter 2 in. Depth 15 ft.

ESTIMATED STARTING DATE 12/4/01

ESTIMATED COMPLETION DATE 12/4/01

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

APPLICANT'S SIGNATURE Rob Saur ERI DATE 10/29/01

PLEASE PRINT NAME, Rob Saur

Rev. 6-5-00

FOR OFFICE USE

PERMIT NUMBER W01-1007

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 original Department of Water Resources Well Completion Report.
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 by tremie with cement grout or cement grout/sand mixture. Upper two-three feet replaced in kind or with compacted cuttings.

E. CATHODIC

Fill hole anode zone with concrete placed by tremie

F. WELL DESTRUCTION

See attached requirements for destruction of shallow wells. Send a map of work site. A different permit application is required for wells deeper than 45 feet.

G. SPECIAL CONDITIONS

NOTE: One application must be submitted for each well or well destruction. Multiple borings on one application are acceptable for geotechnical and contamination investigations.

APPROVED

DATE

10-29-01

ATTACHMENT C

FIELD PROTOCOL

FIELD PROTOCOL

Site Safety Plan

Field work is performed by ERI personnel in accordance with a site safety plan (SSP) developed for the site. The SSP describes the basic safety requirements for the subsurface investigation and the drilling of soil borings at the work site. The SSP is applicable to personnel and subcontractors of ERI. Personnel at the site are informed of the contents of the SSP before work begins. A copy of the SSP is kept at the work site and is available for reference by appropriate parties during the work. The ERI geologist acts as the Site Safety Officer.

Soil Borings and Soil Sampling

Prior to drilling of borings, ERI acquires the necessary permits from the appropriate agency(ies). ERI contacts Underground Service Alert (USA) before drilling to help locate public utility lines at the site. ERI observes the driller clear boring locations to a depth of approximately 4 feet before drilling to reduce the risk of damaging underground structures.

Soil borings are drilled with a B-57 (or similar) drill rig equipped with hollow-stem augers. Auger flights and sampling equipment are steam-cleaned before use to minimize the possibility of crosshole contamination. The rinsate is containerized and stored on site. ERI coordinates the appropriate disposal or recycling of the rinsate with Tosco.

Drilling is performed under the observation of a field geologist, and the earth materials in the borings are identified using visual and manual methods, and classified as drilling progresses using the Unified Soil Classification System. Soil borings are advanced until groundwater is encountered, until refusal, or until the maximum extent of the drill rig is reached.

During drilling, soil samples are collected at 5-foot intervals, obvious changes in lithology, and just above the groundwater surface. Samples are collected with a California-modified, split-spoon sampler equipped with laboratory-cleaned brass sleeves. Samples are collected by advancing the auger to a point just above the sampling depth and driving the sampler into the soil. The sampler is driven 18 inches with a standard 140-pound hammer repeatedly dropped 30 inches. The number of blows required to drive the sampler each successive 6-inch interval is counted and recorded to give an indication of soil consistency.

Soil samples are monitored with a photoionization device (PID), which measures hydrocarbon concentrations in the ambient air or headspace above the soil sample. Field instruments such as the PID are useful for indicating relative levels of hydrocarbon vapors, but do not detect concentrations of hydrocarbons with the same precision as laboratory analyses. Soil samples selected for possible chemical analysis are sealed promptly with Teflon® tape and plastic caps. The samples are labeled and placed in iced storage for transport to the laboratory. Chain of Custody records are initiated by the geologist in the field, updated throughout handling of the samples, and sent with the samples to the laboratory. Copies of these records are included in the final report.

Cuttings generated during drilling are placed on plastic sheeting, covered, and left at the site. ERI coordinates the appropriate disposal or recycling of the cuttings with Tosco.

Hydropunch® Groundwater Sampling

ERI observes the driller push the Hydropunch® (or similar temporary discrete groundwater sampling well point) approximately 2 to 3 feet below the groundwater surface using a GeoProbe® (or similar direct-push rig). The point is then opened exposing a well screen to the formation. ERI collects a discrete groundwater sample for laboratory analysis using a stainless steel bailer cleaned with a laboratory-grade detergent and deionized water. Groundwater is transferred slowly from the bailer to laboratory-cleaned, 1-liter amber bottles and 40-milliliter glass volatile organic analysis vials (VOAs) for analyses by the laboratory. The VOAs contain hydrochloric acid as a preservative. The sampler checks to see if headspace is present. If headspace is present, the sampler collects more samples until none is present. Chain of Custody records are initiated in the field by the sampler, updated throughout handling of the samples, and sent along with the samples to the laboratory. Copies of these records are included in our final report.

Quality Assurance/Quality Control

The sampling and analysis procedures employed by ERI for groundwater sampling follow regulatory guidance documents for quality assurance/quality control (QA/QC). Quality control is maintained by site-specific field protocols and quality control checks performed by the laboratory. Laboratory and field handling of samples may be monitored by including QC samples for analysis. QC samples may include any combination of the following. The number and types of QC samples are selected and analyzed on a project-specific basis.

Trip Blanks – Trip blanks are prepared with organic-free water by the laboratory, and accompany sampling equipment to the project site. They are not opened. Trip blanks travel with the groundwater samples (collected from the project site) to the laboratory and verify that concentrations of analyzed chemical constituents are not being introduced into the samples during transportation.

Bailer Blanks – Bailer blanks are prepared at the project site immediately prior to sample collection using a new disposable bailer or a cleaned stainless steel bailer, and organic-free water. Bailer blanks accompany the groundwater samples (collected from the project site) to the laboratory and verify that concentrations of analyzed chemical constituents are not being introduced into the samples by the sampling equipment and/or methods used in the field.

ATTACHMENT D

**UNIFIED SOIL CLASSIFICATION SYSTEM, SYMBOL KEY,
AND BORING LOGS**

UNIFIED SOIL CLASSIFICATION SYSTEM

MAJOR DIVISIONS	LTR	DESCRIPTION	MAJOR DIVISIONS	LTR	DESCRIPTION		
COARSE GRAINED SOILS	GRAVEL AND GRAVELLY SOILS	GW	Well-graded gravels or gravel sand mixtures, little or no fines	FINE GRAINED SOILS	SILTS AND CLAYS LL<50	ML	Inorganic silts and very fine-grained sands, rock flour, silty or clayey fine sands or clayey silts with slight plasticity
		GP	Poorly-graded gravels or gravel sand mixture, little or no fines			CL	Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, silty clays, lean clays
		GM	Silty gravels, gravel-sand-clay mixtures		OL	Organic silts and organic silt-clays of low plasticity	
		GC	Clayey gravels, gravel-sand-clay mixtures		MH	Inorganic silts, micaceous or diatomaceous fine-grained sandy or silty soils, elastic silts	
	SAND AND SANDY SOILS	SW	Well-graded sands or gravelly sands, little or no fines		SILTS AND CLAYS LL>50	CH	Inorganic clays of high plasticity, fat clays
		SP	Poorly-graded sands or gravelly sands, little or no fines			OH	Organic clays of medium to high plasticity
		SM	Silty sands, sand-silt mixtures			HIGHLY ORGANIC SOILS	Pt
		SC	Clayey sands, sand-clay mixtures				

WELL DESIGN

<p> DEPTH THROUGH WHICH SAMPLER IS DRIVEN</p> <p> RELATIVELY UNDISTURBED SAMPLE</p> <p> MISSED SAMPLE</p> <p> GROUNDWATER LEVEL OBSERVED FROM FIRST WET SOIL SAMPLE IN BORING</p> <p> STATIC GROUNDWATER LEVEL</p> <p>OVM ORGANIC VAPOR METER READING IN PARTS PER MILLION</p> <p>PID PHOTO-IONIZATION DETECTOR READING IN PARTS PER MILLION</p>	<p> SAND PACK</p> <p> BENTONITE ANNULAR SEAL</p> <p> NEAT CEMENT ANNULAR SEAL</p> <p> BLANK PVC</p> <p> MACHINE-SLOTTED PVC</p> <p>S-10 SAMPLE LOCATION</p> <p>NR NOT RECORDED</p> <p>NA NOT ANALYZED</p>
--	--

BLOW/FT. REPRESENTS THE NUMBER OF BLOWS OF A 140-POUND HAMMER FALLING 30 INCHES TO DRIVE THE SAMPLER THROUGH THE LAST 12 INCHES OF AN 18-INCH OR 24-INCH PENETRATION.

