ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
DAVID J. KEARS, Agency Director

04-30-02

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

April 29, 2002
StID 3646/ RO0000223

Ms. Karen Petryna
Equiva Services LLC
P.O. Box 7869
Burbank, CA 91510-7869

Re: Work Plan for Shell-branded Station, 540 Hegenberger Rd., Oakland CA 94621

Dear Ms. Petryna:

Our office has received and reviewed the February 27, 2002 Subsurface Investigation Work Plan for the referenced site prepared by Cambria, your consultant. This proposes the installation of a monitoring well down-gradient of MW-1. This work plan is approved and you should schedule this work as soon as possible. Per your prior reports, groundwater extraction will continue from wells MW-1 and MW-3 and backfill well, BW-D. Please sample from each of the backfill wells and perform your extraction from the highest impacted well.

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

Sincerely,

Barney M Chan

Barney M. Chan
Hazardous Materials Specialist

C: B. Chan, files
Ms. D. Lundquist, Cambria Environmental, 1144 65th St., Suite B., Oakland, CA 94608

540Heg

ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
DAVID J. KEARS, Agency Director

01-08-02

ENVIRONMENTAL HEALTH SERVICES
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(510) 567-6700
FAX (510) 337-9335

January 4, 2002
StID 3646/ RO0000223

Ms. Karen Petryna
Equiva Services LLC
P.O. Box 7869
Burbank, CA 91510-7869

Re: Shell-branded Station, 540 Hegenberger Rd., Oakland CA 94621

Dear Ms. Petryna:

Our office has received and reviewed the December 18, 2001 Cambria report for the referenced site. As you are aware, this station has historically exhibited elevated MTBE levels in groundwater. In this report, the nearest potential receptor, the canal located northwest of the site was sampled and did not detect gasoline, BTEX or MTBE. The storm drain was identified as a potential conduit that could be a preferential pathway. The storm drains, which could also possibly collect and direct contaminated groundwater because of its permeability was scheduled for sampling at two points, however, the storm drains were dry.

During inspection of the UST system, performed as part of the SWRCB's Appendix D recommendations for handling MTBE releases, a leak from the dispenser containment boot was observed and repaired. Perhaps this was the source(s) of the MTBE release. It seems reasonable, since MW-1 with the highest MTBE concentrations is immediately down-gradient of the dispensers. As a side-note, it appears that elevated MTBE concentrations were also found recently beneath dispensers at the 4411 Foothill Blvd. Former Shell station in Oakland. This could be more than a co-incidence.

Since the mass of MTBE removed from DVE is small relative to that from GWE, Cambria proposes to continue solely GWE in MW-2, MW-1 and a selected tank back-fill well. Because of the absence of TPH in the sample from the nearby canal, and because the storm drain main job is to direct surface water, our office sees no reason to sample the storm drains or the canal. We do request that an additional on-site well be installed between MW-1 and prior boring SB-F. This well would be immediately down-gradient of the highest known MTBE impacted area, possibly used for groundwater extraction, used to monitor the affect of remediation from MW-1 and provide better groundwater characterization.

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

Sincerely,

Barney M Chan

Barney M. Chan
Hazardous Materials Specialist

C: B. Chan, files
Ms. Diane Lunquist, Cambria Environmental, 1144 65th St., Oakland, CA 94608
MWrq540HegRd

9-19-01

ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
DAVID J. KEARS, Agency Director

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

September 18, 2001
RO0000223

Ms. Karen Petryna
Equiva Services LLC
P.O. Box 7869
Burbank, CA 91510-7869

Re: Shell-branded Station, 540 Hegenberger Rd., Oakland, CA 94621

Dear Ms. Petryna:

This letter serves to comment on the recent First and Second Quarters 2001 Monitoring Reports for the referenced site. As you are aware, this site located near the Oakland Coliseum, has exhibited and continues to exhibit elevated MTBE concentrations in groundwater. Dual-vacuum extraction (DVE) from specific monitoring and tank back-fill wells is being performed with uncertain success. Groundwater concentrations have fluctuated in TPHg concentrations, however, MTBE concentrations have remained elevated, particularly in well MW-3 and MW-1. The tank back-fill wells also have continual elevated MTBE concentrations. Such observations are consistent with an on-going release.

