

ALAMEDA COUNTY  
HEALTH CARE SERVICES

AGENCY  
DAVID J. KEARS, Agency Director



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

R0228

June 18, 1999  
StID #3737

Ms. Karen Petryna  
Equiva Services LLC  
P.O. Box 6249  
Carson, CA 90749

**Re: Work Plan for Additional Information for Shell Station, 630 High St., Oakland, 94601**

Dear Ms. Petryna:

Our office has received and reviewed the June 15, 1999 letter work plan from Cambria, which responds to my May 13, 1999 letter. As you are aware, my letter was in response to your request to recommend closure for this site as a "low risk" type. The work plan proposes to perform a revised RBCA and sample all wells in the third quarter for oxygenates using EPA Method 8260. A conduit and sensitive receptor survey may also be performed based upon the results of the sampling.

This work plan is approved. Please include an evaluation of MTBE concentrations and provide a recommendation for obtaining site closure, particularly in the presence of MTBE.

You may contact me at (510) 567-6765 if you have any questions.

Sincerely,

Barney M. Chan  
Hazardous Materials Specialist

C: B. Chan, files

Mr. D. Ataide, Cambria Environmental, 1144 65<sup>th</sup> St., Suite B, Oakland CA 94608

Wpap630High

ALAMEDA COUNTY  
HEALTH CARE SERVICES

AGENCY

DAVID J. KEARS, Agency Director



R0228

May 13, 1999  
StID # 3737

Ms. Karen Petryna  
Equiva Services LLC  
P.O. Box 6249  
Carson CA 90749

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

**Re: Shell-branded Service Station, 630 High St., Oakland CA 94601**

Dear Ms. Petryna:

This letter responds to the recent recommendation from your consultant, Cambria Environmental Technology, (Cambria), to propose closure of the above site as a low-risk groundwater site. I have reviewed the site history and evaluated it against the current guidelines. I have identified two items that need further attention, one of which is minor and other which is not.

The first item involves the January 30, 1995 RBCA evaluation performed by Weiss Associates. It will be necessary to update this RBCA. This would include using the most recent groundwater concentrations as more representative of current conditions. In addition, the risk based screening level (RBSL) using the updated Look-Up Table should reflect the California slope factor for benzene, 0.1. These items should not affect the conclusions of the initial RBCA in respect to the benzene concentration.

The second item involves the requirements for characterizing the compound, MTBE. Recent Water Board recommendations for MTBE have added additional requirements for the closure of MTBE impacted sites. The **May 15, 1998 Guidance on Analytical Methods for Oxygenates and Additives at Gasoline UST Sites** suggests the analysis of MTBE by EPA Methods 8020 or 8260 based upon the concentration of TPH in groundwater and the stage of the investigation. Using this guideline, the ether oxygenates (including MTBE) should be analyzed in groundwater using EPA Method 8260 in the pre-closure stage such is the case here. In addition, I noticed that some of the wells at the site have never been analyzed for MTBE and none of the wells have ever been analyzed for MTBE using EPA Method 8260. Therefore, you should provide justification for not running MTBE on a specific well and confirm the presence of MTBE by EPA Method 8260 on the others. Another guidance document is the **MtBE Road Map to Compliance**, presented at the SWRCB, 1998 UST Conference on April 7-9, 1998. This document provides a risk-based approach in handling these sites. This risk-based approach requires the response to the following questions in regards to MTBE:

- Has the site been adequately characterized ?
- Has the source been removed?
- Has free product been removed to the extent practicable?
- Do you have a stable plume?
- Are there any current or future public health or ecological threats?
- Is there any current or future water resource threat?
- Is a risk management plan in place?

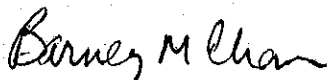
Ms. Karen Petryna  
StID # 3737  
630 High St., Oakland CA 94601  
May 13, 1999  
Page 2.

In determining whether the site is adequately characterized, you should perform a conduit study and a sensitive receptor study. Some of this information may be extracted from the previous RBCA performed by Weiss.

Please address the above items in a revised RBCA and an evaluation of the MTBE requirements for the above site. A work plan should be submitted to perform additional chemical or subsurface analysis. Please submit your work plan **within 30 days of this letter or by June 15, 1999.**

You may contact me at (510) 567-6765 if you have any questions.

Sincerely,



Barney M. Chan  
Hazardous Materials Specialist

C: B. Chan, files  
Mr. Darryk Ataide, Cambria Environmental Technology, 1144 65<sup>th</sup> St., Suite B, Oakland  
CA, 94608

Clrq630HighSt

ALAMEDA COUNTY  
HEALTH CARE SERVICES

AGENCY

DAVID J. KEARS, Agency Director



20228

May 6, 1999

STID 3737

Ms. Karen Petryna  
Equiva Services LLC  
P.O. Box 6249  
Carson, CA 90749-6249

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

RE: Shell-branded Service Station, 630 High St., Oakland CA 94601

LANDOWNER NOTIFICATION AND PARTICIPATION REQUIREMENTS

Dear Ms. Petryna:

This letter is to inform you of new legislative requirements pertaining to cleanup and closure of sites where an unauthorized release of hazardous substance, including petroleum, has occurred from an underground storage tank (UST). Section 25297.15(a) of Ch. 6.7 of the Health & Safety Code requires the primary or active responsible party to notify all current record owners of fee title to the site of: 1) a site cleanup proposal, 2) a site closure proposal, 3) a local agency intention to make a determination that no further action is required, and 4) a local agency intention to issue a closure letter. Section 25297.15(b) requires the local agency to take all reasonable steps to accommodate responsible landowners' participation in the cleanup or site closure process and to consider their input and recommendations.

Please comply with these requirements so our office may proceed in evaluating your proposal for site closure.

For purposes of implementing these sections, you have been identified as the primary or active responsible party. Please provide to this agency, within twenty (20) calendar days of receipt of this notice, a complete mailing list of all current record owners of fee title to the site. You may use the enclosed "list of landowners" form (sample letter 2) as a template to comply with this requirement. If the list of current record owners of fee title to the site changes, you must notify the local agency of the change within 20 calendar days from when you are notified of the change.

