

ENVIRONMENTAL  
PROTECTION

98 FEB -3 PM 3:35



January 31, 1998

Alameda County Health Department  
Hazardous Materials Division  
1131 Harbor Bay Parkway  
Alameda, California 94502

Attention: Mr. Scott Seery

Subject: January 1998 Quarterly Monitoring Report  
Former Jack Holland Sr. Oil Company  
16301 East 14th Street, San Leandro, California  
(CCI Project No. 12059-2)

Dear Mr. Seery:

In accordance with instructions from Ms. Barbara Holland, Compliance & Closure, Inc. is here by forwarding a copy of the January 1998 Quarterly Monitoring Report for the former Jack Holland Sr. Oil Company facility, located at 16301 East 14th Street, in the City of San Leandro, Alameda County, California.

CCI would appreciate your comments on this report. If you have any questions or require additional information, please call our office at (510) 426-5395.

Sincerely,  
Compliance & Closure, Inc.

A handwritten signature in black ink that reads 'Gary R. Mulkey'. The signature is written in a cursive style with a large initial 'G'.

Gary R. Mulkey, R.G. 5842

cc: Ms. Barbara Holland



January 30, 1998

Ms. Barbara Holland  
20993 Foothill Boulevard  
Hayward, California 94541

Subject: January 1998 Quarterly Report  
Former Jack Holland Sr. Oil Company  
16301 East 14th Street, San Leandro, California  
(CCI Project No. 12059-2)

Dear Ms. Holland:

Compliance & Closure, Inc. (CCI) is pleased to present the January 1998 Quarterly Report for the sampling of the three groundwater monitoring wells, located at 16301 East 14th Street, in the City of San Leandro, Alameda County, California (Figure 1). CCI completed the well sampling in accordance with requirements of the Alameda County Health Care Services Agency. The monitoring wells were sampled on January 13, 1998.

#### **Groundwater Sampling**

Groundwater samples were collected from the three monitoring wells in accordance with CCI's Groundwater Sampling Protocol (Appendix A). The groundwater purged from each well and equipment rinse water were placed in a labeled, Department of Transportation-approved drum and left at the site pending laboratory results. A summary of the groundwater purge data is presented in Table 1.

#### **Laboratory Analysis**

North State Environmental (North State) of South San Francisco, California, a state-certified laboratory, analyzed the water samples. The water samples collected from each monitoring well (MW-1, MW-2 and MW-3) were analyzed for the presence of total petroleum hydrocarbons as gasoline (TPHG), benzene, toluene, ethylbenzene, and total xylenes (BTEX), following EPA Methods 8015M and 8020. The water samples were also analyzed for total petroleum hydrocarbons as diesel (TPHD), following EPA Method 8015M and 3350B.

### **Summary of Laboratory Results**

Groundwater samples collected from the monitoring wells indicated two of the three wells were contaminated with petroleum hydrocarbons. TPHG contamination ranged from below the laboratory reporting limit of 50 parts per billion (ppb) in well MW-2 and MW-3 to 150 ppb in well MW-1. All three monitoring wells were reported to be free of detectable TPHD. Benzene was only reported in MW-1, at a concentration of 5 ppb. Toluene and ethylbenzene were reported below the laboratory reporting limit of 0.5 ppb in all three monitoring wells. Total xylenes were only detected at 11 ppb in MW-2. No other compounds were reported by the laboratory for the three Monitoring wells.

The results of the groundwater analysis are summarized in Table 2. The analytical reports from North State and chain-of-custody documents are attached in Appendix B.

### **Discussion**

Groundwater measurements taken in the three monitoring wells on January 13, 1998 indicated that depth-to-groundwater ranged from approximately 4.99 to 5.45 feet below the top of the well casings. The water table has risen approximately three feet since October 1997. Groundwater contours indicate a groundwater flow direction in the vicinity of the three monitoring wells to be toward the north, at an approximate gradient of 0.01 feet per foot (Figure 2). The groundwater flow direction has change slightly from the northwest direction reported in October 1997.

During the latest quarterly sample round, petroleum hydrocarbons were detected by the laboratory in two of the three onsite wells. During sampling of the wells, no sheen was noted on the surface of purge water collected from the three monitoring wells. Monitoring well MW-1, the down-gradient well, located on the northwest side of the site, was reported to contain 150 ppb TPHG in the water. The TPHG concentrations in well MW-1 has decreased in the last three months, from 630 ppb reported in October 1997. No Diesel concentrations reported for any of the three monitoring wells this quarter. The over-all concentrations of petroleum hydrocarbons detected in water samples at the site have dropped significantly since the wells were first installed. No petroleum hydrocarbon contamination has been reported by the laboratory in well MW-3 over the past four sample rounds. The next quarterly sample round is scheduled for April 1998.