The off-site well MW-4 has not detected the same elevated MTBE levels, however, it is not realistic to believe that the MTBE plume has not migrated off-site. It was presumptuous to stop DVE when this off-site well did not detect elevated concentrations of MTBE. Because you cannot determine where the MTBE has gone does not mean there is no potential risk to the environment. As you are aware, the SWRCB final draft of the Guidelines for Investigation and Cleanup of MTBE and Other Ether-Based Oxygenates recommends interim remedial actions for sites with persistent MTBE concentrations over 10,000 ppb as a way to preserve water quality and financial resources. Therefore, you should continue your DVE on a regular schedule and also include extraction from the tank back-fill wells, such as BW-B, which exhibited 40,000 ppb MTBE during the second quarter monitoring event.

Our office disagrees with the proposed strategy to determine if the sanitary sewer down-gradient of the site is acting as a preferential pathway to the nearby canal. Cambria proposes to collect samples from the canal and also collect samples from the storm drains near and down-gradient of the site, which empty into the canal. Such information would not tell anything about the MTBE plume migrating from this site. It would only tell what contribution is possible from the storm drains and what is impacting the canal. The source of any contamination would not necessarily be from this site and would likely be affected by dilution. It would be much more informative to collect groundwater samples near the porous back-fill near the sanitary sewer. Such sampling was performed at the Shell-branded station at 285 Hegenberger Rd. Please reconsider sampling from other more appropriate locations.

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

Sincerely,

Barney M Chan

Barney M. Chan
Hazardous Materials Specialist

C: B. Chan, files
Ms. D. Lundquist, Cambria Environmental Technology, 1144 65th St., Suite B, Oakland 94608
Prefpath540HegRd

ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
DAVID J. KEARS, Agency Director

9-19-01

ENVIRONMENTAL HEALTH SERVICES
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1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577
(510) 567-6700
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September 18, 2001
RO0000223

Ms. Karen Petryna
Equiva Services LLC
P.O. Box 7869
Burbank, CA 91510-7869

Re: Shell-branded Station, 540 Hegenberger Rd., Oakland, CA 94621

Dear Ms. Petryna:

This letter serves to comment on the recent First and Second Quarters 2001 Monitoring Reports for the referenced site. As you are aware, this site located near the Oakland Coliseum, has exhibited and continues to exhibit elevated MTBE concentrations in groundwater. Dual-vacuum extraction (DVE) from specific monitoring and tank back-fill wells is being performed with uncertain success. Groundwater concentrations have fluctuated in TPHg concentrations, however, MTBE concentrations have remained elevated, particularly in well MW-3 and MW-1. The tank back-fill wells also have continual elevated MTBE concentrations. Such observations are consistent with an on-going release.

The off-site well MW-4 has not detected the same elevated MTBE levels, however, it is not realistic to believe that the MTBE plume has not migrated off-site. It was presumptuous to stop DVE when this off-site well did not detect elevated concentrations of MTBE. Because you cannot determine where the MTBE has gone does not mean there is no potential risk to the environment. As you are aware, the SWRCB final draft of the Guidelines for Investigation and Cleanup of MTBE and Other Ether-Based Oxygenates recommends interim remedial actions for sites with persistent MTBE concentrations over 10,000 ppb as a way to preserve water quality and financial resources. Therefore, you should continue your DVE on a regular schedule and also include extraction from the tank back-fill wells, such as BW-B, which exhibited 40,000 ppb MTBE during the second quarter monitoring event.

Our office disagrees with the proposed strategy to determine if the sanitary sewer down-gradient of the site is acting as a preferential pathway to the nearby canal. Cambria proposes to collect samples from the canal and also collect samples from the storm drains near and down-gradient of the site, which empty into the canal. Such information would not tell anything about the MTBE plume migrating from this site. It would only tell what contribution is possible from the storm drains and what is impacting the canal. The source of any contamination would not necessarily be from this site and would likely be affected by dilution. It would be much more informative to collect groundwater samples near the porous back-fill near the sanitary sewer. Such sampling was performed at the Shell-branded station at 285 Hegenberger Rd. Please reconsider sampling from other more appropriate locations.

