



**Chevron** U.S.A. Inc.

2410 Camino Ramon, San Ramon, California • Phone (510) 842-9500  
Mail Address: P.O. Box 5004, San Ramon, CA 94583-0804

91 NOV 25 11:11:47

Marketing Department

November 20, 1991

Ms. Susan Hugo  
Alameda County Health Care Services  
80 Swan Way, Room 200  
Oakland, CA 94621

3710402

Re: **Former Chevron Service Station #9-3864**  
**5101 Telegraph Avenue, Oakland**

Dear Ms. Hugo:

Enclosed we are forwarding the **Full Service Station Remediation Report** dated October 28, 1991, prepared by our consultant **Blaine Tech Services, Inc.** for the above referenced site. This report documents the verification sampling performed during the removal of all above ground and subsurface improvements and subsequent soils remediation activities. The soils remediation activity consisted of excavating and aerating impacted soils encountered during the removal of the underground storage tank system and to assess the magnitude and extent of the subsurface contamination.

As indicated in the report, on September 18, 1991, all **underground storage tanks** and associated piping were removed. Samples were collected 2-feet into the native soils beneath the former **product tanks**. In addition, **sidewall samples** were collected to assess the lateral extent. The samples were analyzed for total petroleum hydrocarbons as gasoline (TPH-G) and BTEX. The sidewall samples reported non-detectable (ND) concentrations of these constituents. These samples were collected approximately 10-feet below grade. The samples collected beneath the former tanks detected TPH-G concentrations ranging from ND to 1,300 ppm. These samples were collected approximately 13.5-feet below grade. Analytical results of the samples collected beneath the former product lines reported non-detectable concentrations with the exception of the southeastern trench sample which detected TPH-G at 53 ppm.

Two (2) samples were collected beneath the former waste oil tank at a depth of 11.5 feet below grade. These samples were analyzed for TPH-G, TPH-Diesel, purgeable halocarbons, total oil & grease (TOG), and BTEX. All constituents reported non-detectable concentrations.

A soils remediation program was implemented on September 26, 1991, in an attempt to remove the **unsaturated site soils** that contained in excess of 10 ppm TPH-G. Over excavation was performed beneath the former product tanks and product lines and extended vertically to a depth of 17 to 18-feet below grade within the tank excavation and 5-feet below grade within the piping trench. Ground water was encountered within the tank excavation at a depth of 15.5-feet. Final excavation samples from the **southeastern piping trench** reported non-detectable concentrations. Final **excavation samples** collected beneath the former product tanks detected TPH-G at concentrations ranging from 71 to 980 ppm. These samples were saturated samples collected at the capillary fringe area. Initial tank sidewall samples indicated that the contamination did not extend laterally within the unsaturated soils adjacent to the tank excavation. Excavation was limited vertically to groundwater as further excavation of the saturated soils was not appropriate. The soils at and/or below the groundwater interface will be addressed as a groundwater issue as prescribed by the Regional Water Quality Control Board (RWQCB).

Page 2  
November 20, 1991  
#9-3864 - Oakland

Excavation activity generated approximately 600 cubic yards of soils. Approximately 300 yards of hydrocarbon impacted soils were disposed of offsite at an appropriate disposal facility. A discreet sample was collected for every 20 cubic yards of the remaining soils as prescribed by the Regional Water Quality Control Board (RWQCB) for on-site disposal. The results of these soils reported non-detectable concentrations of total petroleum hydrocarbons as gasoline and BTEX. These soils were used in conjunction with clean fill material imported into the site for backfilling and compacting the excavations.

Based on these findings it appears that additional site assessment work is warranted. Chevron has instructed our consultant to conduct an investigation to assess the existence of potential off-site sources. This is surmised based on the sampling results reported this quarter which were significantly higher than the prior quarters results. In addition, our records indicate no product loss or tank failures of the former tank system. Upon completion of this investigation, all data will be evaluated and appropriate next actions recommended in regards to additional assessment work and possible remediation.

Chevron will continue to monitor this site and report findings on a quarterly basis.

If you have any questions or comments, please do not hesitate to contact me at (510) 842-9581.

Very truly yours,  
CHEVRON U.S.A. INC.

  
Nancy Vukelich  
Environmental Engineer

cc: Mr. Eddy So, RWQCB-Bay Area  
Mr. W.T. Scudder  
File (9-3864A1)

Mr. Paul Eveloff  
80 E. Sir Francis Drake Blvd.  
Wood Island, Suite 3A  
Larkspur, CA 94939



**Chevron U.S.A. Inc.**

2410 Camino Ramon, San Ramon, California • Phone (610) 842-8600

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November 20, 1991

**Ms. Susan Hugo**  
Alameda County Health Care Services  
80 Swan Way, Room 200  
Oakland, CA 94621

**Re: Former Chevron Service Station #9-3864**  
**5101 Telegraph Avenue, Oakland**

Dear Ms. Hugo:

Enclosed we are forwarding the Full Service Station Demolition Report dated October 28, 1991, prepared by our consultant Blaine Tech Services, Inc. for the above referenced site. This report documents the verification sampling performed during the removal of all above ground and subsurface improvements and subsequent soils remediation activities. The soils remediation activity consisted of excavating and aerating impacted soils encountered during the removal of the underground storage tank system and to assess the magnitude and extent of the subsurface contamination.

As indicated in the report, on September 18, 1991, all underground storage tanks and associated piping were removed. Samples were collected 2-feet into the native soils beneath the former product tanks. In addition, sidewall samples were collected to assess the lateral extent. The samples were analyzed for total petroleum hydrocarbons as gasoline (TPH-G) and BTEX. The sidewall samples reported non-detectable (ND) concentrations of these constituents. These samples were collected approximately 10-feet below grade. The samples collected beneath the former tanks detected TPH-G concentrations ranging from ND to 1,300 ppm. These samples were collected approximately 13.5-feet below grade. Analytical results of the samples collected beneath the former product lines reported non-detectable concentrations with the exception of the southeastern trench sample which detected TPH-G at 53 ppm.

Two (2) samples were collected beneath the former waste oil tank at a depth of 11.5-feet below grade. These samples were analyzed for TPH-G, TPH-Diesel, purgeable halocarbons, total oil & grease (TOG), and BTEX. All constituents reported non-detectable concentrations.

A soils remediation program was implemented on September 26, 1991, in an attempt to remove the unsaturated site soils that contained in excess of 10 ppm TPH-G. Over excavation was performed beneath the former product tanks and product lines and extended vertically to a depth of 17 to 18-feet below grade within the tank excavation and 5-feet below grade within the piping trench. Ground water was encountered within the tank excavation at a depth of 15.5-feet. Final excavation samples from the southeastern piping trench reported non-detectable concentrations. Final excavation samples collected beneath the former product tanks detected TPH-G at concentrations ranging from 71 to 980 ppm. These samples were saturated samples collected at the capillary fringe area. Initial tank sidewall samples indicated that the contamination did not extend laterally within the unsaturated soils adjacent to the tank excavation. Excavation was limited vertically to groundwater as further excavation of the saturated soils was not appropriate. The soils at and/or below the groundwater interface will be addressed as a groundwater issue as prescribed by the Regional Water Quality Control Board (RWQCB).

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November 20, 1991  
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Based on these findings it appears that additional site assessment work is warranted. Chevron has instructed our consultant to conduct an investigation to assess the existence of potential off-site sources. This is surmised based on the sampling results reported this quarter which were significantly higher than the prior quarters results. In addition, our records indicate no product loss or tank failures of the former tank system. Upon completion of this investigation, all data will be evaluated and appropriate next actions recommended in regards to additional assessment work and possible remediation.

Chevron will continue to monitor this site and report findings on a quarterly basis.

If you have any questions or comments, please do not hesitate to contact me at (510) 842-9581.

Very truly yours,  
CHEVRON U.S.A. INC.

  
Nancy Vukelich  
Environmental Engineer

cc: Mr. Eddy So, RWQCB-Bay Area  
Mr. W.T. Scudder  
File (9-3864A1)

Mr. Paul Eveloff  
80 E. Sir Francis Drake Blvd.  
Wood Island, Suite 3A  
Larkspur, CA 94939



FACSIMILE COVER SHEET

CHEVRON U.S.A. PRODUCTS COMPANY  
MARKETING - NORTHWEST REGION



Mailing Address : Chevron U.S.A. Products Company  
P.O. Box 5004  
San Ramon, CA 94583-0804  
(Street - 2410 Camino Ramon)

Date: 8-7-92 Fax Number: 510 569-4757

To: SUSAN HUGO - ALAMEDA CO. HEALTH SERVICES DEPT.

|  |                |                 |
|--|----------------|-----------------|
| From:  | Phone Number   | Room / Building |
| Kenneth Kan<br>Site Assessment & Remediation Group | (510) 842-8752 | A-02 / 2410     |

Subject: FORMER CHEVRON STATION 9-3864 OAKLAND

Remarks: ATTACHED IS NANCY YURELICH LETTER DATED  
Nov. 20, 1991.

Number of Pages Including Cover Sheet 3

To Reply By Facsimile - Dial (510) 842-9591



# BLAINE TECH SERVICES INC.

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

October 28, 1991

Chevron USA, Inc.  
2410 Camino Ramon  
San Ramon, CA 94583

Attn: Nancy Vukelich

SITE:  
Chevron Service Station No. 93864  
5101 Telegraph Avenue  
Oakland, California

PROJECT:  
Full service station demolition  
with removal of all above ground  
and subsurface installations

## MULTIPLE EVENT SAMPLING REPORT 911010-C-1

Blaine Tech Services, Inc. performs specialized environmental sampling and documentation as an independent third party. In order to avoid compromising the objectivity necessary for the proper and disinterested performance of this work, Blaine Tech Services, Inc. does not participate in the interpretation of analytical results or engage in the marketing or installation of remedial systems.

This report covers the environmental sampling performed by our personnel during three different sampling events that were completed during the station demolition work at the site. The report presents each of these sampling events in chronological order, and contains descriptive text, diagrams, and a (fold out) comprehensive table of sampling locations and analytical results. The chain of custody records and certified analytical reports are presented as supporting documents in an appendix following the close of the report.

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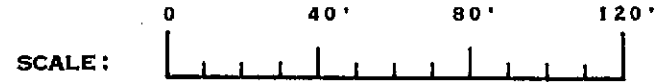
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Chevron Station 93864

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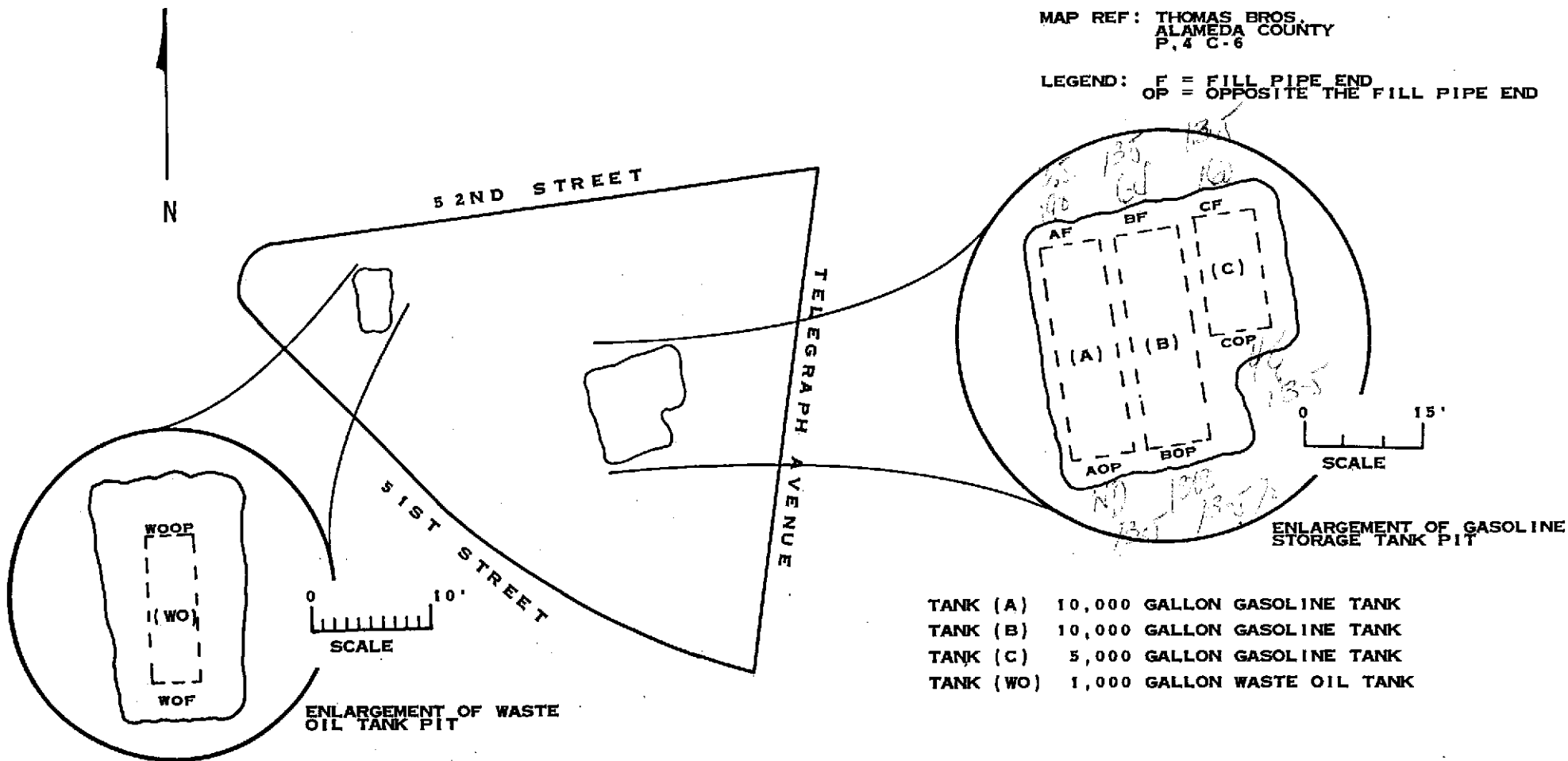
# MASTER SITE DIAGRAM

Chevron Station 93864



MAP REF: THOMAS BROS.  
ALAMEDA COUNTY  
P. 4 C-6

LEGEND: F = FILL PIPE END  
OP = OPPOSITE THE FILL PIPE END



- TANK (A) 10,000 GALLON GASOLINE TANK
- TANK (B) 10,000 GALLON GASOLINE TANK
- TANK (C) 5,000 GALLON GASOLINE TANK
- TANK (WO) 1,000 GALLON WASTE OIL TANK



## TANK REMOVAL SAMPLING

---

September 18, 1991 / 910918-C-1

### SCOPE OF REQUESTED SERVICES

In accordance with your request, our office was asked to provide field personnel who would be sent to the site for the specific purpose of obtaining environmental samples following the removal of three gasoline tanks and one waste oil tank.

Our personnel would collect the samples, arrange for the requested analyses of the samples and maintain documentation for the issuance of a formal Sampling Report. The collection of environmental samples was to be performed in accordance with the requirements of the State Water Resources Control Board, Regional Water Quality Control Board, and the specific directions of the Local Implementing Agency (LIA) inspector.

It was noted that the site is located within the overall jurisdiction of the Regional Water Quality Control Board -- San Francisco Bay Region. In this part of the RWQCB region, the initial inspection and evaluation of a site is customarily conducted by the LIA, the Alameda County Health Agency.

### EXECUTION OF THE WORK PERFORMED ON SEPTEMBER 18, 1991

Personnel were dispatched from our office and arrived at the subject site at 1030 hours on Wednesday, September 18, 1991.

Our representative met with Ms. Sharian O'Brien of Chevron USA, Inc. Ms. O'Brien indicated that the site would be returned to the property owner once Chevron removed the tanks and handled any environmental problems.

Golden West Builders, the contracting firm hired by Chevron USA, Inc., was present to perform the station demolition work, excavation and removal of subsurface installations. At the time of our arrival, Golden West Builders personnel were purging the three gasoline tanks, which had been excavated and completely uncovered, with liquid nitrogen.

At 1100 hours, Mr. Gary Lieberman, staff geologist with HLA, arrived at the site. Mr. Lieberman was present to represent the property owner and observe the extent of any contamination.

At 1130 hours, Ms. Nancy Vukelich, environmental engineer with Chevron USA, Inc. arrived at the site to supervise the sampling activity. At that time, neither LIA representative involved with the site had arrived. Both the Alameda County Health Agency and the City of Oakland Fire Department were behind schedule.

At 1145 hours, Inspector Gil Cody of the City of Oakland Fire Department arrived at the site. Vapor readings were immediately taken to establish the condition of the atmosphere inside each tank. Measurements were taken with a model 1314 Gastech combustible vapor meter. It was determined by Inspector Cody that all four tanks could be safely removed from the excavation.

Ms. Susan Hugo, Hazardous Materials Specialist of the Alameda County Health Agency arrived at the site during the tank removal. Ms. Hugo was present to direct the sampling activity.

In accordance with the local regulations and the field judgment of the LIA representative, a detailed inspection of the tanks was conducted following their removal from the open excavation. The tanks were visually inspected and likely failure points were probed with small pointed metal examination tools. No holes were observed in any of the tanks.

The backfill material at the fill pipe end of the gasoline tanks was noticeably discolored. This could be attributed to chronic over-fill problems.

| TANK I.D. | SIZE IN GALLONS | TANK CONTENT | MATERIAL OF CONSTRUCTION | INSPECTION FOUND |
|-----------|-----------------|--------------|--------------------------|------------------|
| A         | 10,000          | GASOLINE     | COATED STEEL             | NO HOLES         |
| B         | 10,000          | GASOLINE     | COATED STEEL             | NO HOLES         |
| C         | 5,000           | GASOLINE     | COATED STEEL             | NO HOLES         |
| WO        | 1,000           | WASTE OIL    | COATED STEEL             | NO HOLES         |

Standard RWQCB interface samples were taken of the native soil at points corresponding to both ends of each underground storage tank. Stockpile samples were also obtained, as were samples of the soil underlying the product line that conducted fuel from the underground storage tanks to the dispenser pumps. The sampling was performed in accordance with the direction of the LIA representative, Ms. Hugo. In the paragraphs that follow, the samples are described in the order in which they were collected:

Sample #1 was a standard interface sample taken at the end opposite the fill pipe of Tank A at a depth of thirteen and a half feet (13.5') below grade.

Sample #2 was a standard interface sample taken at the end opposite the fill pipe of Tank B at a depth of thirteen and a half feet (13.5') below grade.

Sample #3 was a standard interface sample taken at the end opposite the fill pipe of Tank C at a depth of thirteen and a half feet (13.5') below grade.

Sample #4 was a standard interface sample taken at the fill pipe end of Tank C at a depth of thirteen and a half feet (13.5') below grade.

