

1997 – 1998
SITE DESIGNATION COMMITTEE

AND RELATED DOCUMENTS

ALAMEDA COUNTY
HEALTH CARE SERVICES

AGENCY
DAVID J. KEARS, Agency Director



February 2, 1998

ENVIRONMENTAL HEALTH SERVICES

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

Mr. Kenneth Selover, Chair
California Environmental Protection Agency
Site Designation Committee
555 Capital Mall, Suite 525
Sacramento, CA 95814

RE: Pending Site Designation Committee Consideration of Request
for Transfer of Oversight Authority for the site:
Glovatorium, 3815 Broadway, Oakland

Dear Mr. Selover:

It has come to my attention that a couple of typographical errors were overlooked during peer review of the January 29, 1998 "Opposition to Application of Transfer of Oversight" letter previously submitted by this agency regarding the subject site. The referenced errors appear on page 10 of the noted letter, 3rd paragraph, the next to last sentence. That sentence now reads,

"Mr. Goldman further implies that the project may have been jeopardized by pushing the sampler the few feet deeper necessary to each ground water."

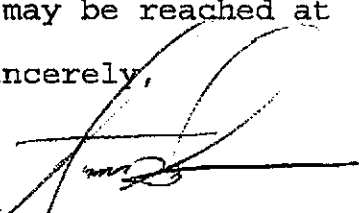
This sentence should have read,

"Mr. Goldman further implies that the project may have been jeopardized by pushing the sampler the few extra feet necessary to reach ground water."

Enclosed are 10 corrected double-sided copies of pages 9 and 10 for replacement of those pages in copies of the letter of opposition submitted previously. I apologize for any inconvenience this may have caused.

I may be reached at (510) 567-6783 should you have any questions.

Sincerely,



Scott O. Seery, CHMM
Hazardous Materials Specialist

enclosures

Mr. Selover
RE: Glovatorium, 3815 Broadway, Oakland
February 2, 1998
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cc: Mee Ling Tung, Director
Richard Pantages, Chief, Environmental Protection Division
Stephen Hill, SFRWQCB
Larry Blazer, Alameda County District Attorney's Office

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January 29, 1998
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intended to keep this project on a "tight rein." The reason for this was two-fold: 1) I had been made aware that the applicant and his son, Stuart Depper, had a well-documented history of "foot dragging" with respect to various aspects of their compliance with environmental regulations and agency mandates; and, 2) I had been assigned the responsibility through the District Attorney's Office to enforce orders of the Superior Court with respect to the UST closures and environmental investigation elements of their sentencing. I intended to ensure work was completed appropriately and in a timely fashion.

After much discussion and some modification, the GeoSolv work plan was eventually accepted by this office. The final number of proposed Geoprobe® "borings," as well as the suite of target compounds selected for samples collected from each, were modified from those initially proposed. Twelve (12) such borings were to be emplaced, from which both soil and ground water were to be collected and analyzed. As you are likely aware, Geoprobe® is a "push-tool" technology, which does not in practice include the use of a double-cased probe. The use of a Geoprobe® sampling device was what was proposed by Mr. Goldman, and the use of a Geoprobe® device is what was ultimately approved.

In addition, because of our collective knowledge of the locally tight confines within the Glovatorium plant, a "limited access" rig would be required. I was aware that Geoprobe® markets several such devices designed to accommodate the very conditions we anticipated within the Glovatorium plant.

I was therefore surprised upon my visit to the site during the August 1997 sampling activities when instead of a Geoprobe® device, some other limited access push-tool sampling device was employed for the project. Mr. Goldman describes it in his submittal as an "Enviro-core" sampling device. I was informed in the field that this device employs a conductor casing which it drives along with the sampler rod, essentially creating a double-cased hole. This feature is an idiosyncrasy of this particular device. The approved Geoprobe® device would not involve such a double-cased hole.

It appears, based on Mr. Goldman's accounts, that the Enviro-core sampler was not capable of driving its rods to adequate depth sufficient to encounter ground water. Based on boring logs submitted with the recent GeoSolv report, so called "refusal" was reportedly reached at very shallow depths. Refusal was reportedly reached at depths between 7' and 14' below grade.

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It appears, therefore, the Enviro-core device did not provide adequate static weight and/or down force to meet the required scope of this initial phase of work at the site. Geoprobe[®] limited access devices would have provided both adequate static weight (up to 3700 lbs.) and down force (18,000 lbs.) sufficient to complete this project quickly and efficiently.

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I did indeed tell Mr. Goldman that if he wouldn't comply with the approved scope of work, and my request, I would find a consultant who would. I intended to see to it that this project remained on schedule. Mr. Goldman implies in his site investigation summary that one should interpret from this request, and its absence from my field notes, something insidious. Mr. Goldman further implies that the project may have been jeopardized by pushing the sampler the few extra feet necessary to reach ground water. This is ridiculous.

After much complaining, Mr. Goldman did, however, finally confide in me that August day the reason he really wanted to wait until the winter to collect water samples: it was because the project was taking more time than he had budgeted for, that the applicant still owed him money, and, consequently, he was feeling strapped financially. He apparently felt that if he could close this chapter of the investigation now, he would finally get some financial relief. To demonstrate my reasonableness under the circumstances, I requested he remobilize the sampling device and collect water samples from only 6 of the 10 boreholes located within the Glovatorium plant which were originally subject to the ground water sampling requirements.

I regret failing to memorialize this information in my field notes that day, too.

It has been a challenge, and, frankly, a distressing one at that, to work with Mr. Goldman on this case. Mr. Goldman appears to have lost his ability to perform the work and interpret the results in a clear, professional, and objective manner. Review



Ca/EPA

**San Francisco
Bay Regional
Water Quality
Control Board**

2101 Webster St. #500
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(510) 286-1255
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Pete Wilson
Governor

January 30, 1998
File No. 2198.__(SAH)

**Kim Ward
SWRCB - CWP
2014 T Street, Suite 130
Mail Code G-8
Sacramento, CA 95814**

**RE: Site Designation Application for Former Glovatorium/The Leather Cleaners,
3815 Broadway, Oakland, Alameda County**

Dear Kim Ward:

Regional Board staff have reviewed the discharger's December 22, 1997, request to transfer oversight responsibility from Alameda County Environmental Health (ACEH) to the Regional Board. As explained below, I oppose the transfer and request that ACEH remain as lead agency.

The subject site contains a dry cleaning facility specializing in leather goods. Stoddard solvent has been released at the site and has polluted soil and groundwater. One of the site owners was convicted of felony charges for illegal dumping and discharge of solvents at the site. Underground tanks used to store stoddard solvent have been removed. However, remedial investigation of soil/groundwater pollution has not been completed, and no groundwater remediation has been started.

In a December 22, 1997, letter the owner's technical consultant requested that oversight responsibility be transferred from ACEH to the Regional Board. I oppose the transfer, for the following reasons:

- 1. ACEH expertise: We are confident that ACEH can provide appropriate oversight at the subject site. ACEH oversees numerous fuel UST and SLIC (non-fuel) cases in Alameda County and has the experience and technical expertise necessary to oversee sites such as the subject site. ACEH contracts with the State Board as a local oversight program (LOP) for overseeing fuel UST cases.**
- 2. Delay resulting from transfer: ACEH has overseen the subject site for several years, and is familiar with site history, local geotechnical conditions, and site**



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pollution. Board staff have had little or no involvement with the subject site or nearby sites. We would not be able to assign a staff person to the site initially, due to a vacancy in my section, and oversight would be delayed while a new staffer reviewed site documents. Delayed oversight is undesirable, given significant solvent concentrations in groundwater and potential migration to surface waters.

3. **Commingling unproven:** The transfer request argues that pollutants from this and nearby sites have commingled in groundwater, and that ACEH is less capable of overseeing commingled sites than the Board. We see no compelling evidence of commingling; an upgradient Unocal site has a distinct groundwater plume, and remedial investigation at an adjacent site (Earl Thompson dry cleaners) has not been performed yet.
4. **Any commingling not an obstacle:** Even if commingling is documented, ACEH is capable of providing necessary oversight. ACEH deals with commingling of fuel UST plumes at other sites. In our experience, oversight quality is reduced when different agencies handle various contributors to a commingled plume. This would be the case if the Board oversaw the subject site and ACEH continued to oversee the nearby sites (above).
5. **Opposition by ACEH and District Attorney:** Both ACEH and the Alameda County District Attorney's Office object to the requested transfer. The site owner is subject to a court order requiring ACEH oversight. We see no compelling reason to interfere in this matter.

Please contact Mr. Stephen Hill of my staff at (510) 286-0433 if you have any questions.

Sincerely,

Loretta K. Barsamian
Executive Officer


Stephen I. Morse
Toxics Cleanup Division Chief

cc: Mailing List



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Mailing List

ENVIRONMENTAL
PROTECTION

98 FEB -3 PM 3:43

Laurie Grouard
Cal/EPA Site Designation Committee
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Sacramento, CA 95814

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Alameda County Environmental Health
1131 Harbor Bay Parkway, 2nd Floor
Alameda, CA 94502

Frank Goldman
Geosolv, LLC
643 Oregon Street
Sonoma, CA 95476



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ALAMEDA COUNTY
HEALTH CARE SERVICES

AGENCY

DAVID J. KEARS, Agency Director



January 29, 1998

ENVIRONMENTAL HEALTH SERVICES

1131 Harbor Bay Parkway, Suite 250

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(510) 567-6700

(510) 337-9335 (FAX)

Mr. Kenneth Selover, Chair
California Environmental Protection Agency
Site Designation Committee
555 Capitol Mall, Suite 525
Sacramento, CA 95814

RE: Opposition to Application for Transfer of Oversight from Alameda County Department of Environmental Health (ACDEH), Local Oversight Program (LOP), to the California Regional Water Quality Control Board, San Francisco Bay Region (SFRWQCB): Glovatorium, 3815 Broadway, Oakland

Dear Mr. Selover:

I have reviewed the application of Robert Depper ("applicant") and supplemental information, as submitted under GeoSolv, LLC covers dated December 22, 1997 and January 2, 1998, respectively. The referenced application requests the Site Designation Committee ("Committee") consider removing ACDEH from its current role as lead oversight agency, transferring that role to the SFRWQCB. This letter is sent in opposition to that request.

As I am certain the Committee has been adequately apprised of the applicant's environmental compliance, violation and conviction history, this letter of opposition will not delve into that topic area. This response will begin by addressing, however, each of the initial "reasons" presented in the December 22, 1997 GeoSolv, LLC cover, as well as supporting arguments presented in the January 5, 1998 GeoSolv, LLC supplemental information packet.

- 1) *The recent subsurface investigation has revealed that the site is no longer a simple [underground storage tank] case because it involves off-site dischargers and some of the dischargers are not associated with [underground storage tanks].*

Response

There is no corroborated evidence that the subject site has been affected by discharges from other off-site sources.

The data derived from the recent investigation performed at this site is considered preliminary. This preliminary investigation was intended solely to identify areas of the site where releases appear to have occurred, and whether releases were associated

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with underground storage tanks (UST) and appurtenant piping, or other sources, such as leaks from floor drains or sumps into which dry cleaning wastes were reportedly dumped as a matter of practice.

These preliminary data were to be used to guide the next stage of the investigation if such appeared warranted. The data associated with this preliminary investigation clearly demonstrate the need for further investigation, as the evidence of releases from surface, near surface, and subsurface points within the confines of the Glovatorium plant are substantial.

MtBE

Frank Goldman dba GeoSolv, LLC ("GeoSolv") has suggested in his arguments associated with his client's application to the Committee that the reported presence of MtBE (methyl tert butyl ether) in water sampled from one or more of the temporary well points is evidence of an off-site source for this compound. Mr. Goldman has unequivocally stated that "...it is abundantly clear that the MTBE (sic) plume has emanated from an underground storage tank at a location in the general direction of the UNOCAL site." [underscoring added] Mr. Goldman further states, "Unless there is another gasoline UST between the UNOCAL site and the plume as identified at the Depper's site, the MTBE (sic) exhibits the leading edge of a gasoline plume which has migrated from the UNOCAL site." [underscoring added]

Attached for your review (Attachment 1) are excerpts from the most recent technical report for the cited Unocal station (3943 Broadway) documenting the sampling and monitoring event occurring at that site during November 1997. This report includes a compilation of sampling and monitoring data dating from 1989. Also attached are ground water flow maps for monitoring events between September 1994 and November 1996.

Please note that the investigation associated with the Unocal site has entailed the installation of 12 permanent monitoring wells and one recovery well. Of the 5 wells located off-site, four (MW-8, -9, -11, and -12) are in the apparent downgradient direction from the Unocal site. Review of the data, particularly that associated with the downgradient wells (i.e., those wells located between the Unocal station and Glovatorium), indicates the plume is significantly constrained to the Unocal site.

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These data strongly imply that the Unocal release is not a source of MtBE reportedly encountered in water sampled from one or more of the temporary well points at the applicant's site. No other UST release site is known to be located between the Unocal and applicant's sites. However, there are several other plausible explanations for the reported presence of MtBE in water sampled from the temporary well points at this site, absent the presence of an UST release upgradient of the site.

An attempt to corroborate these reported initial MtBE results may be incorporated into subsequent phases of the investigation at the applicant's site.

Benzene

Here again, Mr. Goldman has suggested in his arguments, based on the most preliminary of data, that the reported presence of benzene in water sampled from one or more of the temporary well points is evidence of an off-site source for this compound. However, according to his argument, the source of this contaminant is not located to the northeast, as was the case with MtBE. Rather, benzene is "...emanating from the south," suggesting a very complex set of dissolved-phase contaminant dispersal mechanisms at and in proximity to the applicant's site, whereby contaminants can enter the site from numerous opposing directions simultaneously.

Mr. Goldman suggests the source of benzene in ground water is an adjoining site (the Earl Thompson property, 316-38th Street). The rationale for this statement is the assumption that: 1) benzene is associated with gasoline, 2) gasoline is associated with other aromatic compounds in addition to benzene, specifically, ethyl benzene, toluene and "xylene," and 3) ethyl benzene, toluene and "xylene" were identified in "contamination" identified at this adjoining site.

There is not one shred of evidence made available to this office regarding confirmed releases of any sort from the Earl Thompson site. To our knowledge, no environmental samples associated with the Earl Thompson USTs or any other area of this site have been collected to date.

It appears Mr. Goldman has mistakenly referred to results of laboratory analyses (SEE Attachment 2: March 14, 1995 document transmittal from The Sutton Group) performed on fluid (water)

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samples collected from several USTs located below the 38th Street sidewalk. These USTs were associated with former activities at the Earl Thompson site, and have reportedly been void of product since the early 1970s, prior to Mr. Thompson's purchase of the site.

Scrutiny of laboratory data for soil samples reportedly collected during the preliminary GeoSolv investigation reveals the presence of a two order-of-magnitude range of concentrations of toluene, ethyl benzene, and total xylene isomers (TEX) in nearly all samples collected from the unsaturated zone in those borings emplaced within the Glovatorium plant. Further, data from shallow (1.5 - 3.5') samples collected from boreholes B2 and B7 also reveal detectable TEX, implying a surface or near surface source.

These preliminary data clearly suggest that sources of these compounds are located on-site within the Glovatorium plant. Following Mr. Goldman's reasoning, benzene, therefore, must also be from an on-site source.

An attempt to corroborate these reported initial benzene and TEX results will be incorporated into subsequent phases of the investigation at the applicant's site.

Gasoline and Oil "Ranged" Organics

Mr. Goldman shares his apparent knowledge of the condition of the culvertized storm drain passing below the applicant's site, indicating the drain "...is riddled with holes, cracks, and very serious deep gaps in the brick and concrete masonry liner." He further indicates this drain "...is very likely...serving as a preferential pathway for the migration of chlorinated solvents throughout the site, offsite, and the San Francisco Bay."

Mr. Goldman also implies in his discussion that the noted storm drain is owned by Alameda County. Attached are memos (Attachment 3) from the City of Oakland Public Works Agency (OPW) and Alameda County Public Works Agency (ACPWA) which counter that claim. The OPW and ACPWA memos indicate that the record does not reflect that this storm drain is owned by Alameda County. Therefore, Alameda County is not responsible for its upkeep, nor any contribution it may provide to contaminant dispersal from or onto the applicant's site.

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Further, a May 1997 inspection of a section of that very storm drain did not reveal the sort of structural disintegration of which Mr. Goldman speaks. Should Mr. Goldman have some direct evidence (i.e., inspection report) of the storm drain condition, this office and that of OPW would welcome its submittal.

Nevertheless, should the storm drain be "...riddled with holes, cracks, and very serious deep gaps in the brick and concrete masonry liner," it would appear its upkeep is the responsibility of the private property owner under whose property it passes. In this case, the applicant would be responsible for that section which passes below his site.

Mr. Goldman presents data representing the reported results of water sampled from the noted storm drain "...after the first rain of the season." These results are clearly within a range anticipated for surface runoff from streets within an urban environment. Such is a symptom of a modern society which relies on the use of motor vehicles to meet the bulk of its transportation needs. Incidental releases of petroleum lubricants and fuels, and their eventual washing into storm drains upon the first and subsequent rains of the season, are the unavoidable result of such reliance.

This office does agree with Mr. Goldman's assertion that the storm drain, at least its alignment, may present a preferential pathway for the downstream migration of contaminants. Because this storm drain reportedly represents a culvertized former creek channel (Rockridge Branch of Glen Echo Creek), we view that this channel may likely assert a degree of hydraulic control over ground water in the general area of the applicant's site.

Surface topography and ground water flow data from the Unocal station (3943 Broadway) and Express Auto Clinic (3810 Broadway) suggest natural (geogenic) ground water flow pathways likely associated with this creek's drainage system may direct ground water towards it. Therefore, subsequent phases of the investigation at the applicant's site will evaluate this issue.

Chlorinated Solvents

Mr. Goldman has not suggested that chlorinated solvents (hereafter referred to as HVOC) have entered the applicant's site from off-site sources. However, several points made in his exploration of HVOC distribution and genesis bear discussion here.

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The scope of the approved GeoSolv work plan, as amended and conditioned, entailed an evaluation of not only potential releases associated with the 6 USTs, but also those associated with other potential point sources. This need was determined based on review of the compliance and enforcement records for this site which clearly demonstrated a practice of using floor drains in the Glovatorium plant as points of disposal for various dry cleaning wastes.

Consequently, one element of the approved GeoSolv work plan was to collect and analyze samples from the approximate 3' depth and the capillary zone, at a minimum. The requirement for shallow samples was intended to identify releases from UST and other process piping, as well as from floor drains and sumps. Approved boring locations, as modified, were specific to addressing these goals.

The approved scope of the work plan was not implemented. Of the 12 borings proposed in the approved work plan, shallow (~3') samples were collected in only nine. Of those 9 shallow samples collected, only 4 were reportedly analyzed by the laboratory.

Borings B3, B6, B9, and B10 were specifically placed to target releases from floor drains and sumps, and were the only borings intended to do so. Only the shallow sample collected from boring B3 was analyzed for the requested suite of target compounds. Consequently, 3 of the target drains/sumps were not appropriately investigated.

Mr. Goldman states in his arguments that "...[HVOC] identified in soil were only found in shallow soils in the vicinity of B10 and not in B3, B9, and B6." The "shallow" soil to which Mr. Goldman refers is apparently at a depth of 15' below grade, the shallowest sample analyzed from that boring (B10). Hence, any evaluation of Mr. Goldman's arguments with respect to HVOC distribution at the site should be tempered with the realization that the data are not representative of site conditions. This work, unfortunately, will need to be repeated.

Mr. Goldman presents his interpretation of the derivations of certain of the HVOC species identified in the course of this limited investigation. Mr. Goldman states, "The groundwater plume map indicates that most of the [tetrachloroethene] (13,000 ppb) has converted to cis 1,2-dichloroethene." [underscoring added]

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However, *cis* 1,2-dichloroethene (1,2-DCE) is also used in industry as a dye extraction solvent (i.e., product). Other HVOC identified during the investigation are also used similarly, some specific to use in dyes and hide degreasing. As the Glovatorium prided itself for its leather cleaning and finishing expertise, these HVOC are potential parent contaminants. Therefore, it is clearly too early in this investigation to begin a practice of forensic chemistry in an attempt to differentiate between parent and daughter degradation products.

- 2) *The hydrocarbon contaminants in groundwater are in the form of a co-mingled plume which is composed of chlorinated solvents, MTBE, and gasoline/diesel/oil ranged organic compounds. A greater range of technical expertise is available at the [SFRWQCB] as compared to that provided by the County.*

Response

We interpret this reference to a "commingled plume" as referring to the multiple dischargers and responsible parties alleged in Item 1, above. Therefore, as stated in the previous response, there is no corroborated evidence that the subject site has been affected by discharges from other off-site sources.

Should it be shown with subsequent evidence that there are, in fact, multiple dischargers and a "co-mingled plume," the ACDEH is not lacking for experience in dealing with such cases. Many of the cases ACDEH staff currently manage deal with co-mingled plumes. One only has to envision the typical 3- or 4-corner gas station arrangement, each with confirmed UST releases, or the dry cleaner located in the very shopping center where a gas station with leaking USTs is also located, to recognize various forms of this phenomena. ACDEH is currently and successfully managing, with several examples, each of these scenarios.

- 3) *The [SFRWQCB] has more experience with regulating dry cleaning facilities and chlorinated solvents in ground water as well as mediating co-mingled plume problems between several responsible parties.*

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Response

The SFRWQCB does not, per se, regulate dry cleaning facilities. The local agencies (e.g., CUPA agencies, fire and building departments, POTWs, Bay Area Air Quality Management District, etc.) regulate dry cleaning facilities. Therefore, this statement has no merit.

The SFRWQCB does have experience, however, managing the assessment of chlorinated solvent plumes. The SFRWQCB has experience dealing with multiple responsible parties and co-mingled plumes. As stated in the response to Item 2, above, ACDEH also has sizable experience with the management of such cases and collateral issues.

- 4) *A potential conflict of interest may prevent Alameda County from rendering enforcement action against itself to determine if their own storm drain system, which is composed of cracked and degraded brick and concrete masonry constructed in the early 1900s, has provided a conduit for uncontrolled stormwater runoff and potential spills from offsite to transport hydrocarbons onsite.*

Response

This issue has already been addressed in response to Item 1, above. The claim of "conflict of interest" has no merit.

In addition to addressing the applicant's "reasons" for consideration by the Committee, it is important that the record is clarified with respect to particular statements memorialized by Mr. Goldman on page 2, section 2.0, *Soil and Groundwater Sampling*, of his supplemental site investigation summary.

It is important to understand the background of this case with respect to the scope of work and goals for this recent phase of the investigation at this site. As stated previously in response to Item 1, above, several potential contaminant source areas were to be targeted, including USTs and floor drains or sumps. Both soil and ground water were to be collected during this phase of the project.

In my numerous discussions with Mr. Goldman over the months leading up to project implementation, I informed him that I

Mr. Kenneth Selover
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intended to keep this project on a "tight rein." The reason for this was two-fold: 1) I had been made aware that the applicant and his son, Stuart Depper, had a well-documented history of "foot dragging" with respect to various aspects of their compliance with environmental regulations and agency mandates; and, 2) I had been assigned the responsibility through the District Attorney's Office to enforce orders of the Superior Court with respect to the UST closures and environmental investigation elements of their sentencing. I intended to ensure work was completed appropriately and in a timely fashion.

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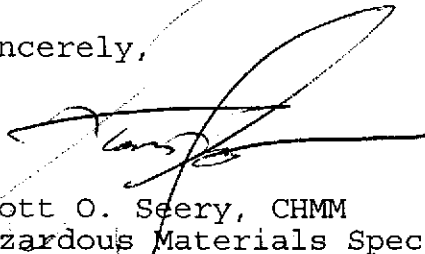
It has been a challenge, and, frankly, a distressing one at that, to work with Mr. Goldman on this case. Mr. Goldman appears to have lost his ability to perform the work and interpret the results in a clear, professional, and objective manner. Review

Mr. Kenneth Selover
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of the recent GeoSolv report presents countless examples of this, from Mr. Goldman's failure to implement the work plan as expected, to apparent selective interpretations based on very preliminary data, hearsay evidence, and presumption, to his lack of attention for the details commensurate with such technical work. I have had difficulty trying to understand it.

Please contact the undersigned should you require any additional information or supporting documents.

Sincerely,



Scott O. Seery, CHMM
Hazardous Materials Specialist
Alameda County Department of Environmental Health
Local Oversight Program

enclosures

cc: Mee Ling Tung, Director
Richard Pantages, Chief, Environmental Protection Division
Stephen Hill, SFRWQCB
Larry Blazer, Alameda County District Attorney's Office

ATTACHMENT 1

Unocal Station #0746
3943 Broadway
Oakland, CA

Semi-annual sampling report (excerpts)

December 8, 1997

and

Ground water flow maps from
September 1994 - May 1997



MPDS-UN0746-13
December 8, 1997

Tosco Marketing Company
Environmental Compliance Department
2000 Crow Canyon Place, Suite 400
San Ramon, California 94583

Attention: Ms. Tina R. Berry

RE: Semi-Annual Data Report
Unocal Service Station #0746
3943 Broadway
Oakland, California

Dear Ms. Berry:

This data report presents the results of the most recent monitoring and sampling of the monitoring wells at the referenced site by MPDS Services, Inc.

RECENT FIELD ACTIVITIES

The monitoring wells that were monitored and sampled are indicated in Table 1. Prior to sampling, the wells were checked for depth to water and the presence of free product or sheen. The monitoring data and the ground water elevations are summarized in Table 1. The ground water flow direction during the most recent semi-annual period is shown on the attached Figure 1.

Ground water samples were collected on November 12, 1997. The monitoring wells were not purged prior to sampling. Dissolved oxygen concentrations were measured and are presented in Table 3. Water samples were collected using a clean Teflon bailer. The samples were decanted into clean VOA vials and/or one-liter amber bottles, as appropriate, which were then sealed with Teflon-lined screw caps, labeled, and stored in a cooler, on ice, until delivery to a state-certified laboratory.

ANALYTICAL RESULTS

The ground water samples were analyzed at Sequoia Analytical Laboratory and were accompanied by properly executed Chain of Custody documentation. The analytical results of the ground water samples collected to date are summarized in Table 2. The concentrations of Total Petroleum Hydrocarbons (TPH) as gasoline and benzene detected in the ground water samples collected this semi-annual period are shown on the attached Figure 2. Copies of the laboratory analytical results and the Chain of Custody documentation are attached to this report.

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LIMITATIONS

Environmental changes, either naturally-occurring or artificially-induced, may cause changes in ground water levels and flow paths, thereby changing the extent and concentration of any contaminants.

DISTRIBUTION

A copy of this report should be sent to the Alameda County Health Care Services.

If you have any questions regarding this report, please do not hesitate to call Mr. Nubar Srabian at (510) 602-5120.

Sincerely,

MPDS Services, Inc.



Haig (Gary) Tejirian
Senior Staff Geologist



Hagop Kevork, P.E.
Senior Staff Engineer



License No. C55734
Exp. Date: December 31, 2000

Attachments: Tables 1, 2 & 3
Location Map
Figures 1 & 2
Laboratory Analyses
Chain of Custody documentation

cc: Mr. Sarkis A. Soghomonian, Kaprealian Engineering, Inc.

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Table 1
Summary of Monitoring Data

Well	Ground Water Elevation (ft)	Specific Conductivity (µmhos/cm)	pH	Temperature (°C)	Dissolved Oxygen (mg/L)	Water Table Elevation (ft)
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(Monitored and Sampled on November 12, 1997)

MW1	73.06	7.48	nm	0	No	0
MW2*	71.48	9.84	nm	0	--	0
MW3	72.23	9.18	nm	0	No	0
MW4	72.37	8.92	nm	0	No	0
MW5	72.11	9.27	nm	0	No	0
MW6*	72.43	7.51	nm	0	--	0
MW7*	73.76	7.88	nm	0	--	0
MW8	WELL WAS INACCESSIBLE (PARKED OVER)†					
MW9	70.31	10.22	nm	0	No	0
MW10*	71.54	10.07	nm	0	--	0
MW11*	68.52	9.66	nm	0	--	0
MW12*	69.60	10.01	nm	0	--	0

(Monitored and Sampled on May 15, 1997)

MW1	72.77	7.77	19.98	0	No	0
MW2*	72.19	9.13	20.10	0	--	0
MW3	71.80	9.61	22.83	0	No	0
MW4	71.92	9.37	20.05	0	No	0
MW5	71.97	9.41	20.60	0	Yes	0
MW6*	72.53	7.41	19.97	0	--	0
MW7*	73.17	8.47	18.08	0	--	0
MW8	70.95	10.46	21.58	0	No	0
MW9	70.64	9.89	22.04	0	No	0
MW10*	70.82	10.79	21.90	0	--	0
MW11*	66.53	11.65	19.24	0	--	0
MW12*	67.89	11.72	17.67	0	--	0

(Monitored and Sampled on November 5, 1996)

MW1	72.64	7.90	20.03	0	No	0
MW2*	70.34	10.98	20.09	0	--	0
MW3	70.77	10.64	22.82	0	No	0
MW4	71.29	10.00	20.05	0	No	0
MW5	70.97	10.41	20.60	0	No	0
MW6*	72.31	7.63	19.97	0	--	0
MW7*	72.97	8.67	18.05	0	--	0
MW8	WELL WAS INACCESSIBLE (PARKED OVER)					
MW9	69.11	11.42	22.10	0	No	0
MW10*	69.65	11.96	21.90	0	--	0
MW11*	67.28	10.90	19.25	0	--	0
MW12*	67.73	11.88	17.67	0	--	0

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Table 1
Summary of Monitoring Data

Well	Ground Water Elevation (feet)	Static Water Level (feet)	Static Water Level (feet)	Protein Thickness (feet)	Protein	Water Sampled (gallons)
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(Monitored and Sampled on May 6, 1996)

MW1	73.14	7.40	19.61	0	No	8.5
MW2*	72.42	8.90	19.85	0	-	0
MW3	71.97	9.44	22.44	0	Yes	9
MW4	72.59	8.70	20.00	0	No	8
MW5	72.35	9.03	19.81	0	Yes	7.5
MW6*	72.14	7.80	19.58	0	-	0
MW7*	73.49	8.15	20.00	0	-	0
MW8	WELL WAS INACCESSIBLE (PARKED OVER)					
MW9	71.52	9.01	21.95	0	No	9
MW10*	70.71	10.90	21.74	0	-	0
MW11*	64.88	13.30	19.15	0	-	0
MW12*	66.36	13.25	17.61	0	-	0

Well	Well Casings Elevation (feet)
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MW1	80.54
MW2	81.32
MW3	81.41
MW4	81.29
MW5	81.38
MW6	79.94
MW7	81.64
MW8	81.41
MW9	80.53
MW10	81.61
MW11	78.18
MW12	79.61
RW1	80.63

- ◆ The depth to water level and total well depth measurements were taken from the top of the well casings.
- * Monitored only.
- ** The elevations of the top of the well casings are relative to Mean Sea Level (MSL), per the City of Oakland Benchmark BM#1336 (elevation = 82.28 feet MSL).
- † Well was parked over by a wreck that could not be moved.
- Sheen determination was not performed.

nm = not measured

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Table 2
Summary of Laboratory Analyses
Water

Well #	Date	Chloride	Sulfate	Calcium	Magnesium	Total Solids	NTU	
MW1	11/1/89	ND	ND	ND	ND	0.3	--	
	2/15/90	170	7.9	ND	2.2	2.8	--	
	8/16/90	ND	ND	ND	ND	ND	--	
	11/7/90	45	ND	ND	ND	ND	--	
	2/25/91	ND	ND	ND	ND	ND	--	
	5/28/91	ND	ND	ND	ND	ND	--	
	8/28/91	ND	ND	ND	ND	ND	--	
	11/19/91	ND	ND	ND	ND	ND	--	
	2/6/92	ND	ND	ND	ND	ND	--	
	5/23/92	ND	ND	ND	ND	ND	--	
	8/26/92	ND	ND	ND	ND	ND	--	
	11/20/92	ND	0.75	ND	ND	ND	--	
	2/24/93	1,100	280	4.9	120	140	--	
	5/25/93	260	27	4.9	2.6	54	--	
	8/25/93	ND	ND	ND	ND	ND	--	
	11/30/93	SAMPLED SEMI-ANNUALLY						--
	2/16/94	ND	0.84	ND	ND	0.59	--	
	8/31/94	ND	ND	0.98	ND	0.84	--	
	11/10/94	SAMPLED SEMI-ANNUALLY						--
	2/7/95	6,100	670	ND	120	60	--	
	5/3/95	260	21	39	17	24	--	
	8/3/95	SAMPLED SEMI-ANNUALLY						--
	11/7/95	ND	ND	ND	ND	ND	--	
5/6/96	170	1.0	20	2.3	17	55		
11/5/96	ND	ND	ND	ND	ND	5.2		
5/15/97	ND	ND	ND	ND	ND	16		
11/12/97	ND	ND	ND	ND	ND	11		
MW2	11/1/89	200	ND	ND	3.0	1.2	--	
	2/15/90	ND	ND	ND	ND	ND	--	
	8/16/90	ND	ND	6.7	ND	ND	--	
	11/7/90	ND	ND	ND	ND	ND	--	
	2/25/91	ND	0.68	0.42	ND	0.86	--	
	5/28/91	ND	ND	ND	ND	ND	--	
	8/28/91	ND	ND	ND	ND	ND	--	
	11/19/91	ND	ND	ND	ND	ND	--	
	2/6/92	ND	0.36	0.66	ND	0.62	--	
	5/23/92	ND	ND	ND	ND	ND	--	
	8/26/92	ND	ND	ND	ND	ND	--	
	11/20/92	510•	ND	ND	ND	ND	--	
	2/24/93	11,000•	ND	ND	ND	ND	--	
	5/25/93	1,300•	ND	ND	ND	ND	2,700	
8/25/93	190•	ND	ND	ND	ND	--		
11/30/93	480•	ND	ND	ND	ND	--		
2/16/94	3,200•	ND	ND	ND	ND	--		

