

ALAMEDA COUNTY
HEALTH CARE SERVICES

AGENCY
DAVID J. KEARS, Agency Director



R02716

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

March 7, 1991

Mr. Dan Lau
City of Oakland
7101 Edgewater Drive
Oakland, CA 94621

RE: 98th and Edes Avenues, Oakland, California

Dear Mr. Lau:

The Alameda County Hazardous Materials Division has reviewed Subsurface Consultants, Inc., quarterly monitoring reports for July and October 1990, and January 1991, for the 98th & Edes Avenue site. The October 31, 1990 report indicates that in October, 6.25 inches of free product were measured in well MW-1. Analyses show that there were 2,900,000 ppb of total volatile hydrocarbons (TVH), 270,000 ppb of total extractable hydrocarbons (TEH), 7,780 ppb benzene, 26,000 ppb toluene, 203,000 ppb xylenes, and 20,000 ppb ethylbenzene. Well 18 also had 4,900 ppb TVH, 5,700 ppb TEH, 82 ppb benzene, 40 ppb toluene, 635 ppb xylene, and 190 ppb ethylbenzene.

The January 1991 quarterly sampling event indicates that there was free product in MW1 and that there are still high contaminant values in MW1 and Well 18.

Based on these reports it appears that the wells do not delineate the extent of contamination plume. The decreasing values may mean natural degradation of the contaminants, or it may also mean that the hydrocarbon plume is moving beyond these monitoring points.

At this point, the City of Oakland is required to: 1) establish interim measures to prevent plume migration; 2) delineate the extent of both the dissolved and free product contaminant plume; and, 3) remediate contaminated groundwater.

To ensure that these actions happen in a timely manner, this office requests a workplan that will address how these items will be implemented by April 8, 1991. A timetable for completion of these items is to be included. Monthly status reports will be required, the first one to be submitted to this office 30 days after the workplan submittal. Any delays in the completion schedule are to be submitted in a timely manner. If our office

Mr. Dan Lau
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has any further requirements or additions to the workplan, we will be in contact to discuss those items. It should be noted that remediation measures and investigation activities should begin upon submittal of the workplan. We will be in contact with the RWQCB in order to provide you with guidance concerning the RWQCB's investigation requirements. However, please be aware that you are responsible for diligent actions to protect the waters of the State.

I also reviewed the quarterly reports for the Pearmain site and the Thrifty Station site, which are in reasonably close proximity to the 98th & Edes Avenue site. Four quarterly sample analyses have been performed on the wells at both sites.

The analyses for the wells at the Thrifty Station Site are still indicating TVH and BTEX contamination. At this point, I will require quarterly monitoring to continue at this site.

Well sampling analyses for the three wells at the Pearmain site have been consistently non-detect for TVH and TEH. BTEX has not been detected in MW4 and MW6 for the four sampling events, and has not been detected in the last 3 sampling events at MW5. Total Oil & Grease was detected at 1 ppm in the third quarter for all three wells, and at 0.6 ppm in MW4 in the January 1991 sampling. Based on these values, I will recommend closure for the wells at the Pearmain site.

In addition, our records indicate the deposit/refund account for the oversight of this project has fallen into a negative balance amount. To refurbish the account, please submit an additional deposit of \$1,340, payable to Alameda County.

If you have any questions, I can be reached at 415/271-4320.

Sincerely,



Cynthia Chapman
Hazardous Materials Specialist

c: Lester Feldman, RWQCB
Director, Oakland Public Works
Bill Wikander, Subsurface Consultants, Inc.

ALAMEDA COUNTY
HEALTH CARE SERVICES

AGENCY
DAVID J. KEARS, Director



R02716

Certified Mail #P 062 127 735

Telephone Number: (415) 271-4320

February 27, 1990

City of Oakland Public Works
7101 Edgewater Dr., Building 4
Oakland, CA 94621

Attn: Mr. James Abron

Re: 98th Ave. & Edes Ave. Site Contamination

Dear Mr. Abron:

This letter responds to your request for clarification on the requirements for site assessment and remediation efforts for subsurface soils and ground water impacted by petroleum hydrocarbons. As discussed in my April 18, 1989 letter to Mr. Dan Lau, the above shown site is considered to have experienced an unauthorized release of fuel. As such, the requirements and regulations set forth by the SFRWQCB and the SDHS, as they relate to unauthorized releases, and the subsequent contamination of soils and possible impact to ground water by petroleum hydrocarbons, will be the regulatory parameters in use.

