## ALAMEDA COUNTY HEALTH CARE SERVICES

**AGENCY** 



DAVID J. KEARS, Agency Director

RO# 1075

StID 662

October 19, 1998

Mr. Clifton Sherwood Adobe Associates P.O. Box 2673 Castro Valley, CA 94546 ENVIRONMENTAL HEALTH SERVICES ENVIRONMENTAL PROTECTION (LOP) 1131 Harbor Bay Parkway, Suite 250 Alameda, CA 94502-6577 (510) 567-6700 FAX (510) 337-9335

RE: Well Decommission at 3098 Castro Valley Blvd, Castro Valley CA 94546

Dear Mr. Sherwood:

This office has reviewed the case closure summary for the above referenced site and concur that no further action related to the underground tank release is required at this time. Before a remedial action completion letter is sent, the onsite monitoring wells (MW-1, MW-2, and MW-3) should be decommissioned, if they will no longer be monitored. Please notify this office upon completion of well destruction so a closure letter can be issued.

Well destruction permits may be obtained from Alameda County Public Works. They can be reached at (510)-670-5575.

If you have any questions, I can be reached at (510) 567-6876.

Sincerely,

Amir K. Gholami, REHS Hazardous Materials Specialist

Ag662mwdestruction

## **ALAMEDA COUNTY HEALTH CARE SERVICES AGENCY**

DAVID J. KEARS, Agency Director

R01075

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

STID 662

January 6, 1993

Mr. Bruce Hageman Hageman-Aguiar, Inc. 3732 Mt. Diablo Boulevard, Ste. 372 Lafayette, CA 94549

RE: ADOBE PLAZA, 3098 CASTRO VALLEY BLVD., CASTRO VALLEY

Dear Mr. Hageman:

As requested in your December 10, 1992 correspondence, attached please find a copy of the RWQCB outline showing the appropriate format and topics for the preparation of a final report summarizing the outcome of the site investigation.

As you are likely aware, site "closure" ultimately requires approval from the RWQCB. You are encouraged to evaluate the data generated to date in this project to identify any data gaps which may prevent this agency and the RWQCB from concurring with your bid for site closure.

Please contact me should you have any questions.

Sincerely,

0./Seery, CHMM

Senior Hazardous Materials Specialist

enclosure

cc:

Rafat A. Shahid, Assistant Agency Director, Env. Health Gil Jensen, Alameda County District Attorney's Office

Rich Hiett, RWQCB

Bob Bohman, Castro Valley Fire Department

Clifton Sherwood, Adobe Associates

Ed Howell - files

#### LETTER OF RECOMMENDATION FOR UST CASE CLOSURE

INTRODUCTION

SITE DESCRIPTION

PREVIOUS WORK

INVESTIGATIVE METHODS

Drilling and Soil Borings

Soil Sampling

Construction of Monitoring Wells

Well Development

Groundwater Sampling

Analytical Methods

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Groundwater Samples

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Hydrocarbons in Groundwater

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Local Hydrology

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Contaminant Fate Transport

Sources of Drinking Water Policy Determination

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RECOMMENDATIONS

TABLES ATTACHED

Results of Analysis of Soil Samples

Cumulative Results of Groundwater Elevation and Flow Direction

Cumulative Results of Analyses of Water Samples

Wells within 1/2-Mile Radius of the Site

RAFAT A. SHAHID, Assistant Agency Director



February 10, 1992

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

Mr. Clifton Sherwood Adobe Associates P.O. Box 2673 Castro Valley, CA 94546

RE: FREQUENCY OF SAMPLING, ADOBE PLAZA, 3098 CASTRO VALLEY BLVD.

Dear Mr. Sherwood:

The Department has completed review of the November 15, 1991 Hageman-Aguiar ground water monitoring report. This document reflects the results of ground water sampling occurring at the referenced site on October 10, 1991. Gasoline constituents have again been detected in monitoring well MW-2, the first time since August 1990.

As a result of these recent "hits," well MW-2 shall be sampled quarterly. At this time, please continue monitoring and sampling wells MW-1 and -3 semiannually.

Please feel free to contact me at 510/271-4320 should you have any questions.