Former Jack Holland Sr. Oil Company  
16301 East 14th Street, San Leandro, CA  
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A copy of this report should be forwarded to the following agencies in a timely manner:

Alameda County Health Care Services Agency  
Hazardous Materials Division  
1131 Harbor Bay Parkway  
Alameda, California 94502  
Attn: Mr. Scott Seery

Region Water Quality Control Board  
2101 Webster Street  
Suite 500  
Oakland, California 94612  
Attn: Mr. Kevin Graves

### **Limitations**

The discussion presented in this report is based on the following:

1. The observations of the field personnel;
2. The results of the laboratory analyses performed by a state certified laboratory;
3. Our understanding of the regulations of the State of California and Alameda County.

It is possible that variations in the soil or groundwater conditions could exist beyond the points explored in this investigation. Also, changes in groundwater conditions could occur at some time in the future due to variations in rainfall, temperature, regional water usage, or other factors.

The services performed by CCI have been conducted in a manner consistent with the level of care and skill ordinarily exercised by members of our profession currently practicing under similar conditions in the San Leandro area. No other warranty, express or implied, is made. Please note that contamination of soil and groundwater must be reported to the appropriate agencies in a timely manner.

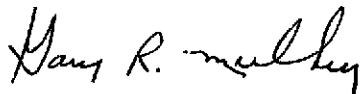
CCI includes in this report chemical analytical data from a state-certified laboratory. CCI has been informed that the analyses are performed according to procedures suggested by the U.S. EPA and the

Former Jack Holland Sr. Oil Company  
16301 East 14th Street, San Leandro, CA  
Page 4

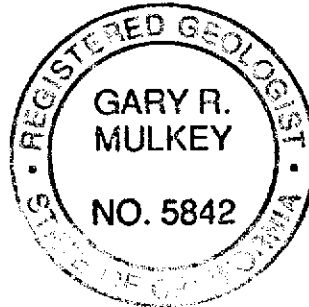
State of California. CCI is not responsible for laboratory errors  
in procedure or results reporting.

If you have any questions or require additional information, please  
call our office at (510) 426-5395.

Sincerely,  
Compliance & Closure, Inc.



Gary R. Mulkey, R.G. 5842



**TABLE 1**  
**GROUNDWATER PURGE DATA**

Sample No.	Date Sampled	Depth to Water (ft)	Well Depth (ft)	Purge Volume (gal)	Temp. (F)	Cond. (umhos/cm)	pH
MW-1	04/09/96	6.49	18.75	10	63.4	1827	7.25
	07/12/96	7.88	18.57	5	68.2	1385	6.90
	10/22/96	8.47	18.40	5	60	1388	6.8
	01/30/97	4.53	18.20	5	57.2	732	6.8
	04/04/97	7.14	18.20	5	63.9	1234	7.0
	07/22/97	7.55	18.20	5	67.8	1343	6.9
	10/14/97	8.37	17.85	5	67.4	1205	6.8
	01/13/98	5.20	18.00	5	59.2	1351	
MW-2	04/09/96	6.54	21.53	10	60.5	1520	7.20
	07/12/96	8.06	21.00	5	69.0	760	6.95
	10/22/96	8.81	20.65	5	60	1035	6.8
	01/30/97	4.18	20.40	5	55.1	495	6.9
	04/04/97	7.16	20.33	5	63.8	736	6.9
	07/22/97	8.28	20.32	5	67.3	732	6.9
	10/14/97	8.80	20.15	5	67.4	845	6.9
	01/13/98	4.99	20.05	5	56.3	744	6.9
MW-3	04/09/96	6.61	22.90	10	63.2	1324	7.30
	07/12/96	7.83	21.58	5	69.6	922	7.10
	10/22/96	8.59	22.30	5	62	1151	6.9
	01/30/97	4.88	21.92	5	58.7	605	6.9
	04/04/97	7.13	21.84	5	64.1	917	6.8
	07/22/97	8.04	21.85	5	68.2	1024	6.8
	10/14/97	8.52	21.85	5	69.4	884	7.0
	01/13/98	5.45	21.75	5	57.6	1096	6.9

ft Feet below top of PVC casing  
gal Gallons  
Temp. Temperature  
F Degrees Fahrenheit  
Cond. Conductivity  
umhos/cm Micromhos per centimeter

