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

06-20-01

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

RO0000393

June 19, 2001

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

RE: Work Plan Approval for ARCO Service Station No. 6113, 785 East Stanley Blvd., Livermore, CA

Dear Mr. Supple:

I have completed review of Cambria's June 2001 *Well Replacement Work Plan* prepared for the above referenced site. The proposal to install one replacement groundwater monitoring well is acceptable. Field work should commence within 60 days of the date of this letter, **or by August 20, 2001.** Please provide 72 hours advance notice of field activities.

If you have any questions, I can be reached at (510) 567-6762.

eva chu
Hazardous Materials Specialist

email: Ron Scheele

arco6113-2

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

04-04-01

P0393

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

StID 3883

April 3, 2001

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

RE: Monitoring Well Replacement for ARCO Station 6113 at 785 E. Stanley Blvd., Livermore, CA

Dear Mr. Supple:

I have completed review of Cambria's March 19, 2001 *Underground Storage Tank, Piping Removal, and Well Abandonment Report* prepared for the above referenced site. Three USTs were removed in January 2001 and replaced with two new USTs. Soil samples collected from the tank excavation contained elevated concentrations of TPHg, BTEX and MTBE. During the replacement activities, wells MW-5 and VW-3 were abandoned. Both wells were drilled out and grouted.

At this time a replacement well should be installed north-northwest of the tank complex. It is recommended that this well be screened from approximately 15 to 30 feet bgs. A workplan for the installation of a replacement is due within 60 days of the date of this letter, **or by June 5, 2001.**

If you have any questions, I can be reached at (510) 567-6762.

eva chu
Hazardous Materials Specialist

c: Ron Scheele, Cambria, 1144 65th Street, Suite B, Oakland, CA 94608

arco6113-1

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

60393

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

June 10, 1998

ATTN: Account Payable

Arco Station #6113
785 E Stanley Blvd
Livermore CA 94550

RE: Project # 291A - Type A
at 785 E Stanley Blvd in Livermore 94550

Dear Property Owner/Designee:

Our records indicate the deposit/refund account for the above project has fallen below the minimum deposit amount. To replenish the account, please submit an additional deposit of $437.70, payable to Alameda County, Environmental Health Services, within two weeks of receipt of this letter.

It is expected that the amount requested will allow the project to be completed with a zero balance. Otherwise, more money will be requested or any unused monies will be refunded to you or your designee.

The deposit refund mechanism is authorized in Section 6.92.040L of the Alameda County Ordinance Code. Work on this project will be debited at the Ordinance specified rate, currently $94 per hour.

Please be sure to write 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 Amir Gholami at (510) 567-6876.

Sincerely,

Tom Peacock, Manager
Environmental Protection

c: files

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

R0393

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

May 12, 1998

ATTN: Sir Or Madam

Resna, Inc.
3315 Almaden Expwy #34
San Jose CA 95120

RE: Project # 291A - Type A
at 785 E Stanley Blvd in Livermore 94550

Dear Property Owner/Designee:

Our records indicate the deposit/refund account for the above project has fallen below the minimum deposit amount. To replenish the account, please submit an additional deposit of $437.70, payable to Alameda County, Environmental Health Services, within two weeks of receipt of this letter.

It is expected that the amount requested will allow the project to be completed with a zero balance. Otherwise, more money will be requested or any unused monies will be refunded to you or your designee.

The deposit refund mechanism is authorized in Section 6.92.040L of the Alameda County Ordinance Code. Work on this project will be debited at the Ordinance specified rate, currently $94 per hour.

Please be sure to write 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 Amir Gholami at (510) 567-6876.

