WEISS ASSOCIATES Consulting in Geology & Geohydrology
2938 McClure Street, Oakland, CA 94609 415-465-1100

October 13, 1989

Ms. Wendy Howell
Shell Oil Company
P.O. Box 4848
Anaheim, CA 92803

Re: Shell Service Station
WIC #204-685-214
1784 150th Avenue
San Leandro, California
WA Job #81-422-02

Dear Ms. Howell:

This letter is submitted to document the November 1986 removal of a former waste oil tank at the subject station and how it complies with the tank closure requirements of the California Regional Water Quality Control Board-San Francisco Bay Region (WQCB) and California Administrative Code Title 23 Waters, Chapter 3, Subchapter 16, Article 7.

Summarized below are previous and current data, including the site background, site history, discussion of site and regional hydrogeologic conditions, descriptions of past and current tank closure requirements, and recommendations for achieving closure of the former waste oil tank excavation.

BACKGROUND

The subject station is located in the city of San Leandro on the southeastern corner of the intersection of 150th Avenue and Freedom Avenue. The operating station retails gasoline from three 10,000 gallon fiberglass storage tanks located in the northwestern portion of the site adjacent to 150th Avenue. The former waste oil tank was buried immediately south of the station building. A site map showing the location of the former waste oil tank is presented as Attachment A.

SITE HISTORY SUMMARY

Shell Oil Company records indicate that a steel 550-gallon waste oil tank was removed from the site in November 1986 by Petroleum Engineering, of Santa Rosa, California, and was

replaced with a 550-gallon fiberglass tank. The removed steel tank was apparently installed in 1967, however Shell Oil Company site inventory documents show a steel 550 gallon tank purchased for the site in 1981. The station manager indicated that no new waste oil tank had been installed in or around 1981.

Immediately following the tank removal, Blaine Tech Services of San Jose, California observed and documented the tank condition and collected soil samples from beneath the former tank location at 8 ft depth. On November 11, 1986, after additional soil excavation, Blaine Tech obtained additional soil samples from beneath the former tank location at depths of 11 ft and 16 ft. Notes taken by the technician at the time describe the soil at 11 ft as "pitch black", and at 16 ft as "brown". The 8 and 11 ft depth native soil samples were submitted to Soil and Water Laboratories of Boulder Creek, California (S&W). S&W analyzed the samples for Total Oil and Grease (TOG). The sample from 16 ft depth was not analyzed. The S&W analytic method and results are presented in Table 1. The soil samples from 8 ft and 11 ft depth contained 196 and 167.4 ppm TOG, respectively.

According to observations made by the Blaine Tech sampling technician, the tank and exterior wrapping appeared to be in good condition. No ground water was encountered in the tank pit during the tank removal or the subsequent deepening of the tank excavation. Blaine Tech field notes and sampling reports are presented as Attachment B. The S&W and Sequoia analytic reports are included with the sampling reports.

SITE HYDROGEOLOGIC CONDITIONS

To estimate the stratigraphy, ground water flow direction and the approximate ground water depth in the site vicinity WA:

- Observed neighboring sites and reviewed local and state agency files to determine whether any water wells were nearby, and
- Researched local and regional hydrogeologic data.

TABLE 1. Analytic Results for Soil, Shell Service Station WIC #204-685-214, 1784 150th Avenue, San Leandro, California

Sample ID	Sample Depth (ft)	Date Sampled	Sampled By	Sample Type	Analytic Lab	Analytic Method	TOG (ppm)
Soil #1	8.0	11/7/86	BT	Excavation Floor	S&W	503E	196
Soil #2	11.0	11/11/86	BT	Excavation Floor	S&W	503E	167

Abbreviations:

TOG = Total Oil and Grease
ppm = parts per million
BT = Blaine Tech Services, San Jose, California
S&W = Soil and Water Laboratories, Boulder Creek, California

Analytic Methods:

503E = American Public Health Association Standard Method 503E, Solvent Extraction/Gravimetric Quantitation

Results of this work indicate:

- No water wells or soil borings are on the Shell site or the adjacent properties.
- Review of Alameda County Flood Control and Water Conservation District (Zone 7) driller's report files indicate 47 wells within one-half mile of the subject site.
- Zone 7 and WQCB records indicate the lithology and depth to water in 2 wells and several soil borings within one-half mile of the site. The ground water depth in nine soil borings drilled about 1,900 ft southwest of the subject site ranged from 11 to 14 ft in April 1988. The depth to ground water in an irrigation well located about 1,500 ft southeast of the site was 12 ft in August 1977. Drillers' logs for the nine nearby borings indicate that the surficial

materials 1,900 ft southwest of the site consist of at least 20 ft of low permeability clay, with occasional thin lenses of sand or gravel. Since these materials are typical of the Quaternary alluvium underlying the broad East Bay Plain Area,[1] similar materials should lie beneath the subject site.

- Based on water level data obtained from the Zone 7 report cited above, the California Department of Water Resources (DWR), and the WQCB, in the vicinity of the subject station unconfined ground water in the upper water-bearing zone flows westward and occurs at a depth of about 12 to 15 ft below ground surface. This flow direction is consistent with the deeper regional westward ground water flow direction.

CLOSURE REQUIREMENTS

A 1985 San Francisco Bay Region WQCB tank removal and fuel leak guidance document[2] requires documentation of the integrity of the tank and tank piping, the condition of the tank excavation, collection of soil samples beneath the tank, and analysis of the samples for hydrocarbons. This document requires monitoring well installation only if greater than 100 ppm hydrocarbons are detected in the soil samples, but does not specifically address waste oil tank removals.

