URS

November 17, 2004

Mr. Robert W. Schultz, R.G.
Alameda County Environmental Health
1131 Harbor Bay Parkway
Alameda, CA 94502

Re: Active Soil Gas Investigation Work Plan Addendum, ARCO Service Station #5387, 20200 Hesperian Boulevard, Hayward, California, URS Project # 38486576

Dear Mr. Schultz:

On behalf of the Atlantic Richfield Company (a BP affiliated Company), URS Corporation (URS) has prepared this work plan addendum for soil gas sampling at ARCO Station #5387 (the Site), located at 20200 Hesperian Boulevard, Hayward, California. The original workplan was submitted on September 28, 2004. This workplan addendum was prepared in response to an email from Alameda County Environmental Health (ACEH) to Atlantic Richfield Company (RM) dated November 5, 2004, requesting further explanation to address the following concerns:

- Determination of remedial/closure goals: Residential or commercial Environmental Screening Levels (ESLs) to be used at the Site and the basis for the selection.
- Likelihood of air-knifing disturbing natural soil conditions and potentially impacting the collection of representative soil vapor samples.
- Methodology to be employed in sealing air-knifed borings between 0 to 5 feet below ground surface (bgs) during soil gas sample collection.

The aforementioned concerns will be addressed as follows:

- The Site is currently developed commercially. RM is not the landowner and can not speculate on future land use. Therefore, to be conservative, residential ESLs will be considered as the remedial/closure targets for the Site. Accordingly, soil gas sample analytical results will be compared to ESLs for Indoor Air and Soil Gas for Residential Land Use from Table E of the San Francisco Bay Regional Water Quality Control Board's 2003 Volume I ESL document. These ESLs assume a very permeable (sandy) fill material but at the Site the first 5 feet bgs are clay and then the soil becomes silt. Therefore, the indoor air screening levels for residential land use will be divided by an attenuation factor of 0.0001 (1/10,000) to produce shallow soil gas screening levels for residential land use underlain by silty or clayey soils as is recommended in the February 23, 2004 Technical Memo on Evaluation of Vapor Intrusion Concerns at Sites Underlain

URS Corporation
1333 Broadway, Suite 800
Oakland, CA 94612-1924
Tel: 510.893.3600
Fax: 510.874.3268

by Fine-Grained Soils from the California Regional Water Quality Control Board San Francisco Bay Region (Attachment B) .

- In addition to collecting soil gas samples from five soil gas sample locations (SG-1 through SG-5) proposed in the original soil gas sampling workplan, URS proposes collecting soil gas samples from five additional locations (SG-6 through SG-10). The proposed sample locations SG-1 through SG-10 are shown in Figure 1. The analytical results of soil gas samples collected from the proposed soil gas sample locations (SG-1 through SG-5) will assist in characterizing residual hydrocarbon concentrations in onsite soils in the primary and secondary source areas, and also in the historic "hot spots" identified in the original work plan (Figure 1). The analytical results of soil gas samples collected from the additionally proposed soil gas sample locations (SG-6 through SG-9) will assist in characterizing residual hydrocarbon concentrations in onsite soils located hydraulically upgradient (northeast) of the primary and secondary source areas at the Site (Figure 1). Furthermore, location is located at the northeast edge of the property and will provided background concentrations. Accordingly, the combined analytical results of the soil gas samples collected from all the proposed soil gas samples locations (SG-1 through SG-10) will provide a representative indication of residual hydrocarbon concentrations in soils through out the entire Site.

- Additionally, instead of collecting only one soil gas sample from each soil gas sample location as proposed in the original work plan, URS proposes collecting two soil gas samples from each of the proposed ten soil gas sample locations (SG-1 through SG-10). One soil gas sample will be collected from within the less permeable clay layer (approximately 5 feet bgs) and the second soil gas sample will be collected from the relatively more permeable silts and sandy silts layer (approximately 7 feet bgs) beneath the Site. However, since the clay layer typically extends from grade to approximately 3 to 10 feet bgs at the Site, it is possible that the first soil gas sample may have to be collected at depths ranging between 3 to 5 feet bgs at some locations. The rationale for collecting soil gas samples from the uppermost clay layer beneath the Site is that they are likely to be more representative of the surface soil gas hydrocarbon exposure levels at the Site.

- Prior to collecting soil gas samples, the depth to groundwater will be measured in onsite wells AV-1, AV-2 and AV-4, which are screened up to the uppermost clay layer beneath the Site. This will assist in determining the extent of the onsite vadose zone at the time of soil gas sampling, enabling accurate determination of the maximum depth at which the second soil gas sample can be collected from each location.

- In accordance with the Department of Toxic Substances Control (DTSC) and the California Regional Water Quality Control Board – Los Angeles Region (RWQCB-LAR) January 2003 "Advisory –Active Soil Gas Investigations" standards (Section 2.2.1), if low-flow or no-flow conditions (e.g., fine-grained soil, clay, soil with vacuum readings that exceed approximately 10 inches of mercury or 136 inches of water) are encountered

at the Site, soil matrix sampling using EPA Method 5035A will be conducted in the respective areas.