Sample #5 was a standard interface sample taken at the fill pipe end of Tank B at a depth of thirteen and a half feet (13.5') below grade.

Sample #6 was a standard interface sample taken at the fill pipe end of Tank A at a depth of thirteen and a half feet (13.5') below grade.

Samples #7-#9 were sidewall samples taken from the gasoline tank pit. These samples were taken at the request of Ms. Vukelich to confirm the lateral extent of contamination.

Sample #7 was a confirming sample taken from the west sidewall of the gasoline tank pit. The sample was taken at the middle of Tank A at a depth of ten feet (10.0') below grade.

Sample #8 was a confirming sample taken from the northeast sidewall of the gasoline tank pit. The sample was taken at the middle of Tank C at a depth of ten feet (10.0') below grade.

Sample #9 was a confirming sample taken from the southeast sidewall of the gasoline tank pit. The sample was taken near the end of Tank B opposite the fill pipe at a depth of ten feet (10.0') below grade.

Sample #10 was taken of the soil underlying a dispenser pump island at a depth of two feet (2.0') below grade.

Sample #11 was taken of the soil underlying the second of two dispenser pumps at a depth of three feet (3.0') below grade.

Sample #12 was taken of the soil underlying a T shaped fitting in the product line piping at a depth of two feet (2.0') below grade.

Sample #13 was taken of the soil underlying a ninety degree bend in the product line piping at a depth of two feet (2.0') below grade.

Sample #14 was a standard interface sample taken at the end opposite the fill pipe of Tank WO at a depth of eleven feet (11.0') below grade.

Sample #15 was a standard interface sample taken at the fill pipe end of Tank WO at a depth of eleven and a half feet (11.5') below grade.

The stockpiled soil generated during the excavation of the waste oil tank was situated directly west of the waste oil tank pit and was estimated to contain approximately 45 cubic yards of soil. One composite sample (#16A-D) was taken from the pile.

Sample #16A-D was a four part composite stockpile sample. Within the stockpile, four individual sample collection points were selected. The sample collection points were arbitrarily chosen in a random pattern intended to represent as much of total soil volume as possible. Each sample container of soil was collected after clearing away the upper twelve inches (12") of surface material. The sample container (a new brass sample liner) was then forced into the newly exposed soil. After being properly sealed and labeled, the four containers were packaged together with instructions to the laboratory to composite the soil from each container prior to analysis.

The stockpiled soil generated during the excavation of the gasoline tanks was situated directly west of the gasoline tank pit and was estimated to contain approximately 500 cubic yards of soil. To facilitate sample collection, this large stockpile was divided into six sections (#17, #18, #19, #20, #21 and #22). Within each section, four individual sample collection points were selected in a random pattern intended to represent as much of the total soil volume.

One sample container of soil was collected at each of the individual sample collection points after clearing away the upper twelve inches (12") of surface material. After being properly sealed and labeled, the four sample containers from each section were packaged together with instructions to the laboratory to composite the soil from each container prior to analysis. (The samples were designated #17A-D, #18A-D, #19A-D, #20A-D, #21A-D and #22A-D.)

In accordance with the instruction of Ms. Vukelich at the time of the sampling event, the interface samples (#14 and #15) taken from the waste oil tank pit were not to be analyzed for the five metals, cadmium, chromium, lead, zinc and nickel, typically associated with the waste oil series of analysis. In addition, she asked that all of the collected stockpile sample material not used in the initial analysis be archived at the laboratory for future analysis.

After completion of the field work, the sample containers were delivered to Superior Analytical Laboratory in Martinez, California. Superior Analytical Laboratory is certified by the California Department of Health Services as a Hazardous Materials Testing Laboratory and is listed as DOHS HMTL #319.

Some of the sample material from this project was later turned over to another laboratory to conduct analyses which Superior Analytical Laboratory would not be able to perform. Clayton Environmental Consultants, Inc. in Pleasanton were used in this capacity. It is also a California Department of Health Services Certified Hazardous Materials Testing Laboratory and is listed as DOHS HMTL #163.

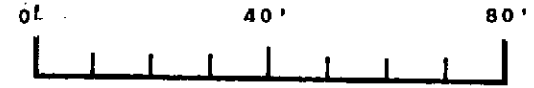
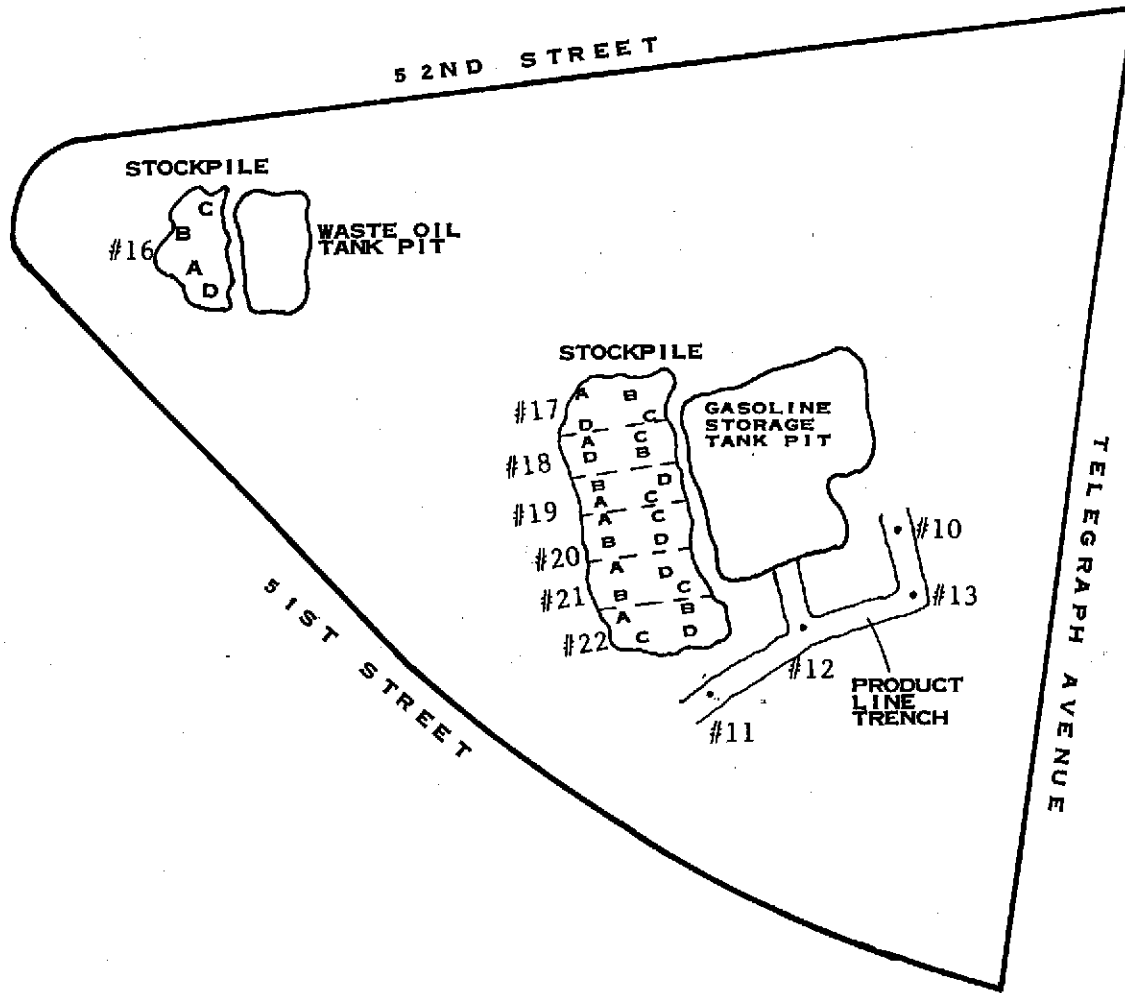
It was requested that the analytical procedures used for these analyses be those specified by the Regional Water Quality Control Board -- San Francisco Bay Region. The methods are defined in attachments to the San Francisco RWQCB (Region 2) publication, Guidelines For Addressing Fuel Leaks and in documents issued to clarify the Board's interpretation of the California LUFT Manual.



# TANK REMOVAL DIAGRAM

September 18, 1991 / 910918-C-1

# DIAGRAM TWO



SCALE:

MAP REF: THOMAS BROS.  
ALAMEDA COUNTY  
P.4 C-6



SAMPLING PERFORMED BY GLEN BENNETT  
DIAGRAM PREPARED BY LI PAN

## **ADDITIONAL EXCAVATION SAMPLING**

---

September 26, 1991 / 910926-C-1

### **BACKGROUND**

A review of the analytical results obtained from analyses of the tank removal samples found five areas of the gasoline tank pit and one area in the product line trench that contained unacceptable levels of hydrocarbon contamination.

### **SCOPE OF REQUESTED SERVICES**

The Chevron engineer made arrangements with the general contractor to have additional excavation performed in the those areas where analyses indicated there was affected soil. In areas where samples #2-#6 were collected, two feet (2.0') of soil would be removed from the bottom of the tank pit at which point groundwater might be encountered. Minor excavation would be conducted in the product line trench where sample #13 was collected.

In connection with this cleanup excavation, Blaine Tech Services, Inc. would collect confirming samples that would demonstrate whether or not the excavation had been successful in removing all of the affected soil.

According to Ms. Vukelich's request, Blaine Tech Services, Inc. would send field personnel to the site to document the additional excavation work and collect confirming samples from the gasoline tank pit and product line trench. In addition, we would communicate to the contractor the Chevron engineer's desire to have the stockpiled soil generated during the tank removal turned over to promote more thorough aeration. We would also collect confirming samples from the stockpiled soil generated during the additional excavation work. Our personnel would arranged for the analyses of the samples and maintain documentation resulting in the issuance of a formal Sampling Report.

## EXECUTION OF THE WORK PERFORMED ON SEPTEMBER 26, 1991

Personnel from our office returned to the site at 1030 hours on Thursday, September 26, 1991.

Our representative met with the general contractor, Golden West Builders and discussed Ms. Vukelich's request to remove one to two feet (1.0-2.0') of granular material from the bottom of the tank pit while trying to avoid groundwater known to be situated at fifteen and a half to sixteen feet (15.5-16.0') below grade. The depth of the tank pit was at thirteen to thirteen and a half feet (13.0-13.5') below grade, approximately one and a half to two feet (1.5-2.0') above the static level of groundwater. The removal of the additional soil from the bottom of the product line trench was also discussed.

Once the excavation of the tank pit bottom started, old fuel was found to have saturated more than the one to two feet (1.0-2.0') of soil. In an effort to define the depth of the saturation zone, an exploratory trench was put down in the tank pit bottom on the 52nd Street side of the tank pit to a depth of eighteen feet (18.0') below grade. It was found that the old fuel had saturated the soil down to a depth of seventeen feet (17.0') below grade, one and a half to two feet (1.5-2.0') below the level of groundwater. As it was Ms. Vukelich's request to remove the contaminated soil without encountering groundwater, further excavation of the tank pit was halted pending her further directions.

Our field representative notified personnel at the offices of Blaine Tech Services, Inc. who advised Ms. Vukelich of the situation. At that time, she approved of the removal of all obviously contaminated soil from the tank pit bottom.

Golden West Builders personnel increased the tank pit depth from thirteen and a half feet to seventeen and a half and eighteen feet (13.5-17.5/18.0') below grade. At that depth, a return to normal soil appearance and coloration was observed.

Following the completion of the excavation work in the tank pit and the product line trench, soil samples were collected. Capillary zone samples were taken from the sidewalls of the tank pit. Capillary zone samples are typically collected when groundwater has entered the bottom of a pit. One confirming soil sample was taken from the bottom of the product line trench after it had been excavated to a depth of five feet (5.0') below grade. In addition, samples of the stockpiled soil generated during the additional excavation work were collected. The samples were collected as follows:

Sample #1 was a capillary zone sample taken from the northern sidewall of the tank pit at a depth of fifteen and a half feet (15.5) below grade.

Sample #2 was a confirming soil sample taken from the product line trench where interface sample #13 had been collected on September 18, 1991. The sample was collected at a depth of five feet (5.0') below grade.

Sample #3 was a capillary zone sample taken from the northeast sidewall of the tank pit at a depth of fifteen and a half feet (15.5) below grade.

Sample #4 was a capillary zone sample taken from the southeast sidewall of the tank pit at a depth of fifteen and a half feet (15.5) below grade.



Sample #5 was a capillary zone sample taken from the southern sidewall of the tank pit at a depth of fifteen and a half feet (15.5) below grade.

Sample #6 was a capillary zone sample taken from the western sidewall of the tank pit at a depth of fifteen and a half feet (15.5) below grade.

The stockpiled soil generated during the additional excavation work consisted of two piles.

The pile situated south of the gasoline tank pit was estimated to contain approximately 150 cubic yards of soil. To facilitate sample collection, the stockpile was divided into three sections (#7, #8 and #9).

Within each section, four individual sample collection points were selected. The sample collection points were arbitrarily chosen in a random pattern intended to represent as much of total soil volume as possible.

One sample container of soil was collected after clearing away the upper twelve inches (12") of surface material. The sample container (a new brass sample liner) was then forced into the newly exposed soil. After being properly sealed and labeled, the four containers were packaged together with instructions to the laboratory to composite the soil from each container prior to analysis. (The samples were designated #7A-D, #8A-D and #9A-D.)

The second pile which was situated north of the gasoline tank pit was also estimated to contain approximately 150 cubic yards of soil. To facilitate sample collection, this stockpile was also divided into three sections (#10, #11 and #12).

Within each section, four individual sample collection points were selected. One sample container of soil was collected at each of the individual sample collection points after clearing away the upper twelve inches (12") of surface material. After being properly sealed and labeled, the four sample containers from each section were packaged together with instructions to the laboratory to composite the soil from each container prior to analysis. (The samples were designated #10A-D, #11A-D and #12A-D.)

Following completion of the sample collection, the 300 cubic yards of stockpiled soil initially excavated from the gasoline tank pit on September 18, 1991 was agitated and tilled by Golden West Builders personnel.

After completion of the field work, the sample containers were delivered to Superior Analytical Laboratory in Martinez, California. Superior Analytical Laboratory is certified by the California Department of Health Services as a Hazardous Materials Testing Laboratory and is listed as DOHS HMTL #319.

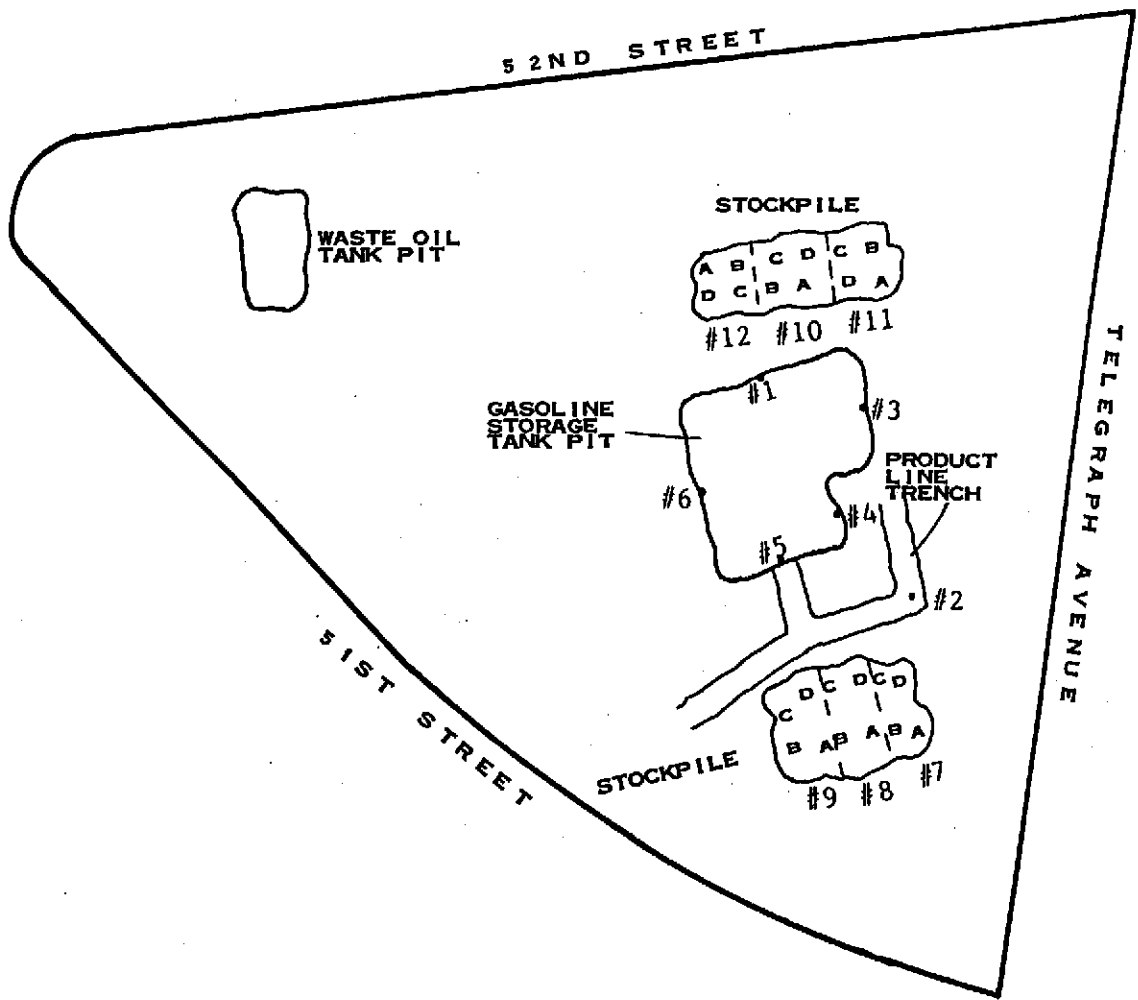
It was requested that the analytical procedures used for these analyses be those specified by the Regional Water Quality Control Board -- San Francisco Bay Region. The methods are defined in attachments to the San Francisco RWQCB (Region 2) publication, Guidelines For Addressing Fuel Leaks and in documents issued to clarify the Board's interpretation of the California LUFT Manual.