**TABLE 2**  
**WATER ANALYSIS DATA**

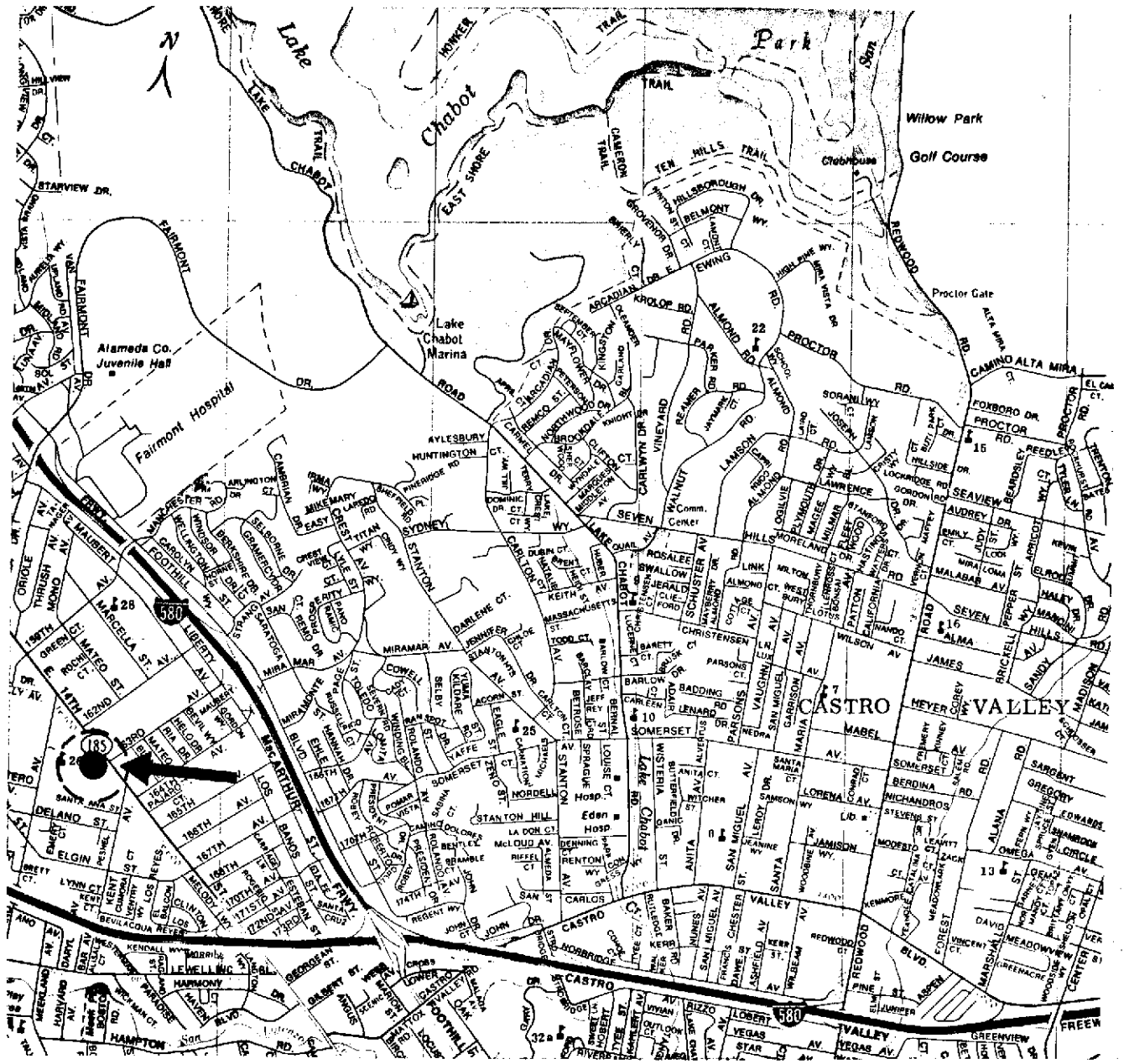
Sample No.	Date Sampled	TPHG ug/kg	Benzene (ppb)	Toluene (ppb)	Ethyl Benzene (ppb)	Total Xylenes (ppb)	TPHD (ppb)	TRPH (ppb)	1,2-Dichloro benzene (ppb)
MW-1	04/09/96	33,000	12	83	22	91	9,700	N.R.	<1
	07/12/96	1,400	17	5.6	7.6	32	3,400	N.R.	N.R.
	10/22/96	2,500	16	8.9	2.1	6.6	14,000	N.R.	N.R.
	01/30/97	2,600	6.4	<0.5	<0.5	44	2,800	N.R.	N.R.
	04/04/97	2,700	16	8	10	25	500	N.R.	N.R.
	07/22/97	180	1.1	<0.5	1.3	2.6	4,400	N.R.	N.R.
	10/17/97	630	14	<0.5	<0.5	8	100	N.R.	N.R.
	01/13/98	150	5	<0.5	<0.5	<0.5	<50	N.R.	N.R.
MW-2	04/09/96	6,900	<0.5	5.1	4.8	160	8,900	N.R.	3.1
	07/12/96	480	<0.5	0.6	3.7	10	4,600	N.R.	N.R.
	10/22/96	7,300	<0.5	2.6	20	15	9,200	N.R.	N.R.
	01/30/97	<50	<0.5	<0.5	<0.5	<0.5	2,000	N.R.	N.R.
	04/04/97	63	<0.5	<0.5	2	<0.5	60	N.R.	N.R.
	07/22/97	70	<0.5	<0.5	<0.5	1.5	2,700	N.R.	N.R.