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Table 2
Summary of Laboratory Analyses
Water

Well #	Date	Oil (ppm)	Gasoline (ppm)	Gasoline (ppm)	Gasoline (ppm)	Gasoline (ppm)	Gasoline (ppm)	M.TBE
MW2	5/31/94	1,100*	ND	ND	ND	ND	ND	--
(Cont)	8/31/94	310*	ND	ND	ND	ND	ND	--
	11/10/94	95**	ND	ND	ND	ND	ND	--
	2/7/95	1,600*	ND	ND	ND	ND	ND	--
	5/3/95	ND	ND	ND	ND	ND	ND	--
	8/3/95	ND	ND	ND	ND	ND	ND	--
	11/7/95†	ND	ND	ND	ND	ND	ND	160
	5/6/96	SAMPLING DISCONTINUED*						
MW3	11/1/89	13,000	57	48	1.7	120		--
	2/15/90	20,000	1,700	2,100	750	3,100		--
	8/16/90	6,800	600	660	760	160		--
	11/7/90	42,000	1,400	5,000	1,800	7,500		--
	2/25/91	37,000	730	2,900	1,300	7,300		--
	5/28/91	24,000	570	1,100	810	4,200		--
	8/28/91	16,000	650	2,200	1,100	5,400		--
	11/19/91	22,000	250	440	660	3,000		--
	2/6/92	24,000	600	1,800	1,200	5,800		--
	5/23/92	25,000	300	130	880	4,900		--
	8/26/92	20,000	690	1,900	1,300	5,700		--
	11/20/92	1,100,000**	1,800	6,400	3,000	15,000		--
	2/24/93	NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT						
	5/25/93	NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT						
	8/25/93	NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT						
	11/30/93	NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT						
	2/16/94	57,000	910	2,500	2,100	9,000		--
	5/31/94	39,000	670	630	1,500	6,200		--
	8/31/94	44,000	500	240	1,400	5,700		--
	11/10/94	86,000	3,300	3,800	1,800	8,300		--
	2/7/95	45,000	1,400	1,300	1,500	5,600		--
	5/3/95	26,000	740	990	1,100	4,400		--
	8/3/95	18,000	59	ND	530	1,900		--
	11/7/95†	17,000	110	26	400	1,500		880
	5/6/96	5,100	48	ND	87	210		370
	11/5/96	35,000	2,200	ND	1,200	2,800		460
	5/15/97	2,400	110	ND	ND	140		100
	11/12/97	29,000	2,000	ND	1,800	3,000		ND
MW4	2/15/90	150	8.0	8.0	10	45		--
	8/16/90	3,600	480	17	230	260		--
	11/7/90	180	1.5	0.37	6.3	26		--
	2/25/91	22,000	600	1,300	780	2,800		--
	5/28/91	38	ND	ND	ND	1.9		--

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Table 2
Summary of Laboratory Analyses
Water

Well #	Date	Free Product	Residual	Alcohol	Hydrocarbons	Aldehydes	WTBE
MW4	8/28/91	2,000	1,500	20	120	300	--
(Cont)	11/19/91	55	9.2	4.5	1.4	6.7	--
	2/6/92	5,700	2,200	140	57	980	--
	5/23/92	ND	ND	ND	ND	ND	--
	8/26/92	120	86	0.52	0.57	1.6	--
	11/20/92	ND	6.2	ND	1.2	0.52	--
	2/24/93	140	12	0.64	9.4	3.7	--
	5/25/93	74	10	ND	4.6	1.8	--
	8/25/93	640	100	1.1	100	22	--
	11/30/93	200	28	ND	17	8.1	--
	2/16/94	190	11	0.98	21	6.6	--
	5/31/94	1,100	190	ND	100	58	--
	8/31/94	400	17	0.94	14	5.2	--
	11/10/94	7,700	1,800	280	460	1,300	--
	2/7/95	540	47	ND	17	2.5	--
	5/3/95	160	8.3	0.52	1.5	3.7	--
	8/3/95	57	2.0	ND	ND	ND	--
	11/7/95	ND	0.71	ND	ND	ND	0.86
	5/6/96	1,200	12	11	15	36	ND
	11/5/96	700	32	0.71	1.8	1.3	6.5
	5/15/97	51	ND	ND	ND	ND	ND
	11/12/97	74	1.7	ND	ND	ND	ND
MW5	2/15/90	24,000	1,500	1,700	260	3,600	--
	8/16/90	16,000	1,400	1,900	2,800	660	--
	11/7/90	20,000	640	1,100	670	3,000	--
	2/25/91	25,000	950	1,300	900	3,500	--
	5/28/91	24,000	2,300	3,400	1,300	6,000	--
	8/28/91	NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT					--
	11/19/91	NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT					--
	2/6/92	NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT					--
	5/23/92	NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT					--
	8/26/92	NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT					--
	11/20/92	NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT					--
	2/24/93	NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT					--
	5/25/93	NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT					--
	8/25/93	NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT					--
	11/30/93	NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT					--
	2/16/94	NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT					--
	5/31/94	43,000	1,500	1,200	1,600	6,700	--
	8/31/94	NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT					--
	11/10/94	NOT SAMPLED DUE TO THE PRESENCE OF FREE PRODUCT					--
	2/7/95	25,000	1,400	740	990	3,000	--
	5/3/95	12,000	680	160	600	1,800	--
	8/3/95	23,000	940	280	810	2,700	--

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Table 2
Summary of Laboratory Analyses
Water

Well #	Date	TPH (mg/L)	Disinfectant Residual (mg/L)	Turbidity (NTU)	Free Chlorine (mg/L)	Total Chlorine (mg/L)	Chlorine Demand (mg/L)	
MW5	11/7/95†	40,000	510	280	1,000	5,700	630	
(Cont)	5/6/96	13,000	200	ND	180	610	170	
	11/5/96	35,000	1,800	ND	1,300	4,900	580	
	5/15/97	10,000	490	ND	ND	1,300	ND	
	11/12/97	100	5.1	ND	ND	ND	74	
MW6	11/7/90	ND	ND	ND	ND	ND	--	
	2/25/91	ND	0.37	0.4	0.35	1.5	--	
	5/28/91	ND	ND	ND	ND	0.42	--	
	8/28/91	ND	ND	ND	ND	ND	--	
	11/19/91	ND	ND	ND	ND	ND	--	
	2/6/92	ND	ND	ND	ND	ND	--	
	5/23/92	ND	ND	ND	ND	ND	--	
	8/26/92	ND	ND	ND	ND	ND	--	
	11/20/92	ND	ND	ND	ND	ND	--	
	2/24/93	ND	ND	ND	ND	ND	--	
	5/25/93	ND	ND	ND	ND	ND	--	
	8/25/93	ND	ND	ND	ND	ND	--	
	11/30/93	SAMPLED SEMI-ANNUALLY						--
	2/16/94	ND	ND	ND	ND	ND	--	
	8/31/94	ND	ND	1.5	ND	1.6	--	
	11/10/94	SAMPLED SEMI-ANNUALLY						--
	2/7/95	ND	ND	ND	ND	ND	--	
	5/3/95	ND	ND	ND	ND	1.0	--	
	8/3/95	SAMPLED SEMI-ANNUALLY						--
	11/7/95	ND	ND	ND	ND	ND	--	
	5/6/96	SAMPLING DISCONTINUED*						--
MW7	11/7/90	ND	ND	ND	ND	ND	--	
	2/25/91	70	ND	ND	ND	0.52	--	
	5/28/91	39	ND	ND	ND	0.73	--	
	8/28/91	ND	ND	ND	ND	ND	--	
	11/19/91	32	ND	ND	ND	ND	--	
	2/6/92	ND	ND	ND	ND	ND	--	
	5/23/92	ND	ND	ND	ND	ND	--	
	8/26/92	ND	ND	ND	0.73	ND	--	
	11/20/92	ND	ND	ND	ND	ND	--	
	2/24/93	ND	ND	ND	ND	ND	--	
	5/25/93	ND	ND	ND	ND	ND	--	
	8/25/93	ND	ND	ND	ND	ND	--	
	11/30/93	SAMPLED SEMI-ANNUALLY						--
	2/16/94	ND	ND	ND	ND	0.7	--	
	8/31/94	ND	ND	0.8	ND	0.75	--	

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Table 2
Summary of Laboratory Analyses
Water

Well#	Date	Flow (gpm)	Residual (ft)	Total (ft)	Static (ft)	Chlorine (mg/l)	MTE	
MW7	11/10/94	SAMPLED SEMI-ANNUALLY						
(Cont)	2/7/95	ND	ND	ND	ND	ND	--	
	5/3/95	ND	ND	ND	ND	1.0	--	
	8/3/95	SAMPLED SEMI-ANNUALLY						
	11/7/95	ND	ND	ND	ND	ND	--	
	5/6/96	SAMPLING DISCONTINUED*						
MWB	11/07/90	4,700	28	38	86	7,200	--	
	2/25/91	5,300	17	6.1	53	300	--	
	5/28/91	4,800	4.2	1.3	5.1	170	--	
	8/28/91	1,800	3.2	1.9	19	74	--	
	11/19/91	1,600	8.1	1.8	19	52	--	
	2/6/92	2,600	4.1	7.0	31	93	--	
	5/23/92	2,100	8.6	1.6	1.7	28	--	
	8/26/92	1,800	12	8.0	4.0	13	--	
	11/20/92	WELL WAS INACCESSIBLE						
	2/24/93	WELL WAS INACCESSIBLE						
	5/25/93	1,200	5.4	ND	9.0	21	--	
	8/25/93	1,800	11	17	8.9	29	--	
	11/30/93	3,500	18	ND	ND	ND	--	
	2/16/94	990	4.9	1.8	2.4	4.5	--	
	5/31/94	350	3.0	1.0	0.73	1.7	--	
	8/31/94	1,800*	ND	ND	ND	ND	--	
	11/10/94	940	6.7	6.3	ND	16	--	
	2/7/95	230	1.4	0.95	0.9	1.1	--	
	5/3/95	75	ND	ND	ND	1.0	--	
	8/3/95	WELL WAS INACCESSIBLE (PARKED OVER)						
	11/7/95†	210	1.3	1.2	ND	ND	--	
	5/6/96	WELL WAS INACCESSIBLE (PARKED OVER)						
	11/5/96	WELL WAS INACCESSIBLE (PARKED OVER)						
	5/15/97	ND	ND	ND	ND	ND	43	
	11/12/97	WELL WAS INACCESSIBLE (PARKED OVER)						
MW9	11/7/90	480	7.8	1.2	13	47	--	
	2/25/91	390	13	1.1	2.8	14	--	
	5/28/91	590	6.0	0.43	6.8	1.4	--	
	8/28/91	450	17	0.9	13	14	--	
	11/19/91	360	17	0.45	15	11	--	
	2/6/92	660	41	1.0	33	15	--	
	5/23/92	460	18	0.66	1.4	3.2	--	
	8/26/92	250	13	ND	8.6	3.8	--	
	11/20/92	WELL WAS INACCESSIBLE						

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Table 2
Summary of Laboratory Analyses
Water

Well#	Date	Depth Gallons	Barrels	Volume Gallons	Flowrate GPM	Water	MTBE	
MW9	2/24/93	WELL WAS INACCESSIBLE						
(Cont)	5/25/93	160	6.1	ND	7.4	1.1	--	
	8/25/93	220	10	ND	6.8	1.4	--	
	11/30/93	200	5.6	ND	2.9	2.7	--	
	2/16/94	250	5.1	1.3	4.4	1.5	--	
	5/31/94	360	7.8	0.97	4.6	2.2	--	
	8/31/94	650	7.7	2.8	4.4	5.0	59	
	11/10/94	ND	ND	ND	ND	ND	--	
	2/7/95	57	0.7	ND	0.86	ND	--	
	5/03/95	ND	0.85	0.67	1.3	1.0	--	
	8/3/95	91	1.1	ND	ND	ND	--	
	11/7/95	--	--	--	--	--	60	
	11/7/95†	130	1.5	0.62	0.71	ND	--	
	5/6/96	860	6.1	13	6.0	25	ND	
	11/5/96	84	0.74	ND	1.2	4.5	ND	
	5/15/97	ND	ND	ND	ND	ND	ND	
	11/12/97	ND	0.55	ND	ND	ND	74	
MW10	2/6/92	ND	ND	ND	ND	ND	--	
	5/23/92	ND	ND	ND	ND	ND	--	
	8/26/92	ND	ND	ND	ND	ND	--	
	11/20/92	ND	ND	ND	ND	ND	--	
	2/24/93	ND	ND	ND	ND	ND	--	
	5/25/93	ND	ND	ND	ND	ND	--	
	8/25/93	ND	ND	ND	ND	ND	--	
	11/30/93	WELL WAS INACCESSIBLE						
	2/16/94	ND	ND	ND	ND	ND	--	
	5/31/94	ND	ND	0.9	ND	0.91	--	
	8/31/94	ND	ND	0.64	ND	0.54	--	
	11/10/94	ND	ND	ND	ND	ND	--	
	2/7/95	SAMPLED SEMI-ANNUALLY						
	5/3/95	ND	ND	ND	ND	0.65	--	
	8/3/95	SAMPLED SEMI-ANNUALLY						
	11/7/95	ND	ND	ND	ND	ND	--	
	5/6/96	SAMPLING DISCONTINUED*						
MW11	2/6/92	ND	ND	ND	ND	ND	--	
	5/23/92	ND	ND	ND	ND	ND	--	
	8/26/92	ND	ND	ND	ND	ND	--	
	11/20/92	ND	ND	ND	ND	ND	--	
	2/24/93	ND	ND	ND	ND	ND	--	
	5/25/93	ND	ND	0.75	ND	1.0	--	

MPDS-UN0746-13

December 8, 1997

Page 9 of 12

Table 2
Summary of Laboratory Analyses
Water

Well #	Date	Gasoline	Benzene	Toluene	Hexane	Xylenes	MTBE
MW11	8/25/93	ND	ND	ND	ND	ND	--
(Cont)	11/30/93	ND	ND	ND	ND	ND	--
	2/16/94	ND	ND	ND	ND	ND	--
	5/31/94	ND	ND	ND	ND	ND	--
	8/31/94	ND	ND	1.5	ND	1.8	--
	11/10/94	ND	ND	ND	ND	ND	--
	2/7/95	SAMPLED SEMI-ANNUALLY					
	5/3/95	ND	ND	ND	ND	ND	--
	8/3/95	SAMPLED SEMI-ANNUALLY					
	11/7/95	ND	ND	ND	ND	ND	--
	5/6/96	SAMPLING DISCONTINUED*					
MW12	8/26/92	ND	ND	ND	ND	ND	--
	11/20/92	ND	ND	ND	ND	ND	--
	11/30/93	ND	ND	ND	ND	ND	--
	8/25/93	ND	ND	ND	ND	ND	--
	5/25/93	ND	ND	ND	ND	ND	--
	2/24/93	ND	ND	ND	ND	ND	--
	2/16/94	ND	ND	ND	ND	ND	--
	8/31/94	ND	ND	1.0	ND	1.0	ND
	5/31/94	ND	ND	0.81	ND	0.82	--
	11/10/94	ND	ND	ND	ND	ND	--
	2/7/95	SAMPLED SEMI-ANNUALLY					
	5/3/95	ND	ND	ND	ND	ND	--
	8/3/95	SAMPLED SEMI-ANNUALLY					
	11/7/95	ND	ND	ND	ND	ND	--
	5/6/96	SAMPLING DISCONTINUED*					

† Sequoia Analytical Laboratory has identified the presence of MTBE at a level greater than or equal to the taste and odor threshold of 40 µg/L in the sample collected from this well.

• Sequoia Analytical Laboratory reported that the hydrocarbons detected did not appear to be gasoline.

•• Sequoia Analytical Laboratory reported that the hydrocarbons detected appeared to be a gasoline and non-gasoline mixture.

* Sampling discontinued per Alameda County Health Care Services' letter dated January 24, 1996.

ND = Non-detectable.

MTBE = Methyl tert butyl ether.

MPDS-UN0746-13
December 8, 1997
Page 10 of 12

Table 2
Summary of Laboratory Analyses
Water

Results are in micrograms per liter ($\mu\text{g/L}$), unless otherwise indicated.

Note: The detection limit for results reported as ND by Sequoia Analytical Laboratory is equal to the stated detection limit times the dilution factor indicated on the laboratory analytical sheets.

Prior to August 1, 1995, the total purgeable petroleum hydrocarbon (TPH as gasoline) quantification range used by Sequoia Analytical Laboratory was C4 - C12. Since August 1, 1995, the quantification range used by Sequoia Analytical Laboratory is C6 - C12.

Laboratory analyses data prior to November 30, 1993, were provided by Kaprealian Engineering, Inc.

MPDS-UN0745-13

December 8, 1997

Page 11 of 12

Table 3
Summary of Monitoring Data

Date	Well	Value	Unit
11/12/97	MW1	4.16	*
	MW3	3.27	*
	MW4	3.11	*
	MW5	1.98	*
	MW-8	WELL WAS INACCESSIBLE (PARKED OVER)	
	MW9	4.02	*
5/15/97	MW1	3.92	*
	MW2	3.01	*
	MW3	3.08	*
	MW4	3.24	*
	MW5	2.10	*
	MW6	2.90	*
	MW7	2.21	*
	MW8	2.88	*
	MW9	3.04	*
	MW10	1.61	*
	MW11	1.68	*
	MW12	2.10	*
11/5/96	MW1	3.12	*
	MW3	2.03	*
	MW4	2.11	*
	MW5	1.85	*
	MW-8	WELL WAS INACCESSIBLE (PARKED OVER)	
	MW9	2.98	*
5/6/96	MW1	5.21	4.13
	MW3	3.18	3.40
	MW4	3.75	5.97
	MW5	2.91	1.80
	MW9	4.23	3.25
11/7/95	MW3	--	1.68
	MW4	--	8.43
	MW5	--	1.79
	RW1	--	2.13
8/19/95	MW2	--	2.77
	MW3	--	2.06
	MW4	--	2.19
	MW5	--	2.09

MPDS-UN0746-13
December 8, 1997
Page 12 of 12

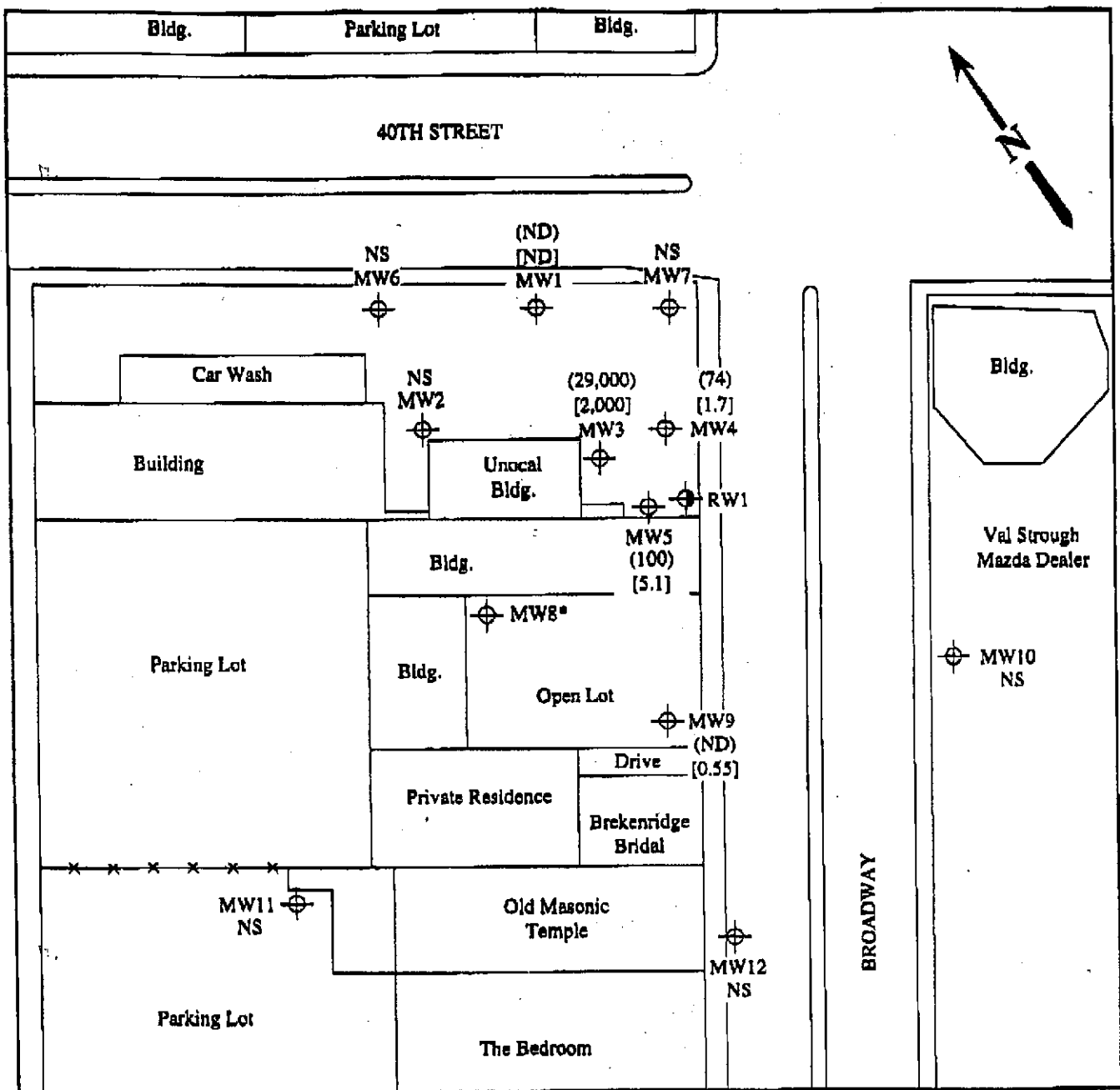
Table 3
Summary of Monitoring Data

* Wells were not purged prior to sampling.

-- Indicates measurement was not taken.

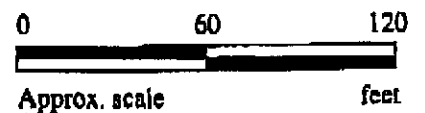
mg/L = milligrams per liter

Note : Measurements were taken using a LaMotte DO4000 dissolved oxygen meter.

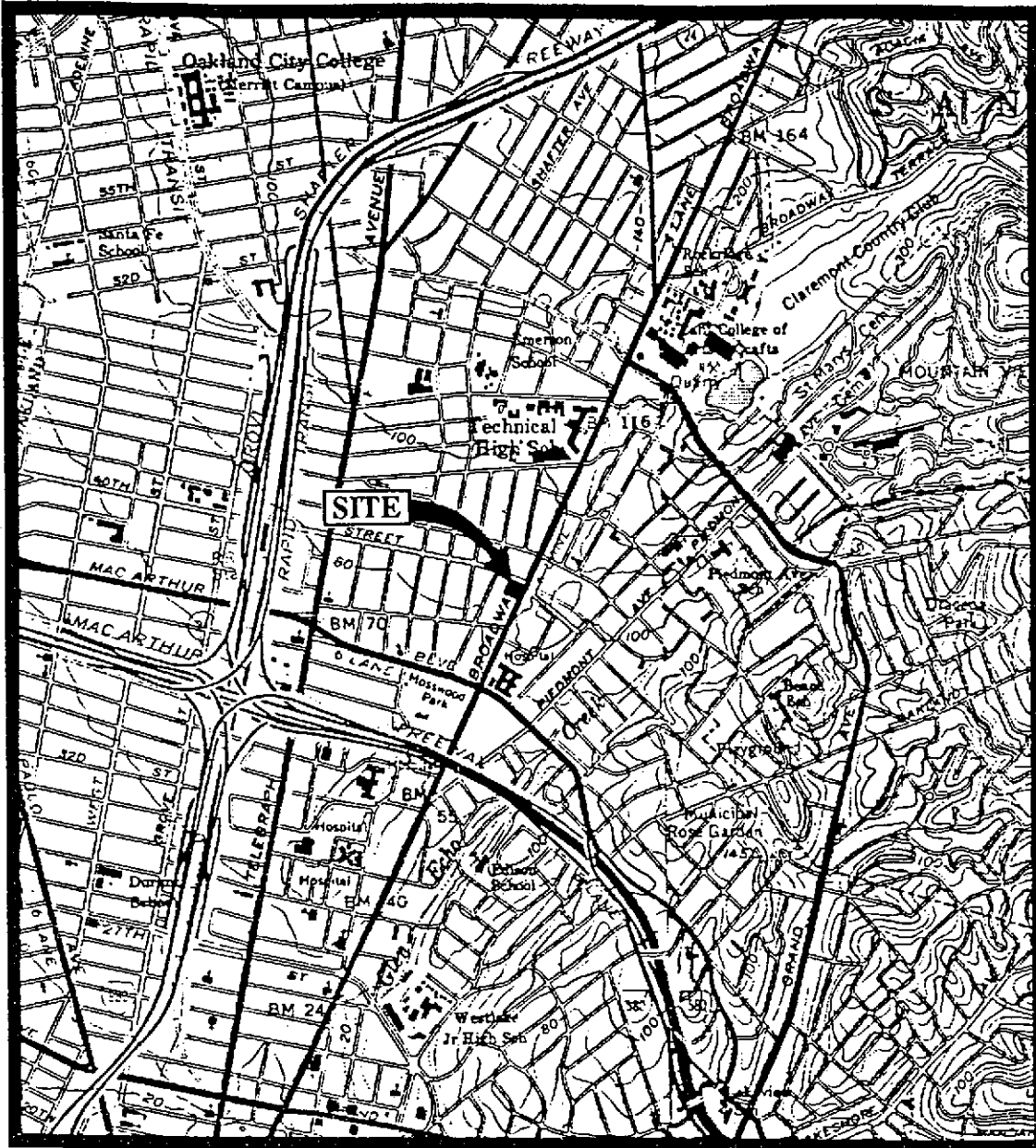


LEGEND

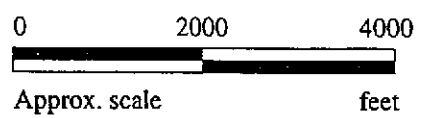
- ⊕ Monitoring well
- ⊕ 6-inch diameter recovery well
- () Concentration of TPH as gasoline in $\mu\text{g/L}$
- [] Concentration of TPH as gasoline in $\mu\text{g/L}$
- ND Non-detectable, NS Not sampled
- * Well was inaccessible.



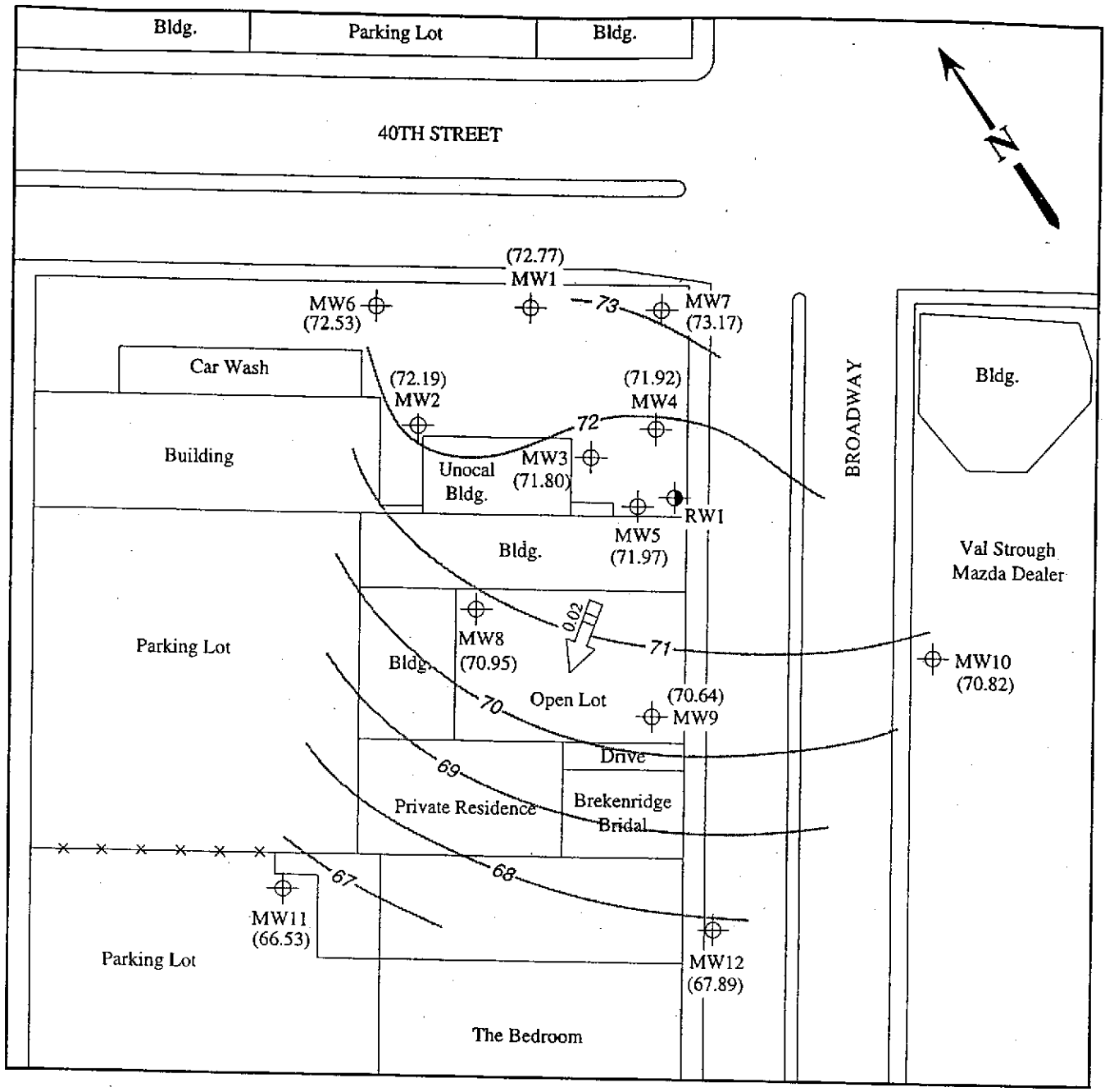
PETROLEUM HYDROCARBON CONCENTRATIONS IN GROUND WATER ON NOVEMBER 12, 1997



Base modified from 7.5 minute U.S.G.S. Oakland East and West Quadrangles
(both photorevised 1980)

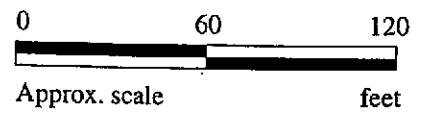


	<p>UNOCAL SERVICE STATION #0746 3943 BROADWAY OAKLAND, CALIFORNIA</p>	<p>LOCATION MAP</p>
--	---	-------------------------



LEGEND

- ⊕ Monitoring well
- ⊙ 6-inch diameter recovery well
- () Ground water elevation in feet above Mean Sea Level
- ➔ Direction of ground water flow with approximate hydraulic gradient
- Contours of ground water elevation