DASHED LINES SEPARATING UNITS ON THE LOG REPRESENT APPROXIMATE BOUNDARIES ONLY. ACTUAL BOUNDARIES MAY BE GRADUAL. LOGS REPRESENT SUBSURFACE CONDITIONS AT THE BORING LOCATION AT THE TIME OF DRILLING ONLY.



UNIFIED SOIL CLASSIFICATION SYSTEM AND LOG OF BORINGS SYMBOL KEY

FORMER TOSCO SERVICE STATION 0843
1629 Webster Street
Alameda, California

ATTACHMENT

D

PROJECT

2248



Project No.: 2248 Boring: GP6 Plate: 1 OF 1
 Site: Former Tosco Service Station 0843 Date: 12/4/01
 Drill Contractor: Gregg Drilling & Testing, Inc.

Sample Method: Direct Push Geologist: John B. Bobbitt
 Drill Rig: Marl 2.5 Bore Hole Diameter: 2" Signature: [Signature]
 Location: 7' South of MW2 Registration: R.G. 4313
 Logged by: Rob A. Saur

DEPTH (ft)	BLOW COUNTS	PD/OVM (ppm)	SAMPLE	COLUMN	USCS	GEOLOGIC DESCRIPTION	WELL DESIGN
					FL	Fill to 3'	
					SP	Sand: fine grained, brown, damp, sub-rounded poorly graded wet at 7' blueish gray from 7' to 8'	
5							
10						Total depth: 8 feet	

Casing Diameter: NA Slot Size: NA Sand Size: NA Grout: Portland I, II



Project No.: 2248 Boring: GP7 Plate: 1 OF 1

Site: Former Tosco Service Station 0843 Date: 12/4/01

Drill Contractor: Gregg Drilling & Testing, Inc.

Sample Method: Direct Push Geologist: John B. Bobbitt

Drill Rig: Mari 2.5 Bore Hole Diameter: 2" Signature: *[Handwritten Signature]*

Location: 7' West of MW2 Registration: R.G. 4313

Logged by: Rob A. Saur

DEPTH (ft)	BLOW COUNTS	PID/OWM (ppm)	SAMPLE	COLUMN	USCS	GEOLOGIC DESCRIPTION	WELL DESIGN
0	0				SP	Sand: fine grained, brown, damp, sub-rounded, poorly graded	PORTLAND I, II
0	0					wet	
10						Total depth = 8 feet	

Casing Diameter: NA Slot Size: NA Sand Size: NA Grout: Portland I, II



Project No.: 2248 Boring: GP8 Plate: 1 OF 1
 Site: Former Tosco Service Station 0843 Date: 12/4/01
 Drill Contractor: Gregg Drilling & Testing, Inc.

Sample Method: Direct Push Geologist: John B. Bobbitt
 Drill Rig: Marl 2.5 Bore Hole Diameter: 2" Signature: [Signature]
 Location: 7' North of MW2 Registration: R.G. 4313
 Logged by: Rob A. Saur

DEPTH (ft)	BLOW COUNTS	PTD/OVM (ppm)	SAMPLE	COLUMN	USCS	GEOLOGIC DESCRIPTION	WELL DESIGN
0						Sand: fine grained, brown, damp, sub-rounded, poorly graded	
5					SP		
6.5						wet at 6.5'	
7						blueish green from 7' to 8'	
8						Total depth = 8 feet	

Casing Diameter: NA Slot Size: NA Sand Size: NA Grout: Portland II



Project No.: 2248 Boring: GP9 Plate: 1 OF 1
 Site: Former Tosco Service Station 0843 Date: 12/4/01
 Drill Contractor: Gregg Drilling & Testing, Inc.

Sample Method: Direct Push Geologist: John B. Bobbitt
 Drill Rig: Marl 2.5 Bore Hole Diameter: 2" Signature: [Signature]
 Location: 7' East of MW2 Registration: R.G. 4313
 Logged by: Rob A. Saur

DEPTH (ft)	BLOW COUNTS	PTD/OVM (ppm)	SAMPLE	COLUMN	USCS	GEOLOGIC DESCRIPTION	WELL DESIGN
5						Sand: fine grained, brown, damp, sub-rounded, poorly graded	[Hatched Pattern]
				SP		wet at 6.5' blueish green from 7' to 8'	
10						Total depth = 8 feet	

Casing Diameter: NA Slot Size: NA Sand Size: NA Grout: Portland I,II



Project No.: 2248 Boring: GP10 Plate: 1 OF 1
 Site: Former Tosco Service Station 0843 Date: 12/4/01
 Drill Contractor: Gregg Drilling & Testing, Inc.

Sample Method: Direct Push Geologist: John B. Bobbitt
 Drill Rig: Marl 2.5 Bore Hole Diameter: 2" Signature: [Signature]
 Location: 15' South of MW2 Registration: R.G. 4313
 Logged by: Rob A. Saur

DEPTH (ft)	BLOW COUNTS	PID/OVM (ppm)	SAMPLE	COLUMN	USCS	GEOLOGIC DESCRIPTION	WELL DESIGN
					FL	Fill to 3'	
0					SP	Sand: fine grained, brown, damp sub-rounded poorly graded	
5						wet at 7' slight blue-green staining from 7' to 8'	
10						Total depth = 8 feet	

Casing Diameter: NA Slot Size: NA Sand Size: NA Grout: Portland II



Project No.: 2248 Boring: GP11 Plate: 1 OF 1
 Site: Former Tosco Service Station 0843 Date: 12/4/01
 Drill Contractor: Gregg Drilling & Testing, Inc.

Sample Method: Direct Push Geologist: John B. Bobbitt
 Drill Rig: Marl 2.5 Bore Hole Diameter: 2" Signature: [Signature]
 Location: 15' West of MW2 Registration: R.G. 4313
 Logged by: Rob A. Saur

DEPTH (ft)	BLOW COUNTS	PD/OVM (ppm)	SAMPLE	COLUMN	USCS	GEOLOGIC DESCRIPTION	WELL DESIGN
5	0					Sand: fine grained, brown, damp, sub-rounded, poorly graded	[Hatched Pattern]
	0			SP		wet at 7' slight blue-green staining from 7' to 8'	
10						Total depth = 8 feet	

Casing Diameter: NA Slot Size: NA Sand Size: NA Grout: Portland II



Project No.: 2248 Boring: GP12 Plate: 1 OF 1
 Site: Former Tosco Service Station 0843 Date: 12/4/01
 Drill Contractor: Gregg Drilling & Testing, Inc.

Sample Method: Direct Push Geologist: John B. Bobbitt
 Drill Rig: Marl 2.5 Bore Hole Diameter: 2" Signature: [Signature]
 Location: 15' North of MW2 Registration: R.G. 4313
 Logged by: Rob A. Saur

DEPTH (ft)	BLOW COUNTS	PTD/OVM (p/ft)	SAMPLE	COLUMN	USCS	GEOLOGIC DESCRIPTION	WELL DESIGN
0							
5						Sand: fine grained, brown, damp, sub-rounded, poorly graded	
6.5					SP	wet at 6.5' blueish green at 7'	
15						brown at 15'	
						Total depth = 16 feet	

Casing Diameter: NA Slot Size: NA Sand Size: NA, Grout: Portland I.II



Project No.: 2248 Boring: GP13 Plate: 1 OF 1
 Site: Former Tosco Service Station 0B43 Date: 12/4/01
 Drill Contractor: Gregg Drilling & Testing, Inc.