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

Sincerely,

Barney M Chan

Barney M. Chan
Hazardous Materials Specialist

C: B. Chan, files
Ms. D. Lundquist, Cambria Environmental Technology, 1144 65th St., Suite B, Oakland 94608
Prefpath540HegRd

CB-1401

ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
DAVID J. KEARS, Agency Director

R0223

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

March 13, 2001
StID # 3646

Ms. Karen Petryna
Equiva Services LLC
P.O. Box 7869
Burbank, CA 91510-7869

Re: Offsite Subsurface Investigation Report for Shell-branded Station, 540 Hegenberger Rd., Oakland CA 94621

Dear Ms. Petryna:

Our office has received and reviewed the February 15, 2001 **Offsite Subsurface Investigation Report** prepared by Cambria, your consultant. This report includes the following:

- Comments to the County's November 19, 1999 letter
- Results of the August 29, 2000 advancement of off-site borings SB-E, SB-F and SB-G
- Results from the September 5, 2000 installation of MW-4
- Results from the December 15, 2000 groundwater sampling of MW-1 through MW-4
- Site Conceptual Model and
- Sensitive Receptor Survey.

Cambria determined that since the plume is defined and there are no observed sensitive receptors, the dual phase extraction from the monitoring and tank back-fill wells could be discontinued. Quarterly monitoring is recommended for the site since Cambria concludes the site poses a low risk to the environment and human health.

Please keep in mind that the evaluation of human health and environmental risk are only one component of evaluating and characterizing a site as a "low risk groundwater case". The other conditions that must be met are insuring that the leak has been stopped, characterizing the site adequately, verifying the plume is not migrating and no surface water or sensitive receptors are impacted in addition to evaluating risk to human health and the environment. In addition, the State Water Resources Control Board and the San Francisco Regional Water Quality Control Board have issued their own guidelines in handling MTBE and TPH, respectively.

Cambria states that the leak observed in the piping between the USTs and the western dispenser was repaired in 1998, therefore, the source of the leak has been stopped. This may or may not be true. Significant MTBE in groundwater was found in MW-1 and the sample from SB-G, which are down-gradient of the eastern dispensers. It is not likely that the only release at this site occurred from the 1998 piping leak. Had this been the case, groundwater concentrations should have stabilized and decreased down-gradient of the release. Cambria states in their Site Conceptual Model that the BTEX and MTBE plumes are not stabile. This is apparent when looking at the historical MTBE concentration in MW-1.

The site has not been adequately characterized. Again, the Site Conceptual Model states that the BTEX and MTBE plume definition status is "undefined". It is clear that both the up-gradient and down-gradient TPH concentrations have not been defined. In the case of MTBE, an elevated concentration (136,000 ppb) has been found in MW-1 and in the grab groundwater sample from SB-G (76,400 ppb), however, MW-4 about forty feet further down-gradient is non-detectable for MTBE. Surely the MTBE plume has not attenuated from these levels as it goes an additional 40 feet. One explanation is that stated in the Site Conceptual Model, which states that the sewer or storm drain trenches may be acting as a preferential pathway for groundwater migration. If this is the case, one could not say that the hydrocarbon plume is not migrating. As you are aware, if the storm or sewer trenches are acting as preferential pathways, the unlined drainage ditch and surface waters could be impacted.

Therefore, the site is not, at this time, a low risk groundwater case. It would appear that additional work is necessary to verify that no additional sources of releases exist, to further characterize the extent of the BTEX and MTBE plumes and to determine if utilities may be acting as a preferential pathway.

The SWRCB in their **3/00 Final Draft for Guidelines for Investigation and Cleanup of MTBE and Other Ether-Based Oxygenates** recommends that Interim Remedial Action be taken at sites where the MTBE concentration over 10,000 ppb persists. The SFRWQCB in their **Application of Risk-Based Screening Levels and Corrective Action to Sites With Contaminated Soil and Groundwater** suggests an aquatic cleanup level of 8000 ppb and a nuisance and odor threshold of 180 ppb. Thus there is rationale for continued remediation at this site. Please continue dual phase extraction from impacted wells, particularly MW-1 and MW-3 until the MTBE concentration at the site has stabilized and decreased below applicable cleanup levels. Please also respond to our observation as to the need to perform addition site characterization.