Sincerely

Sectt 0 / Seery, CHMM

Senior Hazardous Materials Specialist

cc: Rafat A. Shahid, Assistant Agency Director, Environmental Health Edgar Howell, Chief, Hazardous Materials Division Gil Jensen, Alameda County District Attorney's Office Lester Feldman, RWQCB Howard Hatayama, DTSC Bob Bohman, Castro Valley Fire Department Gary Aquiar, Hageman-Aquiar



December 26, 1990

Mr. Bruce Hageman Hageman-Schank, Inc. 3732 Mt. Diablo Boulevard Lafayette, CA 94549

RE: ADOBE PLAZA, 3098 CASTRO VALLEY BLVD., CASTRO VALLEY

Dear Mr. Hageman:

Thank you for your recent submittal of the December 13, 1990 quarterly monitoring report. Following review of this report, we note that MW-2 has shown nondetectable concentrations of target contaminants, as have the remaining two wells. This contrasts with the last sampling event, occurring August 29, 1990, which showed detectable concentrations of TPH-G, toluene, ethylbenzene, and total xylenes in water sampled from MW-2. This well appears to be upgradient of the perceived potential source of contamination at this site, the former underground storage tank cluster.

We will continue to watch for the development of any trends with regards to the occurrence of contaminants in this or other wells at this site. In future reports, please convert ground water measurement data to elevations above mean sea level (MSL) to meet RWQCB requirements for standardization of ground water data.

Should you have any questions, please call me at 415/271-4320.

Sincerely

Scott 0. Seery

Hazardous Materials Specialist

cc: Rafat A. Shahid, Assistant Agency Director, Environmental Health Edgar Howell, Chief, Hazardous Materials Division Gil Jensen, Alameda County District Attorney's Office Howard Hatayama, DHS
Lester Feldman, RWQCB
Bob Bohman, Castro Valley Fire Department Cliff Sherwood, Adobe Associates files



November 26, 1990

Cliff Sherwood Adobe Associates P.O. Box 2673 Castro Valley, CA 94546

Dear Mr. Sherwood:

Our records indicate that your project has depleted your deposit submitted to Alameda County Hazardous Materials Division for the site located at 3098 Castro Valley Blvd., Castro Valley, Ca. (Castro Valley Car Wash). Prior to any further activity at this site, an additional deposit must be received by this office in the amount of \$500.00.

If you have any questions, please contact Scott Seery at (415) 271-4320.

Sincerely,

Edgar B. Howell III, Chief Hazardous Materials Division

EH:lp



November 26, 1990

Cliff Sherwood Adobe Associates P.O. Box 2673 Castro Valley, CA 94546

Dear Mr. Sherwood:

Our records indicate that your project has depleted your deposit submitted to Alameda County Hazardous Materials Division for the site located at 3098 Castro Valley Blvd., Castro Valley, Ca. (Castro Valley Car Wash). Prior to any further activity at this site, an additional deposit must be received by this office in the amount of \$500.00.

If you have any questions, please contact Scott Seery at (415) 271-4320.

Sincerely,

Edgar B. Howell III, Chief Hazardous Materials Division

EH: lp



November 2, 1989

Mr. Cliff Sherwood Adobe Associates P. O. Box 2673 Castro Valley, CA 94546

RE: ADOBE PLAZA, 3098 CASTRO VALLEY BLVD., CASTRO VALLEY

Dear Mr. Sherwood:

Our office is in receipt of the September 25, 1989 Hageman-Schank, Inc. Report of Soil and Groundwater Investigation and addendum of October 27, 1989.

Following review of these materials we concur with your consultant's recommendation for continued quarterly sampling of the on-site wells for a minimum period of one year. Should levels of contamination remain stable or diminish during this time, monitoring frequency may be reduced for the subsequent year.

Each sampling episode should be followed by a quarterly report, due the first day of the second month of each subsequent quarter (i.e. February 1, May 1, August 1, and November 1), which includes a summary of results of all work and laboratory results to date. The next quarterly report is due February 1, 1990 and should include a discussion of activities which occurred during the fourth quarter of 1989.