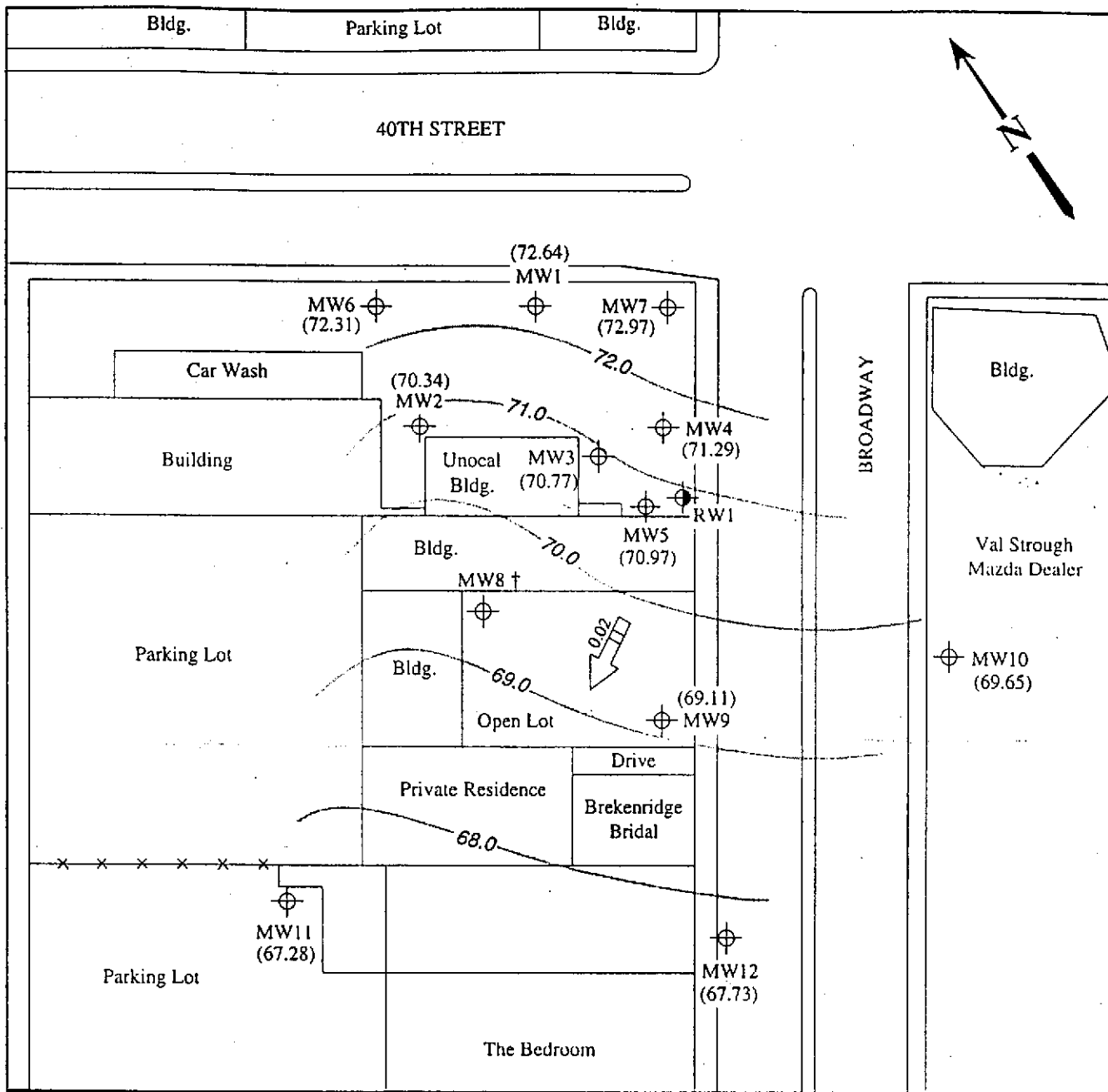


POTENTIOMETRIC SURFACE MAP FOR THE MAY 15, 1997 MONITORING EVENT

MPDS SERVICES, INCORPORATED

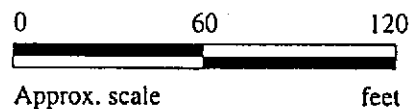
UNOCAL SERVICE STATION #0746
3943 BROADWAY
OAKLAND, CALIFORNIA

FIGURE
1

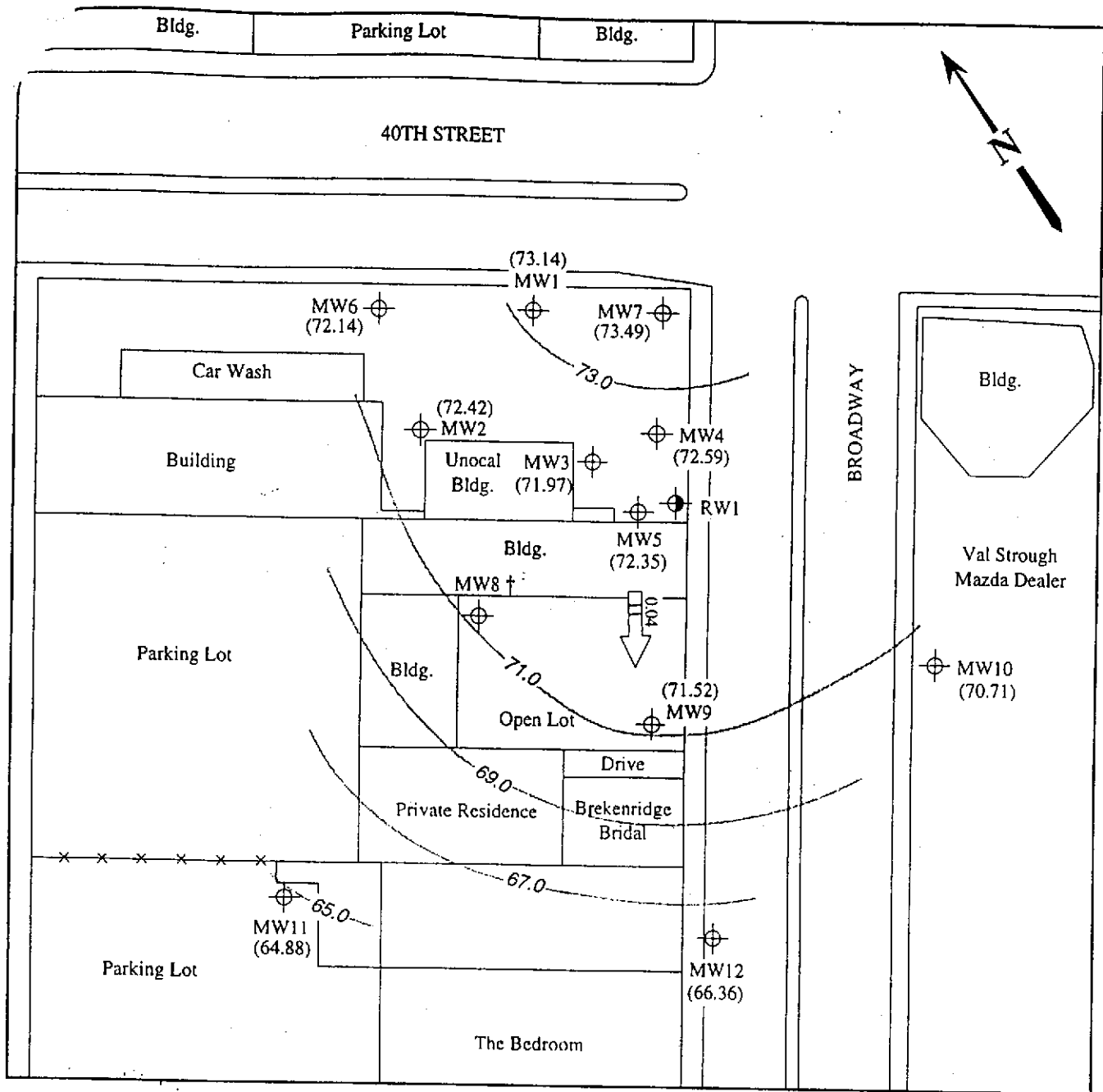


LEGEND

- ⊕ Monitoring well
- ⊙ 6-inch diameter recovery well
- () Ground water elevation in feet above Mean Sea Level
- ### → Direction of ground water flow with approximate hydraulic gradient
- Contours of ground water elevation
- † Well was inaccessible.

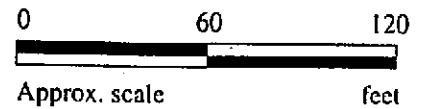


POTENTIOMETRIC SURFACE MAP FOR THE NOVEMBER 5, 1996 MONITORING EVENT



LEGEND

- ⊕ Monitoring well
- ⊙ 6-inch diameter recovery well
- () Ground water elevation in feet above Mean Sea Level
- ### → Direction of ground water flow with approximate hydraulic gradient
- Contours of ground water elevation
- † Well was inaccessible.

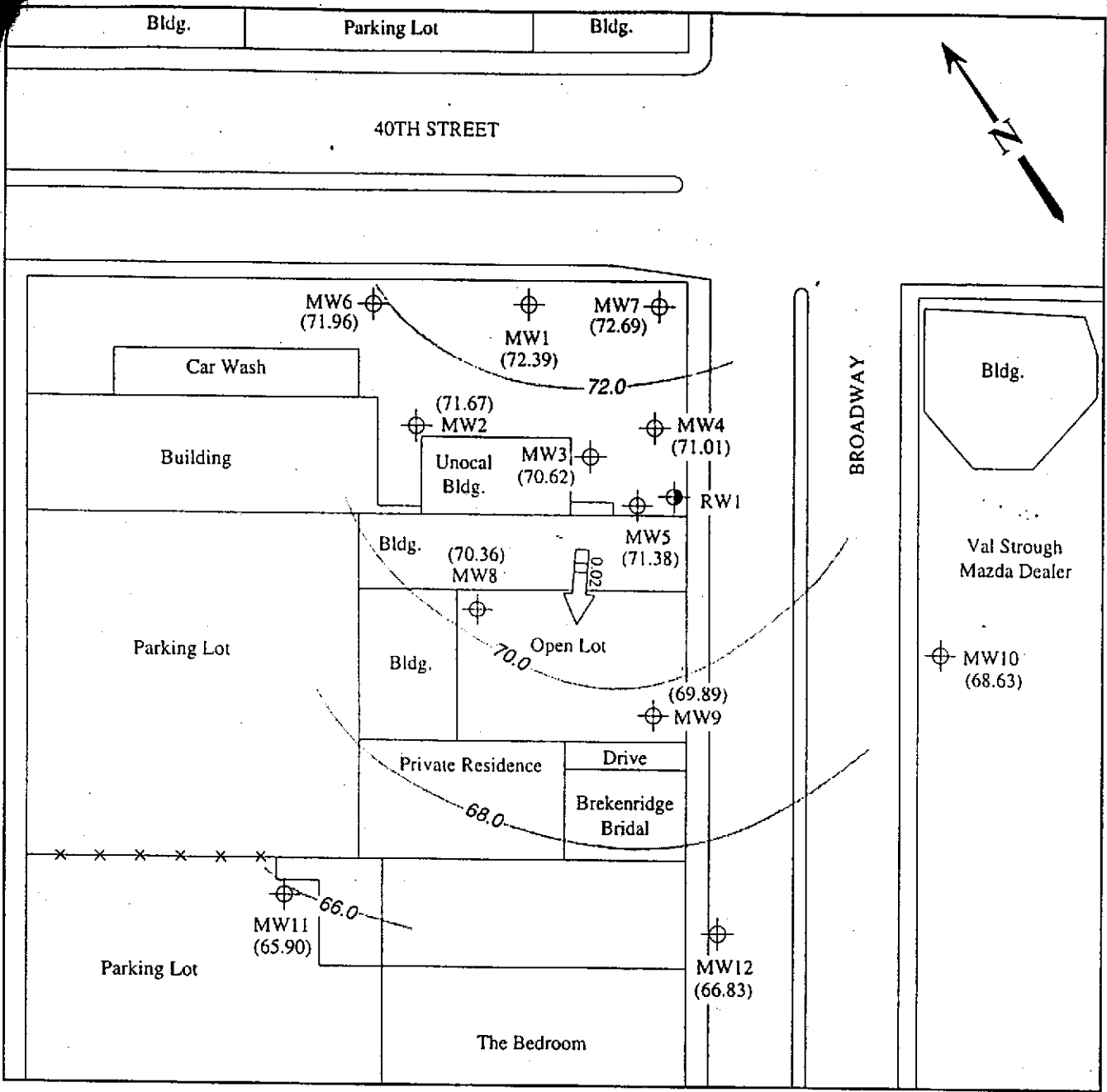


POTENTIOMETRIC SURFACE MAP FOR THE MAY 6, 1996 MONITORING EVENT

MPDS SERVICES, INCORPORATED

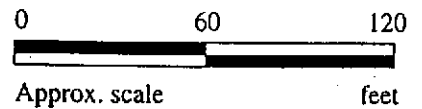
UNOCAL SERVICE STATION #0746
3943 BROADWAY
OAKLAND, CALIFORNIA

FIGURE
1



LEGEND

- ⊕ Monitoring well
- ⊙ 6-inch diameter recovery well
- () Ground water elevation in feet above Mean Sea Level
- ➔ Direction of ground water flow with approximate hydraulic gradient
- Contours of ground water elevation

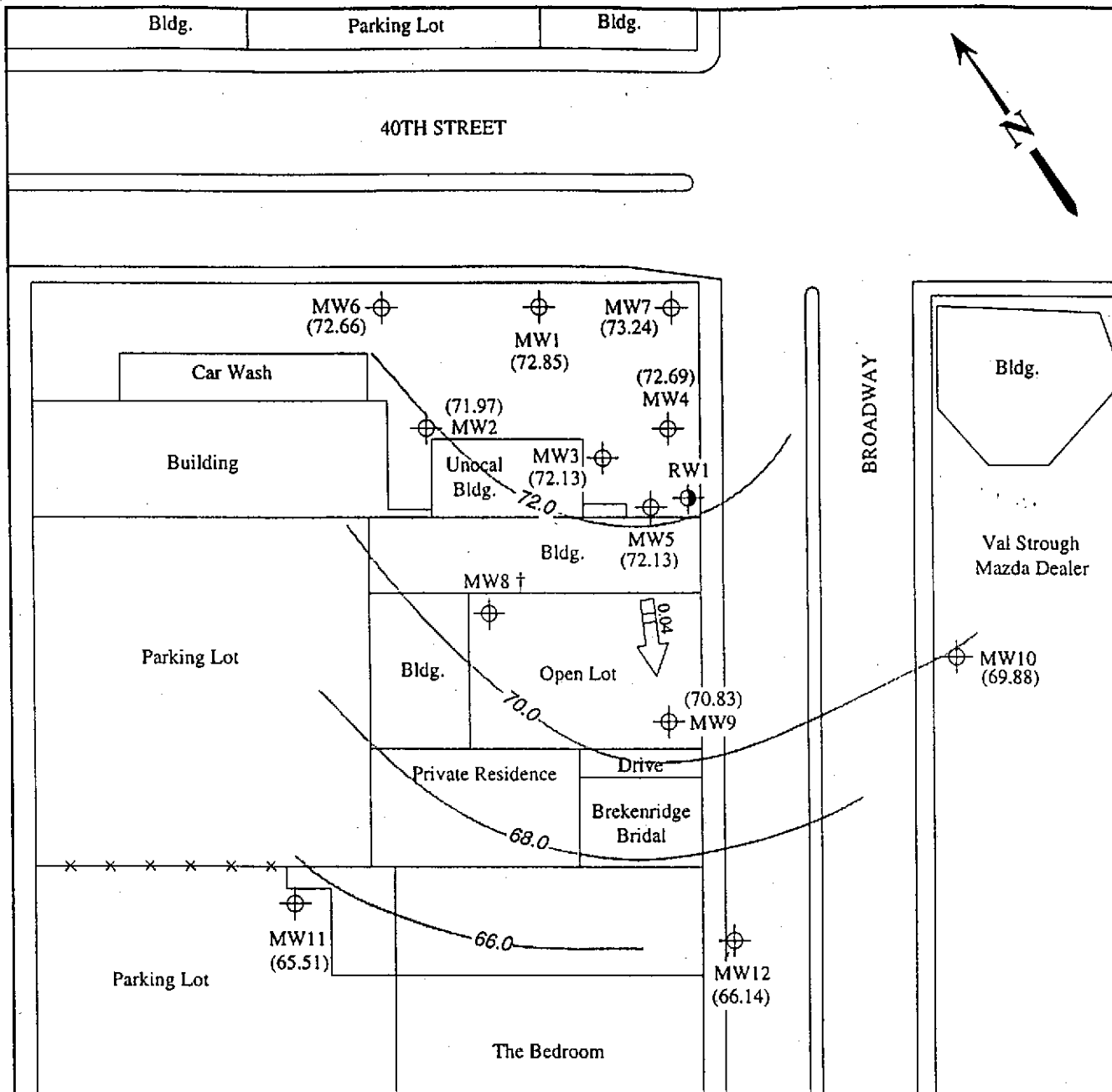


POTENTIOMETRIC SURFACE MAP FOR THE NOVEMBER 7, 1995 MONITORING EVENT

mpds SERVICES, INCORPORATED

UNOCAL SERVICE STATION #0746
3943 BROADWAY
OAKLAND, CALIFORNIA

FIGURE
1



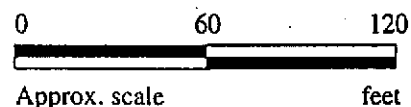
LEGEND

- ⊕ Monitoring well
- ⊙ 6-inch diameter recovery well
- () Ground water elevation in feet above Mean Sea Level

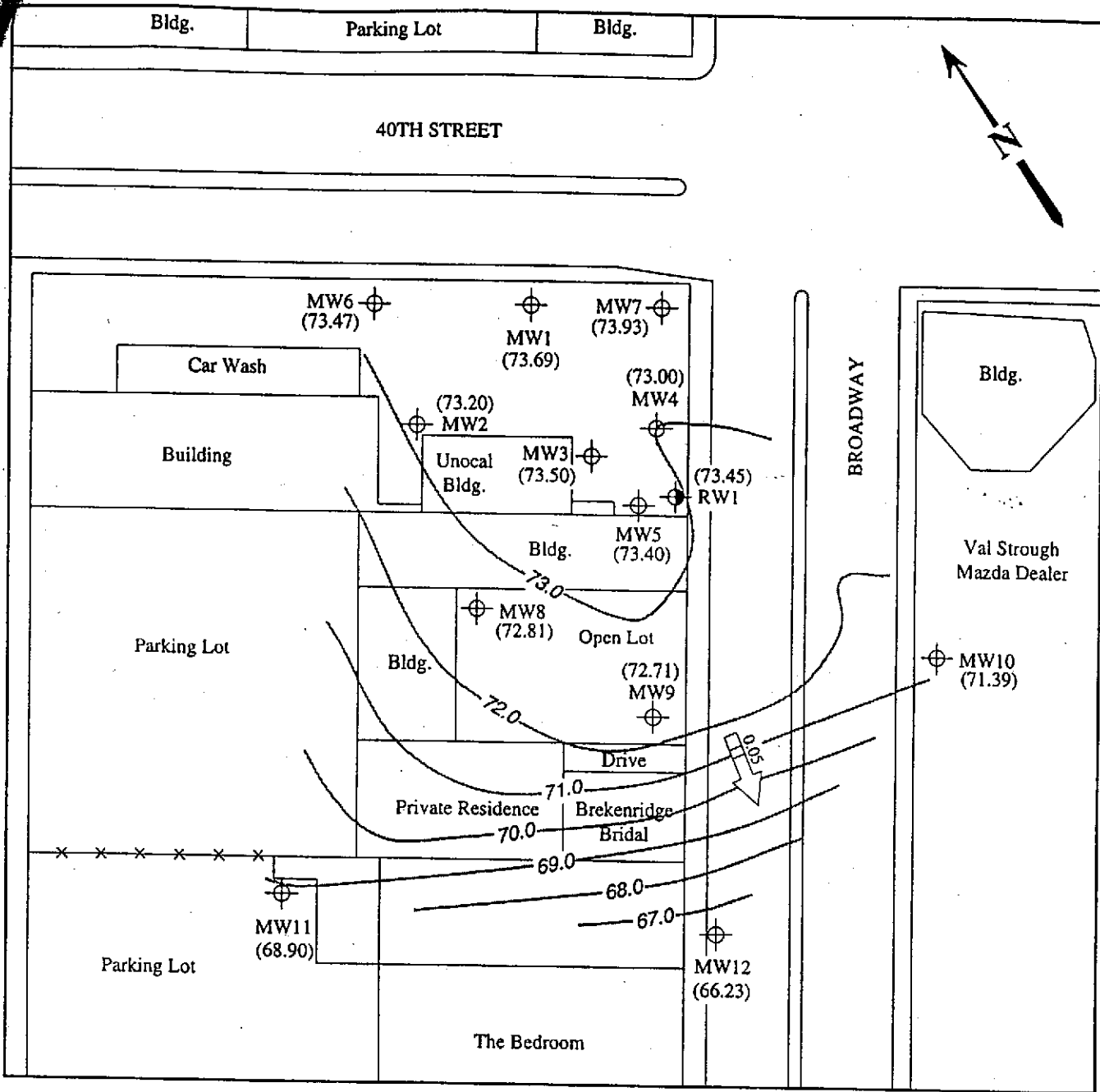
→ Direction of ground water flow with approximate hydraulic gradient

— Contours of ground water elevation

† Well was inaccessible.

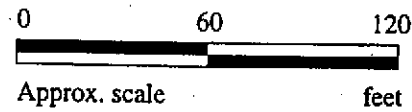


POTENTIOMETRIC SURFACE MAP FOR THE AUGUST 3, 1995 MONITORING EVENT



LEGEND

- ⊕ Monitoring well
- ⊙ 6-inch diameter recovery well
- () Ground water elevation in feet above Mean Sea Level
- ### → Direction of ground water flow with approximate hydraulic gradient
- Contours of ground water elevation

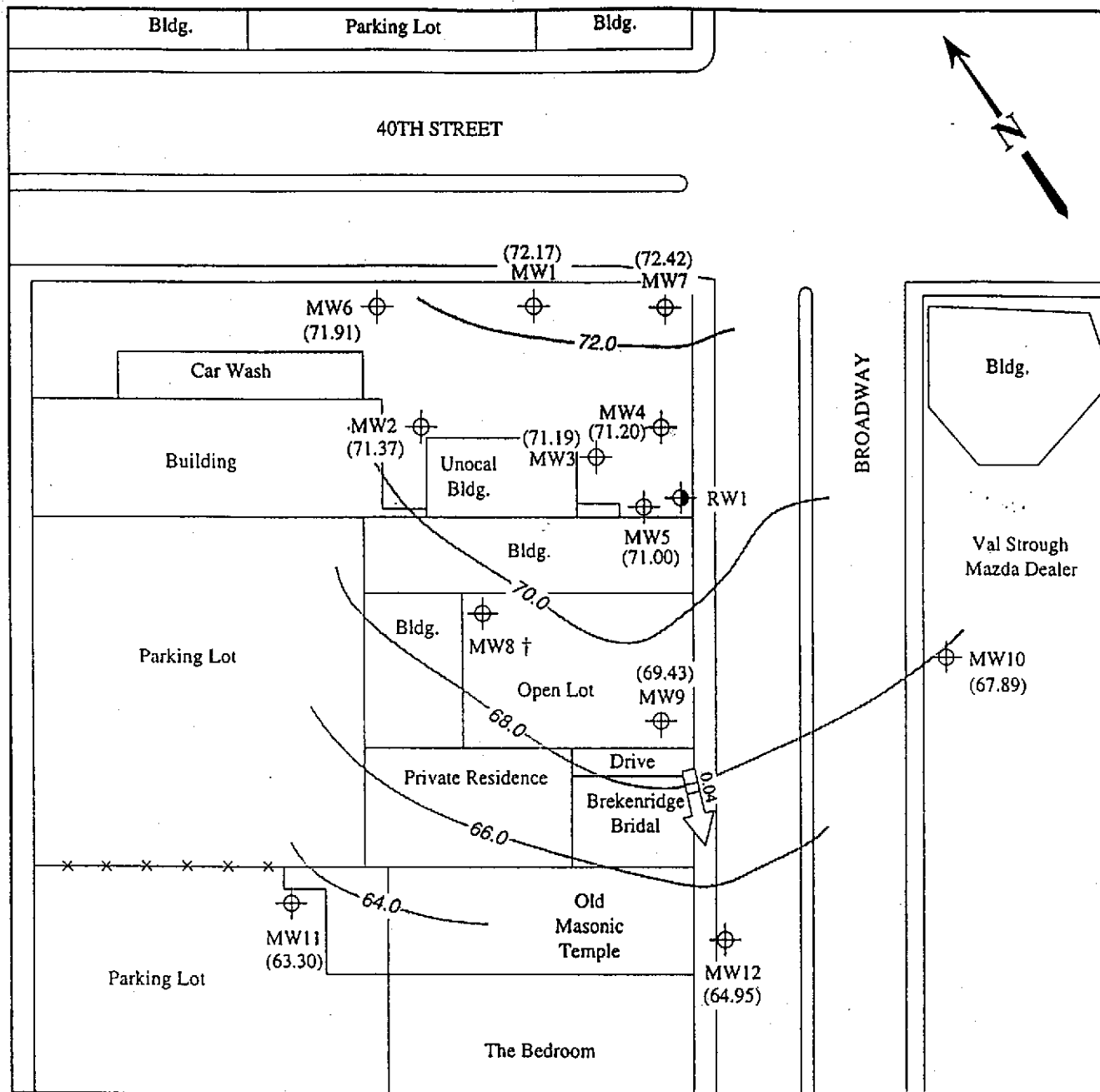


POTENTIOMETRIC SURFACE MAP FOR THE MAY 3, 1995 MONITORING EVENT

mpds SERVICES, INCORPORATED

UNOCAL SERVICE STATION #0746
3943 BROADWAY
OAKLAND, CALIFORNIA

FIGURE
1



LEGEND

⊕ Monitoring well

⊕ 6-inch diameter recovery well

() Ground water elevation in feet above Mean Sea Level

→ Direction of ground water flow with approximate hydraulic gradient

— Contours of ground water elevation

† Well was inaccessible (parked over).



POTENTIOMETRIC SURFACE MAP FOR THE SEPTEMBER 27, 1994 MONITORING EVENT

ATTACHMENT 2

Earl Thompson site
316 - 38th Street
Oakland, CA

The Sutton Group
Document transmittal
March 14, 1996

Lab data for UST liquid samples

DOCUMENT TRANSMITTAL

THE SUTTON GROUP

Engineering and Environmental
Services

51 Shuey Drive

Moraga, California, 94556-2620

phone (510) 631-1688 fax (510) 631-1371

TO: Madhulla Logan
of Alameda County Health Agency

DATE: March 14, 1996

PROJECT: 316 38th Street, Oakland
SUBJECT: Laboratory analysis of samples performed August 1995

PROJECT No. 3030

INITIATOR: John R. Sutton, PE

Attached please find a copy of the laboratory analytical certificates for this project. The analysis was performed on samples of fluids in the tanks. Samples were collected by our staff on August 4, 1995. Analysis was performed by Chromolab of Pleasanton.

You also asked for Mr. Thompson's address:
It is:

Earl W. Thompson, Sr.
P.O. Box 213
Meadow Valley, CA, 95659

phone: (916) 283-4025

If you have questions or desire additional information, please call me

attachment

cc: Mr. Earl W. Thompson, Sr. w/o attachment

sg/3030lt03.doc

96 MAR 19 PM 1:40
ENVIRONMENTAL
PROTECTION

Copy to M. Logan ACEH

CHROMALAB, INC.

Environmental Services (SDB)

August 15, 1995

Submission #: 9508110

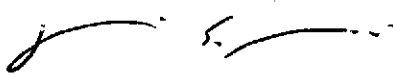
SUTTON GROUP


Atten: John Sutton
Project: SG3030
Received: August 8, 1995
re: 1 sample for Total Extractable Petroleum Hydrocarbons (TEPH) analysis.
Method: EPA 3510/8015M
Sampled: August 8, 1995

Matrix: LIQUID Extracted: August 11, 1995
Run: 8030-D Analyzed: August 11, 1995

Spl #	Sample ID	Kerosene (ug/L)	Diesel (ug/L)	Motor Oil (ug/L)
98476	8/8-3A, 3B, 3C	2900	N.D.	N.D.
For above sample: REPORTING LIMITS RAISED 10X DUE TO DILUTION.				

Reporting Limits	Kerosene	Diesel	Motor Oil
Blank Result	500	500	5000
Blank Spike Result (%)	N.D.	86.00	N.D.
	--	--	--


Dennis Mayugba
Chemist


Ali Kharrazi
Organic Manager

96 MAR 19 PM 1:40
ENVIRONMENTAL PROTECTION

CHROMALAB, INC.

Environmental Services (SDB)

August 15, 1995

Submission #: 9508110

SUTTON GROUP

Atten: John Sutton
Project: SG3030
Received: August 8, 1995
re: One sample for Volatile Organic Compounds analysis.
Method: EPA 8240/8260
SampleID: 8/8-3A, 3B, 3C
Sample #: 98476
Sampled: August 8, 1995

Matrix: LIQUID
Run: 8050-0

Analyzed: August 14, 1995

Analyte	RESULT (ug/L)	REPORTING LIMIT (ug/L)	BLANK RESULT (ug/L)	BLANK SPIKE RESULT (%)
ACETONE	80	4.0	N.D.	--
BENZENE	N.D.	2.0	N.D.	86
BROMODICHLOROMETHANE	N.D.	2.0	N.D.	--
BROMOFORM	N.D.	2.0	N.D.	--
BROMOMETHANE	N.D.	2.0	N.D.	--
METHYL ETHYL KETONE	18	2.0	N.D.	--
CARBON TETRACHLORIDE	N.D.	2.0	N.D.	--
CHLOROBENZENE	N.D.	2.0	N.D.	--
CHLOROETHANE	N.D.	2.0	N.D.	92
2-CHLOROETHYL VINYL ETHER	N.D.	2.0	N.D.	--
CHLOROFORM	N.D.	2.0	N.D.	--
CHLOROMETHANE	N.D.	2.0	N.D.	--
DIBROMOCHLOROMETHANE	N.D.	2.0	N.D.	--
1,1-DICHLOROETHANE	2.0	2.0	N.D.	--
1,2-DICHLOROETHANE	14	2.0	N.D.	--
1,1-DICHLOROETHENE	N.D.	2.0	N.D.	--
CIS-1,2-DICHLOROETHENE	N.D.	2.0	N.D.	77
TRANS-1,2-DICHLOROETHENE	N.D.	2.0	N.D.	--
1,2-DICHLOROPROPANE	N.D.	2.0	N.D.	--
CIS-1,3-DICHLOROPROPENE	N.D.	2.0	N.D.	--
TRANS-1,3-DICHLOROPROPENE	N.D.	2.0	N.D.	--
ETHYLBENZENE	N.D.	2.0	N.D.	--
2-HEXANONE	N.D.	2.0	N.D.	--
METHYLENE CHLORIDE	N.D.	2.0	N.D.	--
METHYL ISOBUTYL KETONE	13	2.0	N.D.	--
STYRENE	2.0	2.0	N.D.	--
1,1,2,2-TETRACHLOROETHANE	N.D.	2.0	N.D.	--
TETRACHLOROETHENE	6.0	2.0	N.D.	--
TOLUENE	N.D.	2.0	N.D.	--
1,1,1-TRICHLOROETHANE	N.D.	2.0	N.D.	87
1,1,2-TRICHLOROETHANE	N.D.	2.0	N.D.	--
TRICHLOROETHENE	N.D.	2.0	N.D.	--
TRICHLOROFLUOROMETHANE	N.D.	2.0	N.D.	96
VINYL ACETATE	N.D.	2.0	N.D.	--
VINYL CHLORIDE	N.D.	2.0	N.D.	--
TOTAL XYLENES	4.0	2.0	N.D.	--

Oleg Nemtsov

Oleg Nemtsov
Chemist

Ali Kharrazi

Ali Kharrazi
Organic Manager

CHROMALAB, INC.

Environmental Services (SDB)

August 11, 1995

Submission #: 9508075

SUTTON GROUP

Atten: John Sutton
Project: 316-38th St
Received: August 4, 1995

Project#: SG 3030

re: 2 samples for Total Extractable Petroleum Hydrocarbons (TEPH) analysis.

Method: EPA 3510/8015M

Sampled: August 4, 1995

Matrix: WATER

Extracted: August 8, 1995


Run: 7948-D

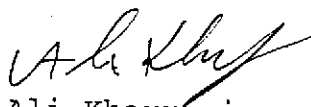
Analyzed: August 9, 1995

Spl #	Sample ID	Kerosene (ug/L)	Diesel (ug/L)	Motor Oil (ug/L)
98236	8/4-1A,B,2A,B	N.D.	95000	N.D.
	For above sample:	REPORTING LIMITS RAISED 100X DUE TO DILUTION.		
98237	8/4-4A,B,5A,B	3500	N.D.	N.D.
	For above sample:	Sample profile is similar to that of stoddard solvent. Reporting limits raised 10X due to dilution.		

Reporting Limits
Blank Result
Blank Spike Result (%)

50	50	500
N.D.	N.D.	N.D.
--	96	--


Dennis Mayugba
Chemist


Ali Kharrazi
Organic Manager

CHROMALAB, INC.

Environmental Services (SDB)

August 11, 1995

Submission #: 9508075

SUTTON GROUP


Atten: John Sutton
Project: 316-38th St
Received: August 4, 1995
re: One sample for Volatile Organic Compounds analysis.
Method: EPA 8240/8260
Sample ID: 8/4-1A, B, 2A, B
Sample #: 98236
Sampled: August 4, 1995


Project#: SG 3030

Matrix: WATER
Run: 8016-0

Analyzed: August 11, 1995

Analyte	RESULT (ug/L)	REPORTING LIMIT (ug/L)	BLANK RESULT (ug/L)	BLANK SPIKE RESULT (%)
ACETONE	4700	200	N.D.	--
BENZENE	N.D.	50	N.D.	102
BROMODICHLOROMETHANE	N.D.	50	N.D.	--
BROMOFORM	N.D.	50	N.D.	--
BROMOMETHANE	N.D.	50	N.D.	--
METHYL ETHYL KETONE	N.D.	50	N.D.	--
CARBON TETRACHLORIDE	N.D.	50	N.D.	--
CHLOROBENZENE	N.D.	50	N.D.	105
CHLOROETHANE	N.D.	50	N.D.	--
2-CHLOROETHYL VINYL ETHER	N.D.	50	N.D.	--
CHLOROFORM	N.D.	50	N.D.	--
CHLOROMETHANE	N.D.	50	N.D.	--
DIBROMOCHLOROMETHANE	N.D.	50	N.D.	--
1,1-DICHLOROETHANE	N.D.	50	N.D.	--
1,2-DICHLOROETHANE	180	50	N.D.	--
1,1-DICHLOROETHENE	N.D.	50	N.D.	104
CIS-1,2-DICHLOROETHENE	N.D.	50	N.D.	--
TRANS-1,2-DICHLOROETHENE	N.D.	50	N.D.	--
1,2-DICHLOROPROPANE	N.D.	50	N.D.	--
CIS-1,3-DICHLOROPROPENE	N.D.	50	N.D.	--
TRANS-1,3-DICHLOROPROPENE	N.D.	50	N.D.	--
ETHYLBENZENE	180	50	N.D.	--
2-HEXANONE	N.D.	50	N.D.	--
METHYLENE CHLORIDE	N.D.	50	N.D.	--
METHYL ISOBUTYL KETONE	4700	50	N.D.	--
STYRENE	N.D.	50	N.D.	--
1,1,2,2-TETRACHLOROETHANE	N.D.	50	N.D.	--
TETRACHLOROETHENE	N.D.	50	N.D.	--
TOLUENE	210	50	N.D.	92
1,1,1-TRICHLOROETHANE	N.D.	50	N.D.	--
1,1,2-TRICHLOROETHANE	N.D.	50	N.D.	--
TRICHLOROETHENE	110	50	N.D.	103
TRICHLOROFLUOROMETHANE	N.D.	50	N.D.	--
VINYL ACETATE	N.D.	50	N.D.	--
VINYL CHLORIDE	N.D.	50	N.D.	--
TOTAL XYLENES	2200	50	N.D.	--


Oleg Nemtsov
Chemist


Ali Kharrazi
Organic Manager

CHROMALAB, INC.