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. S. Bork, Cambria Environmental Technology, 1144 65th St., Suite B., Oakland CA 94608
Mr. L. Griffin, City of Oakland OES, 1605 MLK Jr. Dr., Oakland CA 94612

540HegRd

Sent 6-30-2000

ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
DAVID J. KEARS, Agency Director

RO223

ENVIRONMENTAL HEALTH SERVICES
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1131 Harbor Bay Parkway, Suite 250
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FAX (510) 337-9335

June 29, 2000
StID # 3646

Ms. Karen Petryna
Equiva Services LLC
P.O. Box 7869
Burbank, CA 91510-7869

Re: Investigation Work Plan for 540 Hegenberger Rd., Oakland CA 94621

Dear Ms. Petryna:

I received and reviewed the June 19, 2000 Cambria response letter responding to my May 15, 2000 letter. Two items affecting Cambria's original work plan were in contention. I have discussed these items with Mr. Derek Ataide of Cambria and we have come to the following understanding:

- Although our office will not require an additional data point on the west side of the site, it is understood that prior to site closure, additional groundwater sampling in this area will be necessary to verify that the petroleum plume has not migrated in this direction.
- The proposed borings on the down-gradient edge of the property will not need groundwater elevation measurements since the installation of MW-4, the proposed down-gradient well, will be used to confirm the site's gradient.

You may proceed with the original work plan as proposed with the above items understood. Mr. Ataide mentioned that Cambria might proceed with the three down-gradient borings if the encroachment permit for the off-site well is not shortly received.

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

Sincerely,

Barney M Chan

Barney M. Chan
Hazardous Materials Specialist

C: B. Chan, files
Mr. D. Ataide, Cambria Environmental Technology, Inc., 1144 65th St., Suite B, Oakland CA 94608

Wpadd540Heg

SENT 5-16-2000
Incld CC's

ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
DAVID J. KEARS, Agency Director

R0223

~~May 15, 2000~~
StID # 3646

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

Ms. Karen Petryna
Equiva Services LLC
P.O. Box 7869
Burbank, CA 91510-7869

Re: Subsurface Investigation Work Plan, Shell-branded Service Station, 540 Hegenberger Rd., Oakland CA 94621

Dear Ms. Petryna:

Our office has received and reviewed the May 8, 2000 Subsurface Investigation Work Plan for the above referenced site as prepared by Cambria, your consultant. As you are aware, this work plan proposes the advancement of three temporary borings in addition to one previously approved permanent well. Soil and grab groundwater samples will be collected from the temporary borings. The additional borings will further characterize the extent of the fuel (mainly MTBE) release to soil and groundwater. Cambria also proposes to review the files of the neighboring ARCO site northeast of this site to better understand the hydrogeology. A cross-section in this direction should eventually be produced to evaluate potential off-site migration.

Because of the obvious MTBE release from the western dispenser, our office requests at least two additional borings be advanced on the western perimeter of the site. I would recommend borings to the west of the underground tank pit and west of the west dispenser area. In addition, please install slotted casing in the borings and determine the water elevation in the borings after equilibration to estimate the gradient. I am aware that the existing wells indicate a north-northeast gradient, however, gradient is known to vary in this area and this information is critical in developing appropriate remediation. After this investigation, please confirm the location of the additional monitoring well.

Our office concurs with the interim remediation being done at this site and recommends continued extraction of groundwater from the four tank backfill wells and MW-1 and MW-3. This interim action should continue as long as MTBE concentrations remain as high as they are currently, in excess of 10,000 ppb. **Please provide written comment to this letter within 30 days or no later than June 16, 2000.**

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

Sincerely,

Barney M Chan

Barney M. Chan
Hazardous Materials Specialist

C: B. Chan, files
Mr. D. Ataide, Cambria, 1144 65th St., Suite B, Oakland CA 94608

Ssiwp540Heg

Sent 11-19-99
Including cc's

ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
DAVID J. KEARS, Agency Director

p0223

ENVIRONMENTAL HEALTH SERVICES
ENVIRONMENTAL PROTECTION
1131 Harbor Bay Parkway
Alameda, CA 94502-6577
(510) 567-6700
(510) 337-9432

November 19, 1999
StID # 3646

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

Re: Shell-Branded Station, 540 Hegenberger Rd., Oakland CA 94621

Dear Ms. Petryna:

Our office has received and reviewed the November 3, 1999 Second Quarter 1999 Monitoring Report prepared by Cambria for the above referenced site. This report provides information on the sampling of the three monitoring wells, the removal of groundwater from monitoring and tank back fill wells and a well survey. It is evident that the presence of elevated MTBE in groundwater poses the greatest immediate threat at this site. Our office is pleased that groundwater removal was done from the two monitoring and four tank back fill wells. This weekly groundwater removal was initiated on 7/29/99 and continued up to 8/30/99. Will this action continue on a regular basis?