Sincerely,

Tom Peacock, Manager
Environmental Protection

c: files

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

RAFAT A. SHAHID, Assistant Agency Director

R0393

DEPARTMENT OF ENVIRONMENTAL HEALTH
80 Swan Way, Rm. 210
Oakland, CA 94621
(415) 271-4300

January 10, 1992

Mr. Joel Coffman
RESNA
3315 Almaden Expressway, Suite 34
San Jose, CA 95118

RE: ARCO Station 6113, 785 East Stanley Boulevard, Livermore, California 94550

Dear Mr. Coffman:

This department has completed its review of the Work Plan for Additional Subsurface Investigation and Vapor Extraction Test (October 17, 1991) and the Third Quarter 1991 Groundwater Monitoring Report for the referenced site.

The soil and groundwater investigation being conducted at the site initially started to determine the extent of the unauthorized release associated with the former waste oil tank (removed in 1/26/89). However, gasoline constituents in addition to total oil and grease were found in the monitoring wells. MW-4 showed 3,500 ppb TPHg (2/21/91) and 1,400 ppb TPHg (5/20/91).

The workplan is acceptable provided the following conditions are met:

1) Please clarify the number of underground storage tanks currently operating at the site. According to your reports and site description, there are four underground storage tanks. However, our records showed that only three underground storage tanks are registered with this office.

2) Additional soil borings are required to define the lateral extent of the waste oil contaminants. Elevated levels of oil and grease (1,100 ppm) remain at the site in the vicinity of the station building. Advancement of soil borings around the former waste oil tank (one in the southeast and one in the southwest) is necessary to complete the waste oil contaminant definition.

3) Directional variations in the groundwater gradient at the site (180 degrees at the most) have been documented. Monitoring of groundwater elevations must occur on a monthly basis.

4) Please submit a copy of the site safety plan to this office.

5) All applicable permit requirements from other regulatory agencies must be followed.

6) Analytical result for total oil and grease (TOG) during the May 20, 1991 sampling event showed <75,000 ppb. The Tri-Regional Board's Guidelines (August 1990) requires a quantitation reporting limit of 5,000 ppb in water for TOG analysis. This detection limit should be followed.

7) The extent of groundwater contamination at the site has not been completely delineated. MW-3 showed increasing levels of TPHg, benzene, toluene, ethylbenzene and xylenes during the last two sampling events (2/21/91 and 5/20/91). MW-4 detected 1,400 ppm TPHg (5/20/91). MW-3 and Mw-4 were dry during the monthly groundwater elevation measurement of 9/12/91. Additional groundwater monitoring wells must be installed downgradient of the former waste oil tank at the site and groundwater samples must be analyzed for TPHg, BTEX, TPHd and TOG.

Should you have any questions concerning this letter, please contact me at (510) 271-4320.

Sincerely,

Susan L. Hugo

Susan L. Hugo
Hazardous Materials Specialist

cc: Rafat A Shahid, Asst. Agency Director, Environmental Health
Charles Carmel, ARCO Products Company
Eddy So, San Francisco Bay RWQCB
Mark Thomson, Alameda County District Attorney's Office
Danielle Stefani, City of Livermore Fire Department
Files

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

R0393

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

November 16, 1990

Mr. Kyle Christie
ARCO Products Co.
P.O. Box 5811
San Mateo, CA 94402

RE: **Quarterly monitoring report and consultant's letter on ARCO station #6113, 785 E. Stanley Blvd., Livermore**

Dear Mr. Christie:

The Alameda County Department of Environmental Health, Hazardous Materials Division has reviewed the most recent quarterly report and letter submitted for the above site by Applied Geosystems. The report indicates that levels of total oil and grease in the groundwater cross-gradient and immediately upgradient of the former waste oil tank have returned to "ND," after being detected in the 13 ppm range three months previously. As in previous episodes of sampling, the flow direction of groundwater has remained towards the northeast.

Based on this data, Applied Geosystems has requested that we reconsider our position that additional wells are needed at this site. We are denying this request for the following reasons:

1. Based on the local groundwater gradient, which has remained consistent for each sampling episode, there are no monitoring wells **downgradient** of the former oil tank, and downgradient of the contaminated soil adjacent to it that could not be removed. Installation of downgradient wells is always a requirement once an unauthorized release has been verified.