According to a June 2, 1988 (revised May 1989) Northern California WQCB guidance document,[3] if less than 100 ppm hydrocarbons are detected in the native soil, no hydrocarbons

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[1] Alameda County Flood Control and Water Conservation District, 1988, Geohydrology and Groundwater - Quality Overview, East Bay Plain Area, Alameda County, California, 205(J) Report, 83 pp. and 6 appendices.

[2] Eisenberg, D.M., A.W. Olivieri, et al., September 1985, Guidelines for Addressing Fuel Leaks, California Regional Water Quality Control Board - San Francisco Bay Region; 24 pp and 3 appendices.

[3] North Coast, San Francisco Bay and Central Valley Regional Water Quality Control Boards, June 2, 1988, (Revised May, 1989), Regional Board Staff Recommendations for Initial Evaluation and Investigation of Underground Tanks, 18 pp.

are detected at or below the seasonal high ground water level, low permeability soil underlies the tank, and no hydrocarbons are in ground water beneath the tank, the tank excavation can generally be closed with no further investigation.

The 1988 WQCB guidance document also requires specific EPA-approved chemical analyses of soil and/or ground water samples collected during tank removal. For waste oil tanks, required analyses include gasoline and diesel-range hydrocarbons as well as chlorinated hydrocarbons, benzene, ethylbenzene, toluene and xylenes (BETX), oil and grease, selected metals and, in some cases, semi-volatile organics including polychlorinated biphenols (PCBs).

SITE STATUS WITH RESPECT TO CLOSURE REQUIREMENTS

The results of the previous work at the site and WA's hydrogeologic research indicates:

- Over 100 ppm hydrocarbons were detected in soil samples collected from the tank excavation at 8.0 and 11.0 ft depth.

- The tank and tank wrapping were in good condition when removed, although soil beneath the tank was discolored.

- Additional soil was removed from the tank excavation, to a depth of 16 ft. At this depth the soil was apparently not discolored. No ground water was encountered in the tank pit.

- Depth to water in the site vicinity is approximately 12 to 15 ft below grade, and was evidently greater than 16 ft directly beneath the site in November 1986.

- Although specific information regarding the composition of the subsurface materials at the Shell site is not available, driller's logs from nearby wells and borings indicate that the unconsolidated sediments in the site vicinity are predominantly fine-grained low permeability clay, interbedded with moderate to high permeability sand and gravel lenses. These materials are typical of the East Bay Plain Area where the site is located.

RECOMMENDATIONS

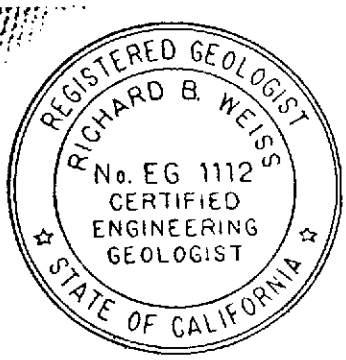
Although greater than 100 ppm hydrocarbons were detected in soil immediately below the removed tank, the excavation was extended to at least 5 ft below the deepest contaminated soil sample. Based on the removal of all discolored soil from the tank site, the above-noted site characteristics and the tank conditions, we recommend that Shell Oil apply for closure of the former waste oil tank excavation by submitting this report to the following agencies:

San Leandro Fire Department
901 E. 14th Street
San Leandro, California, 94577
Attn: Guy Pelham

Alameda County Department of Environmental Health
Hazardous Materials Program
80 Swan Way, Room 200
Oakland, California 94621
Attn: Mr. Edgar Howell

California Regional Water Quality Control Board - San Francisco Bay Region
1111 Jackson Street
Oakland, California 94607
Attn: Mr. Lester Feldman

We are pleased to provide hydrogeologic consulting services to Shell Oil and trust this submittal meets your needs. Please call if you have any questions or comments.



Sincerely,
Weiss Associates,

Joseph P. Theisen by KCS
Joseph P. Theisen
Project Geologist

Richard B. Weiss
Principal Hydrogeologist

JPT/RBW:ag

F:\ALL\SHELL\422L1OC9.WP

Encl.: Attachment A - Site Map
Attachment B - Blaine Tech Service Field Notes and Sampling Report