Sample Method: Direct Push Geologist: John B. Bobbitt
 Drill Rig: Marl 2.5 Bore Hole Diameter: 2" Signature: *[Signature]*
 Location: 15' East of MW2 Registration: R.G. 4313
 Logged by: Rob A. Saur

DEPTH (ft)	BLOW COUNTS	PD/OVM (ppm)	SAMPLE COLUMN	USCS	GEOLOGIC DESCRIPTION	WELL DESIGN
5			SP		Sand: fine grained, brown, damp, sub-rounded, poorly graded	
					wet at 7' slight blueish green from 7' to 8'	
10					Total depth = 8 feet	
15						

Casing Diameter: NA Slot Size: NA Sand Size: NA Grout: Portland I,II



Project No.: 2248 Boring: GP14 Plate: 1 OF 1

Site: Former Tosco Service Station 0843 Date: 12/4/01

Drill Contractor: Gregg Drilling & Testing, Inc.

Sample Method: Direct Push Geologist: John B. Bobbitt

Drill Rig: Marl 2.5 Bore Hole Diameter: 2" Signature: *[Handwritten Signature]*

Location: 10' Southeast of MW4 Registration: R.G. 4313

Logged by: Rob A. Saur

DEPTH (ft)	BLOW COUNTS	PID/OVM (ppm)	SAMPLE	COLUMN	USCS	GEOLOGIC DESCRIPTION	WELL DESIGN
0	0					Sand: fine grained, brown, damp, sub-rounded, poorly graded	PORTLAND I.II
5	0			SP		wet at 7.5'	
10						Total depth = 8 feet	

Casing Diameter: NA Slot Size: NA Sand Size: NA Grout: NA Portland I.II



Project No.: 2248 Boring: GP15 Plate: 1 OF 1
 Site: Former Tosco Service Station 0B43 Date: 12/4/01
 Drill Contractor: Gregg Drilling & Testing, Inc.

Sample Method: Direct Push Geologist: John B. Robbitt
 Drill Rig: Marl 2.5 Bore Hole Diameter: 2" Signature: *J. B. Robbitt*
 Location: 30' Southeast of MW4 Registration: R.G. 4313
 Logged by: Rob A. Saur

DEPTH (ft.)	BLOW COUNTS	PD/OVM (ppm)	SAMPLE COLUMN	USCS	GEOLOGIC DESCRIPTION	WELL DESIGN
0					Sand: fine grained, brown, damp, sub-rounded, poorly graded	[Hatched pattern]
5					wet at 7'	
10				SP		
15						
					Total depth = 16 feet	

Casing Diameter: NA Slot Size: NA Sand Size: NA Grout: Portland I,II



Project No.: 2248 Boring: GP16 Plate: 1 OF 1
 Site: Former Tosco Service Station 0843 Date: 12/4/01
 Drill Contractor: Gregg Drilling & Testing, Inc.

Sample Method: Direct Push Geologist: John B. Bobbitt
 Drill Rig: Marl 2.5 Bore Hole Diameter: 2" Signature: [Signature]
 Location: 30' Southwest of MW1 Registration: R.G. 4313
 Logged by: Rob A. Saur

DEPTH (ft)	BLOW COUNTS	PTD/OVM (ppm)	SAMPLE	COLUMN	USCS	GEOLOGIC DESCRIPTION	WELL DESIGN
0	0					Sand: fine grained, brown, damp, sub-rounded, poorly graded	[Hatched Area]
5	0					wet at 7'	
10	0			SP		very slight blueish-green tint from 10' to 11' brown	
15	0					Total depth = 16 feet	

Casing Diameter: NA Slot Size: NA, Sand Size: NA, Grout: Portland I.II



Project No.: 2248 Boring: GP17 Plate: 1 OF 1
 Site: Former Tosco Service Station 0843 Date: 12/4/01
 Drill Contractor: Gregg Drilling & Testing, Inc.

Sample Method: Direct Push Geologist: John B. Bobbitt
 Drill Rig: Marl 2.5 Bore Hole Diameter: 2" Signature: [Signature]
 Location: 10' Southeast of MW3 Registration: R.G. 4313
 Logged by: Rob A. Saur

DEPTH (ft)	BLOW COUNTS	PID/OVM (ppm)	SAMPLE COLUMN	USCS	GEOLOGIC DESCRIPTION	WELL DESIGN
5			SP		Sand: fine grained, brown, damp, sub-rounded, poorly graded	
					wet at 7'	
10					Total depth = 8 feet	

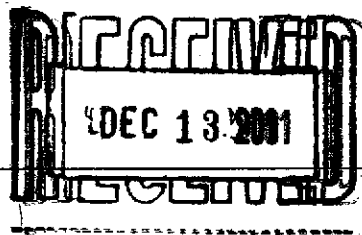
Casing Diameter: NA Slot Size: NA, Sand Size: NA, Grout: Portland I.II

ATTACHMENT E

**LABORATORY ANALYSIS REPORTS AND
CHAIN-OF-CUSTODY RECORDS**



Sequoia
Analytical



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

12 December, 2001

Paul Blank
ERI
73 Digital Dr. Suite 100
Novato, CA 94949

RE: TOSCO/PHILLIPS
Sequoia Work Order: P112179

Enclosed are the results of analyses for samples received by the laboratory on 12/07/01 15:00. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Angelee Cari
Client Services Representative

CA ELAP Certificate #2374



ERI
73 Digital Dr. Suite 100
Novato CA, 94949

Project: TOSCO/PHILLIPS
Project Number: 0843/Alameda, CA.
Project Manager: Paul Blank

Reported:
12/12/01 13:48

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
S-6.5-GP6	P112179-02	Soil	12/04/01 10:30	12/07/01 15:00
S-6.5-GP7	P112179-04	Soil	12/04/01 08:30	12/07/01 15:00
S-6-GP8	P112179-06	Soil	12/04/01 10:00	12/07/01 15:00
S-6-GP9	P112179-08	Soil	12/04/01 10:50	12/07/01 15:00
S-6.5-GP10	P112179-10	Soil	12/04/01 11:10	12/07/01 15:00
S-6.5-GP11	P112179-12	Soil	12/04/01 08:50	12/07/01 15:00
S-12-GP12	P112179-13	Soil	12/04/01 09:30	12/07/01 15:00
S-6-GP12	P112179-15	Soil	12/04/01 09:15	12/07/01 15:00
S-6.5-GP13	P112179-17	Soil	12/04/01 11:40	12/07/01 15:00
S-12-GP13	P112179-18	Soil	12/04/01 11:50	12/07/01 15:00
S-7-GP14	P112179-20	Soil	12/04/01 12:10	12/07/01 15:00
S-6-GP15	P112179-22	Soil	12/04/01 12:40	12/07/01 15:00
S-16-GP15	P112179-23	Soil	12/04/01 12:50	12/07/01 15:00
S-6.5-GP16	P112179-25	Soil	12/04/01 13:25	12/07/01 15:00
S-12-GP16	P112179-26	Soil	12/04/01 13:35	12/07/01 15:00
S-6.5-GP17	P112179-29	Soil	12/04/01 14:15	12/07/01 15:00

Samples received at 3.1 degrees C.