2. There has been no effort to explain the oil and grease contamination found in monitoring well MW-1 (upgradient from the former waste oil pit) and MW-3 (cross-gradient), in June 1990. This was requested in my letter of September 21.

Therefore, as stated previously, we are requiring that additional monitoring wells be installed at the site. More wells must be installed to define the downgradient limits of a potential oil & grease plume (if, in fact, one exists).

The Applied Geosystems letter requested a discontinuance of TPH-diesel as a groundwater monitoring parameter. This is acceptable, since no diesel has been detected in groundwater and there is no diesel sold at the site.

Please submit to this office and to the Regional Water Board a work plan addressing the questions and concerns raised in this letter. This work plan is due no later than **December 21, 1990**, and must include a schedule for implementation of specific tasks. Because we are overseeing this site under the designated authority of the Water Board, this constitutes a formal request for technical reports, per Sec. 13267(b) of the California Water Code. Failure to respond in a timely manner could result in civil liabilities under the Water Code of up to $1,000 per day. Other violations of California law, such as Sec. 25299.37 of the California Health and Safety Code, may also be cited.

Because the funds on deposit for this site have nearly been depleted, we require an additional deposit of $400 to continue county oversight of the case. Please remit a draft, made out to Alameda County and indicating the site address, by December 21, 1990. If you have any questions about this letter, please contact me at 271-4320.

Sincerely,

Gilbert M. Wistar

Gil Wistar
Hazardous Materials Specialist

cc: Marc A. Briggs, Applied Geosytems (3315 Almaden Expy., Suite 34, San Jose, CA 95118)
Lester Feldman, San Francisco Bay RWQCB
Gil Jensen, District Attorney, Alameda County Consumer and Environmental Protection Division
Rafat Shahid, Asst. Agency Director, Environmental Health
files

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

R0393

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

September 21, 1990

Mr. Kyle Christie
ARCO Products Co.
P.O. Box 5811
San Mateo, CA 94402

RE: "Second quarter" monitoring report for ARCO station #6113, 785 E. Stanley Blvd., Livermore

Dear Mr. Christie:

The Alameda County Department of Environmental Health, Hazardous Materials Division has reviewed the above report prepared by Applied Geosystems. It indicates that levels of total oil and grease in the groundwater cross-gradient and immediately upgradient of the former waste oil tank have increased to the 13 ppm range. In addition, the flow direction of groundwater has remained northeasterly, apparently diverging from the general flow in the region.

This information raises the following questions:

1. How can the oil and grease contamination in monitoring wells MW-1 (upgradient) and MW-3 (cross-gradient) be explained?

2. What is the extent of oil and grease contamination in groundwater beneath the site?

We are requiring that additional monitoring wells be installed to answer these questions. Based on the measured groundwater flow direction, there are no wells on the site that are downgradient from the location of the old waste oil tank. Further, the levels of TOG in groundwater in wells MW-1 and MW-3 suggest that there may be a fairly large plume of hydrocarbons beneath the site. More monitoring wells must be installed to define the limits of this plume and infer its direction of movement.

Finally, quarterly sampling means every three months, not at nine-month intervals. According to the Applied Geosystems report, groundwater samples were first taken in September 1989 and then in June 1990. Quarterly sampling and analysis means that another round is to take place this month and at least every three months into the future.

Please submit to this office and to the Regional Water Board a work plan addressing the questions and concerns raised in this letter. This work plan is due no later than **October 22, 1990**, and should include a schedule for implementation of specific tasks.

Because we are overseeing this site under the designated authority of the Water Board, this letter constitutes a formal request for technical reports, per Sec. 13267(b) of the California Water Code. Failure to respond in a timely manner could result in civil liabilities under the Water Code of up to $1,000 per day. Other violations of California law, such as Sec. 25299.37 of the California Health and Safety Code, may also be cited.