- To avoid and minimize potential soil gas sample dilution concerns during sampling, soil gas samples will be collected from each proposed location by direct pushing from grade to the target sampling depths. The inactive status of the Site and the absence of typical service station associated underground utilities at the Site, allowed issuance of an authorized variance from RM's standard safety protocol of air-knifing from 0 to 5 feet bgs. Therefore, air-knifing will not be conducted as originally proposed.
- Soil vapor sample collection will be generally consistent with the guidelines published by DTSC and the RWQCB-LAR in the *January 28, 2003 Advisory – Active Soil Gas Investigations*, and EPA Standard Operating Procedure (SOP) #1704, Summa Canister Sampling (provided as part of the original work plan). Soil gas sampling procedures will include the following:
    - Soil gas samples will not be collected during or immediately after a significant rain event (e.g. ½ inch or greater).
    - The soil gas sampling probe will be pushed to the target depth; the sampling line will be installed; the sampling line will be capped with a vapor-tight valve; the valve will be closed; the probe will be raised six inches; and the line will be purged after 30 minutes have elapsed.
    - Hydrated bentonite will be placed around the drill rod prior to sampling in order to inhibit surface air migration down the outer portion of the drill rod.
    - Swage-Lok-type ferruled fittings will be used for all sample line connections to prevent vacuum leaks.
    - A leak check will be performed prior to sampling by placing shaving cream with propellants containing isopropanol, isobutene, and/or propane on all sample line fittings and the top of the vapor probe tubing where the tubing exits the well.
    - Three volumes of air will be purged using a vacuum pump or suma canister with flow regulator from the sample tubing before sample collection at a maximum purge rate of 200 milliliters per minute to inhibit portioning and short circuiting.
    - A flow regulator will be used to collect vapor samples at a rate of 100 to 200 milliliters per minute (ml/min) to inhibit partitioning and short-circuiting.
    - Summa canisters with vacuum gauges will be used to collect samples; with at least 29 inches of mercury vacuum prior to sampling, and 5 inches of mercury vacuum remaining in the canister at the conclusion of sampling.
    - At least one duplicate sample will be collected from an area likely to have been impacted by hydrocarbons.
    - Soil gas samples will not be chilled.

- Laboratory analysis will be performed with 30 days of sample collection, in accordance with EPA holding time standards (method TO-15) for Summa canisters.

URS hopes that this work plan addendum adequately addresses the concerns and issues raised with regards to the original soil gas sampling work plan submitted for this Site on September 28, 2004. If you have any questions regarding this submission, please call me at (510) 874-3280.

Sincerely,

URS CORPORATION

Scott Robinson,
Project Manager

Leonard P. Niles, R.G. #5774, C.E.G. #357
Senior Geologist

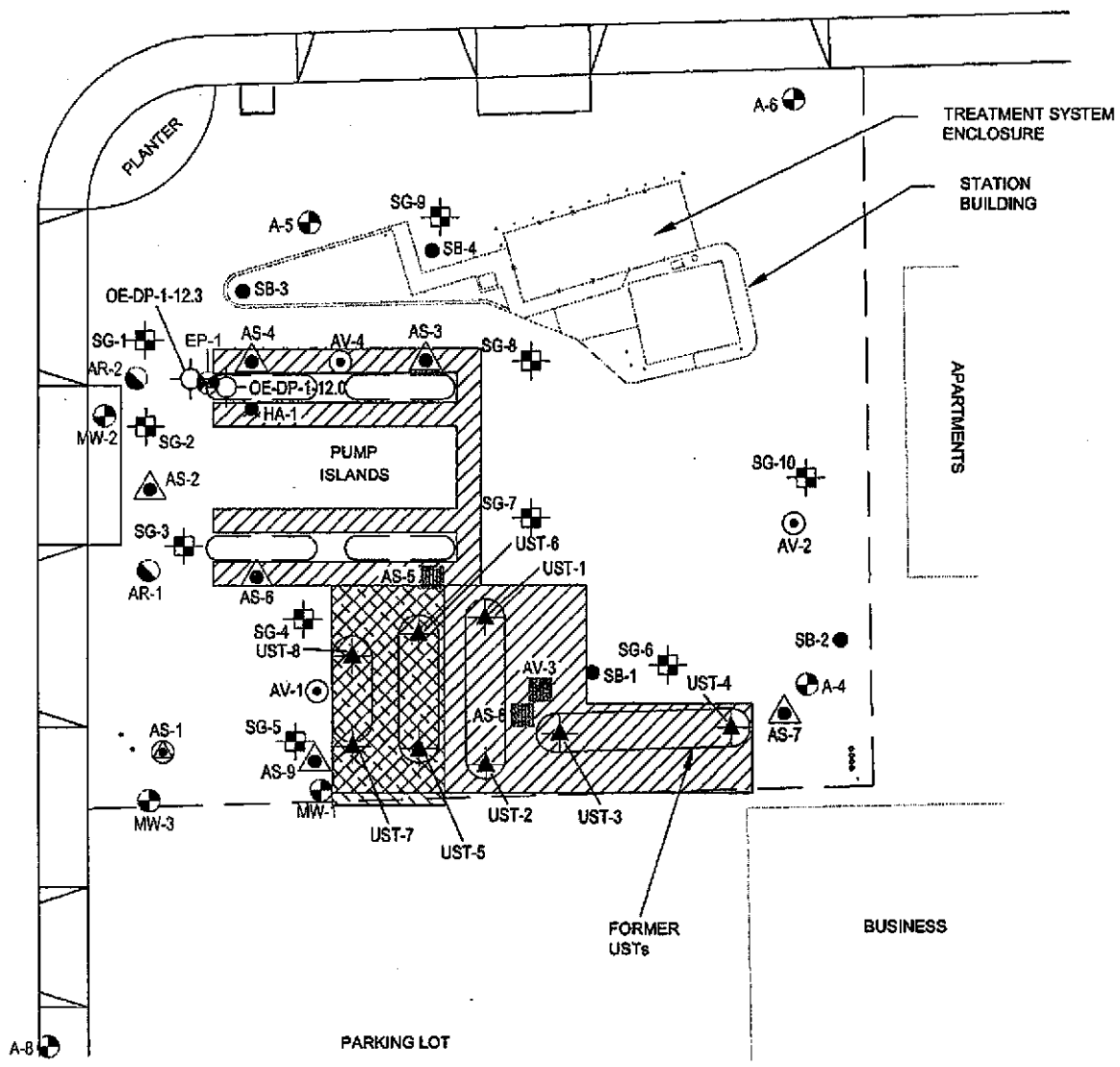
REGISTERED GEOLOGIST
LEONARD P. NILES
No. 5774
EXP. 3/31/06
STATE OF CALIFORNIA

Figure 1 – Site Plan with Historical Sample Locations and Proposed Soil Gas Sample locations