Environmental Services (SDB)

August 11, 1995

Submission #: 9508075

SUTTON GROUP


Atten: John Sutton
Project: 316-38th St
Received: August 4, 1995
re: One sample for Volatile Organic Compounds analysis.
Method: EPA 8240/8260
Sample ID: 8/4-4A,B,5A,B
Sample #: 98237
Sampled: August 4, 1995


Project#: SG 3030

Matrix: WATER
Run: 8016-0

Analyzed: August 11, 1995

Analyte	RESULT (ug/L)	REPORTING LIMIT (ug/L)	BLANK RESULT (ug/L)	BLANK SPIKE RESULT (%)
ACETONE	170000	4000	N.D.	--
BENZENE	N.D.	200	N.D.	102
BROMODICHLOROMETHANE	N.D.	200	N.D.	--
BROMOFORM	N.D.	200	N.D.	--
BROMOMETHANE	N.D.	200	N.D.	--
METHYL ETHYL KETONE	N.D.	200	N.D.	--
CARBON TETRACHLORIDE	N.D.	200	N.D.	--
CHLOROBENZENE	N.D.	200	N.D.	105
CHLOROETHANE	N.D.	200	N.D.	--
2-CHLOROETHYL VINYL ETHER	N.D.	200	N.D.	--
CHLOROFORM	N.D.	200	N.D.	--
CHLOROMETHANE	N.D.	200	N.D.	--
DIBROMOCHLOROMETHANE	N.D.	200	N.D.	--
1,1-DICHLOROETHANE	N.D.	200	N.D.	--
1,2-DICHLOROETHANE	N.D.	200	N.D.	--
1,1-DICHLOROETHENE	N.D.	200	N.D.	104
CIS-1,2-DICHLOROETHENE	N.D.	200	N.D.	--
TRANS-1,2-DICHLOROETHENE	N.D.	200	N.D.	--
1,2-DICHLOROPROPANE	N.D.	200	N.D.	--
CIS-1,3-DICHLOROPROPENE	N.D.	200	N.D.	--
TRANS-1,3-DICHLOROPROPENE	N.D.	200	N.D.	--
ETHYLBENZENE	N.D.	200	N.D.	--
2-HEXANONE	N.D.	200	N.D.	--
METHYLENE CHLORIDE	N.D.	200	N.D.	--
METHYL ISOBUTYL KETONE	N.D.	200	N.D.	--
STYRENE	N.D.	200	N.D.	--
1,1,2,2-TETRACHLOROETHANE	N.D.	200	N.D.	--
TETRACHLOROETHENE	N.D.	200	N.D.	--
TOLUENE	N.D.	200	N.D.	92
1,1,1-TRICHLOROETHANE	N.D.	200	N.D.	--
1,1,2-TRICHLOROETHANE	N.D.	200	N.D.	--
TRICHLOROETHENE	N.D.	200	N.D.	103
TRICHLOROFLUOROMETHANE	N.D.	200	N.D.	--
VINYL ACETATE	N.D.	200	N.D.	--
VINYL CHLORIDE	N.D.	200	N.D.	--
TOTAL XYLENES	N.D.	200	N.D.	--


Oleg Nemtsov
Chemist


Ali Khazrazi
Organic Manager

1220 Quarry Lane • Pleasanton, California 94566-4756

(510) 484-1919 • Facsimile (510) 484-1096

Federal ID #68-0140157

CHROMALAB, INC. SAMPLE RECEIPT CHECKLIST

Client Name SUTTON
 Project SG 3030
 Reference/Subm # 23280/9508/110
 Checklist completed by: Crowley 8/9/95
 Signature / Date

Date/Time Received 8/8/95 17:30
Date / Time
 Received by R. Nyachoto
 Carrier name _____
 Logged in by CR 8/8/95
Initials / Date
 Matrix H2O

- Shipping container in good condition? NA Yes No
- Custody seals present on shipping container? Intact Broken Yes No
- Custody seals on sample bottles? Intact Broken Yes No
- Chain of custody present? Yes No
- Chain of custody signed when relinquished and received? Yes No
- Chain of custody agrees with sample labels? Yes No
- Samples in proper container/bottle? Yes No
- Samples intact? Yes No
- Sufficient sample volume for indicated test? Yes No
- VOA vials have zero headspace? NA Yes No
- Trip Blank received? NA Yes No
- All samples received within holding time? Yes No
- Container temperature? _____
- pH upon receipt 6.2 pH adjusted _____ Check performed by: _____ NA

Any NO response must be detailed in the comments section below. If items are not applicable, they should be marked NA.

Client contacted? _____ Date contacted? _____

Person contacted? _____ Contacted by? _____

Regarding? _____

Comments: _____

Corrective Action: _____

CHROMALAB, INC. SAMPLE RECEIPT CHECKLIST

Client Name SUTTON GROUP Date/Time Received 8/4/95
 Project 5001 Received by PSolis Date / Time
 Reference/Subm # 23244/9508075 Carrier name _____
 Checklist completed by: Chowling 8/8/95 Logged in by CR 8/4/95
 Signature / Date Initials / Date
 Matrix H2O

Shipping container in good condition? NA ___ Yes ___ No ___
 Custody seals present on shipping container? Intact ___ Broken ___ Yes ___ No ___
 Custody seals on sample bottles? Intact ___ Broken ___ Yes ___ No ___
 Chain of custody present? Yes No ___
 Chain of custody signed when relinquished and received? Yes No ___
 Chain of custody agrees with sample labels? Yes No ___
 Samples in proper container/bottle? Yes No ___
 Samples intact? Yes No ___
 Sufficient sample volume for indicated test? Yes No ___
 VOA vials have zero headspace? NA ___ Yes No ___
 Trip Blank received? NA ___ Yes ___ No
 All samples received within holding time? Yes No ___
 Container temperature? _____
 pH upon receipt _____ pH adjusted _____ Check performed by: _____ NA ___

Any **NO** response must be detailed in the comments section below. If items are not applicable, they should be marked NA.

Client contacted? _____ Date contacted? _____

Person contacted? _____ Contacted by? _____

Regarding? _____

Comments: _____

Corrective Action: _____

9508075
CHROMALAB, INC.

REVISED 8/7/95
 1220 Quarry Lane • Pleasanton, California 94566-4756
 510/484-1919 • Facsimile 510/484-1096

Chain of Custody

Environmental Services (SDB) (DOHS 1094)

DATE 8/4/95 PAGE 1 OF 1

PROJ. MGR. <u>JOHN SUTTON</u>	ANALYSIS REPORT																	
COMPANY <u>SUTTON GROUP</u>																		
ADDRESS <u>10 CROW CANYON CT SAN RAMON 94583</u>	TPH - Gasoline (EPA 5030, 8015)	TPH - Gasoline (5030, 8015) w/BTEX (EPA 602, 8020)	TPH - Diesel, TEPH (EPA 3510/3550, 8015)	PURGEABLE AROMATICS BTEX (EPA 602, 8020)	PURGEABLE HALOCARBONS (EPA 601, 8010)	VOLATILE ORGANICS (EPA 624, 8240, 524.2)	BASE/NEUTRALS, ACIDS (EPA 625/627, 8270, 525)	TOTAL OIL & GREASE (EPA 5520, B+F, E+F)	PCB (EPA 608, 8080)	PESTICIDES (EPA 608, 8080)	TOTAL RECOVERABLE HYDROCARBONS (EPA 418.1)	2015 STANDARD SOLV	LUFT METALS: Cd, Cr, Pb, Zn, Ni	CAM METALS (17)	PRIORITY POLLUTANT METALS (13)	TOTAL LEAD	EXTRACTION (TCLP, STLC)	NUMBER OF CONTAINERS
SAMPLERS (SIGNATURE)	(PHONE NO.) <u>838-3850</u>	(FAX NO.) <u>743-9150</u>																

SAMPLE ID.	DATE	TIME	MATRIX	PRESERV.	TPH - Gasoline (EPA 5030, 8015)	TPH - Gasoline (5030, 8015) w/BTEX (EPA 602, 8020)	TPH - Diesel, TEPH (EPA 3510/3550, 8015)	PURGEABLE AROMATICS BTEX (EPA 602, 8020)	PURGEABLE HALOCARBONS (EPA 601, 8010)	VOLATILE ORGANICS (EPA 624, 8240, 524.2)	BASE/NEUTRALS, ACIDS (EPA 625/627, 8270, 525)	TOTAL OIL & GREASE (EPA 5520, B+F, E+F)	PCB (EPA 608, 8080)	PESTICIDES (EPA 608, 8080)	TOTAL RECOVERABLE HYDROCARBONS (EPA 418.1)	2015 STANDARD SOLV	LUFT METALS: Cd, Cr, Pb, Zn, Ni	CAM METALS (17)	PRIORITY POLLUTANT METALS (13)	TOTAL LEAD	EXTRACTION (TCLP, STLC)	NUMBER OF CONTAINERS	
<u>8/4-1A,B,2A,B</u>	<u>8/4</u>	<u>15:45</u>	<u>W</u>	<u>Y</u>						X						X							<u>4</u>
<u>8/4-4A,B,5A,B</u>	<u>2</u>	<u>15:59</u>	<u>✓</u>	<u>✓</u>						X						X							<u>4</u>

PROJECT INFORMATION				SAMPLE RECEIPT				RELINQUISHED BY 1.		RELINQUISHED BY 2.		RELINQUISHED BY 3.			
PROJECT NAME:		TOTAL NO. OF CONTAINERS <u>8</u>		(SIGNATURE)		(TIME)		(SIGNATURE)		(TIME)		(SIGNATURE)		(TIME)	
PROJECT NUMBER <u>5001</u>		HEAD SPACE		(PRINTED NAME)		(DATE)		(PRINTED NAME)		(DATE)		(PRINTED NAME)		(DATE)	
P.O. #		REC'D GOOD CONDITION/COLD		(COMPANY)				(COMPANY)				(COMPANY)			
TAT	<u>STANDARD 5-DAY</u>	24	48	72	OTHER	RECEIVED BY 1.		RECEIVED BY 2.		RECEIVED BY (LABORATORY) 3.					
SPECIAL INSTRUCTIONS/COMMENTS:				(SIGNATURE)		(TIME)		(SIGNATURE)		(TIME)		(SIGNATURE)		(TIME)	
				(PRINTED NAME)		(DATE)		(PRINTED NAME)		(DATE)		(PRINTED NAME)		(DATE)	
				(COMPANY)				(COMPANY)				(LAB)			

013 / 184 - 1000

CHROMALAB, INC.

Environmental Services (SDB) (DOHS 1094)

SUBM #: 9508075 REP: PM
 CLIENT: CL
 DUE: 08/11/95
 REF #: 23244

23244

Chain of Custody

DATE 8/4/95 PAGE 1 OF 1

PROJ. MGR John Sutton
 COMPANY Majichlor - Sutton Group
 ADDRESS 10 Crow Canyon Ct.
San Ramon CA.

SAMPLERS (SIGNATURE) [Signature] (PHONE NO.) 930-3350
 (FAX NO.) 743-9150

ANALYSIS REPORT

SAMPLE ID.	DATE	TIME	MATRIX	PRESERV.	TPH - Gasoline (EPA 5030, 8015)	TPH - Gasoline (5030, 8015) w/BTEX (EPA 602, 8020) <u>70H</u>	TPH - Diesel, TEPH (EPA 3510/3550, 8015)	PURGEABLE AROMATICS BTEX (EPA 602, 8020)	PURGEABLE HALOCARBONS (EPA 601, 8010)	VOLATILE ORGANICS (EPA 624, 8240, 524.2)	BASE/NEUTRALS, ACIDS (EPA 625/627, 8270, 525)	TOTAL OIL & GREASE (EPA 5520, B+F, E+F)	PCB (EPA 608, 8080)	PESTICIDES (EPA 608, 8080)	TOTAL RECOVERABLE HYDROCARBONS (EPA 418.1)	LUFT METALS: Cd, Cr, Pb, Zn, Ni	CAM METALS (17)	PRIORITY POLLUTANT METALS (13)	TOTAL LEAD	EXTRACTION (TCLP, STLC)	NUMBER OF CONTAINERS	
<u>8/4-1A</u>	<u>8/4/95</u>	<u>1545</u>	<u>AQ</u>	<u>HCL</u>		<input checked="" type="checkbox"/>																
<u>8/4-1B</u>		<u>1545</u>		<u>HCL</u>																		<input checked="" type="checkbox"/>
<u>8/4-2A</u>		<u>1550</u>		<u>NA</u>							<input checked="" type="checkbox"/>											<input checked="" type="checkbox"/>
<u>8/4-2B</u>		<u>1555</u>		<u>NA</u>																		<input checked="" type="checkbox"/>
<u>8/4-4A</u>		<u>1559</u>		<u>HCL</u>		<input checked="" type="checkbox"/>																<input checked="" type="checkbox"/>
<u>8/4-4B</u>		<u>1605</u>		<u>HCL</u>																		<input checked="" type="checkbox"/>
<u>8/4-5A</u>		<u>1610</u>		<u>NA</u>							<input checked="" type="checkbox"/>											<input checked="" type="checkbox"/>
<u>8/4-5B</u>		<u>1615</u>		<u>NA</u>																		<input checked="" type="checkbox"/>

PROJECT INFORMATION		SAMPLE RECEIPT			
PROJECT NAME:		TOTAL NO. OF CONTAINERS	<u>8</u>		
PROJECT NUMBER	<u>5001</u>	HEAD SPACE			
P.O. #		REC'D GOOD CONDITION/COLD			
TAT	<u>STANDARD 5-DAY</u>	CONFORMS TO RECORD			
		24	48	72	OTHER

RELINQUISHED BY		1.	2.	3.
(SIGNATURE)	(TIME)	(SIGNATURE)	(TIME)	(SIGNATURE)
<u>RJ Murawski</u>				
(PRINTED NAME)	(DATE)	(PRINTED NAME)	(DATE)	(PRINTED NAME)
(COMPANY)		(COMPANY)		(COMPANY)

SPECIAL INSTRUCTIONS/COMMENTS:
Call John Sutton @ 930-3350 or
Bob Murawski 930-0518
X SAMPLES RECEIVED AT 22300 RS

RECEIVED BY		1.	2.	3.
(SIGNATURE)	(TIME)	(SIGNATURE)	(TIME)	(SIGNATURE)
(PRINTED NAME)	(DATE)	(PRINTED NAME)	(DATE)	(PRINTED NAME)
(COMPANY)		(COMPANY)		(LAB)

ATTACHMENT 3

City of Oakland
Public Works Agency

Memorandum

January 28, 1998

and

Alameda County
Public Works Agency

Correspondence

January 29, 1998



CITY OF OAKLAND



ENVIRONMENTAL SERVICES - 1333 BROADWAY, SUITE 330A - OAKLAND, CALIFORNIA 94612

Public Works Agency

January 28, 1998

(510) 238-6688
FAX (510) 238-7286
TDD (510) 238-7644

To: Scott Seery
Alameda County Environmental Health Services

RE: ROCKRIDGE BRANCH OF GLEN ECHO CREEK BETWEEN MANILLA AVENUE
AND BROADWAY AND 38TH STREET AND 40TH STREET

Oakland's storm drain system is owned by several entities, including the City of Oakland, the Alameda County Flood Control and Water Conservation District (ACFCD), and several private property owners. And while the City and ACFCD are often responsible for enforcing local, state, and federal storm water pollution laws, the ultimate responsibility for many storm water quality problems rests with individuals who are inclined to disregard the law.

The following are a few summaries that may help clear up and questions you have had about the Rockridge Branch of Glen Echo Creek between Manilla Avenue and Broadway and 38th Street and 40th Street:

Storm Drain Ownership and Responsibility

From the records and maps available at the City, and to the best of my current knowledge, the City of Oakland does not own the section of creek and culvert of the Rockridge Branch of Glen Echo Creek between Manilla Avenue and Broadway and 38th Street and 40th Street. From our records, there is also no indication that the Alameda County or the Alameda County Flood Control and Water Conservation District owns this section. Our records imply that the section of creek and culvert is privately owned and is part of each parcel that it passes through. However, if absolute verification is required, I would recommend a complete title search by a title company. Please note that an easement granted to the City is not valid unless it is accepted and recorded by the City.

Upstream and downstream of the site, culverted sections of the Rockridge Branch of Glen Echo Creek and storm drains draining into the creek are owned by various private property owners and by the City of Oakland. All of the open sections of the creek are privately owned. In general, the storm drain system within the public right of way is the City's responsibility to maintain, and the storm drain systems on private property are the private property owners' responsibility to maintain, unless there is a written agreement accepted by the City.

Apparent Condition of Culvert

On May 12, 1997, I visually inspected the arch of the culvert in question from the bottom of the culvert manhole on 38th Street. As far as I could see from that position, the arch of the culvert appeared to be in excellent condition.

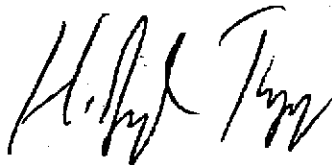
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BROADWAY AND 38TH STREET AND 40TH STREET

Apparent Water Quality

We do not have sufficient information to describe a typical range of dissolved petroleum hydrocarbons in Oakland's storm water. We do know, however, that storm water quality is poorer during the first rain of the rainy season. Storm water quality of Oakland's Creeks ranges from poor to excellent. In many of the creeks, the water quality is good enough to support significant aquatic life. Recently, we have discovered rainbow trout in some of our creeks. We will be studying aquatic life in more of the creeks in the near future, including Glen Echo Creek.

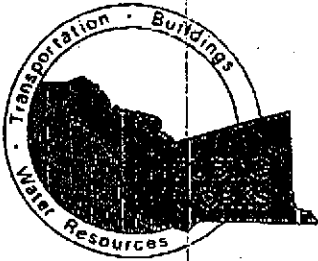
If you have any further questions about this matter, please call me at 238-6544.

Sincerely,



H. Joseph Trapp
Assistant Engineer II

cc: Brooke Levin, PWA Environmental Services Program Manager
Andrew Clark-Clough, PWA Environmental Program Supervisor
Mike Neary, Supervising Engineer, PWA Engineering Design



**COUNTY OF ALAMEDA
PUBLIC WORKS AGENCY**

399 Elmhurst Street • Hayward, CA 94544-1395
(510) 670-5480

January 29, 1998

Mr. Scott Seery
Alameda County Environmental Health Services
Environmental Protection Division
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502-6577

Dear Mr. Seery:

Subject: Your Memorandum Dated January 26, 1998

The following comments are made in response to the numbered questions asked in your memorandum dated January 26, 1998 to Joe Trapp at the City of Oakland, Office of Public Works.

1. The storm drain in question, Line B-1, is in private ownership or within the City of Oakland easement both upstream and downstream of 38th Street. Upkeep is the responsibility of the property owner or possibly, where the City has easement, the City of Oakland. In either case, the Alameda County Flood Control District has no responsibility of any kind.
2. Ownership and responsibility may change along the alignment, but never to the District.
3. The source of water that feeds into the storm drain is outlined on the attached drainage area map on which the reach in question is highlighted in green. This line ultimately discharges into Line B and then Lake Merritt. There are numerous inlets along Line B-1.
4. To our knowledge, the District has never inspected this reach of Line B-1.

Mr. Scott Seery

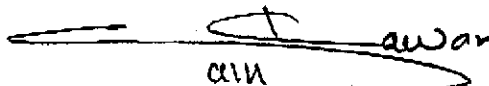
-2-

January 28, 1998

5. Our records indicate that District Water Resources personnel have never sampled water from Line B-1. That is the responsibility of the City of Oakland.

If you require any further information, please do not hesitate to contact me at 670-5456.

Yours truly,

Handwritten signature of Ousama H. Kavar in black ink, written over a horizontal line. The signature is stylized and includes the name "Kavar".

Ousama H. Kavar
Assistant Director of Public Works

Enclosure

OHK:HEA:nbc

MEMORANDUM

DATE: January 26, 1998

TO: Joe Trapp, Oakland Public Works 238-7286 FAX

FROM: Scott Seery 567-6783 337-9335 FAX

SUBJ: Storm drain responsibility, area of Manilla and 38th Streets

As we discussed last week by phone, the owners of the former Glovatorium drycleaning plant (3815 Broadway) have applied to Cal-EPA's "Site Designation Committee" to assign the Regional Water Quality Control Board (RWQCB) the oversight responsibility for the environmental investigation at this site, removing the Health Department from that role. In their application to Cal-EPA, applicants have asserted as one point of reason that a brick-lined storm drain passing below the site has been compromised structurally, and that contaminants entrained in water flowing within have "likely" impacted their site and San Francisco Bay. Applicants further assert this storm drain is owned by Alameda County, and therefore, constitutes a conflict of interest as a county-owned utility should the Health Department continue as lead agency.

In order to respond to this particular point, I have sought your assistance regarding several storm drain issues. Please answer the following questions:

- 1) Who "owns" the subject storm drain upstream of 38th Street? Downstream? Who has responsibility for its upkeep?
- 2) Do ownership and/or responsibility change along the storm drain alignment, in other words, do either change as the drain passes from below city easement to private property to city easement again?
- 3) I understand that the subject storm drain is part of the Glen Echo system of drains, and represents a culvertized former creek channel. What source of water feeds this storm drain? Where does the drain discharge? Are there other inlets to this storm drain?
- 4) During your inspection of the 38th Street segment of this drain in May 1997, did you notice any internal portion of the structure to be riddled with holes, cracks, and very serious deep gaps in the brick and concrete masonry liner?
- 5) What is the typical (ppm) range of dissolved-phase petroleum hydrocarbon compounds in water sampled from storm drains in the city as a whole? Is it ever higher in storm water collected after the first rain event of the season?

Thank you in advance for your assistance.



CITY OF OAKLAND



ENVIRONMENTAL SERVICES • 1333 BROADWAY, SUITE 330A • OAKLAND, CALIFORNIA 94612

Public Works Agency

January 28, 1998

(510) 238-6688
FAX (510) 238-7286
TDD (510) 238-7644

To: Scott Seery
Alameda County Environmental Health Services

RE: ROCKRIDGE BRANCH OF GLEN ECHO CREEK BETWEEN MANILLA AVENUE
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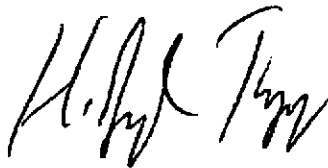
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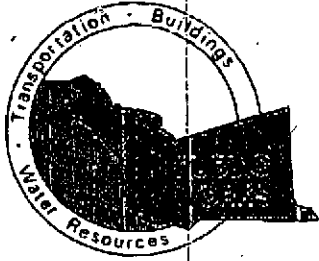
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Sincerely,



H. Joseph Trapp
Assistant Engineer II

cc: Brooke Levin, PWA Environmental Services Program Manager
Andrew Clark-Clough, PWA Environmental Program Supervisor
Mike Neary, Supervising Engineer, PWA Engineering Design



COUNTY OF ALAMEDA
PUBLIC WORKS AGENCY
399 Elmhurst Street • Hayward, CA 94544-1395
(510) 670-5480

January 29, 1998

Mr. Scott Seery
Alameda County Environmental Health Services
Environmental Protection Division
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502-6577

Dear Mr. Seery:

Subject: Your Memorandum Dated January 26, 1998

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4. To our knowledge, the District has never inspected this reach of Line B-1.

Mr. Scott Scery

-2-

January 28, 1998

- 5. Our records indicate that District Water Resources personnel have never sampled water from Line B-1. That is the responsibility of the City of Oakland.

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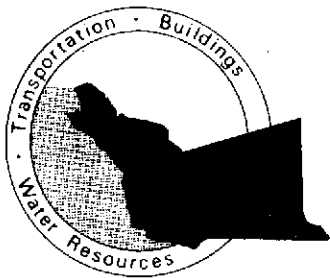
Yours truly,

Handwritten signature of Ousama H. Kavar in black ink, written over a horizontal line.

Ousama H. Kavar
Assistant Director of Public Works

Enclosure

OHK:HEA:nbe



COUNTY OF ALAMEDA
PUBLIC WORKS AGENCY
399 Elmhurst Street • Hayward, CA 94544-1395
(510) 670-5480

RECEIVED
PUBLIC WORKS AGENCY
98 FEB -3 AM 9:30

January 29, 1998

Mr. Scott Seery
Alameda County Environmental Health Services
Environmental Protection Division
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502-6577

Dear Mr. Seery:

Subject: Your Memorandum Dated January 26, 1998

The following comments are made in response to the numbered questions asked in your memorandum dated January 26, 1998 to Joe Trapp at the City of Oakland, Office of Public Works.

1. The storm drain in question, Line B-1, is in private ownership or within the City of Oakland easement both upstream and downstream of 38th Street. Upkeep is the responsibility of the property owner or possibly, where the City has easement, the City of Oakland. In either case, the Alameda County Flood Control District has no responsibility of any kind.
2. Ownership and responsibility may change along the alignment, but never to the District.
3. The source of water that feeds into the storm drain is outlined on the attached drainage area map on which the reach in question is highlighted in green. This line ultimately discharges into Line B and then Lake Merritt. There are numerous inlets along Line B-1.
4. To our knowledge, the District has never inspected this reach of Line B-1.

Mr. Scott Seery

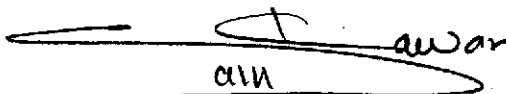
-2-

January 28, 1998

5. Our records indicate that District Water Resources personnel have never sampled water from Line B-1. That is the responsibility of the City of Oakland.

If you require any further information, please do not hesitate to contact me at 670-5456.

Yours truly,



OHK

Ousama H. Kavar
Assistant Director of Public Works

Enclosure

OHK:HEA:nbe

**ALAMEDA COUNTY ENVIRONMENTAL
HEALTH SERVICES**

ENVIRONMENTAL PROTECTION DIVISION

1131 Harbor Bay Parkway, Suite 250

Alameda, CA 94502-6577

Telephone (510) 667-6700

Fax (510) 337-9336

FAX COVER SHEET

DATE: Jan. 22, 19 98

TO: John Fenstermacher

AlCo PW Real Estate

FAX # () 782-1939

Total number of pages including cover sheet 2

FROM: Scott Scery 667-6783

ACDEH

NOTE:

PLEASE RESPOND BY FAX ONLY.

Thanks for your help. I need a letter from ACPW
stating position with respect to ownership/responsibility
of/for noted storm drain on attached map. I

(SMILE) HAVE A NICE DAY
DO SOMETHING FOR OUR ENVIRONMENT

desperately need response next week so I may
submit rebuttal to Cal-EPA several days in advance
of Feb. 5 hearing regarding clean-up of site.

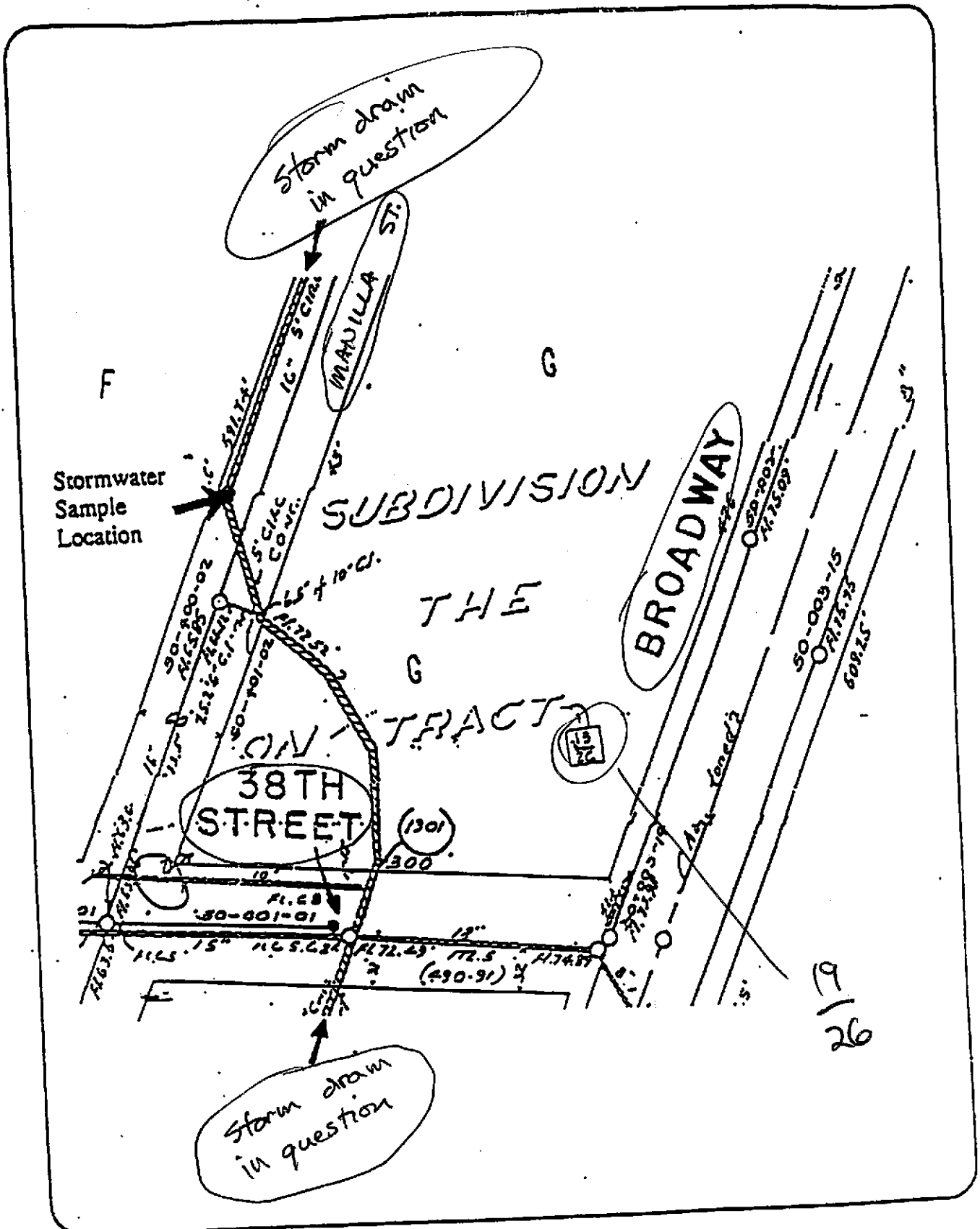


Figure 1. Site Location



Alameda County
District Attorney's Office
Thomas J. Orloff, District Attorney

January 13, 1998

Francis McChesney
State Water Resources Control Board
901 P Street
Sacramento, CA 95814

Re: Opposition to Application for Transfer of Oversight
From Alameda County to the SFRWQCB
3815 Broadway, Oakland, CA
People v. Depper (Alameda County Superior Court No. 116653 A&B)

Dear Ms. McChesney:

It has come to our attention that Robert and Stuart Depper, the owner and operator of the contaminated site formerly known as the "Glovatorium", are seeking to have the site designated as one inappropriate for local (County) oversight. Please accept this letter as an objection to any such designation.

The Deppers have committed a variety of environmental crimes over a period of years, culminating in their being criminally charged and convicted. Both are currently on probation in the Alameda County Superior Court, with one explicit condition of probation being that they comply with instructions from the Alameda County Department of Environmental Health regarding the site investigation and any necessary remediation. In other words, a Superior Court judge has specifically ordered each defendant to comply with instructions from the County.

Francis McChesney
State Water Resources Control Board
January 13, 1998
Page 2

They are now seeking to escape this oversight, hoping for more casual scrutiny. Such a request is inappropriate because:

1. Such an action would "have the effect of reversing a regulatory or enforcement action initiated by an agency that has jurisdiction over the site, a facility on the site, or an activity." (H&S §25262(a)(2)). (Taking the oversight away from the County would actually be contrary to and require modification of a Superior Court order.)
2. Alameda County is the appropriate agency for oversight because it "has accepted responsibility for overseeing the site investigation or remedial action at the site, and is certified, or has been approved by a state agency to conduct that oversight." (H&S §25262(c)(2)(d)(iii)). (The County has already been delegated this responsibility as a Local Oversight Program ("LOP")).

Enclosed, to provide you with some background regarding the Deppers, are:

1. the Sentencing Memorandum in the criminal case, setting forth the facts and crimes charged;
2. a newspaper article regarding Judge Lambden's comment that these defendants had committed a "murderous assault on the earth";
3. my letter to the probation officer setting forth the terms and conditions of the probation of Robert Depper (Stuart was ordered to comply with the same terms at a different time), and
4. the Petition to Revoke Probation filed after these defendants actually refused to comply with the order that they commence the environmental investigation.