	10/14/97	<50	<0.5	<0.5	<0.5	<0.5	10	N.R.	N.R.
	01/13/98	<50	<0.5	<0.5	<0.5	11	<50	N.R.	N.R.
MW-3	04/09/96	<50	<0.5	<0.5	<0.5	<0.5	1,100	41,000	1.4
	07/12/96	<50	<0.5	<0.5	<0.5	<0.5	380*	N.R.	N.R.
	10/22/96	<50	<0.5	<0.5	<0.5	<0.5	4,700	1,100	N.R.
	01/30/97	<50	<0.5	<0.5	<0.5	<0.5	460	3	N.R.
	04/04/97	<50	<0.5	<0.5	<0.5	<0.5	<50	<500	N.R.
	07/22/97	<50	<0.5	<0.5	<0.5	<0.5	<50	<5000	N.R.
	10/14/97	<50	<0.5	<0.5	<0.5	<0.5	<50	<10000	N.R.
	01/13/98	<50	<0.5	<0.5	<0.5	<0.5	<50	N.R.	N.R.
BB-1	04/09/96	<50	<0.5	0.5	<0.5	0.83	N.R.	N.R.	N.R.
	07/12/96	N.R.	N.R.	N.R.	N.R.	N.R.	N.R.	N.R.	N.R.
	10/22/96	N.R.	N.R.	N.R.	N.R.	N.R.	N.R.	N.R.	N.R.
	01/30/97	N.R.	N.R.	N.R.	N.R.	N.R.	N.R.	N.R.	N.R.
	04/04/97	N.R.	N.R.	N.R.	N.R.	N.R.	N.R.	N.R.	N.R.
	07/22/97	N.R.	N.R.	N.R.	N.R.	N.R.	N.R.	N.R.	N.R.
	10/14/97	<50	<0.5	<0.5	<0.5	<0.5	N.R.	N.R.	N.R.
	01/13/98	N.R.	N.R.	N.R.	N.R.	N.R.	N.R.	N.R.	N.R.