If you have any questions about this letter, please contact the undersigned at 271-4320.

Sincerely,

Gilbert M. Wistar

Gil Wistar
Hazardous Materials Specialist

cc: Marc A. Briggs, Applied Geosytems (3315 Almaden Expy., Suite 34, San Jose, CA 95118)
Lester Feldman, San Francisco Bay RWQCB
Gil Jensen, District Attorney, Alameda County Consumer and Environmental Protection Division
Rafat Shahid, Asst. Agency Director, Environmental Health
files

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

R0393

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

May 22, 1990

Mr. Robert E. Kitay
Staff Geologist
Weiss Associates
5500 Shellmound St.
Emeryville, CA 94608

Dear Mr. Kitay:

In your letter dated May 4, 1990, you requested information from the site investigation report prepared by Applied Geosystems for the ARCO filling station at 785 E. Stanley Blvd. in Livermore. Our file review yielded the following information.

1. Groundwater gradient at the site
According to Zone 7 of the Alameda County Flood Control and Water Conservation District, the regional groundwater flow in this area is towards the north-northwest. However, the calculated direction from the three monitoring wells on site is towards the northeast at a gradient of 0.028 feet/ft.

2. A map with approximate well locations
This map is enclosed; it shows the locations of monitoring wells MW-1, MW-2, and MW-3.

3. Analytical results from soil and groundwater
Soil and groundwater samples were analyzed for chromium, lead, and zinc, as well as for TPH-G, TPH-D, BTEX, and TOG. The metal levels in soils from the well borings were consistent, ranging from 37-77 mg/kg (Cr) to 4-13 mg/kg (Pb), to 31-57 mg/kg (Zn). These metals were found in groundwater at levels well below 1 ppm. No hydrocarbons were found in soils. Hydrocarbons were found in groundwater as follows:

MW-1: TPH-G - 80 ppb; BTEX - 3, 1, 0.7, 1 ppb, respectively
MW-2: ND for all constituents
MW-3: TPH-G - 170 ppb; BTEX - 8.9, 0.6, 1.1, ND ppb

4. Description of lithology beneath the site
Two geologic cross-sections are enclosed. From the surface to about 3 feet, there is a silty sand layer. Below this is a 6-10 foot lens of gravel or cobble interbedded with clayey gravel. Below this lies 18-24 feet of silty clay with interspersed gravels, pebbles, and fine sand. Beneath this is a 6-foot zone of water-bearing silty to clayey gravel, which is underlain by a stiff, silty clay of unknown thickness (but at least 3 feet).

5. Depth to water in each well
As of October 12, 1989, the standing water depth below ground surface in each well is as follows:

MW-1: 19.64 feet
MW-2: 18.98 feet
MW-3: 19.66 feet.

This letter contains information limited to files in this office, and does not reflect data that may be available from other agencies or parties. You will be billed for provision of this service at the rate of $60 per hour; enclosed is a copy of the invoice sent to our Billing Department.

If you have any questions concerning this letter, please contact the undersigned at (415) 271-4320.

Sincerely,

Gilbert M. Wistar

Gil Wistar
Hazardous Materials Specialist

Enclosures

c: Rafat A. Shahid, Asst. Agency Director, Environmental Health
files

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

R0393

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

July 27, 1989

Mr. Kyle Christie
Arco Products Co.
P.O. Box 5811
San Mateo, CA 94403

RE: Arco Service Station #6113, 785 E. Stanley Blvd., Livermore

Dear Mr. Christie:

We have received your consultant's work plan dated July 18, 1989. We cannot complete our review of this work plan or of any other materials submitted since the following items are missing or incomplete:

A. **Administrative:**

1. [ ] We have not received a deposit for reviewing the report. A deposit of _____ is required. Please make checks payable to Alameda County.

2. [x] We have exhausted your deposit account. Please send a deposit of $400 to cover costs of remediation oversight.

3. [ ] Other:

B. **Soils Investigation:**

1. [ ] Description of field soil sampling methodology.