Our office recommends that you sample and analyze these wells after groundwater removal to 1) estimate the amount of chemical removed and to 2) see if any remediation of groundwater is occurring. It appears that on an interim basis, groundwater removal should continue as long as concentrations of MTBE remain high. This, however, may be only treating the result of an on-going problem, not the problem itself.

Please determine the source(s) of the MTBE release and attempt to provide an iso-concentration profile in soil and groundwater. Is the source of the MTBE from past or present releases? What is your theory to explain the apparent release of MTBE and the relative absence of TPHg and BTEX? This phenomenon is an alarming yet common situation at many newly installed and upgraded service stations. Obviously, we are interested in understanding the cause of the release to determine the appropriate remediation.

I have previously written to you regarding the evolving requirements for handling MTBE releases and you are now aware of the requirement for a site conceptual model, SCM. Most of these requirements have been or will be addressed shortly by your consultant. Cambria stated in their report that they are working on their evaluation of preferential pathways and will soon install the down-gradient well, previously proposed. There may be a need for additional borings or wells to define the lateral extent of MTBE. Please comment on this. You will also need to determine the vertical extent of MTBE by advancing and sampling a deep boring. In addition, please evaluate your remediation options and determine whether the interim groundwater removal will be your remediation of choice.

Please provide a written response to this letter **within 30 days or no later than December 20, 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. D. Ataide, Cambria Environmental Technology, 1144 65th St., Suite B., Oakland CA 94608
2MTBE540Heg

ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
DAVID J. KEARS, Agency Director

RO#223

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

April 30, 1999
StID # 3646

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

Re: Shell-branded Station, 540 Hegenberger Rd., Oakland CA 94621

Dear Ms. Petryna:

Our office has received and reviewed the Fourth Quarter 1998 Monitoring Report for the above site as prepared by your consultant, Cambria. This site is similar to other Shell-branded sites under my oversight, ie releases from dispensers may have contributed to a MTBE plume which has yet to be delineated. As you are aware, an off-site well is being proposed, following a utility and sensitive receptor survey. In an attempt to provide some consistency in handling these MTBE sites, I have been requesting items such as determining the integrity of the underground tank system, the above mentioned receptor survey and the delineation of the MTBE plume. When possible, the source of the contaminant should be removed. To this end, I remind you of my prior request to sample and analyze the groundwater from the tank pit. Previous evidence indicated releases from the dispenser and piping. The gravel backfill of the piping run may have acted as a preferential pathway for contamination.

One puzzling item was observed in the monitoring report; the large difference in the reported MTBE concentration for MW-1 run by Method 8020 vs. that run by 8260. You should contact your laboratory and request an explanation for this significant difference (153,000 ppb vs 33000 ppb).

Please sample and analyze the groundwater from the tank pit during your next sampling event. Your evaluation of data should comment on whether the removal of groundwater from the tank pit would be beneficial.

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

Sincerely,

Barney M Chan

Barney M. Chan
Hazardous Materials Specialist

C: B. Chan, files
Mr. D. Ataide, Cambria Environmental Technology, 1144 65th St., Suite B, Oakland 94608
mon540Heg

ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
DAVID J. KEARS, Agency Director

RO# 223

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

March 2, 1999
StID # 3646

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

Re: Subsurface Investigation Work Plan for Shell-branded Station, 540 Hegenberger Rd., Oakland CA 94621

Dear Ms. Petryna:

Thank you for the submission of the February 25, 1999 work plan for the above referenced site as prepared by your consultant, Cambria Environmental Technology, Inc. (Cambria). This work plan responds to my January 4, 1999 letter, which expressed the County's concerns over the elevated MTBE concentrations in soil and groundwater at this site. Our office requested that items be addressed consistent with the Water Board's draft **MTBE Road Map to Compliance.**

To further characterize the site, Cambria proposes to install an off site monitoring well, tentatively located on the north side of Edes Ave., just south of the existing ARCO station. The location of this well is based on the groundwater gradient found in the 3rd and 4th Quarter 1998 monitoring events. This location is acceptable, since the gradient is consistent with that of the ARCO site and would make this well up-gradient of ARCO. In addition, the ARCO site is near closure as that site has been determined to be of low risk.