TRPH Total Recoverable Petroleum Hydrocarbons  
 TPHD Total Petroleum Hydrocarbons as Diesel  
 TPHG Total Petroleum Hydrocarbons as Gasoline  
 ug/kg Micrograms per kilogram - equivalent to parts per billion  
 < Below laboratory detection limit  
 \* Pattern of Chromatogram resembles a whettered or degraded petroleum hydrocarbon


Current Department of Health Services Drinking Water Standards  
 Benzene 1ppb (MCL)  
 Toluene 100 ppb (AL)  
 Ethylbenzene 680 ppb (MCL)  
 Xylenes 1,750 ppb (MCL)

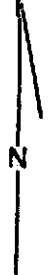
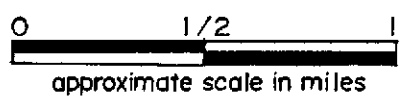
Note: Subject to change as reviewed by Department of Health Services



MCL: Maximum Contaminant Level  
 AL: Action Level



**LEGEND**

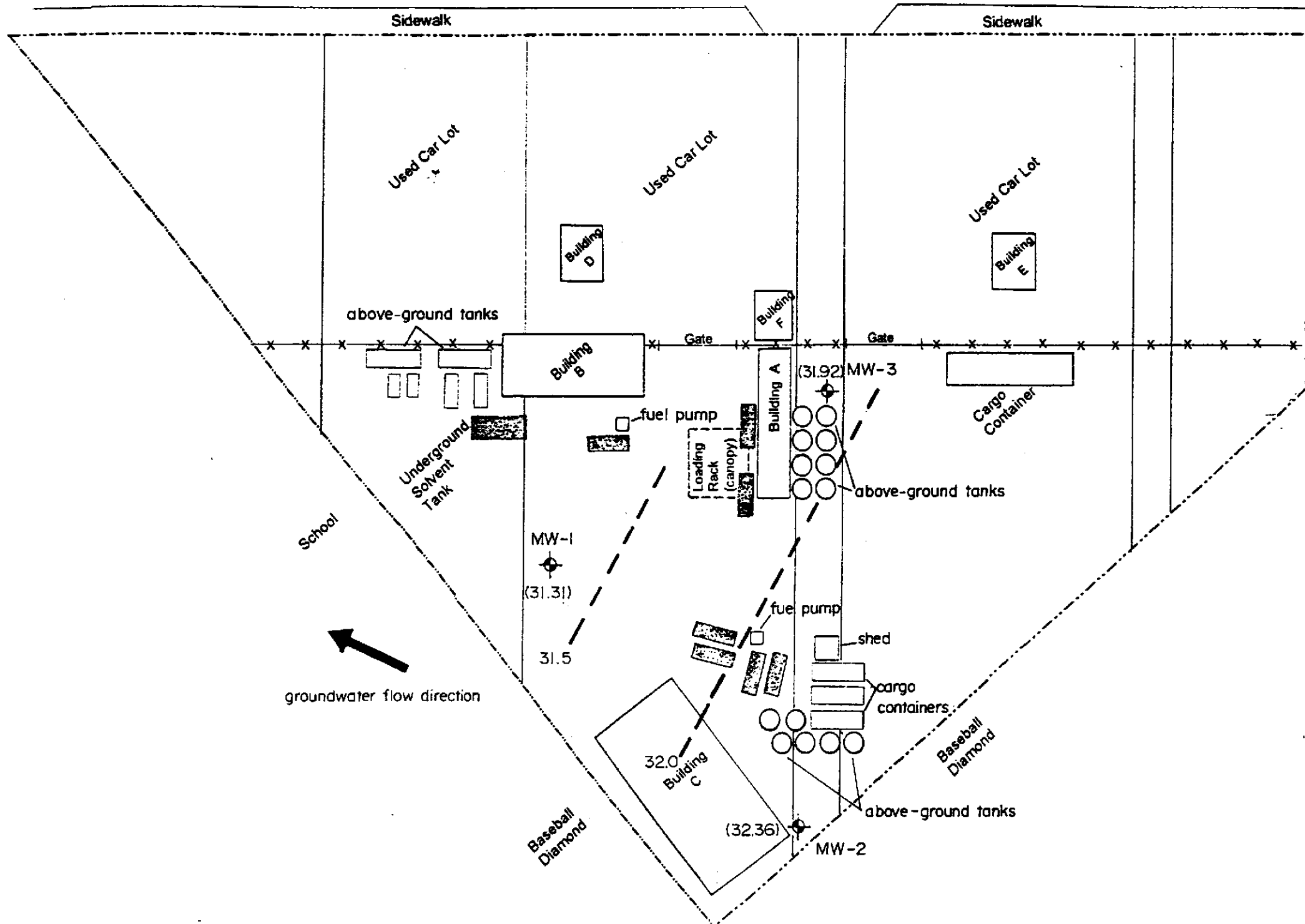
 site location





reviewed by:	VICINITY MAP	 <b>Compliance &amp; Closure, Inc.</b>
approved by: 	FORMER JACK HOLLAND SR. OIL COMPANY	
drawn by: GM	16301 EAST 14TH STREET	
job no. 12059	SAN LEANDRO, CALIFORNIA	date: 11/14/95 drawing no. FIG. 1



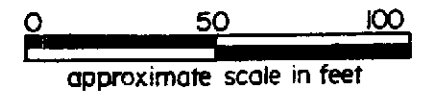
EAST 14TH STREET





**LEGEND**

-  monitoring well
-  underground storage tank
- (31.31) groundwater surface elevation in feet (datum: m.s.l.)
- 32.0 groundwater surface elevation contour line in feet (datum: m.s.l.)