If you are the sole landowner, please indicate that on the landowner list form. The following notice requirements do not apply to responsible parties who are the sole landowner for the site.

LANDOWNER NOTIFICATION

Re: 630 High St., Oakland CA 94601

May 6, 1999

Page 2 of 2

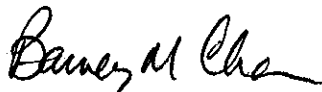
In accordance with Section 25297.15(a) of Ch. 6.7 of the Health & Safety Code, you must certify to the local agency that all current record owners of fee title to the site have been informed of the proposed action before the local agency may do any of the following:

- 1) consider a cleanup proposal (corrective action plan)
- 2) consider a site closure proposal
- 3) make a determination that no further action is required
- 4) issue a closure letter

You may use the enclosed "notice of proposed action" form (sample letter 3) as a template to comply with this requirement. Before approving a cleanup proposal or site closure proposal, determining that no further action is required, or issuing a closure letter, the local agency will take all reasonable steps necessary to accommodate responsible landowner participation in the cleanup and site closure process and will consider all input and recommendations from any responsible landowner.

Please call me at (510) 567-6765 should you have any questions about the content of this letter.

Sincerely,



Barney M. Chan  
Hazardous Materials Specialist

Attachments

cc: Chuck Headlee, RWQCB

ALAMEDA COUNTY  
HEALTH CARE SERVICES

AGENCY

DAVID J. KEARS, Agency Director



RO# 228

December 16, 1996  
StID # 3737

Mr. Jeff Granberry  
Shell Oil Company  
P.O. Box 4023  
Concord CA 94524

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

**Re: Groundwater Monitoring at 630 High St., Oakland CA 94601**

Dear Mr. Granberry:

Our office last wrote to Mr. Dan Kirk in my February 17, 1995 letter where our office concurred with the January 30, 1995 Tier 1 Risk Assessment for the above site as prepared by Weiss Associates. This letter requested a proposal for groundwater monitoring and contingency program consistent with the Non-Attainment policy and site closure. After discussion with Mr. Tom Fogut, Weiss Associates prepared the May 1, 1995 the **Proposed Future Action Plan and Request to Establish a Non-Attainment Zone**. In this report, a modified sampling schedule was proposed for bi-annual monitoring of wells MW-1, MW-5, MW-6 and MW-7. Table D-1 within this report contained the contingency plan for this site. Trigger concentrations (that which would indicate an increasing plume) were set for the guard well, MW-1, and the boundary wells, MW-5, MW-6 and MW-7. The first action, should the trigger concentrations be exceeded, would be to revert back to quarterly monitoring. However, should this monitoring confirm a stabilized or decreasing plume, site closure would be requested in 1998.

Although our office did not give formal written approval of this schedule, the schedule is reasonable and you may proceed with the proposed monitoring. Please inform our office if you have commenced on the proposed monitoring schedule. It would appear not, since we do not have any monitoring reports for 1996. Please initiate bi-annual monitoring immediately.

You may contact me at (510) 567-6765 if you have any questions.

Sincerely,

Barney M. Chan  
Hazardous Materials Specialist

c: Mr. S. Long, Weiss Associates, 5500 Shellmound St., Emeryville  
CA 94608-2411

B. Chan, files      bian630

ALAMEDA COUNTY  
HEALTH CARE SERVICES  
AGENCY

DAVID J. KEARS, Agency Director



R0228

RAFAT A. SHAHID, ASST. AGENCY DIRECTOR

DEPARTMENT OF ENVIRONMENTAL HEALTH  
State Water Resources Control Board  
Division of Clean Water Programs  
UST Local Oversight Program  
80 Swan Way, Rm 200  
Oakland, CA 94621  
(510) 271-4530

September 16, 1992  
STID# 3737

Shell Oil Co.  
ATTN: Dan Kirk  
P.O. Box 4023  
Concord, CA 94524

Re: 630 High St., Oakland, CA 94601

Dear Dan Kirk:

This office has received and reviewed the Request for Closure dated December 31, 1991 by Converse Environmental West. Several previous quarterly reports for the above site have also been reviewed. The request for closure is **denied**. The following are comments concerning this site:

1. There is a great deal of evidence that contamination on the site is from the former underground storage tanks. Sampling of wells MW-1, MW-3, MW-4, and MW-5 since 5/25/89 has shown high levels of TPHg, TPHd, and benzene which has not been declining. In some cases it has actually increased. The levels of these contaminants are about 2 orders of magnitude above any level which might be considered for closure.
2. The consultant says that they are 70% complete on the groundwater characterization task. This is not a situation suitable for closure.
3. The last reported analysis is for 10/21/91, almost 11 months ago. This office has not received a quarterly report or any update since then. Quarterly monitoring should be re-started as soon as possible.
4. There should soon be a proposal for implementation of a remediation system for this site. If you have any questions concerning this matter please contact this office.

Sincerely,

Thomas F. Peacock, Supervising HMS  
Hazardous Material Division

cc: Lester Feldman, RWQCB  
Edgar Howell, Chief - Files

ALAMEDA COUNTY  
HEALTH CARE SERVICES  
AGENCY

DAVID J. KEARS, Agency Director



R0228

RAFAT A. SHAHID, ASST. AGENCY DIRECTOR

DEPARTMENT OF ENVIRONMENTAL HEALTH

ALAMEDA COUNTY CC4580  
DEPT. OF ENVIRONMENTAL HEALTH  
ENVIRONMENTAL PROTECTION DIV.  
1131 HARBOR BAY PKWY., #250  
ALAMEDA CA 94502-6577

February 17, 1995  
StID # 3737

Mr. Dan Kirk  
Shell Oil Company  
P.O. Box 4023  
Concord CA 94524

**Re: Comment on January 30, 1995 Tier 1 Risk Based Assessment for  
Shell Service Station, 630 High St., Oakland CA 94601**

Dear Mr. Kirk:

Our office has received and reviewed the Risk Based Assessment for the above site as provided by your consultants, Weiss Associates. Recall, this assessment used the ASTM standard guide, ES 38. Our office concurs with this assessment ie the current levels of soil and groundwater at this site do not pose a threat to human health based on the current site usage. Should there be a change of site useage, you are required to re-evaluate your risk assessment.