Mr. Cliff Sherwood

RE: 3098 Castro Valley Blvd.

Castro Valley November 2, 1989

Page 2 of 2

Should you have any questions, please contact the undersigned at 415/271-4320.

Sincerely,

Scott O. Seery

Hazardous Materials Specialist

SOS: mam

cc: Rafat A. Shahid, Assistant Agency Director, Alameda County
Department of Environmental Health
Bruce Hageman, Hageman-Schank, Inc.
Bob Bohman, Castro Valley Fire Department

Howard Hatavama. DHS

Howard Hatayama, DHS Lester Feldman, RWQCB

Gil Jensen, Alameda County District Attorney, Consumer and Environmental Protection Division



August 10, 1989

Mr. Bruce Hageman Hageman-Schank, Inc. 2723 Crow Canyon Road Suite 210 San Ramon, CA 94583

RE: SITE ASSESSMENT WORK PLAN PROPOSAL: ADOBE PLAZA, 3098 CASTRO VALLEY BLVD., CASTRO VALLEY

Dear Mr. Hageman:

We are in receipt and have completed review of the August 2 and 8, 1989 addenda to the July 7, 1989 proposal for the investigation of subsurface contamination at the noted site. We have accepted the work plan as amended with the following conditions:

- Any formation water which, following characterization, is subsequently discharged to either the sanitary or storm sewers must be under appropriate permit issued from the Castro Valley Sanitation District or RWQCB, respectively;
- 2) The implemented Site Safety Plan must follow guidelines specified under Part 1910.120(i)(2) of 29 CFR;
- 3) Field QA/QC protocol must include trip blanks and spiked samples for each day of sampling. Spiked sample concentrations must be coordinated with the laboratory doing analyses to check the accuracy of field sampling procedures. Results of trip blank and spike sample analyses must also appear in laboratory reports;
- 4) The construction of monitoring wells is solely limited to a driller with a valid State Water Well Contractor's License (C-57).

Mr. Bruce Hageman

RE: 3098 Castro Valley Blvd.

Castro Valley August 10, 1989 Page 2 of 2

Please notify this office when the proposed work is scheduled to begin. Should you have any questions, please call Scott Seery, Hazardous Materials Specialist, at 415/271-4320.

Edgar B. Howello

MRafat A. Shahid, Chief

Hazardous Materials Division

RAS:SOS:mam

cc: Cliff Sherwood, Adobe Associates

Bob Bohman, Castro Valley Fire Department

Jerry Crabtree, Castro Valley Sanitation District

Howard Hatayama, DHS

Scott Hugenberger, RWQCB

Gil Jensen, Alameda County District Attorney, Consumer and

**Environmental Protection Division** 

Scott Seery, Alameda County Hazardous Materials Division



August 2, 1989

Mr. Bruce Hageman Hageman-Schank, Inc. 2723 Crow Canyon Rd. Suite 210 San Ramon, CA 94583

RE: SITE ASSESSMENT WORK PLAN PROPOSAL: ADOBE PLAZA, 3098 CASTRO VALLEY BLVD., CASTRO VALLEY

Dear Mr. Hageman:

This letter is in response to our review of the Hagemen-Schank, Inc. proposed work plan for the investigation of subsurface contamination at the referenced site, as submitted under cover dated July 7, 1989.

This work plan may be approved for the first stages of site contaminant assessment provided the following issues are resolved:

- Soil sampling during boring advancement should also occur at any change in lithology, as well as at 5-foot intervals;
- Provide a quality assurance/quality control (QA/QC) plan for field sampling activities;
- 3) Completed wells should not be sampled until allowed to stabilize at least 24 hours after development;
- 4) All formation water purged from wells during development or sampling activities, and proposed for subsequent discharge to the sanitary sewer system, must be under appropriate permit issued by the Castro Valley Sanitation District;
- 5) Submit a Site Safety Plan;
- 6) Provide assurance that a final report will be submitted following completion of this stage of site assessment, which includes recommendations for any additional work and conclusions.