Attachment A – Alameda County Environmental Health's email correspondence dated November 5, 2004

Attachement B – Technical Memorandum on the Evaluation of Vapor Intrusion Concerns at Sites Underlain by Fine-Grained Soils, California Regional Water Quality Control Board, San Francisco Bay Region, February 23, 2004

Nov 10, 2004 - 10:18am
X:\x_env_waste\BP GEM\Sites\Scott Robinson\Paul Supple\5387\SVS Investigation\Drawings\SAMPLE-GAS-POINTS.dwg



LEGEND:

- PROPOSED SOIL GAS SAMPLE
- ABANDONED MONITORING WELL
- MONITORING WELL
- GROUNDWATER EXTRACTION WELL
- SOIL VAPOR EXTRACTION WELL
- AIR SPARGE WELL
- DUAL AIR SPARGE/SOIL VAPOR EXTRACTION WELL
- AIR SPARGE WELL (DELTA ENVIRONMENTAL, 2000)
- DUAL AIR SPARGE/SOIL VAPOR EXTRACTION WELL
- EXTRACTION POINT
- OVER-EXCAVATION SOIL SAMPLE (DELTA ENVIRONMENTAL, 2002)
- TANK BASIN SOIL SAMPLE (DELTA ENVIRONMENTAL, 2002)
- AREA OF OVER-EXCAVATION DURING REPLACEMENT OF TANKS/PRODUCT LINES/DISPENSER PUMPS (DELTA ENVIRONMENTAL, 2002)
- AREA OF SOIL EXCAVATION DURING REPLACEMENT OF TANKS/PRODUCT LINES/DISPENSER PUMPS (DELTA ENVIRONMENTAL, 2002)

NORTH

0 30 60

SCALE IN FEET

URS	Project No. 38486910 Former ARCO Service Station #5387 20200 Hesperian Boulevard Hayward, California	SITE PLAN WITH HISTORIC SAMPLE LOCATIONS AND PROPOSED SOIL GAS SAMPLE LOCATIONS	FIGURE 3

"Schultz, Robert, Env. Health" <robert.schultz@acgov.org>

To: "'Scott_Robinson@URSCorp.com'" <Scott_Robinson@URSCorp.com>
cc: "Paul Supple (E-mail)" <supplpv@bp.com>
Subject: RO-174 - RE: ARCO 5387 - 20200 Hesperian Blvd.

11/05/2004 01:39 PM

Paul and Scott:

We need further explanation to address several concerns re. your proposed active soil gas investigation:

1. you state that the service station is non-operational. will the site be redeveloped, and if so is residential use a possiblity? please state your remedial goals for soil vapor and the basis for those goals (i.e. pathway, receptor).
2. you propose air knifing to 5 ft, then direct push from 5 ft to the target depth of between 5 ft and 12 ft (where more permeable soils are anticipated). What is your plan for sealing the boring between 0 and 5 ft where you previously air knifed? what would be the diameter of the air-knifed hole, compared to the direct push drilling rods?
3. air knifing will likely result in soil vapor disturbance. how do you plan to ensure equilibrium conditions following air-knifing so that your samples are representative?

Please submit your response in the form of a workplan addendum.
Thank you,
Bob

-----Original Message-----
From: Scott_Robinson@URSCorp.com [mailto:Scott_Robinson@URSCorp.com]
Sent: Wednesday, November 03, 2004 12:16 PM
To: Schultz, Robert, Env. Health
Subject: ARCO 5387 - 20200 Hesperian Blvd., Hayward & others

Bob:

I just wanted to follow up & see if you had any information on the sites below. I'm especially interested in the work plan for ARCO 5387 on 20200 Hesperian Blvd.

Another site I had a question on is:
ARCO 2035 - 1001 SAN PABLO AVE., ALBANY
A letter was submitted to you on July 15, 2004 requesting permission to permanently shut down the soil vapor extraction system due to low to non-detect influent hydrocarbon concentrations. The Bay Area Air Quality Management District permit needs to be renewed by November 10, 2005 if we are not going to shut the system down.

Thanks,
Scott

Scott Robinson
Project Manager / Senior Geologist
URS Corporation
1333 Broadway, Suite 800 (NEW ADDRESS)
Oakland, CA 94612
510-874-3280 Direct / 510-874-3268 Fax

----- Forwarded by Scott Robinson/Oakland/URSCorp on 11/03/2004 12:08 PM -----

Scott Robinson

To: robert.schultz@acgov.org

10/22/2004 10:37 AM

cc:

Subject: ARCO 5387 - 20200 Hesperian Blvd., Hayward & others

Bob:

I just wanted to follow up on a few sites to see how things were progressing.

FORMER ARCO 5387 - 20200 HESPERIAN BLVD>., HAYWARD
I wanted to see if you had a chance to look over the workplan for the soil vapor sampling. This site is a big prioirty for BP/ARCO because of the monthly hold-over rent.

ARCO 2112 - 1260 PARK STREET, ALAMEDA
Case Closure submitted Nov. 20, 1996; pending comments from Alameda County.

ARCO 2185 - 9800 E 14TH ST, OAKLAND
No monitoring required per letter dated April 8, 1999. Submitted closure using recent soil results from line upgrade work on September 9, 2003.

ARCO 2162 - 15135 HESPERIAN BLVD., SAN LEANDRO
Closure request submitted on June 6, 2004.