2. [ ] Chemical Methods to be used for sample preparation and analysis (method numbers and references).

   pH, GC/FID, PCB

3. [ ] Drilling Logs.

4. [ ] Copies of original, signed laboratory reports.

   Not signed on each page.

5. [ ] Detection limits for all parameters analyzed.

6. [ ] Site map.

C. **Groundwater**

1. [ ] Background assessment: cause & location, pollutants, site history, etc.

2. [ ] Groundwater monitoring well design, installation, development.

3. [ ] Groundwater sampling methodology.

4. [ ] Certified Laboratory and DHS Certified number, chain of custody procedures, sample preservation methods, holding times, etc.

5. [ ] Method used to measure free product thickness.

6. [ ] Method used to measure groundwater elevations.

7. [ ] Vertical and lateral definition of soil contamination.

8. [ ] Local and regional hydrogeology:

   Groundwater sensitivity, site specific geology, hydrogeologic setting, nearby surface water descriptions, potential pollutant pathways, hydraulic connections, local gradient evaluation, seasonal fluctuations, aquifer characteristics, soil permeability.

9. [ ] Groundwater cross-section graphics, gradient maps.

10. [ ] Groundwater beneficial uses:

    Existing beneficial uses, potential beneficial uses, well surveys (municipal, agricultural, domestic), long term fate of contaminants.

11. [ ] Remediation Activities:

    Rationale, soil remediation method and effectiveness, groundwater remediation method and effectiveness, impact on beneficial uses.

12. [ ] Remediation Completion:

    Final clean-up levels sought, monitoring program verification criteria (frequency, duration, statistical methods), impact of residual pollutants on beneficial uses.

D. **Site Safety Plan**

1. [ ] Elements of Site Safety Plan as specified by 29 CFR 1910.120 (See attached).

2. [ ] Other.

E. Other

1. [ ] Reports referred to in your plan have not been supplied to this office.

2. [ ] Reference list to the reports cited in document.

3. [ ] Data format: correlation of lab sample numbers, drilling log sample numbers, cross references, incomplete tables, etc.

4. [ ] Primary contact person for project.

5. [ ] Name and address of organization or persons funding this report.

6. [ ] DHS Laboratory Certification Number.

7. [ ] Statement from certified laboratory that analytical methods used in this report have been certified by DHS.

8. [ ] Quality control and assurance data regarding the analytical information submitted.

9. [ ] Signature of report by registered engineer or professional (Sections 6735, 7835, 7835.1 of Business & Professional Code; Rule 415 of Professional and Vocational Regulations.).

10. [ ] Curriculum vitae for persons involved in project.

11. [ ] Other.

If you have any questions on this matter, please contact Gil Wistar, Hazardous Materials Specialist, at 415/271-4320.

Sincerely,

Gilbert M. Wistar /for

Rafat A. Shahid, Chief
Hazardous Materials Division

RAS:LM:mam

rev 6/89

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

R0393

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

Certified Mailer #P 833 981 392

May 4, 1989

Mr. Kyle Christie
Atlantic Richfield Co.
P.O. Box 5811
San Mateo, CA 94403

RE: ARCO Service Station #6113, 785 E. Stanley Blvd., Livermore

Dear Mr. Christie:

The Alameda County Department of Environmental Health, Hazardous Materials Division, has reviewed your consultant's report on the site shown above. We are not convinced that your approach to the existing contamination will prevent the degradation of groundwater beneath the site, and therefore are requiring further work and/or investigation at this site.

Mr. Robert Wenzlau of Pacific Environmental Group has indicated that soil remaining in the ground at the north end of the tank pit is contaminated above 1,000 ppm of hydrocarbons, but that this soil's removal would threaten the stability of the station building. As a result, he recommends leaving this contaminated soil in place. Because of these structural considerations, we are willing to waive the requirement of removing soil contaminated at hazardous waste concentrations. However, this soil represents a source of potential groundwater contamination; to ensure that migration to the water table does not occur, a groundwater monitoring program should be initiated.