Mr. Bruce Hageman RE: Adobe Plaza 3098 Castro Valley Blvd. Castro Valley August 2, 1989 Page 2 of 2

Please submit a response which adequately addresses the previous list of items. This submittal may be in the form of an addendum to the July 7 proposal.

Should you have any questions, please contact Scott Seery, Hazardous Materials Specialist, at 415/271-4320.

Sincerely,

Rafat A. Shahid, Chief

Pfc & Shh

Hazardous Materials Division

RAS:SOS:mam

cc: Cliff Sherwood, Adobe Associates

Bob Bohman, Castro Valley Fire Dept.

Jerry Crabtree, Castro Valley Sanitation District Howard Hatayama, DHS

Scott Hugenberger, RWQCB

Gil Jensen, Alameda County District Attorney, Consumer and

Environmental Protection Division

Scott Seery, Alameda County Hazardous Materials Division



July 21, 1989

Mr. Mike Hood Alameda County Bldg. Inspection Dept. Public Works Agency 399 Elmhurst Street Hayward, CA 94544

RE: ADOBE PLAZA, 3098 CASTRO VALLEY BLVD., CASTRO VALLEY

Dear Mr. Hood:

It has come to our attention that the Alameda County Building Inspection Department has held back issuance of occupancy permits for the referenced Castro Valley site. We understand that occupancy will not be granted pending notification by our office that remediation of groundwater impacted by past uses of this site has been completed.

For your information, an updated proposal for a preliminary site investigation has been submitted by Hageman-Schank, Inc., under cover dated July 7, 1989. This proposal was received by this office July 18, 1989 and is currently under review. We have been assured by Mr. Cliff Sherwood of Adobe Associates that activities outlined in the preliminary site assessment proposal will be dispatched immediately once this plan is approved. Mr. Sherwood has also indicated that any subsequent work deemed necessary by this department following completion of the initial investigation will be fully implemented.

At this time, we feel that the investigation and remediation of subsurface contamination underlying this site is currently on track. Consequently, we request that the moratorium on occupancy permit issuance for this site be lifted.

Mr. Mike Hood

RE: 3098 Castro Valley Blvd.

Castro Valley July 21, 1989 Page 2 of 2

Should you have any questions, please contact Scott Seery, Hazardous Materials Specialist, at 415/271-4320.

sincerely, Peff A. Sheh

Rafat A. Shahid, Chief

Hazardous Materials Division

RAS:SOS:mam

cc: Cliff Sherwood, Adobe Associates

Howard Hatayama, DHS

Bruce Hageman, Hageman-Schank, Inc.

Gil Jensen, Alameda County District Attorney, Consumer and

Environmental Protection Division

Bob Bohman, Castro Valley Fire Department

Scott Hugenberger, RWQCB

Scott Seery, Alameda County Hazardous Materials Division



July 3, 1989

DEPARTMENT OF ENVIRONMENTAL HEALTH Hazardous Materials Program 80 Swan Way, Rm. 200 Oakland, CA 94621 (415) 271-4320

Mr. Bruce Hageman Hageman-Schank, Inc. 2723 Crow Canyon Rd. Suite 210 San Ramon, CA 94583

RE: INITIAL SUBSURFACE INVESTIGATION PROPOSAL: ADOBE PLAZA, 3098 CASTRO VALLEY BLVD., CASTRO VALLEY

Dear Mr. Hageman:

Our office has received and reviewed the Hageman-Schank, Inc. subsurface investigation proposal for the referenced site submitted under cover dated June 23, 1989. In concurrence with Mr. Scott Hugenberger of the San Francisco Bay Regional Water Quality Control Board (RWQCB), your proposal, as currently submitted, does not provide adequate information regarding the proposed activities. This proposal has consequently been rejected.

Your attention is again directed to the "Regional Board Staff Recommendations for the Initial Evaluation and Investigation of Underground Tanks" and the accompanying Appendix A to aid in the development of a viable workplan. Noteworthy is the requirement for all project proposals, workplans, reports, and work activities to be under the direction and seal of an appropriate California-registered professional (Section 6735, 7835, and 7835.1 of the California Business and Professions Code). A statement of qualifications for this California-registered professional must accompany your subsequent workplan proposal.