ATTACHMENT A

SITE MAP

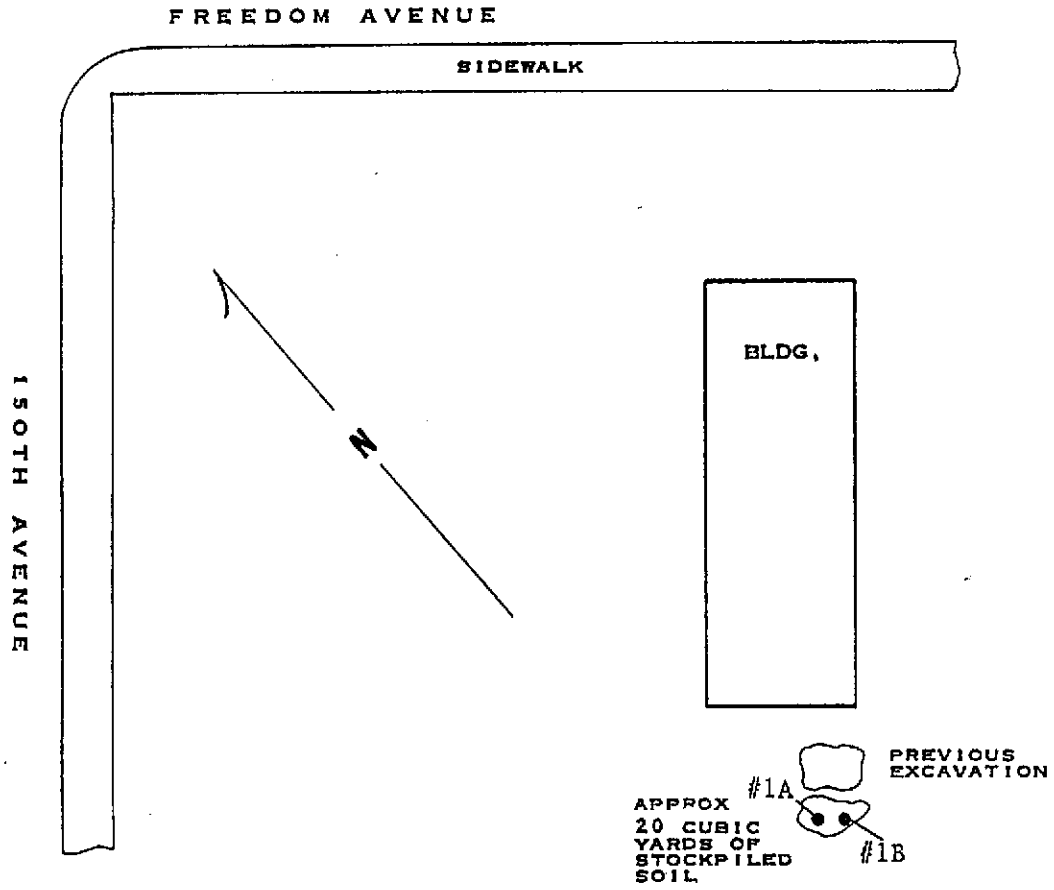
(*from* Blaine Tech Services Sampling Report,
Shell Service Station,
1784 150th Avenue, San Leandro, CA,
November 11, 1986, 3 pp. and 2 attachments)

BLAINE
TECH SERVICES

SAMPLING REPORT 86342F3 12-8-86 SHELL OIL, 1784 150TH AVENUE, SAN LEANDRO, CA

SCALE: 0 10 20'

MAP REF: THOMAS BROS.
ALAMEDA COUNTY
P. 27 E-1



#1 STOCKPILE SOIL COMPOSITE
FROM SAMPLE POINTS A & B
A 12" BELOW SURFACE
B 18" BELOW SURFACE
ANALYSIS FOR FLASHPOINT,
ORGANIC LEAD, STLC AND TTLC
AT SEQUOIA ANALYTICAL LABORTORY
SEQUOIA LAB NO. 6120436

SAMPLING PERFORMED BY
FRANK A. CLINE

DIAGRAM PREPARED BY
TAMMIE STALLINGS

Tammie Stallings

ATTACHMENT B

BLAINE TECH SERVICE FIELD NOTES AND SAMPLING REPORT

BLAINE
TECH SERVICES INC.

1370 TULLY RD., SUITE 505
SAN JOSE, CA 95122
(408) 995-5535

June 28, 1989

Shell Oil Company
P.O. Box 4848
511 North Brookhurst Street
Anaheim, CA 92803

Attn: Peter J. Pugnale
Area Engineer--Environmental
Western Distribution Area

SITE:
Shell Service Station
1784 150th Avenue
San Leandro, California

PROJECT:
Archival search for previously unpublished notes made during waste oil tank removal related sampling:

November 7, 1986 86311-F-4
November 11, 1986 86315-M-2
December 8, 1986 86342-F-3

DOCUMENT PACKAGE 86342-F-3.ADD

Blaine Tech Services Inc. is an independent third party that performs tank removal sampling, groundwater monitoring well sampling and grab sampling services throughout central and northern California. The scope of services is intentionally limited to those that provide objective information. Unlike consulting/remediation vendors who have a complete battery of related investigation, evaluation, and remediation services which they hope to use, Blaine Tech Services, Inc. is only in the business of supplying high quality sampling and documentation. In order to preserve the objectivity necessary for the proper and impartial performance of this work and avoid implicit conflicts of interest, Blaine Tech Services, Inc. does not participate in the interpretation of analytical results or engage in the marketing of remediation systems of any kind.

TABLE OF CONTENTS

LIMITATIONS

This information was compiled in response to your request for any additional and potentially useful unpublished notes made by our personnel during the waste oil tank removal project. In order to give an unfragmented presentation, we have assembled a package of *all* the applicable information. The previously unpublished notations are presented along with any existing photographs of the work in progress, followed by a complete reproduction of the original Sampling Report, the chain of custody, and the certified analytical laboratory reports.

Please bear in mind that the present search of our files is a separate scope of work from the original tank removal sampling which was completed with the issuance of our Sampling Reports 86311-F-4, 86315-M-2, and 86342-F-3. It is prudent to remember that this new work carries with it the usual dangers that are inherent in all archival research. In particular, there are two distinct problems that will impede attempts to make substantive use of the informal notes which have been drawn from our files.

First, the unpublished information was considered, at the time of its collection, to be ancillary to the core information issued in the formal Sampling Report. After so much time has elapsed it would be difficult to justify elevating those casual contemporaneous notations to a more authoritive status.