# ADDITIONAL EXCAVATION DIAGRAM

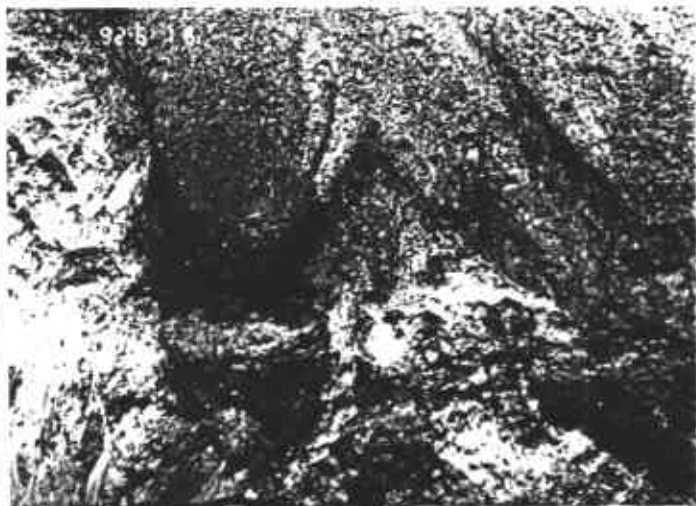
September 26, 1991 / 910926-C-1



MAP REF: THOMAS BROS.  
ALAMEDA COUNTY  
P.4 C-6



SAMPLING PERFORMED BY GLEN BENNETT  
DIAGRAM PREPARED BY LI PAN



## STOCKPILE SAMPLING

---

October 10, 1991 / 911010-C-1

### SCOPE OF REQUESTED SERVICES

In accordance with your request, field personnel would be dispatched to the site to obtain samples from the stockpiled soil remaining there from the tank removal and additional excavation work. Sample collection was to be performed in accordance with standard methodologies with documentation sufficient to prepare a formal Sampling Report.

### EXECUTION OF THE WORK PERFORMED ON OCTOBER 10, 1991

Our personnel returned to the site at 1415 hours on Thursday, October 10, 1991.

Our representative met with Ms. Nancy Vukelich of Chevron USA, Inc. who informed us that the stockpiled soil generated during the initial tank removal was to be sampled in accordance with the RWQCB soil characterization protocol for reuse as backfill material at the site. Also, the stockpiled soil generated during the additional excavation work was to be sampled in accordance with the BAAQMD stockpile protocol which was acceptable to the BFI Livermore for disposal purposes. Additionally, sample #16A-D (collected on September 18, 1991 and then placed on hold at Superior Analytical Laboratory) was to be re-logged and analyzed for RCI, CAM-WET for Lead and TCLP for metals with a turn around time of 48 hours.

The following samples were collected at the direction of Ms. Vukelich:

As was the situation during our previous sampling event, the stockpiled soil generated during the additional excavation work had been placed in two piles.

The pile situated south of the gasoline tank pit was estimated to contain approximately 160 cubic yards of soil. To facilitate sample collection, the stockpile was divided into three sections (#1, #2 and #3).

Within each section, four individual sample collection points were selected. The sample collection points were arbitrarily chosen in a random pattern intended to represent as much of total soil volume as possible.

At each of the four locations that would contribute to the composite sample, one sample container of soil was collected after clearing away the upper twelve inches (12") of surface material. The sample container (a new brass sample liner) was then forced into the newly exposed soil. After being properly sealed and labeled, the four containers were packaged together with instructions to the laboratory to composite the soil from each container prior to analysis. (The samples were designated #1A-D, #2A-D and #3A-D.)

The second pile which was situated north of the gasoline tank pit was also estimated to contain approximately 150 cubic yards of soil. To facilitate sample collection, this stockpile was also divided into three sections (#4, #5 and #6).

Within each section, four individual sample collection points were selected. One sample container of soil was collected at each of the individual sample collection points after clearing away the upper twelve inches (12") of surface material. After being properly sealed and labeled, the four sample containers from each section were packaged together with instructions to the laboratory to composite the soil from each container prior to analysis. (The samples were designated #4A-D, #5A-D, #6A-D.)

The stockpiled soil that had been initially generated during the tank removal work and then turned during the additional excavation work was now situated directly west of the gasoline tank pit. The stockpile was estimated to contain approximately 300 cubic yards of soil and one discrete sample was taken for each approximate 20 cubic yards of soil. Each discrete sample was collected after clearing away the upper twelve inches (12") of surface material. (The samples were designated #7 through #21.)

After completion of the field work, the sample containers were delivered to Superior Analytical Laboratory in San Francisco, California. Superior Analytical Laboratory is certified by the California Department of Health Services as a Hazardous Materials Testing Laboratory and is listed as DOHS HMTL #319.

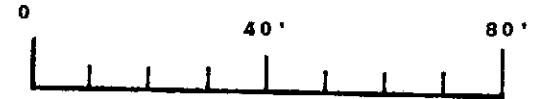
The laboratory was also instructed to analyze sample 16A-D (collected on September 18, 1991 and then archived and saved at Superior Analytical Laboratory) for RCI, CAM-WET for Lead and TCLP for metals within 48 hours.

Some of the sample material from this project was later turned over to another laboratory to conduct analyses which Superior Analytical Laboratory would not be able to perform. Clayton Environmental Consultants, Inc. in Pleasanton were used in this capacity. It is also a California Department of Health Services Certified Hazardous Materials Testing Laboratory and is listed as DOHS HMTL #163.

It was requested that the analytical procedures used for these analyses be those specified by the Regional Water Quality Control Board -- San Francisco Bay Region. The methods are defined in attachments to the San Francisco RWQCB (Region 2) publication, Guidelines For Addressing Fuel Leaks and in documents issued to clarify the Board's interpretation of the California LUFT Manual.

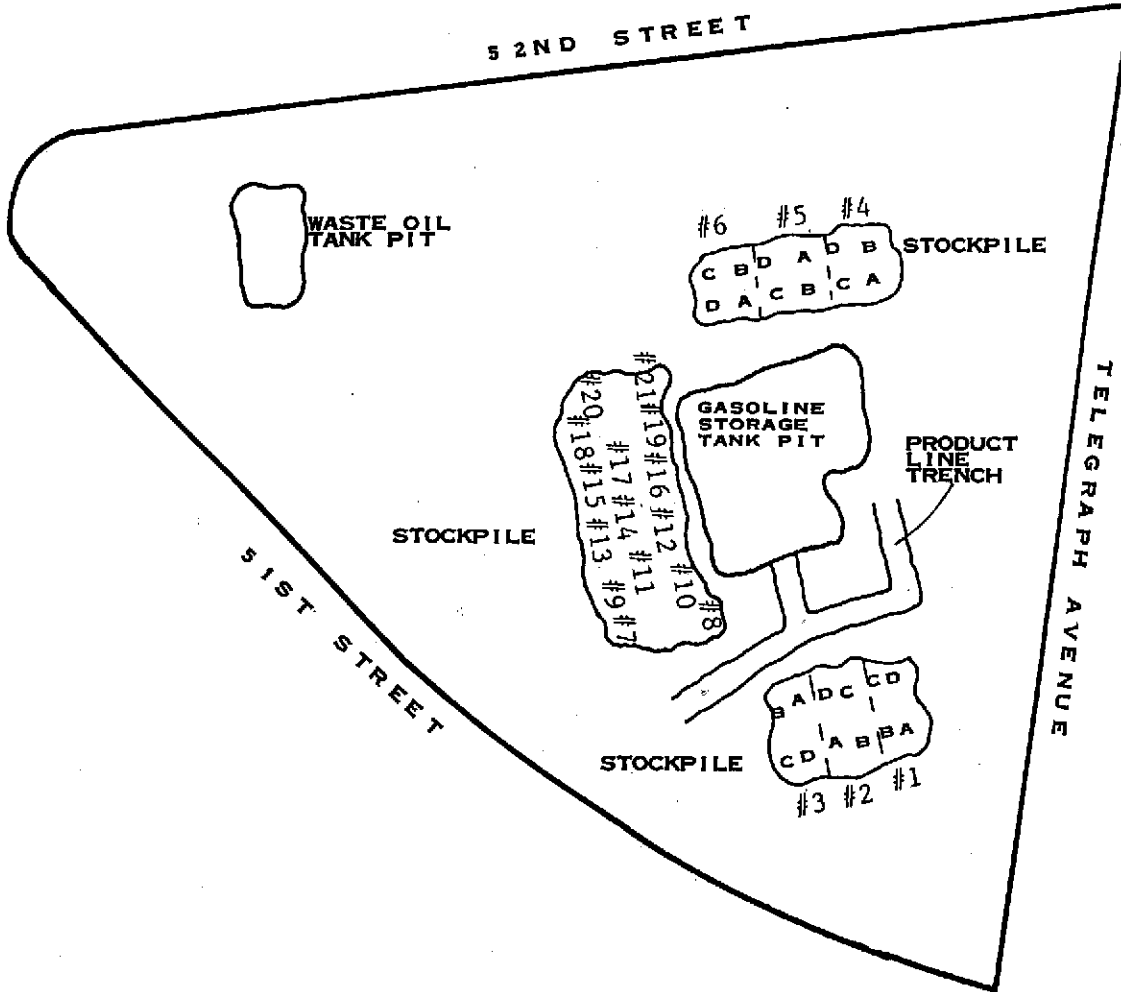
# STOCKPILE DIAGRAM

September 10, 1991 / 911010-C-1



SCALE:

MAP REF: THOMAS BROS.  
ALAMEDA COUNTY  
P.4 C-6



SAMPLING PERFORMED BY GLEN BENNETT  
DIAGRAM PREPARED BY LI PAN

# TABLE OF SAMPLING LOCATIONS AND ANALYTICAL RESULTS

NOTE: Analytical results are reported in  
Parts Per Million or Parts Per Billion

| I.D. GIVEN THIS SAMPLE AREA            | SAMPLE DEPTH IN FT. BELOW GRADE | SAMPLING LOCATION DICTATED BY | TYPE & METHOD FOR THE SAMPLE OBTAINED | SAMPLE MATRIX | DATE SAMPLED | BTS CHAIN OF CUSTODY I.D. | BTS SAMPLE I.D. | NAME OF DOHS HMTL LABORATORY | LABORATORY SAMPLE I.D. | PPM        |         |          |                |          |
|--|---------------------------------|-------------------------------|---------------------------------------|---------------|--------------|---------------------------|-----------------|------------------------------|------------------------|------------|---------|----------|----------------|----------|
|  |                                 |                               |                                       |               |              |                           |                 |                              |                        | TPH AS GAS | BEN-ENE | TOL-UENE | ETHYL-BEN-ZENE | XY-LENES |
| TANK PIT                               |                                 |                               |                                       |               |              |                           |                 |                              |                        |            |         |          |                |          |
| AF                                     | 13.5                            | STANDARD                      | INTRFACE                              | SOIL          | 09/18/91     | 910918-C-1                | #6              | SUPERIOR                     | 83940-6                | 190        | 0.33    | 0.38     | 0.81           | 1.8      |
| AM                                     | 10.0                            | ELECTIVE                      | CONFIRM                               | SOIL          | 09/18/91     | 910918-C-1                | #7              | SUPERIOR                     | 83940-7                | ND         | ND      | ND       | ND             | ND       |
| Aop                                    | 13.5                            | STANDARD                      | INTRFACE                              | SOIL          | 09/18/91     | 910918-C-1                | #1              | SUPERIOR                     | 83940-1                | ND         | ND      | ND       | ND             | ND       |
| BF                                     | 13.5                            | STANDARD                      | INTRFACE                              | SOIL          | 09/18/91     | 910918-C-1                | #5              | SUPERIOR                     | 83940-5                | 64         | 0.040   | 0.040    | 0.13           | 0.32     |
|  | 10.0                            | ELECTIVE                      | CONFIRM                               | SOIL          | 09/18/91     | 910918-C-1                | #9              | SUPERIOR                     | 83940-9                | ND         | ND      | ND       | ND             | 0.007    |
| Bop                                    | 13.5                            | STANDARD                      | INTRFACE                              | SOIL          | 09/18/91     | 910918-C-1                | #2              | SUPERIOR                     | 83940-2                | 1300       | ND      | 2.3      | 2.8            | 7.6      |
| CF                                     | 13.5                            | STANDARD                      | INTRFACE                              | SOIL          | 09/18/91     | 910918-C-1                | #4              | SUPERIOR                     | 83940-4                | 160 @      | ND      | ND       | 1.6            | 3.2      |
| CM                                     | 10.0                            | ELECTIVE                      | CONFIRM                               | SOIL          | 09/18/91     | 910918-C-1                | #8              | SUPERIOR                     | 83940-8                | ND         | ND      | ND       | ND             | ND       |
| Cop                                    | 13.5                            | STANDARD                      | INTRFACE                              | SOIL          | 09/18/91     | 910918-C-1                | #3              | SUPERIOR                     | 83940-3                | 46 @       | 0.10    | 0.070    | 0.21           | 0.18     |
| #1                                     | 15.5                            | ELECTIVE                      | CAPILLAR                              | SOIL          | 09/26/91     | 910926-C-1                | #1              | SUPERIOR                     | 84002-1                | 580        | ND      | 1.4      | 1.5            | 3.9      |
| #3                                     | 15.5                            | ELECTIVE                      | CAPILLAR                              | SOIL          | 09/26/91     | 910926-C-1                | #3              | SUPERIOR                     | 84002-3                | 71         | 0.069   | 0.12     | 0.22           | 0.57     |
| #4                                     | 15.5                            | ELECTIVE                      | CAPILLAR                              | SOIL          | 09/26/91     | 910926-C-1                | #4              | SUPERIOR                     | 84002-4                | 980        | ND      | 2.7      | 2.5            | 5.5      |
| #5                                     | 15.5                            | ELECTIVE                      | CAPILLAR                              | SOIL          | 09/26/91     | 910926-C-1                | #5              | SUPERIOR                     | 84002-5                | 330        | ND      | 0.81     | 1.0            | 2.7      |
| #6                                     | 15.5                            | ELECTIVE                      | CAPILLAR                              | SOIL          | 09/26/91     | 910926-C-1                | #6              | SUPERIOR                     | 84002-6                | 460        | ND      | 0.92     | 1.3            | 3.0      |
| DISPENSER PUMP ISLAND AND PRODUCT LINE |                                 |                               |                                       |               |              |                           |                 |                              |                        |            |         |          |                |          |
| DP                                     | 2.0                             | LIA                           | INTRFACE                              | SOIL          | 09/18/91     | 910918-C-1                | #10             | SUPERIOR                     | 83940-10               | ND         | ND      | ND       | ND             | ND       |
|  | 3.0                             | LIA                           | INTRFACE                              | SOIL          | 09/18/91     | 910918-C-1                | #11             | SUPERIOR                     | 83940-11               | ND         | 0.008   | 0.009    | ND             | 0.010    |
| PL                                     | 2.0                             | LIA                           | INTRFACE                              | SOIL          | 09/18/91     | 910918-C-1                | #12             | SUPERIOR                     | 83940-12               | ND         | ND      | ND       | ND             | ND       |
|  | 2.0                             | LIA                           | INTRFACE                              | SOIL          | 09/18/91     | 910918-C-1                | #13             | SUPERIOR                     | 83940-13               | ND         | 0.90    | 3.5      | 1.2            | 6.9      |
|  | 5.0                             | ELECTIVE                      | CONFIRM                               | SOIL          | 09/26/91     | 910926-C-1                | #2              | SUPERIOR                     | 84002-2                | 2.0        | 0.069   | 0.092    | 0.022          | 0.18     |

@ Gasoline range concentration reported. Heavy hydrocarbons present in chromatogram.

**Standard** - The location conformed to established (professional or regulatory) definitions for the type of sample being collected.  
Example: a standard RWQCB interface sample.

**LIA** - The local implementing agency inspector chose a sampling location that was different from a standard (pre-defined) location.

**Elective** - Elective samples are not taken to comply with regulatory requirements, but to obtain information. Sampling locations may be chosen by the property owner, the contractor, a consultant, etc. The samples may or may not be analyzed.

## SAMPLING METHODOLOGIES

Specific methods used on this project

**Standard RWQCB Interface Samples:** Samples taken immediately following a tank removal are required to conform to criteria established by the Regional Water Quality Control Boards. Interpretation of these criteria is usually entrusted to the discretion of the local implementing agency inspector, but are widely known and conformance with these criteria is expected even when no regulatory agency personnel are present to direct the procedures. Accordingly, "Standard Interface samples" are those which have been taken in accordance with the standard protocol for obtaining interface samples. These samples fall into the category of samples which are known to be of primary concern to the interested regulatory agencies for determining if additional action will be required at a site and the methodology has been closely defined in state and RWQCB publications, supplements, and presentations. These specify both the acceptable depth and lateral situation of sample collection points. In accordance with these specifications, sample collection is executed as close as possible to the center line (longitudinal axis) of the tank and on a vertical axis with the fill pipe. A corresponding location is also found at the opposite end of the tank whenever standard interface samples are being collected.

Briefly, the method consists of digging up native soil from directly below the fill pipe and the corresponding opposite end of the tank and obtaining a sample from the backfill/native soil interface or a short distance below the interface. A short distance has been defined by Region 2 Board engineers as not greater than twenty-four inches below the backfill/native soil interface and is generally taken to be one foot below the backfill/native soil interface. This soil is brought up in the backhoe bucket. A shovel or trowel is used to cut away surface soil and backfill material which may have been included in the bucket, and the sample is taken by pushing or driving a brass sample liner into the newly exposed soil from the designated depth and location. Additional clarifications by Region 2 Board engineers have indicated that when there is an obvious difference in the relative contamination of soil brought up from the interface depth, then it is the relatively more contaminated soil that should be selected for inclusion in the sample.

**Elective Confirming Samples Following Additional Excavation:** In cases where, as a precaution, excavation is continued in order to remove soil which may be contaminated, it is customary to obtain one or more samples of the soil at the furthest extent of excavation. These samples provide information on the condition of the soil remaining after the excavation effort was completed.

As the precautionary excavation is completed, the backhoe is used to dig up soil representative of the material which remains in the bottom of the pit. The sample material is collected and handled according to the same procedures used with other backhoe assisted sampling methodologies and duplicates RWQCB standard interface sampling in all respects except the depth at which the soil is obtained.



**Capillary Zone Soil Sample:** The capillary zone is the soil horizon immediately above the surface of standing groundwater into which moisture is drawn by capillary action. Capillary zone sampling is most often requested in open pit and open trench situations where lost petroleum products are evident or suspected. In these cases, it is reasoned that a sample of the capillary zone will demonstrate whether or not fuel has been drawn up into the soil above the groundwater and, thereby, provide a rough indication of the volume and duration of the lost fuel condition.

Engineers of the Region 2 RWQCB staff have specified the correct sampling area as being ~~from zero to six inches above the surface of the standing perched water and no more than twelve inches back into the native soil from the lateral backfill/native soil interface.~~

There are two weaknesses which tend to invalidate capillary zone sampling on the basis of ~~inconsistent results.~~ First, is the difficulty encountered in locating the true surface of the ~~perched water above which the capillary zone resides.~~ The removal of the tank and backfill material tends to artificially lower the water in the immediate vicinity of the tank pit below the true standing water level and mislead observers attempting to evaluate where the capillary zone is located. Second, the zone itself is a narrow horizon which is bordered on the top and bottom by soil which would not be expected to contain nearly the concentration of fuel hydrocarbons as the capillary zone proper. Collecting the correct material is complicated by conditions at the site which usually consist of a broad excavation, with vertical walls descending into a water filled pit. Because of these conditions, direct approach to the sampling area is difficult, dangerous, or impossible.

