

ALAMEDA COUNTY
HEALTH CARE SERVICES

AGENCY
DAVID J. KEARS, Agency Director



RO # 392

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

March 18, 1999
StID # 3876

Mr. Paul Supple
ARCO Products Co.
P.O. Box 6549
Moraga, CA 94570

**Re: Additional Subsurface Investigation at ARCO Station No. 2185, 9800 E. 14th St.,
Oakland, CA, 94603**

Dear Mr. Supple:

Upon review of the recent quarterly groundwater monitoring report for the Fourth Quarter 1998 for the above site, it appears that groundwater conditions have stabilized and do not pose a risk. At this time, you may suspend future monitoring. However, one problem still remains which our office has discussed with Mr. Ray Kaminsky of EMCON. It concerns the Tier 2 RBCA for this site. The residual benzene concentration in soil samples collected beneath the former fuel dispensers may conservatively pose a risk to human health. The soil results are biased because of the results of a few soil samples with elevated benzene concentration. Therefore, to resolve this situation, our office requests an additional subsurface investigation in the areas near the former dispensers. Either soil or soil vapor samples should be collected to verify the prior analytical results. It is likely that current site conditions have changed considerably from the initial conditions taken during the tank removal in 1991. Therefore, you are encouraged to re-sample soil in the same general location as in the past. Alternatively, soil vapor samples may be taken, however, there may be some doubt as to soil conditions if this is done.

Please submit a work plan for this additional investigation to our office within 30 days or by April 19, 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. G. Vander Veen, Pinnacle Environmental Solutions, 144-A Mayhew Way, Walnut
Creek, CA 94596

Mr. R. Kaminsky, EMCON, 1921 Ringwood Ave., San Jose, CA 95131-1721

Addwp9800

ALAMEDA COUNTY
HEALTH CARE SERVICES



AGENCY
DAVID J. KEARS, Agency Director

R0392

June 16, 1998
StID # 3876

Mr. Paul Supple
ARCO Products Co.
P.O. Box 6549
Moraga, CA 94570

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

Re: Risk Assessment and MTBE Sampling at ARCO Station No. 2185, 9800
E. 14th St., Oakland CA 94603

Dear Mr. Supple:

Our office has been informed that EMCON has previously prepared and submitted a Human Health Risk Assessment (HHRA) for the above site, dated October 6, 1997. Unfortunately, I have not been able to find the copy sent to our office. I have, therefore, requested from Mr. Glen VanderVeen, that another copy be sent to me.

In addition, our office has recently received guidance from the Regional Water Quality Control Board regarding their sampling recommendation for the analysis of oxygenates and other gasoline additives. According to their May 15, 1998 memo, when a site is in the pre-closure stage, you should confirm MTBE using EPA Method 8240 or 8260. Therefore, our office requests that you sample monitoring wells MW-3 and MW-8 for this compound using either method. Additional groundwater sampling may then be put on hold until we receive and review the HHRA and the confirmatory MTBE results. Please submit these technical reports to our office within 30 days or by July 16, 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

Mr. G. VanderVeen, EMCON, 1433 N. Market Blvd., Sacramento, CA
95834-1943

Mr. G. Messerotes, EMCON, 1921 Ringwood Ave., San Jose, CA
95131-1721

ALAMEDA COUNTY
HEALTH CARE SERVICES

AGENCY
DAVID J. KEARS, Agency Director



R0392

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

June 8, 1998
StID # 3876

Mr. Paul Supple
ARCO Products Co.
P.O. Box 6549
Moraga, CA 94570

Re: Request for Risk Evaluation for ARCO Station No. 2185, 9800 E. 14th
St., Oakland CA 94603

Dear Mr. Supple:

Our office has been reviewing the above site for recommendation for site closure as a "low risk" groundwater case. Although it appears that the site may be eligible for closure under this classification, our office will need an evaluation for risk to human health. This is necessary, since it appears that the site may not pass a Tier 1 risk assessment, the most conservative of evaluations.