In regards to the future actions for this site, our office also concurs with the Non-Attainment Area approach for this site. Your next action should be the proposal of a monitoring plan which is agreeable with our office for site closure and consistent with the NAA policy. Until such time, quarterly monitoring reports should be submitted and wells monitoring according to the existing schedule.

You may contact me at (510) 567-6765 should you have any questions.

Sincerely,

A handwritten signature in cursive script that reads "Barney M. Chan".

Barney M. Chan  
Hazardous Materials Specialist

cc: Ms. A. Watts, Weiss Associates, 5500 Shellmound St.,  
Emeryville, CA 94608-2411

E. Howell, files  
RBCA630



ALAMEDA COUNTY  
HEALTH CARE SERVICES

AGENCY

DAVID J. KEARS, Agency Director



R0228

RAFAT A. SHAHID, Assistant Agency Director

December 16, 1994  
STID # 3737

DEPARTMENT OF ENVIRONMENTAL HEALTH  
Hazardous Materials Division  
80 Swan Way, Rm. 200  
Oakland, CA 94621  
(510) 271-4320

Ms. Karen Clark  
Environmental Analyst  
Shell Oil Company  
P.O. Box 4023  
Concord, California 94524

Re: **FIVE YEAR UNDERGROUND TANK PERMIT AT HIGH STREET SHELL,  
630 HIGH STREET, OAKLAND, CA 94601**

Dear Ms. Clark:

Please find enclosed a **five year underground storage tank permit certificate**. This permit is being issued for the site noted above, contingent upon the facility's compliance with all applicable underground tank monitoring requirements. These conditions are described in the revised Title 23, California Code of Regulations (C.C.R.) which became effective May 5, 1994. In order to maintain a valid permit, any deficiencies noted on the final underground tank inspection report or subsequent inspections, must be corrected. Below is a summary of your monitoring requirements and options for your facility:

**1. Sections 2645 and 2646 - Inventory Reconciliation**

- a) Record the daily variation by inventory reconciliation. This is the difference between the measured inventory in the tank and the calculated inventory. The calculated inventory shall be determined by adding the fuel inputs from deliveries and subtracting the day's sales withdraws. The deliveries are added to the gallons measured at the end of the previous day. **The number of gallons sold is calculated from the pump meter, and subtracted from the physically measured inventory of the day before.**

Meters or gauges used to measure in the tank inventory must be approved by this office. Commercial gauges and measuring devices should meet the standards in Title 4, Chapter 9, of the California Code of Regulations (C.C.R.) and be inspected by the County Department of Weights and Measures.

**At facilities where the highest anticipated groundwater may rise to less than 20 feet below the bottom of the tank Statistical Inventory Reconciliation (SIR-method) is required. This method**

Page 2 of 5  
Ms. Clark  
December 16, 1994

requires the daily inventory reconciliation data to be evaluated by a third party certified statistical analyst.

For manual inventory reconciliation your daily variations shall be summed for a period of one month. If monthly variations exceed one (1%) per cent of the monthly tank deliveries plus 130 gallons, a leak may be suspected. You must notify this office and investigate as to the cause of excess variations within 24 hours.

- b) Submit an annual statement to this office which states that all inventory reconciliation data are within allowable limits or list the times and corresponding variations when allowable limits were exceeded. This statement shall be executed under penalty of perjury.
- c) Weekly tank gauging is allowable for small tanks with a total system capacity of 2000 gallons or less and can be taken out of service for at least 48 to 72 continuous hours each week. Proper measurements of the tank volume must be taken at the beginning and end of the gauging period. No product shall be added to the tank for a 12 hour period preceding the gauging period. The variation between the beginning and ending measurements shall not exceed the weekly or monthly standards set forth in table 4.1 of Title 23 C.C.R..

## 2. Section 2643 - Non-visual Monitoring

- a) Monitoring of pressurize piping shall be conducted at least hourly, and shall be capable of alerting the operator when a leak occurs or a leak rate calculated at three gallons per hour at 10 p.s.i. exists; **and**

Annual piping system integrity testing shall be conducted which is capable of detecting a minimum release of 0.1 gallon per hour at one and a one half times (1.5) normal operating pressure.

- b) Annual tank volumetric integrity testing shall be conducted which is capable of detecting a release of 0.1 gallon per hour at or above the maximum product level of the tank. **Or**
- c) Conduct one of the following monthly automatic tank gauging

Page 3 of 5  
Ms. Clark  
December 16, 1994

procedures:

- 1) Once per calendar month after the tank filled to within 10% of the highest operating level with the capability of detecting a release of 0.2 gallon per hour.
- 2) Automatic tank gauge plus manual inventory reconciliation. Provided the gauge is capable of detecting a release of 0.1 gallon per hour during testing and product level in the tank is at least 3 feet.

Tank gauging equipment must have a 95% probability of detection and not more than a 5% probability of false alarm. In addition, it shall generate a hard copy of all data reported, including time and date; tank identification; fuel depth; water depth; temperature; liquid volume; the time automatic tank gauging is performed and duration of test; the calculated leak rate; leak threshold and hourly temperature corrected volume data during the automatic tank test.

Automatic Liquid Level gauging devices must be approved by the State Water Resources Control Board. All certified integrity testing procedures and monitoring equipment are listed in the Board's guidance letter LG-113.