Sequoia Analytical - Petaluma

Angelee Cari

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



ERI
 73 Digital Dr. Suite 100
 Novato CA, 94949

Project: TOSCO/PHILLIPS
 Project Number: 0843/Alameda, CA.
 Project Manager: Paul Blank

Reported:
 12/12/01 13:48

Total Petroleum Hydrocarbons as Gasoline and BTEX by EPA 8015M/8020M
Sequoia Analytical - Petaluma

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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S-6.5-GP6 (P112179-02) Soil Sampled: 12/04/01 10:30 Received: 12/07/01 15:00

Gasoline (C6-C12)	ND	1.0	mg/kg	1	1120224	12/11/01	12/11/01	EPA 8015M/8020M	
Benzene	ND	0.0050	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.0050	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	0.050	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		102 %		65-135	"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		96 %		65-135	"	"	"	"	

S-6.5-GP7 (P112179-04) Soil Sampled: 12/04/01 08:30 Received: 12/07/01 15:00

Gasoline (C6-C12)	ND	1.0	mg/kg	1	1120224	12/11/01	12/11/01	EPA 8015M/8020M	
Benzene	ND	0.0050	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.0050	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	0.050	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		104 %		65-135	"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		96 %		65-135	"	"	"	"	

S-6-GP8 (P112179-06) Soil Sampled: 12/04/01 10:00 Received: 12/07/01 15:00

Gasoline (C6-C12)	ND	1.0	mg/kg	1	1120224	12/11/01	12/11/01	EPA 8015M/8020M	
Benzene	ND	0.0050	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.0050	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	0.050	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		104 %		65-135	"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		94 %		65-135	"	"	"	"	



ERI
73 Digital Dr. Suite 100
Novato CA, 94949

Project: TOSCO/PHILLIPS
Project Number: 0843/Alameda, CA.
Project Manager: Paul Blank

Reported:
12/12/01 13:48

Total Petroleum Hydrocarbons as Gasoline and BTEX by EPA 8015M/8020M
Sequoia Analytical - Petaluma

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
S-6-GP9 (P112179-08) Soil Sampled: 12/04/01 10:50 Received: 12/07/01 15:00									
Gasoline (C6-C12)	ND	1.0	mg/kg	1	1120224	12/11/01	12/11/01	EPA 8015M/8020M	
Benzene	ND	0.0050	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.0050	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	0.050	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		106 %	65-135		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		95 %	65-135		"	"	"	"	
S-6.5-GP10 (P112179-10) Soil Sampled: 12/04/01 11:10 Received: 12/07/01 15:00									
Gasoline (C6-C12)	ND	1.0	mg/kg	1	1120224	12/11/01	12/11/01	EPA 8015M/8020M	
Benzene	ND	0.0050	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.0050	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	0.050	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		106 %	65-135		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		98 %	65-135		"	"	"	"	
S-6.5-GP11 (P112179-12) Soil Sampled: 12/04/01 08:50 Received: 12/07/01 15:00									
Gasoline (C6-C12)	ND	1.0	mg/kg	1	1120224	12/11/01	12/11/01	EPA 8015M/8020M	
Benzene	ND	0.0050	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.0050	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	0.050	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		102 %	65-135		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		97 %	65-135		"	"	"	"	



ERI
 73 Digital Dr. Suite 100
 Novato CA, 94949

Project: TOSCO/PHILLIPS
 Project Number: 0843/Alameda, CA.
 Project Manager: Paul Blank

Reported:
 12/12/01 13:48

Total Petroleum Hydrocarbons as Gasoline and BTEX by EPA 8015M/8020M
Sequoia Analytical - Petaluma

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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S-12-GP12 (P112179-13) Soil Sampled: 12/04/01 09:30 Received: 12/07/01 15:00

Gasoline (C6-C12)	ND	1.0	mg/kg	1	1120224	12/11/01	12/11/01	EPA 8015M/8020M	
Benzene	ND	0.0050	"	"	"	"	"	"	"
Toluene	ND	0.0050	"	"	"	"	"	"	"
Ethylbenzene	0.010	0.0050	"	"	"	"	"	"	"
Xylenes (total)	0.015	0.0050	"	"	"	"	"	"	"
Methyl tert-butyl ether	ND	0.050	"	"	"	"	"	"	"
Surrogate: a,a,a-Trifluorotoluene		104 %	65-135		"	"	"	"	"
Surrogate: 4-Bromofluorobenzene		97 %	65-135		"	"	"	"	"

S-6-GP12 (P112179-15) Soil Sampled: 12/04/01 09:15 Received: 12/07/01 15:00

Gasoline (C6-C12)	ND	1.0	mg/kg	1	1120224	12/11/01	12/11/01	EPA 8015M/8020M	
Benzene	ND	0.0050	"	"	"	"	"	"	"
Toluene	ND	0.0050	"	"	"	"	"	"	"
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	"
Xylenes (total)	ND	0.0050	"	"	"	"	"	"	"
Methyl tert-butyl ether	ND	0.050	"	"	"	"	"	"	"
Surrogate: a,a,a-Trifluorotoluene		104 %	65-135		"	"	"	"	"
Surrogate: 4-Bromofluorobenzene		96 %	65-135		"	"	"	"	"

S-6.5-GP13 (P112179-17) Soil Sampled: 12/04/01 11:40 Received: 12/07/01 15:00

Gasoline (C6-C12)	ND	1.0	mg/kg	1	1120224	12/11/01	12/11/01	EPA 8015M/8020M	
Benzene	ND	0.0050	"	"	"	"	"	"	"
Toluene	ND	0.0050	"	"	"	"	"	"	"
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	"
Xylenes (total)	ND	0.0050	"	"	"	"	"	"	"
Methyl tert-butyl ether	ND	0.050	"	"	"	"	"	"	"
Surrogate: a,a,a-Trifluorotoluene		102 %	65-135		"	"	"	"	"
Surrogate: 4-Bromofluorobenzene		97 %	65-135		"	"	"	"	"



ERI
73 Digital Dr. Suite 100
Novato CA, 94949

Project: TOSCO/PHILLIPS
Project Number: 0843/Alameda, CA.
Project Manager: Paul Blank

Reported:
12/12/01 13:48

Total Petroleum Hydrocarbons as Gasoline and BTEX by EPA 8015M/8020M
Sequoia Analytical - Petaluma

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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S-12-GP13 (P112179-18) Soil Sampled: 12/04/01 11:50 Received: 12/07/01 15:00

Gasoline (C6-C12)	ND	1.0	mg/kg	1	1120224	12/11/01	12/11/01	EPA 8015M/8020M	
Benzene	ND	0.0050	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.0050	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	0.050	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		106 %	65-135		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		98 %	65-135		"	"	"	"	

S-7-GP14 (P112179-20) Soil Sampled: 12/04/01 12:10 Received: 12/07/01 15:00

Gasoline (C6-C12)	ND	1.0	mg/kg	1	1120224	12/11/01	12/11/01	EPA 8015M/8020M	
Benzene	ND	0.0050	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.0050	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	0.050	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		107 %	65-135		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		93 %	65-135		"	"	"	"	

S-6-GP15 (P112179-22) Soil Sampled: 12/04/01 12:40 Received: 12/07/01 15:00

Gasoline (C6-C12)	ND	1.0	mg/kg	1	1120224	12/11/01	12/11/01	EPA 8015M/8020M	
Benzene	ND	0.0050	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.0050	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	0.050	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		103 %	65-135		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		98 %	65-135		"	"	"	"	



ERI
 73 Digital Dr. Suite 100
 Novato CA, 94949

Project: TOSCO/PHILLIPS
 Project Number: 0843/Alameda, CA.
 Project Manager: Paul Blank

Reported:
 12/12/01 13:48

Total Petroleum Hydrocarbons as Gasoline and BTEX by EPA 8015M/8020M
Sequoia Analytical - Petaluma

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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S-16-GP15 (P112179-23) Soil Sampled: 12/04/01 12:50 Received: 12/07/01 15:00

Gasoline (C6-C12)	ND	1.0	mg/kg	1	1120224	12/11/01	12/11/01	EPA 8015M/8020M	
Benzene	ND	0.0050	"	"	"	"	"	"	"
Toluene	ND	0.0050	"	"	"	"	"	"	"
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	"
Xylenes (total)	ND	0.0050	"	"	"	"	"	"	"
Methyl tert-butyl ether	ND	0.050	"	"	"	"	"	"	"
<i>Surrogate: a,a,a-Trifluorotoluene</i>		105 %		65-135	"	"	"	"	"
<i>Surrogate: 4-Bromofluorobenzene</i>		97 %		65-135	"	"	"	"	"