Assuming that the true and original surface of the perched water can be determined, samples can be safely obtained by one of the following methods. The backhoe bucket can be used to dig up a segment of the pit wall that contains the capillary zone and bring it up for inspection and sampling. An alternative method is to use sections of light weight drill rod and a drive shoe which contains a brass sample liner. This train can be extended across the pit, positioned, and used to drive an undisturbed soil sample.

**Stockpile Survey (Modified BAAQMD Protocol):** This sampling follows a survey pattern, but uses a modified BAAQMD protocol for sampling stockpiles of material that have been newly removed from a tank pit excavation. This protocol calls for a discrete sample container to be collected for every 12.5 cubic yards of material. The survey includes opposite sides of the stockpile. Strict observance of the BAAQMD protocol (for purposes of evaluating the levels of fuel vapor likely to be discharged from a stockpile) calls for inclusion of the surface material in the brass liner which is driven into the pile at a right angle (to the angle of repose) until the liner is full. Unless specifically asked to follow the BAAQMD protocol, our personnel routinely modify the procedure to exclude the surface soil and collect soil from a depth of eight to eighteen inches. While this prejudices the sample in the direction of yielding higher results than would a strict BAAQMD sample, it is more representative of the levels of fuel hydrocarbons present in the soil and is not likely to mislead the client or contractor into offhauling or backfilling with soil stockpiles that are relatively clean at the surface, but unacceptably contaminated through the remainder of their volume.

**Discrete Stockpile Samples** In addition to stockpile samples taken to satisfy the Air Quality District, certain jurisdictions may require different types of stockpile sampling that is designed to satisfy other criteria. Alameda County requirements for sampling soil that is to be used as backfill for a tank excavation call for the collection and analysis of one discrete soil sample for every twenty cubic yards of material that is to be used as backfill. These requirements are not a creation of Alameda County, but are an implementation of requirements established by the Regional Water Quality Control Boards participating in the Tri-Regional (RWQCB Regions 1, 2, and 5) conference responsible for issuing the Regional Board Staff Recommendations for Initial Evaluation and Investigation of Underground Storage Tanks. Recognizing that not all soil stockpiles will be homogeneous, Alameda County does not take a hard position in opposition to compositing. Composites are allowed (e.g. four containers from each 20 cubic yards) provided that each twenty cubic yards of soil receives one analyses.

## STANDARD PROCEDURES

Conventions and practices

### General Practices

U.S. Environmental Protection Agency standards serve as the foundation for all field sampling operations performed by our firm. The EPA SW 846 is the primary publication from which procedures are derived, though there are additional EPA sources such as training films and verbal communications. Sampling related to underground storage tanks and tank related threats to groundwater are governed by the California Water Resources Control Board and its Regional Water Quality Control Boards. While some aspects of field and laboratory work may be delegated to the California Department of Health Services, the CWRCB and the nine Regional Water Quality Control Boards establish the general and specific criteria for sampling performed in connection with underground storage tanks. This is done through the publication of guidance documents, the issuance of memoranda, and verbal announcements.

Other agencies, such as Air Pollution Control Districts, may require additional samples, but these are usually in addition to samples required by the RWQCB. Local implementing agency (LIA) inspectors are frequently present during the tank removal phase of a project and either direct or request that samples be taken according to RWQCB specifications. Additional samples may, and frequently are, taken at the request of the LIA inspector.

Based on field conditions directly observable by the LIA inspector, our field personnel may be asked to collect samples that are tailored to the specific situation and which the inspector judges will provide substantial information about the site. Quite often these directions or suggestions coincide with the sampling areas established by the RWQCB as the proper collection points for samples which will be used as the Primary Criteria for a Regulatory Agency Determination on whether additional exploration or remediation will be required at a particular site. Similarly, there are instances when the LIA inspector's judgments do not coincide with Board specifications.

Two common examples of this are as follows:

1. A local implementing agency inspector notes that soil dug up from the correct RWQCB interface sampling point is relatively clean, but observes that there is quite obviously contaminated backfill underlying the center of the tank. The inspector directs that the contaminated backfill should be taken instead of the clean interface soil so as to provide information about the "worst case" conditions within the tank pit.

2. The soil at the specified interface sampling depth is found to be slightly contaminated, but much less so than the soil only a few inches above. Noting the relatively dense soil, the local implementing agency inspector decides not to have the interface soil sampled and has the backhoe dig deeper to see if the contamination diminishes to acceptable levels. This exploration saves the property owner the cost of running two samples at that location, and enables the inspector to directly observe the condition of the deeper soil.

In both examples, different material is collected in lieu of a standard RWQCB interface sample. Further, the material collected is substantially different from what would have been obtained by taking representative soil at the Board specified sampling location. Note that both of these samples were taken at the direction of the local implementing agency inspector who was present at the site and elected to select alternative sampling locations. Note too, that these alternative samples may provide more information about the site than standard Board specified samples. However, as the LIA elected samples do not accurately reflect soil conditions at the sampling points specified by the RWQCB, the decision making process may be hampered.

As important as this may be, it is not the role of Blaine Tech Services, Inc. personnel to evaluate what samples meet or fail to meet the precise definition of a standard RWQCB interface sample. The evaluation of how to classify different samples is as much a part of the LIA inspector's job as is the selection of what material is to be sampled. Discrepancies in definitions can, if necessary, be debated between the RWQCB and the LIA. What is important is that we record where samples were obtained and how the LIA inspector chose to classify those samples.

In example 1. above, the sample would be classified as an LIA elective sample because the LIA inspector identified it as a worst case example rather than as a standard interface sample. Furthermore, it was not collected at a standard interface sample location or depth. The lateral location of the sample and the depth would identify it as an LIA elective sample even if it had not been so designated.

Example 2. above is not so clearcut. It would be up to the LIA inspector to classify this sample as either a standard RWQCB interface sample or as an LIA elective exploratory sample. However classified by the inspector, the depth at which the sample was collected is clearly noted in the second column of the TABLE OF SAMPLING LOCATIONS AND ANALYTICAL RESULTS. It is not uncommon for LIA inspectors to have the backhoe continue digging until they are sure that all backfill material has been eliminated and native soil has been reached. The additional depth of the sample reflects this judgement call on the part of the inspector. On the other hand, the inspector might acknowledge that the sample was part of an exploration which he or she directed.

The information presented in the first, second, third and fourth columns of the TABLE OF SAMPLING LOCATIONS AND ANALYTICAL RESULTS should be sufficient to define where the sample was taken and how the LIA inspector defined and classified the type of sample it was.

### **Sample Containers**

Our firm uses new sample containers of the type specified by either EPA or the RWQCB for the collection of samples at sites where underground storage tanks are involved. Water samples are contained in 40 ml volatile organic analysis vials (VOAs) when analysis for gasoline and similar light volatile compounds is intended. These containers are prepared according to EPA SW 846 and will contain a small amount of preservative when the analysis is for TPH as gasoline or EPA 602. Vials intended for EPA 601 analysis and EPA 624 GCMS procedures are not preserved. Closure is accomplished with an open headed (syringe accessible) plastic screw cap brought down on top of a Teflon faced septum which is used to seal the sample without headspace.

Water samples intended for semivolatile and nonvolatile analysis such as total oil and grease (TOG) and diesel (TPH HBF) are collected and transported in properly prepared new glass liter bottles. Dark amber glass is used in the manufacture of these bottles to reduce any adverse effect on the sample by sunlight. Antimicrobial preservative may be added to the sample liquid if a prolonged holding time is expected prior to analysis. Closure is accomplished with a heavy plastic screw cap.

Soil samples for volatile, semivolatile and nonvolatile analyses are all collected in properly prepared new brass liners which are 2 inches in diameter by 4 inches in length. Closure is accomplished with press fit plastic end caps which are fitted to the open ends of brass tube liners after a sheet of aluminum foil is wrapped over the exposed sample material. No preservative other than cold storage is used on samples captured in sample containers of this type.

### **Sample Handling Procedures**

Solid sample material is captured by advancing the liner into the soil. This may be done by pushing the liner into soft soils or by containing the liner in a drive shoe which can be advanced and then retracted by means of a slide hammer. The open ends of the sample liner are covered with aluminum foil and plastic end caps. The brass liner is then labeled with the appropriate identification numbers which specify the sampling activity designation number, sample collection area, depth etc. that apply to that particular sample. The sample liner is then placed in an ice chest which contains pre-frozen blocks of an inert ice substitute such as Blue Ice or Super Ice.

Water samples are collected in any of several appropriate devices such as bailers, Coliwassas, Middleburg sampling pumps, etc., which are described in detail only as warranted by their employment at a given site. Sample liquid is decanted into new sample containers in a manner which reduces the loss of volatile constituents and follows the applicable EPA procedures for handling volatile organic and semi-volatile compounds. Only two variations from the EPA methods are generally employed. First, preservative is added to the sample container prior to addition of the sample liquid. This method was pioneered by

Stoner Laboratories in 1982 and subsequently adopted by laboratories and environmental consulting firms as a practical means of reducing the time that a liquid is allowed to aerate prior to closure of the sampling container. Second, because tests have shown that the preservative readily mixes with sample liquid, glass stirring rods are not used to agitate the sample/preservative mixture.

### **Sample Designations**

All sample containers are identified with both a sampling event number and a discrete sample identification number. Please note that the sampling event number is the number that appears on our chain of custody. It is roughly equivalent to a job number, but applies only to work done on a particular day of the year rather than spanning several days as jobs and projects often do. This is followed by the sample I.D. number which is usually a simple number such as #1, #2, #3.

### **Chain of Custody**

Samples are continuously maintained in either a chilled ice chest, refrigerator, or freezer from the time of collection until acceptance by the State certified Hazardous Materials Testing Laboratory selected to perform the analytical procedures. If the samples are taken charge of by a different party (such as another person from our office, a courier, etc.) prior to being delivered to the laboratory, appropriate release and acceptance records are made on the chain of custody (time, date, and signature of person releasing the samples followed by the time, date and signature of the person accepting custody of the samples).

### **Laboratory Identification Numbers**

Following receipt of the samples and completion of the Chain of Custody form, the laboratory then assigns their own identification numbers to the samples. Different laboratories use different numbering systems and, according to their own internal conventions, may or may not assign sequential numbers to samples which are placed on temporary "hold", pending the results of other analyses. Laboratory identification numbers (if assigned and available) are included in the TABLE, and will be found on the certified analytical report by the analytical laboratory.

### **Certified Analytical Report**

The certified analytical report (CAR) generated by the laboratory is the official document in which they issue their findings. The Results of Analyses section of the TABLE OF SAMPLING LOCATIONS AND ANALYTICAL RESULTS should correspond exactly with the laboratory's CAR. Any discrepancy between analytical values should be decided in favor of the CAR, for while it may, itself, be in error with regard to a particular number, the CAR remains the recognized document until such time as it is amended with a corrected report.

The certified analytical report should also be reviewed when samples are taken from below waste oil tanks as any detection of the EPA halogenated and purgeable aromatic compounds may be grounds for requiring further action. Also the TABLE OF SAMPLING

LOCATIONS AND ANALYTICAL RESULTS is insufficiently spacious to allow anything more than a simple listing of the detected compounds. The TABLE does not include such information as the detection limits at which other compounds were not detected. The full text of the laboratory report will be found in the Analytical Appendix.

### **Professional Review**

Blaine Tech Services, Inc. employs the services of outside professional engineering and engineering geological firms to conduct independent evaluations and review of the technical methods and procedures used by Blaine Tech Services, Inc. in the conduct of its strictly technical work. The scope of these professional reviews is limited to evaluating the adequacy and repeatability of the technical procedures performed by Blaine Tech Services, Inc. personnel and does not extend to making evaluations or recommendations about the general condition of the site.

### **Reportage**

Submission to the Regional Water Quality Control Board and the local implementing agency should include copies of the sampling report, the chain of custody, and the certified analytical report issued by the Hazardous Materials Testing Laboratory. The property owner should attach a cover letter and submit all documents together in a package.

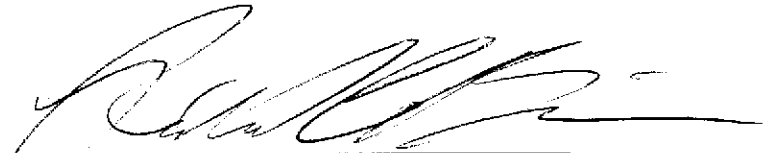
The following addresses have been listed here for your convenience:

Water Quality Control Board  
San Francisco Bay Region  
1800 Harrison Street  
Room 700  
Oakland, CA 94612  
ATTN: Lester Feldman

Alameda County Health Agency  
Hazardous Materials Management  
80 Swan Way, Room 200  
Oakland, CA 94621  
ATTN: Susan L. Hugo

City of Oakland  
Fire Prevention Bureau  
1330 Broadway  
Oakland, CA 94612  
ATTN: Gil Cody

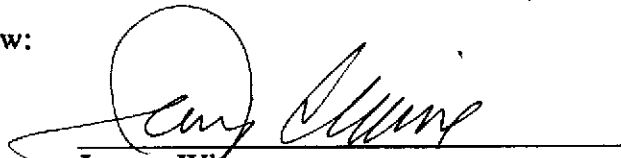
Please call if we can be of any further assistance.



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Richard C. Blaine

Independent professional review:



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Jeremy Wife  
Engineering Geologist, EG-71

RCB/dmp

## ANALYTICAL APPENDIX

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Supporting documents

CHAIN OF CUSTODY FORMS  
CERTIFIED ANALYTICAL REPORTS  
TABLE OF SAMPLING LOCATIONS AND ANALYTICAL RESULTS











# Superior Precision Analytical, Inc.

825 Arnold Drive, Suite 114 • Martinez, California 94553 • (510) 229-1512 / fax (510) 229-1526

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

LABORATORY NO.: 83940  
CLIENT: Blaine Tech Services, Inc.  
CLIENT JOB NO.: 910918-C1

DATE RECEIVED: 09/18/91  
DATE REPORTED: 09/20/91

Page 1 of 4

| Lab Number | Customer Sample Identification | Date Sampled | Date Analyzed |
|------------|--------------------------------|--------------|---------------|
| 83940- 1   | 1                              | 09/18/91     | 09/19/91      |
| 83940- 2   | 2                              | 09/18/91     | 09/19/91      |
| 83940- 3   | 3                              | 09/18/91     | 09/20/91      |
| 83940- 4   | 4                              | 09/18/91     | 09/19/91      |
| 83940- 5   | 5                              | 09/18/91     | 09/19/91      |
| 83940- 6   | 6                              | 09/18/91     | 09/19/91      |
| 83940- 7   | 7                              | 09/18/91     | 09/19/91      |
| 83940- 8   | 8                              | 09/18/91     | 09/19/91      |
| 83940- 9   | 9                              | 09/18/91     | 09/19/91      |
| 83940-10   | 10                             | 09/18/91     | 09/19/91      |

| Laboratory Number: | 83940 | 83940 | 83940 | 83940 | 83940 |
|--------------------|-------|-------|-------|-------|-------|
|                    | 1     | 2     | 3     | 4     | 5     |

| ANALYTE LIST        | Amounts/Quantitation Limits (mg/Kg) |         |       |         |       |
|---------------------|-------------------------------------|---------|-------|---------|-------|
| OIL AND GREASE:     | NA                                  | NA      | NA    | NA      | NA    |
| TPH/GASOLINE RANGE: | ND<1                                | 1300    | @ 46  | @ 160   | 64    |
| TPH/DIESEL RANGE:   | NA                                  | NA      | NA    | NA      | NA    |
| BENZENE:            | ND<.005                             | ND<0.25 | 0.10  | ND<0.12 | 0.040 |
| TOLUENE:            | ND<.005                             | 2.3     | 0.070 | ND<0.12 | 0.040 |
| ETHYL BENZENE:      | ND<.005                             | 2.8     | 0.21  | 1.6     | 0.13  |
| XYLENES:            | ND<.005                             | 7.6     | 0.18  | 3.2     | 0.32  |

| Laboratory Number: | 83940 | 83940 | 83940 | 83940 | 83940 |
|--------------------|-------|-------|-------|-------|-------|
|                    | 6     | 7     | 8     | 9     | 10    |

| ANALYTE LIST        | Amounts/Quantitation Limits (mg/Kg) |         |         |         |         |
|---------------------|-------------------------------------|---------|---------|---------|---------|
| OIL AND GREASE:     | NA                                  | NA      | NA      | NA      | NA      |
| TPH/GASOLINE RANGE: | 190                                 | ND<1    | ND<1    | ND<1    | ND<1    |
| TPH/DIESEL RANGE:   | NA                                  | NA      | NA      | NA      | NA      |
| BENZENE:            | 0.33                                | ND<.005 | ND<.005 | ND<.005 | ND<.005 |
| TOLUENE:            | 0.38                                | ND<.005 | ND<.005 | ND<.005 | ND<.005 |
| ETHYL BENZENE:      | 0.81                                | ND<.005 | ND<.005 | ND<.005 | ND<.005 |
| XYLENES:            | 1.8                                 | ND<.005 | ND<.005 | 0.007   | ND<.005 |

Certified Laboratories



# Superior Precision Analytical, Inc.

825 Arnold Drive, Suite 114 • Martinez, California 94553 • (510) 229-1512 / fax (510) 229-1526

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

LABORATORY NO.: 83940  
CLIENT: Blaine Tech Services, Inc.  
CLIENT JOB NO.: 910918-C1