Second, the information contained in those casual notes was not collected in a formal and systematic fashion that would allow all parties to have a high degree of confidence that the notes accurately represent *all* the conditions at the site which may now (after several years) be deemed important. In this regard, the primary skepticism that must be applied to the information is not that it is, necessarily, inaccurate but that it *is*, necessarily, incomplete.

These limitations suggest that the previously unpublished notations will mainly be of use in corroborating information available from other sources (such as the already issued reports), and will probably not alter the ranking of the site established by laboratory results and accepted regulatory criteria. These constraints should be taken into account when requesting archival searches and, especially, when evaluating the utility of the unpublished information in relationship to the cost of obtaining it.

BACKGROUND

Blaine Tech Services, Inc. was contacted to perform the collection of samples at this site, and to transport the samples to a state licensed laboratory. The brief report that was subsequently issued followed the standard short form format being used by our firm at that time. Though sparse by contemporary standards, this abbreviated report format had been developed at the request of the RWQCB and was used as a model by several San Francisco Bay area regulatory agencies.

Hired primarily to perform sampling (rather than documenting the entire sequence of events involved in the tank removal process), our personnel directed their documentation efforts mainly to establishing and recording the location from which the sample material was collected. Other data was collected as it was available and as our personnel had time to record it. QC work was directed to verifying the correctness of information in the written reports and did not address the casual notes and comments entered into the file by our field personnel.

ADDITIONAL NOTES ON SAMPLING EVENT 86311-F-4

Waste oil tank removal sampling November 7, 1986

The Shell engineer overseeing work at this site was Mr. Stan Roller. However, much of the actual work at the site was organized and coordinated by the contractors performing the work. Mr. Ron Ridley of Petroleum Engineering made many of the arrangements.

The local regulatory agency was the San Leandro Fire Department, represented by Mr. Joe Ferreira.

Notations not summarized in our report include the following:

Our personnel noted that Mr. Ferreira was not present.

The tank was a 550 gallon tank with an exterior wrapping.

The tank appeared to be in good condition. The wrap on the tank appeared to be in good condition.

The open tank pit was nine feet (9') long and six feet (6') wide.

The pit contained pea gravel backfill. (This may have affected access to the bottom of the pit.)

One sample was taken. This was an interface sample obtained from a depth of 8.0' below grade. The sample was taken at the opposite end of the tank from the fill pipe and off to the side of the tank's footprint rather than directly on the tank centerline.

No photographic prints or negatives were found in the job folder.

The remaining papers contained in the job folder comprise the notes, forms and original diagrams that support the information presented in Sampling Report 86311-F-4. The full text of the Sampling Report, along with the chain of custody form, and the certified analytical report are reproduced in their entirety on the pages that follow.

BLAINE
TECH SERVICES

P.O. BOX 5745
SAN JOSE, CA 95150
(408) 723-3974

November 21, 1986

Shell Oil Company
P.O. Box 7004
Lafayette, CA 94549

Attention: Stan Roller

Re: Field sampling at 1784 150th Avenue
San Leandro, CA
on
November 7, 1986

SAMPLING REPORT

Field sampling was undertaken in accordance with State and local enforcement agency standards and requirements for objective analytical information on the levels of residual contaminants found outside the primary containment structure. This project concerned the following:

Underground storage tank removal

Reason for removal -- replacement with double containment tanks

Type -- one 550 gallon waste oil

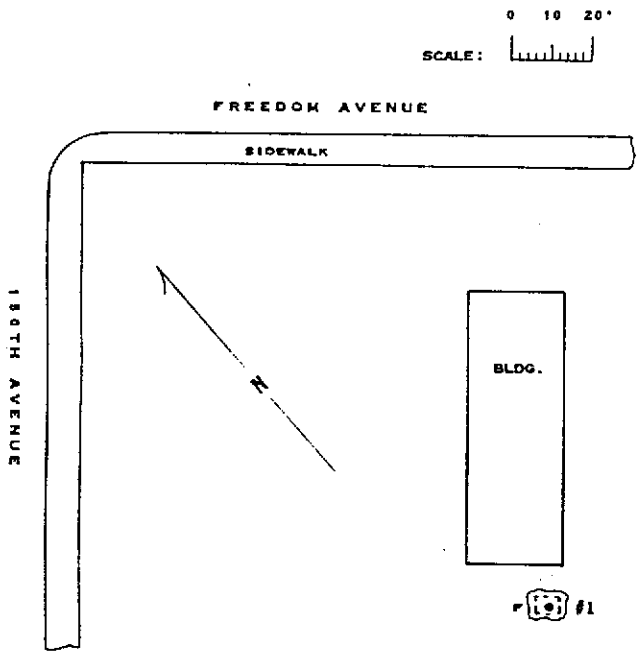
Age -- unspecified

Sampling was performed in accordance with approved methodology at the location shown on the accompanying site diagram. Additional information is presented on the diagram including our field sampling designation and the lab identification number which reference the analytical results which will be found in the separate laboratory report. Sample material was collected in a special container appropriate to the type of analysis intended. The sample container was sealed, chilled, and transported to the laboratory with standard chain of custody records maintained at each transmittal. This sampling report, the chain of custody, and the analytical report comprise the formal documentation of the sampling conducted during this phase of work at the site.