Three monitoring wells should be installed within 10 feet of the location of the former waste oil tank. If you can verify the site-specific groundwater flow direction, one monitoring well in the downgradient direction will suffice. If you can demonstrate that the soil under the station building cannot migrate to groundwater, then we may reconsider this monitoring well requirement. Such site-specific factors as depth to seasonal high groundwater or the existence of laterally continuous clay layers in the vadose zone would be useful in this regard. In our opinion, the impermeable building foundation is not sufficient to prevent the movement of hydrocarbons to groundwater.

We are requesting that the work described above be completed by **June 23, 1989.** Please also send to this office, as soon as possible, all signed manifests documenting the disposal of excavated soil to date.

In addition, we have still not received the $500 deposit requested in the two previous letters to ARCO. This deposit is necessary for the County's oversight of remediation activities, and is only drawn upon when a Hazardous Materials Specialist spends time on this specific project. Funds deposited for the initial tank removal have been exhausted.

If you have any questions about this letter, please contact Gil Wistar, Hazardous Materials Specialist, at (415) 271-4320.

Sincerely,

Rafat A. Shahid, Chief
Hazardous Materials Division

cc: Robert Wenzlau, Pacific Environmental Group
Dyan Whyte, RWQCB
Gil Jensen, Alameda County District Attorney, Consumer and Environmental Protection Agency

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

R0393

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

Certified mailer #: P 833 981 286

April 7, 1989

Mr. Chase Jiannalone
Atlantic Richfield Co.
2000 Alameda de las Pulgas
San Mateo, CA 94402

SECOND NOTICE OF VIOLATION

Re: Unauthorized release from underground storage tank, ARCO Station #6113, 785 E. Stanley Blvd., Livermore, CA

Dear Mr. Jiannalone:

In a letter sent to you on February 21, 1989, the Alameda County Department of Environmental Health, Hazardous Materials Division, requested a proposal and time schedule for completing a site investigation report. As of the date of this letter, this office had received nothing from ARCO. Therefore, this letter constitutes a second notice requesting the materials described below.

Analytical results from soil samples collected from the above site on January 26, 1989 (during tank removal) and on February 3 indicated hydrocarbon contamination above 100 ppm, which is evidence of tank leakage. Title 23 of the California Code of Regulations requires all such unauthorized releases from underground tanks to be reported. An unauthorized release report has been filed per Title 23, and your next step is to initiate further investigation and/or cleanup activities at this site.

First, a preliminary assessment should be conducted to determine the extent of soil and groundwater contamination that has resulted from the leaking tank. The information gathered by this investigation will be used to assess the need for additional actions at the site. The preliminary assessment should be designed to provide all of the information in the format shown in Appendix A (attached) of the Regional Water Quality Control Board (RWQCB's) guidelines.

Until cleanup is complete, the operator or permittee will need to submit reports to this office and to the RWQCB every three months (or at a more frequent interval, if specified at any time by either agency). These reports should include

information pertaining to further investigative results; the methods and costs of cleanup actions implemented to date; and the method and location of disposal of any contaminated material.

Soils contaminated at hazardous waste concentrations should be transported by a licensed hazardous waste hauler and disposed of or treated at a facility approved by the California Department of Health Services. Soils contaminated below the hazardous threshold may be managed as nonhazardous, but are still subject to the RWQCB's waste discharge requirements.

A proposal and time schedule for completing the initial site investigation report (Appendix A) should be submitted to this office by May 1, 1989. A report describing the results of the initial site assessment should be submitted by June 1, 1989. Copies of the proposal and report should also be sent to the RWQCB (attention: Dyan Whyte).

You will need to submit an additional deposit of $500 to cover costs that the Division of Hazardous Materials incurs during remediation oversight. Should you have any questions about this letter or about remediation requirements established by the RWQCB, please contact Gil Wistar, Hazardous Materials Specialist, at 271-4320.