groundwater flow direction



REVIEWED BY: 	GROUNDWATER SURFACE CONTOUR MAP (01/13/98)		 <b>Compliance &amp; Closure, Inc.</b>
	FORMER JACK HOLLAND SR. OIL COMPANY		
APPROVED BY:	16301 EAST 14TH STREET		JOB #: 12059-2
	SAN LEANDRO, CALIFORNIA		DATE: 1/27/98
			DRAWN BY: GM
			DRAWING #: FIG. 2

Base: Cambria Environmental - locations are approximate

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## G R O U N D W A T E R   S A M P L I N G   P R O T O C O L

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Sampling of groundwater is performed by Compliance & Closure, Inc. sampling technicians. Summarized field sampling procedures are as follows:

1. Proceed to first well with clean and decontaminated equipment.
2. Measurements of liquid surface(s) in the well, and total depth of monitoring well. Note presence of silt accumulation.
3. Field check for presence of floating product; measure apparent thickness.
4. Purge well prior to collecting samples; purge volume (casing volumes) calculated prior to removal.
5. Monitor groundwater for temperature, pH, and specific conductance during purging. Allow well to recover.
6. Collect samples using Environmental Protection Agency (EPA) approved sample collection devices, i.e., teflon or stainless steel bailers or pumps.
7. Transfer samples into laboratory-supplied EPA-approved containers.
8. Label samples and log onto chain-of-custody form.
9. Store samples in a chilled ice chest for shipment to a state-certified analytical laboratory.
10. Decontaminate equipment prior to sampling next well.

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Compliance & Closure, Inc.  
Groundwater Sampling Protocol  
Latest Revision: November 7, 1996

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### **Equipment Cleaning and Decontamination**

All water samples are placed in precleaned laboratory-supplied bottles. Sample bottles and caps remain sealed until actual usage at the site. All equipment which comes in contact with the well or groundwater is thoroughly cleaned with trisodium phosphate (TSP) solution and rinsed with deionized or distilled water before each use at the site. This cleaning procedure is followed between each well sampled. Wells are sampled in approximate order of increasing contamination. If a teflon cord is used, the cord is cleaned. If a nylon or cotton cord is used, a new cord is used in each well. All equipment blanks are collected prior to sampling. The blanks are analyzed periodically to ensure proper cleaning procedures are used.

### **Water Level Measurements**

Depth to groundwater is measured in each well using a sealed sampling tape or scaled electric sounder prior to purging or sampling. If the well is known or suspected of containing free-phase petroleum hydrocarbons, an optical interface probe is used to measure the hydrocarbon thickness and groundwater level. Measurements are collected and recorded to the nearest 0.01 foot. Each monitoring well's total depth will be measured; this will allow a relative judgment of well siltation to be made and need for redevelopment.

### **Bailer Sheen Check**

If no measureable free-phase petroleum hydrocarbons are detected, a clear acrylic bailer is used to determine the presence of a sheen. Any observed film, as well as odor and color of the water is recorded.

### **Groundwater Sampling**

Prior to groundwater sampling, each well is purged of "standing" groundwater. Either a bailer, hand pump, or submersible pump is used to purge the well. The amount of purging is dependent on the well yield. In a high yield formation, samples will be collected when normal field measurement, including temperature, pH, and specific conductance stabilize, provided a minimum of three well-casing volumes of water have been removed. Field measurements will

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Compliance & Closure, Inc.  
Groundwater Sampling Protocol  
Latest Revision: November 7, 1996

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be taken after purging each well volume. Physical parameter measurements (temperature, pH, and specific conductance) are closely monitored throughout the well purging process and are used as indicators for assessing sufficient purging. The purging parameters are measured to observe stabilization to a range of values typical for that aquifer and well. Stable field parameters are recognized as indicative of groundwater aquifer chemistry entering the well. Specific conductance (conductivity) meters are read to the nearest  $\pm 10$  umhos/cm and are calibrated daily, if possible. Temperature is read to the nearest 0.1 F. Calibration of physical parameter meters will follow manufacturer's specifications. Collected field data during purging activities will be entered on the Well Sampling Field Data Sheet.