ORIGINAL SAMPLING REPORT 86311-F-4 page 2 diagram

BLAINE
TECH SERVICES

SAMPLING REPORT 86311F4 11-7-86 SHELL OIL, 1764 150TH AVE., SAN LEANDRO, CA



MAP REF: THOMAS BROS. ALAMEDA COUNTY P. 27 E-1

LEGEND: F = FILL END

#1 SOIL FROM 8'
ANALYSIS FOR WASTE OIL
AT SOIL AND WATER LABORATORY
S & W LAB NO. 311B6-6

SAMPLING PERFORMED BY
FRANK A. CLINE

DIAGRAM PREPARED BY
TAMMIE STALLINGS

PAGE 2

Reportage

Submission to the Regional Water Quality Control Board and the local regulatory/enforcemnt agency should include copies of the sampling report, the chain of custody, and the laboratory report. The property owner should attach a cover letter and submit all documents together in a package.

The following addresses have been listed here for your convenience:

Water Quality Control Board
San Francisco Bay Region
1111 Jackson Street
Room 6040
Oakland, CA 94607
ATTN: Peter Johnson

San Leandro Fire Department
835 East 14th St.
San Leandro, Ca 94577
ATTN: Joe Ferreira

If I can be of any further assistance, please call.

Richard C. Blaine

RCB/tls

ORIGINAL SAMPLING REPORT 86311-F-4 chain of custody

BLAINE TECH SERVICES

P O BOX 5745
SAN JOSE, CA 95150
(408) 723-3974

Include ALL of the following designation in lab reports and invoices
861114 Shell Oil 1784 150th Ave. San Leandro, CA
EVERYTHING written above this line is the project designation

Field sampling completed 11:35 hrs. 11-7-86 performed by [signature]

RELEASED BY		ACCEPTED BY	
14:00 hrs. 11-7-86	[signature]	14:?? hrs. 11-7-86	[signature]
??:06 hrs. 11-7-86	[signature]	12:?? hrs. 11-7-86	[signature]
__:__ hrs. - -86		__:__ hrs. - -86	
__:__ hrs. - -86		__:__ hrs. - -86	

I.D.	TYPE	ANALYSIS	LAB #	PRELIMS	FINAL
#1	Soil	Waste Oil	3142-6		1?, ppm

TURN AROUND By 11-10-86

REPORT TO: Blaine Tech Services
Attn
Phone

BILLING INVOICE TO: Same
Attn
Verbal/Ref PO From:

cc BLAINE TECH SERVICES (always)
cc OTHER:

SPECIAL INSTRUCTIONS
[ ] Phone results to BTS
[ ] Phone results to client direct

ORIGINAL SAMPLING REPORT 86311-F-4 lab report 1 of 1

S&W
SOIL AND WATER LABORATORY
Soil Fertility—Plant Tissue
Pollution and Residue Control
Drinking Water

14072 W. Park Avenue
Boulder Creek, CA 95006

(408) 338-3053

Laboratory Report

Client	Report Date
Blaine Tech Services P. O. Box 5745 San Jose, CA. 95150	11/10/86
Sample Site	**Date Received**
Shell Oil 1784 - 150th Avenue San Leandro, CA. 86311F4 #1	11/7/86
Analysis Requested	**Procedure** / **Date Analyzed**
Soil/Waste Oil	EPA 3550 / 11/7/86

S&W Ref. #	Client Ref. #	Matrix/Analysis	Concentration (ppm)	Detection Limit (ppm)
311B6-6		Soil/Waste Oil	196	20 ppm

Analyst Signature K. L. Lemon

ADDITIONAL NOTES ON SAMPLING EVENT 86315-M-2

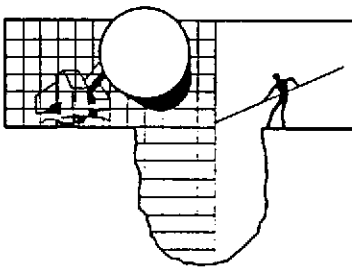
Deeper sampling on November 11, 1986 following additional excavation

Notations not summarized in our report include the following:

> Our personnel were asked to return to the site on November 11, 1986 to collect samples in connection with additional cleanup excavation being conducted by the contractor.
>
> The first sample (#1) was obtained at a depth of 11.0' below grade in the approximate center of the tank footprint. The soil was described with the phrase, "Soil pitch black."
>
> Exploratory excavation was continued down to the furthest reach of the backhoe bucket which was 16.0' below grade. A second sample (#2) was obtained at this depth. The soil at this depth was described as, "Brown".

No photographic prints or negatives were found in the job folder.

The remaining papers contained in the job folder comprise the notes, forms and original diagrams that support the information presented in Sampling Report 86315-M-2. The full text of the Sampling Report, along with the chain of custody records, and certified analytical reports are reproduced in their entirety on the pages which follow.



BLAINE
TECH SERVICES INC.

1370 TULLY RD., SUITE 505
SAN JOSE, CA 95122
(408) 995-5535

November 21, 1986

Shell Oil Company
P.O. Box 7004
Lafayette, CA 94549

Attention: Stan Roller

Re: Field sampling at 1784 150th Avenue
San Leandro, CA
on
November 11, 1986

SAMPLING REPORT

Field sampling was undertaken in accordance with State and local enforcement agency standards and requirements for objective analytical information on the levels of residual contaminants found outside the primary containment structure. This project concerned the following:

Underground storage tank removal

Reason for removal -- replacement with double containment tanks

Type -- one 550 gallon waste oil

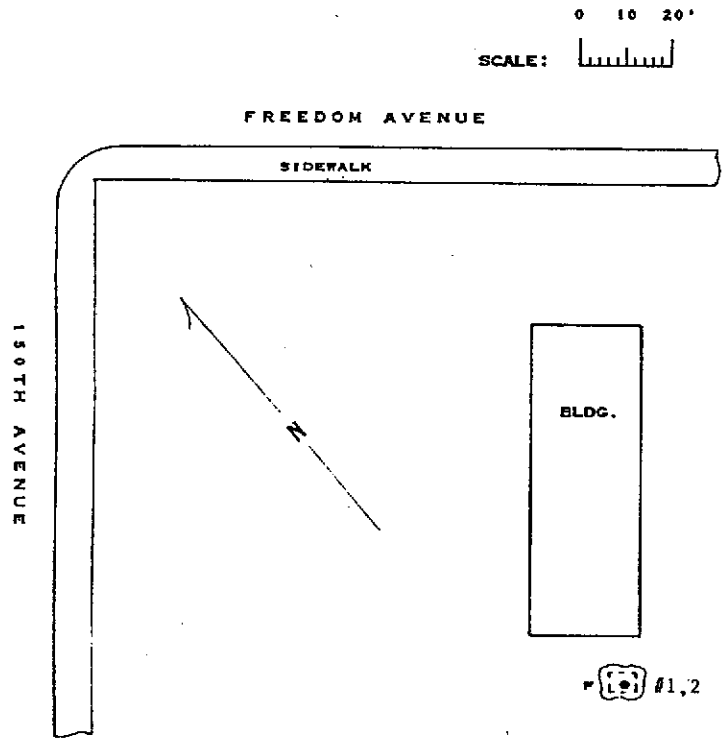
Age -- unspecified

Sampling was performed in accordance with approved methodology at the locations shown on the accompanying site diagram. Additional information is presented on the diagram including our field sampling designations and the lab identification numbers which reference the analytical results which will be found in the separate laboratory report. Sample material was collected inspecial containers appropriate to the type of analysis intended. Sample containers were sealed, chilled, and transported to the laboratory with standard chain of custody records maintained at each transmittal. This sampling report, the chain of custody, and the analytical report comprise the formal documentation of the sampling conducted during this phase of work at the site.

ORIGINAL SAMPLING REPORT 86315-M-2 page 2 diagram

BLAINE
TECH SERVICES

SAMPLING REPORT 86315M2 11-11-86 SHELL OIL, 1784 150TH AVENUE, SAN LEANDRO, CA



MAP REF: THOMAS BROS. ALAMEDA COUNTY P. 27 E-1

LEGEND: F = FILL END

#1 SOIL FROM 11'
ANALYSIS FOR WASTE OIL
AT SOIL AND WATER LABORATORY
S & W LAB NO. 31686-2

#2 SOIL FROM 16'
SAMPLE PLACED ON 'HOLD'

SAMPLING PERFORMED BY
HELEN MAWHINNEY

DIAGRAM PREPARED BY
TAMMIE STALLINGS

PAGE 2

Reportage

Submission to the Regional Water Quality Control Board and the local regulatory/enforcemnt agency should include copies of the sampling report, the chain of custody, and the laboratory report. The property owner should attach a cover letter and submit all documents together in a package.

The following addresses have been listed here for your convenience:

Water Quality Control Board
San Francisco Bay Region
1111 Jackson Street
Room 6040
Oakland, CA 94607
ATTN: Peter Johnson

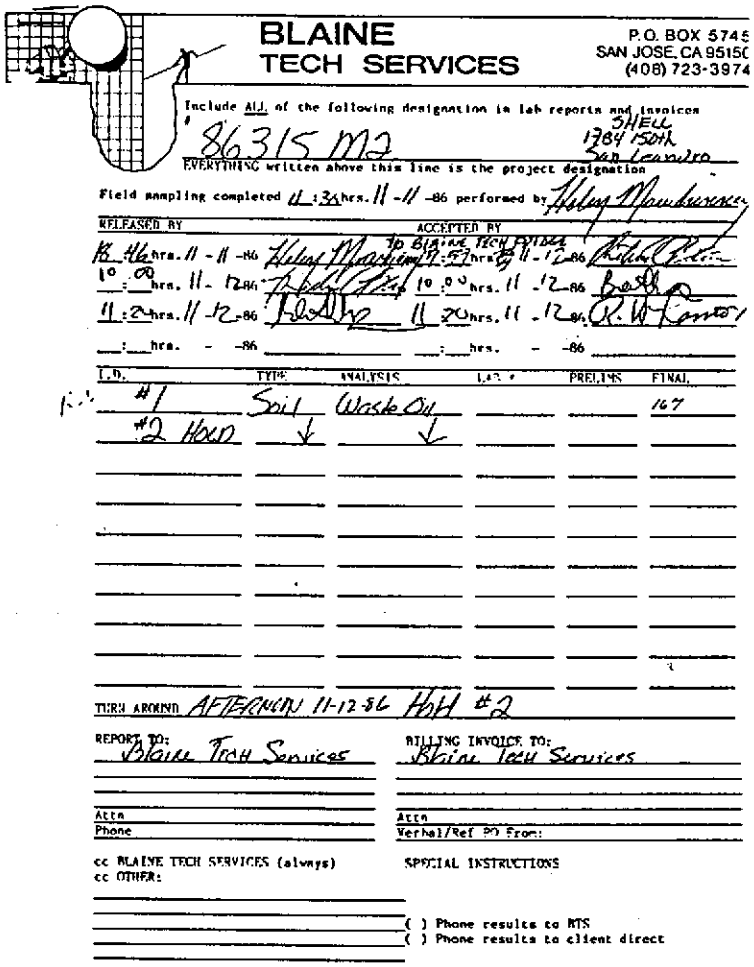
San Leandro Fire Department
835 East 14th St.
San Leandro, Ca 94577
ATTN: Joe Ferreira

If I can be of any further assistance, please call.