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

Sincerely,

Barney M. Chan
Hazardous Materials Specialist

C: B. Chan, files
Mr. G. Messerotes, EMCON, 1921 Ringwood Ave., San Jose, CA 95131-1721

HRA-9800

ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY

DAVID J. KEARS, Agency Director



R0392

RAFAT A. SHAHID, DIRECTOR

DEPARTMENT OF ENVIRONMENTAL HEALTH
State Water Resources Control Board
Division of Clean Water Programs
UST Local Oversight Program
1131 Harbor Bay Parkway
Alameda, CA 94502-6577
(510) 567-6700

June 1, 1995
StID # 3876

Mr. Micheal Whelan
ARCO Products Company
2155 South Bascom Ave., Suite 202
Campbell, CA 95008

**Re: Status of Subsurface Investigation at Station #2185, 9800
E. 14th St., Oakland CA 94603**

Dear Mr. Whelan:

Thank you for the submission of your first quarter 1995 groundwater monitoring report for the above site. It appears that you are continuing to experience access problems with the two additional off-site wells previously proposed. It was noticed that significant reduction was observed from the past monitoring event especially in MW-3. It is not certain what is the cause(s) for this reduction. Perhaps natural biodegradation and plume migration are the contributing factors.

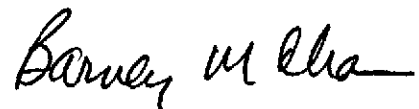
In an attempt to determine the applicability of the Non-Attainment Area policy, our office has the the following requests/comments:

1. Please incorporate the analysis for MTBE in your future groundwater analyses. I believe ARCO has been notified of this new requirement requested by the RWQCB.
2. To verify that biodegradation is occurring our office requests at least on an annual basis, the analysis for chemicals and other indicators of biodegradation in your monitoring wells. These parameters should include dissolved oxygen, potassium, soluble and total Kjeldahl nitrogen, phosphate, redox potential and a plate count for heterotrophic and hydrocarbon utilizing bacteria. It would be recommended for these analyses to be reported in the next monitoring report if possible.
3. Please provide the gas chromatogram for TPH analysis of groundwater from MW7 and a representative chromatogram from the other wells (if their chromatograms are similar). Some estimation of biodegradation and hydrocarbon loss can be estimated through the examination of the chromatograms.
4. If you foresee that access for the off-site wells is not imminent, please consider temporary borings and groundwater sampling as an alternative.

Mr. Micheal Whelan
StID # 3876
9800 E. 14th St.
June 1, 1995
Page 2.

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

Sincerely,



Barney M. Chan
Hazardous Materials Specialist

cc: David Larsen, Emcon, 1921 Ringwood Ave., San Jose, CA 95131-
1721
M.L. Tung, files

bio9800

ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY

DAVID J. KEARS, Agency Director



R0392

RAFAT A. SHAHID, ASST. AGENCY DIRECTOR

March 18, 1994
StID # 3876

Mr. Michael Whelan
ARCO Products Company
P.O. Box 5811
San Mateo, CA 94402

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 Investigation at ARCO Station 2185, 9800 E. 14th
St., Oakland CA 94603**

Dear Mr. Whelan,

Our office has received the March 10, 1994 response letter to my February 10, 1994 letter from RESNA. This letter follows our February 28th meeting at our office where we discussed the County's concerns in accepting Alternative Points of Compliance (APC) for this site. At that time, I agreed that the two off-site wells should be installed and could be used as the APC, compliance wells, while the wells on-site could be used as the trigger or guard wells. We also agreed that one additional on-site well should be installed in the northwest corner of the property. Given the physical constraints of the concrete planter area, a well as shown in Plate 2 of the March 10th letter is acceptable and is approved.

We also discussed what other items could be done to investigate this site. These items include:

1. Further record search of the neighboring sites to see if they had underground tanks, if the tanks were removed, if there was ever a reported fuel release at the site, etc. Because MW-7 appears to have been impacted by gasoline, this information is critical if another RP is being considered to be identified.
2. We discussed the use of fate-and-transport modeling to determine if the concentration of gasoline and BTEX in MW-7 would be consistent with concentrations being found onsite. Please use a public domain model when doing this.
3. We encouraged you to develop cleanup levels for the guard well and the APC well. Please support such concentrations with published data or by use of a risk assessment.
4. I mentioned that as part of the risk management of this site, you should develop a contingency plan and consider filing an indemnification letter with our office and the RWQCB. It may be premature at this time to perform items 3 and 4, however, items one and two should be done since it may be up to 22 weeks before the off-site wells are installed.

Mr. Michael Whelan
StID # 3876
9800 E. 14th St.
March 18, 1994
Page 2.

As you continue your quarterly monitoring and the installation of MW-10, it may become clear whether off-site migration has occurred and whether items 1 and 2 are necessary.