DATE RECEIVED: 09/18/91  
DATE REPORTED: 09/20/91

Page 2 of 4

| Lab Number | Customer Sample Identification | Date Sampled | Date Analyzed |
|------------|--------------------------------|--------------|---------------|
| 83940-11   | 11                             | 09/18/91     | 09/19/91      |
| 83940-12   | 12                             | 09/18/91     | 09/19/91      |
| 83940-13   | 13                             | 09/18/91     | 09/19/91      |
| 83940-14   | 14                             | 09/18/91     | 09/20/91      |
| 83940-15   | 15                             | 09/18/91     | 09/20/91      |
| 83940-16   | 16A-D                          | 09/18/91     | 09/20/91      |
| 83940-17   | 17A-D                          | 09/18/91     | 09/20/91      |
| 83940-18   | 18A-D                          | 09/18/91     | 09/20/91      |
| 83940-19   | 19A-D                          | 09/18/91     | 09/20/91      |
| 83940-20   | 20A-D                          | 09/18/91     | 09/20/91      |

| Laboratory Number: | 83940 | 83940 | 83940 | 83940 | 83940 |
|--------------------|-------|-------|-------|-------|-------|
|                    | 11    | 12    | 13    | 14    | 15    |

| ANALYTE LIST        | Amounts/Quantitation Limits (mg/Kg) |         |      |         |         |
|---------------------|-------------------------------------|---------|------|---------|---------|
| OIL AND GREASE:     | NA                                  | NA      | NA   | ND<50   | ND<50   |
| TPH/GASOLINE RANGE: | ND<1                                | ND<1    | 53   | ND<1    | ND<1    |
| TPH/DIESEL RANGE:   | NA                                  | NA      | NA   | ND<10   | ND<10   |
| BENZENE:            | 0.008                               | ND<.005 | 0.90 | ND<.005 | ND<.005 |
| TOLUENE:            | 0.009                               | ND<.005 | 3.5  | ND<.005 | ND<.005 |
| ETHYL BENZENE:      | ND<.005                             | ND<.005 | 1.2  | ND<.005 | ND<.005 |
| XYLENES:            | 0.010                               | ND<.005 | 6.9  | ND<.005 | ND<.005 |

| Laboratory Number: | 83940 | 83940 | 83940 | 83940 | 83940 |
|--------------------|-------|-------|-------|-------|-------|
|                    | 16    | 17    | 18    | 19    | 20    |

| ANALYTE LIST        | Amounts/Quantitation Limits (mg/Kg) |         |       |       |         |
|---------------------|-------------------------------------|---------|-------|-------|---------|
| OIL AND GREASE:     | ND<50                               | NA      | NA    | NA    | NA      |
| TPH/GASOLINE RANGE: | ND<1                                | @ 65    | 120   | 6     | ND<1    |
| TPH/DIESEL RANGE:   | * 78                                | NA      | NA    | NA    | NA      |
| BENZENE:            | ND<.005                             | ND<0.05 | 0.030 | 0.008 | ND<.005 |
| TOLUENE:            | ND<.005                             | ND<0.05 | 0.046 | 0.097 | 0.006   |
| ETHYL BENZENE:      | ND<.005                             | 0.58    | 0.71  | 0.060 | ND<.005 |
| XYLENES:            | 0.006                               | 2.6     | 2.4   | 0.68  | 0.034   |



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

LABORATORY NO.: 83940  
CLIENT: Blaine Tech Services, Inc.  
CLIENT JOB NO.: 910918-C1

DATE RECEIVED: 09/18/91  
DATE REPORTED: 09/20/91

Page 3 of 4

| Lab Number | Customer Sample Identification | Date Sampled | Date Analyzed |
|------------|--------------------------------|--------------|---------------|
| 83940-21   | 21A-D                          | 09/18/91     | 09/20/91      |
| 83940-22   | 22A-D                          | 09/18/91     | 09/20/91      |

|                    |       |       |
|--------------------|-------|-------|
| Laboratory Number: | 83940 | 83940 |
|                    | 21    | 22    |

| ANALYTE LIST        | Amounts/Quantitation Limits (mg/Kg) |         |
|---------------------|-------------------------------------|---------|
| OIL AND GREASE:     | NA                                  | NA      |
| TPH/GASOLINE RANGE: | 3                                   | 3       |
| TPH/DIESEL RANGE:   | NA                                  | NA      |
| BENZENE:            | 0.006                               | ND<.005 |
| TOLUENE:            | 0.024                               | 0.015   |
| ETHYL BENZENE:      | 0.020                               | 0.011   |
| XYLENES:            | 0.26                                | 0.33    |



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

### ANALYSIS FOR TOTAL PETROLEUM HYDROCARBONS

Page 4 of 4  
QA/QC INFORMATION  
SET: 83940

NA = ANALYSIS NOT REQUESTED

ND = ANALYSIS NOT DETECTED ABOVE QUANTITATION LIMIT

mg/Kg = part per million (ppm)

\* = Diesel Range Concentration Reported. Heavy Hydrocarbons Present In Chromatogram.

@ = Gasoline Range Concentration Reported. Heavy Hydrocarbons Present In Chromatogram.

OIL AND GREASE ANALYSIS By Standard Methods Method 5520F:  
Minimum Detection Limit in Soil: 50mg/Kg

Modified EPA-SW846 Method 8015 for Extractable Hydrocarbons:  
Minimum Quantitation Limit for Diesel in Soil: 1mg/Kg  
Standard Reference: 07/20/91

EPA-SW846 Method 8015/5030 Total Purgable Petroleum Hydrocarbons:  
Minimum Quantitation Limit for Gasoline in Soil: 1mg/Kg  
Standard Reference: 06/26/91

SW-846 Method 8020/BTXE  
Minimum Quantitation Limit in Soil: 0.005mg/Kg  
Standard Reference: 07/08/91

| ANALYTE       | REFERENCE | SPIKE LEVEL | MS/MSD RECOVERY | RPD | CONTROL LIMIT |
|---------------|-----------|-------------|-----------------|-----|---------------|
| Oil & Grease  | 09/10/91  | 20 ppm      | 94/88           | 7   | 56-106        |
| Diesel        | 07/20/91  | 200 ppm     | 85/82           | 4   | 75-125        |
| Gasoline      | 06/26/91  | 200 ng      | 106/108         | 2   | 70-130        |
| Benzene       | 07/08/91  | 200 ng      | 87/92           | 6   | 70-130        |
| Toluene       | 07/08/91  | 200 ng      | 89/95           | 7   | 70-130        |
| Ethyl Benzene | 07/08/91  | 200 ng      | 94/99           | 6   | 70-130        |
| Total Xylene  | 07/08/91  | 200 ng      | 90/95           | 5   | 70-130        |

Richard Srna, Ph.D.

Laboratory Director



# Superior Precision Analytical, Inc.

1555 Burke, Unit I • San Francisco, California 94124 • (415) 647-2081 / fax (415) 821-7123

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

LABORATORY NO.: 12351-1  
CLIENT: Blaine Tech Services  
JOB NO.: 910918-C1

DATE SAMPLED: 09/18/91  
DATE RECEIVED: 09/18/91  
DATE ANALYZED: 09/20/91

EPA SW-846 METHOD 8010  
HALOGENATED VOLATILE ORGANICS

SAMPLE: #14

| Compound                     | MDL (ug/kg) | RESULTS (ug/kg) |
|------------------------------|-------------|-----------------|
| Chloromethane/Vinyl Chloride | 10          | ND              |
| Bromomethane/Chloroethane    | 10          | ND              |
| Trichlorofluoromethane       | 5           | ND              |
| 1,1-Dichloroethene           | 5           | ND              |
| Methylene Chloride           | 5           | ND              |
| trans-1,2-Dichloroethene     | 5           | ND              |
| 1,1-Dichloroethane           | 5           | ND              |
| Chloroform                   | 5           | ND              |
| 1,1,1-Trichloroethane        | 5           | ND              |
| Carbon tetrachloride         | 5           | ND              |
| 1,2-Dichloroethane           | 5           | ND              |
| Trichloroethylene            | 5           | ND              |
| 1,2-Dichloropropane          | 5           | ND              |
| Bromodichloromethane         | 5           | ND              |
| Cis-1,3-Dichloropropene      | 5           | ND              |
| trans-1,3-Dichloropropene    | 5           | ND              |
| 1,1,2-Trichloroethane        | 5           | ND              |
| Tetrachloroethene            | 5           | ND              |
| Dibromochloromethane         | 5           | ND              |
| Chlorobenzene                | 5           | ND              |
| Bromoform                    | 5           | ND              |
| 1,1,2,2-Tetrachloroethane    | 5           | ND              |
| 1,3-Dichlorobenzene          | 5           | ND              |
| 1,2-Dichlorobenzene          | 5           | ND              |
| 1,4-Dichlorobenzene          | 5           | ND              |
| Cis-1,2-Dichloroethene       | 5           | ND              |

MDL = Method Detection Limit  
ug/kg = parts per billion (ppb)

QA/QC Summary: Daily Standard RPD = <15%

MS/MSD average recovery = 80% :MS/MSD RPD =< 2%

Richard Srna, Ph.D.

*Richard Srna*  
Laboratory Director





# Superior Precision Analytical, Inc.

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

LABORATORY NO.: 12351-2  
CLIENT: Blaine Tech Services  
JOB NO.: 910918-C1

DATE SAMPLED: 09/18/91  
DATE RECEIVED: 09/18/91  
DATE ANALYZED: 09/20/91

EPA SW-846 METHOD 8010  
HALOGENATED VOLATILE ORGANICS  
SAMPLE: #15

| Compound                     | MDL (ug/kg) | RESULTS (ug/kg) |
|------------------------------|-------------|-----------------|
| Chloromethane/Vinyl Chloride | 10          | ND              |
| Bromomethane/Chloroethane    | 10          | ND              |
| Trichlorofluoromethane       | 5           | ND              |
| 1,1-Dichloroethene           | 5           | ND              |
| Methylene Chloride           | 5           | ND              |
| trans-1,2-Dichloroethene     | 5           | ND              |
| 1,1-Dichloroethane           | 5           | ND              |
| Chloroform                   | 5           | ND              |
| 1,1,1-Trichloroethane        | 5           | ND              |
| Carbon tetrachloride         | 5           | ND              |
| 1,2-Dichloroethane           | 5           | ND              |
| Trichloroethylene            | 5           | ND              |
| 1,2-Dichloropropane          | 5           | ND              |
| Bromodichloromethane         | 5           | ND              |
| Cis-1,3-Dichloropropene      | 5           | ND              |
| trans-1,3-Dichloropropene    | 5           | ND              |
| 1,1,2-Trichloroethane        | 5           | ND              |
| Tetrachloroethene            | 5           | ND              |
| Dibromochloromethane         | 5           | ND              |
| Chlorobenzene                | 5           | ND              |
| Bromoform                    | 5           | ND              |
| 1,1,2,2-Tetrachloroethane    | 5           | ND              |
| 1,3-Dichlorobenzene          | 5           | ND              |
| 1,2-Dichlorobenzene          | 5           | ND              |
| 1,4-Dichlorobenzene          | 5           | ND              |
| Cis-1,2-Dichloroethene       | 5           | ND              |

MDL = Method Detection Limit  
ug/kg = parts per billion (ppb)  
QA/QC Summary: Daily Standard RPD = <15%  
MS/MSD average recovery = 80% :MS/MSD RPD =< 2%

Richard Srna, Ph.D.

*Cecilia J. Souza (for)*  
Laboratory Director



# Superior Precision Analytical, Inc.

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

LABORATORY NO.: 12351-3  
CLIENT: Blaine Tech Services  
JOB NO.: 910918-C1

DATE SAMPLED: 09/18/91  
DATE RECEIVED: 09/18/91  
DATE ANALYZED: 09/20/91

EPA SW-846 METHOD 8010  
HALOGENATED VOLATILE ORGANICS  
SAMPLE: #16A-D

| Compound                     | MDL (ug/kg) | RESULTS (ug/kg) |
|------------------------------|-------------|-----------------|
| Chloromethane/Vinyl Chloride | 10          | ND              |
| Bromomethane/Chloroethane    | 10          | ND              |
| Trichlorofluoromethane       | 5           | ND              |
| 1,1-Dichloroethene           | 5           | ND              |
| Methylene Chloride           | 5           | ND              |
| trans-1,2-Dichloroethene     | 5           | ND              |
| 1,1-Dichloroethane           | 5           | ND              |
| Chloroform                   | 5           | ND              |
| 1,1,1-Trichloroethane        | 5           | ND              |
| Carbon tetrachloride         | 5           | ND              |
| 1,2-Dichloroethane           | 5           | ND              |
| Trichloroethylene            | 5           | ND              |
| 1,2-Dichloropropane          | 5           | ND              |
| Bromodichloromethane         | 5           | ND              |
| Cis-1,3-Dichloropropene      | 5           | ND              |
| trans-1,3-Dichloropropene    | 5           | ND              |
| 1,1,2-Trichloroethane        | 5           | ND              |
| Tetrachloroethene            | 5           | ND              |
| Dibromochloromethane         | 5           | ND              |
| Chlorobenzene                | 5           | ND              |
| Bromoform                    | 5           | ND              |
| 1,1,2,2-Tetrachloroethane    | 5           | ND              |
| 1,3-Dichlorobenzene          | 5           | ND              |
| 1,2-Dichlorobenzene          | 5           | ND              |
| 1,4-Dichlorobenzene          | 5           | ND              |
| Cis-1,2-Dichloroethene       | 5           | ND              |

MDL = Method Detection Limit  
ug/kg = parts per billion (ppb)

QA/QC Summary: Daily Standard RPD = <15%

MS/MSD average recovery = 80% :MS/MSD RPD =< 2%

Richard Srna, Ph.D.

*Cecilia Gorgini (for)*  
Laboratory Director



# Superior Precision Analytical, Inc.

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

LABORATORY NO.: 84106  
CLIENT: Blaine Tech Services, Inc.  
CLIENT JOB NO.: 910918-C-1

DATE RECEIVED: 10/11/91  
DATE REPORTED: 10/15/91

ANALYSIS FOR SOLUBLE LEAD  
by Calif. Admin. Code Title 22, Paragraph 66700

| LAB # | Sample Identification | Concentration (mg/L)<br>Lead in Extract |
|-------|-----------------------|---|
| 1     | #16 A-D               | 0.6                                     |

mg/L - parts per million (ppm)

Method Detection Limit for Lead in Extract: 0.5 mg/L

QAQC Summary: MS/MSD Average Recovery : 96/95%  
Duplicate RPD : 1

Richard Srna, Ph.D.

  
Laboratory Manager



# Superior Precision Analytical, Inc.

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

LABORATORY NO.: 84106-1  
CLIENT: BLAINE TECH SERVICES  
CLIENT JOB #: 910918-C-1

DATE RECEIVED: 10/11/91  
DATE REPORTED: 10/15/91  
CLIENT SAMPLE ID: #16A-D

### TCLP METALS RCRA SW-846 Method 1311

| Compound |      | Results mg/L | Detection Limit mg/L |
|----------|------|--------------|----------------------|
| Barium   | (Ba) | 0.8          | 0.5                  |
| Cadmium  | (Cd) | ND           | 0.5                  |
| Chromium | (Cr) | ND           | 0.5                  |
| Lead     | (Pb) | ND           | 1                    |
| Silver   | (Ag) | ND           | 0.5                  |

mg/L = part per million (ppm)

Richard Srna, Ph.D

Laboratory Manager



# Superior Precision Analytical, Inc.

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

LABORATORY NO.: TCLP SPIKE  
CLIENT: BLAINE TECH SERVICES  
CLIENT JOB NUMBER: 910918-C-1  
DATE ANALYZED: 10/14/91

DATE RECEIVED: 10/11/91  
DATE REPORTED: 10/15/91

TCLP METALS  
RCRA SW-846 Method 1311

| Compound |      | MS/MSD %<br>RECOVERY | RPD |
|----------|------|----------------------|-----|
| Barium   | (Ba) | 99/90                | 10  |
| Cadmium  | (Cd) | 112/103              | 8   |
| Chromium | (Cr) | 108/101              | 7   |
| Lead     | (Pb) | 116/109              | 6   |
| Silver   | (Ag) | 94/90                | 4   |

Richard Srna, Ph.D

Laboratory Manager

Western Operations

1252 Quarry Lane  
Pleasanton, CA 94566  
(415) 426-2600  
Fax (415) 426-0106

**Clayton**  
ENVIRONMENTAL  
CONSULTANTS

October 15, 1991

Ms. Elaine Holland  
BLAINE TECH SERVICES, INC.  
1370 Tully Road, Suite 505  
San Jose, CA 95122

910918C1

Client Ref. 93864/910918CI  
Clayton Project No. 91101.08

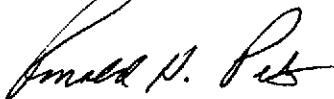
Dear Ms. Holland:

Attached is our analytical laboratory report for the samples received on October 11, 1991 from Superior Analytical Laboratory. A copy of the Chain-of-Custody form acknowledging receipt of these samples is attached.

Please note that any unused portion of the samples will be disposed of 30 days after the date of this report, unless you have requested otherwise.

We appreciate the opportunity to be of assistance to you. If you have any questions, please contact Maryann Gambino, Client Services Supervisor, at (415) 426-2657.

Sincerely,



Ronald H. Peters, CIH  
Director, Laboratory Services  
Western Operations

RHP/tb  
Attachments

Results of Analysis  
for  
Chevron U.S.A. Inc./Blaine Tech Services, Inc.

Client Reference: 93864/910918CI  
Clayton Project No. 91101.08

Sample Identification: #16A-D (SOIL)  
Lab Number: 9110108-01  
Sample Matrix/Media: SOIL

Date Sampled: 09/18/91  
Date Received: 10/11/91

| Analyte          | Concentration | Detection Limit | Units     | Date Prepared | Date Analyzed | Prep Method | Analysis Method |
|------------------|---------------|-----------------|-----------|---------------|---------------|-------------|-----------------|
| Ignitability     | N.I.          | --              | Degrees F | --            | 10/13/91      | --          | SW (7.1.2)      |
| pH               | 8.3           | --              | S.U.      | --            | 10/11/91      | --          | EPA 9045        |
| Reactive Cyanide | <0.3          | 0.3             | mg/kg     | --            | 10/13/91      | --          | SW 7.3.3.2      |
| Reactive Sulfide | <10           | 10              | mg/kg     | --            | 10/13/91      | --          | SW 7.3.4.2      |

ND Not detected at or above limit of detection  
< Not detected at or above limit of detection  
-- Information not available or not applicable

N.I. = Not Ignitable





Results of Analysis  
for  
Chevron U.S.A. Inc./Blaine Tech Services, Inc.

Client Reference: 93864/910918CI  
Clayton Project No. 91101.08

Sample Identification: METHOD BLANK  
Lab Number: 9110108-03  
Sample Matrix/Media: SOIL

Date Sampled: --  
Date Received: --

| Analyte          | Concentration | Detection Limit | Units | Date Prepared | Date Analyzed | Prep Method | Analysis Method |
|------------------|---------------|-----------------|-------|---------------|---------------|-------------|-----------------|
| Reactive Cyanide | <0.3          | 0.3             | mg/kg | --            | 10/13/91      | --          | SW 7.3.3.2      |
| Reactive Sulfide | <10           | 10              | mg/kg | --            | 10/13/91      | --          | SW 7.3.4.2      |

ND Not detected at or above limit of detection  
< Not detected at or above limit of detection  
-- Information not available or not applicable



Quality Assurance Results Summary  
for  
Clayton Project No.91101.08

Clayton Lab Number: 9110108-02A  
Ext./Prep. Method: EPA3010  
Date: 10/11/91  
Analyst: SUE  
Std. Source: VHGI0140

Analytical Method: EPA6010  
Instrument ID: 03891  
Date: 10/11/91  
Analyst: HYW  
Sample Matrix/Media: TCLP  
Units: MG/L

| Analyte  | Sample Result | Spike Level | Matrix Spike Result | MS Recovery (%) | Matrix Spike Duplicate Result | MSD Recovery (%) | Average Recovery (% R) | LCL (% R) | UCL (% R) | RPD (%) | UCL (%RPD) |
|----------|---------------|-------------|---------------------|-----------------|-------------------------------|------------------|------------------------|-----------|-----------|---------|------------|
| ARSENIC  | ND            | 5.00        | 4.99                | 100             | 5.14                          | 103              | 101                    | 75        | 125       | 3.1     | 20         |
| SELENIUM | ND            | 1.00        | 0.979               | 98              | 1.02                          | 102              | 100                    | 75        | 125       | 4.4     | 20         |

LCS = Laboratory Control Sample  
ND = Not detected at or above limit of detection

LCL = Lower Control Limit

UCL = Upper Control Limit  
SOR = Spike out of range due to high sample concentration.