ARCO 6148 - 5131 SHATTUCK AVE., OAKLAND
Closure request submitted on June 1, 2004.

Thanks,
Scott

Scott Robinson
Project Manager / Senior Geologist
URS Corporation
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Oakland, CA 94612
510-874-3280 Direct / 510-874-3268 Fax

California Regional Water Quality Control Board
San Francisco Bay Region

Terry Tamminen
Secretary for Environmental Protection

1515 Clay Street, Suite 1400, Oakland, California 94612
(510) 622-2300 • Fax (510) 622-2460
http://www.swrcb.ca.gov/rwqcb2

Arnold Schwarzenegger
Governor

To: Interested Parties

File No. 1210.40 (RDB)

From: Roger Brewer, EG,
Toxics Cleanup Division

Date: February 23, 2004

Technical Memorandum: Evaluation of Vapor Intrusion Concerns at Sites Underlain by Fine-Grained Soils

Concur:
Stephen Hill, Chief
Toxics Cleanup Division Chief

This memo addresses issues regarding the intrusion of volatile organic compounds into buildings that overly predominantly clayey or silty, "fine-grained" soils. The information provided is not intended to serve as regulatory "guidance." It does, however, reflect Regional Water Board staff's current understanding of and approaches to these issues. To summarize:

- The Regional Water Board's July 2003 Environmental Screening Levels document contains updated screening levels and information for evaluation of vapor intrusion concerns;
- The use of shallow soil gas data is preferred at sites where potential vapor intrusion concerns have been identified, followed by sampling of indoor air if needed;
- A minimum soil gas-to-indoor air attenuation factor of 0.0001 (1/10,000) is recommended for use at sites underlain by silty or clayey soils (i.e., assumed maximum ten-thousand-fold dilution of soil gas in indoor air).

Additional information is provided in our technical document *Screening For Environmental Concerns at Sites With Contaminated Soil and Groundwater* (July 2003 and updates). Our office is assisting staff of the Department of Toxics Substances Control in preparation of guidance on vapor intrusion and indoor-air impact issues (due later this year). Your comments and suggestions regarding this subject are appreciated.

Revisions to 2001 RBSL Document

The December 2001 edition of our Environmental Screening Levels document (ESLs, formerly called "Risk-Based Screening Levels") was peer reviewed by the University of California in early 2003. Several reviewers commented that the vapor flow rate predicted under the silty clay or "fine-grained" soil scenario (now referred to as "low/moderate permeability" soils) may not be adequately conservative for some Bay area soils. Based on their experience, secondary features such as plant root structures, desiccation cracks, stratigraphic heterogeneities (e.g., thin stringers of sand), underground utilities, disturbance and recompaction during redevelopment, etc., could

significantly increase the vapor permeability of shallow, clayey and silty soils over that predicted for homogeneous, undisturbed soils. Assuming these soil types in vapor intrusion models without taking this into account could cause the models to under predict vapor flux into buildings and subsequently under predict impacts to indoor air.

Due to the above concerns, soil screening levels for vapor intrusion concerns included in the July 2003 ESL document are based on an assumption that shallow soils have a high vapor permeability, regardless of the soil type (refer to Volume 1, Section 2.7). At sites where significant releases of volatile chemicals has occurred, the use of soil gas data in conjunction with soil data is strongly recommended.

Primary groundwater screening levels presented in the ESL document for vapor intrusion concerns are similarly based on an assumption that overlying vadose-zone soils are highly permeable to volatile chemicals (refer to Volume 1, Section 2.7 and Appendix 1, Section 2.4 of ESL document). Groundwater screening levels for a low/moderate permeability site scenario are also included in Appendix 1 of the ESL document (refer to Table E-1a). However, the model used to develop the screening levels is more conservative than the model used in the December 2001 version of the document (refer to Appendix 1, Section 2.4). The assumed vadose-zone soil in the groundwater vapor-emission model was changed from silty clay (SICL) to a mix of loamy sand (LS) overlying silt (SI). This increased the calculated vapor flux into buildings overlying lower permeability soils from 0.23 cm^3/sec to 13 cm^3/sec (see Appendix 4 of July 2003 ESL document) with a correlative decrease in groundwater screening levels for this concern. For comparison, the calculated vapor flux into buildings overlying "high-permeability" soils is 67 cm^3/sec. The of soil gas data in conjunction with groundwater data is strongly recommended at sites where the groundwater screening levels based on low/moderate permeability vadose-zone soils are applied.

Shallow Soil Gas Screening Levels

In 2003, the emphasis for evaluation of vapor intrusion and indoor-air impact concerns in our ESL document progressed to the use of shallow soil gas data (refer to Volume 1, Section 2.7). At sites where screening levels for soil or groundwater are approached or exceeded, it is recommended that shallow soil gas data be collected and compared to screening levels for vapor intrusion concerns (e.g., refer to Table E in Volume 1). Soil gas data from immediately beneath the building footprint are preferable. At sites where no buildings are present, samples should be collected from a depth of approximately five feet below ground surface. These data should then be assumed to reflect the concentration of volatile chemicals in soil gas immediately beneath any future buildings (e.g., depth to source in models = 15cm). Acceptable protocols for the collection of soil gas samples are discussed in the joint DTSC-LA Regional Water Board document *Soil Gas Advisory* (DTSC 2003).

Soil gas screening levels presented in Table E of our July 2003 ESL document are based on an assumed soil gas-to-indoor air attenuation factor of either 0.001 for residential settings (i.e., 1,000 times the indoor air goal) or 0.0005 for commercial/industrial settings (i.e., 2,000 times the indoor air goal). These attenuation factors are based on vapor intrusion models that assume

highly permeable, near-surface soils and are within the range of attenuation factors identified in radon studies (refer to Appendix 1, Chapter 4 of the ESL document).