S-6.5-GP16 (P112179-25) Soil Sampled: 12/04/01 13:25 Received: 12/07/01 15:00

Gasoline (C6-C12)	ND	1.0	mg/kg	1	1120224	12/11/01	12/11/01	EPA 8015M/8020M	
Benzene	ND	0.0050	"	"	"	"	"	"	"
Toluene	ND	0.0050	"	"	"	"	"	"	"
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	"
Xylenes (total)	ND	0.0050	"	"	"	"	"	"	"
Methyl tert-butyl ether	ND	0.050	"	"	"	"	"	"	"
<i>Surrogate: a,a,a-Trifluorotoluene</i>		106 %		65-135	"	"	"	"	"
<i>Surrogate: 4-Bromofluorobenzene</i>		96 %		65-135	"	"	"	"	"

S-12-GP16 (P112179-26) Soil Sampled: 12/04/01 13:35 Received: 12/07/01 15:00

Gasoline (C6-C12)	ND	1.0	mg/kg	1	1120224	12/11/01	12/11/01	EPA 8015M/8020M	
Benzene	ND	0.0050	"	"	"	"	"	"	"
Toluene	ND	0.0050	"	"	"	"	"	"	"
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	"
Xylenes (total)	ND	0.0050	"	"	"	"	"	"	"
Methyl tert-butyl ether	ND	0.050	"	"	"	"	"	"	"
<i>Surrogate: a,a,a-Trifluorotoluene</i>		103 %		65-135	"	"	"	"	"
<i>Surrogate: 4-Bromofluorobenzene</i>		87 %		65-135	"	"	"	"	"



ERI
73 Digital Dr. Suite 100
Novato CA, 94949

Project: TOSCO/PHILLIPS
Project Number: 0843/Alameda, CA.
Project Manager: Paul Blank

Reported:
12/12/01 13:48

**Total Petroleum Hydrocarbons as Gasoline and BTEX by EPA 8015M/8020M
Sequoia Analytical - Petaluma**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
S-6.5-GP17 (P112179-29) Soil Sampled: 12/04/01 14:15 Received: 12/07/01 15:00									
Gasoline (C6-C12)	ND	1.0	mg/kg	1	1120224	12/11/01	12/11/01	EPA 8015M/8020M	
Benzene	ND	0.0050	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.0050	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	0.050	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		106 %		65-135	"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		98 %		65-135	"	"	"	"	



ERJ
 73 Digital Dr. Suite 100
 Novato CA, 94949

Project: TOSCO/PHILLIPS
 Project Number: 0843/Alameda, CA.
 Project Manager: Paul Blank

Reported:
 12/12/01 13:48

Total Petroleum Hydrocarbons as Gasoline and BTEX by EPA 8015M/8020M - Quality Control
Sequoia Analytical - Petaluma

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 1120224 - EPA 5030, soils

Blank (1120224-BLK1)

Prepared & Analyzed: 12/11/01

Gasoline (C6-C12)	ND	1.0	mg/kg							
Benzene	ND	0.0050	"							
Toluene	ND	0.0050	"							
Ethylbenzene	ND	0.0050	"							
Xylenes (total)	ND	0.0050	"							
Methyl tert-butyl ether	ND	0.050	"							
<i>Surrogate: a,a,a-Trifluorotoluene</i>	0.607		"	0.600		101	65-135			
<i>Surrogate: 4-Bromofluorobenzene</i>	0.590		"	0.600		98	65-135			

LCS (1120224-BS1)

Prepared & Analyzed: 12/11/01

Gasoline (C6-C12)	5.35	1.0	mg/kg	5.50		97	65-135			
Benzene	0.0810	0.0050	"	0.0660		123	65-135			
Toluene	0.395	0.0050	"	0.397		99	65-135			
Ethylbenzene	0.0880	0.0050	"	0.0920		96	65-135			
Xylenes (total)	0.480	0.0050	"	0.461		104	65-135			
Methyl tert-butyl ether	0.136	0.050	"	0.105		130	65-135			
<i>Surrogate: a,a,a-Trifluorotoluene</i>	0.596		"	0.600		99	65-135			
<i>Surrogate: 4-Bromofluorobenzene</i>	0.602		"	0.600		100	65-135			

Matrix Spike (1120224-MS1)

Source: P112179-02

Prepared & Analyzed: 12/11/01

Gasoline (C6-C12)	5.91	1.0	mg/kg	5.50	ND	107	65-135			
Benzene	0.0714	0.0050	"	0.0660	ND	108	65-135			
Toluene	0.446	0.0050	"	0.397	ND	112	65-135			
Ethylbenzene	0.102	0.0050	"	0.0920	ND	111	65-135			
Xylenes (total)	0.546	0.0050	"	0.461	ND	118	65-135			
Methyl tert-butyl ether	0.148	0.050	"	0.105	ND	141	65-135			QM-07
<i>Surrogate: a,a,a-Trifluorotoluene</i>	0.629		"	0.600		105	65-135			
<i>Surrogate: 4-Bromofluorobenzene</i>	0.591		"	0.600		98	65-135			



ERI
73 Digital Dr. Suite 100
Novato CA, 94949

Project: TOSCO/PHILLIPS
Project Number: 0843/Alameda, CA.
Project Manager: Paul Blank

Reported:
12/12/01 13:48

Total Petroleum Hydrocarbons as Gasoline and BTEX by EPA 8015M/8020M - Quality Control
Sequoia Analytical - Petaluma

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1120224 - EPA 5030, soils										
Matrix Spike Dup (1120224-MSD1)										
		Source: P112179-02			Prepared & Analyzed: 12/11/01					
Gasoline (C6-C12)	5.74	1.0	mg/kg	5.50	ND	104	65-135	3	20	
Benzene	0.0714	0.0050	"	0.0660	ND	108	65-135	0	20	
Toluene	0.437	0.0050	"	0.397	ND	110	65-135	2	20	
Ethylbenzene	0.0974	0.0050	"	0.0920	ND	106	65-135	5	20	
Xylenes (total)	0.526	0.0050	"	0.461	ND	114	65-135	4	20	
Methyl tert-butyl ether	0.148	0.050	"	0.105	ND	141	65-135	0	20	QM-07
<hr/>										
Surrogate: a,a,a-Trifluorotoluene	0.613		"	0.600		102	65-135			
Surrogate: 4-Bromofluorobenzene	0.570		"	0.600		95	65-135			



ERI
73 Digital Dr. Suite 100
Novato CA, 94949

Project: TOSCO/PHILLIPS
Project Number: 0843/Alameda, CA.
Project Manager: Paul Blank

Reported:
12/12/01 13:48

Notes and Definitions

- QM-07 The spike recovery was outside control limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
- DET Analyte DETECTED
- ND Analyte NOT DETECTED at or above the reporting limit
- NR Not Reported
- dry Sample results reported on a dry weight basis
- RPD Relative Percent Difference

No 007398 TOSCO

885 Jarvis Drive • Morgan Hill, CA 95037 • (408) 776-9600 • FAX (408) 762-6300
 819 Striker Ave., Suite 8 • Sacramento, CA 95834 • (916) 921-9600 • FAX (916) 921-0100
 404 N. Wiget Lane • Walnut Creek, CA 94598 • (925) 988-9600 • FAX (925) 988-9673
 1455 McDowell Blvd. North, Suite D • Petaluma, CA 94954 • (707) 792-1865 • FAX (707) 792-0342
 1551 Industrial Road • San Carlos, CA 94070 • (650) 232-9600 • FAX (650) 232-9612