You should keep our office updated as to your progress in installing the on-site and off-site wells and in complying with items 1 and 2 mentioned above.

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

Sincerely,



Barney M. Chan
Hazardous Materials Specialist

cc: J. Young, RESNA, 3315 Almaden Expressway, Suite 34, San Jose,
CA 95118
E. Howell, files

4-9800E14

ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY

DAVID J. KEARS, Agency Director



R0392

RAFAT A. SHAHID, ASST. AGENCY DIRECTOR

February 10, 1994
StID # 3876

Mr. Michael Whelan
ARCO Products Company
P.P. Box 5811
San Mateo, CA 94402

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 January 20, 1994 Work Plan for Record Search and
Additional Offsite Investigation at ARCO Station 2185, 9800
E. 14th St., Oakland CA 94603**

Dear Mr. Whelan:

Our office has received and reviewed the above referenced work plan as prepared by your consultant, RESNA. This work plan responded to my December 2, 1993 letter which requested additional information and work prior to accepting Alternative Points of Compliance (APC) for this site.

In response to RESNA's proposal our office has the following comments/requirements:

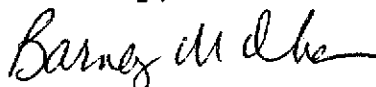
1. Step 1 of their proposal proposes a record search of the properties around the ARCO station to determine whether they previously had underground tanks. RESNA suggests that the contamination currently being found in the off-site well, MW-7, may be from prior tank activities at the adjacent site. Keep in mind, the mere presence of former tanks is not sufficient to implicate this site as the source of hydrocarbon contamination. You must provide subsurface soil and/or groundwater data to support this claim.
2. Step 3 of RESNA's proposal states that two additional wells will be installed on the two other parcels across the street from this site. Our office requests two additional wells be installed on the immediate north and west side of this site along 98th Ave. and E. 14th St. respectively. One of these wells should be continuously cored and logged to verify the absence of any sand stringers or other permeable lens. Recall that the compliance or trigger wells should be located, when at all possible, on the site. Please provide a map indicating the location of these additional wells. In addition, our office requests a specific contingency plan which will be implaced upon significant impact of the compliance wells.

Please provide written comment to this letter within 30 days or by March 14, 1994.

Mr. Michael Whelan
StID # 3876
9800 E. 14th St.
February 10, 1994
Page 2.

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

Sincerely,



Barney M. Chan
Hazardous Materials Specialist

cc: G. Jensen, Alameda County District Attorney Office
J. Young, RESNA, 3315 Almaden Expressway, Suite 34, San
Jose, CA 95118
E. Howell, files

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ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY

DAVID J. KEARS, Agency Director



R0392

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

December 2, 1993
StID # 3876

Mr. Michael Whelan
ARCO Products Company
P. O. Box 5811
San Mateo, CA 94402

**Re: Status of Subsurface Investigation at ARCO Station 2185,
9800 E. 14th St., Oakland CA 94603**

Dear Mr. Whelan:

Our office has completed the review of the October 12, 1993 Report of Findings for the above referenced site. This report, prepared by Resna, summarizes the results following the installation of two additional on-site wells and one off-site well plus gives the pump test results using MW-3 as the pumping well. Clearly, the residual soil contamination around the former tank pit and dispenser islands is the source of significant groundwater contamination which is migrating off-site. Remediation alternatives are also discussed and "Alternative Points of Compliance" (APC) is concluded to be the most feasible remedial method.

Although it appears that vapor extraction, air sparging and groundwater pump and treat methods have been investigated, it seems premature to state that APC is the most appropriate remedial method, especially when the conditions of APC have not yet been met. Though the specifics of APC have not yet been adopted in the Basin Plan, the general concepts are outlined in the Basin Plan Amendments, adopted in October 1992. Assuming the specific requirements for APC remain unchanged from the Tentative Resolution, you will need to address the following concerns prior to proposing APC as your most feasible remedial method:

Complete site characterization data is necessary. The highly polluted source areas in the vadose zone and in the capillary fringe, for shallow water table conditions, must be removed to the extent feasible. Where plumes have migrated offsite, several compliance points could be considered, one at the property boundary and one at the plume boundary. Source removal must be to a level which adequately protects public health. Any compromise to groundwater quality must obtain the approval of the Regional Water Quality Control Board. Capping or slurry walls may be an effective means to limit migration. An acceptable plan is submitted for containing and managing the remaining risks posed by residual ground water pollution. This plan could

Mr. M. Whelan
StID # 3876, 9800 E. 14th St.
December 2, 1993
Page 2.


include institutional controls like a deed restriction and a commitment to mitigating measures, such as participation in a regional ground water monitoring program.