An evaluation of preferential pathways will be done by contacting underground service alert (USA) and the local Department of Public Works. A map indicating the location and depths of utilities should be provided. Should potential conduits exist, sampling along the conduit should be proposed and the location of the off-site well reconsidered. In addition, a sensitive receptor survey will be performed. Surface water bodies and irrigation and drinking water wells will be sought.

Because of the elevated concentrations of MTBE found on-site, our office also requests the following actions:

- Please verify that the current underground tank system is tight through evaluation of recent tank and piping test results. Please provide the results of this evaluation in your upcoming monitoring report.
- Please continue to sample tank backfill groundwater. Consideration should be given for the removal of groundwater from the tank pit since it is a potential "sink" for groundwater and releases.

You may perform the preferential pathways and sensitive receptor survey as soon as possible. Please inform our office if the location of the off-site well is change and when it will be installed.

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

Sincerely,

Barney M Chan

Barney M. Chan
Hazardous Materials Specialist

C: B. Chan, files
Mr. D. Ataide, Cambria, 1144 65th St., Suite B, Oakland, CA 94608
WpMTBE540Heg

ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
DAVID J. KEARS, Agency Director

RO#223

ENVIRONMENTAL HEALTH SERVICES
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January 4, 1999
StID # 3646

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

Re: Shell-branded Service Station, 540 Hegenberger Rd., Oakland CA 94621
WIC #204-5508-5900

Dear Ms. Petryna:

Our office has recently received and reviewed the **November 9, 1998 and November 19, 1998 Well Installation Report and Third Quarter 1998 Monitoring Report**, respectively, for the above site as prepared by Cambria Environmental Technology (Cambria). The results of these investigations confirm the release of gasoline and MTBE that have impacted the shallow groundwater beneath the site. These results are predictable given the results from sampling from recent borings and samples from piping repair and station upgrade.

My first impression of the site is that the main chemical of concern is MTBE. Elevated levels of MTBE, from 12,000 to 31,000 ppb, were reported in the backfill monitoring well and monitoring wells MW-1 and MW-3 in the initial sampling event on July 15, 1998. The more recent August 26, 1998 sampling event reported even higher MTBE concentrations, up to 75,000 ppb in the post-purge sample from MW-3. This site should be handled in a manner consistent with the SFRWQCB recommendation for their **MTBE Road Map to Compliance**.

The following items should be adequately addressed:

- Has the site been adequately characterized? If not, what additional investigation is proposed?
- Have the sources been determined and have they been removed if possible?
- Are there any current or future public health or ecological threats?
- Do you have a stable plume?
- Is a risk management plan in place?

When the above items are addressed, you should proceed with a Risk-Based Evaluation. This should include a site conceptual model (SCM) which identifies all major source areas, all major exposure pathways and all current and future receptors. To aid in developing the SCM a well and receptor survey and a conduit study should be performed. When long term monitoring demonstrates a stable plume site closure may be recommended along with institutional controls if necessary within an acceptable risk management plan.

Please address the above items in writing **within 45 days or by February 22, 1999**.

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

Sincerely,

Barney M Chan

Barney M. Chan
Hazardous Materials Specialist

C: B. Chan, files
Mr. D. Ataide, Cambria, 1144 65th St., Suite B, Oakland CA 94608
540 Heg-MTBE

ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
DAVID J. KEARS, Agency Director

RO#223

May 26, 1998
StID # 3646

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

Mr. Alex Perez
Shell Oil Products Company
P.O. Box 8080
Martinez, CA 94553

Re: Investigation Work Plan for Shell Service Station, 540 Hegenberger Rd., Oakland CA 94621

Dear Mr. Perez:

Our office has received and reviewed the May 14, 1998 **Investigation Work Plan** for the above site as prepared by Cambria. This work plan responds to my April 23, 1998 request for further investigation of the petroleum release from the above site. Three monitoring wells and one boring are proposed. In addition, a water sample from the tank backfill will be collected and analyzed. It is anticipated that one soil sample will be collected from each boring for chemical analysis. The proposed analytes are TPHg, BTEX and MTBE. MTBE in groundwater will be confirmed by EPA Method 8260. The boring sample will be located near the existing cashier building and be analyzed for the specific parameters useful for risk assessment purposes; dry bulk density, moisture content, porosity and fraction organic carbon.