Consultant Company: <u>ERT</u>			Tosco Engineer: <u>Dave DeWitt</u>		
Address: <u>73 Digital Dr Ste 100</u>			Site #: <u>0843</u>		
City: <u>Novato</u>	State: <u>CA</u>	Zip Code: <u>94949</u>	Site Address: <u>1629 Webster St</u>		
Telephone: <u>415-382-9105</u> Fax #: <u>415-382-1856</u>			City, State: <u>Alameda, CA</u>		
Report To: <u>Paul Blank</u>		Sampler: <u>Rob Saur</u>		QC Data: <input checked="" type="checkbox"/> Level D (Standard) <input type="checkbox"/> Level C <input type="checkbox"/> Level B <input type="checkbox"/> Level A	

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

Drinking Water
 Waste Water
 Other

Analyses Requested

<input checked="" type="checkbox"/> TPH/BTEX/MTBE	<input checked="" type="checkbox"/> TPH Diesel (B015)	<input checked="" type="checkbox"/> TOG (A10:1)	<input checked="" type="checkbox"/> Oxygenates (6) 8260	<input checked="" type="checkbox"/> Oxygenates (9) EDB	<input checked="" type="checkbox"/> PCBs (230)	<input checked="" type="checkbox"/> PAHs (16:1)	<input checked="" type="checkbox"/> PAHs (16:1)
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Project Coding: 224803T 8

Client Sample I.D.	Date/Time Sampled	Matrix Desc.	# of Cont.	Cont. Type	Sequoia's Sample #	Analyses Requested	Comments
1. <u>S-4-GP6</u>	<u>12/1/01 1015</u>	<u>Soil</u>	<u>1</u>	<u>Slurry</u>	<u>PI1279-01</u>		<u>Hold</u>
2. <u>S-65-GP6</u>	<u>1030</u>				<u>-02</u>	<input checked="" type="checkbox"/>	
3. <u>S-4-GP7</u>	<u>810</u>				<u>-03</u>		<u>Hold</u>
4. <u>S-65-GP7</u>	<u>830</u>				<u>-04</u>	<input checked="" type="checkbox"/>	
5. <u>S-4-GP8</u>	<u>930</u>				<u>-05</u>		<u>Hold</u>
6. <u>S-6-GP8</u>	<u>1000</u>				<u>-06</u>	<input checked="" type="checkbox"/>	<u>COOLER CUSTODY SEALS INTACT <input type="checkbox"/></u>
7. <u>S-4-GP9</u>	<u>1040</u>				<u>-07</u>		<u>Hold</u>
8. <u>S-6-GP9</u>	<u>1050</u>				<u>-08</u>	<input checked="" type="checkbox"/>	<u>NOT INTACT <input type="checkbox"/></u>
9. <u>S-4-GP10</u>	<u>1100</u>				<u>-09</u>		<u>COOLER TEMPERATURE <u>3.1</u></u>
10. <u>S-65-GP10</u>	<u>1110</u>				<u>-10</u>	<input checked="" type="checkbox"/>	<u>Hold</u>

Relinquished By: <u>Rob Saur</u>	Date: <u>12/6/01</u>	Time: <u>1200</u>	Received By: <u>[Signature]</u>	Date: <u>12-7-01</u>	Time: <u>1400</u>
Relinquished By: _____	Date: _____	Time: _____	Received By: _____	Date: _____	Time: <u>1500</u>
Relinquished By: _____	Date: _____	Time: _____	Received By: _____	Date: _____	Time: _____

Were Samples Received in Good Condition? Yes No
 Samples on Ice? Yes No
 Method of Shipment _____
 Page 1 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 - Sequoia

White - Sequoia

TOSCO

Nº 007399

- 885 Jarvis Drive • Morgan Hill, CA 95037 • (408) 776-9600 • FAX (408) 782-6308
- 819 Striker Ave., Suite 8 • Sacramento, CA 95834 • (916) 921-9600 • FAX (916) 921-0100
- 404 N. Wiget Lane • Walnut Creek, CA 94598 • (925) 988-9600 • FAX (925) 988-9673
- 1455 McDowell Blvd. North, Suite D • Petaluma, CA 94954 • (707) 792-1865 • FAX (707) 792-0342
- 1551 Industrial Road • San Carlos, CA 94070 • (650) 232-9600 • FAX (650) 232-9612

Consultant Company: <u>ERI</u>			Tosco Engineer: <u>Dave Dewitt</u>		
Address: <u>73 Digital Dr Ste 100</u>			Site #: <u>0843</u>		
City: <u>Novato</u>		State: <u>CA</u>	Zip Code: <u>94949</u>		Site Address: <u>1629 Webster St</u>
Telephone: <u>415-382-3605</u> Fax #: <u>415-382-1856</u>			City, State: <u>Alameda CA</u>		
Report To: <u>Paul Blank</u>		Sampler: <u>Rob Saul</u>		QC Data: <input checked="" type="checkbox"/> Level D (Standard) <input type="checkbox"/> Level C <input type="checkbox"/> Level B <input type="checkbox"/> Level A	

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

Analyses Requested

<input type="checkbox"/> Drinking Water	<input type="checkbox"/> Waste Water	<input type="checkbox"/> Other
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Project Coding: 22460378

Client Sample I.D.	Date/Time Sampled	Matrix Desc.	# of Cont.	Cont. Type	Sequoia's Sample #	Analyses Requested							Comments		
						TPHq/BTEX/MTBE	TPH Diesel (8015)	TDS (418.1)	Oxygenates (6) 8260	Oxygenates (6) EDB	1,2-DCA (8260)	MTBE (418.1)		5262 (418.1)	
1. S-4-GP11	12/4/01 840	Soil	1	Steave	P11279.11									Hold	
2. S-65-GP11	850				-12	X						X			
3. S-12-GP12	930				-13	X						X			
4. S-4-GP12	900				-14									Hold	
5. S-6-GP12	915				-15	X						X	COOLER CUSTODY SEALS INTACT	<input type="checkbox"/>	
6. S-4-GP13	1130				-16									NOT INTACT	<input type="checkbox"/>
7. S-65-GP13	1140				-17	X						X			
8. S-12-GP13	1150				-18	X						X	COOLER TEMPERATURE 3.1		
9. S-4-GP14	1200				-19									Hold	
10. S-7-GP14	1210				-20	X						X			

Relinquished By: <u>Paul Blank</u>	Date: <u>12/4/01</u>	Time: <u>1200</u>	Received By: <u>[Signature]</u>	Date: <u>12-7-01</u>	Time: <u>1400</u>
Relinquished By: _____	Date: _____	Time: _____	Received By: _____	Date: _____	Time: <u>1500</u>
Relinquished By: _____	Date: _____	Time: _____	Received By: _____	Date: _____	Time: _____

Were Samples Received in Good Condition? Yes No Samples on Ice? Yes No Method of Shipment _____ Page 52 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 - Sequoia
White - Sequoia

№ 007400 TOSCO

- 885 Jarvis Drive • Morgan Hill, CA 95037 • (408) 776-9600 • FAX (408) 782-6308
- 819 Striker Ave., Suite 8 • Sacramento, CA 95834 • (916) 921-9600 • FAX (916) 921-0100
- 404 N. Wiget Lane • Walnut Creek, CA 94598 • (925) 988-9600 • FAX (925) 988-9673
- 1455 McDowell Blvd. North, Suite D • Petaluma, CA 94954 • (707) 792-1865 • FAX (707) 792-0342
- 1551 Industrial Road • San Carlos, CA 94070 • (650) 232-9600 • FAX (650) 232-9612

Consultant Company: ERD		Tosco Engineer: Dave Delwitt	
Address: 73 Digital Dr Ste 100		Site #: 0843	
City: Novato	State: CA	Zip Code: 94949	Site Address: 1629 Webster St
Telephone: 415-382-9105		Fax #: 415-382-1856	
City, State: Alameda, CA		QC Data: <input checked="" type="checkbox"/> Level D (Standard) <input type="checkbox"/> Level C <input type="checkbox"/> Level B <input type="checkbox"/> Level A	
Report To: Paul Blank	Sampler: Rob Saur		