Francis McChesney
State Water Resources Control Board
January 13, 1998
Page 3

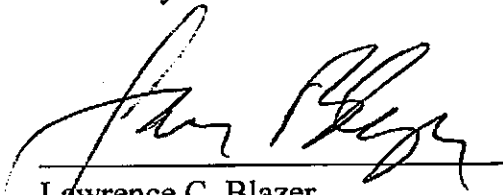
It should be noted that these defendants have lied repeatedly to environmental regulators (see the Sentencing Memorandum) and that they have yet to present any technical report regarding the current investigation to the County.

If you have any further questions, or need any more information, please feel free to call me

Very truly yours,

THOMAS J. ORLOFF
District Attorney

By:



Lawrence C. Blazer
Deputy District Attorney

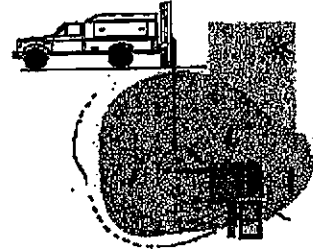
TJO:LCB:md

enclosures

cc: Scott Seery

GeoSolv, LLC

Environmental and Hydrogeological Consulting
643 Oregon Street, Sonoma, CA 95476
Phone: (707) 996-4227 Fax: (707) 996-7882



We Don't Just Work on Your Environmental Problems. We Solve Them!

January 2, 1998

Laurie Grouard
State of California
Department of Toxic Substances Control
301 Capitol Mall, 4th floor
Sacramento, CA 95814

Post-it® Fax Note	7671	Date	1-7-98	# of pages	12
To	Scott Seery	From	Laurie Grouard		
Co./Dept.		Co.	Toxic Sub. Ctrl		
Phone #		Phone #	916-323-3394		
Fax #	510-337-9335	Fax #	916-323-3700		

SUBJECT: Additional information to Supplement the Application for Transfer of Oversight from the Alameda County Local Oversight Program (LOP) for Underground Storage Tanks (USTs) to the San Francisco Regional Water Quality Control Board (SFRWQCB) for the:

**Former Glovatorium/The Leather Cleaners (Depper) site at:
3815 BROADWAY, OAKLAND, CA 94611**

Dear Ms. Grouard:

I appreciate your efforts to expedite the processing and review of the previously submitted application for "Site Designation" so that it can hopefully be placed on the January 29th meeting agenda. During our recent phone conversation you stated that you would need the following three items to complete the application package:

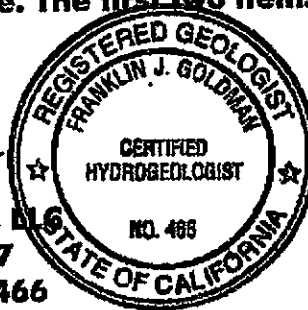
- 1) Legal Description of the site (e.g. Township and Range, Parcel Map, etc.)
- 2) List of interested parties/property owners in the vicinity with names, addresses and phone numbers.
- 3) Detailed summary of the contaminants identified in the subsurface investigation. Due in your office by Monday, January 5, 1998.

Enclosed is the 3rd item listed above. The first two items are forthcoming.

Sincerely,

A handwritten signature in cursive script that reads "Franklin J. Goldman".

Franklin J. Goldman, CEO/GeoSolv, LLC
State Registered Geologist No. 5557
State Certified Hydrogeologist No. 466



**Site Investigation Summary
Subsurface Investigation Report for Two Clusters of Underground Storage Tanks
Former Glovatorium/The Leather Cleaners
3815 BROADWAY, OAKLAND, CA 94611**

1.0 Summary of Contaminants Identified in Soil and Groundwater

GeoSolv, LLC has completed the aforementioned subsurface investigation. The purpose of the investigation was to comply with the requirements of the workplan approved by Alameda County Environmental Health and to identify incidental discharges from two clusters of six USTs. Discharges of standard solvent have been confirmed to have emanated from the USTs onsite, surface spillage, and possibly from the Thompson property to the south. During the course of the investigation, MTBE was identified in groundwater and appears to have migrated from offsite and up-gradient from the Unocal Gasoline Service Station to the north. Chlorinated solvents were also identified, however, the source and origin of the discharge has not been confirmed. BTEX constituents were identified in groundwater and appear to be migrating from the direction of the location the underground storage tanks located at the Earl Thompson property on 38th Street, to the south. Gasoline ranged organic compounds were identified in soil and groundwater in the vicinity of an Alameda County, five (5) foot diameter, concrete masonry stormdrain constructed at the turn-of-the-century. Also, oil ranged organic compounds were identified in the stormdrain discharge leading into the Depper's property during several sampling events over the past four (4) years.

2.0 Soil and Groundwater Sampling

Fourteen (14), 2.5 inch diameter continuously cored boreholes were excavated with a push technology drill rig from 8-19-97 through 8-22-97 to obtain soil and groundwater samples.

The boreholes were initially excavated with a push-technology, limited access sampling rig, called an Enviro-core, owned and operated by Precision Sampling, Inc. of San Rafael California. This unique sampling device provides an outer conductor casing which provides a protective sheath around the drill stem and sampling tube so that cross contamination of potential chlorinated solvents can be prevented. Since chlorinated solvents tend to sink instead of float on the groundwater (e.g. gasoline and diesel float), it was imperative that the conductor casing be used to protect the sampling device from cross contamination. The negative consequence of not using the conductor casing is that the sampler can drag chlorinated solvents encountered at shallower depths, down to greater depths, thus erroneously implying that the chlorinated solvents encountered in soil are deeper than in reality. Unfortunately, Scott Seary of Alameda County Health, demanded, when drilling with the conductor casing which met with resistance/refusal due to gravels in clay, that the boreholes be drilled to a greater depth without the conductor casing with a 1.0 inch diameter split spoon sampler until groundwater was encountered. I stated to Mr. Seary, in the field that it would be best to wait until the groundwater rises in a few months as it was the dry season and we could supplement the investigation with a more focused well location strategy based upon the soil concentration data we had collected from the original fourteen holes. Mr. Seary stated that if I did not extend the borings deeper, he would find another consultant who would. Mr. Seary's field notes (attached) tell a different story. In essence, it is my professional opinion that drilling deeper with the split spoon through chlorinated solvent

contaminated soil may have jeopardized the investigation by implying that the contamination in soil is deeper than it actually is. Also, it unnecessarily increased the overall cost of the investigation by increasing the density and number of borehole/data points which were extended to greater depths. A more efficient approach would have been to drill and sample to define the shallow contamination in soil and to then install temporary wells in the open boreholes. Next, wait a few months for water levels to rise up into the temporary wells and collect water samples. Then, utilize the contaminant concentration data to design a supplemental groundwater investigation with more strategically placed deeper wells installed with a hollow-stem augers to be used as conductor casings to prevent cross contamination by chlorinated solvents.

Seven (7) of the boreholes received a 1/2 inch, temporary PVC blank and screened casing (0.02 inch slots) to obtain groundwater samples.

The boreholes were logged by a State registered geologist. Soil samples extruded into the acetate liners were cut into approximate six inch lengths. Samples collected with the split spoon were extruded into brass tubes. Soil samples were covered at each end with Teflon sheets, capped with plastic end caps, taped with duct tape, labeled, placed into plastic Zip-loc bags, placed into an ice chest at 4 degrees centigrade, and transported to a State certified laboratory, under proper chain of custody, within appropriate holding times. All samplers were cleaned with a Liquinox solution between samplings.

Groundwater samples were collected by purging and developing the temporary wells with a 3/8 inch steel bailer. Approximately 3 to 10 saturated borehole volumes were removed from each well. Groundwater samples were collected after the water level had recovered to within 80% of its original depth bgs. Groundwater extracted during the development process was analyzed for temperature, conductivity, and pH with a Hydac Kit until three consecutive readings were within a 10% difference for each parameter. Groundwater samples were placed in 40 ml VOAs with HCL preservative and in one liter amber bottles for VOCs and diesel ranged organics, respectively. Water samples were labeled under proper chain of custody and placed in an ice chest at 4 degrees centigrade for transport to a State certified lab. All bailers were cleaned with a Liquinox solution between samplings.

Seven of the boreholes were backfilled with grout and the seven wells were sealed with a bentonite plug, six inches thick, and a concrete dome to complete the seal at the surface opening to the temporary well.

Soil drill cuttings, well purge water, and rinseate were placed in drums. The drums were labeled and left onsite for profiling for eventual transport to a legal point of disposal.

3.0 Groundwater Level Measurements

Water level measurements were taken with an electronic water level sounder to the nearest 100th of a foot below ground surface. Well locations were measured for relative elevation by a certified land surveyor. The groundwater gradient direction is to the west at a gradient of 0.11 feet/foot (Figure 1). A groundwater mound exists at well B10 which suggests a relatively continuous recharge area. An investigation performed for the UNOCAL Service Station at 40th and Broadway, exhibited a groundwater gradient in the west to southwest direction.

4.0 Reporting of Laboratory Results

Stoddard Solvent

The main hydrocarbon constituent discharged at the site is stoddard solvent. Cross sections of the stoddard solvent in soil (Figure 6) indicate that the plume is centered around borehole B7 where a bare patch of soil, was reported to have existed in the concrete slab and may have provided a pathway for discharges indicating that a significant portion of the stoddard solvent in the subsurface was from surface spillage and not from the underground storage tanks.

Stoddard solvent in groundwater mimics the lateral distribution of the plume in soil (Figure 7) in that it is centered around borehole B7. One exception is that another point source is located at the recessed storm drain as indicated by 48,000 ppb stoddard solvent identified in groundwater at borehole B10. The distribution of stoddard solvent in soil and groundwater was assessed as an indicator constituent to demonstrate a generalized configuration of potential point sources and migratory pathways of other constituents identified at the site.

Chlorinated Solvents

Soil samples collected at B10 and analyzed for chlorinated solvents revealed PCE and TCE in soil (Figure 8). PCE and TCE in soil were not identified in B9, at the same depth (15 to 16 feet bgs), just 20 feet away from B10. This is typical of the migratory behavior of these heavy molecules in that they tend to migrate vertically more so than laterally. Lateral migration is controlled to a minor degree when alternating layers of sand and clay earth materials dip in a preferred orientation and direct the DNAPL solvent phase across the top of clay layers to cascade down to sand layers below. This site, however, is predominantly clay with little variation in stratigraphy in terms of the vertical extent encountered in the boreholes. As a result, chlorinated solvents identified in soil were only found in shallow soils in the vicinity of B10 and not in B3, B9, and B6.

The PCE and TCE has biodegraded to cis 1,2-dichloroethene as shown by the distribution of the solvents in groundwater (Figure 8). The groundwater plume map indicates that most of the PCE (13,000 ppb) has converted to cis 1,2-dichloroethene.

MTBE

The MTBE was identified in groundwater and is migrating from offsite (from the north and northwest) from the general direction of the existing UNOCAL service station. Initial results for MTBE revealed the highest concentration of 790 ppb in groundwater at borehole B1 (Figure 9). The same groundwater sample was further analyzed by EPA Method 8260 to confirm the initial result of 790 ppb and it was revealed that the concentration of MTBE in the same lab sample was actually 850 ppb. In this case, it is abundantly clear that the MTBE plume has emanated from an underground storage tank at a location in the general direction of the UNOCAL site. Unless there is another gasoline UST between the UNOCAL site and the plume as identified at the Depper's site, the MTBE exhibits the leading edge of a gasoline plume which has migrated from the UNOCAL site.

Benzene

Benzene (up to 18 ppb) was identified in groundwater and is emanating from the south in the general direction of the Earl Thompson property (Figure 10). No benzene was identified in soil. This suggests that the point source for the benzene is in the direction of the Earl Thompson property. Detectable levels of ethyl benzene, toluene, and xylene were identified in soil and are typically associated with benzene within gasoline fuels. Since the benzene is usually the first to biodegrade and volatilize within a gasoline mixture, in-situ, it indicates that the primary (e.g. a UST) and secondary (gasoline contaminated soil) contaminant sources exist to the south of the investigation area. Contamination identified at the Earl Thompson property and the constituents at the subject site are ethyl benzene, toluene, and xylene.

The benzene plume, at the subject site does not possess a spatial distribution which is similar to that of the stoddard solvent or chlorinated solvent plumes and therefore cannot be considered as a trace constituent which could have been entrained in the solvent products.

Gasoline and Oil Ranged Organics

Since the five (5) foot diameter storm drain which runs underneath the property, is riddled with holes, cracks, and very serious deep gaps in the brick and concrete masonry liner, it is very likely that it is serving as a preferential pathway for the migration of chlorinated solvents throughout the site, offsite, and to the San Francisco Bay.

Gasoline ranged organics (220 PPM in soil & 3,200 ppb in groundwater) were collected from borehole BSD (Figure 1 for borehole location) directly adjacent to the incoming storm drain.

Oil ranged organics (81 ppb in water) were identified in a water sample collected from the Alameda County storm drain system conduit, after the first rain of the season (1997), located across Manila street, upflow from the site. Water samples collected from the storm drain leading to the Depper's property on 11-29-93 identified oil range compounds (700ppb in water). Oil ranged organic compounds were also identified in the storm drain leading into the Depper's property on 10-14-93 (1,300 ppb in water).

Limitations

This report was prepared as an interim measure to provide site designation committee members with a more focused summary of the activities completed to date. It is not meant to be considered as the final report. The final subsurface investigation report will be available on January 26th, 1998. This report has been prepared in accordance with generally accepted environmental, geological and engineering practices. No warranty, either expressed or implied, is made as to the professional advice presented herein. The analyses, conclusions and recommendations contained in this report are based upon site conditions as they existed at the time of the investigation and they are subject to change. The conclusions presented in this report are professional opinions based solely upon visual observations of the site and vicinity, and interpretation of available information as described in this report. Geosolv, LLC, recognizes that the limited scope of services performed in execution of this investigation may not be appropriate to satisfy the needs, or requirements of other state agencies, or of other users.

white - env. health
yellow - facility
pink - files

ALAMEDA COUNTY, DEPARTMENT OF
ENVIRONMENTAL HEALTH
Hazardous Materials Inspection Form

1131 Harbor Bay Pkwy
Alameda CA 94502
510/567-6700

II, III

Site ID # 437 Site Name Glaxo Today's Date 8/29/97
Site Address 3815 Broadway
City Oakland Zip 94 Phone _____

MAX AMT stored > 500 lbs, 55 gal., 200 cft.?

Inspection Categories:

- I. Haz. Mat/Waste GENERATOR/TRANSPORTER
 II. Hazardous Materials Business Plan, Acutely Hazardous Materials
 III. Under ground Storage Tanks

* Calif. Administration Code (CAC) or the Health & Safety Code (HS&C)

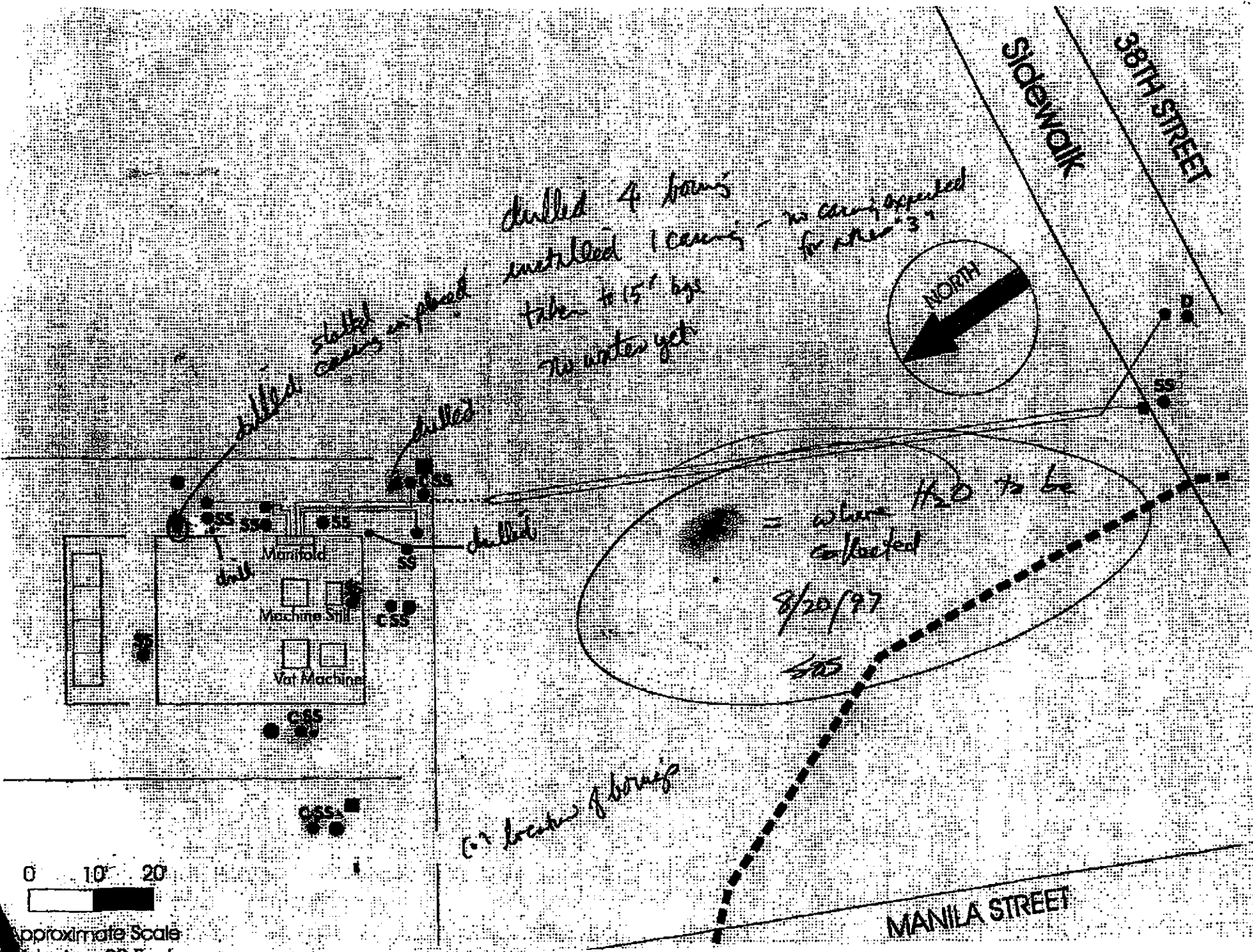
Comments:

On-site to observe portions of soil boring operation using a "push-tool" limited access rig. Boring B7 was employed through the floor of the dry cleaning room. Refusal was encountered @ ~11' BG; similar refusal was also experienced in other borings at depths from ~10 to 14' BG due to friction/obstructions caused by gravelly clays. Frank Goldman wanted to stop at those depths and wait several months for GW to rise into boreholes with coming rains. However, I suggested a modification to "drilling" technique such that the outer casing (a unique feature with this drilling apparatus) not be pushed once reaching refusal, but to continue with a smaller diameter push rod/sampler. GW was reached in B7 within a few feet from where it was stopped previously due to refusal. ~~It is recommended such technique be used @ 5 other locations (SEE attached map).~~

Contact Frank Goldman
Title Geo. Eng.
Signature _____

Inspector S. J. SEARY
Signature _____

II, III



drilled 4 holes
 installed 1 casing - no casing reported
 taken to 15' bgs for other 3'
 no water yet

drilled
 still casing in place

drilled

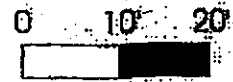
drilled

= where H₂O to be collected

8/20/97

505

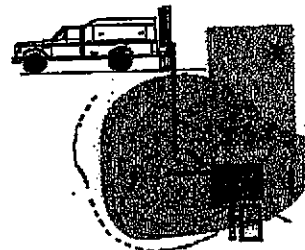
0.7 location of borings



Approximate Scale
 1 Inch = 20 Feet

GeoSolv, LLC

Environmental and Hydrogeological Consulting
643 Oregon Street, Sonoma, CA 95476
Phone: (707) 996-4227 Fax: (707) 996-7882



We Don't Just Work on Your Environmental Problems. We Solve Them!

December 22, 1997

State of California
California Environmental Protection Agency
Site Designation Committee
555 Capitol Mall, Suite 525
Sacramento, CA 95814

SUBJECT: Application for Transfer of Oversight from the Alameda County Local Oversight Program (LOP) for Underground Storage Tanks (USTs) to the San Francisco Regional Water Quality Control Board (SFRWQCB) for the: Former Glovatorium/The leather Cleaners (Depper) site at: 3815 BROADWAY, OAKLAND, CA 94611

Dear Committee Member:

The stoddard solvent underground storage tanks at the subject site have been properly abandoned in-place and an extensive subsurface investigation has been completed. No response to the UST closure report has been received from Alameda County to date. The subsurface investigation report has been completed and is currently undergoing editing.

Robert and Stuart Depper are requesting that their site be transferred to the SFRWQCB from the Alameda County LOP for USTs for the following reasons:

- 1) The recent subsurface investigation has revealed that the site is no longer a simple UST case because it involves off-site dischargers and some of the discharges are not associated with USTs.
- 2) The hydrocarbon contaminants in groundwater are in the form of a co-mingled plume which is composed of chlorinated solvents, MTBE, and gasoline/diesel/oil ranged organic compounds. A greater range of technical expertise is available at the Board as compared to that provided by the County.
- 3) The Regional Board has more experience with regulating dry cleaning facilities and chlorinated solvents in groundwater as well as mediating co-mingled plume problems between several responsible parties.
- 4) A potential conflict of interest may prevent Alameda County from rendering enforcement action against itself to determine if their own storm drain system, which is composed of cracked and degraded brick and concrete masonry constructed in the early 1900s, has provided a conduit for uncontrolled stormwater runoff and potential spills from offsite to transport hydrocarbons onsite.

Sincerely,

Franklin J. Goldman, CEO/GeoSolv, LLC
State Registered Geologist No. 5557
State Certified Hydrogeologist No. 466



CALIFORNIA ENVIRONMENTAL PROTECTION AGENCY
 SITE DESIGNATION COMMITTEE
 555 Capitol Mall, Suite 525
 Sacramento, CA 95814
 Phone: (916) 445-3884

Date Received

DEC 29 1997

Request No.

97-23

REQUEST FOR DESIGNATION OF ADMINISTERING AGENCY

This application provides the necessary information to request a designated administrative agency. Complete and submit this application to the address in the upper left corner. Type or print legibly the required information in the applicable sections below. Refer to the application instructions on reverse.

I. RESPONSIBLE PARTY IDENTIFICATION

A. Applicant / Responsible Party Name per HAS Code §25260(h) Robert Depper		C. Reason Why Applicant is a Responsible Party Property owner/operator - dry cleaning facility	
Mailing Address 31 Muth Drive		B. Identify Any Other Parties Responsible For This Release County of Alameda Public Works (hydrocarbons enter from offsite through broken stormdrain conduit), Unocal (MTBE), Earl Thompson property (stoddard & benzene)	
City, State Orinda, CA	Zip Code 94563	E. Identify All Known Interested Parties For This Release None	
Telephone No. (510) 254-4049			
B. Contact Person's Name (if different from above) Stuart Depper			
Telephone No. (415) 985-3762	Title		

II. SITE DESCRIPTION

A. Site Location (see instructions on reverse) Former Glovatorium/The Leather Cleaners	B. Brief Description of Site A labyrinth of connected rooms, built from the early 1900s thru 1950s. Industrial/commercial with some residences nearby. Surface cover is concrete. Groundwater gradient flow is predominantly from the north (Unocal) however, buried channels and conduits can direct flow from any direction.
3815 Broadway, Oakland, CA 94618	
County Alameda	

III. DESCRIPTION OF RELEASE OR THREATENED RELEASE

A. Known or Suspected Nature of Release or Threatened Release Stoddard solvent, MTBE, chlorinated solvents, diesel, oil, and gasoline ranged organic compounds, in groundwater	B. Type of Facility (see instructions on reverse) Dry cleaning onsite and offsite w/USTs; Offsite Gasoline service station; Uncontrolled runoff & possible hydrocarbon spills enter through Alameda County's cracked and degraded 5 foot diameter concrete stormdrain conduit.
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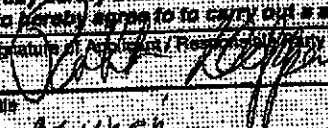
IV. REGULATORY OR ENFORCEMENT ACTIONS (KNOWN OR PENDING)

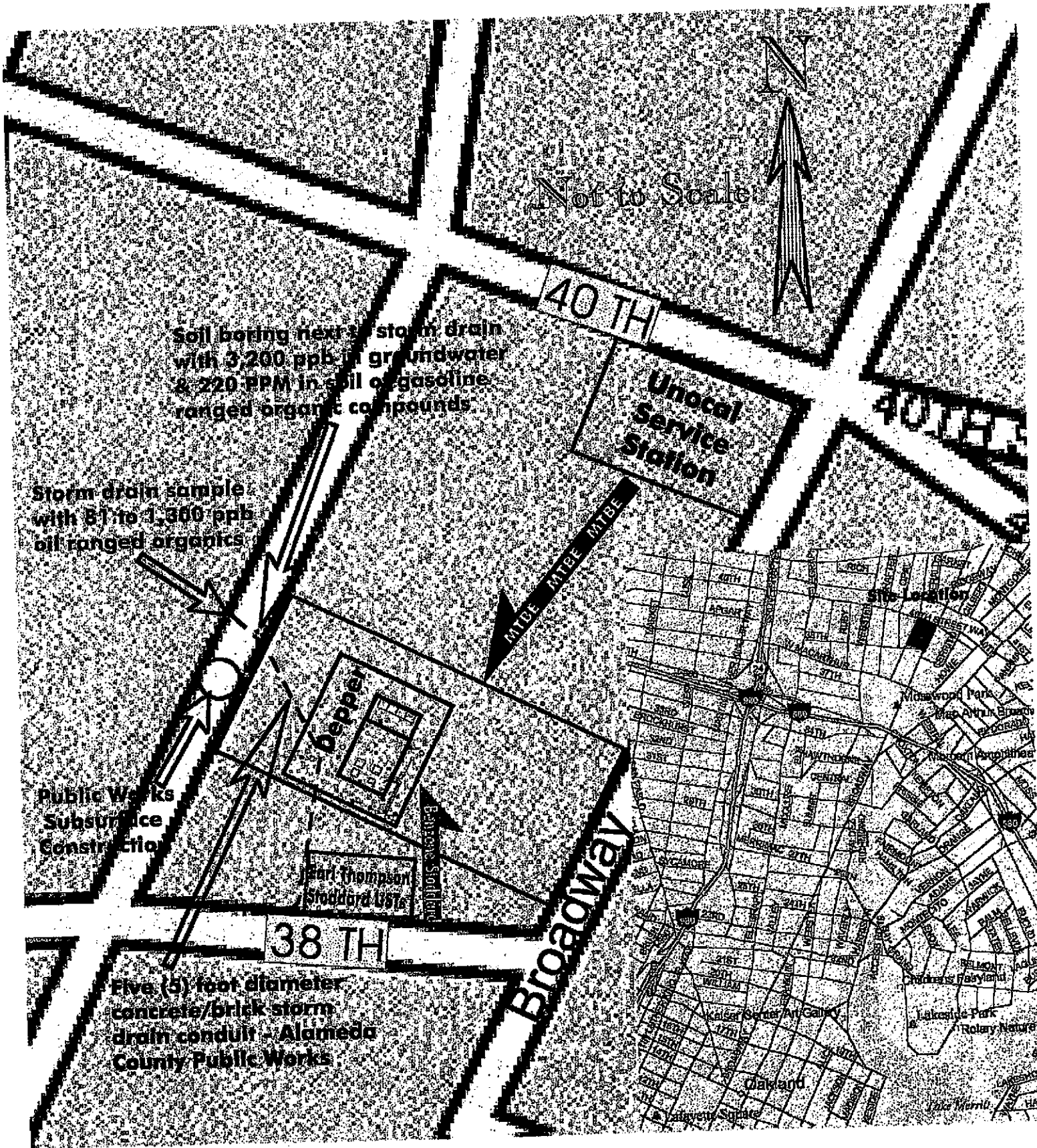
A. 1. Name of Primary Agency Involved Alameda County Environmental Health	B. 1. Name of Other Agency Involved (attach pages if more than 2 agencies involved)
2. Agency Project Number or Other Reference Site I.D. 439	2. Agency Project Number or Other Reference
3. Agency Principal Contact and Telephone Number Scott Seary (510) 567-6774 12/18/97	3. Agency Principal Contact and Telephone Number
4. Regulatory or Enforcement Action(s) Taken or Pending USTs abandoned in place and subsurface investigation as enforced by district attorney	4. Regulatory or Enforcement Action(s) Taken or Pending
C. List environmental permits (see instructions on reverse) See permit application for six (6) USTs abandoned in-place	

V. DESIGNATION REQUEST

A. Agency Requested San Francisco Regional Water Quality Control Board	B. Reason for Request Better expertise with dry cleaners/chlorinated solvents & co-mingled plumes. Also possible possible conflict of interest because the County failed to enforce against offsite polluters.
--	--

VI. CERTIFICATION AND LIST OF ATTACHMENTS

I hereby certify that the information provided in this application and in any attachments is true and accurate to the best of my knowledge. I also hereby agree to carry out a site investigation and remedial action at the site identified above.	
A. Signature of Applicant/Responsible Party 	D. List Titles of Any Attachments Site location map, plume maps & application for abandonment of USTs in-place. Abandonment + initial investigation complete
B. Title owner	C. Date 12-14-97