Quality Assurance Results Summary  
 For  
 Clayton Project No. 91101.08

Clayton Lab Number: 9110108-02A  
 Ext./Prep. Method: EPA7470  
 Date: 10/11/91  
 Analyst: SUE  
 Std. Source: BAKER 6934-1

Analytical Method: EPA7470  
 Instrument ID: 05581  
 Date: 10/13/91  
 Analyst: SUE  
 Sample Matrix/Media: TCLP  
 Units: MG/L

| Analyte | Sample Result | Spike Level | Matrix Spike Result | MS Recovery (%) | Matrix Spike Duplicate Result | MSD Recovery (%) | Average Recovery (% R) | LCL (% R) | UCL (% R) | RPD (%) | UCL (%RPD) |
|---------|---------------|-------------|---------------------|-----------------|-------------------------------|------------------|------------------------|-----------|-----------|---------|------------|
| MERCURY | ND            | 0.100       | 0.101               | 101             | 0.0970                        | 97               | 99                     | 75        | 125       | 4.0     | 20         |

LCS = Laboratory Control Sample  
 ND = Not detected at or above limit of detection

LCL = Lower Control Limit

UCL = Upper Control Limit  
 SOR = Spike out of range due to high sample concentration.

Quality Assurance Results Summary  
for  
Clayton Project No. 91101.08

Clayton Lab Number: 9110085-01A  
Ext./Prep. Method: EPA7.3.4.2  
Date: 10/11/91  
Analyst: HYW  
Std. Source: KODAK #AOA

Analytical Method: EPA7 3 4 2  
Instrument ID: 00008  
Date: 10/13/91  
Analyst: HYW  
Sample Matrix/Media: SOIL  
Units: MG/KG

| Analyte          | Sample Result | Spike Level | Matrix Spike Result | MS Recovery (%) | Matrix Spike Duplicate Result | MSD Recovery (%) | Average Recovery (% R) | LCL (% R) | UCL (% R) | RPD (%) | UCL (%RPD) |
|------------------|---------------|-------------|---------------------|-----------------|-------------------------------|------------------|------------------------|-----------|-----------|---------|------------|
| REACTIVE SULFIDE | ND            | 470         | 360                 | 77              | 380                           | 81               | 79                     | 75        | 125       | 5.4     | 20         |

LCS = Laboratory Control Sample  
ND = Not detected at or above limit of detection

LCL = Lower Control Limit

UCL = Upper Control Limit  
SOR = Spike out of range due to high sample concentration.

Quality Assurance Results Summary  
for  
Clayton Project No. 91101.08

Clayton Lab Number: 9110085-01A  
Ext./Prep. Method: EPA7.3.3.2  
Date: 10/11/91  
Analyst: HYW  
Std. Source: BAKER #3080-1

Analytical Method: EPA7\_3\_3\_2  
Instrument ID: 07487  
Date: 10/13/91  
Analyst: HYW  
Sample Matrix/Media: SOIL  
Units: MG/KG

| Analyte          | Sample Result | Spike Level | Matrix Spike Result | MS Recovery (%) | Matrix Spike Duplicate Result | MSD Recovery (%) | Average Recovery (% R) | LCL (% R) | UCL (% R) | RPD (%) | UCL (%RPD) |
|------------------|---------------|-------------|---------------------|-----------------|-------------------------------|------------------|------------------------|-----------|-----------|---------|------------|
| REACTIVE CYANIDE | ND            | 100         | 88.3                | 88              | 89.4                          | 89               | 89                     | 75        | 125       | 1.2     | 20         |

LCS = Laboratory Control Sample  
ND = Not detected at or above limit of detection

LCL = Lower Control Limit

UCL = Upper Control Limit  
SOR = Spike out of range due to high sample concentration.





# Superior Precision Analytical, Inc.

P.O. Box 1545 • Martinez, California 94553 • (510) 229-1590 / fax (510) 229-0916

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

LABORATORY NO.: 84002  
CLIENT: Blaine Tech Services, Inc.  
CLIENT JOB NO.: 910926-C1

DATE RECEIVED: 09/26/91  
DATE REPORTED: 10/03/91

Page 1 of 3

| Lab Number | Customer Sample Identification | Date Sampled | Date Analyzed |
|------------|--------------------------------|--------------|---------------|
| 84002- 1   | 1                              | 09/26/91     | 10/02/91      |
| 84002- 2   | 2                              | 09/26/91     | 10/01/91      |
| 84002- 3   | 3                              | 09/26/91     | 10/02/91      |
| 84002- 4   | 4                              | 09/26/91     | 10/01/91      |
| 84002- 5   | 5                              | 09/26/91     | 10/02/91      |
| 84002- 6   | 6                              | 09/26/91     | 10/01/91      |
| 84002- 7   | 7A-D                           | 09/26/91     | 10/02/91      |
| 84002- 8   | 8A-D                           | 09/26/91     | 10/01/91      |
| 84002- 9   | 9A-D                           | 09/26/91     | 10/02/91      |
| 84002-10   | 10A-D                          | 09/26/91     | 10/02/91      |

| Laboratory Number: | 84002 | 84002 | 84002 | 84002 | 84002 |
|--------------------|-------|-------|-------|-------|-------|
|                    | 1     | 2     | 3     | 4     | 5     |

| ANALYTE LIST        | Amounts/Quantitation Limits (mg/Kg) |       |       |         |         |
|---------------------|-------------------------------------|-------|-------|---------|---------|
| OIL AND GREASE:     | NA                                  | NA    | NA    | NA      | NA      |
| TPH/GASOLINE RANGE: | 580                                 | 2     | 71    | 980     | 330     |
| TPH/DIESEL RANGE:   | NA                                  | NA    | NA    | NA      | NA      |
| BENZENE:            | ND<0.12                             | 0.069 | 0.069 | ND<0.12 | ND<0.12 |
| TOLUENE:            | 1.4                                 | 0.092 | 0.12  | 2.7     | 0.81    |
| ETHYL BENZENE:      | 1.5                                 | 0.022 | 0.22  | 2.5     | 1.0     |
| XYLENES:            | 3.9                                 | 0.18  | 0.57  | 5.5     | 2.7     |

| Laboratory Number: | 84002 | 84002 | 84002 | 84002 | 84002 |
|--------------------|-------|-------|-------|-------|-------|
|                    | 6     | 7     | 8     | 9     | 10    |

| ANALYTE LIST        | Amounts/Quantitation Limits (mg/Kg) |         |         |         |         |
|---------------------|-------------------------------------|---------|---------|---------|---------|
| OIL AND GREASE:     | NA                                  | NA      | NA      | NA      | NA      |
| TPH/GASOLINE RANGE: | 460                                 | 540     | 210     | 170     | 74      |
| TPH/DIESEL RANGE:   | NA                                  | NA      | NA      | NA      | NA      |
| BENZENE:            | ND<0.12                             | ND<0.12 | ND<0.05 | ND<0.12 | ND<.025 |
| TOLUENE:            | 0.92                                | 1.1     | 0.27    | 0.54    | 0.16    |
| ETHYL BENZENE:      | 1.3                                 | 1.6     | 0.56    | 0.64    | 0.24    |
| XYLENES:            | 3.0                                 | 3.8     | 1.4     | 1.5     | 0.54    |





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

LABORATORY NO.: 84002  
CLIENT: Blaine Tech Services, Inc.  
CLIENT JOB NO.: 910926-C1

DATE RECEIVED: 09/26/91  
DATE REPORTED: 10/03/91

Page 2 of 3

| Lab Number | Customer Sample Identification | Date Sampled | Date Analyzed |
|------------|--------------------------------|--------------|---------------|
| 84002-11   | 11A-D                          | 09/26/91     | 10/02/91      |
| 84002-12   | 12A-D                          | 09/26/91     | 10/02/91      |

|                    |       |       |
|--------------------|-------|-------|
| Laboratory Number: | 84002 | 84002 |
|                    | 11    | 12    |

| ANALYTE LIST        | Amounts/Quantitation Limits (mg/kg) |         |
|---------------------|-------------------------------------|---------|
| OIL AND GREASE:     | NA                                  | NA      |
| TPH/GASOLINE RANGE: | 320                                 | 200     |
| TPH/DIESEL RANGE:   | NA                                  | NA      |
| BENZENE:            | ND<0.12                             | ND<0.12 |
| TOLUENE:            | 0.84                                | 0.55    |
| ETHYL BENZENE:      | 0.96                                | 0.69    |
| XYLENES:            | 2.6                                 | 1.6     |



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

ANALYSIS FOR TOTAL PETROLEUM HYDROCARBONS

Page 3 of 3  
QA/QC INFORMATION  
SET: 84002

NA = ANALYSIS NOT REQUESTED  
ND = ANALYSIS NOT DETECTED ABOVE QUANTITATION LIMIT  
mg/kg = part per million (ppm)

OIL AND GREASE ANALYSIS By Standard Methods Method 503E:  
Minimum Detection Limit in Soil: 50mg/kg

Modified EPA-SW846 Method 8015 for Extractable Hydrocarbons:  
Minimum Quantitation Limit for Diesel in Soil: 1mg/kg  
Standard Reference: NA

EPA-SW846 Method 8015/5030 Total Purgable Petroleum Hydrocarbons:  
Minimum Quantitation Limit for Gasoline in Soil: 1mg/kg  
Standard Reference: 06/26/91

SW-846 Method 8020/BTXE  
Minimum Quantitation Limit in Soil: 0.005mg/kg  
Standard Reference: 07/08/91

| ANALYTE       | REFERENCE | SPIKE LEVEL | MS/MSD RECOVERY | RPD | CONTROL LIMIT |
|---------------|-----------|-------------|-----------------|-----|---------------|
| Oil & Grease  | NA        | NA          | NA              | NA  | NA            |
| Diesel        | NA        | NA          | NA              | NA  | NA            |
| Gasoline      | 06/26/91  | 200 ng      | 96/100          | 4   | 70-130        |
| Benzene       | 07/08/91  | 200 ng      | 94/84           | 11  | 70-130        |
| Toluene       | 07/08/91  | 200 ng      | 94/90           | 5   | 70-130        |
| Ethyl Benzene | 07/08/91  | 200 ng      | 100/96          | 5   | 70-130        |
| Total Xylene  | 07/08/91  | 200 ng      | 96/92           | 4   | 70-130        |

Richard Srna, Ph.D.

*Robert W. Srna*  
Laboratory Director

Fax copy of Lab Report and COC to Chevron Contact:  Yes  No

**Chain-of-Custody-Record**

|  |  |   |
|--|--|---|
| Chevron U.S.A. Inc.<br>P.O. BOX 5004<br>San Ramon, CA 94583<br>FAX (415)842-9591 | Chevron Facility Number <u>93864</u>           | Chevron Contact (Name) <u>NANCY VOLELICH</u>    |
|  | Facility Address <u>5101 TELEGRAPH OAKLAND</u> | (Phone) _____                                   |
|  | Consultant Project Number <u>911010-C1</u>     | Laboratory Name <u>SUPERIOR</u>                 |
|  | Consultant Name <u>BLAINE TECH SERVICES</u>    | Laboratory Release Number <u>4054670</u>        |
|  | Address <u>1370 TULLY RD. S., CA</u>           | Samples Collected by (Name) <u>GLEN BELMONT</u> |
| Project Contact (Name) <u>Elaine Holland</u>                                     | Collection Date <u>10-10-71</u>                | Signature <u>[Signature]</u>                    |
|  | (Phone) _____                                  | (Fax Number) _____                              |

| Sample Number | Lab Sample Number | Number of Containers | Matrix<br>S = Soil<br>W = Water<br>A = Air<br>C = Charcoal | Type<br>G = Grab<br>C = Composite<br>D = Descrete | Time | Sample Preservation | Iced (Yes or No) | Analyses To Be Performed |                      |                          |                                 |                               |                              |                                |  |  |  |          | Remarks |
|---------------|-------------------|----------------------|--|---|------|---------------------|------------------|--------------------------|----------------------|--------------------------|---------------------------------|-------------------------------|------------------------------|--------------------------------|--|--|--|----------|---------|
|               |                   |                      |  |   |      |                     |                  | BTX + TPH GAS<br>(8015)  | TPH Diesel<br>(8015) | Oil and Grease<br>(8020) | Purgeable Halocarbons<br>(8010) | Purgeable Aromatics<br>(8020) | Purgeable Organics<br>(8240) | Extractable Organics<br>(8270) | Metals<br>Cd, Cr, Pb, Zn, Ni<br>(ICAP or AA) |  |  |          |         |
| 1A-D          |                   | 4                    | S  | C   |      |                     | YES              | /                        |                      |                          |                                 |                               |                              |                                |  |  |  | 24 HOURS |         |
| 2A-D          |                   |                      |  |   |      |                     |                  | /                        |                      |                          |                                 |                               |                              |                                |  |  |  | 24 HOURS |         |
| 3A-D          |                   |                      |  |   |      |                     |                  | /                        |                      |                          |                                 |                               |                              |                                |  |  |  | 24 HOURS |         |
| 4A-D          |                   |                      |  |   |      |                     |                  | /                        |                      |                          |                                 |                               |                              |                                |  |  |  | 24 HOURS |         |
| 5A-D          |                   |                      |  |   |      |                     |                  | /                        |                      |                          |                                 |                               |                              |                                |  |  |  | 24 HOURS |         |
| 6A-D          |                   |                      |  |   |      |                     |                  | /                        |                      |                          |                                 |                               |                              |                                |  |  |  | 24 HOURS |         |
| 7             |                   | 1                    | S  | D   |      |                     | YES              | /                        |                      |                          |                                 |                               |                              |                                |  |  |  | 48 HOURS |         |
| 8             |                   |                      |  |   |      |                     |                  | /                        |                      |                          |                                 |                               |                              |                                |  |  |  |          |         |
| 9             |                   |                      |  |   |      |                     |                  | /                        |                      |                          |                                 |                               |                              |                                |  |  |  |          |         |
| 10            |                   |                      |  |   |      |                     |                  | /                        |                      |                          |                                 |                               |                              |                                |  |  |  |          |         |
| 11            |                   |                      |  |   |      |                     |                  | /                        |                      |                          |                                 |                               |                              |                                |  |  |  |          |         |
| 12            |                   |                      |  |   |      |                     |                  | /                        |                      |                          |                                 |                               |                              |                                |  |  |  |          |         |
| 13            |                   |                      |  |   |      |                     |                  | /                        |                      |                          |                                 |                               |                              |                                |  |  |  |          |         |
| 14            |                   |                      |  |   |      |                     |                  | /                        |                      |                          |                                 |                               |                              |                                |  |  |  | 48 HOURS |         |

SAVE COMPOSITES

CC: Blaine Tech Services

|  |                         |                           |   |                    |                             |  |
|--|-------------------------|---------------------------|---|--------------------|-----------------------------|--|
| Relinquished By (Signature) <u>[Signature]</u> | Organization <u>BTS</u> | Date/Time <u>10-10-71</u> | Received By (Signature) _____                             | Organization _____ | Date/Time _____             | Turn Around Time (Circle Choice)<br>24 Hrs.<br>48 Hrs.<br>5 Days<br>10 Days<br>As Contracted |
| Relinquished By (Signature) _____              | Organization _____      | Date/Time _____           | Received By (Signature) _____                             | Organization _____ | Date/Time _____             |  |
| Relinquished By (Signature) _____              | Organization _____      | Date/Time _____           | Received For Laboratory By (Signature) <u>[Signature]</u> | Organization _____ | Date/Time <u>10-10-71/4</u> |  |

COC-3LDWG/03 91/MSH



Fax copy of Lab Report and COC to Chevron Contact:  Yes  No

Chain-of-Custody-Record

|   |  |   |
|---|--|---|
| Chevron U.S.A. Inc.<br>P.O. BOX. 5004<br>San Ramon, CA 94583<br>FAX (415)842-9591 | Chevron Facility Number <u>93864</u>           | Chevron Contact (Name) <u>NANCY VUCKICH</u>   |
|   | Facility Address <u>5101 TELEGRAPH OAKLAND</u> | (Phone) _____                                 |
| Consultant Project Number <u>911010-C1</u>  | Consultant Name <u>BLAINE TECH SERVICES</u>    | Laboratory Name <u>SUPERIOR</u>               |
| Address <u>1370 TULLY RD. SJ, CA</u>  | Project Contact (Name) <u>Elaine Holland</u>   | Laboratory Release Number <u>4056670</u>      |
| Project Contact (Phone) _____ (Fax Number) _____                                  |  | Sample Collected by (Name) <u>GLEN BENNET</u> |
|   |  | Collection Date <u>10-10-71</u>               |
|   |  | Signature <u>[Signature]</u>                  |

| Sample Number | Lab Sample Number | Number of Containers | Media<br>S = Soil<br>W = Water<br>A = Air<br>C = Charcoal | Type<br>G = Grab<br>C = Composite<br>D = Discrete | Time | Sample Preservation | Iod (Yes or No) | Analyse To Be Performed |                   |                       |                              |                            |                           |                             |  |   |   |   | Remarks |              |           |          |          |
|---------------|-------------------|----------------------|---|---|------|---------------------|-----------------|-------------------------|-------------------|-----------------------|------------------------------|----------------------------|---------------------------|-----------------------------|--|---|---|---|---------|--------------|-----------|----------|----------|
|               |                   |                      |   |   |      |                     |                 | BTEX + TPH GAS (E015)   | TPH Diesel (E015) | Oil and Grease (E020) | Purgeable Halocarbons (E010) | Purgeable Aromatics (E020) | Purgeable Organics (E040) | Extractable Organics (E070) | Metals Cd, Cr, Pb, Zn, Ni (ICAP or AA) | R | C | I |         | CAM WET LEAD | TCLP LEAD |          |          |
| 1A-D          |                   | 4                    | S   | C   |      |                     | YES             | /                       |                   |                       |                              |                            |                           |                             |  |   |   |   |         |              |           | 24 HOURS |          |
| 2A-D          |                   |                      |   |   |      |                     |                 | /                       |                   |                       |                              |                            |                           |                             |  |   |   |   |         |              |           |          | 24 HOURS |
| 3A-D          |                   |                      |   |   |      |                     |                 | /                       |                   |                       |                              |                            |                           |                             |  |   |   |   |         |              |           |          | 24 HOURS |
| 4A-D          |                   |                      |   |   |      |                     |                 | /                       |                   |                       |                              |                            |                           |                             |  |   |   |   |         |              |           |          | 24 HOURS |
| 5A-D          |                   |                      |   |   |      |                     |                 | /                       |                   |                       |                              |                            |                           |                             |  |   |   |   |         |              |           |          | 24 HOURS |
| 6A-D          |                   |                      |   |   |      |                     |                 | /                       |                   |                       |                              |                            |                           |                             |  |   |   |   |         |              |           |          | 24 HOURS |
| 7             |                   | 1                    | S   | D   |      |                     | YES             | /                       |                   |                       |                              |                            |                           |                             |  |   |   |   |         |              |           |          | 48 HOURS |
| 8             |                   |                      |   |   |      |                     |                 | /                       |                   |                       |                              |                            |                           |                             |  |   |   |   |         |              |           |          |          |
| 9             |                   |                      |   |   |      |                     |                 | /                       |                   |                       |                              |                            |                           |                             |  |   |   |   |         |              |           |          |          |
| 10            |                   |                      |   |   |      |                     |                 | /                       |                   |                       |                              |                            |                           |                             |  |   |   |   |         |              |           |          |          |
| 11            |                   |                      |   |   |      |                     |                 | /                       |                   |                       |                              |                            |                           |                             |  |   |   |   |         |              |           |          |          |
| 12            |                   |                      |   |   |      |                     |                 | /                       |                   |                       |                              |                            |                           |                             |  |   |   |   |         |              |           |          |          |
| 13            |                   |                      |   |   |      |                     |                 | /                       |                   |                       |                              |                            |                           |                             |  |   |   |   |         |              |           |          |          |
| 14            |                   |                      |   |   |      |                     |                 | /                       |                   |                       |                              |                            |                           |                             |  |   |   |   |         |              |           |          | 48 HOURS |

|  |                         |                                |   |                    |                             |  |
|--|-------------------------|--------------------------------|---|--------------------|-----------------------------|--|
| Relinquished By (Signature) <u>[Signature]</u> | Organization <u>BTS</u> | Date/Time <u>10-10-71 1715</u> | Received By (Signature) _____                             | Organization _____ | Date/Time _____             | Turn Around Time (Circle Choice)<br>24 Hrs.<br>48 Hrs.<br>5 Days<br>10 Days<br>As Contracted |
| Relinquished By (Signature) _____              | Organization _____      | Date/Time _____                | Received By (Signature) _____                             | Organization _____ | Date/Time _____             |  |
| Relinquished By (Signature) _____              | Organization _____      | Date/Time _____                | Received For Laboratory By (Signature) <u>[Signature]</u> | Organization _____ | Date/Time <u>10-10-71/4</u> |  |