This work plan is accepted with the following conditions:

- Please move the location of the western boring/well northward to align with the former locations of D-1 and SB-5.
- Please inform our office 72 working hours prior to this field work.

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

Sincerely,

Barney M. Chan
Hazardous Materials Specialist

C: B. Chan, files
Ms. M. Feineman, Cambria Environmental, 1144 65th St., Suite B, Oakland, CA 94608

Wpap540

ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
DAVID J. KEARS, Agency Director

RO # 223

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

April 23, 1998
StID #3646

Mr. Alex Perez
Shell Oil Products Company
P.O. Box 8080
Martinez, CA 94553

Re: Subsurface Investigation Report for Shell Service Station, 540 Hegenberger Rd., Oakland CA 94621

Dear Mr. Perez:

Our office has received and reviewed the April 15, 1998 Subsurface Investigation Report for the above referenced site prepared by Cambria Environmental Technology, Inc. (Cambria). This report summarizes the results of the recent March 1998 Geoprobe boring investigation at the site. This investigation follows these past investigations:

- The detection of soil contamination beneath piping at dispenser 1 in August 1996;
- The detection of free product in the piping run between one of the dispensers and the gasoline tank; and
- The detection of TPHg, TPHd and BTEX beneath dispensers 1,2 and 6 during the 1998 station upgrade.

Because of the rainy conditions during the station upgrade, no remediation was done after the detection of the free product.

In March 1998, soil borings SB-1 through SB-5 were advanced around the areas of known petroleum release, dispenser 1 and the repaired piping run. Both soil and grab groundwater samples were taken for chemical analysis. Additional parameters including porosity, moisture content, fractional organic carbon and bulk density were also determined on specific samples. These results indicate the major petroleum release to be TPHg, BTEX and MTBE and its location is near dispenser 1 and the underground tank pit. The southernmost borings, SB-4 and SB-1 did not detect appreciable contamination. At this time, our office requests additional site characterization along with a groundwater investigation. Your work plan should determine the extent of both soil and groundwater contamination. The extent of free product, if present, should also be determined. The high concentration of TPHg detected in SB-5 and the observed free product within the piping run indicate the likelihood of free product.

Although regional and anticipated groundwater flow is southwesterly towards the bay, it has been found that site specific gradient is variable in this area. The fill material in shallow soil may give rise to preferential groundwater flow pathways.

Our office recommends additional site investigation and the conversion of selected borings into permanent monitoring wells. Should free product be present, please indicate how it will be remediated. Boring(s) should be advanced near the noted Existing Building for future risk evaluation. You should also collect and analyze a water sample from the existing underground storage tank pit.

Please submit a work plan to address the above concerns **within 30 days or by May 25, 1998.**

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

Sincerely,

Barney M. Chan
Hazardous Materials Specialist

C: B. Chan, files
Ms. M. Feineman, Cambria Environmental, 1144 65th St., Suite B
Oakland, CA 94608

Ssi540

ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
DAVID J. KEARS, Agency Director

R0223

ENVIRONMENTAL HEALTH SERVICES
1131 Harbor Bay Parkway
Alameda, CA 94502-6577
(510) 567-6777

April 25, 1997

ATTN: Brett Hovland

Shell Oil Co
P O Box 4023
Concord CA 94524

RE: Project # 2A - Type MOD
at 540 Hegenberger Rd in Oakland 94621

Dear Mr. Hovland,

Enclosed is a list of the time spent to oversee the repair of the leaking pipeline from August 21, 1996 to November 1, 1996, the amount owed is $282.00.

The deposit refund mechanism is authorized in Section 3-140.5 of the Alameda County Ordinance Code. Work on this project was debited at the Ordinance specified rate, currently $94 per hour.