In low yield formations, the well is purged such that the "standing" water is removed and the well is allowed to recharge. (Normal field measurements will be periodically recorded during the purging process). In situations where recovery to 80% of static water level is estimated, or observed to exceed a two hour duration, a sample will be collected when sufficient volume is available for a sample for each parameter. Attempts will be made so the well is not purged dry such that the recharge rate causes the formation water to cascade into the well.

In wells where free-phase hydrocarbons are detected, the free-phase portion will be bailed from the well and the estimated volume removed and recorded. A groundwater sample will be collected if bailing reduces the amount of free-phase hydrocarbons to the point where they are not present in the well. Well sampling will be conducted using one of the aforementioned methods depending on the formation yield. However, if free-phase hydrocarbons persist throughout bailing, then a groundwater sample will not be collected.

Volatile organic groundwater samples are collected so that air passage through the sample does not occur or is minimal (to prevent volatiles from being stripped from the samples): sample bottles are filled by slowly running the sample down the side of the bottle until there is a positive convex meniscus over the neck of the bottle; the teflon side of the septum (in cap) is positioned against the meniscus, and the cap screwed on tightly; the sample is inverted and the bottle lightly tapped. The absence of an air bubble indicates a successful seal; if a bubble is evident, the cap is removed, more sample is added, and the bottle is resealed.

#### **Chain-of-Custody**

Groundwater sample containers are labeled with a unique sample number, location, and date of collection. All samples are logged into a chain-of

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Compliance & Closure, Inc.  
Groundwater Sampling Protocol  
Latest Revision: Npvenber 7, 1996

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custody form and placed in a chilled ice chest for shipment to a laboratory certified by the State of California Department of Health Services.

### **Sample Storage**

Groundwater samples collected in the field are stored in an ice chest cooled to 4 C while in transit to the office or analytical laboratory. Samples are stored in a refrigerator overnight and during weekends and holidays. The refrigerator is set to 4 C and is locked with access controlled by a designated sample custodian.

### **Quality Assurance/Quality Control Objectives**

The sampling and analysis procedures employed by Compliance & Closure, Inc. for groundwater sampling and monitoring follow quality assurance/quality control (QA/QC) guidelines. Quality assurance objectives have been established to develop and implement procedures for obtaining and evaluating water quality and field data in an accurate, precise, and complete manner. In this way, sampling procedures and field measurements provide information that is comparable and representative of actual field conditions. Quality control (QC) is maintained by site-specific field protocols and requiring the analytical laboratory to perform internal and external QC checks. The goal is to provide data that are accurate, precise, complete, comparable, and representative. The definitions as developed by overseeing federal, state, and local agency guidance documents for accuracy, precision, completeness, comparability, and representativeness are:

- o **Accuracy** - the degree of agreement of a measurement with an accepted reference or true value.
- o **Precision** - a measure of agreement among individual measurements under similar conditions. Usually expressed in terms of the standard deviation.
- o **Completeness** - the amount of valid data obtained from a measurement system compared to the amount that was expected to meet the project data goals.
- o **Comparability** - express the confidence with which one data set

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Compliance & Closure, Inc.  
Groundwater Sampling Protocol  
Latest Revision: November 7, 1996

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can be compared to another.

- o **Representativeness** - a sample or group of samples that reflect the characteristics of the media at the sampling point. It also includes how well the sampling point represents the actual parameter variations which are under study.

Laboratory and field handling procedures of samples are monitored by including QC samples for analysis with every submitted sample lot from a project site. QC samples may include any combination of the following:

- o **Trip Blanks:** Used for purgeable organic compounds only; QC samples are collected in 40 milliliter (ml) sample vials filled in the analytical laboratory with organic-free water. Trip blanks are sent to the project site, and travel with project site samples. Trip blanks are **not** opened, and are returned from a project site with the project site samples for analysis.
- o **Field Blank:** Prepared in the field using organic-free water. These QC samples accompany project site samples to the laboratory and are analyzed for specific chemical parameters unique to the project site where they were prepared.
- o **Duplicates:** Duplicated samples are collected "second samples" from a selected well and project site. They are collected as either split samples or second-run samples collected from the same well.
- o **Equipment Blank:** Periodic QC samples collected from field equipment rinseate to verify decontamination procedures.

The number and types of QC samples are determined and analyzed on a project-specific basis.