Note that attenuation factors as high as 0.1 have been reported in basements or buildings that have been abandoned or temporarily shut-in. Such locations would likely be uninhabitable do to very poor ventilation and these attenuation factors are not considered to be representative of occupied spaces.

Interim Actions At Sites With Existing Buildings

Sampling of indoor air is generally recommended at sites where concentrations of volatile chemicals in soil gas exceed screening levels for vapor intrusion concerns. Acceptable guidance on the collection of indoor air samples is provided in the Massachusetts Department of Environmental Protection document *Indoor Air Sampling And Evaluation Guide* (MADEP 2002), among other sources. In some cases it may be prudent to collect indoor air samples at the same time that soil gas samples are collected.

Interim Actions At Sites Being Redeveloped

For sites that are being redeveloped, it can reasonably be assumed that significant impacts to indoor air will not occur if concentrations of volatile chemicals in soil gas do not exceed screening levels for vapor intrusion concerns. If more than three carcinogenic chemicals or five chemicals with similar noncarcinogenic health effects are present, cumulative health risk concerns may need to be further evaluated (refer to Volume 1, Section 2.10 in July 2003 ESL document).

At sites where concentrations of volatile chemicals in shallow soil gas exceed default or site-specific screening levels for vapor intrusion concerns, additional evaluation is needed. Vapor intrusion concerns should be considered to be especially significant at sites where the concentrations of volatile chemicals in shallow soil gas exceed 10,000 times the indoor air goal, regardless of the result of more "site-specific" models based on soil type data alone. Aggressive remediation is likely to be recommended prior to construction of new residences or buildings overlying these areas. If redevelopment of a site is to take place prior to final cleanup, the inclusion of passive or active vapor mitigation measures in building designs should be considered (podium parking, impermeable membranes, subslab venting, etc.).

Site-Specific Attenuation Factors

"Site-specific" soil gas-to-indoor air attenuation factors were discussed in length at the "Subsurface Vapor Intrusion to Indoor Air" symposiums held in San Jose and Long Beach, California, in 2003 (sponsored by the Groundwater Resources Association, in cooperation with the USEPA, DTSC and the Regional Water Board). Dr. Paul Johnson of the Arizona State University and Dr. Ron Mosely of the USEPA stressed that attenuation factors based on field data typically ranged from 0.01 (one-hundred-fold dilution) to 0.0001 (ten-thousand-fold dilution), with 0.001 being a reasonable value for screening purposes. In contrast, vapor intrusion models presented with the USEPA document *User's Guide For The Johnson and Ettinger (1991) Model For Subsurface Vapor Intrusion Into Buildings* (USEPA 2003 and

updates) can be manipulated to predict soil gas-to-indoor air attenuation factors as low as 0.00001 (1/100,000) for silty and clayey soils. Dr. Johnson stressed these attenuation factors may be under-conservative for many sites, due to secondary features mentioned above that enhance the vapor permeability of these types of soils.

It is likely that the silty, clayey nature of shallow soils in many parts of the Bay Area will inhibit vapor flow into buildings more effectively than in areas underlain by sandier and more permeable soils. Until additional field data can be collected and compiled, however, it is prudent to assume that secondary features in silty, clayey soils could enhance vapor flow well above model predictions based on these soil types. "Site-specific" soil gas-to-indoor air attenuation factors should be based on field data from that site, where feasible. At sites where both soil gas and indoor air data are not available, modeled attenuation factors lower than 0.0001 should be avoided in the absence of field based, in-situ studies of soil vapor permeability and vapor flux under advective flow conditions.

If you have any questions, comments or suggestions, please contact Roger Brewer at (510) 622-2374 (e-mail rdb@rb2.swrcb.ca.gov).

References:

DTSC, 2003, *Soil Gas Advisory* (January 2003): Department of Toxic Substances Control and Los Angeles Regional Water Quality Control Board; www.dtsc.ca.gov/PolicyAndProcedures/SiteCleanup/SMBR_ADV_activesoilgasinvst.pdf

MADEP, 2003, *Indoor Air Sampling And Evaluation Guide* (2002): Massachusetts Department of Environmental Protection, Office of Research and Standards, WSC Policy #02-430; www.state.ma.us/dep/bwsc/finalpol.htm

RWQCBSF, 2003, *Screening For Environmental Concerns at Sites With Contaminated Soil and Groundwater* (Interim Final - July 2003 and updates): California Environmental Protection Agency, Regional Water Quality Control Board, San Francisco Bay Area Region, www.swrcb.ca.gov/rwqcb2/esl.htm

USEPA, 2003, *User's Guide For The Johnson and Ettinger (1991) Model For Subsurface Vapor Intrusion Into Buildings:* U.S. Environmental Protection Agency Office of Emergency and Remedial Response, March 2003 (and updates), www.epa.gov/oerrpage/superfund/programs/risk/airmodel/johnson_ettinger.htm

Other Useful References:

Annual Toxics Summaries: California Air Resources Board, (includes concentrations of common volatile chemicals in outdoor air), www.arb.ca.gov/aqd/toxics/sitesubstance.html

Chlorinated Chemicals in Your Home (May 2001): California Air Resources Board, (includes concentrations of selected volatile chemicals in indoor air), www.arb.ca.gov/research/indoor/clguide.pdf

Alameda County Environmental Health

1131 Harbor Bay Pkwy., #250
Alameda CA 94502-6577
Telephone (510) 567-6700 FAX (510) 337-9335

FACSIMILE COVER SHEET

TO: Glen Vanderveen, IT Corp., Fax: 510-663-3315

FROM: Juliet Shin

DATE: 09/10/99

Total number of pages including cover sheet 22

-NOTES- Glen, per our conversation, here is the info on recent dispenser sampling, site figure, & g.w. sampling results for 20200 Hesperian Blvd., Hayward. Let me know if you have any questions
- Juliet Shin

faxdoc.doc/n.arreguin/5-11-98

UST SAMP

A summary of historical analytical sampling results are provided in **Table 1.** Copies of the EMC Project Status Report are presented in **Appendix A**, and copies of the laboratory analytical results with Chain-of-Custody are contained in **Appendix B**.