Please submit a check payable to Alameda County Environmental Health Services and include the following identifying information on your check:
- project #
- type of project and
- site address (see RE: line above).

If you have any questions, please contact me at (510) 567-6746.

Sincerely,

Don Hwang
Hazardous Materials Specialist

ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
DAVID J. KEARS, Agency Director

RO#223

February 26, 1997
StID # 3646

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

Mr. R. Jeff Granberry
Shell Oil Products Co.
P.O. Box 4023
Concord, CA 94524-4023

Re: Investigation Work Plan, Shell Service Station, 540 Hegenberger Rd., Oakland CA 94621

Dear Mr. Granberry:

Our office has received and reviewed the January 9, 1997 Investigation Work Plan for the above referenced site as prepared by Cambria. This work plan is in response to the County's request for site characterization subsequent to detecting contamination in a soil sample beneath the westernmost dispenser at the site.

The work plan proposes advancing ten (10) Geoprobe borings covering the entire site, with specific borings for soil and groundwater samples and specific borings for soil sampling only. My general impression of the work plan is that it appears excessive if the only confirmed release is from beneath the western dispenser area. If this area is the only area of suspected fuel release, I recommend advancing the four proposed Geoprobe borings in the four major compass directions around the western dispenser and take both soil and groundwater samples from each of these borings. Should field screening indicate contamination in any of these borings, another boring further downgradient would be recommended. You may also choose to take a grab groundwater sample from one of the existing observation wells within the tank pit for chemical analysis. Samples should be run for TPHg, BTEX and MTBE.

You may assume a west-northwesterly gradient at this site based upon the gradient at the Arco Station at 566 Hegenberger Rd.

Please comment on my observations and notify me prior to your field work. I may be reached at (510) 567-6765.

Sincerely,

Barney M. Chan
Hazardous Materials Specialist

c: B. Chan, files
N. S. MacLeod, Cambria, 1144 65th St., Suite B, Oakland 94608
wpap530

ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
DAVID J. KEARS, Agency Director

RO#223

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

November 7, 1996
StID # 3646

Mr. Jeff Granberry
Shell Oil Products Co.
P.O. Box 4023
Concord, CA 94524

Re: Request for Work Plan for Subsurface Investigation at 540 Hegenberger Rd., Oakland CA 94621

Dear Mr. Granberry:

Our office has received and reviewed a copy of the analytical report for a soil sample taken beneath a repaired dispenser at the above referenced site. The report was sent by Mr. Paul Waite of Cambria Environmental Technology to Mr. Don Hwang of our office. The analytical results of the soil sample (3400 ppm Total Purgeable Petroleum Hydrocarbons, 720 ppm MTBE and 17, 280, 84, 450 ppm BTEX respectively) indicate that a release of petroleum hydrocarbons has occurred, the extent of which must be determined and potentially remediated. We have also received an Unauthorized Release (Leak) Report dated 8/21/96 completed by Mr. Brett Hovland of Shell Oil. The leak reports state that a site investigation is planned. Our office agrees with this recommendation.

Therefore, please submit a work plan for both soil and groundwater characterization of the above site. Your work plan for this site **within 45 days or by December 16, 1996.**

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. P. Waite, Cambria Environmental Technologies, 1144 65th St., Suite B, Oakland CA 94608
Mr. D. Hwang, ACEDH

wprq540

ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
DAVID J. KEARS, Agency Director

R0223

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

April 4, 1990

Ms. Lisa Foster
Shell Oil Company
P.O. Box 4023
Concord, CA 95424

RE: Underground Tank Issuance of Five Year Permit

Dear Ms. Foster:

An underground tank inspection was conducted at Mac's Shell located at 540 Hegenberger Rd., Oakland, CA 94621 on January 31, 1990 by Susan Hugo of our department.

The facility at the above mentioned location has been issued a five year permit to operate the four underground tanks.

Enclosed is the five year permit.

If you have any question, please contact Susan Hugo, Hazardous Materials Specialist at (415) 271-4320.

Sincerely,

Edgar B. Howell

Edgar B. Howell III, Chief
Hazardous Materials Division

EBH:SH:sh

cc: Ken Lottinger, Shell Area Manager
Marvin McVicker, Dealer