Our office will be the lead agency overseeing both the soil and groundwater remediation of this site. The Regional Water Quality Control Board (RWQCB) is currently unable to oversee the large number of contamination cases within Alameda County and has delegated the handling of this case to our Division. We will be in contact with the RWQCB in order to provide you with guidance concerning the RWQCB's remediation requirements. However, please be aware that you are responsible for diligent actions to protect waters of the State.

To complete contaminant assessment and begin remediation, we require that you submit a work plan which, at a minimum, addresses the items listed below and presents a timetable for their completion. Please evaluate the work submitted by your environmental consultants to determine which workplan requirements must still be addressed.

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I. Introduction

- A. Statement of scope of work
- B. Site map showing location of existing and past underground storage tanks along 98th Ave.
- C. Site History
 - provide historical site use and ownership information.

II. Site Description

- A. Vicinity description including hydrogeologic setting
- B. Initial soil contamination and excavation results
 - provide sampling procedures used
 - indicate depth to ground water
 - describe soil strata encountered
 - provide soil sampling results, chain of custody forms, identity of sampler
 - describe methods for storing and disposal of all soils

III. Plan for determining extent of soil contamination on site

- A. Describe approach to determine extent of lateral and vertical contamination
 - identify subcontractors, if any
 - identify methods or techniques used for analysis
 - provide sampling map showing all lines of excavation and sampling points
 - if a step out procedure is used, define action level for determination of "clean" isopleth
 - provide chain of custody forms, lab analysis results, all receipts and manifests, & identity of sampler
- B. Describe method and criteria for screening clean versus contaminated soil. If onsite soil aeration/bioremediation is to be utilized, then provide a complete description of method that includes:
 - volume and rate of aeration/turning
 - method of containment and cover
 - wet weather contingency plans
 - permits obtained
- C. Describe security measures

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IV. Plan for determining ground water contamination

- Construction and placement of wells should adhere to the requirements of the "Regional Board Staff Recommendations for Initial Evaluation and Investigation of Underground Tanks". Provide a description of placement and rationale for the location of monitoring wells including a map to scale.
- The placement and number of wells must be able to determine the extent and magnitude of the free product and dissolved product plumes.

A. Drilling method for construction of monitoring wells

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

B. Ground water sampling plan

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

D. Sampling schedule

- The sampling schedule will be dependent on the degree of contamination encountered.
- measure free product weekly for first month following well installation
 - measure free product and dissolved constituents monthly for first three months.
 - after first three months monitor quarterly.
 - monitoring must occur a minimum of one year.

V. Provide a site safety plan

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VI Development of a Remediation Plan.

- A. The remediation plan is to include a time schedule for remediation, and, at minimum, must address the following issues:
- removal of all free product. Manual bailing is not acceptable as a recovery system. Actual amount of free product removed must be monitored and tabulated.
 - remediation of contaminated soils and dissolved constituents must follow RWQCB's resolution No. 68-16.
 - soils containing 1,000+ ppm of hydrocarbons must be remediated. Soils containing between 100 and 1,000 ppm must be remediated unless sufficient evidence is provided which indicates no adverse effects on groundwater will occur. Clean up of soils to 100 ppm is strongly recommended.
 - design of remedial action system should be based on a review of hydrogeologic and water quality data and on an evaluation of mitigation alternatives. The determination of probable capture zone(s) of extraction system(s) should be based on aquifer characteristics as determined by aquifer test data
 - if it appears remediation or removal is impractical, the RWQCB must be approached for a waste discharge requirements (WDR).

VII Reporting

- A. Technical reports should be submitted with a cover letter from the City of Oakland. The letter must be signed by an authorized representative.
- B. Monthly reports must be submitted for the next three months with the first report due 90 days from the above letter date.
- C. Quarterly reports must be submitted with the first report due 90 days after the final monthly report. These reports should describe the status of the investigation and cleanup.

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- D. All reports and proposals must be signed by a California-Certified Engineering Geologist, California Registered Geologist or a California-Registered Civil Engineer (see page 2, 2 June 1988 RWQCB document). A statement of qualifications should be included in all reports. Initial tank removal and soil sampling does not require such expertise; however, borehole and monitoring well installation and logging, and impact assessments do require such a professional.