All samples collected for TPH-g for gasoline, and benzene were below the laboratory detection limits. MTBE samples above the detection limit of 5 ug/L were in monitoring wells MW-1 (17 ug/L), and MW-2 (16 ug/L), all other samples were below the detection limits. TPH-g and benzene concentrations were plotted on **Figures 2** and **3**. An MTBE isoconcentration map is presented in **Figure 4**.

DISPENSER SAMPLING

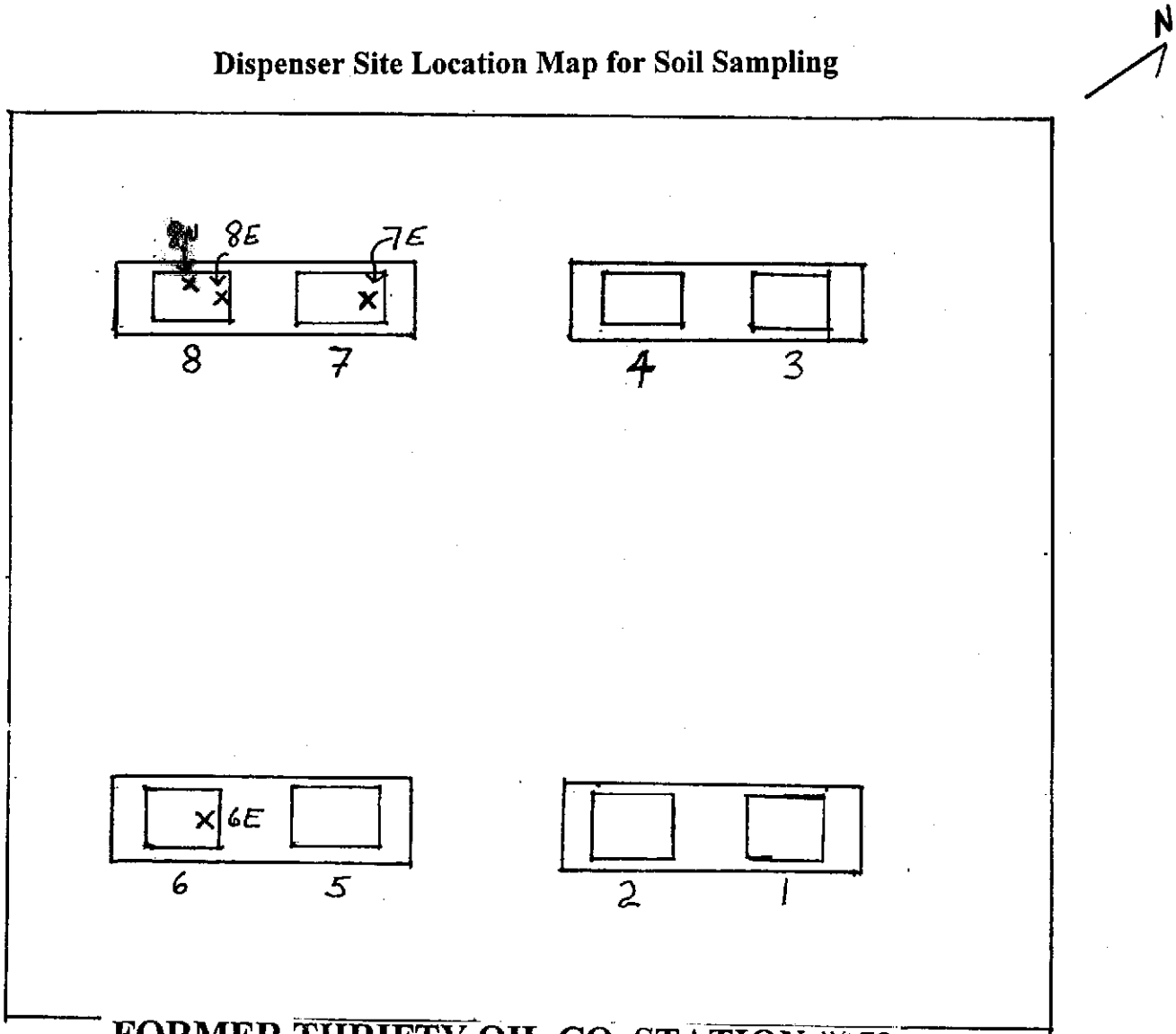
On May 27, 1999, a Thrifty geologist, Mr. Raymond C. Friedrichsen, met Ms. Juliet Shin and Mr. Robert Weston of the Alameda County Health Agency to observe the collection of soil samples beneath selected gasoline dispensers. All dispensers were inspected by the agency, and four soil samples were collected by Thrifty at the agency's discretion. One sample (6E) was collected approximately 2.5 feet below ground surface (bgs) from beneath dispenser #6, one sample (7E) was collected approximately 2.5 feet bgs from beneath dispenser #7, and two samples (8N and 8E) were collected approximately 2.5 and 3 feet bgs from beneath dispenser #8. All sample locations are plotted on **Figure 5**.

The reason for this sampling event is because Mr. Robert Weston noticed that a valve was dripping gasoline from dispenser #8 where an ARCO representative was working on this dispenser. Mr. Weston stated that this event happen on December 11, 1998.