Also, each applicable element of the proposal format outlined in Appendix A must be addressed. Please pay particular attention to those areas dealing with, among others, the following elements: site history; site description; well placement rationale; drilling and soil sampling methods; name and license number of drilling contractor; screen interval length and placement rationale; pack and slot sizing technique; surveying plans for wells; time intervals between well development and sample collection; contracted certified laboratory; quality assurance plan; site safety plan; and, the assurance that a report will be submitted summarizing the results of all work and analyses performed. This report must include recommendations and time frames for continued monitoring of the completed wells, based on field observations and the severity of

Mr. Bruce Hageman RE: Adobe Plaza 3098 Castro Valley Blvd. Castro Valley July 3, 1989 Page 2 of 2

contamination, and any additional work which may be needed.

Should you have any questions, please contact Scott Seery, Hazardous Materials Specialist, at 415/271-4320.

Sincerely,

PJCA She

Rafat A. Shahid, Chief Hazardous Materials Division

RAS:SOS:mam

cc: Cliff Sherwood, Adobe Associates

Howard Hatayama, DHS

Scott Hugenberger, RWQCB

Bob Bohman, Castro Valley Fire Dept.

Gil Jensen, Alameda County District Attorney, Consumer and Environmental Protection Division

Mike Hood, Alameda County Building and Inspection Department Scott Seery, Alameda County Hazardous Materials Division Files June 13, 1989

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

Mr. Cliff Sherwood Adobe Associates P.O. Box 2673 Castro Valley, CA 94546

RE: Groundwater contamination at 3098 Castro Valley Blvd., Castro Valley: Request for Site Assessment

Dear Mr. Sherwood:

This letter is in response to a letter from Mr. Bruce Hageman of Hageman-Schanks, Inc., dated June 5, 1989, and a telephone conversation between he and Mr. Scott Seery of this office on June 9, 1989. The subject of both the noted letter and phone conversation involved the installation of groundwater monitoring wells at the referenced Castro Valley site, the former Scub-a-Luv Car Wash.

As Mr. Seery discussed with Mr. Hageman, groundwater wells must be installed at the referenced site to monitor the extent and rate of degradation of the groundwater contamination underlying this site noted following the closure July 26, 1989 of two underground storage tanks (UST). A minimum of three (3) wells will initially need to be installed in the vicinity of the former UST pit. These wells will be used in determining the site specific groundwater gradient. In the event the water table surface is irregular, these points may not be adequate to deter- mine gradient or direction of flow. Four points, allowing the separate solution of four three-point problems, may be necessary, therefore, to indicate the nonplaner nature of the potentiometric surface. If, however, an appropriate number of wells already exist within a 100-foot radius of the former location of the USTs, these wells may possibly be used for gradient determinations.

Following the reevaluation of the information submitted by Hageman-Schank, Inc., undercover dated August 8, 1988, this site is categorized as experiencing a "confirmed release" according to the San Francisco Bay Regional Water Quality Control Board (RWQCB) fuel leak criteria. This determination is based upon laboratory analysis results provided in the cited August 8 report, which identify initial soil contamination concentrations exceeding 100 ppm of total petroleum hydrocarbons characterized as gasoline (TPH-G), and confirmed groundwater contamination by fuel constituents in concentrations exceeding the State Department of Health Services Action Levels (DOHS-AL). Noteworthy are water samples ws-1 and ws-2 collected from borings 1 and 2, respectively, in which benzene concentrations exceeded DOHS-AL by two-to-three orders of magnitude (See: Drawing J 2020, August 8, 1988, Hageman-Schanks, Inc., report).

Mr. Cliff Sherwood Adobe Associates P.O. Box 2673 Castro Valley, CA 94546 June 12, 1989 Page 2 of 3

Further, water sample ws-1 was collected from a boring advanced in an area approximately 100-feet south of the former tank pit, indicating substantial contaminant migration has already occurred. Contaminants may have, in fact, already migrated off-site. Clearly, the need for further assessment of the extent and degree of contamination presents itself. As a result, we do not concur with the conclusions and recommendations advanced by your consultant in the referenced August 8 report.