### **3. Section 2663 - Overfill Prevention**

- a) Onsite personnel or the operator's agent must ensure that the volume of product or waste oil to be transferred into the tank does not exceed the remaining tank capacity before the transfer is made. Also the transfer process must be watched to prevent overfilling and spilling.
- b) Tank systems must maintain their spill container or upgrade by Dec. 22, 1998 to provide an approved spill container in good repair. Each spill container shall meet the requirements specified in section 2635 (b), of Title 23, (C.C.R.).

### **4. Section 2643 et. seq., Non-Visual Monitoring**

- b) Maintain the monitoring equipment in good repair and service in accordance with the manufacturer's instructions.

Page 4 of 5  
Ms. Clark  
December 16, 1994

In a written plan, describe the training needed or the operation of both the tank system and monitoring equipment. Maintain the plan on site for review.

#### 5. Section 2712 - Permit Conditions

- a) Retain all monitoring and maintenance records on-site or at a readily available location off-site, if approved by this agency, for a period of at least 3 years. These records must be made available, upon request within 36 hours, to the local agency or the Regional Water Quality Control Board.

The above listed requirements reflect the information currently on file and may not include deficiencies disclosed during routine inspections or changes that will result from tank and piping upgrading that may be necessary by December 22, 1998.

According to our most recent records, three 12,000 gallon and one 10,000 gallon single-walled fiberglass tanks are on site. With a double-walled fiberglass pressurized piping system. Spill basins are present at the fill risers. Your tanks are currently being monitored by a Veeder-Root 250 TLS (automatic liquid level sensor) and the piping has interstitial monitoring by a Ronan X76S electronic alarm system. Your Underground tank written monitoring plan, spill response plan and hazardous materials management plan (HMMP) are outdated. We are in receipt of a fax-copy of your "A" and "B"(s) Underground Tank Permit Application Forms (UTPAF). This Office request that you submit new monitoring, spill and HMMP plans along with the original "A" and "B"(s) UTPA forms (blank forms are enclosed). Your permit is being approved conditional to you submitting the above listed documents within 30 days from the date of this letter.

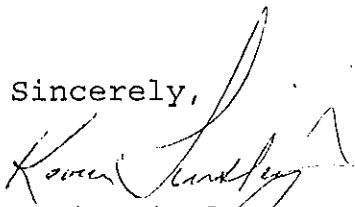
If you do not monitor by the program described above. Be advised your program must be approved and implemented as described for tanks and pipelines in the revised Title 23, C.C.R.. Please send a letter to this office notifying us of any changes in the monitoring methods.

Consult the revised Title 23, C.C.R. regarding any additional requirements. To obtain a copy of the regulations, you may contact the State Water Resources Control Board at 916-227-4303

Page 5 of 5  
Ms. Clark  
December 16, 1994

Should you have any questions or concerns regarding the contents of this letter, please call me at 510-567-6700.

Sincerely,



Kevin Tinsley  
Hazardous Materials Specialist  
Underground Tank Program

cc: Edgar Howell, Chief (files - kt)  
Ronald Sloan, Station operator

ALAMEDA COUNTY  
HEALTH CARE SERVICES  
AGENCY

DAVID J. KEARS, Agency Director



R0228

RAFAT A. SHAHID, ASST. AGENCY DIRECTOR

DEPARTMENT OF ENVIRONMENTAL HEALTH

November 3, 1994  
StID # 3737

Alameda County  
Health Care Services Agency  
Dept. Of Environmental Health  
1131 Harbor Bay Pkwy 2nd Flr.  
Alameda Ca 94502-6577

Mr. Dan Kirk  
Shell Oil Company  
P.O. Box 4023  
Concord CA 94524

**Re: Comment on Non-Attainment Area Proposal for Shell Service  
Station at 630 High St., Oakland CA 94601**

Dear Mr. Kirk:

As you may recall, our office was receptive in considering this site as one eligible for Alternative Points of Compliance, prior to its refinement and name change to Non-Attainment Area (NAA) policy. Recall, your consultants performed significant work to verify that bioremediation was likely occurring at this site. Over the past several years monitoring has been performed to see whether trends in petroleum hydrocarbon contamination are decreasing toward some asymptotic level. Your last few monitoring reports, July and September 1994, state that should the benzene concentrations remain stable or decrease, NAA policy would be requested for this site.

Since the initiation of our office's oversight, significant advancement has occurred in the NAA policy. You are aware that this policy has been incorporated in the August 1994 Ground Water Basin Plan Amendments and is also consistent with the Risk Based Corrective Action (RBCA) process, ASTM ES38, which the SFRWQCB now endorses. As part of both RBCA and NAA, risk assessment plays an important part in cases where soil and groundwater contamination is allowed to be monitored without any "active" remediation. Upon review of the groundwater contamination at this site, it appears that there is a need to perform some type of risk assessment. As a first step, following the RBCA guideline, you should examine the potential exposure scenarios which exist at this site and compare the current concentrations to that in the "Lookup Table". Should the existing concentrations exceed these values, a site specific risk assessment may be required along with site specific risk management practices. One obvious concern is the potential exposure to on-site workers (cashiers) over their working career.

Since you are contemplating recommending the NAA policy for this site, please provide a risk assessment for potential exposure. You should also provide a recommendation for your next action based on the results of your assessment.

Mr. Dan Kirk  
StID # 3737  
630 High St.  
November 3, 1994  
Page 2.

Please provide the requested document within 60 days or by  
January 2, 1995.

You may contact me at (510) 567-6765 if you have any questions.