A stainless steel shovel was washed with water in a three bucket rinse after each use, then used to dig beneath each dispenser a sample was collected to approximately one foot into the native clay soil. Four soil samples were collected by using a two inch brass tubes. All samples were collected by covering one end of the tube with a Teflon sheet and an end cap, then placing the open end into the hole and hand pushing until the tube was full of soil. The open of the brass tube was then covered with Teflon, capped, labeled and placed in an ice chest. The samples were forwarded for analysis along with a chain of custody to American Analytical Laboratory, a state certified laboratory located in Chatsworth, California.

The samples were analyzed for total petroleum hydrocarbons (TPH-g) by EPA method 8015. Benzene, toluene, ethylbenzene, xylenes (BTEX), and MTBE samples were analyzed by EPA method 8020. If MTBE was detected it was verified by EPA method 8260. The laboratory analytical results for soil samples 6E and 7E were below the detection limits for TPH-g (1 mg/kg), benzene (0.005 mg/kg), and MTBE (20 mg/kg). The laboratory analytical concentrations for soil samples 8E and 8N were 8.4 and 2400 mg/kg for TPH-g, below the detection limit of (0.005) and 0.38 mg/kg for benzene, and 2,200 and 10,000 ug/L for MTBE, respectively. These laboratory results are in **Appendix C**.

Dispenser Site Location Map for Soil Sampling



FORMER THRIFTY OIL CO. STATION #052

ARCO SERVICE STATION #5387

20200 Hesperian Boulevard at West Sunset Drive

Hayward, California

MAY 27, 1999

FIGURE 5

AMERICAN ANALYTICS

LABORATORY ANALYSIS RESULTS

Client: Thrifty Oil Company
Project No.: N/A
Project Name: SS# 052
Sample Matrix: Soil
Method: EPA 8015M (Gasoline)

AA Project No.: A135052-15
Date Received: 05/28/99
Date Reported: 06/02/99
Units: mg/Kg

AA I.D. No.	Client I.D. No.	Date Sampled	Date Analyzed	Results	MRL
88644	6E	05/27/99	06/01/99	<1	1
88645	7E	05/27/99	06/01/99	<1	1
88646	8E	05/27/99	06/01/99	8.4	1
88647	8N	05/27/99	06/01/99	2400	1

MRL: Method Reporting Limit
<: Not detected at or above the value of the concentration indicated.

George Havalias
Laboratory Director

AMERICAN ANALYTICS

LABORATORY ANALYSIS RESULTS

Client: Thrifty Oil Company
Project No.: N/A
Project Name: SS# 052
Sample Matrix: Soil
Method: EPA 8020 (BTEX)

AA Project No.: A135052-15
Date Received: 05/28/99
Date Reported: 06/02/99
Units: mg/Kg

Date Sampled:	05/27/99	05/27/99	05/27/99	05/27/99	
Date Analyzed:	06/01/99	06/01/99	06/01/99	06/01/99	
AA ID No.:	88644	88645	88646	88647	
Client ID No.:	6E	7E	8E	8N	MRL
Compounds:					
Benzene	<0.005	<0.005	<0.005	0.38	0.005
Ethylbenzene	<0.005	<0.005	<0.005	9.8	0.005
Toluene	<0.005	<0.005	<0.005	18	0.005
Xylenes	<0.01	<0.01	0.038	210	0.01

MRL: Method Reporting Limit
<: Not detected at or above the value of the concentration indicated.

George Havalias
Laboratory Director

AMERICAN ANALYTICS

LABORATORY ANALYSIS RESULTS

Client: Thrifty Oil Company
Project No.: N/A
Project Name: SS# 052
Sample Matrix: Soil
Method: MTBE (EPA 8020)

AA Project No.: A135052-15
Date Received: 05/28/99
Date Reported: 06/02/99
Units: ug/Kg

AA I.D. No.	Client I.D. No.	Date Sampled	Date Analyzed	Results	MRL
88644	6E	05/27/99	06/01/99	<20	20
88645	7E	05/27/99	06/01/99	<20	20
88646	8E	05/27/99	06/01/99	8100	20
88647	8N	05/27/99	06/01/99	13000	20

MRL: Method Reporting Limit
<: Not detected at or above the value of the concentration indicated.

George Havalias
Laboratory Director

AMERICAN ANALYTICS

LABORATORY ANALYSIS RESULTS

Client: Thrifty Oil Company
Project No.: N/A
Project Name: SS# 052
Sample Matrix: Soil
Method: MTBE (EPA 8260)

AA Project No.: A135052-15
Date Received: 05/28/99
Date Reported: 06/10/99
Units: ug/Kg

AA I.D. No.	Client I.D. No.	Date Sampled	Date Analyzed	Results	MRL
88646	8E	05/27/99	06/07/99	2200	10
88647	8N	05/27/99	06/07/99	10000	10

MRL: Method Reporting Limit
<: Not detected at or above the value of the concentration indicated.

George Havalias
Laboratory Director

AMERICAN ANALYTICS

LABORATORY QA/QC REPORT

Client: Thrifty Oil Company
Project Name: SS# 052
Method: EPA 8020 (BTEX)
Sample ID: Matrix Spike
Concentration: 0.04 mg/Kg

AA ID No.: 88644
Project No.: N/A
AA Project No.: A135052-15
Date Analyzed: 06/01/99
Date Reported: 06/02/99

Compounds	Result (mg/Kg)	Spike Recovery (%)	Dup. Result (mg/Kg)	Spike/Dup. Recovery (%)	RPD (%)	Accept.Rec. Range (%)
Benzene	0.0387	97.00	0.0387	97.00	0.00	65 - 135
Ethylbenzene	0.0373	93.00	0.0388	97.00	4.21	77 - 123
Toluene	0.0369	92.00	0.0385	96.00	4.26	66 - 134
Xylenes	0.0375	94.00	0.0392	98.00	4.17	73 - 126

George Havalias
Laboratory Director

AMERICAN ANALYTICS

LABORATORY QA/QC REPORT

Client: Thrifty Oil Company
Project Name: SS# 052
Method: EPA 8015M (Gasoline)
Sample ID: Matrix Spike
Concentration: 1 mg/Kg