Based on the review of all reports and data for this site, the criteria of APC have not been met. Specifically, it is clear that one off-site well, currently on the west side of E. 14th St., does not adequately identify the limits of off-site contamination nor does it fully characterize the site given the varying groundwater gradient found at this site. The additional required wells constitute the added characterization and compliance points necessary for this site. Some type of contingency plan should be proposed to prevent an increase of dissolved constituents from passing the compliance point. Limited groundwater extraction or the installation of a slurry wall could be considered. Source removal may not adequately protect human health. Upon the completion of your site characterization, the potential risks of residual groundwater contamination may need to be investigated via a human health risk assessment. Specific risk management techniques will also be required when all other elements of APC are met.

Because of these conditions, you are requested to provide a work plan to further characterize this site **within 45 days or by January 20, 1994**. You should also provide written comment to the above mentioned items within your work plan.

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
J. Young, Resna, 3315 Almaden Expressway, Suite 34, San
Jose, CA 95118
E. Howell, files

2wpad9800

ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY

DAVID J. KEARS, Agency Director



R0392

RAFAT A. SHAHID, ASST. AGENCY DIRECTOR

December 7, 1992
STID # 3876

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. Michael Whelan
ARCO Products Company
P.O. Box 5811
San Mateo, CA 94402

**Re: Comment on the Work Plan for Additional Subsurface
Investigation at ARCO Station 2185, 9800 E.14th St.,
Oakland CA 94603**

Dear Mr. Whelan:

Our office has received and reviewed the November 25, 1992 work plan for additional subsurface investigation for the above ARCO site. As you are aware, this plan calls for the installation of two on-site wells and one off-site well, the analysis of selected soil samples from the well borings, the performing of a step draw-down pump test on MW-3 and additional records and well survey searches. Prior to initiating this work our office has the following concerns which need to be addressed:

1. The additional wells are going to be used to determine the lateral and vertical extent of hydrocarbon contamination downgradient to the former service islands and former underground tanks. Assuming the gradient, as shown in this report, it appears that both MW-6 and MW-7 would be better located somewhat north of their proposed locations on Plate 5. Please comment on this observation.

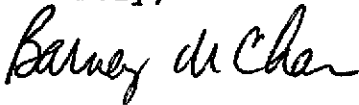
2. Although the most significant groundwater impact appears to be near MW-3, our office is also concerned about the potential offsite migration of hydrocarbon contamination near MW-2. Please keep in mind that if the pump test performed on MW-3 does not show sufficient influence on MW-2, you should consider pumping from MW-2 as well. If neither well shows much lateral influence, another remediation method must be considered.

Please provide a written response to these issues prior to initiating this work plan.

Mr. Michael Whelan
STID # 3876
9800 E. 14th St.
December 7, 1992
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
J. Coffman, RESNA, 3315 Almaden Expressway, Suite 34,
San Jose, CA 95118
E. Howell, files
WP-9800E14

ALAMEDA COUNTY
HEALTH CARE SERVICES

AGENCY

DAVID J. KEARS, Agency Director



R0392

RAFAT A. SHAMID, Assistant Agency Director

May 19, 1992

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

Mr. Tom Wray
Field Engineer
Atlantic Richfield Company
112 44th Street
San Mateo, CA 94402

Re: ARCO Station #2185, 9800 E. 14th Street, Oakland, CA 94603

Dear Mr. Wray:

On May 7, 1992, Barney Chan and Ron Owcarz of this office made a final inspection of the installation of four new underground fuel tanks at the above referenced site. At this inspection, it was noticed that only five gallon overspill protection was installed on the product delivery riser pipes. These will have to be replaced with 15 gallon units as indicated on the underground tank installation plans approved by Barney Chan on August 7, 1991.

In addition, please submit the following items within 30 days in order to receive five-year permits to operate the new underground tanks at this site:

1. An as-built and complete plot plan.
2. A written spill response plan.
3. A written tank monitoring plan.
4. Results of initial precision tank tests.
5. Results of initial precision pipeline leak detector tests.
6. Complete permit form A (one per facility).
7. Complete permit form B (one per tank).
8. Complete permit form C (one per tank).