Sincerely,



Barney M. Chan  
Hazardous Materials Specialist

cc: Mr. J. Carmody, Weiss Associates, 5500 Shellmound St.,  
Emeryville, CA 94608-2411

E. Howell, files  
RA630

ALAMEDA COUNTY  
HEALTH CARE SERVICES  
AGENCY

DAVID J. KEARS, Agency Director



R0228

RAFAT A. SHAHID, ASST. AGENCY DIRECTOR

March 8, 1994  
StID # 3737

Mr. Dan Kirk  
Shell Oil Co.  
P. O. Box 5278  
Concord, CA 94520

DEPARTMENT OF ENVIRONMENTAL HEALTH  
State Water Resources Control Board  
Division of Clean Water Programs  
UST Local Oversight Program  
80 Swan Way, Rm 200  
Oakland, CA 94621  
(510) 271-4530

**Re: Comment on Status of Investigation at Shell Service Station  
at 630 High St., Oakland CA 94601**

Dear Mr. Kirk:

Our office has been reviewing the past few 1993 quarterly monitoring reports for the above site as prepared by Weiss Associates. These reports further describe the conditions conducive for bioremediation and indicate the likelihood of this occurring at this site. As long as the hydrocarbon plume remains confined and its limits determined, it appears that only groundwater monitoring is needed and no active remediation will be required at this site. In other words, Alternative Points of Compliance, (APC), seems applicable. However, we have also received Shell's description of its difficulties in obtaining access to install the off-site monitoring well in the northeast corner of the site. Without the complete characterization of this site, it is impossible to determine the full extent of the groundwater contamination. Our office's concern is the increasing TPHg and BTEX components being found in MW-5. The gradient would indicate the likelihood of off-site migration.

In order to avoid any uncertainty in regards to the future of this site, ie to insure proper characterization, monitoring and closure, you will need to propose a feasible approach to determine the full extent of groundwater contamination in the area in question. Please provide alternatives to address this issue. It would be best to clarify this issue as quickly as possible.

You may contact me at (510) 271-4530 if you have any questions.

Sincerely,

Barney Chan  
Hazardous Materials Specialist

cc: Ms. Malieka Bundy, Weiss Associates, 5500 Shellmound St.,  
Emeryville, Ca 94608-2411

E. Howell, files  
4-630Hi



ALAMEDA COUNTY  
HEALTH CARE SERVICES  
AGENCY

DAVID J. KEARS, Agency Director



R0228

RAFAT A. SHAHID, ASST. AGENCY DIRECTOR

September 2, 1993  
StID # 3737

Mr. Dan Kirk  
Shell Oil Company  
P.O. Box 5278  
Concord, CA 94520-9998

DEPARTMENT OF ENVIRONMENTAL HEALTH  
State Water Resources Control Board  
Division of Clean Water Programs  
UST Local Oversight Program  
80 Swan Way, Rm 200  
Oakland, CA 94621  
(510) 271-4530

**Re: Status of Subsurface Investigation at Shell Service Station,  
at 630 High St., Oakland CA 94601**

Dear Mr. Kirk:

Our office has reviewed the Weiss Associates August 17 and August 20, 1993 reports. They described the attempt to install an offsite well plus gave the results of the analysis of the parameters required for in-situ bioremediation. First of all, we agree that alternate locations for an offsite well should be investigated. Given the varying gradient at this site, any location along High St., between MW-5 and MW-6, would seem reasonable. The high concentration of Total Petroleum Hydrocarbons being found in MW-5 and MW-6 indicate a strong likelihood of off-site migration of impacted groundwater. Recall, item 3 of my March 18, 1993 letter stated that monitoring wells MW-6, MW-7 and MW-8 would be used as indicators of potential off-site migration. Well MW-5 should also be included as an indicator well since recent groundwater gradient has been northerly. Groundwater extraction or another technology must be investigated if the current trends of petroleum hydrocarbons contamination continue to be seen in MW-5 and MW-6.

Our other concern is the measurement of the parameters required for in-situ bioremediation plus the verification of the efficiency of this process. Please comment on the following concerns:

1. The 8/17/93 report states that 20 ppm dissolved oxygen (DO) is required to oxidize 1ppm of BTEX and based on 1.5 to 9.7 ppm DO being found, 0.8 to 0.5 ppm of BTEX can be oxidized. It therefore appears that the conservative estimate of 14 ppm gasoline in groundwater cannot be oxidized with the amount of DO currently present.
2. Please clarify the need for the nutrient nitrogen. Is there evidence that total nitrogen is the limiting factor as opposed to nitrogen from ammonia or nitrogen from nitrates? If there is a requirement for the type of nitrogen, additional analysis should be done to distinguish the source of the total Kjeldahl nitrogen.

Mr. Dan Kirk  
StID # 3737  
630 High St.  
September 2, 1993  
Page 2.

3. Please provide a copy of the Frankenberger report stating the typical bacterial count for bioremediating groundwater. Our office is concerned with the relatively low hydrogen utilizing bacteria count, particularly in monitoring wells MW-1, MW-4 and MW-6 which have high concentrations of TPHg.

4. Given the above concerns, have you considered enhancing the bioremediation by air sparging, adding supplemental nutrients or adding cultivated bacteria? Please also consider monitoring the efficiency of the bioremediation by measuring the carbon dioxide concentration within the wells. Any other means to measure bio-oxidation by-products is acceptable.

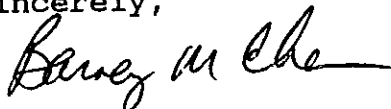
5. For the groundwater samples reporting TPHg attributable to one single discrete peak, please attempt to identify this compound using GC/MS.

Because of the difficulty with installing the off-site well, one cannot determine the extent of the groundwater contaminant plume. At this time, the current concentration trends in the indicator wells do not reflect significant bioremediation.

Please provide written comment to the above observations and concerns in a separate letter or with your next quarterly monitoring report.

You may contact me at (510) 271-4530 if you have any questions.