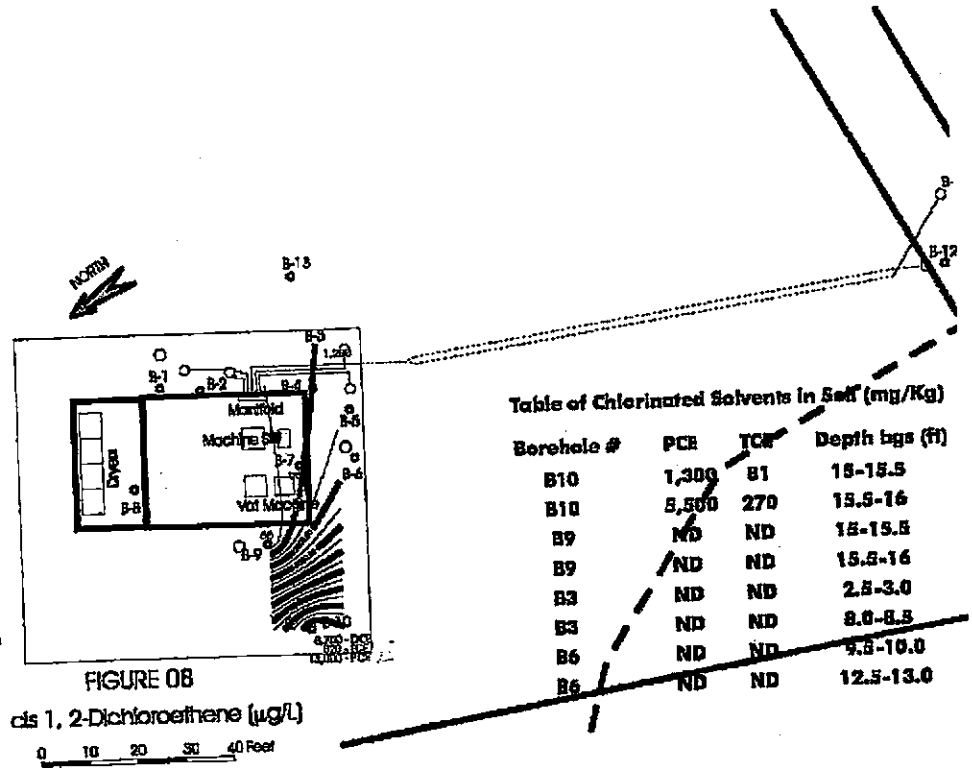
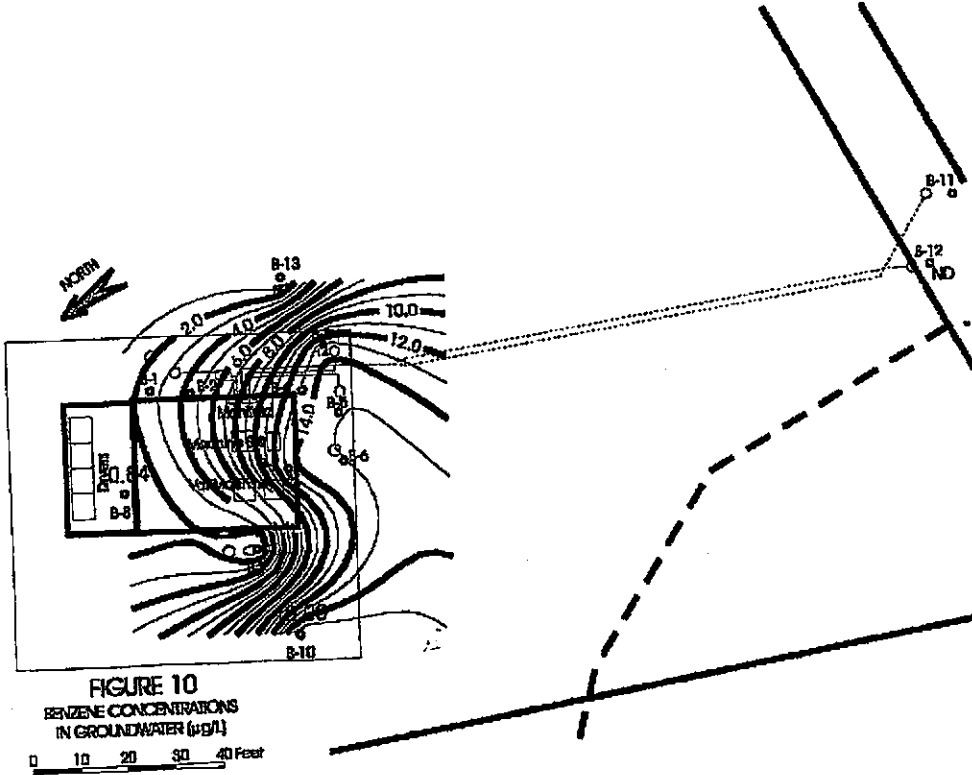
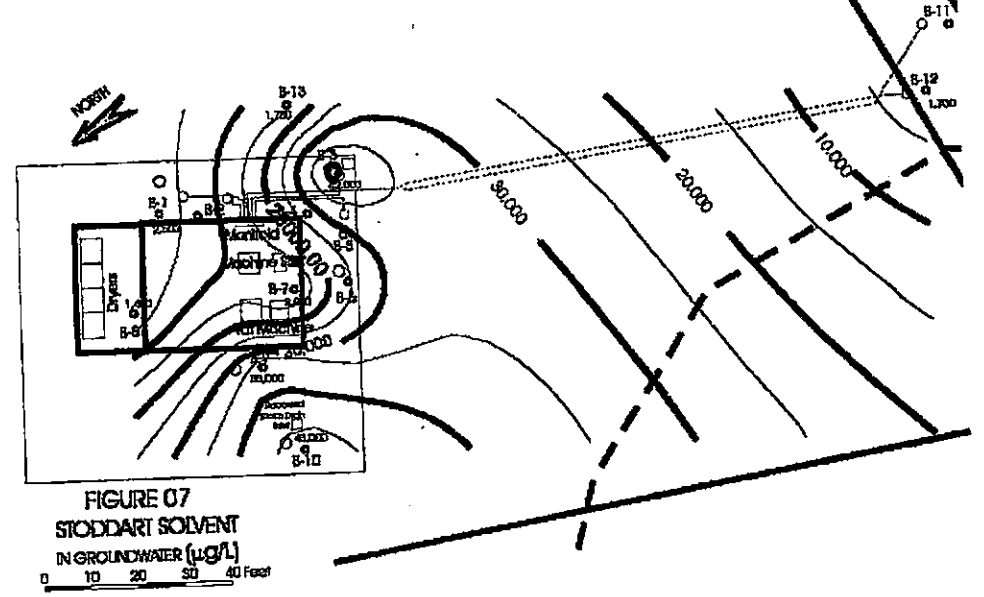
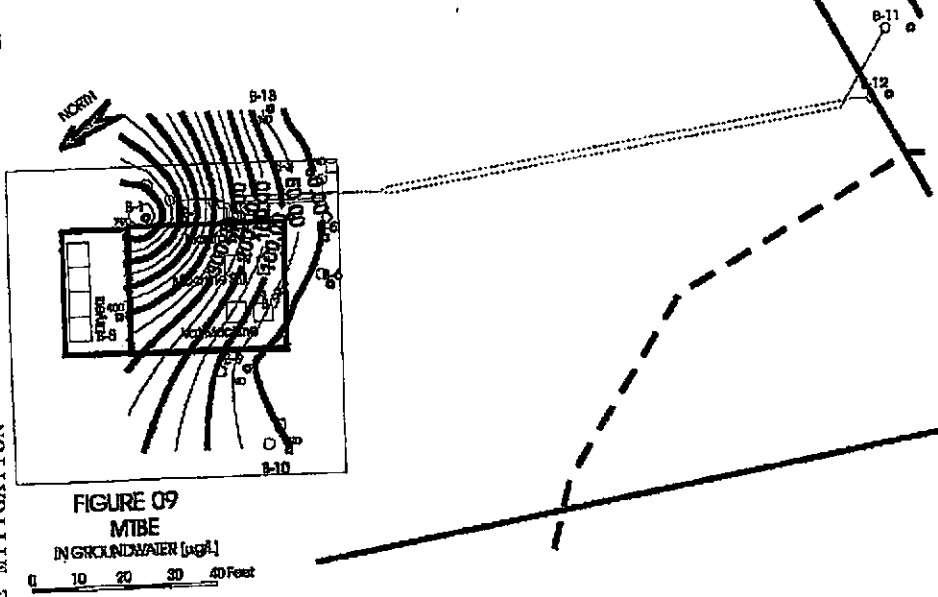


Table of Chlorinated Solvents in Soil (mg/Kg)

Borehole #	PCB	TCF	Depth bgs (ft)
B10	1,300	81	15-15.5
B10	5,500	270	15.5-16
B9	ND	ND	15-15.5
B9	ND	ND	15.5-16
B3	ND	ND	2.5-3.0
B3	ND	ND	8.0-8.5
B6	ND	ND	9.5-10.0
B6	ND	ND	12.5-13.0

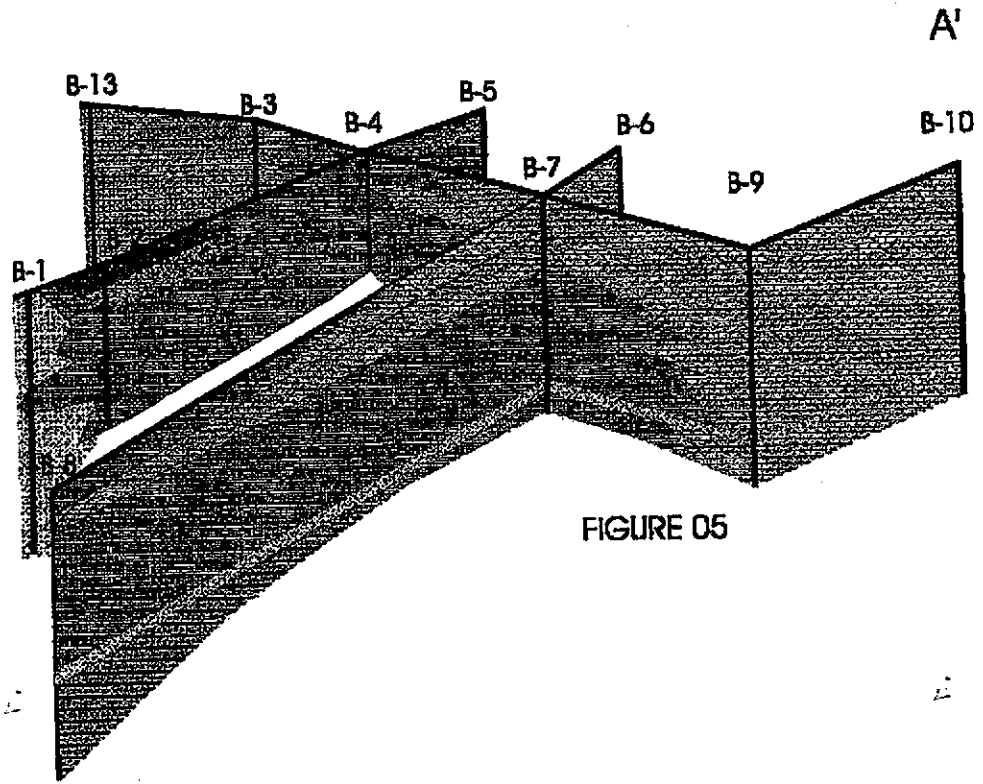
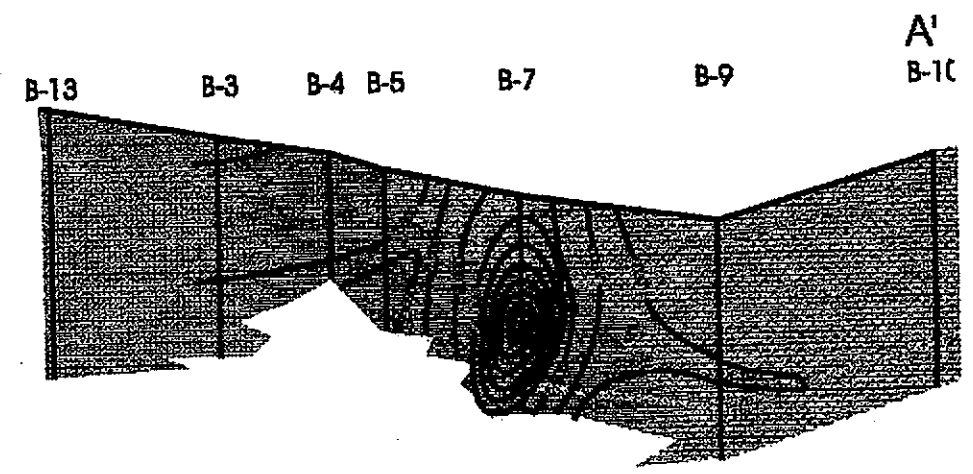
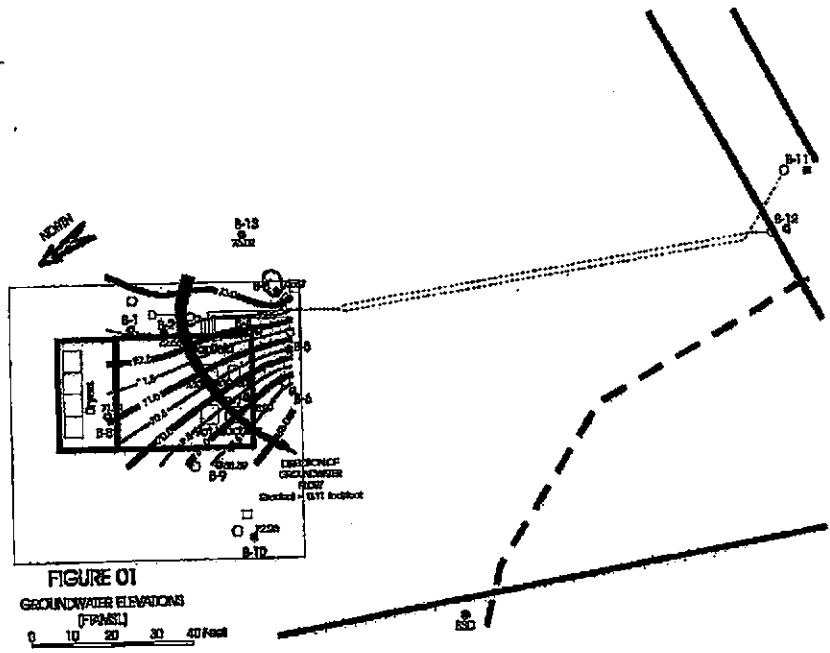


FIGURE 05

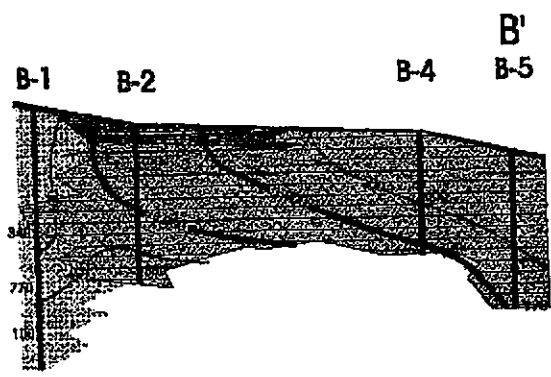


FIGURE 06
STODDART SOLVENT (mg/kg)
In Soil



Lori Grouard (Cal EPA) - requested RWQCB
(916) 323-3394

site designation committee

- Jan. 15 "work group" meeting
- Jan. 29 "site designation committee" meeting in Sacto @ 1:30
- need official letter from Dept. prior to
Sacto meeting

HSC Div. 20, Ch. 6.65, S. 25260

~~2~~

CALIFORNIA ENVIRONMENTAL PROTECTION AGENCY
 SITE DESIGNATION COMMITTEE
 555 Capitol Mall, Suite 825
 Sacramento, CA 95814
 Phone: (916) 445-3864



STATE USE ONLY:

Date Received	DEC 29 1997
Request No.	97-23

REQUEST FOR DESIGNATION OF ADMINISTERING AGENCY

This application provides the necessary information to request a designated administrative agency. Complete and submit this application to the address in the upper left corner. Type or print legibly the required information in the applicable sections below. Refer to the application instructions on reverse.

I. RESPONSIBLE PARTY IDENTIFICATION

A. Applicant / Responsible Party Name per H&S Code §25260(h) Robert Depper		C. Reason Why Applicant is A Responsible Party Property owner/operator-dry cleaning facility	
Mailing Address 31 Muth Drive			
City, State Orinda, CA	Zip Code 94563	D. Identify Any Other Parties Responsible For This Release County of Alameda Public Works (hydrocarbons enter from offsite through broken stormdrain conduit), Unocal (MTBE), Earl Thompson property (stoddard & benzene)	
Telephone No. (510) 254-4049		E. Identify All Known Interested Parties For This Release None	
B. Contact Person's Name (if different from above) Stuart Depper			
Telephone No. (415) 985-3762	Title		

II. SITE DESCRIPTION

A. Site Location (see instructions on reverse) Former Glovatorium/The Leather Cleaners	B. Brief Description of Site A labyrinth of connected rooms, built from the early 1900s thru 1950s. Industrial/commercial with some residences nearby. Surface cover is concrete. Groundwater gradient flow is predominantly from the north (Unocal) however, buried channels and conduits can
3815 Broadway, Oakland, CA 94618	
County Alameda	direct flow from any direction.

III. DESCRIPTION OF RELEASE OR THREATENED RELEASE

A. Known or Suspected Nature of Release or Threatened Release Stoddard solvent, MTBE, chlorinated solvents, diesel, oil, and gasoline ranged organic compounds, in groundwater	B. Type of Facility (see instructions on reverse) Dry cleaning onsite and offsite w/USTs; Offsite Gasoline service station; Uncontrolled runoff & possible hydrocarbon spills enter through Alameda County's cracked and degraded 5 foot diameter concrete stormdrain conduit.
--	--

IV. REGULATORY OR ENFORCEMENT ACTIONS (KNOWN OR PENDING)

A. 1. Name of Primary Agency Involved Alameda County Environmental Health	B. 1. Name of Other Agency Involved (attach pages if more than 2 agencies involved)
2. Agency Project Number or Other Reference Site I.D. 439	2. Agency Project Number or Other Reference
3. Agency Principal Contact and Telephone Number Scott Seary (510) 567-6774 6783	3. Agency Principal Contact and Telephone Number
4. Regulatory or Enforcement Action(s) Taken or Pending USTs abandoned in-place and subsurface investigation as enforced by district attorney	4. Regulatory or Enforcement Action(s) Taken or Pending

C. List environmental permits (see instructions on reverse)

See permit application for six (6) USTs abandoned in-place

V. DESIGNATION REQUEST

A. Agency Requested San Francisco Regional Water Quality Control Board
Owner's expertise with dry cleaners/chlorinated solvents & co-mingled plumes. Also possible possible conflict of interest because the County failed to enforce against offsite polluters.

VI. CERTIFICATION AND LIST OF ATTACHMENTS

I hereby certify that the information provided in this application and in any attachments is true and accurate to the best of my knowledge. I also hereby agree to carry out a site investigation and remedial action at the site identified above.	
A. Signature of Applicant / Responsible Party 	D. List Titles of Any Attachments Site location map, plume maps & application for abandonment of USTs in-place. Abandonment+initial investigation complete
B. Title owner	C. Date 12-19-97

Not to Scale.

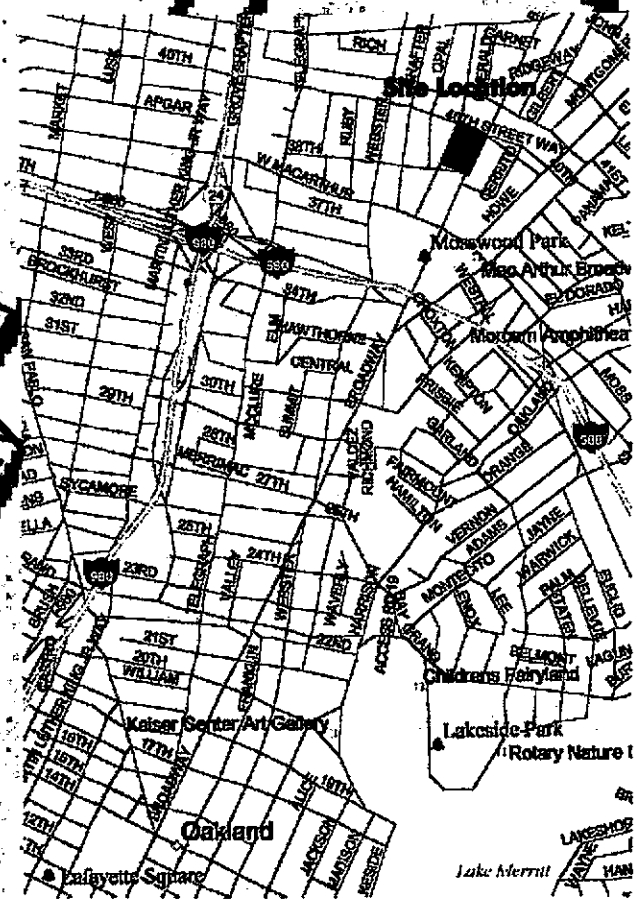


Soil boring next to storm drain with 3,200 ppb in groundwater & 220 PPM in soil of gasoline ranged organic compounds

Storm drain sample with 81 to 1,300 ppb oil ranged organics

Public Works Subsurface Construction

Five (5) foot diameter concrete/brick storm drain conduit - Alameda County Public Works



Unocal Service Station

Bepper

Earl Thompson Stoddard USTs

Broadway

40 TH

38 TH

Oakland

Lake Merritt

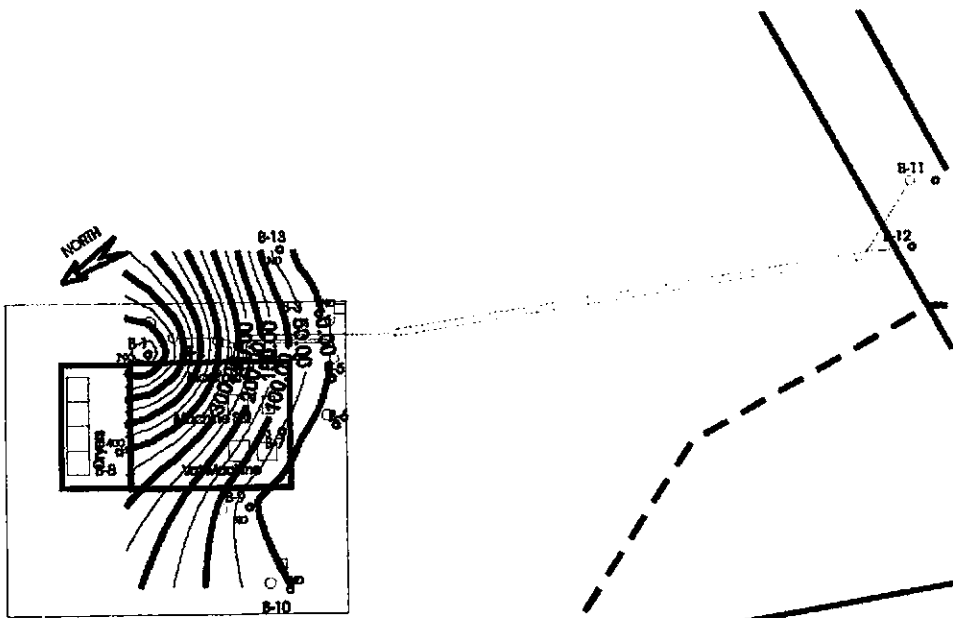


FIGURE 09
MTBE
IN GROUNDWATER (pg/L)

0 10 20 30 40 Feet

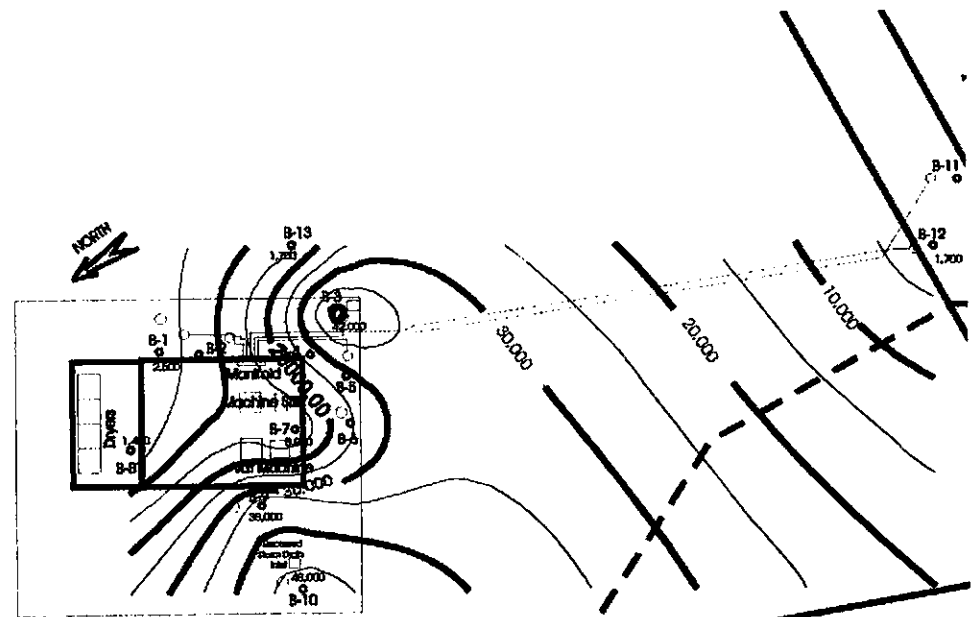


FIGURE 07
STODDART SOLVENT
IN GROUNDWATER (ug/L)

0 10 20 30 40 Feet

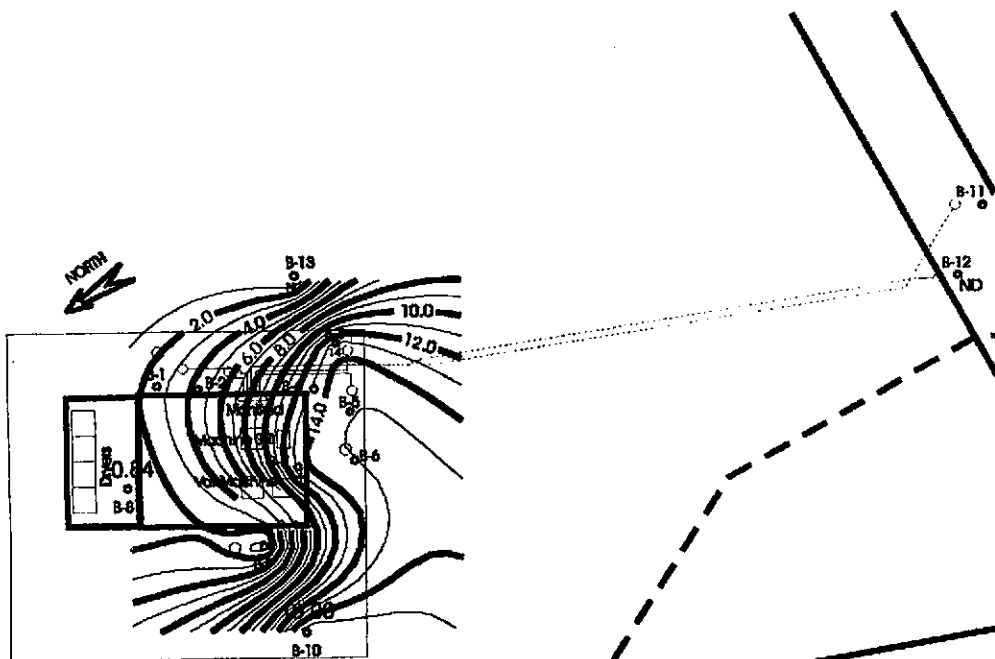


FIGURE 10
BENZENE CONCENTRATIONS
IN GROUNDWATER (ug/L)

0 10 20 30 40 Feet

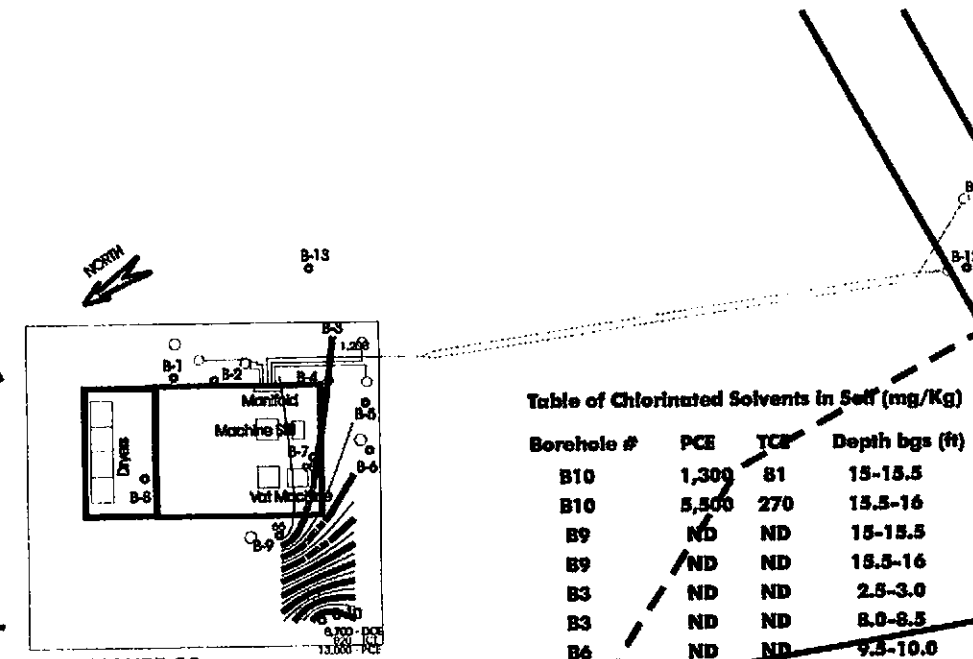
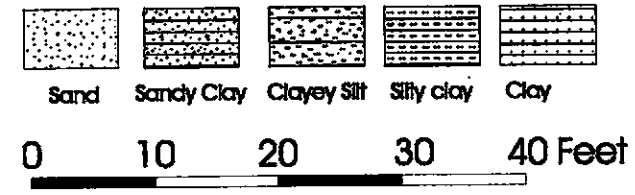
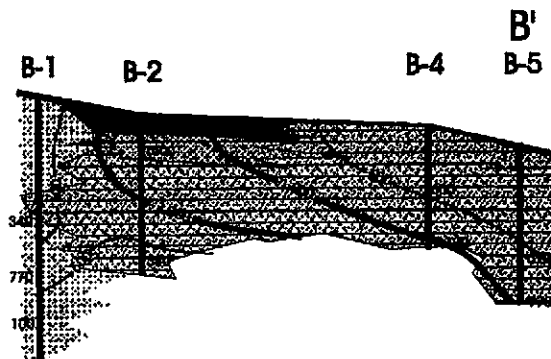
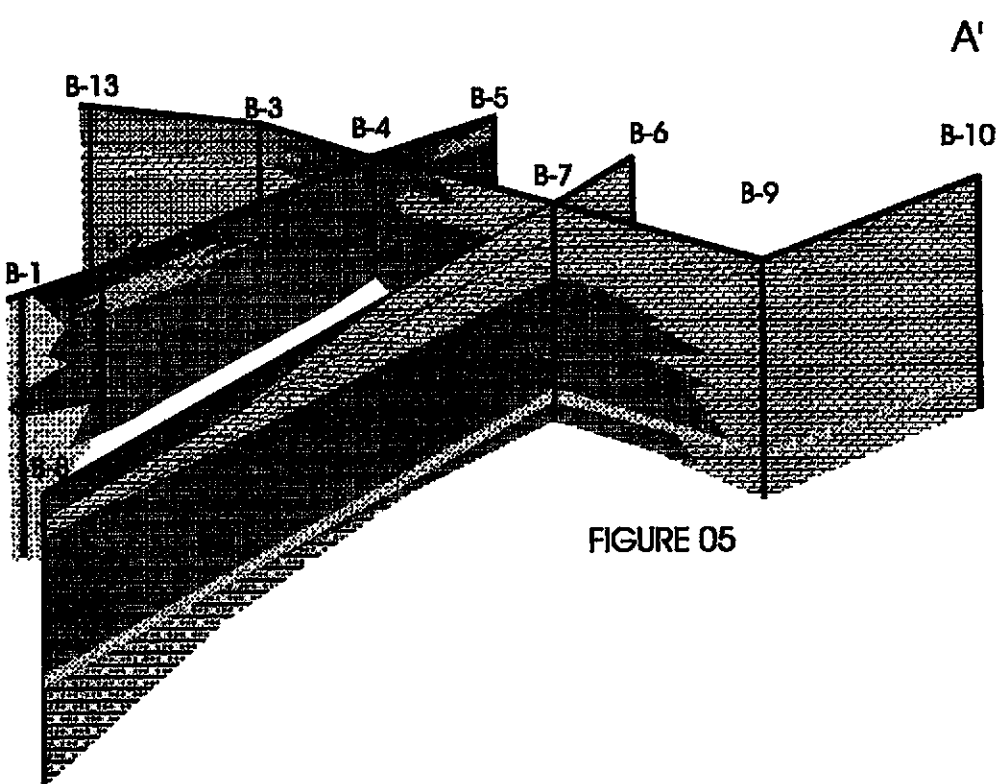
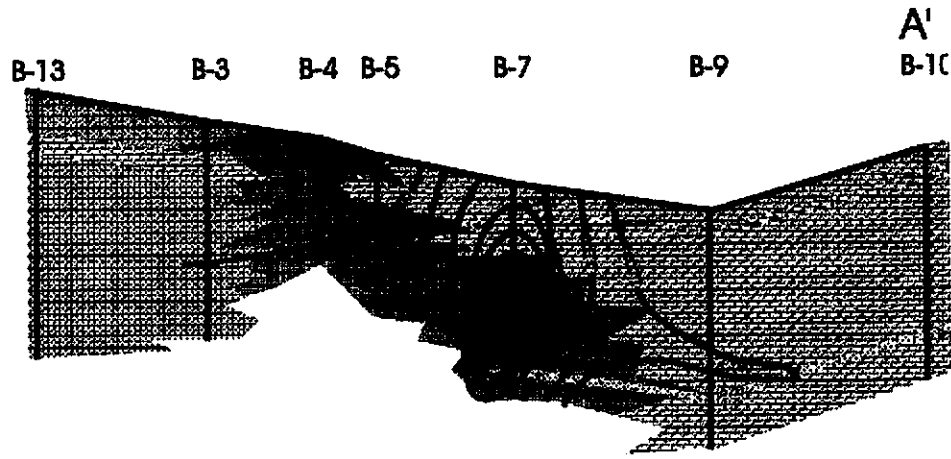
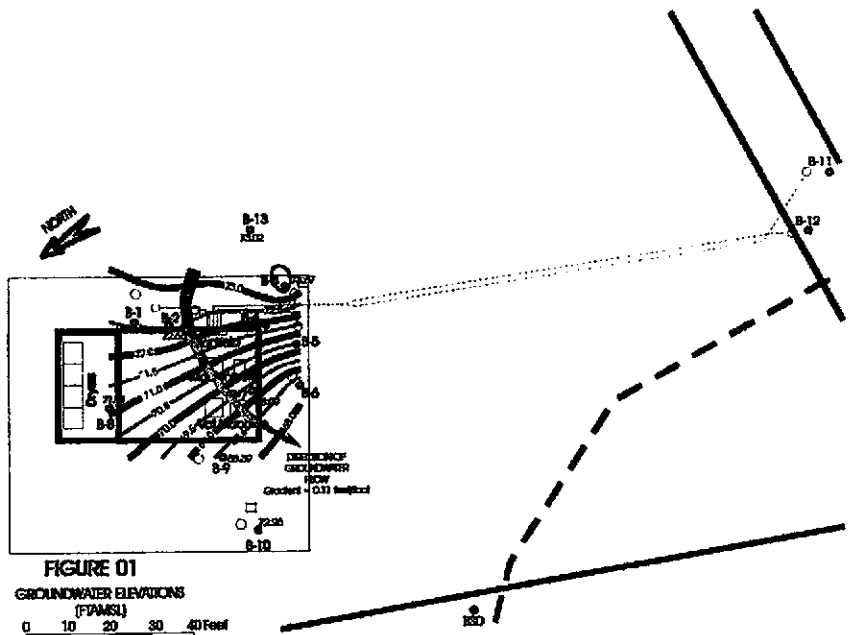


FIGURE 08
cis 1, 2-Dichloroethene (ug/L)

0 10 20 30 40 Feet

Table of Chlorinated Solvents in Soil (mg/Kg)

Borehole #	PCE	TCE	Depth bgs (ft)
B10	1,300	81	15-15.5
B10	5,500	270	15.5-16
B9	ND	ND	15-15.5
B9	ND	ND	15.5-16
B3	ND	ND	2.5-3.0
B3	ND	ND	8.0-8.5
B6	ND	ND	9.5-10.0
B6	ND	ND	12.5-13.0



SITE DESIGNATION COMMITTEE

of the
California Environmental Protection Agency
at the Union Building
301 Capital Mall, Fourth Floor Conference Room
Sacramento, California 95814
February 5, 1998
1:30 p.m.