Sincerely,

R/C A. Shd

Rafat A. Shahid, Chief
Hazardous Materials Division

RAS:GW:gw: enclosure

cc (without enclosure):

Dyan Whyte, San Francisco Bay RWQCB
Gil Jensen, District Attorney, Alameda County Consumer and Environmental Protection Agency
files

Appendix A

Workplan for Initial Subsurface Investigation

There are a large number of initial site investigations related to unauthorized releases of fuel products. The number of workplans and reports to be reviewed and approved require that these documents have uniform organization and content. The purpose of this appendix is to present an outline to be followed by professional engineering or geologic consultants in preparing workplans to be submitted for approval to the Regional Board and local agencies.

A statement of qualifications and registration number for the California registered engineer and/or registered geologist responsible for the project will need to be included with the submitted workplan and reports.

This appendix should be referred to in context with the "Regional Board Staff Recommendations for Initial Evaluation and Investigation of Underground Tanks".

PROPOSAL FORMAT

I. Introduction

A. Statement of Scope of Work

B. Site location

C. Background

D. Site History

1. Brief description of the type of business and associated activities that take place at the site, including the number and capacity of operating tanks.

2. Description of previous businesses at the site.

3. Complete description of tank activities, tank contents, and tank removal.

a. Number of underground tanks, uses, etc. (include the volume of each tank, construction material, and tank condition)

b. Date of tank removal and condition of tank.

c. Description of all waste removal, including copies of all manifests.

d. Filing status and copy of unauthorized release form, if not previously submitted.

e. Previous tank testing results and date. Include discussion of inventory reconciliation methods and results for previous three years.

f. Estimate of the total quantity of product lost.

4. Other spill, leak and accident history at the site, including any previously removed tanks.

5. Describe any previous subsurface work at the site or adjacent sites.

II. Site Description

A. Vicinity description and hydrogeologic setting.

B. Vicinity map (including wells located on-site or on adjoining lots, as well as any nearby streams).

C. Site map to include:

1. Adjacent streets.

2. Site building locations.

3. Tank locations.

4. Island locations and piping to pumps from tanks.

5. Any known subsurface conduits, underground utilities, etc.

D. Existing soil contamination and excavation results.

1. Provide sampling procedures used.

2. Indicate depth to groundwater, if encountered.

3. Describe soil strata encountered in excavation.

4. Provide results in tabular form and location of all soil sampling (and water sampling, if appropriate). The date sampled, the identity of the sampler, and signed laboratory data sheets need to be included.

5. Identify underground utilities

6. Describe any unusual problems encountered.

7. Completely describe methods for storing and disposal of all contaminated soil.

8. Reference all required permits, including those issued by the Air Quality Management District and local underground tank permitting agency.

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

A. Describe method/technique for determining extent of contamination within the excavation.

B. Describe sampling methods and procedures to be used.

1. If a soil gas survey is planned, then:

a. Identify number of boreholes, location, sampling depth, etc.

b. Identify subcontractors, if any

c. Identify methods or techniques used for analysis

d. Provide quality assurance plan for field testing

2. If soil borings are to be used to determine the extent of soil contamination, then:

a. Identify number and location (mapped) of proposed borings.

b. Describe depth of borings

c. Describe soil classification system, soil sampling method and rationale

d. Describe boring drilling method, including decontamination procedures.

e. Describe boring abandonment method

C. Describe method and criteria for screening clean versus contaminated soil, including a complete description of procedures to be used for storing and disposal of any excavated soil. If on-site soil aeration is to be utilized, then a complete description of the treatment method is required:

1. Volume and rate of aeration/turning.

2. Method of containment and cover

3. Wet weather contingency plans.

Other on-site treatments (such as bioremediation) requires permits issued by the Regional Board. Off-site storage or treatment also requires permits issued bY the Regional Board.