Richard C. Blaine

RCB/tls

ORIGINAL SAMPLING REPORT 86315-M-2 chain of custody



BLAINE TECH SERVICES

P.O. BOX 5745
SAN JOSE, CA 95150
(408) 723-3974

Include ALL of the following designation in lab reports and invoices

86315 M2

SHELL
1784 150th
San Leandro

EVERYTHING written above this line is the project designation

Field sampling completed 11:35 hrs. 11-11-86 performed by Helen Mawhinney

RELEASED BY		ACCEPTED BY	
15:46 hrs. 11-11-86	Helen Mawhinney	17:57 hrs. To Blaine Tech Services 11-12-86	
10:00 hrs. 11-12-86		10:00 hrs. 11-12-86	
11:20 hrs. 11-12-86		11:20 hrs. 11-12-86	
:hrs. -86		:hrs. -86	

I.D.	TYPE	ANALYSIS	LAB #	PRELIMS	FINAL
#1	Soil	Waste Oil			167
#2 HOLD	↓	↓			

TURN AROUND AFTERNOON 11-12-86 H&H #2

REPORT TO: Blaine Tech Services

BILLING INVOICE TO: Blaine Tech Services

Attn
Phone

Attn
Verbal/Ref PO From:

cc BLAINE TECH SERVICES (always)
cc OTHER:

SPECIAL INSTRUCTIONS

( ) Phone results to BTS
( ) Phone results to client direct

ORIGINAL SAMPLING REPORT 86315-M-2 lab report 1 of 1

S&W
SOIL AND WATER LABORATORY
Soil Fertility—Plant Tissue
Pollution and Residue Control
Drinking Water

14072 W. Park Avenue
Boulder Creek, CA 95006

(408) 338-3053

Laboratory Report

Client	Report Date
Blaine Tech Services P. O. Box 5745 San Jose, CA. 95150	11/17/86
Sample Site	**Date Received**
Shell Oil 1784 - 150th San Leandro, CA. 86315M2-1	11/12/86

Analysis Requested	Procedure	Date Analyzed
Soil/Waste Oil	EPA 3550	11/12/86

S&W Ref. #	Client Ref. #	Matrix/Analysis	Concentration (ppm)	Detection Limit (ppm)
316B6-2	#1	Soil/Waste Oil	167.4	20 ppm

Analyst Signature

ADDITIONAL NOTES ON SAMPLING EVENT 86342-F-3

Stockpile sampling on December 8, 1986

Our personnel were asked to return to the site on December 8, 1986 to obtain samples of the soil stockpiled beside the open tank pit.

Notations not summarized in our report include the following:

Our personnel measured the stockpile and calculated the volume at approximately 20 cubic yards of material. Dimensions of the stockpile were recorded as 18.0' long by 15.0' wide by 4.0' high.

Two brass sample containers were used to contain the collected soil. However, in accordance with a common practice in use at the time, each container was filled with equal amounts of soil from two different locations. This effectively doubled the number of sample collection points being included in the composite. The brass tubes were labeled as containing two equal layers of soil and the laboratory was accustomed to obtaining sample material from both ends of all such sample containers.

The samples were delivered to the laboratory with instructions to composite the material (from four locations) and conduct a series of analyses referred to as the Shell Lead Series. In order to avoid any confusion on what should be conducted, our personnel wrote out the specific analyses being requested. Accordingly, the request consisted of analytical procedures to determine flash point, extractable lead, total lead and organic lead content. PCB's were entered on the chain of custody form, but subsequently crossed off.

No photographic prints or negatives were found in the job folder.

The remaining papers contained in the job folder comprise the notes, forms and original diagrams that support the information presented in Sampling Report 86342-F-3. The full text of the Sampling Report, along with the chain of custody records, and certified analytical reports are reproduced on the next pages of this document.

Note: The first page of Sampling Report 86342-F-3 incorrectly indicates that the work was performed on November 11, 1986. The correct date on which the work was actually performed was December 8, 1986.

BLAINE TECH SERVICES INC.
1370 TULLY RD., SUITE 505
SAN JOSE, CA 95122
(408) 995-5535

December 29, 1986

Shell Oil
P.O. Box 7004
Lafayette, CA 94549

Attention: Stan Roller

Re: Field sampling at 1784 150th Avenue
San Leandro, CA
on
November 11, 1986

SAMPLING REPORT

Field sampling was undertaken in accordance with State and local enforcement agency standards and requirements for objective analytical information on the levels of residual contaminants found outside the primary containment structure. This project concerned the following:

Underground storage tank removal

Reason for removal -- replacement with double containment tanks

Type -- one 550 gallon waste oil

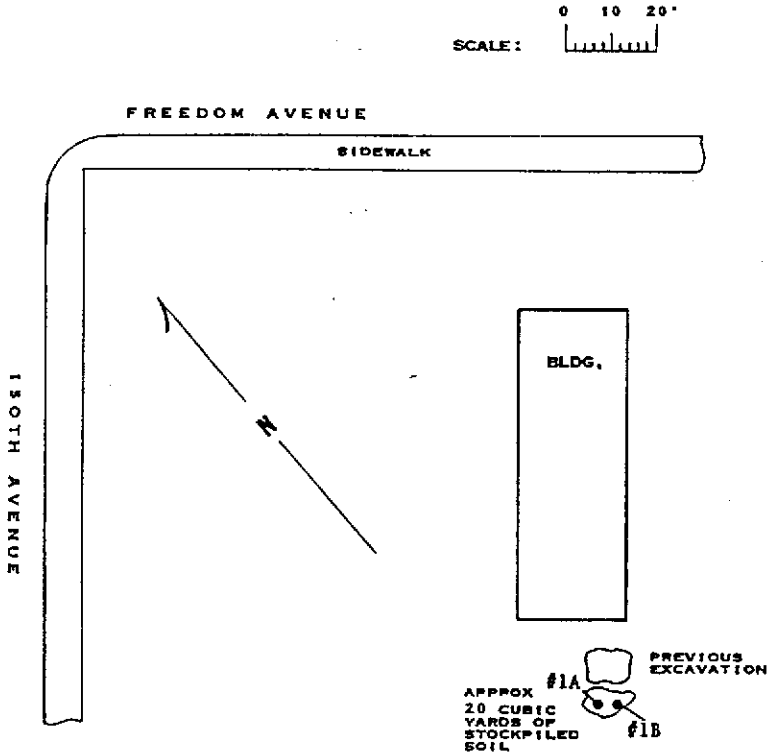
Age -- unspecified

Sampling was performed in accordance with approved methodology at the location shown on the accompanying site diagram. Additional information is presented on the diagram including our field sampling designation and the lab identification number which reference the analytical results which will be found in the separate laboratory report. Sample material was collected in a special container appropriate to the type of analysis intended. The sample container was sealed, chilled, and transported to the laboratory with standard chain of custody records maintained at each transmittal. This sampling report, the chain of custody, and the analytical report comprise the formal documentation of the sampling conducted during this phase of work at the site.

ORIGINAL SAMPLING REPORT 86342-F-3 page 2 diagram

BLAINE
TECH SERVICES

SAMPLING REPORT 86342F3 12-8-86 SHELL OIL, 1784 150TH AVENUE, SAN LEANDRO, CA



#1 STOCKPILE SOIL COMPOSITE
FROM SAMPLE POINTS A & B
A 12" BELOW SURFACE
B 18" BELOW SURFACE
ANALYSIS FOR FLASHPOINT,
ORGANIC LEAD, STLC AND TTLC
AT SEQUOIA ANALYTICAL LABORTORY
SEQUOIA LAB NO. 6120436

SAMPLING PERFORMED BY
FRANK A. CLINE

DIAGRAM PREPARED BY
TAMMIE STALLINGS

PAGE 2

Reportage

Submission to the Regional Water Quality Control Board and the local regulatory/enforcemnt agency should include copies of the sampling report, the chain of custody, and the laboratory report. The property owner should attach a cover letter and submit all documents together in a package.

The following addresses have been listed here for your convenience:

Water Quality Control Board
San Francisco Bay Region
1111 Jackson Street
Room 6040
Oakland, CA 94607
ATTN: Peter Johnson

San Leandro Fire Dept.
835 East 14th Street
San Leandro, CA 94577
ATTN: Joe Ferreira

If I can be of any further assistance, please call.

Richard C. Blaine

cc Petroleum Engineering

RCB/tls

BLAINE TECH SERVICES

P.O. BOX 5745
SAN JOSE, CA 95150
(408) 723-3974

Include ALL of the following designation in lab reports and invoices

\# 86342 F3 Shell Oil at 1784 150th Ave. San Leandro, CA

EVERYTHING written above this line is the project designation

Field sampling completed 6:45 hrs. 12-8-86 performed by [signature]

RELEASED BY		ACCEPTED BY	
14:33 hrs. 12-8-86	[signature]	14:35 hrs. 12-5-86	[signature]
__:__ hrs. - -86		__:__ hrs. - -86	
__:__ hrs. - -86		__:__ hrs. - -86	
__:__ hrs. - -86		__:__ hrs. - -86	

I.D.	TYPE	ANALYSIS	LAB #	PRELIMS	FINAL
A1 A4B	Soil	Lead Series: Flashpoint, Extractable Lead, Total Lead, Organic Lead			

Composite 2 cans into 1 samples

2 layers in each can

TURN AROUND 48 Hr Rush

REPORT TO: Blaine Tech Services

Attn

Phone

BILLING INVOICE TO: Same

Attn

Verbal/Ref PO From:

cc BLAINE TECH SERVICES (always)
cc OTHER:

SPECIAL INSTRUCTIONS

( ) Phone results to BTS
( ) Phone results to client direct

SEQUOIA Analytical Laboratory
2549 Middlefield Road
Redwood City, CA 94063 • (415) 364-9222

Blaine Tech Services
P.O. Box 5745
San Jose, CA 95150
Attn: Richard Blaine

Date Sampled: 12/08/86
Date Received: 12/08/86
Date Reported: 12/12/86

Sample Number	Sample Description
6120436	BTS #86342F3, Soil Composite of #1A & #1B - Shell Oil at 1784 150th Ave. in San Leandro

ANALYSIS

	STLC mg/L	TTLC mg/kg-wet wt.
Flashpoint, °C		> 110
Lead	< 0.005	0.68
Organic Lead	--	< 0.05

SEQUOIA ANALYTICAL LABORATORY

Arthur G. Burton
Laboratory Director

sls

We hope that the foregoing documents will be of use in your work at this site.

Please call if we can be of any further assistance.

Richard C. Blaine

RCB/dmp