Turnaround Time: <input checked="" type="checkbox"/> 10 Work Days <input type="checkbox"/> 5 Work Days <input type="checkbox"/> 3 Work Days <input type="checkbox"/> 2 Work Days <input type="checkbox"/> 1 Work Day <input type="checkbox"/> 2-8 Hours	<input type="checkbox"/> Drinking Water <input type="checkbox"/> Waste Water <input type="checkbox"/> Other	Analyses Requested: <div style="border: 1px solid black; padding: 2px; transform: rotate(-45deg); display: inline-block;"> TPH/G/BTEX/MTBE TPH Diesel (8015) TOG (418.1) Oxygenates (6) 8260 Oxygenates (6)+EDB 1,2-DCA (8260) MTBE Saw (13.15, 2.2, 1.1) </div>
Project Coding: 224603T8		

Client Sample I.D.	Date/Time Sampled	Matrix Desc.	# of Cont.	Cont. Type	Sequoia's Sample #	TPH/G/BTEX/MTBE	TPH Diesel (8015)	TOG (418.1)	Oxygenates (6) 8260	Oxygenates (6)+EDB 1,2-DCA (8260)	MTBE	Saw (13.15, 2.2, 1.1)	Comments
1. S-4-GP15	12/4/01 1230	Soil	1	Sleeve	P112 (74-D)								Hold
2. S-6-GP15	1240				-22	<input checked="" type="checkbox"/>							
3. S-16-GP15	1250				-23	<input checked="" type="checkbox"/>							
4. S-16-GP15													
5. S-9-GP16	11315				-24								
6. S-6.5-GP16	1325				-25	<input checked="" type="checkbox"/>							COOLER CUSTODY SEALS INTACT <input type="checkbox"/>
7. S-12-GP16	1335				-26	<input checked="" type="checkbox"/>							NOT INTACT <input type="checkbox"/>
8. S-16-GP16	1345				-27								COOLER TEMPERATURE <u>Hold</u> °C
9. S-4-GP17	1410				-28								Hold
10. S-6.5-GP17	1415				-29	<input checked="" type="checkbox"/>							Hold

Relinquished By: Rob Saur	Date: 12/6/01	Time: 1200	Received By:	Date: 12-7-01	Time: 1400
Relinquished By: _____	Date: _____	Time: _____	Received By: _____	Date: _____	Time: 1509
Relinquished By: _____	Date: _____	Time: _____	Received By: _____	Date: _____	Time: _____

Were Samples Received in Good Condition? Yes No Samples on Ice? Yes No Method of Shipment _____ Page **23** 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? _____

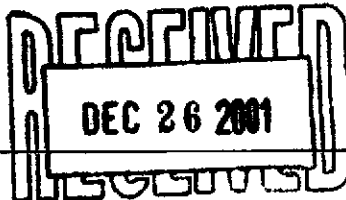
2) Was the report issued within the requested turnaround time? Yes No If no, what was the turnaround time? _____

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

Pink - Client
Yellow - Sequoia
White - Sequoia



**Sequoia
Analytical**



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

20 December, 2001

Paul Blank
ERI
73 Digital Dr. Suite 100
Novato, CA 94949

RE: TOSCO/PHILLIPS
Sequoia Work Order: P112176

Enclosed are the results of analyses for samples received by the laboratory on 12/07/01 15:00. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Angelee Cari
Client Services Representative

CA ELAP Certificate #2374



ERI
73 Digital Dr. Suite 100
Novato CA, 94949

Project: TOSCO/PHILLIPS
Project Number: 0843/Alameda, Ca
Project Manager: Paul Blank

Reported:
12/20/01 13:28

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
W-7-GP14	P112176-01	Water	12/04/01 12:20	12/07/01 15:00
W-7-GP15	P112176-02	Water	12/04/01 13:00	12/07/01 15:00
W-7-GP16	P112176-03	Water	12/04/01 14:00	12/07/01 15:00

Samples received at 3.1 degrees C.

Sequoia Analytical - Petaluma

Angelee Cari

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Angelee Cari, Client Services Representative



ERI
73 Digital Dr. Suite 100
Novato CA, 94949

Project: TOSCO/PHILLIPS
Project Number: 0843/Alameda, Ca
Project Manager: Paul Blank

Reported:
12/20/01 13:28

**Total Petroleum Hydrocarbons as Gasoline and BTEX by EPA 8015M/8020M
Sequoia Analytical - Petaluma**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
W-7-GP14 (P112176-01) Water Sampled: 12/04/01 12:20 Received: 12/07/01 15:00									
Gasoline (C6-C12)	ND	50	ug/l	1	1120187	12/10/01	12/10/01	EPA 8015M/8020M	
Benzene	ND	0.50	"	"	"	"	"	"	"
Toluene	ND	0.50	"	"	"	"	"	"	"
Ethylbenzene	ND	0.50	"	"	"	"	"	"	"
Xylenes (total)	ND	0.50	"	"	"	"	"	"	"
Methyl tert-butyl ether	6.4	2.5	"	"	"	"	"	"	"
Surrogate: a,a,a-Trifluorotoluene		100 %		65-135	"	"	"	"	"
Surrogate: 4-Bromofluorobenzene		99 %		65-135	"	"	"	"	"
W-7-GP15 (P112176-02) Water Sampled: 12/04/01 13:00 Received: 12/07/01 15:00									
Gasoline (C6-C12)	ND	50	ug/l	1	1120187	12/10/01	12/10/01	EPA 8015M/8020M	
Benzene	ND	0.50	"	"	"	"	"	"	"
Toluene	ND	0.50	"	"	"	"	"	"	"
Ethylbenzene	ND	0.50	"	"	"	"	"	"	"
Xylenes (total)	ND	0.50	"	"	"	"	"	"	"
Methyl tert-butyl ether	ND	2.5	"	"	"	"	"	"	"
Surrogate: a,a,a-Trifluorotoluene		99 %		65-135	"	"	"	"	"
Surrogate: 4-Bromofluorobenzene		101 %		65-135	"	"	"	"	"
W-7-GP16 (P112176-03) Water Sampled: 12/04/01 14:00 Received: 12/07/01 15:00									
Gasoline (C6-C12)	ND	50	ug/l	1	1120187	12/10/01	12/10/01	EPA 8015M/8020M	
Benzene	ND	0.50	"	"	"	"	"	"	"
Toluene	ND	0.50	"	"	"	"	"	"	"
Ethylbenzene	ND	0.50	"	"	"	"	"	"	"
Xylenes (total)	ND	0.50	"	"	"	"	"	"	"
Methyl tert-butyl ether	ND	2.5	"	"	"	"	"	"	"
Surrogate: a,a,a-Trifluorotoluene		100 %		65-135	"	"	"	"	"
Surrogate: 4-Bromofluorobenzene		99 %		65-135	"	"	"	"	"



ERI
73 Digital Dr. Suite 100
Novato CA, 94949

Project: TOSCO/PHILLIPS
Project Number: 0843/Alameda, Ca
Project Manager: Paul Blank

Reported:
12/20/01 13:28

**Volatile Organic Compounds by EPA Method 8260B
Sequoia Analytical - Petaluma**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
W-7-GP14 (P112176-01) Water Sampled: 12/04/01 12:20 Received: 12/07/01 15:00									
Methyl tert-butyl ether	5.1	0.50	ug/l	1	1120349	12/17/01	12/18/01	EPA 8260B	
Surrogate: Dibromofluoromethane		114 %	84-122		"	"	"	"	



ERI
 73 Digital Dr. Suite 100
 Novato CA, 94949

Project: TOSCO/PHILLIPS
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Reported:
 12/20/01 13:28