I have enclosed blank copies of the required permit forms for you. Title 23 of the California Code of Regulations prohibits the operation of any underground storage tank without a permit. Please contact Ron Owcarz at 271-4320 if you have any questions which may arise in completing the mandatory five-year permit process.

Sincerely,


Larry Seto
Senior Hazardous Materials Specialist

Enclosures

Mr. Tom Wray
May 19, 1992
Page 2 of 2

cc: Gil Jensen, Alameda County District Attorney's Office
Marlon Brandle, Oakland Fire Department
Rafat Shahid, Assistant Agency Director, Environmental Health
Barney Chan, Alameda County Hazardous Materials Division
Ron Owcarz, Alameda County Hazardous Materials Division
Dan Goalwin, Barghausen Consulting Engineers

ALAMEDA COUNTY
HEALTH CARE SERVICES

AGENCY

DAVID J. KEARS, Agency Director



R0390

RAFAT A. SHAHID, Assistant Agency Director

May 5, 1992
BTID # 3876

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

Mr. Mike Whelan
Arco Environmental Compliance Section
2000 Alameda de las Pulgas
San Mateo, CA 94403

Re: Review of Site Investigation Work Plan for ARCO Facility No.
2185, 9800 E. 14th St., Oakland 94603

Dear Mr. Whelan:

Our office has received and reviewed the Site Investigation Work Plan dated December 18, 1991 for the above location, prepared by Roux Associates. The plan calls for the installation of four (4) monitoring wells and subsequent soil and groundwater analysis. The proposed initiation of this work is scheduled for when the installation of the new underground tanks is complete.

Although in a previous meeting with Mr. Chuck Carmel and Paul Supple of Roux, the County relented to their request to initiate an investigation after the installation of the new tanks, it appears that the locations of the proposed monitoring wells would not interfere with the installation of the tanks. Presently, the new tanks have been installed and are awaiting a final inspection prior to issuance of an operating permit. No further excavation is likely to be needed for the tank installations, therefore the installation of the monitoring wells can and should proceed immediately.

The County also recommends the initiation of offsite permit application for the installation of additional wells. This is requested because of the expected groundwater gradient and the closeness of contaminated soils to the border of the property.

You may contact me at (510) 271-4320 should you have any questions regarding this letter.

Sincerely,

A handwritten signature in cursive script, appearing to read "Barney M. Chan".

Barney M. Chan
Hazardous Materials Specialist

cc: M. Thomson, Alameda County District Attorney Office
P. Supple, Roux Associates
R. Hiatt, RWQCB
WP-9800E14

ALAMEDA COUNTY
HEALTH CARE SERVICES

AGENCY

DAVID J. KEARS, Agency Director



R0392

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

December 11, 1991

Mr. Chuck Carmel
Arco- Environmental Compliance Section
2000 Alameda de las Pulgas
San Mateo, Ca 94403

Re: Status of the Underground Tank Removals and Replacements at
Arco #2185, 9800 E. 14th St., Oakland CA 94603

Dear Mr. Carmel:

This letter serves to comment on the results of the November 19, 1991 meeting our office had with you and Mr. Paul Supple of Roux Associates. The letter also serves as written approval to backfill the former tank and dispenser pit areas with clean fill. It was acknowledged that considerable gasoline and BTEX contamination exists in these areas and that further excavation was not the best approach due to the unknown limits of contamination. It was agreed that after an initial investigation consisting of installation of soil borings and monitoring wells along with soil and ground water analysis and a ground water pump test, a more detailed remediation plan will be developed to encompass the entire site. Mr. Supple stated that the initial Work Plan would be submitted to our office by December 18, 1991.

The County would like to complete the removal/installation project at this site concurrently with the assessment and remediation of the subsurface soils and ground water. To this end, the timely submission of your initial and subsequent Work Plans is critical along with the timely completion of these specific items. Arco's current approach of updating work performed at their various sites will help us follow the progress of these goals.

Sincerely,

A handwritten signature in cursive script, appearing to read "Barney M. Chan".

Barney M. Chan, Hazardous Materials Specialist

cc: M. Thomson, Alameda County District Attorney Office
P. Supple, Roux Associates
E. So, RWQCB

1-9800E14Arco #5