Sincerely,



Barney M. Chan  
Hazardous Materials Specialist

cc: S. MacLeod, Weiss Associates, 5500 Shellmound St.,  
Emeryville, CA 94608-2411  
E. Howell, files

2-630High

ALAMEDA COUNTY  
HEALTH CARE SERVICES  
AGENCY

DAVID J. KEARS, Agency Director



R0228

RAFAT A. SHAHID, ASST. AGENCY DIRECTOR

March 18, 1993  
StID # 3737

DEPARTMENT OF ENVIRONMENTAL HEALTH  
State Water Resources Control Board  
Division of Clean Water Programs  
UST Local Oversight Program  
80 Swan Way, Rm 200  
Oakland, CA 94621  
(510) 271-4530

Mr. Dan Kirk  
Shell Oil Company  
P.O. Box 5278  
Concord, CA 94520-9998

**Re: Evaluation of March 1, 1993 Work Plan Proposal for Shell  
Service Station, 630 High St., Oakland CA 94601**

Dear Mr. Kirk:

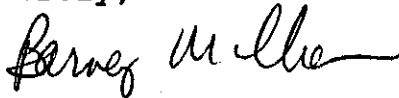
Our office is in receipt of Weiss Associates' March 1, 1993 proposal for further investigation at the above site. This proposal was generated after the February 16, 1993 meeting with you and Mr. Scott MacLeod of Weiss Associates. Recall, in this meeting we agreed on conditions where our office would allow "natural bioremediation" and require only quarterly monitoring. The submitted work tasks are acceptable under the following conditions:

1. Monitoring wells 1,4,5,6,9 will be analyzed **annually** for the proposed constituents: hydrocarbon-utilizing bacteria, the nutrients (nitrates, total Kjeldahl nitrogen, total phosphorous, total potassium and total dissolved solids) and dissolved oxygen. Please provide documentation as to "acceptable concentrations" of these parameters.
2. An offsite monitoring well to the north of the site, possibly on High St., will be installed due to the elevated levels of gasoline and benzene being found in MW-5. You should update our office in each quarterly report as to your progress in receiving drilling permission for this well. If you are not successful within a reasonable amount of time you will be required to install the monitoring well onsite, possibly within your site's planter area.
3. The last condition, not mentioned in the March 1, 1993 letter, is that monitoring wells MW-6, MW-7 and MW-8 will be used as indicators of the hydrocarbon contaminant plume migration. High levels of dissolved gasoline and concentrations of benzene exceeding its MCL, shall require the instituton of a groundwater extraction system to contain the contamination on-site.

Mr. Dan Kirk  
StID #3737  
630 High St.  
March 18, 1993  
Page 2.

You may contact me at (510) 271-4530 should you have any questions.

Sincerely,



Barney M. Chan  
Hazardous Materials Specialist

cc: G. Jensen, Alameda County District Attorney Office  
R. Hiett, RWQCB  
S. MacLeod, Weiss Associates, 5500 Shellmound St.,  
Emeryville, CA 94608-2411  
E. Howell, files

WP-630High

ALAMEDA COUNTY  
HEALTH CARE SERVICES  
AGENCY

DAVID J. KEARS, Agency Director



R0228

RAFAT A. SHAHID, ASST. AGENCY DIRECTOR

January 14, 1992  
STID # 3737

DEPARTMENT OF ENVIRONMENTAL HEALTH  
State Water Resources Control Board  
Division of Clean Water Programs  
UST Local Oversight Program  
80 Swan Way, Rm 200  
Oakland, CA 94621  
(510) 271-4530

Mr. Dan Kirk  
Shell Oil Co.  
P.O. Box 4023  
Concord, CA 94524

**Re: Request for Further Subsurface Investigation at Shell  
Station, 630 High St., Oakland CA 94601**

Dear Mr. Kirk:

As you are aware, the oversight of the remediation at the above referenced site has been transferred to the Local Oversight Program (LOP) section of Alameda County Environmental Health, Hazardous Materials Division and your new case worker is the undersigned Hazardous Materials Specialist.

Upon review of the numerous reports associated with this site, our office has the following concern:

It appears that there is a plume of TPHg, TPHd and BTEX emanating from near MW-1 which is moving across the site westerly, as the gradient would predict. The plume has reached MW-4, MW-5 and is beginning to be detected in MW-6 according to the 8/20/92 monitoring report. The concentrations of these parameters in groundwater have not been decreasing over the three year monitoring period. In the March 29, 1990 report Concerse, your consultant, proposed to prepare a Groundwater and Soil Corrective Action Plan. In addition, an offsite well to the northeast of the site was also proposed. What is the status of these actions? Additional wells are now required to define the extent of the groundwater contamination. Soil contamination likely exists at this site, as evidenced in the 1989 Blaine Technical Services reports describing the results of numerous soil borings. These soils may be a source of the petroleum contamination being monitored in MW-1 and MW-3 through MW-6. The slug test performed on this site stated that the average linear velocity of the groundwater is approximately 17-25 feet/year. This calculation accurately describes the movement of the contaminant plume's migration.

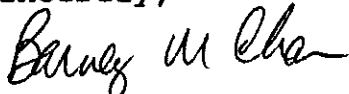
Please provide a written response to the above concern to our office within 30 days of receipt of this letter.

Mr. Dan Kirk  
Shell Oil Company  
630 High St.  
January 14, 1993  
Page 2.

Please be advised that our office is acting as an agent for the Regional Water Quality Control Board (RWQCB) and this request for technical reports is pursuant to Section 13267 (b) of the California Water Code. Failure to submit the requested documents may subject Shell Oil Company to civil liabilities.

You may contact me at (510) 271-4530 should you have any questions.

Sincerely,



Barney M. Chan  
Hazardous Materials Specialist

cc: G. Jensen, Alameda County District Attorney Office  
R. Hiett, RWQCB  
J. Theisen, Weiss Associates, 5500 Shellmound St., Emeryville  
CA 94608-2411  
E. Howell, files

WP-630High

ALAMEDA COUNTY  
HEALTH CARE SERVICES

AGENCY  
DAVID J. KEARS, Agency Director



R0228

June 9, 1989

DEPARTMENT OF ENVIRONMENTAL HEALTH  
Hazardous Materials Program  
80 Swan Way, Rm. 200  
Oakland, CA 94621  
(415)

Shell Oil  
P.O. Box 4023  
Concord, CA 94520

Attn: Mr. Raymond Newsome

Re: 630 High Street, Oakland

Dear Mr. Newsome:

The deposit submitted to Alameda County Environmental Health, Hazardous Materials Program for the above noted site has been depleted. An additional deposit of three hundred thirty six dollars (\$336.00) is required by this Office to continue our evaluation of the work performed by the contracted Environmental Consultants to further assess this site's degree of subsurface soils and ground water contamination.