2-3LWMS/03 91/MSH



# Superior Precision Analytical, Inc.

825 Arnold Drive, Suite 114 • Martinez, California 94553 • (510) 229-1512 / fax (510) 229-1526

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

LABORATORY NO.: 84104  
CLIENT: Blaine Tech Services, Inc.  
CLIENT JOB NO.: 911010-C1

DATE RECEIVED: 10/10/91  
DATE REPORTED: 10/15/91

Page 1 of 4

| Lab Number | Customer Sample Identification | Date Sampled | Date Analyzed |
|------------|--------------------------------|--------------|---------------|
| 84104- 1   | 1A-D                           | 10/10/91     | 10/11/91      |
| 84104- 2   | 2A-D                           | 10/10/91     | 10/11/91      |
| 84104- 3   | 3A-D                           | 10/10/91     | 10/11/91      |
| 84104- 4   | 4A-D                           | 10/10/91     | 10/11/91      |
| 84104- 5   | 5A-D                           | 10/10/91     | 10/11/91      |
| 84104- 6   | 6A-D                           | 10/10/91     | 10/11/91      |
| 84104- 7   | 7                              | 10/10/91     | 10/11/91      |
| 84104- 8   | 8                              | 10/10/91     | 10/11/91      |
| 84104- 9   | 9                              | 10/10/91     | 10/11/91      |
| 84104-10   | 10                             | 10/10/91     | 10/11/91      |

| Laboratory Number: | 84104 | 84104 | 84104 | 84104 | 84104 |
|--------------------|-------|-------|-------|-------|-------|
|                    | 1     | 2     | 3     | 4     | 5     |

| ANALYTE LIST        | Amounts/Quantitation Limits (mg/Kg) |         |         |         |         |
|---------------------|-------------------------------------|---------|---------|---------|---------|
| OIL AND GREASE:     | NA                                  | NA      | NA      | NA      | NA      |
| TPH/GASOLINE RANGE: | 100                                 | 67      | 140     | 30      | 75      |
| TPH/DIESEL RANGE:   | NA                                  | NA      | NA      | NA      | NA      |
| BENZENE:            | ND<.025                             | ND<.025 | ND<.025 | ND<.025 | ND<.025 |
| TOLUENE:            | 0.19                                | 0.12    | 0.16    | 0.061   | 0.14    |
| ETHYL BENZENE:      | 0.26                                | 0.22    | 0.32    | 0.10    | 0.22    |
| XYLENES:            | 0.70                                | 0.57    | 0.93    | 0.29    | 0.57    |

| Laboratory Number: | 84104 | 84104 | 84104 | 84104 | 84104 |
|--------------------|-------|-------|-------|-------|-------|
|                    | 6     | 7     | 8     | 9     | 10    |

| ANALYTE LIST        | Amounts/Quantitation Limits (mg/Kg) |         |         |         |         |
|---------------------|-------------------------------------|---------|---------|---------|---------|
| OIL AND GREASE:     | NA                                  | NA      | NA      | NA      | NA      |
| TPH/GASOLINE RANGE: | 72                                  | ND<1    | ND<1    | ND<1    | ND<1    |
| TPH/DIESEL RANGE:   | NA                                  | NA      | NA      | NA      | NA      |
| BENZENE:            | ND<.025                             | ND<.005 | ND<.005 | ND<.005 | ND<.005 |
| TOLUENE:            | 0.085                               | ND<.005 | ND<.005 | ND<.005 | ND<.005 |
| ETHYL BENZENE:      | 0.17                                | ND<.005 | ND<.005 | ND<.005 | ND<.005 |
| XYLENES:            | 0.48                                | ND<.005 | ND<.005 | ND<.005 | ND<.005 |



# Superior Precision Analytical, Inc.

825 Arnold Drive, Suite 114 • Martinez, California 94553 • (510) 229-1512 / fax (510) 229-1526

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

LABORATORY NO.: 84104  
CLIENT: Blaine Tech Services, Inc.  
CLIENT JOB NO.: 911010-C1

DATE RECEIVED: 10/10/91  
DATE REPORTED: 10/15/91

Page 2 of 4

| Lab Number | Customer Sample Identification | Date Sampled | Date Analyzed |
|------------|--------------------------------|--------------|---------------|
| 84104-11   | 11                             | 10/10/91     | 10/11/91      |
| 84104-12   | 12                             | 10/10/91     | 10/11/91      |
| 84104-13   | 13                             | 10/10/91     | 10/14/91      |
| 84104-14   | 14                             | 10/10/91     | 10/11/91      |
| 84104-15   | 15                             | 10/10/91     | 10/15/91      |
| 84104-16   | 16                             | 10/10/91     | 10/15/91      |
| 84104-17   | 17                             | 10/10/91     | 10/15/91      |
| 84104-18   | 18                             | 10/10/91     | 10/15/91      |
| 84104-19   | 19                             | 10/10/91     | 10/15/91      |
| 84104-20   | 20                             | 10/10/91     | 10/15/91      |

| Laboratory Number: | 84104 | 84104 | 84104 | 84104 | 84104 |
|--------------------|-------|-------|-------|-------|-------|
|                    | 11    | 12    | 13    | 14    | 15    |

| ANALYTE LIST        | Amounts/Quantitation Limits (mg/Kg) |         |         |         |         |
|---------------------|-------------------------------------|---------|---------|---------|---------|
| OIL AND GREASE:     | NA                                  | NA      | NA      | NA      | NA      |
| TPH/GASOLINE RANGE: | ND<1                                | ND<1    | ND<1    | ND<1    | ND<1    |
| TPH/DIESEL RANGE:   | NA                                  | NA      | NA      | NA      | NA      |
| BENZENE:            | ND<.005                             | ND<.005 | ND<.005 | ND<.005 | ND<.005 |
| TOLUENE:            | ND<.005                             | ND<.005 | ND<.005 | ND<.005 | ND<.005 |
| ETHYL BENZENE:      | ND<.005                             | ND<.005 | ND<.005 | ND<.005 | ND<.005 |
| XYLENES:            | ND<.005                             | ND<.005 | ND<.005 | ND<.005 | ND<.005 |

| Laboratory Number: | 84104 | 84104 | 84104 | 84104 | 84104 |
|--------------------|-------|-------|-------|-------|-------|
|                    | 16    | 17    | 18    | 19    | 20    |

| ANALYTE LIST        | Amounts/Quantitation Limits (mg/Kg) |         |         |         |         |
|---------------------|-------------------------------------|---------|---------|---------|---------|
| OIL AND GREASE:     | NA                                  | NA      | NA      | NA      | NA      |
| TPH/GASOLINE RANGE: | ND<1                                | ND<1    | ND<1    | ND<1    | ND<1    |
| TPH/DIESEL RANGE:   | NA                                  | NA      | NA      | NA      | NA      |
| BENZENE:            | ND<.005                             | ND<.005 | ND<.005 | ND<.005 | ND<.005 |
| TOLUENE:            | ND<.005                             | ND<.005 | ND<.005 | ND<.005 | ND<.005 |
| ETHYL BENZENE:      | ND<.005                             | ND<.005 | ND<.005 | ND<.005 | ND<.005 |
| XYLENES:            | ND<.005                             | ND<.005 | ND<.005 | ND<.005 | ND<.005 |



# Superior Precision Analytical, Inc.

825 Arnold Drive, Suite 114 • Martinez, California 94553 • (510) 229-1512 / fax (510) 229-1526

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

LABORATORY NO.: 84104  
CLIENT: Blaine Tech Services, Inc.  
CLIENT JOB NO.: 911010-C1

DATE RECEIVED: 10/10/91  
DATE REPORTED: 10/15/91

Page 3 of 4

| Lab Number | Customer Sample Identification | Date Sampled | Date Analyzed |
|------------|--------------------------------|--------------|---------------|
| 84104-21   | 21                             | 10/10/91     | 10/15/91      |

Laboratory Number: 84104  
21

### ANALYTE LIST                      Amounts/Quantitation Limits (mg/Kg)

|                     |         |
|---------------------|---------|
| OIL AND GREASE:     | NA      |
| TPH/GASOLINE RANGE: | ND<1    |
| TPH/DIESEL RANGE:   | NA      |
| BENZENE:            | ND<.005 |
| TOLUENE:            | ND<.005 |
| ETHYL BENZENE:      | ND<.005 |
| XYLENES:            | ND<.005 |





# Superior Precision Analytical, Inc.

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## CERTIFICATE OF ANALYSIS

### ANALYSIS FOR TOTAL PETROLEUM HYDROCARBONS

Page 4 of 4  
QA/QC INFORMATION  
SET: 84104

NA = ANALYSIS NOT REQUESTED  
ND = ANALYSIS NOT DETECTED ABOVE QUANTITATION LIMIT  
mg/Kg = part per million (ppm)

OIL AND GREASE ANALYSIS By Standard Methods Method 503E:  
Minimum Detection Limit in Soil: 50mg/Kg

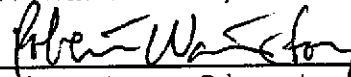
Modified EPA-SW846 Method 8015 for Extractable Hydrocarbons:  
Minimum Quantitation Limit for Diesel in Soil: 1mg/Kg  
Standard Reference: NA

EPA-SW846 Method 8015/5030 Total Purgable Petroleum Hydrocarbons:  
Minimum Quantitation Limit for Gasoline in Soil: 1mg/Kg  
Standard Reference: 10/04/91

SW-846 Method 8020/BTXE  
Minimum Quantitation Limit in Soil: 0.005mg/Kg  
Standard Reference: 10/11/91

| ANALYTE       | REFERENCE | SPIKE LEVEL | MS/MSD RECOVERY | RPD | CONTROL LIMIT |
|---------------|-----------|-------------|-----------------|-----|---------------|
| Oil & Grease  | NA        | NA          | NA              | NA  | NA            |
| Diesel        | NA        | NA          | NA              | NA  | NA            |
| Gasoline      | 10/04/91  | 200 ng      | 87/89           | 3   | 70-130        |
| Benzene       | 10/11/91  | 200 ng      | 93/92           | 1   | 70-130        |
| Toluene       | 10/11/91  | 200 ng      | 91/90           | 1   | 70-130        |
| Ethyl Benzene | 10/11/91  | 200 ng      | 93/91           | 2   | 70-130        |
| Total Xylene  | 10/11/91  | 200 ng      | 93/92           | 1   | 70-130        |

Richard Srna, Ph.D.

  
Laboratory Director



# Superior Precision Analytical, Inc.

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

LABORATORY NO.: 84123  
CLIENT: Blaine Tech Services, Inc.  
CLIENT JOB NO.: 911010-C1

DATE RECEIVED: 10/15/91  
DATE REPORTED: 10/17/91

### ANALYSIS FOR TCLP LEAD RCRA SW-846 Method 1311

| LAB # | Sample Identification | Concentration (mg/L)<br>Lead in Extract |
|-------|-----------------------|---|
| 1     | #1A-D                 | ND                                      |
| 2     | #2A-D                 | ND                                      |
| 3     | #3A-D                 | ND                                      |
| 4     | #4A-D                 | ND                                      |
| 5     | #5A-D                 | ND                                      |
| 6     | #6A-D                 | ND                                      |

mg/L - parts per million (ppm)

Method Detection Limit for Lead in Extract: 0.5 mg/L

QAQC Summary: MS/MSD Recovery : 117/104%  
Duplicate RPD : 4

Richard Srna, Ph.D.

  
Laboratory Manager



# Superior Precision Analytical, Inc.

825 Arnold Drive, Suite 114 • Martinez, California 94553 • (510) 229-1512 / fax (510) 229-1526

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

LABORATORY NO.: 84123  
CLIENT: Blaine Tech Services, Inc.  
CLIENT JOB NO.: 911010-C1

DATE RECEIVED: 10/15/91  
DATE REPORTED: 10/17/91

ANALYSIS FOR SOLUBLE LEAD  
by Calif. Admin. Code Title 22, Paragraph 66700

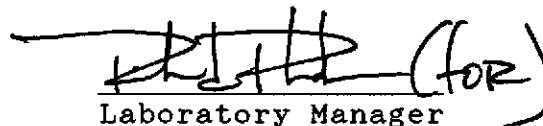
| LAB # | Sample Identification | Concentration (mg/L)<br>Lead in Extract |
|-------|-----------------------|---|
| 1     | #1A-D                 | 0.2                                     |
| 2     | #2A-D                 | 0.2                                     |
| 3     | #3A-D                 | 0.2                                     |
| 4     | #4A-D                 | 0.5                                     |
| 5     | #5A-D                 | 0.2                                     |
| 6     | #6A-D                 | 0.2                                     |

mg/L - parts per million (ppm)

Method Detection Limit for Lead in Extract: 0.1 mg/L

QAQC Summary: MS/MSD Recovery : 99/95%  
Duplicate RPD : 4

Richard Srna, Ph.D.

 (for)  
Laboratory Manager

Western Operations

1252 Quarry Lane  
Pleasanton, CA 94566  
(415) 426-2600  
Fax (415) 426-0106

**Clayton**  
ENVIRONMENTAL  
CONSULTANTS

October 17, 1991

Ms. Elaine Holland  
BLAINE TECH SERVICES, INC.  
1370 Tully Road, Suite 505  
San Jose, CA 95122

Client Ref. 93864/911010-C1  
Clayton Project No. 91101.31

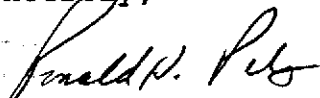
Dear Ms. Holland:

Attached is our analytical laboratory report for the samples received on October 15, 1991 from Superior Analytical Laboratory. A copy of the Chain-of-Custody form acknowledging receipt of these samples is attached.

Please note that any unused portion of the samples will be disposed of 30 days after the date of this report, unless you have requested otherwise.

We appreciate the opportunity to be of assistance to you. If you have any questions, please contact Maryann Gambino, Client Services Supervisor, at (510) 426-2657.

Sincerely,



Ronald H. Peters, CIH  
Director, Laboratory Services  
Western Operations

RHP/caa  
Attachments



Results of Analysis  
 for  
 Chevron U.S.A. Inc./Blaine Tech Services, Inc.

Client Reference: 93864/911010-C1  
 Clayton Project No. 91101.31

Sample Matrix/Media: SOIL Date Received: 10/15/91  
 Analysis Method: SW (7.1.2) Date Analyzed: 10/17/91

| Lab No. | Sample ID | Date Sampled | Ignitability (Degrees F) |
|---------|-----------|--------------|--------------------------|
| 01A     | #1A-D     | 10/10/91     | N.I.                     |
| 02A     | #2A-D     | 10/10/91     | N.I.                     |
| 03A     | #3A-D     | 10/10/91     | N.I.                     |
| 04A     | #4A-D     | 10/10/91     | N.I.                     |
| 05A     | #5A-D     | 10/10/91     | N.I.                     |
| 06A     | #6A-D     | 10/10/91     | N.I.                     |

Detection Limit: --

ND Not detected at or above limit of detection  
 < Not detected at or above limit of detection  
 -- Information not available or not applicable

N. I. = Not Ignitable

Results of Analysis  
 for  
 Chevron U.S.A. Inc./Blaine Tech Services, Inc.

Client Reference: 93864/911010-C1  
 Clayton Project No. 91101.31

Sample Matrix/Media: SOIL  
 Analysis Method: EPA 9045

Date Received: 10/15/91  
 Date Analyzed: 10/15/91

| Lab No. | Sample ID | Date Sampled | pH (S.U.) |
|---------|-----------|--------------|-----------|
| 01A     | #1A-D     | 10/10/91     | 7.7       |
| 02A     | #2A-D     | 10/10/91     | 7.7       |
| 03A     | #3A-D     | 10/10/91     | 7.7       |
| 04A     | #4A-D     | 10/10/91     | 7.9       |
| 05A     | #5A-D     | 10/10/91     | 7.7       |
| 06A     | #6A-D     | 10/10/91     | 7.5       |

Detection Limit: --

ND Not detected at or above limit of detection  
 < Not detected at or above limit of detection  
 -- Information not available or not applicable





Quality Assurance Results Summary  
for  
Clayton Project No. 91101.31

Clayton Lab Number: 9110131-06A  
Ext./Prep. Method: EPA7.3.4.2  
Date: 10/15/91  
Analyst: MCN  
Std. Source: KODAK #AOA

Analytical Method: EPA7.3.4.2  
Instrument ID: 00008  
Date: 10/16/91  
Analyst: HYW  
Sample Matrix/Media: SOIL  
Units: MG/KG

| Analyte          | Sample Result | Spike Level | Matrix Spike Result | MS Recovery (%) | Matrix Spike Duplicate Result | MSD Recovery (%) | Average Recovery (% R) | LCL (% R) | UCL (% R) | RPD (%) | UCL (%RPD) |
|------------------|---------------|-------------|---------------------|-----------------|-------------------------------|------------------|------------------------|-----------|-----------|---------|------------|
| REACTIVE SULFIDE | ND            | 470         | 415                 | 88              | 404                           | 86               | 87                     | 75        | 125       | 2.5     | 20         |

LCS = Laboratory Control Sample  
ND = Not detected at or above limit of detection

LCL = Lower Control Limit

UCL = Upper Control Limit  
SOR = Spike out of range due to high sample concentration.