### **Shallow Groundwater Survey**

A shallow groundwater survey employs reconnaissance field sampling and chemical analysis for rapid plume mapping. Occasionally, a state-certified laboratory subcontractor may be used. The subcontractor would sample for analysis at locations marked by the CCI field geologist. The thin-diameter probes from which groundwater is collected are advanced to the water bearing

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Compliance & Closure, Inc.  
Groundwater Sampling Protocol  
Latest Revision: November 7, 1996

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stratum, sample is withdrawn to the surface, and analyzed immediately thereafter. Probe holes are backfilled with a grout slurry or as the local permitting agency requires. The shallow survey contractor will supply sampling, purging, and field chemical analysis to CCI in their report. CCI considers this type of shallow probe mapping (together with shallow groundwater sampling) to be a reconnaissance technique only.



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

Lab Number: 98-037  
Client: Compliance & Closure, Inc.  
Project: #12059-2 / Jack Holland Sr Oil Co.

Date Reported: 01/19/98

Gasoline, BTEX and MTBE by Methods 8015M and 8020  
Diesel Range Hydrocarbons by Method 8015M

Analyte	Method	Result	Unit	Date Sampled	Date Analyzed
Sample: 98-037-01		Client ID: MW-1		01/13/98	WATER
Gasoline	8015M	150	ug/L		01/19/98
Benzene	8020	5	ug/L		
Ethylbenzene	8020	ND			
MTBE	8020	ND			
Toluene	8020	ND			
Xylenes	8020	ND			
Diesel	8015M	ND			01/16/98
Sample: 98-037-02		Client ID: MW-2		01/13/98	WATER
Gasoline	8015M	ND			01/19/98
Benzene	8020	ND			
Ethylbenzene	8020	ND			
MTBE	8020	ND			
Toluene	8020	ND			
Xylenes	8020	11	ug/L		
Diesel	8015M	ND			01/16/98





North State Environmental  
Chemical Waste Disposal · Trucking · Consulting

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

Lab Number: 98-037  
Client: Compliance & Closure, Inc.  
Project: #12059-2 / Jack Holland Sr Oil Co.  
Date Reported: 01/19/98

Gasoline, BTEX and MTBE by Methods 8015M and 8020  
Diesel Range Hydrocarbons by Method 8015M

Analyte	Method	Result	Unit	Date Sampled	Date Analyzed
Sample: 98-037-03	Client ID: MW-3			01/13/98	WATER
Gasoline	8015M	ND			01/19/98
Benzene	8020	ND			
Ethylbenzene	8020	ND			
MTBE	8020	ND			
Toluene	8020	ND			
Xylenes	8020	ND			
Diesel	8015M	ND			01/16/98



North State Environmental  
Chemical Waste Disposal · Trucking · Consulting

## CERTIFICATE OF ANALYSIS

### Quality Control/Quality Assurance

Lab Number: 98-037  
Client: Compliance & Closure, Inc.  
Project: #12059-2 / Jack Holland Sr Oil Co.

Date Reported: 01/19/98

Gasoline, BTEX and MTBE by Methods 8015M and 8020  
Diesel Range Hydrocarbons by Method 8015M

Analyte	Method	Reporting Limit	Unit	Blank	MS/MSD Recovery	RPD
Gasoline	8015M	50	ug/L	ND	99	11
Benzene	8020	0.5	ug/L	ND	109	2
Ethylbenzene	8020	0.5	ug/L	ND	108	4
Toluene	8020	0.5	ug/L	ND	105	0
Xylenes	8020	1.0	ug/L	ND	104	1
MTBE	8020	0.5	ug/L	ND	118	7
Diesel	8015M	0.05	mg/L	ND	80	1

ELAP Certificate NO:1753

Reviewed and Approved

John A. Murphy, Laboratory Director

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**COMPLIANCE & CLOSURE WELL DEVELOPMENT LOG**

JOB # 12059-2

DATE: 1/13/98

NAME: Jack Holland SR oil co.

TIME: 7:30 am

<u>WELL #</u>	<u>VOLUME</u>	<u>TD</u>	<u>DTW</u>	<u>Ph</u>	<u>TEMP</u>	<u>COND</u>	<u>COMMENTS</u>
MW-1	5/5	18.00	5.20	6.9 6.8	58.3 60.1	1327 1375	Moderate product od. clean to slightly cloudy.
MW-2	5/5	20.05	4.99	6.8 6.8	56.0 56.5	742 747	clean to slightly cloudy, very slight product odor.
MW-3	5/5	21.75	5.45	6.9 6.8	52.3 58.0	1084 1108	clean, no odor

PH w/ #4 & #10 buffer

EQUIPMENT CALIBRATION DATE: 1/13/98

SERIAL No. 9204