To further elaborate on the use of WDR as an alternative to remediation, it should be understood that this is a viable option only under a narrow set of conditions. Subchapter 15 of Chapter 3 of the 23 CCR allows for leaving contaminated soil in place if a Report of Discharge in Application for a Waste Discharge Requirement (WDR) is submitted and accepted by the SFRWQCB. The WDR must, at a minimum, include the following:

1. Application fee
2. Full description of relevant technical/economic factors that preclude restoring the site to its former uncontaminated state by treatment or excavation.
3. Results of hydrogeologic assessment that includes the following:
 - depth to ground water, seasonal fluctuations, aquifer thickness, gradient (both rate of movement, and direction), include possible vertical components.
 - geology of site (sand lenses, fractures, etc.) include geologic map and geologic cross sections showing lithology and structural features.
 - what water bodies are hydrologically connected to the underlying ground water, and what are their existing and potential beneficial uses.
 - what are the potential impacts to the beneficial uses of ground and /or surface waters should the contaminants migrate to these waters.
 - other site features such as but not limited to:
 - is the site capped to prevent surface infiltration
 - average annual rain fall
 - is the site in a 25 year flood plain
 - what wells are within a 1/2 mile of the site

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4. the results of a contaminant assessment that includes, but is not limited to the following:
 - evidence of floating product
 - concentration of dissolved constituents in the ground water
 - site maps that show the full extent of the ground water contamination zone. Include a supporting lab data
 - site maps that show the full vertical and horizontal extent of the soil contamination zone(s), the lack of full 3 dimensional description must be justified, include all supporting lab data, boring logs, etc..
5. Describe the actions to be taken to comply with 23CCR, Section 2511 (d).
6. Perform a Risk Assessment that fully evaluates the potential human and environmental health hazards posed by the onsite contamination.
7. Propose a ground water monitoring program that will detect whether and to what extent soil contamination impacts ground water, and whether off site migration of contaminants occurs. Include the following in the proposal:
 - site map showing all wells, define the wells that are down gradient and up gradient from the contaminated zone(s).
 - proposed ground water sampling frequency, analysis methods, detection limits.
8. Include a Plan of Action in the event the contaminant features fail to prevent the off site migration of waste.

All proposals, reports and analytical results pertaining to this investigation and remediation must be sent to our office and RWQCB. You should be aware that this Division is working in conjunction with the RWQCB and that this is a formal request for technical reports pursuant to California Water Code Section 13267 (b). Failure to respond or a late response may result in referral of this case to the RWQCB for enforcement and may subject the City of Oakland to civil liabilities imposed by the RWQCB to a maximum amount of \$1,000 per day. Any extensions of agreed upon time deadlines must be confirmed in writing by either this Division or the RWQCB.

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Should you have any questions concerning the contents of this letter or the status of this case please feel free to contact me.

Sincerely,



Ariu Levi, Senior Hazardous Materials Specialist
Alameda County Hazardous Materials Program

cc: Gil Jensen, Alameda County District Attorney, Consumer &
Environmental Protection
Rafat Shahid, Assistant Agency Director
Ed Howell, Chief HazMat Unit
Lester Feldman, SFRWQCB
Howard Hatayama, DOHS
Inspector Dawson, OFD
Files 98thede2

ALAMEDA COUNTY
HEALTH CARE SERVICES



AGENCY
DAVID J. KEARS, Agency Director

R02716

April 18, 1989

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

City of Oakland Public Works
1419 Broadway, Suite 700
Oakland, CA 94612

Attn: Dan Lau

Re: Subsurface soil contamination at 98th and Edes in Oakland

Dear Mr. Lau:

Thank you for submitting the requested soils analysis results, as conducted by the environmental consulting firm of Brown and Coldwell, for the surface and trench project at 98th and Edes Street in Oakland. Based on the results of this analysis, and the former use of this parcel as a gasoline station, this site is considered to have experienced a confirmed fuel release.

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

The proposed investigative work is to be submitted in the form of a workplan. This plan is to include, but is not limited to the following information:

I Introduction:

- A. Statement of scope of work
- B. Site location showing location of past underground tank(s)
- C. Site history
 - describe any previous subsurface work at the site

II Plan for determining ground water contamination

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

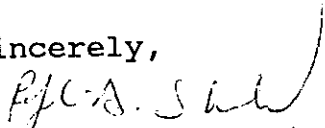
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- A. Drilling method for construction of monitoring wells
- expected depth and diameter of monitoring wells
 - date of expected drilling
 - casing type, diameter, screen interval, and pack and slot sizing techniques
 - depth and type of seal
 - development method and criteria for adequacy of development
 - plans for cuttings and development water
- B. Ground water sampling plan
- method for free product measurement, observation of sheen
 - well purging procedures
 - sample collection procedures
 - chain of custody procedures

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

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

Sincerely,


Rafat Shahid, Chief
Hazardous Materials Program

cc: Diane Lundquist, RWQCB
Gil Jensen, Alameda County District Attorney, Consumer and
Environmental Protection Agency
Howard Hatayama, DOHS