Total Petroleum Hydrocarbons as Gasoline and BTEX by EPA 8015M/8020M - Quality Control
Sequoia Analytical - Petaluma

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 1120187 - EPA 5030, waters

Blank (1120187-BLK1)

Prepared & Analyzed: 12/10/01

Gasoline (C6-C12)	ND	50	ug/l							
Benzene	ND	0.50	"							
Toluene	ND	0.50	"							
Ethylbenzene	ND	0.50	"							
Xylenes (total)	ND	0.50	"							
Methyl tert-butyl ether	ND	2.5	"							
<i>Surrogate: a,a,a-Trifluorotoluene</i>	299		"	300		100	65-135			
<i>Surrogate: 4-Bromofluorobenzene</i>	294		"	300		98	65-135			

LCS (1120187-BS1)

Prepared & Analyzed: 12/10/01

Gasoline (C6-C12)	2520	50	ug/l	2750		92	65-135			
Benzene	44.0	0.50	"	33.0		133	65-135			
Toluene	181	0.50	"	198		91	65-135			
Ethylbenzene	47.2	0.50	"	46.0		103	65-135			
Xylenes (total)	211	0.50	"	230		92	65-135			
Methyl tert-butyl ether	65.2	2.5	"	52.5		124	65-135			
<i>Surrogate: a,a,a-Trifluorotoluene</i>	311		"	300		104	65-135			
<i>Surrogate: 4-Bromofluorobenzene</i>	308		"	300		103	65-135			

Matrix Spike (1120187-MS1)

Source: P112164-05

Prepared & Analyzed: 12/10/01

Gasoline (C6-C12)	2530	50	ug/l	2750	ND	92	65-135			
Benzene	41.1	0.50	"	33.0	ND	125	65-135			
Toluene	198	0.50	"	198	ND	100	65-135			
Ethylbenzene	51.9	0.50	"	46.0	ND	113	65-135			
Xylenes (total)	236	0.50	"	230	ND	103	65-135			
Methyl tert-butyl ether	66.8	2.5	"	52.5	ND	126	65-135			
<i>Surrogate: a,a,a-Trifluorotoluene</i>	302		"	300		101	65-135			
<i>Surrogate: 4-Bromofluorobenzene</i>	317		"	300		106	65-135			

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Reported:
 12/20/01 13:28

Total Petroleum Hydrocarbons as Gasoline and BTEX by EPA 8015M/8020M - Quality Control
Sequoia Analytical - Petaluma

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1120187 - EPA 5030, waters										
Matrix Spike Dup (1120187-MSD1)		Source: P112164-05			Prepared & Analyzed: 12/10/01					
Gasoline (C6-C12)	2470	50	ug/l	2750	ND	90	65-135	2	20	
Benzene	41.1	0.50	"	33.0	ND	125	65-135	0	20	
Toluene	197	0.50	"	198	ND	99	65-135	0.5	20	
Ethylbenzene	50.2	0.50	"	46.0	ND	109	65-135	3	20	
Xylenes (total)	234	0.50	"	230	ND	102	65-135	0.9	20	
Methyl tert-butyl ether	69.0	2.5	"	52.5	ND	131	65-135	3	20	
<i>Surrogate: a,a,a-Trifluorotoluene</i>	300		"	300		100	65-135			
<i>Surrogate: 4-Bromofluorobenzene</i>	315		"	300		105	65-135			



ERI 73 Digital Dr. Suite 100 Novato CA, 94949	Project: TOSCO/PHILLIPS Project Number: 0843/Alameda, Ca Project Manager: Paul Blank	Reported: 12/20/01 13:28
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**Volatile Organic Compounds by EPA Method 8260B - Quality Control
Sequoia Analytical - Petaluma**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC %REC	Limit	RPD	RPD Limit	Notes
Batch 1120349 - EPA 5030 waters										
Blank (1120349-BLK1)					Prepared & Analyzed: 12/17/01					
Methyl tert-butyl ether	ND	0.50	ug/l							
<i>Surrogate: Dibromofluoromethane</i>	4.55		"	5.00		91	84-122			
LCS (1120349-BS1)					Prepared & Analyzed: 12/17/01					
Methyl tert-butyl ether	0.906	0.50	ug/l	1.00		91	79-118			
<i>Surrogate: Dibromofluoromethane</i>	4.79		"	5.00		96	84-122			
Matrix Spike (1120349-MS1)					Source: P112165-04		Prepared & Analyzed: 12/17/01			
Methyl tert-butyl ether	19.7	10	ug/l	20.0	ND	98	79-118			
<i>Surrogate: Dibromofluoromethane</i>	5.12		"	5.00		102	84-122			
Matrix Spike Dup (1120349-MSD1)					Source: P112165-04		Prepared & Analyzed: 12/17/01			
Methyl tert-butyl ether	18.0	10	ug/l	20.0	ND	90	79-118	9	20	
<i>Surrogate: Dibromofluoromethane</i>	5.14		"	5.00		103	84-122			

ERI
73 Digital Dr. Suite 100
Novato CA, 94949

Project: TOSCO/PHILLIPS
Project Number: 0843/Alameda, Ca
Project Manager: Paul Blank

Reported:
12/20/01 13:28

Notes and Definitions

DET Analyte DETECTED
ND Analyte NOT DETECTED at or above the reporting limit
NR Not Reported
dry Sample results reported on a dry weight basis
RPD Relative Percent Difference

TOSCO

№ 007401

- 819 Striker Ave., Suite 8 • Sacramento, CA 95834 • (916) 921-9600 • FAX (916) 921-0100
- 404 N. Wiget Lane • Walnut Creek, CA 94598 • (925) 988-9600 • FAX (925) 988-9673
- 1455 McDowell Blvd. North, Suite D • Petaluma, CA 94954 • (707) 792-1865 • FAX (707) 792-0342
- 1551 Industrial Road • San Carlos, CA 94070 • (650) 232-9600 • FAX (650) 232-9612

Consultant Company: ERT		Tosco Engineer: Dave DeWitt	
Address: 73 Digital Dr. Ste 100		Site #: 0843	
City: Novato	State: CA	Zip Code: 94949	Site Address: 1629 Webster St
Telephone: 415-382-9105 Fax #: 415-382-1856		City, State: Alameda, CA	
Report To: Paul Blank	Sampler: Rob Saur	QC Data: <input checked="" type="checkbox"/> Level D (Standard) <input type="checkbox"/> Level C <input type="checkbox"/> Level B <input type="checkbox"/> Level A	

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

Analyses Requested

Drinking Water
 Waste Water
 Other

Project Coding: **224803T8**

Client Sample I.D.	Date/Time Sampled	Matrix Desc.	# of Cont.	Cont. Type	Sequoia's Sample #	Analyses Requested						Comments		
						TPH _g /BTEX/MTBE	TPH Diesel (8015)	TOG (418.1)	Oxygenates (6) 8260	Oxygenates (6)+EDB 1,2-DCA (8260)	MTBE Conf. Filter 8260 (this only)			
1. W-7-6P14	12/4/01 1220	Water	6	VOAS	P112176-01	X								
2. W-7-6P15	↓ 1300	↓	↓	↓	↓ -02	X								
3. W-7-6P16	↓ 1400	↓	↓	↓	↓ -03	X								
4.														
5.														
6.														
7.														
8.														
9.														
10.														

COOLER CUSTODY SEALS INTACT
 NOT INTACT
 COOLER TEMPERATURE 3.1 °C

Relinquished By: Rob Saur	Date: 12/4/01	Time: 1200	Received By:	Date: 12-7-01	Time: 1400
Relinquished By: _____	Date: _____	Time: _____	Received By: _____	Date: _____	Time: 1500
Relinquished By: _____	Date: _____	Time: _____	Received By: _____	Date: _____	Time: _____

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 - Sequoia
White - Sequoia