Quality Assurance Results Summary  
for  
Clayton Project No. 91101.31

Clayton Lab Number: 9110131-01A  
Ext./Prep. Method: EPA7\_3\_3\_2  
Date: 10/15/91  
Analyst: MCN  
Std. Source: MALL 688 KAA

Analytical Method: EPA7\_3\_3\_2  
Instrument ID: 07487  
Date: 10/17/91  
Analyst: MCN  
Sample Matrix/Media: SOIL  
Units: mg/Kg

| Analyte          | Sample Result | Spike Level | Matrix Spike Result | MS Recovery (%) | Matrix Spike Duplicate Result | MSD Recovery (%) | Average Recovery (% R) | LCL (% R) | UCL (% R) | RPD (%) | UCL (%RPD) |
|------------------|---------------|-------------|---------------------|-----------------|-------------------------------|------------------|------------------------|-----------|-----------|---------|------------|
| REACTIVE CYANIDE | ND            | 100         | 96.9                | 97              | 97.8                          | 98               | 97                     | 75        | 125       | 0.9     | 20         |

LCS = Laboratory Control Sample  
ND = Not detected at or above limit of detection

LCL = Lower Control Limit

UCL = Upper Control Limit  
SOR = Spike out of range due to high sample concentration.

# SAMPLING LOCATIONS AND ANALYTICAL RESULTS

NOTE: Analytical results are reported in  
Parts Per Million or Parts Per Billion

| SAMPLE MATRIX | DATE SAMPLED | BTS CHAIN OF CUSTODY I.D. | BTS SAMPLE I.D. | NAME OF DOES HMTL LABORATORY | LABORATORY SAMPLE I.D. | -----PPM----- |          |          |                |          |
|---------------|--------------|---------------------------|-----------------|------------------------------|------------------------|---------------|----------|----------|----------------|----------|
|               |              |                           |                 |                              |                        | TPH AS GAS    | BEN-ZENE | TOL-UENE | ETHYL BEN-ZENE | XY-LENES |
| SOIL          | 09/18/91     | 910918-C-1                | #6              | SUPERIOR                     | 83940-6                | 190           | 0.33     | 0.38     | 0.81           | 1.8      |
| SOIL          | 09/18/91     | 910918-C-1                | #7              | SUPERIOR                     | 83940-7                | ND            | ND       | ND       | ND             | ND       |
| SOIL          | 09/18/91     | 910918-C-1                | #1              | SUPERIOR                     | 83940-1                | ND            | ND       | ND       | ND             | ND       |
| SOIL          | 09/18/91     | 910918-C-1                | #5              | SUPERIOR                     | 83940-5                | 64            | 0.040    | 0.040    | 0.13           | 0.32     |
| SOIL          | 09/18/91     | 910918-C-1                | #9              | SUPERIOR                     | 83940-9                | ND            | ND       | ND       | ND             | 0.007    |
| SOIL          | 09/18/91     | 910918-C-1                | #2              | SUPERIOR                     | 83940-2                | 1300          | ND       | 2.3      | 2.8            | 7.6      |
| SOIL          | 09/18/91     | 910918-C-1                | #4              | SUPERIOR                     | 83940-4                | 160 @         | ND       | ND       | 1.6            | 3.2      |
| SOIL          | 09/18/91     | 910918-C-1                | #8              | SUPERIOR                     | 83940-8                | ND            | ND       | ND       | ND             | ND       |
| SOIL          | 09/18/91     | 910918-C-1                | #3              | SUPERIOR                     | 83940-3                | 46 @          | 0.10     | 0.070    | 0.21           | 0.18     |
| SOIL          | 09/26/91     | 910926-C-1                | #1              | SUPERIOR                     | 84002-1                | 580           | ND       | 1.4      | 1.5            | 3.9      |
| SOIL          | 09/26/91     | 910926-C-1                | #3              | SUPERIOR                     | 84002-3                | 71            | 0.069    | 0.12     | 0.22           | 0.57     |
| SOIL          | 09/26/91     | 910926-C-1                | #4              | SUPERIOR                     | 84002-4                | 980           | ND       | 2.7      | 2.5            | 5.5      |
| SOIL          | 09/26/91     | 910926-C-1                | #5              | SUPERIOR                     | 84002-5                | 330           | ND       | 0.81     | 1.0            | 2.7      |
| SOIL          | 09/26/91     | 910926-C-1                | #6              | SUPERIOR                     | 84002-6                | 460           | ND       | 0.92     | 1.3            | 3.0      |
| NE            |              |                           |                 |                              |                        |               |          |          |                |          |
| SOIL          | 09/18/91     | 910918-C-1                | #10             | SUPERIOR                     | 83940-10               | ND            | ND       | ND       | ND             | ND       |
| SOIL          | 09/18/91     | 910918-C-1                | #11             | SUPERIOR                     | 83940-11               | ND            | 0.008    | 0.009    | ND             | 0.010    |
| SOIL          | 09/18/91     | 910918-C-1                | #12             | SUPERIOR                     | 83940-12               | ND            | ND       | ND       | ND             | ND       |
| SOIL          | 09/18/91     | 910918-C-1                | #13             | SUPERIOR                     | 83940-13               | 53            | 0.90     | 3.5      | 1.2            | 6.9      |
| SOIL          | 09/26/91     | 910926-C-1                | #2              | SUPERIOR                     | 84002-2                | 2.0           | 0.069    | 0.092    | 0.022          | 0.18     |

ed. Heavy hydrocarbons present in chromatogram.

established (professional or regulatory) definitions for the type of sample being collected.  
interface sample.

ancy inspector chose a sampling location that was different from a standard (pre-defined) location.

taken to comply with regulatory requirements, but to obtain information. Sampling locations  
arty owner, the contractor, a consultant, etc. The samples may or may not be analyzed.

# SAMPLING LOCATIONS AND ANALYTICAL RESULTS

NOTE: Analytical results are reported in  
Parts Per Million or Parts Per Billion

| DATE SAMPLED | BTS CHAIN OF CUSTODY I.D. | BTS SAMPLE I.D. | NAME OF DOES HMTL LABORATORY | LABORATORY SAMPLE I.D. | PPM        |          |          |                |          | TCLP LEAD * | SOLUBLE LEAD * |
|--------------|---------------------------|-----------------|------------------------------|------------------------|------------|----------|----------|----------------|----------|-------------|----------------|
|              |                           |                 |                              |                        | TPH AS GAS | BEN-ZENE | TOL-UENE | ETHYL BEN-ZENE | XY-LENES |             |                |
| 09/18/91     | 910918-C-1                | #17A-D          | SUPERIOR                     | 83940-17               | 65 @       | ND       | ND       | 0.58           | 2.6      | ---         | ---            |
| 09/18/91     | 910918-C-1                | #18A-D          | SUPERIOR                     | 83940-18               | 120        | 0.030    | 0.046    | 0.71           | 2.4      | ---         | ---            |
| 09/18/91     | 910918-C-1                | #19A-D          | SUPERIOR                     | 83940-19               | 6.0        | 0.008    | 0.097    | 0.050          | 0.68     | ---         | ---            |
| 09/18/91     | 910918-C-1                | #20A-D          | SUPERIOR                     | 83940-20               | ND         | ND       | 0.006    | ND             | 0.034    | ---         | ---            |
| 09/18/91     | 910918-C-1                | #21A-D          | SUPERIOR                     | 83940-21               | 3.0        | 0.006    | 0.024    | 0.020          | 0.26     | ---         | ---            |
| 09/18/91     | 910918-C-1                | #22A-D          | SUPERIOR                     | 83940-22               | 3.0        | ND       | 0.015    | 0.011          | 0.33     | ---         | ---            |
| 09/26/91     | 910926-C-1                | #7A-D           | SUPERIOR                     | 84002-7                | 540        | ND       | 1.1      | 1.6            | 3.8      | ---         | ---            |
| 09/26/91     | 910926-C-1                | #8A-D           | SUPERIOR                     | 84002-8                | 210        | ND       | 0.27     | 0.56           | 1.4      | ---         | ---            |
| 09/26/91     | 910926-C-1                | #9A-D           | SUPERIOR                     | 84002-9                | 170        | ND       | 0.54     | 0.64           | 1.5      | ---         | ---            |
| 09/26/91     | 910926-C-1                | #10A-D          | SUPERIOR                     | 84002-10               | 74         | ND       | 0.16     | 0.24           | 0.54     | ---         | ---            |
| 09/26/91     | 910926-C-1                | #11A-D          | SUPERIOR                     | 84002-11               | 320        | ND       | 0.84     | 0.96           | 2.6      | ---         | ---            |
| 09/26/91     | 910926-C-1                | #12A-D          | SUPERIOR                     | 84002-12               | 200        | ND       | 0.55     | 0.69           | 1.6      | ---         | ---            |
| 10/10/91     | 911010-C-1                | #1A-D           | SUPERIOR                     | 84104-1                | 100        | ND       | 0.19     | 0.26           | 0.70     | ND          | 0.2            |
| 10/10/91     | 911010-C-1                | #2A-D           | SUPERIOR                     | 84104-2                | 67         | ND       | 0.12     | 0.22           | 0.57     | ND          | 0.2            |
| 10/10/91     | 911010-C-1                | #3A-D           | SUPERIOR                     | 84104-3                | 140        | ND       | 0.16     | 0.32           | 0.93     | ND          | 0.2            |
| 10/10/91     | 911010-C-1                | #4A-D           | SUPERIOR                     | 84104-4                | 30         | ND       | 0.061    | 0.10           | 0.29     | ND          | 0.5            |
| 10/10/91     | 911010-C-1                | #5A-D           | SUPERIOR                     | 84104-5                | 75         | ND       | 0.14     | 0.22           | 0.57     | ND          | 0.2            |
| 10/10/91     | 911010-C-1                | #6A-D           | SUPERIOR                     | 84104-6                | 72         | ND       | 0.085    | 0.17           | 0.48     | ND          | 0.2            |
| 10/10/91     | 911010-C-1                | #7              | SUPERIOR                     | 84104-7                | ND         | ND       | ND       | ND             | ND       | ---         | ---            |
| 10/10/91     | 911010-C-1                | #8              | SUPERIOR                     | 84104-8                | ND         | ND       | ND       | ND             | ND       | ---         | ---            |
| 10/10/91     | 911010-C-1                | #9              | SUPERIOR                     | 84104-9                | ND         | ND       | ND       | ND             | ND       | ---         | ---            |
| 10/10/91     | 911010-C-1                | #10             | SUPERIOR                     | 84104-10               | ND         | ND       | ND       | ND             | ND       | ---         | ---            |
| 10/10/91     | 911010-C-1                | #11             | SUPERIOR                     | 84104-11               | ND         | ND       | ND       | ND             | ND       | ---         | ---            |
| 10/10/91     | 911010-C-1                | #12             | SUPERIOR                     | 84104-12               | ND         | ND       | ND       | ND             | ND       | ---         | ---            |
| 10/10/91     | 911010-C-1                | #13             | SUPERIOR                     | 84104-13               | ND         | ND       | ND       | ND             | ND       | ---         | ---            |
| 10/10/91     | 911010-C-1                | #14             | SUPERIOR                     | 84104-14               | ND         | ND       | ND       | ND             | ND       | ---         | ---            |
| 10/10/91     | 911010-C-1                | #15             | SUPERIOR                     | 84104-15               | ND         | ND       | ND       | ND             | ND       | ---         | ---            |
| 10/10/91     | 911010-C-1                | #16             | SUPERIOR                     | 84104-16               | ND         | ND       | ND       | ND             | ND       | ---         | ---            |
| 10/10/91     | 911010-C-1                | #17             | SUPERIOR                     | 84104-17               | ND         | ND       | ND       | ND             | ND       | ---         | ---            |
| 10/10/91     | 911010-C-1                | #18             | SUPERIOR                     | 84104-18               | ND         | ND       | ND       | ND             | ND       | ---         | ---            |
| 10/10/91     | 911010-C-1                | #19             | SUPERIOR                     | 84104-19               | ND         | ND       | ND       | ND             | ND       | ---         | ---            |
| 10/10/91     | 911010-C-1                | #20             | SUPERIOR                     | 84104-20               | ND         | ND       | ND       | ND             | ND       | ---         | ---            |
| 10/10/91     | 911010-C-1                | #21             | SUPERIOR                     | 84104-21               | ND         | ND       | ND       | ND             | ND       | ---         | ---            |

| DATE SAMPLED | BTS CHAIN OF CUSTODY I.D. | BTS SAMPLE I.D. | NAME OF DOES HMTL LABORATORY | LABORATORY SAMPLE I.D. | REACTIVITY--PPM-- |         | CORROSIVITY PH | IGNITABILITY FLASH POINT |
|--------------|---------------------------|-----------------|------------------------------|------------------------|-------------------|---------|----------------|--------------------------|
|              |                           |                 |                              |                        | CYANIDE           | SULFIDE |                |                          |
| 10/10/91     | 911010-C-1                | #1A-D           | CLAYTON                      | 01A                    | <0.3              | <10     | 7.7            | N.I.                     |
| 10/10/91     | 911010-C-1                | #2A-D           | CLAYTON                      | 02A                    | <0.3              | <10     | 7.7            | N.I.                     |
| 10/10/91     | 911010-C-1                | #3A-D           | CLAYTON                      | 03A                    | <0.3              | <10     | 7.7            | N.I.                     |
| 10/10/91     | 911010-C-1                | #4A-D           | CLAYTON                      | 04A                    | <0.3              | <10     | 7.9            | N.I.                     |
| 10/10/91     | 911010-C-1                | #5A-D           | CLAYTON                      | 05A                    | <0.3              | <10     | 7.7            | N.I.                     |
| 10/10/91     | 911010-C-1                | #6A-D           | CLAYTON                      | 06A                    | <0.3              | <10     | 7.5            | N.I.                     |

heavy hydrocarbons present in chromatogram.

\* for TCLP Lead and Soluble Lead for samples #1A-D through #6A-D are 84123-1 through 84123-6.

## SAMPLING LOCATIONS AND ANALYTICAL RESULTS

NOTE: Analytical results are reported in  
Parts Per Million or Parts Per Billion

| SAMPLE MATRIX | DATE SAMPLED | BTS CHAIN OF CUSTODY I.D. | BTS SAMPLE I.D. | NAME OF DOHS HMTL LABORATORY | LABORATORY SAMPLE I.D. | PPM        |          |          |                |          |              |
|---------------|--------------|---------------------------|-----------------|------------------------------|------------------------|------------|----------|----------|----------------|----------|--------------|
|               |              |                           |                 |                              |                        | TPH AS GAS | BEN-ZENE | TOL-UENE | ETHYL BEN-ZENE | XY-LENES | SOLUBLE LEAD |
| SOIL          | 09/18/91     | 910918-C-1                | #15             | SUPERIOR                     | 83940-15               | ND         | ND       | ND       | ND             | ND       | --           |
| SOIL          | 09/18/91     | 910918-C-1                | #14             | SUPERIOR                     | 83940-14               | ND         | ND       | ND       | ND             | ND       | --           |
| SOIL          | 09/18/91     | 910918-C-1                | #16A-D          | SUPERIOR                     | 83940-16               | ND         | ND       | ND       | ND             | 0.006    | 0.6          |

| SAMPLE MATRIX | DATE SAMPLED | BTS CHAIN OF CUSTODY I.D. | BTS SAMPLE I.D. | NAME OF DOHS HMTL LABORATORY | LABORATORY SAMPLE I.D. | PPM           |                    | EPA 8010 COMPOUNDS |
|---------------|--------------|---------------------------|-----------------|------------------------------|------------------------|---------------|--------------------|--------------------|
|               |              |                           |                 |                              |                        | TPH-HB DIESEL | TOTAL OIL & GREASE |                    |
| SOIL          | 09/18/91     | 910918-C-1                | #15             | SUPERIOR                     | 83940-15               | ND            | ND                 | ND                 |
| SOIL          | 09/18/91     | 910918-C-1                | #14             | SUPERIOR                     | 83940-14               | ND            | ND                 | ND                 |
| SOIL          | 09/18/91     | 910918-C-1                | #16A-D          | SUPERIOR                     | 83940-16               | 78 *          | ND                 | ND                 |

| SAMPLE MATRIX | DATE SAMPLED | BTS CHAIN OF CUSTODY I.D. | BTS SAMPLE I.D. | NAME OF DOHS HMTL LABORATORY | LABORATORY SAMPLE I.D. | PPM    |         |          |      |        |
|---------------|--------------|---------------------------|-----------------|------------------------------|------------------------|--------|---------|----------|------|--------|
|               |              |                           |                 |                              |                        | BARIUM | CADMIUM | CHROMIUM | LEAD | SILVER |
| SOIL          | 09/18/91     | 910918-C-1                | #16A-D          | SUPERIOR                     | 83940-16               | 0.8    | ND      | ND       | ND   | ND     |

| SAMPLE MATRIX | DATE SAMPLED | BTS CHAIN OF CUSTODY I.D. | BTS SAMPLE I.D. | NAME OF DOHS HMTL LABORATORY | LABORATORY SAMPLE I.D. | PPM     |         |          |
|---------------|--------------|---------------------------|-----------------|------------------------------|------------------------|---------|---------|----------|
|               |              |                           |                 |                              |                        | ARSENIC | MERCURY | SELENIUM |
| SOIL          | 09/18/91     | 910918-C-1                | #16A-D          | CLAYTON                      | 9110108-02             | <0.1    | <0.1    | <0.1     |

| SAMPLE MATRIX | DATE SAMPLED | BTS CHAIN OF CUSTODY I.D. | BTS SAMPLE I.D. | NAME OF DOHS HMTL LABORATORY | LABORATORY SAMPLE I.D. | REACTIVITY | PPM     | CORROSIVITY | IGNITABILITY |
|---------------|--------------|---------------------------|-----------------|------------------------------|------------------------|------------|---------|-------------|--------------|
|               |              |                           |                 |                              |                        | CYANIDE    | SULFIDE | PH          | FLASH POINT  |
| SOIL          | 09/18/91     | 910918-C-1                | #16A-D          | CLAYTON                      | 9110108-01             | <0.3       | <10     | 8.3         | N.I.         |

1. Heavy hydrocarbons present in chromatogram.