As a result of this site's "confirmed release" status, additional investigative work must be performed to further define the extend of vertical and lateral impact upon groundwater and soils resulting from the noted contamination. The information gathered by this investigation must be used to determine an appropriate course of action to remediate the site. This preliminary site assessment should be conducted in accordance with he RWQCB Staff Recommendations for Initial Evaluation and Investigation of Underground Tanks. The major elements of such an investigation are summarized in the attached Appendix A.

In order to proceed with a site investigation, you should obtain professional services from a reputable engineering/geotechnical consulting firm. The responsibility of your consultant is to submit for review a proposal outlining planned activities pertinent to meeting the criteria outlined in this letter and the attached Appendix A. Once the preliminary site assessment has been completed, a technical report summarizing site related activities and conclusions must be submitted to this office and the RWQCB. All reports and proposals must be sub- mitted under seal of a California-Certified Engineering Geologist, California-Registered Geologist or California-Registered Civil Engineer.

This office will oversee the site assessment for the referenced site. This oversight will include our review and comment on work proposals, and technical guidance on appropriate investigative approaches. However, the issuance of monitoring well installation permits will be through Zone 7. The RWQCB may choose to take over as lead agency if it is determined following the site assessment that there has been a substantial impact upon groundwater.

Mr. Cliff Sherwood Adobe Associates P.O. Box 2673 Castro Valley, CA 94546 June 12, 1989 Page 3 of 3

Please submit a Preliminary Site Assessment proposal within thirty (30) days of the receipt of this letter. Accompanying this proposal must be a check totaling \$498.00 to help defer the cost of our review of this plan and our oversight of the remediation process. This check should be made out to the County of Alameda. A copy of this proposal should also be sent to the RWQCB (Attn: Scott Hugenberger) for their review.

Lastly, the use of one or more monitoring wells as a source of planter irrigation water is not acceptable at this time. These wells are to be used for monitoring purposes, only.

If you have any questions, please call Scott Seery, Hazardous Materials Specialist, at (415) 271-4320.

Sincerely,

RJGA Shill

Rafat A. Shahid, Chief, Hazardous Materials Program

RAS:SOS:mnc

Enclosure

cc: Howard Hatayama, DOHS

Scott Hugenberger, RWQCB

Bob Bohman, Castro Valley Fire Dept.

Gil Jensen, Alameda County District Attorney, Consumer and Environmental Protection Agency

Mike Hood, Alameda County Building & Inspection Department Bruce Hageman, Hageman-Schank, Inc.

Scott Seery, Alameda County Hazardous Materials Program

### 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 uniform outline to be followed by professional engineering or geologic 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
  - 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.
- Other spill, leak and accident history at the site, including any previously removed tanks.
- 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.
  - 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 — 1958 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
  - Date of expected drilling.
  - 3. Method and location of soil sampling of borings. .
  - Casing type, diameter, screen interval, and pack and slot sizing technique.
  - Depth and type of seal.
  - 6. Construction diagram for wells.
  - 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 0.01 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.

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

R01075

Telephone Number: (415)

August 30, 1988

Mr. Cliff Sherwood Adobe Associates P.O. Box 2673 Castro Valley, CA 94546

> RE: Underground Tank Closure at 3098 Castro Valley Blvd., Castro, Valley, CA

Dear Mr. Sherwood:

We have reviewed the soil and water analysis of the above site that was attached to the report prepared by Hageman-Schank, Inc., dated August 8, 1988.

After consultation with Lisa McCann of the Regional Water Quality Control Board, a minimum of one monitoring well must be installed down gradient from the old tank area.

Although the County of Alameda is the lead agency at this time, the Regional Water Quality Control Board has responsibilities for overseeing all cases that may infect ground water. Copies of all correspondence to this office should be submitted to RWQCB.

If you have any questions, please contact Larry Seto, Hazardous Materials Specialist, at 271-4320.

Sincerely,

Rafat A. Shahid, Chief, Hazardous Materials Program

RAS: LS: mnc

cc: Gil Jensen, Alameda County District Attorney, Consumer and Environmental Protection Agency Dwight Hoenig, DOHS Bruce Hageman, Hageman-Schank