If you have any questions concerning the contents of this letter or the status of this case please contact Hazardous Materials Specialist, Ariu Levi. Mr. Levi can be reached at 415-271-4320.

Sincerely,

  
Rafat Shahid, Chief  
Hazardous Materials Program

cc: Gil Jensen, Alameda County District Attorney, Consumer and  
Environmental Protection

ALAMEDA COUNTY  
HEALTH CARE SERVICES

AGENCY  
DAVID J. KEARS, Agency Director



R0228

June 2, 1989

DEPARTMENT OF ENVIRONMENTAL HEALTH  
Hazardous Materials Program  
80 Swan Way, Rm. 200  
Oakland, CA 94621  
(415)

Shell Oil  
P.O. Box 4023  
Concord, CA 94520

Attn: Ms. Diane Lundquist

Re: Work Plan for 630 High Street In Oakland

Dear Ms. Lundquist:

Thank you for submitting the Work Plan prepared by Converse Environmental Consultants California (CECC) for the Shell facility located at 630 High Street in Oakland as requested in this Office's letter to Mr. Ray Newsome dated February 24, 1989.

The Division has completed it's review of the proposed Work Plan. Based on this review, and consultation with the Regional Water Quality Control Board (RWQCB), the Division accepts your general approach to further assess the degree of site contamination by MVF. Several questions, though, concerning earlier work, and sample preparation methods remain unanswered. Specific comments on the submittal follow.

The initial site work conducted by Blaine Tech, which is included in the work plan as attachment 1, discovered an area of contamination where a waste oil tank was formerly located. Soil samples from this area were tested for TPH-g&d and BTXE. The samples were not evaluated for Total Oil and Grease (TOG) (by EPA Method 3550 and gravimetric determination by Method 503E), or Volatile Organic Compounds (VOC's) (by EPA Method 8240, or 8010 and 8020) as required by RWQCB guidelines. Failure to properly evaluate the samples at the time of excavation renders the determination of lateral and vertical extent of contamination incomplete. Additional sampling and proper testing will be required.

The disposition of soil stockpiles remains unclear. Page four of the Work Plan describes two piles in the northern part of the site, which from page four of Attachment 1 appears to be the same general location of the stock pile from the waste oil tank excavations. If soils from any area where sampling showed TPH in excess of 100 ppm have been moved off site please provide this Office with documentation that shows it was properly handled. Also inform this Office how the waste oil tank stockpile will be handled, and if it is your intent to address this issue separately or as part of the Soil Remedial Action Plan still to be submitted.

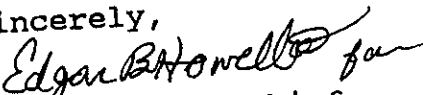


Shell Oil  
June 2, 1989  
Page 2

The sample preparation method for lead analysis remains unclear. Please specify whether EPA Preparation Method 3020 or 3040 for analysis by EPA Method 7421 was used during the February excavation and will be used for future sample analysis.

Should you have any questions concerning the contents of this letter please contact Hazardous Materials Specialist, Ariu Levi. Mr. Levi can be reached at 415-271-4320.

Sincerely,

  
Rafat Shahid, Chief  
Hazardous Materials Program

cc: Gil Jensen, Alameda County District Attorney, Consumer and  
Environmental Protection  
Alan Whitman, OPD  
Scott Hugenberger, RWQCB  
Howard Hatayama, DOHS

ALAMEDA COUNTY  
HEALTH CARE SERVICES

DAVID J. KEARS AGENCY  
~~MARK NIXON~~ Agency Director



Department of Environmental Health  
Hazardous Materials Division  
80 Swan Way, Room 200  
Oakland, CA 94621

R0228

Telephone Number:(415) 271-4320

February 24, 1989

Shell Oil  
P.O. Box 4023  
Concord, CA 94520

Attn: Raymond Newsome

Re: 630 High St., Oakland

Dear Mr. Newsome:

In response to conditions found during site visits, and verbal communication of subsurface soil sampling results, the Shell facility at 630 High St. in Oakland is considered to have a confirmed fuel release.

The Alameda County Environmental Health Department, Hazardous Materials Program, has contracted with the State Water Resources Control Board to oversee and evaluate investigations and cleanups at leaking underground fuel system sites in the County of Alameda. The above referenced site is considered to have soil and/or ground water contamination that will require investigation and/or cleanup.

The proposed investigative work is to be submitted in the form of a workplan. This plan is to include the following information:

- I. Introduction
  - A. Statement of scope of work
  - B. Site location showing location of existing and past UST
  - C. Site History
    - describe any previous subsurface work at the site or adjacent sites.
  
- II Site Description
  - A. Vicinity description including hydrogeologic setting
  - B. Existing soil contamination and excavation results
    - provide sampling procedures used
    - indicate depth to ground water
    - describe soil strata encountered
    - provide soil sampling results, chain of custody forms, identity of sampler
    - describe methods for storing and disposal of all soils

Shell Oil  
February 24, 1989  
Page 2

- III Plan for determining extent of soil contamination on site
- A. Describe method for determining extent of contamination within excavation
- identify subcontractors, if any
  - identify methods or techniques used for analysis
  - provide sampling map showing lines of excavation and sampling points
  - provide chain of custody forms, lab analysis results, identity of sampler
- B. Describe method and criteria for screening clean versus contaminated soil. If onsite soil aeration/bioremediation is to be utilized, then provide a complete description of method that includes:
- volume and rate of aeration/turning
  - method of containment and cover
  - wet weather contingency plans
  - permits obtained
- C. Describe security measures
- IV Plan for determining ground water contamination
- Construction and placement of wells should adhere to the requirements of the "Regional Board Staff Recommendations for Initial Evaluation and Investigation of Underground Tanks". Provide a description of placement and rationale for the location of monitoring wells including a map to scale
- A. Drilling method for construction of monitoring wells
- expected depth and diameter of monitoring wells
  - date of expected drilling
  - casing type, diameter, screen interval, and pack and slot sizing techniques
  - depth and type of seal
  - development method and criteria for adequacy of development
  - plans for cuttings and development water
- B. Ground water sampling plan
- method for free product measurement, observation of sheen
  - well purging procedures
  - sample collection procedures
  - chain of custody procedures
- V Provide a site safety plan

Shell Oil  
February 24, 1989  
Page 3

Please submit your work plan for this site within twenty five days from the above letter date. Implementation of remediation plans may begin before acceptance and approval of the work plan. Final approval for site sign off by this office, though, will depend on adequacy of work done per the above requirements. Final site sign off will remain the responsibility of the RWQCB.