Because there has been public interest in activities at these sites, and the Committee wished to hear relevant information without unnecessary delay from all parties who desire to speak, the Committee will conduct this proceeding in the following manner:

The Committee will hear testimony only from those who identify themselves as wishing to speak at the beginning of the proceeding. Testimony may be restricted to the following time limits according to the number of parties who wish to testify. Testimony will be heard from parties in the following order:

1. The applicant (maximum of 20 minutes)
2. Proposed Administering Agency
3. Representatives of organizations
(maximum of 20 minutes each)
4. Governmental agencies
(maximum of 10 minutes each)
5. Individuals (maximum of 5 minutes each)

The Committee will also consider any written comments which are received prior to the hearing date. The Committee may modify these limits if conditions warrants.

**SITE DESIGNATION COMMITTEE MEETING
OF THE
CALIFORNIA ENVIRONMENTAL PROTECTION AGENCY**

February 5, 1998
1:30 p.m.

Union Building
301 Capitol Mall
Fourth Floor Large Conference Room
Sacramento, California 95814

58 JAN 27 AM 8:21
CALIFORNIA ENVIRONMENTAL PROTECTION AGENCY

A G E N D A

Notice: Testimony will be taken from those who identify themselves as wishing to speak at the beginning of the proceedings. Speakers for each item will be called in the following order: Applicant, Proposed Administering Agency, Representatives of Organizations, Governmental agencies; and other interested parties. Please note that there may be time limits placed upon testimony according to the number of parties who wish to participate. **When submitting written comments, please provide 10 two-sided copies.** If you need further information, please contact Laurie Grouard, at (916) 323-3394.

1. CONSIDERATION OF AN ADMINISTERING AGENCY FOR THE ZERO CORPORATION SITE LOCATED AT 777 FRONT STREET, BURBANK, CALIFORNIA, COUNTY OF LOS ANGELES. THE APPLICANT, ZERO CORPORATION, HAS REQUESTED THAT THE REGIONAL WATER QUALITY CONTROL BOARD BE DESIGNATED AS ADMINISTERING AGENCY FOR THIS SITE.
2. CONSIDERATION OF AN ADMINISTERING AGENCY FOR THE FORMER GLOVATORIUM/THE LEATHER CLEANERS SITE AT 3815 BROADWAY, OAKLAND, CALIFORNIA, COUNTY OF ALAMEDA. THE APPLICANT, ROBERT DEPPER, HAS REQUESTED THAT THE REGIONAL WATER QUALITY CONTROL BOARD BE DESIGNATED AS ADMINISTERING AGENCY FOR THESE SITES.
3. CONSIDERATION OF AN ADMINISTERING AGENCY FOR THE PACIFIC GAS & ELECTRIC REDDING FORMER MANUFACTURED GAS PLANT LOCATED AT THE BLOCK BOUNDED BY SOUTH STREET, CENTER STREET, AND GOLD STREET, REDDING, CALIFORNIA, COUNTY OF SHASTA. THE APPLICANT, PACIFIC GAS & ELECTRIC COMPANY, HAS REQUESTED THAT THE DEPARTMENT OF TOXIC SUBSTANCES CONTROL (DTSC) BE DESIGNATED THE LEAD AGENCY UNDER THE EXPEDITED REMEDIAL ACTION PROGRAM.
4. CONSIDERATION OF AN ADMINISTERING AGENCY FOR THE PACIFIC GAS & ELECTRIC COLUSA FORMER MANUFACTURED GAS PLANT LOCATED AT FIRST AND MAIN STREETS, COLUSA, CALIFORNIA, COUNTY OF COLUSA. THE APPLICANT, PACIFIC GAS & ELECTRIC COMPANY, HAS REQUESTED THAT THE DEPARTMENT OF TOXIC SUBSTANCES CONTROL (DTSC) BE DESIGNATED THE LEAD AGENCY UNDER THE EXPEDITED REMEDIAL ACTION PROGRAM.

COM No.	REMOTE STATION	START TIME	DURATION	PAGES	RESULT	USER ID	REMARKS
880	510 286 1380	02-02 10:09	05' 41	18/18	OK		

7499402046

ALAMEDA COUNTY
HEALTH CARE SERVICES

AGENCY

DAVID J. KEARS, Agency Director

January 29, 1998

Post-It™ brand fax transmittal memo 7671		# of pages ▶ 18
To Stephen Hill	From S. Seery	
Co. RWQCB	Co. ACDEH	
Dept.	Phone # 567-6783	
Fax # 286-1380	Fax #	

1101 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577
(510) 567-6700
(510) 337-9335 (FAX)

Mr. Kenneth Selover, Chair
California Environmental Protection Agency
Site Designation Committee
555 Capitol Mall, Suite 525
Sacramento, CA 95814

RE: Opposition to Application for Transfer of Oversight from Alameda County Department of Environmental Health (ACDEH), Local Oversight Program (LOP), to the California Regional Water Quality Control Board, San Francisco Bay Region (SFRWQCB): Glovatorium, 3815 Broadway, Oakland

Dear Mr. Selover:

I have reviewed the application of Robert Depper ("applicant") and supplemental information, as submitted under GeoSolv, LLC covers dated December 22, 1997 and January 2, 1998, respectively. The referenced application requests the Site Designation Committee ("Committee") consider removing ACDEH from its current role as lead oversight agency, transferring that role to the SFRWQCB. This letter is sent in opposition to that request.

As I am certain the Committee has been adequately apprised of the applicant's environmental compliance, violation and conviction history, this letter of opposition will not delve into that topic area. This response will begin by addressing, however, each of the initial "reasons" presented in the December 22, 1997 GeoSolv, LLC cover, as well as supporting arguments presented in the January 5, 1998 GeoSolv, LLC supplemental information packet.

- 1) The recent subsurface investigation has revealed that the site is no longer a simple [underground storage tank] case because it involves...

ALAMEDA COUNTY
HEALTH CARE SERVICES

AGENCY
DAVID J. KEARS, Agency Director

January 29, 1998

Mr. Kenneth Selover, Chair
California Environmental Protection Agency
Site Designation Committee
555 Capitol Mall, Suite 525
Sacramento, CA 95814

Post-It™ brand fax transmittal memo 7671 # of pages > 18

To	Stephen Hill	From	J. Seery
Co.	RWQCB	Co.	ACDEH
Dept.		Phone #	567-6783
Fax #	286-1350 3981	Fax #	

(510) 337-9335 (FAX)

RE: Opposition to Application for Transfer of Oversight from Alameda County Department of Environmental Health (ACDEH), Local Oversight Program (LOP), to the California Regional Water Quality Control Board, San Francisco Bay Region (SFRWQCB): Glovatorium, 3815 Broadway, Oakland

Dear Mr. Selover:

I have reviewed the application of Robert Depper ("applicant") and supplemental information, as submitted under GeoSolv, LLC covers dated December 22, 1997 and January 2, 1998, respectively. The referenced application requests the Site Designation Committee ("Committee") consider removing ACDEH from its current role as lead oversight agency, transferring that role to the SFRWQCB. This letter is sent in opposition to that request.

As I am certain the Committee has been adequately apprised of the applicant's environmental compliance, violation and conviction history, this letter of opposition will not delve into that topic area. This response will begin by addressing, however, each of the initial "reasons" presented in the December 22, 1997 GeoSolv, LLC cover, as well as supporting arguments presented in the January 5, 1998 GeoSolv, LLC supplemental information packet.

- 1) *The recent subsurface investigation has revealed that the site is no longer a simple [underground storage tank] case because it involves off-site dischargers and some of the dischargers are not associated with [underground storage tanks].*

Response

There is no corroborated evidence that the subject site has been affected by discharges from other off-site sources.

The data derived from the recent investigation performed at this site is considered preliminary. This preliminary investigation was intended solely to identify areas of the site where releases appear to have occurred, and whether releases were associated

Mr. Kenneth Selover
RE: 3815 Broadway, Oakland
January 29, 1998
Page 2 of 11

with underground storage tanks (UST) and appurtenant piping, or other sources, such as leaks from floor drains or sumps into which dry cleaning wastes were reportedly dumped as a matter of practice.

These preliminary data were to be used to guide the next stage of the investigation if such appeared warranted. The data associated with this preliminary investigation clearly demonstrate the need for further investigation, as the evidence of releases from surface, near surface, and subsurface points within the confines of the Glovatorium plant are substantial.

MtBE

Frank Goldman dba GeoSolv, LLC ("GeoSolv") has suggested in his arguments associated with his client's application to the Committee that the reported presence of MtBE (methyl tert butyl ether) in water sampled from one or more of the temporary well points is evidence of an off-site source for this compound. Mr. Goldman has unequivocally stated that "...it is abundantly clear that the MTBE (sic) plume has emanated from an underground storage tank at a location in the general direction of the UNOCAL site." [underscoring added] Mr. Goldman further states, "Unless there is another gasoline UST between the UNOCAL site and the plume as identified at the Depper's site, the MTBE (sic) exhibits the leading edge of a gasoline plume which has migrated from the UNOCAL site." [underscoring added]

Attached for your review (Attachment 1) are excerpts from the most recent technical report for the cited Unocal station (3943 Broadway) documenting the sampling and monitoring event occurring at that site during November 1997. This report includes a compilation of sampling and monitoring data dating from 1989. Also attached are ground water flow maps for monitoring events between September 1994 and November 1996.

Please note that the investigation associated with the Unocal site has entailed the installation of 12 permanent monitoring wells and one recovery well. Of the 5 wells located off-site, four (MW-8, -9, -11, and -12) are in the apparent downgradient direction from the Unocal site. Review of the data, particularly that associated with the downgradient wells (i.e., those wells located between the Unocal station and Glovatorium), indicates the plume is significantly constrained to the Unocal site.

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RE: 3815 Broadway, Oakland
January 29, 1998
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These data strongly imply that the Unocal release is not a source of MtBE reportedly encountered in water sampled from one or more of the temporary well points at the applicant's site. No other UST release site is known to be located between the Unocal and applicant's sites. However, there are several other plausible explanations for the reported presence of MtBE in water sampled from the temporary well points at this site, absent the presence of an UST release upgradient of the site.

An attempt to corroborate these reported initial MtBE results may be incorporated into subsequent phases of the investigation at the applicant's site.

Benzene

Here again, Mr. Goldman has suggested in his arguments, based on the most preliminary of data, that the reported presence of benzene in water sampled from one or more of the temporary well points is evidence of an off-site source for this compound. However, according to his argument, the source of this contaminant is not located to the northeast, as was the case with MtBE. Rather, benzene is "...emanating from the south," suggesting a very complex set of dissolved-phase contaminant dispersal mechanisms at and in proximity to the applicant's site, whereby contaminants can enter the site from numerous opposing directions simultaneously.

Mr. Goldman suggests the source of benzene in ground water is an adjoining site (the Earl Thompson property, 316-38th Street). The rationale for this statement is the assumption that: 1) benzene is associated with gasoline, 2) gasoline is associated with other aromatic compounds in addition to benzene, specifically, ethyl benzene, toluene and "xylene," and 3) ethyl benzene, toluene and "xylene" were identified in "contamination" identified at this adjoining site.

There is not one shred of evidence made available to this office regarding confirmed releases of any sort from the Earl Thompson site. To our knowledge, no *environmental* samples associated with the Earl Thompson USTs or any other area of this site have been collected to date.

It appears Mr. Goldman has mistakenly referred to results of laboratory analyses (SEE Attachment 2: March 14, 1995 document transmittal from *The Sutton Group*) performed on fluid (water)

Mr. Kenneth Selover
RE: 3815 Broadway, Oakland
January 29, 1998
Page 4 of 11

samples collected from several USTs located below the 38th Street sidewalk. These USTs were associated with former activities at the Earl Thompson site, and have reportedly been void of product since the early 1970s, prior to Mr. Thompson's purchase of the site.

Scrutiny of laboratory data for soil samples reportedly collected during the preliminary GeoSolv investigation reveals the presence of a two order-of-magnitude range of concentrations of toluene, ethyl benzene, and total xylene isomers (TEX) in nearly all samples collected from the unsaturated zone in those borings emplaced within the Glovatorium plant. Further, data from shallow (1.5 - 3.5') samples collected from boreholes B2 and B7 also reveal detectable TEX, implying a surface or near surface source.

These preliminary data clearly suggest that sources of these compounds are located on-site within the Glovatorium plant. Following Mr. Goldman's reasoning, benzene, therefore, must also be from an on-site source.

An attempt to corroborate these reported initial benzene and TEX results will be incorporated into subsequent phases of the investigation at the applicant's site.

Gasoline and Oil "Ranged" Organics

Mr. Goldman shares his apparent knowledge of the condition of the culvertized storm drain passing below the applicant's site, indicating the drain "...is riddled with holes, cracks, and very serious deep gaps in the brick and concrete masonry liner." He further indicates this drain "...is very likely...serving as a preferential pathway for the migration of chlorinated solvents throughout the site, offsite, and the San Francisco Bay."

Mr. Goldman also implies in his discussion that the noted storm drain is owned by Alameda County. Attached are memos (Attachment 3) from the City of Oakland Public Works Agency (OPW) and Alameda County Public Works Agency (ACPWA) which counter that claim. The OPW and ACPWA memos indicate that the record does not reflect that this storm drain is owned by Alameda County. Therefore, Alameda County is not responsible for its upkeep, nor any contribution it may provide to contaminant dispersal from or onto the applicant's site.

Mr. Kenneth Selover
RE: 3815 Broadway, Oakland
January 29, 1998
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Further, a May 1997 inspection of a section of that very storm drain did not reveal the sort of structural disintegration of which Mr. Goldman speaks. Should Mr. Goldman have some direct evidence (i.e., inspection report) of the storm drain condition, this office and that of OPW would welcome its submittal.

Nevertheless, should the storm drain be "...riddled with holes, cracks, and very serious deep gaps in the brick and concrete masonry liner," it would appear its upkeep is the responsibility of the private property owner under whose property it passes. In this case, the applicant would be responsible for that section which passes below his site.

Mr. Goldman presents data representing the reported results of water sampled from the noted storm drain "...after the first rain of the season." These results are clearly within a range anticipated for surface runoff from streets within an urban environment. Such is a symptom of a modern society which relies on the use of motor vehicles to meet the bulk of its transportation needs. Incidental releases of petroleum lubricants and fuels, and their eventual washing into storm drains upon the first and subsequent rains of the season, are the unavoidable result of such reliance.

This office does agree with Mr. Goldman's assertion that the storm drain, at least its alignment, may present a preferential pathway for the downstream migration of contaminants. Because this storm drain reportedly represents a culvertized former creek channel (Rockridge Branch of Glen Echo Creek), we view that this channel may likely assert a degree of hydraulic control over ground water in the general area of the applicant's site.

Surface topography and ground water flow data from the Unocal station (3943 Broadway) and Express Auto Clinic (3810 Broadway) suggest natural (geogenic) ground water flow pathways likely associated with this creek's drainage system may direct ground water towards it. Therefore, subsequent phases of the investigation at the applicant's site will evaluate this issue.

Chlorinated Solvents

Mr. Goldman has not suggested that chlorinated solvents (hereafter referred to as HVOC) have entered the applicant's site from off-site sources. However, several points made in his exploration of HVOC distribution and genesis bear discussion here.

Mr. Kenneth Selover
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January 29, 1998
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The scope of the approved GeoSolv work plan, as amended and conditioned, entailed an evaluation of not only potential releases associated with the 6 USTs, but also those associated with other potential point sources. This need was determined based on review of the compliance and enforcement records for this site which clearly demonstrated a practice of using floor drains in the Glovatorium plant as points of disposal for various dry cleaning wastes.

Consequently, one element of the approved GeoSolv work plan was to collect *and analyze* samples from the approximate 3' depth and the capillary zone, at a minimum. The requirement for shallow samples was intended to identify releases from UST and other process piping, as well as from floor drains and sumps. Approved boring locations, as modified, were specific to addressing these goals.

The approved scope of the work plan was not implemented. Of the 12 borings proposed in the approved work plan, shallow (~3') samples were collected in only nine. Of those 9 shallow samples collected, only 4 were reportedly analyzed by the laboratory.

Borings B3, B6, B9, and B10 were specifically placed to target releases from floor drains and sumps, and were the only borings intended to do so. Only the shallow sample collected from boring B3 was analyzed for the requested suite of target compounds. Consequently, 3 of the target drains/sumps were not appropriately investigated.

Mr. Goldman states in his arguments that "...[HVOC] identified in soil were only found in shallow soils in the vicinity of B10 and not in B3, B9, and B6." The "shallow" soil to which Mr. Goldman refers is apparently at a depth of 15' below grade, the shallowest sample analyzed from that boring (B10). Hence, any evaluation of Mr. Goldman's arguments with respect to HVOC distribution at the site should be tempered with the realization that the data are not representative of site conditions. This work, unfortunately, will need to be repeated.

Mr. Goldman presents his interpretation of the derivations of certain of the HVOC species identified in the course of this limited investigation. Mr. Goldman states, "The groundwater plume map indicates that most of the [tetrachloroethene] (13,000 ppb) has converted to cis 1,2-dichloroethene." [underscoring added]

Mr. Kenneth Selover
RE: 3815 Broadway, Oakland
January 29, 1998
Page 7 of 11

However, *cis* 1,2-dichloroethene (1,2-DCE) is also used in industry as a dye extraction solvent (i.e., product). Other HVOC identified during the investigation are also used similarly, some specific to use in dyes and hide degreasing. As the Glovatorium prided itself for its leather cleaning and finishing expertise, these HVOC are potential parent contaminants. Therefore, it is clearly too early in this investigation to begin a practice of forensic chemistry in an attempt to differentiate between parent and daughter degradation products.

- 2) *The hydrocarbon contaminants in groundwater are in the form of a co-mingled plume which is composed of chlorinated solvents, MTBE, and gasoline/diesel/oil ranged organic compounds. A greater range of technical expertise is available at the [SFRWQCB] as compared to that provided by the County.*

Response

We interpret this reference to a "commingled plume" as referring to the multiple dischargers and responsible parties alleged in Item 1, above. Therefore, as stated in the previous response, there is no corroborated evidence that the subject site has been affected by discharges from other off-site sources.

Should it be shown with subsequent evidence that there are, in fact, multiple dischargers and a "co-mingled plume," the ACDEH is not lacking for experience in dealing with such cases. Many of the cases ACDEH staff currently manage deal with co-mingled plumes. One only has to envision the typical 3- or 4-corner gas station arrangement, each with confirmed UST releases, or the dry cleaner located in the very shopping center where a gas station with leaking USTs is also located, to recognize various forms of this phenomena. ACDEH is currently and successfully managing, with several examples, each of these scenarios.

- 3) *The [SFRWQCB] has more experience with regulating dry cleaning facilities and chlorinated solvents in ground water as well as mediating co-mingled plume problems between several responsible parties.*

Mr. Kenneth Selover
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January 29, 1998
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Response

The SFRWQCB does not, per se, regulate dry cleaning facilities. The local agencies (e.g., CUPA agencies, fire and building departments, POTWs, Bay Area Air Quality Management District, etc.) regulate dry cleaning facilities. Therefore, this statement has no merit.

The SFRWQCB does have experience, however, managing the assessment of chlorinated solvent plumes. The SFRWQCB has experience dealing with multiple responsible parties and commingled plumes. As stated in the response to Item 2, above, ACDEH also has sizable experience with the management of such cases and collateral issues.

- 4) *A potential conflict of interest may prevent Alameda County from rendering enforcement action against itself to determine if their own storm drain system, which is composed of cracked and degraded brick and concrete masonry constructed in the early 1900s, has provided a conduit for uncontrolled stormwater runoff and potential spills from offsite to transport hydrocarbons onsite.*

Response

This issue has already been addressed in response to Item 1, above. The claim of "conflict of interest" has no merit.

In addition to addressing the applicant's "reasons" for consideration by the Committee, it is important that the record is clarified with respect to particular statements memorialized by Mr. Goldman on page 2, section 2.0, *Soil and Groundwater Sampling*, of his supplemental site investigation summary.

It is important to understand the background of this case with respect to the scope of work and goals for this recent phase of the investigation at this site. As stated previously in response to Item 1, above, several potential contaminant source areas were to be targeted, including USTs and floor drains or sumps. Both soil and ground water were to be collected during this phase of the project.

In my numerous discussions with Mr. Goldman over the months leading up to project implementation, I informed him that I

Mr. Kenneth Selover
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January 29, 1998
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intended to keep this project on a "tight rein." The reason for this was two-fold: 1) I had been made aware that the applicant and his son, Stuart Depper, had a well-documented history of "foot dragging" with respect to various aspects of their compliance with environmental regulations and agency mandates; and, 2) I had been assigned the responsibility through the District Attorney's Office to enforce orders of the Superior Court with respect to the UST closures and environmental investigation elements of their sentencing. I intended to ensure work was completed appropriately and in a timely fashion.

After much discussion and some modification, the GeoSolv work plan was eventually accepted by this office. The final number of proposed Geoprobe® "borings," as well as the suite of target compounds selected for samples collected from each, were modified from those initially proposed. Twelve (12) such borings were to be emplaced, from which both soil and ground water were to be collected and analyzed. As you are likely aware, Geoprobe® is a "push-tool" technology, which does not in practice include the use of a double-cased probe. The use of a Geoprobe® sampling device was what was proposed by Mr. Goldman, and the use of a Geoprobe® device is what was ultimately approved.

In addition, because of our collective knowledge of the locally tight confines within the Glovatorium plant, a "limited access" rig would be required. I was aware that Geoprobe® markets several such devices designed to accommodate the very conditions we anticipated within the Glovatorium plant.

I was therefore surprised upon my visit to the site during the August 1997 sampling activities when instead of a Geoprobe® device, some other limited access push-tool sampling device was employed for the project. Mr. Goldman describes it in his submittal as an "Enviro-core" sampling device. I was informed in the field that this device employs a conductor casing which it drives along with the sampler rod, essentially creating a double-cased hole. This feature is an idiosyncrasy of this particular device. The approved Geoprobe® device would not involve such a double-cased hole.

It appears, based on Mr. Goldman's accounts, that the Enviro-core sampler was not capable of driving its rods to adequate depth sufficient to encounter ground water. Based on boring logs submitted with the recent GeoSolv report, so called "refusal" was reportedly reached at very shallow depths. Refusal was reportedly reached at depths between 7' and 14' below grade.

Mr. Kenneth Selover
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It appears, therefore, the Enviro-core device did not provide adequate static weight and/or down force to meet the required scope of this initial phase of work at the site. Geoprobe[®] limited access devices would have provided both adequate static weight (up to 3700 lbs.) and down force (18,000 lbs.) sufficient to complete this project quickly and efficiently.

Mr. Goldman informed me that August day that he planned to simply place temporary casings into each of the holes and "come back this winter" in hopes that water would have risen into the holes. I told him this was not acceptable. I suggested he remobilize the rig at each previously "drilled" hole, and attempt to push only the inner sampler rod. I could tell Mr. Goldman was somewhat distressed by this prospect, and initially balked at the notion.

I did indeed tell Mr. Goldman that if he wouldn't comply with the approved scope of work, and my request, I would find a consultant who would. I intended to see to it that this project remained on schedule. Mr. Goldman implies in his site investigation summary that one should interpret from this request, and its absence from my field notes, something insidious. Mr. Goldman further implies that the project may have been jeopardized by pushing the sampler the few feet deeper necessary to each ground water. This is ridiculous.

After much complaining, Mr. Goldman did, however, finally confide in me that August day the reason he really wanted to wait until the winter to collect water samples: it was because the project was taking more time than he had budgeted for, that the applicant still owed him money, and, consequently, he was feeling strapped financially. He apparently felt that if he could close this chapter of the investigation now, he would finally get some financial relief. To demonstrate my reasonableness under the circumstances, I requested he remobilize the sampling device and collect water samples from only 6 of the 10 boreholes located within the Glovatorium plant which were originally subject to the ground water sampling requirements.

I regret failing to memorialize this information in my field notes that day, too.

It has been a challenge, and, frankly, a distressing one at that, to work with Mr. Goldman on this case. Mr. Goldman appears to have lost his ability to perform the work and interpret the results in a clear, professional, and objective manner. Review

Mr. Kenneth Selover
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January 29, 1998
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of the recent GeoSolv report presents countless examples of this, from Mr. Goldman's failure to implement the work plan as expected, to apparent selective interpretations based on very preliminary data, hearsay evidence, and presumption, to his lack of attention for the details commensurate with such technical work. I have had difficulty trying to understand it.

Please contact the undersigned should you require any additional information or supporting documents.

Sincerely,

Scott O. Seery, CHMM
Hazardous Materials Specialist
Alameda County Department of Environmental Health
Local Oversight Program

enclosures

cc: Mee Ling Tung, Director
Richard Pantages, Chief, Environmental Protection Division
Stephen Hill, SFRWQCB
Larry Blazer, Alameda County District Attorney's Office

ATTACHMENT 1

Unocal Station #0746
3943 Broadway
Oakland, CA

Semi-annual sampling report (excerpts)

December 8, 1997

and

Ground water flow maps from
September 1994 - May 1997

ATTACHMENT 2

Earl Thompson site
316 - 38th Street
Oakland, CA

The Sutton Group
Document transmittal
March 14, 1996

Lab data for UST liquid samples

ATTACHMENT 3

City of Oakland
Public Works Agency

Memorandum

January 28, 1998

and

Alameda County
Public Works Agency

Correspondence

January 29, 1998

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GeoSolv, LLC

Environmental and Hydrogeological Consulting
643 Oregon Street, Sonoma, CA 95476
Phone: (707) 996-4227 Fax: (707) 996-7882

We Don't Just Work on Your Environmental Problems. We Solve Them!

January 16, 1998

Scott Seary
Alameda County Health Care Agency
Environmental Protection Division, Department of Environmental Health
1131 Harbor Bay Parkway, 2nd Floor, Room 250
Alameda, CA 94502
(510) 567-6783 Phone, (510) 337-9335 Fax

SUBJECT: Subsurface Investigation Report of Two Clusters of Underground (USTs) at the Former Glovatorium/The Leather Cleaners Site Loc BROADWAY, OAKLAND, CA 94611

Dear Mr. Seary,

GeoSolv, LLC has completed the aforementioned subsurface investigation and the report is contained herein. The purpose of the investigation was to comply with the requirements of the approved workplan and to identify incidental discharges from two clusters of six USTs. Discharges of stoddard solvent have been confirmed to have emanated from within the vicinity of the USTs onsite and possibly from the Thompson property to the south. During the course of the investigation, MTBE was identified in groundwater and appears to have migrated from offsite. Chlorinated solvents were identified in the vicinity of borehole B-10 within the subject facility. BTEX constituents were identified in groundwater and appear to be migrating from the direction of the underground storage tanks located at the Earl Thompson property at 316 38th Street. Prior sampling, conducted in about 1993, reported the presence of diesel in the subsurface. This report attempted to confirm the reported presence of this diesel fuel but was unable to do so. While heavy long change hydrocarbons were identified in soil and groundwater, the most recent analyses performed during this investigation could not confirm that these constituents biodegraded from diesel.

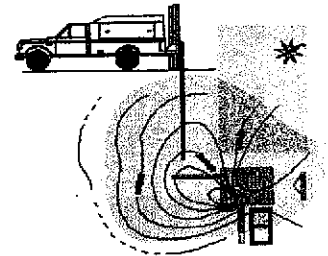
Heavy long carbon chain hydrocarbons were identified in soil and groundwater as a result of analysis for diesel ranged organics which could have originated from a number of potential sources (Figure A - Map of site location relative to adjacent sites). Groundwater resources are not at risk because the site is located in an area where the beneficial uses of groundwater are not even sulted for industrial/commercial use and all business and residences in the vicinity are on municipal supply water. The contamination identified on site does not pose a



Post-It™ brand fax transmittal memo 7671		# of pages • 9	
To	Joe Trapp	From	Scott Seary
Co.	Oakland PW	Co.	ACEH
Dept.		Phone #	507-6783
Fax #	238-7286	Fax #	

GeoSolv, LLC

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January 16, 1998

Scott Seary
Alameda County Health Care Agency
Environmental Protection Division, C
1131 Harbor Bay Parkway, 2nd Floor
Alameda, CA 94502
(510) 567-6783 Phone, (510) 337-9

Post-It™ brand fax transmittal memo 7671 # of pages ▶ 9

To	Joe Trapp	From	Scott Seary
Co.	Oakland PW	Co.	ACDEH
Dept.		Phone #	567-6783
Fax #	238-7286	Fax #	

SUBJECT: Subsurface Investigation
(USTs) at the Former Gloveatorium, ...
BROADWAY, OAKLAND, CA 94611

Dear Mr. Seary,

GeoSolv, LLC has completed the aforementioned subsurface investigation and the report is contained herein. The purpose of the investigation was to comply with the requirements of the approved workplan and to identify incidental discharges from two clusters of six USTs. Discharges of stoddard solvent have been confirmed to have emanated from within the vicinity of the USTs onsite and possibly from the Thompson property to the south. During the course of the investigation, MTBE was identified in groundwater and appears to have migrated from offsite. Chlorinated solvents were identified in the vicinity of borehole B-10 within the subject facility. BTEX constituents were identified in groundwater and appear to be migrating from the direction of the underground storage tanks located at the Earl Thompson property at 316 38th Street. Prior sampling, conducted in about 1993, reported the presence of diesel fuel in the subsurface. This report attempted to confirm the reported presence of this diesel fuel but was unable to do so. While heavy long change hydrocarbons were identified in soil and groundwater, the most recent analyses performed during this investigation could not confirm that these constituents biodegraded from diesel.

Heavy long carbon chain hydrocarbons were identified in soil and groundwater as a result of analysis for diesel ranged organics which could have originated from a number of potential sources (Figure A - Map of site location relative to adjacent sites). Groundwater resources are not at risk because the site is located in an area where the beneficial uses of groundwater are not even suited for industrial/commercial use and all business and residences in the vicinity are on municipal supply water. The contamination identified on site does not pose a significant threat to health or the environment.

Sincerely,

Franklin J. Goldman
CEO/GeoSolv, LLC
Registered Geologist No. 5557
Certified Hydrogeologist No. 466



1.0 Soil and Groundwater Sampling

Fourteen (14), 2.5 inch diameter continuously cored boreholes were excavated with a push technology drill rig from 8-19-97 through 8-22-97 to obtain soil and groundwater samples. When drilling met significant resistance, a 1.0 inch diameter split spoon sampler was used to complete the boreholes until groundwater was encountered. Seven (7) of the boreholes received a ½ inch, temporary PVC blank and screened casing (0.02 inch slots) to obtain groundwater samples. The boreholes were logged by a State registered geologist (Appendix A - Boring Logs). Soil samples extruded into the acetate liners were cut into approximate six inch lengths. Samples collected with the split spoon were extruded into brass tubes. Soil samples were covered at each end with Teflon sheets, capped with plastic end caps, taped with duct tape, labeled, placed into plastic Zip-loc bags, placed into an ice chest at 4 degrees centigrade, and transported to a State certified laboratory, under proper chain of custody, within appropriate holding times. All samplers were cleaned with a Liquinox solution between samplings.

Groundwater samples were collected by purging and developing the temporary wells with a 3/8 inch steel bailer. Approximately three (3) borehole volumes were removed from each well. Groundwater samples were collected after the water level had recovered to within 80% of its original depth bgs. Groundwater extracted during the development process was analyzed for temperature, conductivity, and pH with a Hydac Kit until three consecutive readings were within 10% difference for each parameter. Groundwater samples were placed in 40 ml VOAs with HCL preservative and in one amber liter bottles for VOCs and diesel ranged organics, respectively. Water samples were labeled under proper chain of custody and placed in an ice chest at four (4) degrees centigrade for transport to a State certified lab. All bailers were cleaned with a Liquinox solution between samplings. Seven of the boreholes were backfilled and sealed with grout and the seven temporary well points were covered with a six inch thick bentonite plug and a concrete cap to complete the seal at the surface opening. A report dated 11-20-97 was submitted to the Zone 7 Water Agency documenting well abandonment activities.

when develop
 " purge
 " sample
 same day? :

Soil drill cuttings, well purge water, and rinseate were placed in drums. The drums were labeled and left onsite for profiling for eventual transport to a legal point of disposal.

2.0 Groundwater Level Measurements

Water level measurements were taken with an electronic water level sounder to the nearest 100th of a foot below ground surface. Well locations were measured for relative elevation by a certified land surveyor. The groundwater gradient direction is to the southwest at a gradient of 0.11 feet/foot (Figure 1A & Figure 1). This is consistent with the investigation performed for the UNOCAL Service Station at 40th and Broadway which also exhibited a groundwater gradient in the west to southwest direction towards the subject site (see Appendix B2 for Unocal's gradient map).

when?

3.0 Local Hydrogeology

The site is located within gravelly and sandy clays below the stratigraphic equivalent of the water bearing Merritt sand (Figure 2). The earth materials encountered in the boreholes support the lithology in the reference map and stratigraphic section. The site is located within Area "B" which has a probable maximum well yield which is "adequate for stock or single family domestic use but inadequate to marginal for light industrial use" according to the USGS and the Department of Housing and Urban development.

- map stakes data are for "water bearing rocks" not unconsolidated sediment which is it intended to represent?

The site is predominantly clay with peat in isolated areas near surface elevation (Figures 3, 4, & 5 - Lithologic cross sections).

4.0 Reporting and Interpretation of Laboratory Results

Stoddard Solvent

The distribution of stoddard solvent in soil and groundwater was assessed as an indicator constituent to demonstrate a generalized configuration of potential point sources and migratory pathways of other constituents identified at the site. Stoddard solvent is not carcinogenic or toxic according to any regulatory interpretation of existing State and Federal regulations. It is not a hazardous substance.

wrong -

- Class II combust.
- PEL TOL 500 ppm
- listed haz waste (22 CFR)

Cross sections of stoddard solvent in soil (Figure 6) indicate that the plume is centered around borehole B7. The highest concentrations of stoddard solvent in borehole B7 are at a depth of approximately ten (10) feet bgs. (Lower concentrations were found above the 10 foot level). This indicates that the stoddard solvent migrated from a lateral point source rather than from the surface.