D. Security measures planned for excavated hole and contaminated soil (i.e., six foot fence around hole, ripped up piping,m spoil piles, etc.)

IV. Plan for determining groundwater 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". If the verified down gradient location has been established, then a complete description of the rationale must be provided.

A. Placement and rationale for location of monitoring wells, including a map to scale.

B. Drilling method for construction of monitoring wells, including decontamination procedures.

1. Expected depth and diameter of monitoring wells
2. Date of expected drilling.
3. Method and location of soil sampling of borings.
4. Casing type, diameter, screen interval, and pack and slot sizing technique.
5. Depth and type of seal.
6. Construction diagram for wells.
7. Development method and criteria for determination of adequacy of development.
8. Plans for disposal of cuttings and development water.
9. Surveying plans for wells (requirements include surveying to established benchmark to Ø.Ø1 foot)

C. Groundwater sampling plans (include plans for sampling and on-site domestic wells)

1. Water level measurement procedure
2. Methods for free product measurement, observation of sheen and odor.
3. Well purging procedures.
4. Well purge water disposal plans.
5. Sample collection procedures.
6. Sample analyses to be used
7. Quality assurance plan
8. Chain of custody procedures

V. Include a site safety plan

A report will need to be submitted following collection of the information proposed and approved in the workplan. The report should set out the collected information in an orderly fashion and include any recommendations for additional needed work.

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

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

R0393

Certified mailer #: P 833 981 237

Telephone Number:(415) 271-4320

February 21, 1989

Mr. Chase Jiannalone
Atlantic Richfield Co.
2000 Alameda de las Pulgas
San Mateo, CA 94402

Re: Unauthorized release from underground storage tank, ARCO Station #6113, 785 E. Stanley Blvd., Livermore, CA

Dear Mr. Jiannalone:

Analytical results from soil samples collected from the above site on January 26, 1989 (during tank removal) and on February 3 indicated hydrocarbon contamination above 100 ppm, which is evidence of tank leakage. Title 23 of the California Code of Regulations requires all such unauthorized releases from underground tanks to be reported. An unauthorized release report has been filed per Title 23, and your next step is to initiate further investigation and/or cleanup activities at this site.

First, a preliminary assessment should be conducted to determine the extent of soil and groundwater contamination that has resulted from the leaking tank. The information gathered by this investigation will be used to assess the need for additional actions at the site. The preliminary assessment should be designed to provide all of the information in the format shown in Appendix A (attached) of the Regional Water Quality Control Board (RWQCB's) guidelines.

Until cleanup is complete, the operator or permittee will need to submit reports to this office and to the RWQCB every three months (or at a more frequent interval, if specified at any time by either agency). These reports should include information pertaining to further investigative results; the methods and costs of cleanup actions implemented to date; and the method and location of disposal of any contaminated material.

Soils contaminated at hazardous waste concentrations should be transported by a licensed hazardous waste hauler and disposed of or treated at a facility approved by the California Department of Health Services. Soils contaminated below the hazardous threshold may be managed as nonhazardous, but are still subject to the RWQCB's waste discharge requirements.

A proposal and time schedule for completing the initial site investigation report (Appendix A) should be submitted to this office within 30 days of the date of this letter. A report describing the results of the preliminary site assessment should be submitted within 60 days of the date of this letter. Copies of the proposal and report should also be sent to the RWQCB (attention: Lisa McCann).

You will need to submit an additional deposit of $500 to cover costs that the Division of Hazardous Materials incurs during remediation oversight. Should you have any questions about this letter or about remediation requirements established by the RWQCB, please contact Gil Wistar, Hazardous Materials Specialist, at 271-4320.

Sincerely,

Rafat A. Shahid
Chief, Hazardous Materials Division

RAS:GW:gw: enclosure

cc: Owen Ratchye, Pacific Environmental Group, Inc.
Lisa McCann, San Francisco Bay RWQCB
Gil Jensen, District Attorney, Alameda County Consumer and Environmental Protection
files