Should you have any questions concerning the contents of this letter or the status of this case please contact Hazardous Materials Specialist, Ariu Levi. Mr. Levi can be reached at 415-271-4320.

Sincerely,

*Rafat A. Shahid*

Rafat Shahid, Chief  
Hazardous Materials Program

cc: Lisa McCann, RWQCB  
GIL Jensen, Alameda County District Attorney, Consumer and  
Environmental Protection Agency  
Howard Hatayama, DOHS  
Files

ALAMEDA COUNTY  
HEALTH CARE SERVICES

AGENCY  
DAVID J. KEARS, Director



Department of Environmental Health  
Hazardous Materials Division  
80 Swan Way, Room 200  
Oakland, CA 94621

R0228

Certified Mail #P 833 981 239

Telephone Number: (415) 271-4320

February 24, 1989

Shell Oil  
P.O. Box 4023  
Concord, CA 94520

ATTN: Mr. Raymond Newsome

RE: 630 High St., Oakland

Dear Mr. Newsome:

In response to conditions found during site visits and verbal communication of subsurface soil sampling results, the Shell facility at 630 High St. in Oakland, is considered to have a confirmed fuel release.

The Alameda County Environmental Health Department, Hazardous Materials Program, has an official agreement with the State Water Resources Control Board to oversee and evaluate investigations and cleanups at leaking underground fuel system sites in the County of Alameda. The above referenced site is considered to have soil and/or ground water contamination that will require investigation and/or cleanup.

The proposed investigative work is to be submitted in the form of a workplan. This plan is to include the following information:

I. Introduction

- A. Statement of scope of work
- B. Site location showing location of existing and past UST
- C. Site History

- describe any previous subsurface work at the site or adjacent sites.

II. Site Description

- A. Vicinity description including hydrogeologic setting
- B. Existing soil contamination and excavation results

Shell Oil  
February 24, 1989  
Page 2 of 3

- provide sampling procedures used
- indicate depth to ground water
- describe soil strata encountered
- provide soil sampling results, chain of custody forms, identity of sampler
- describe methods for storing and disposal of all soils

### III. Plan for determining extent of soil contamination on site

#### A. Describe method for determining extent of contamination within excavation

- identify subcontractors, if any
- identify methods or techniques used for analysis
- provide sampling map showing lines of excavation and sampling points
- provide chain of custody forms, lab analysis results, identity of sampler

#### B. Describe method and criteria for screening clean versus contaminated soil. If onsite soil aeration/bioremediation is to be utilized, then provide a complete description of method that includes:

- volume and rate of aeration/turning
- method of containment and cover
- wet weather contingency plans
- permits obtained

#### C. Describe security measures

### IV. Plan for determining ground water contamination

- Construction and placement of wells should adhere to the requirements of the "Regional Board Staff Recommendations for Initial Evaluation and Investigation of Underground Tanks". Provide a description of placement and rationale for the location of monitoring wells including a map to scale.

#### A. Drilling method for construction of monitoring wells

- expected depth and diameter of monitoring wells
- date of expected drilling

Shell Oil  
February 24, 1989  
Page 3 of 3

- casing type, diameter, screen interval, and pack and slot sizing techniques
- depth and type of seal
- development method and criteria for adequacy of development
- plans for cuttings and development water

B. Ground water sampling plan

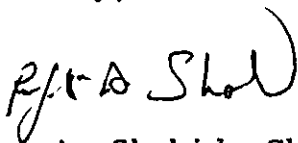
- method for free product measurement, observation of sheen
- well purging procedures
- sample collection procedures
- chain of custody procedures

V. Provide a site safety plan

Please submit your work plan for this site within twenty five days from the above letter date. Implementation of remediation plans may begin before acceptance and approval of the work plan. Final approval for site sign off by this office, though, will depend on adequacy of work done per the above requirements. Final site sign off will remain the responsibility of the RWQCB.

Should you have any questions concerning the contents of this letter or the status of this case, please contact Hazardous Materials Specialist, Ariu Levi. Mr. Levi can be reached at 415-271-4320.

Sincerely,



Rafat A. Shahid, Chief  
Hazardous Materials Program

RAS:AL:mnc

cc: \* Lisa McCann, RWQCB  
Gil Jensen, Alameda County District Attorney, Consumer and  
Environmental Protection Agency  
Howard Hatayama, DOHS  
Files

ALAMEDA COUNTY  
HEALTH CARE SERVICES  
AGENCY



CARL N. LESTER, Agency Director

R0228

Telephone Number:(415)

February 24, 1989

Shell Oil  
P.O. Box 4023  
Concord, CA 94520

Attn: Raymond Newsome

Re: 630 High St., Oakland

Dear Mr. Newsome:

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Shell Oil  
February 24, 1989  
Page 2

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Shell Oil  
February 24, 1989  
Page 3

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Should you have any questions concerning the contents of this letter or the status of this case please contact Hazardous Materials Specialist, Ariu Levi. Mr. Levi can be reached at 415-271-4320.

Sincerely,

Rafat Shahid, Chief  
Hazardous Materials Program

cc: Lisa McCann, RWQCB  
GIL Jensen, Alameda County District Attorney, Consumer and  
Environmental Protection Agency  
Howard Hatayama, DOHS  
Files