- probably combination of surface/shallow and deeper (UST?) source

Prior field observations during the UST abandonment procedure on the Depper property indicated that one UST in the vicinity of boreholes B3 and B4 had leaked. Sampling in boreholes B3 and B4 confirmed the presence of stoddard solvent at depths of 5 feet to 11 feet below ground surface which is consistent with these prior observations. It is also known that stoddard solvent was stored in USTs located on the Earl Thompson property located south of boreholes B3 and B4. As exhibited in Figures 4 and 5, there is a laterally continuous sandy clay layer which exhibits a preferred stratigraphic orientation which would direct the migration of contaminants from the vicinity of boreholes B3 and B4 towards borehole B7 (See Figure 6). In addition, the groundwater flow direction is east to west from the direction of boreholes B3 and B4 towards borehole B7. Therefore, it appears that most of the contamination in the vicinity of borehole B7 migrated from the direction of the Earl Thompson property and the onsite USTs in the vicinity of boreholes B3 and B4.

would, or could?

!?

*

In addition, it has been reported that there was a bare patch of soil, which has since been sealed with concrete, on the surface in the vicinity of borehole B7. It is also reported that the prior owner of the Depper property washed the floors in this area with stoddard solvent. Therefore, the bare patch may have provided a pathway for surface discharges of stoddard solvent to the subsurface. As exhibited in Figure 6, the data confirms the presence of stoddard solvent near the surface in the vicinity of borehole B7.

reported by whom?

per patch of ground present 8/97

* boring B-7 was advanced through a bare dirt patch in the floor of stoddard solvent cleaning machine room

In summary, most of the stoddard solvent identified in soil appears to have come from the vicinity of the onsite USTs and the Earl Thompson property and some of the stoddard solvent came from surface spillage onsite.

Groundwater at the property is located at a depth of approximately 14 feet below ground surface. Stoddard solvent in groundwater generally mimics the lateral distribution of the plume in soil (See Figures 7 and 7A and Appendix C1) in that it is centered around borehole B7. The highest concentrations of stoddard solvent in groundwater are centered at B3, implying a potential source in the vicinity of the USTs and the Earl Thompson property. A high concentration of stoddard solvent in groundwater was also found in the vicinity of borehole B10 (stoddard solvent levels in soil in B10 were very low). Figures 4, 5 and 6 indicate the presence of a laterally continuous sand layer, 1/2 foot to 2 feet thick, at a depth of about 15 to 17 feet bgs in boreholes B7, B8, B9, B10, B11 and B12. This sand layer is very permeable and ^(may) serves as a conduit for the migration of contaminants. Since no significant levels of stoddard solvent were found in the soil in the vicinity of B10, it appears that the stoddard solvent contamination in groundwater in boring B10 migrated to this area from the vicinity of the USTs and the Earl Thompson property through this sand layer.

As noted above, the stoddard solvent identified is not toxic or carcinogenic and groundwater has no practical beneficial use. In addition, stoddard solvent does not biodegrade into a hazardous waste. Moreover, the whole site is covered with concrete to prevent physical contact with human receptor. Therefore, the stoddard solvent does not pose a risk requiring any remedial activity at the site.

Chlorinated Solvents

Groundwater sampling was conducted in B3, B6, B9 and B10 for PCE and TCE. PCE and TCE were only identified in groundwater at borehole B10, but not in boreholes B3, B6 and B9 (Figure 8A, Figure 8 and Appendix C). Cis 1,2-dichloroethene (DCE) was found in the groundwater in all four boreholes. DCE is a well known biodegradation daughter product of the breakdown of PCE and TCE in soil and groundwater. The results demonstrate that a significant amount of the PCE and TCE onsite has biodegraded to DCE. DCE is generally not considered a significant health risk. This extensive transformation indicates that (1) onsite discharges have ceased and (2) there is a high rate and extent of biodegradation of PCE and TCE onsite. It is also evident that the PCE/TCE plume is no longer migrating and, indeed, is dissipating in place by being biodegraded into DCE, a significantly less hazardous material. Therefore, the isolated PCE/TCE plume poses a limited health risk. Based on the ASTM guidelines for risk based corrective action (RBCA) and experience with the State of California State Water Resources Control Board, it appears that this site qualifies for closure without the need for any additional investigation or remedial work.

Soil sampling was conducted in B3, B6, B9 and B10 for PCE and TCE. PCE and TCE were identified in soil at borehole B10 and were not identified in B3, B6, and B9 (Figure 8A, Figure 8 & Appendix C2). DCE was identified in soil in all four boreholes and appears to mimic the plume of DCE in groundwater. The DCE is a biodegradation product of the breakdown to the PCE and TCE identified in soil at B10. Since the chlorinated solvents in soil appear to be isolated at B10 in relatively deep soil,

* 1,2-DCE (usually mixture of trans and cis isomers) is also a solvent used in dye extraction, a likely process at this leather cleaning facility.

How shown?

|| ? !

beneath concrete slabs, the risk of potential exposure to humans through inhalation and dermal exposure is minimal. Moreover, the presence of DCE in all four boreholes at relatively high concentrations indicates that the PCE/DCE plume is diminishing over time and should qualify for site closure based upon ASTM risk evaluation.

Other Related Issues - Significant Conduit for Migration of Chlorinated Solvent Offsite

One factor which could spread, or may have spread, the chlorinated solvent plume in groundwater, is the five (5) foot diameter Alameda County storm drain which runs underneath the property. It is riddled with holes, cracks, and very serious deep gaps in the concrete/brick liner which could permit chlorinated solvent contaminated groundwater to enter the stormdrain which would then serve as a preferential pathway for the migration of chlorinated solvents throughout the site and offsite.

City of Oakland indicates it is a private S.D.

It is recommended that the Alameda County Department of Public Works conduct a subsurface investigation to define the extent of the problem and to determine what remedies should be applied.

MTBE

MTBE was identified in groundwater at B1, B7, and B8 and is migrating from offsite (from the north and northwest) from the general direction of the existing UNOCAL service station. Initial laboratory results revealed 790 ppb of MTBE in groundwater at borehole B1 (Figure 9 & Figure 9A) and a follow-up analysis by EPA Method 8260 (Appendix D) confirmed the prior results.

There is no evidence of gasoline usage at the subject site and the only likely candidate up-gradient is the UNOCAL gasoline service station. The Alameda County Department of Environmental Health should contact UNOCAL and require them to investigate and mitigate the MTBE identified in groundwater.

Benzene

Benzene was identified in groundwater and is emanating from the south in the general direction of the Earl Thompson property (Figure 10A & Figure 10). It is also possible that this benzene could have emanated from the Express Auto Clinic located at 3610 Broadway (Figure A). No benzene was identified in soil (Appendix C1). Detectable levels of ethyl benzene, toluene, and xylene were identified in soil and are typically associated with benzene within gasoline fuels. Since the benzene is usually the first to biodegrade and volatilize within a gasoline mixture, in-situ, it indicates that the primary (e.g. a UST) and secondary (gasoline contaminated soil) contaminant sources exist to the south of the investigation area. Contamination identified at the Earl Thompson property and the constituents at the subject site are ethyl benzene, toluene, and xylene (Appendix E). There is no know source of BTEX constituents on the Depper property, however, toluene and xylenes were identified in a water sample collected from Earl Thompson's USTs.

-TEX found in shallow (2.5-3.5') soil @ B1, B2, B7 indicating on-site source

The benzene plume, at the subject site, does not possess a spatial distribution which is similar to that of the stoddard solvent or chlorinated solvent plumes and therefore cannot be considered as a trace constituent which could have been entrained in the solvent products.

The Alameda County Department of Environmental Health should contact Earl Thompson and require a subsurface investigation and mitigation of benzene and stoddard solvent in groundwater. Benzene should be evaluated by Earl Thompson's environmental consultant for health risk to workers via inhalation inside the building and possibly for the residences nearby if the plume has been demonstrated to have migrated beneath one of the nearby houses, in the vapor phase.

Diesel and Oil Ranged Organics

Testing conducted in about 1993 by the Alameda County Health Department reported the presence of diesel fuel in soil on the property. As part of this study, sampling was conducted to determine the nature and extent of any diesel fuel at the property. Of the 19 soil and groundwater samples collected from the site and specifically analyzed for diesel ranged organics, not one was confirmed with the subscript of "a" in the lab reports (Appendix F1 and F2) which designates these hydrocarbons as diesel fuel. Instead, every diesel ranged hit was designated in the lab report as a "b" subscript which indicates that diesel ranged organic compounds are present yet there is no way of confirming that the original hydrocarbon it degraded from is actually diesel fuel. The statement associated with the "b" footnote designation, as labeled in the lab report (Appendix F1 and F2), is "no recognizable pattern." This means that the gas chromatographic peak cannot be matched with a diesel standard gas chromatographic peak as interpreted by a qualified chemist at a State Certified Analytical Laboratory. In summary, the numerical results presented in Appendix F1 and F2 represent long carbon chain petroleum hydrocarbons and do not represent diesel fuel. In other words, there is no discrete chemical analysis which can establish that a biodegradation relationship exists between a petroleum hydrocarbon such as stoddard solvent and a generic long carbon chain petroleum hydrocarbon which could be representative of natural organics in soil (e.g. Bay Mud and peat) or oil ranged organics.

- diesel fuel
or diesel -
range?

Also, the distribution pattern of these long carbon chain petroleum hydrocarbon concentrations in soil and groundwater does not mimic the distribution of any of the other hydrocarbons identified at the site, according to the data collected to date. Therefore, there is no basis for concluding that these long carbon chain hydrocarbons are a biodegradation product of any other contaminants identified at the site.

Since there is no confirmation of diesel fuel and the long carbon chain petroleum hydrocarbons do not appear to be associated with any other hydrocarbons at the site, the implication is that these hydrocarbons did not degrade from some other hydrocarbon and may have emanated from some other source. The most likely source would be via the Alameda County Storm Drain System which is in serious disrepair and is serving as a conduit for the migration of long carbon chain petroleum hydrocarbons from offsite as confirmed from storm drain samples collected during this investigation, upflow from the site. Thus as part of this investigation, oil ranged organics (81ppb in water) were identified migrating from offsite through the County storm drain system conduit - a water sample was collected from the storm drain, after the first rain of the season (1997), located across Manila street, upflow from the site (Appendix F3 for laboratory data sheet). In addition, water samples collected from the storm drain leading into the Depper's property on 11-29-93 identified oil range compounds (700ppb in water) (Appendix F4 for laboratory data sheets). Oil ranged organic compounds (i.e. long carbon chain

petroleum hydrocarbons) were also identified in the storm drain leading into the Depper's property on 10-14-93 (1,300 ppb in water)(Appendix F5).

Allegations of diesel identified at the subject site during past sampling events was certainly not confirmed by this investigation.

Are Diesel Ranged Organics of Concern?

The "Scope of the CERCLA Petroleum Exclusion" generated by the US EPA Office of Solid Waste and Emergency Response (Attachment A) generally states that petroleum distillates such as diesel are not hazardous substances and therefore when discharged are not hazardous wastes because, in effect, the diesel does not alter or degrade into a hazardous form.

Diesel ranged organics, regardless of where they came from, will not be evaluated for risk because they are not toxic or carcinogenic. Diesel ranged organics have a taste and odor threshold for deliverable water but the beneficial uses of groundwater are not at issue.

Gasoline Ranged Organic Compounds

No definite point source of contamination has been associated with the gasoline ranged organic compounds identified in soil at a depth of 9.5 to 10.0 feet bgs at 220 PPM and in groundwater at 3,200 ppb in borehole BSD (Figure 1 for borehole location & Appendix F2) located in the sidewalk on Manilla street, adjacent to the five foot diameter County storm drain. The only potential point sources for this contamination, with the data collected to date, are the storm drain and/or associated bedding material or a discharge of gasoline fuel which could have occurred during the recent construction work performed by the City of Oakland Sewer Maintenance Department personnel at that exact location.

5.0 Conclusions

The site is predominantly underlain by clay in an industrial/commercial area where groundwater is of no beneficial use. The site is completely covered by concrete thus limiting exposures related to health risk. MTBE and benzene were identified onsite and appear to be migrating from offsite from the Unocal Gasoline Service Station to the north, and the Earl Thompson property to the south, respectively. The stoddard solvent and the chlorinated solvents appear to have emanated from onsite. In any event, however, the stoddard solvent does not pose a risk and the chlorinated solvents are biodegrading in-place. Uncontrolled storm water runoff is migrating from offsite into the Depper's property via a County storm drain system which has very poor structural integrity and may be transporting long carbon chain hydrocarbons into the Depper's property. Gasoline ranged organics may be migrating from offsite via the storm drain and/or from an illegal waste discharge to the subsurface during recent construction on Manilla street.

6.0 Recommendations

The seven temporary wells should be converted to more permanent groundwater monitoring wells so that quarterly groundwater monitoring can be utilized to

establish trends in concentrations to perform fate and transport calculation to establish relative health risks.

Since the chlorinated solvents are biodegrading in-situ, the natural attenuation process should be evaluated in general accordance with 1) the methods established in the US EPA guidance document entitled "Technical Protocol for Evaluating the Natural Attenuation of Chlorinated Ethenes in Groundwater" (Attachment B) and by 2) ASTM Risk-Based Corrective Action.

Earl Thompson, UNOCAL, and the Alameda County Department of Public Works should be contacted ASAP so that they can address the subsurface contamination problems associated with their operations. Earl Thompson should analyze for stoddard solvent, chlorinated solvents and BTEX constituents as these chemicals were identified in water samples collected from his USTs. Unocal should analyze for MTBE and BTEX constituents.

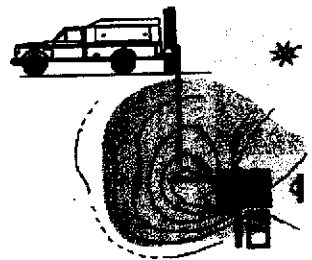
Limitations

This report has been prepared in accordance with generally accepted environmental, geological and engineering practices. No warranty, either expressed or implied, is made as to the professional advice presented herein. The analysis, conclusions and recommendations contained in this report are based upon site conditions as they existed at the time of the investigation and they are subject to change.

The conclusions presented in this report are professional opinions based solely upon visual observations of the site and vicinity, and interpretation of available information as described in this report. GEOSOLV, LLC. recognizes that the limited scope of services performed in execution of this investigation may not be appropriate to satisfy the needs or requirements of other state and local agencies or of other users. Any use or reuse of this document or its findings, conclusions or recommendations presented herein is at the sole risk of said user. Any and all previous drafts of this report dated prior to this report will be considered irrelevant and unsuitable for any purpose other than for communications between the client and the client's legal representatives.

GeoSolv, LLC

Environmental and Hydrogeological Consulting
643 Oregon Street, Sonoma, CA 95476
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We Don't Just Work on Your Environmental Problems. We Solve Them!

January 2, 1998

Laurie Grouard
State of California
Department of Toxic Substances Control
301 Capitol Mall, 4th floor
Sacramento, CA 95814

SUBJECT: Additional Information to Supplement the Application for Transfer of Oversight from the Alameda County Local Oversight Program (LOP) for Underground Storage Tanks (USTs) to the San Francisco Regional Water Quality Control Board (SFRWQCB) for the:

**Former Glovatorium/The Leather Cleaners (Depper) site at:
3815 BROADWAY, OAKLAND, CA 94611**

Dear Ms. Grouard:

I appreciate your efforts to expedite the processing and review of the previously submitted application for "Site Designation" so that it can hopefully be placed on the January 29th meeting agenda. During our recent phone conversation you stated that you would need the following three items to complete the application package:

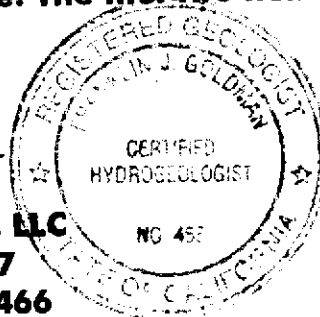
- 1) Legal Description of the site (e.g. Township and Range, Parcel Map, etc.)
- 2) List of interested parties/property owners in the vicinity with names, addresses and phone numbers.
- 3) Detailed summary of the contaminants identified in the subsurface investigation. Due in your office by Monday, January 5, 1998.

Enclosed is the 3rd item listed above. The first two items are forthcoming.

Sincerely,

A handwritten signature in cursive script that reads "Franklin J. Goldman".

Franklin J. Goldman, CEO/GeoSolv, LLC
State Registered Geologist No. 5557
State Certified Hydrogeologist No. 466



Site Investigation Summary
Subsurface Investigation Report for Two Clusters of Underground Storage Tanks
Former Glovatorium/The Leather Cleaners
3815 BROADWAY, OAKLAND, CA 94611

1.0 Summary of Contaminants Identified in Soil and Groundwater

GeoSolv, LLC has completed the aforementioned subsurface investigation. The purpose of the investigation was to comply with the requirements of the workplan approved by Alameda County Environmental Health and to identify incidental discharges from two clusters of six USTs. Discharges of stoddard solvent have been confirmed to have emanated from the USTs onsite, surface spillage, and possibly from the Thompson property to the south. During the course of the investigation, MTBE was identified in groundwater and appears to have migrated from offsite and up-gradient from the Unocal Gasoline Service Station to the north. Chlorinated solvents were also identified, however, the source and origin of the discharge has not been confirmed. BTEX constituents were identified in groundwater and appear to be migrating from the direction of the location the underground storage tanks located at the Earl Thompson property on 38th Street, to the south. Gasoline ranged organic compounds were identified in soil and groundwater in the vicinity of an Alameda County, five (5) foot diameter, concrete masonry stormdrain constructed at the turn-of- the-century. Also, oil ranged organic compounds were identified in the stormdrain discharge leading into the Depper's property during several sampling events over the past four (4) years.

2.0 Soil and Groundwater Sampling

Fourteen (14), 2.5 inch diameter continuously cored boreholes were excavated with a push technology drill rig from 8-19-97 through 8-22-97 to obtain soil and groundwater samples.

The boreholes were initially excavated with a push-technology, limited access sampling rig, called an Enviro-core, owned and operated by Precision Sampling, Inc. of San Rafael California. This unique sampling device provides an outer conductor casing which provides a protective sheath around the drill stem and sampling tube so that cross contamination of potential chlorinated solvents can be prevented. Since chlorinated solvents tend to sink instead of float on the groundwater (e.g. gasoline and diesel float), it was imperative that the conductor casing be used to protect the sampling device from cross contamination. The negative consequence of not using the conductor casing is that the sampler can drag chlorinated solvents encountered at shallower depths, down to greater depths, thus erroneously implying that the chlorinated solvents encountered in soil are deeper than in reality. Unfortunately, Scott Seary of Alameda County Health, demanded, when drilling with the conductor casing which met with resistance/refusal due to gravels in clay, that the boreholes be drilled to a greater depth without the conductor casing with a 1.0 inch diameter split spoon sampler until groundwater was encountered. I stated to Mr. Seary, in the field that it would be best to wait until the groundwater rises in a few month as it was the dry season and we could supplement the investigation with a more focused well location strategy based upon the soil concentration data we had collected from the original fourteen holes. Mr. Seary stated that if I did not extend the borings deeper, he would find another consultant who would. Mr. Seary's field notes (attached) tell a different story. In essence, it is my professional opinion that drilling deeper with the split spoon through chlorinated solvent

contaminated soil may have jeopardized the investigation by implying that the contamination in soil is deeper than it actually is. Also, it unnecessarily increased the overall cost of the investigation by increasing the density and number of borehole/data points which were extended to greater depths. A more efficient approach would have been to drill and sample to define the shallow contamination in soil and to then install temporary wells in the open boreholes. Next, wait a few months for water levels to rise up into the temporary wells and collect water samples. Then, utilize the contaminant concentration data to design a supplemental groundwater investigation with more strategically placed deeper wells installed with a hollow-stem augers to be used as conductor casings to prevent cross contamination by chlorinated solvents.

Seven (7) of the boreholes received a 1/2 inch, temporary PVC blank and screened casing (0.02 inch slots) to obtain groundwater samples.

The boreholes were logged by a State registered geologist. Soil samples extruded into the acetate liners were cut into approximate six inch lengths. Samples collected with the split spoon were extruded into brass tubes. Soil samples were covered at each end with Teflon sheets, capped with plastic end caps, taped with duct tape, labeled, placed into plastic Zip-loc bags, placed into an ice chest at 4 degrees centigrade, and transported to a State certified laboratory, under proper chain of custody, within appropriate holding times. All samplers were cleaned with a Liquinox solution between samplings.

Groundwater samples were collected by purging and developing the temporary wells with a 3/8 inch steel bailer. Approximately 3 to 10 saturated borehole volumes were removed from each well. Groundwater samples were collected after the water level had recovered to within 80% of its original depth bgs. Groundwater extracted during the development process was analyzed for temperature, conductivity, and pH with a Hydac Kit until three consecutive readings were within a 10% difference for each parameter. Groundwater samples were placed in 40 ml VOAs with HCL preservative and in one liter amber bottles for VOCs and diesel ranged organics, respectively. Water samples were labeled under proper chain of custody and placed in an ice chest at 4 degrees centigrade for transport to a State certified lab. All bailers were cleaned with a Liquinox solution between samplings.

Seven of the boreholes were backfilled with grout and the seven wells were sealed with a bentonite plug, six inches thick, and a concrete dome to complete the seal at the surface opening to the temporary well.

Soil drill cuttings, well purge water, and rinseate were placed in drums. The drums were labeled and left onsite for profiling for eventual transport to a legal point of disposal.

3.0 Groundwater Level Measurements

Water level measurements were taken with an electronic water level sounder to the nearest 100th of a foot below ground surface. Well locations were measured for relative elevation by a certified land surveyor. The groundwater gradient direction is to the west at a gradient of 0.11 feet/foot (Figure 1). A groundwater mound exists at well B10 which suggests a relatively continuous recharge area. An investigation performed for the UNOCAL Service Station at 40th and Broadway, exhibited a groundwater gradient in the west to southwest direction.

4.0 Reporting of Laboratory Results

Stoddard Solvent

The main hydrocarbon constituent discharged at the site is stoddard solvent. Cross sections of the stoddard solvent in soil (Figure 6) indicate that the plume is centered around borehole B7 where a bare patch of soil, was reported to have existed in the concrete slab and may have provided a pathway for discharges indicating that a significant portion of the stoddard solvent in the subsurface was from surface spillage and not from the underground storage tanks.

Stoddard solvent in groundwater mimics the lateral distribution of the plume in soil (Figure 7) in that it is centered around borehole B7. One exception is that another point source is located at the recessed storm drain as indicated by 48,000 ppb stoddard solvent identified in groundwater at borehole B10. The distribution of stoddard solvent in soil and groundwater was assessed as an indicator constituent to demonstrate a generalized configuration of potential point sources and migratory pathways of other constituents identified at the site.

Chlorinated Solvents

Soil samples collected at B10 and analyzed for chlorinated solvents revealed PCE and TCE in soil (Figure 8). PCE and TCE in soil were not identified in B9, at the same depth (15 to 16 feet bgs), just 20 feet away from B10. This is typical of the migratory behavior of these heavy molecules in that they tend to migrate vertically more so than laterally. Lateral migration is controlled to a minor degree when alternating layers of sand and clay earth materials dip in a preferred orientation and direct the DNAPL solvent phase across the top of clay layers to cascade down to sand layers below. This site, however, is predominantly clay with little variation in stratigraphy in terms of the vertical extent encountered in the boreholes. As a result, chlorinated solvents identified in soil were only found in shallow soils in the vicinity of B10 and not in B3, B9, and B6.

The PCE and TCE has biodegraded to cis 1,2-dichloroethene as shown by the distribution of the solvents in groundwater (Figure 8). The groundwater plume map indicates that most of the PCE (13,000 ppb) has converted to cis 1,2-dichloroethene.

MTBE

The MTBE was identified in groundwater and is migrating from offsite (from the north and northwest) from the general direction of the existing UNOCAL service station. Initial results for MTBE revealed the highest concentration of 790 ppb in groundwater at borehole B1 (Figure 9). The same groundwater sample was further analyzed by EPA Method 8260 to confirm the initial result of 790 ppb and it was revealed that the concentration of MTBE in the same lab sample was actually 850 ppb. In this case, it is abundantly clear that the MTBE plume has emanated from an underground storage tank at a location in the general direction of the UNOCAL site. Unless there is another gasoline UST between the UNOCAL site and the plume as identified at the Depper's site, the MTBE exhibits the leading edge of a gasoline plume which has migrated from the UNOCAL site.

Benzene

Benzene (up to 18 ppb) was identified in groundwater and is emanating from the south in the general direction of the Earl Thompson property (Figure 10). No benzene was identified in soil. This suggests that the point source for the benzene is in the direction of the Earl Thompson property. Detectable levels of ethyl benzene, toluene, and xylene were identified in soil and are typically associated with benzene within gasoline fuels. Since the benzene is usually the first to biodegrade and volatilize within a gasoline mixture, in-situ, it indicates that the primary (e.g. a UST) and secondary (gasoline contaminated soil) contaminant sources exist to the south of the investigation area. Contamination identified at the Earl Thompson property and the constituents at the subject site are ethyl benzene, toluene, and xylene.

The benzene plume, at the subject site does not possess a spatial distribution which is similar to that of the stoddard solvent or chlorinated solvent plumes and therefore cannot be considered as a trace constituent which could have been entrained in the solvent products.

Gasoline and Oil Ranged Organics

Since the five (5) foot diameter storm drain which runs underneath the property, is riddled with holes, cracks, and very serious deep gaps in the brick and concrete masonry liner, it is very likely that it is serving as a preferential pathway for the migration of chlorinated solvents throughout the site, offsite, and to the San Francisco Bay.

Gasoline ranged organics (220 PPM in soil & 3,200 ppb in groundwater) were collected from borehole BSD (Figure 1 for borehole location) directly adjacent to the incoming storm drain.

Oil ranged organics (81 ppb in water) were identified in a water sample collected from the Alameda County storm drain system conduit, after the first rain of the season (1997), located across Manila street, upflow from the site. Water samples collected from the storm drain leading to the Depper's property on 11-29-93 identified oil range compounds (700ppb in water). Oil ranged organic compounds were also identified in the storm drain leading into the Depper's property on 10-14-93 (1,300 ppb in water).

Limitations

This report was prepared as an interim measure to provide site designation committee members with a more focused summary of the activities completed to date. It is not meant to be considered as the final report. The final subsurface investigation report will be available on January 26th, 1998. This report has been prepared in accordance with generally accepted environmental, geological and engineering practices. No warranty, either expressed or implied, is made as to the professional advice presented herein. The analyses, conclusions and recommendations contained in this report are based upon site conditions as they existed at the time of the investigation and they are subject to change. The conclusions presented in this report are professional opinions based solely upon visual observations of the site and vicinity, and interpretation of available information as described in this report. Geosolv, LLC, recognizes that the limited scope of services performed in execution of this investigation may not be appropriate to satisfy the needs, or requirements of other state agencies, or of other users.

white - env. health
yellow - facility
pink - files

ALAMEDA COUNTY, DEPARTMENT OF
ENVIRONMENTAL HEALTH
Hazardous Materials Inspection Form

1131 Harbor Bay Pkwy
Alameda CA 94502
510/567-6700

II, III

Site ID # 437 Site Name Gloveorium Today's Date 8/29/97
Site Address 3815 Broadway
City Oakland Zip 94 Phone _____

MAX AMT stored > 500 lbs, 55 gal., 200 cft.?

Inspection Categories:

- I. Haz. Mat/Waste GENERATOR/TRANSPORTER
- II. Hazardous Materials Business Plan, Acutely Hazardous Materials
- III. Under ground Storage Tanks

* Calif. Administration Code (CAC) or the Health & Safety Code (HS&C)

Comments:

On-site to observe portions of soil boring operation using a "push-tool" limited access rig. Boring B7 was employed through the floor of the dry cleaning room. Refusal was encountered @ ~11' BG; similar refusal was also experienced in other borings at depths from ~10 to 14' BG due to friction/obstructions caused by gravelly clays. Frank Goldman (owner) wanted to stop at those depths and wait several months for GW to rise into boreholes with coming rains. However, I suggested a modification to "drilling" technique such that the outer casing (a unique feature with this drilling apparatus) not be pushed once reaching refusal, but to continue with a smaller diameter push rod/sampler. GW was reached in B7 within a few feet from where it was stopped previously due to refusal. I requested such borings be used @ 5 other locations (SEE attached map).

Contact Frank Goldman
Title Geo Solr
Signature _____

Inspector S. JERRY
Signature _____

II, III

Sidewalk

38TH STREET

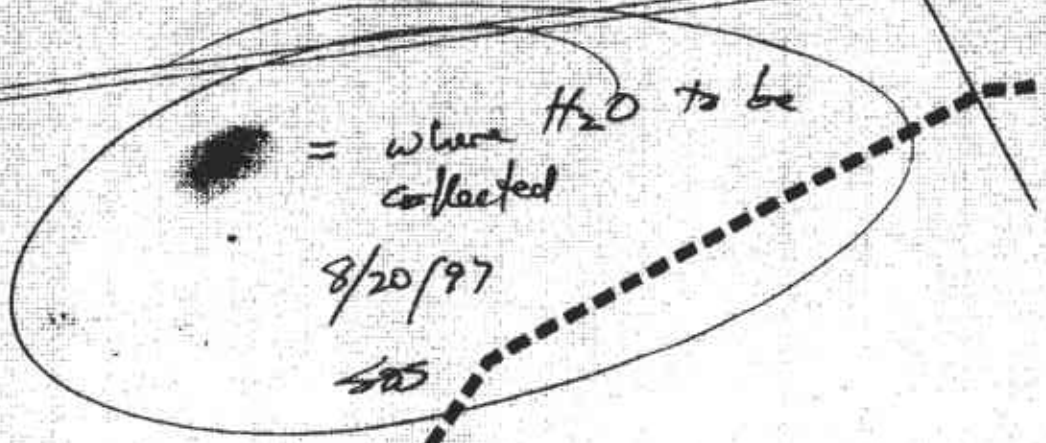


drilled 4 borings
installed 1 casing - no casing expected
taken to 15' bgs. for water 3'
no water yet

drilled slotted casing in place

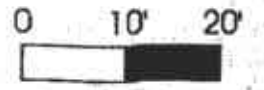
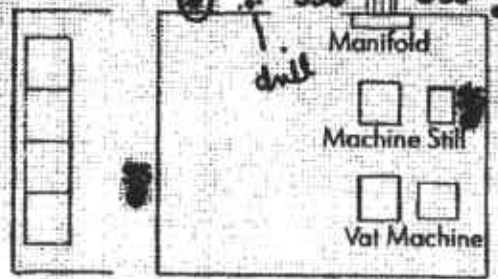
drilled

drilled



(?) location of borings

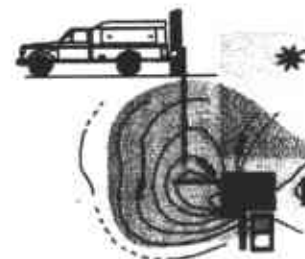
MANILA STREET



Approximate Scale
1 Inch = 20 Feet

GeoSolv, LLC

Environmental and Hydrogeological Consulting
643 Oregon Street, Sonoma, CA 95476
Phone: (707) 996-4227 Fax: (707) 996-7882



We Don't Just Work on Your Environmental Problems. We Solve Them!

December 22, 1997

State of California
California Environmental Protection Agency
Site Designation Committee
555 Capitol Mall, Suite 525
Sacramento, CA 95814

SUBJECT: Application for Transfer of Oversight from the Alameda County Local Oversight Program (LOP) for Underground Storage Tanks (USTs) to the San Francisco Regional Water Quality Control Board (SFRWQCB) for the: Former Glovatorium/The leather Cleaners (Depper) site at: 3815 BROADWAY, OAKLAND, CA 94611

Dear Committee Member:

The standard solvent underground storage tanks at the subject site have been properly abandoned in-place and an extensive subsurface investigation has been completed. No response to the UST closure report has been received from Alameda County to date. The subsurface investigation report has been completed and is currently undergoing editing.

Robert and Stuart Depper are requesting that their site be transferred to the SFRWQCB from the Alameda County LOP for USTs for the following reasons:

- 1) The recent subsurface investigation has revealed that the site is no longer a simple UST case because it involves off-site dischargers and some of the discharges are not associated with USTs.
- 2) The hydrocarbon contaminants in groundwater are in the form of a co-mingled plume which is composed of chlorinated solvents, MTBE, and gasoline/diesel/oil ranged organic compounds. A greater range of technical expertise is available at the Board as compared to that provided by the County.
- 3) The Regional Board has more experience with regulating dry cleaning facilities and chlorinated solvents in groundwater as well as mediating co-mingled plume problems between several responsible parties.
- 4) A potential conflict of interest may prevent Alameda County from rendering enforcement action against itself to determine if their own storm drain system, which is composed of cracked and degraded brick and concrete masonry constructed in the early 1900s, has provided a conduit for uncontrolled stormwater runoff and potential spills from offsite to transport hydrocarbons onsite.

Sincerely,

Franklin J. Goldman, CEO/GeoSolv, LLC
State Registered Geologist No. 5557
State Certified Hydrogeologist No. 466