AA ID No.: 88644
Project No.: N/A
AA Project No.: A135052-15
Date Analyzed: 06/01/99
Date Reported: 06/02/99

Compounds	Result (mg/Kg)	Spike Recovery (%)	Dup. Result (mg/Kg)	Spike/Dup. Recovery (%)	RPD (%)	Accept.Rec. Range (%)
Gasoline Range Organics	0.98	98	1.02	102	4	51 - 149

George Havalias
Laboratory Director

AMERICAN ANALYTICS CHAIN-OF-CUSTODY RECORD

9765 ETON AVE., CHATSWORTH, CA 91311
(818) 998-5547 (818) 998-5548 1-800-533-TEST 1-800-533-8378 FAX (818) 998-7258

DATE: 5/27/99

PAGE 1 OF 1

AA Client: Thrifty Oil Co.
Project Manager: Ray C Friedrichsen
Project Name: TOC SS # 52
Job Name: TOC #52
and Address: 20200 Hesperian Blvd. Hayward, Ca

Phone: (562) 921-3581
P.O. No.:
Project No.: 52
Sampler's Name: Raymond C Friedrichsen
Sampler's Signature:
Project Manager's Signature:

ANALYSIS REQUIRED

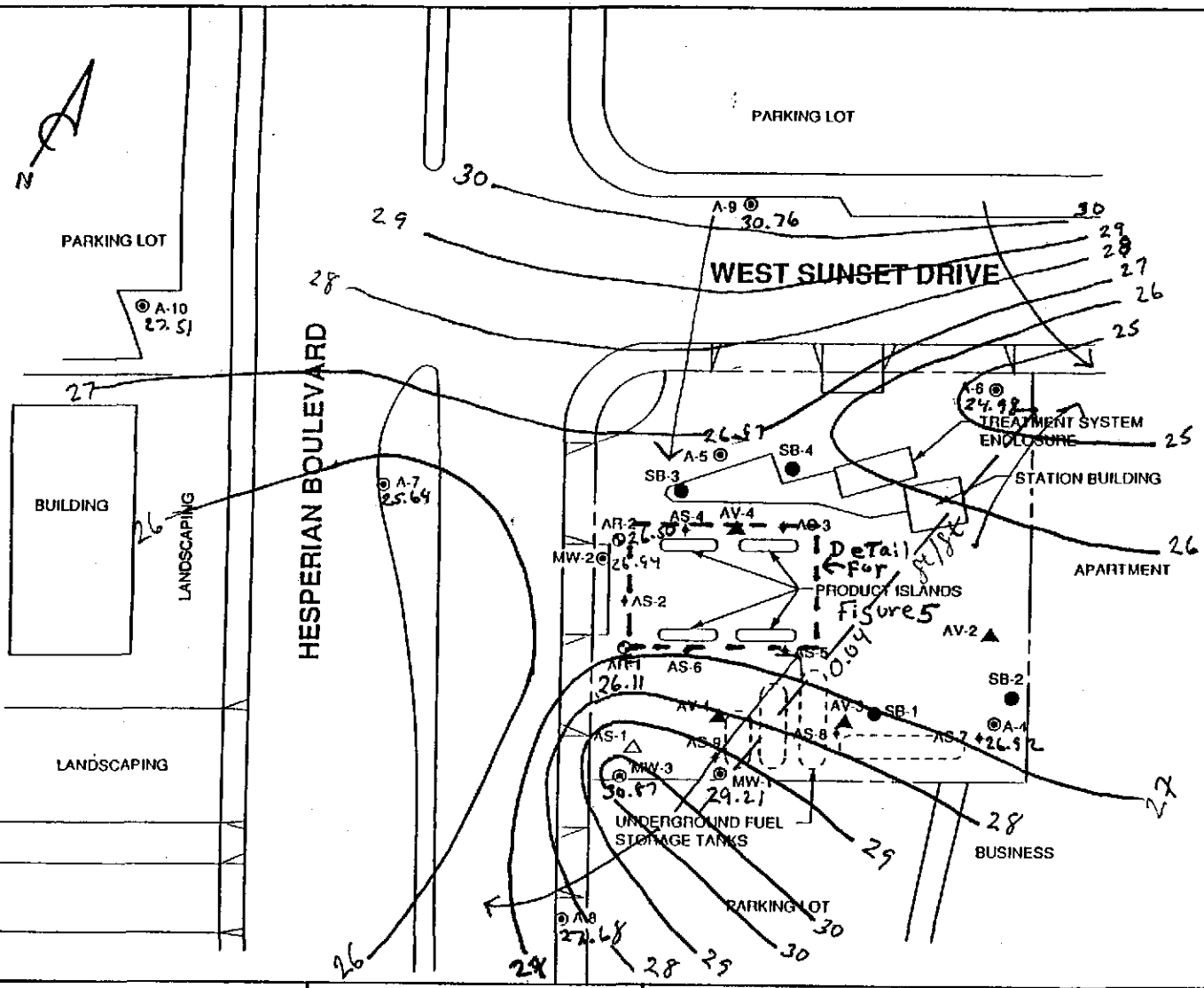
AA I.D.#	Client's I.D.	Date	Time	Sample Type	Number of Containers	Detection Limits / Test Name: EPA 8015	EPA 8020	MTBE (EPA 8260)	Test Requirements
38644	6E	5/27/99	AM	Soil	1	X	X		NOTE: If MTBE Is Detected Confirm W/ An EPA Method 8260.
38645	7E			Soil	1	X	X		
38646	8E			Soil	1	X	X	X	
38647	9N	5/27/99	AM	Soil	1	X	X	X	

SAMPLE INTEGRITY-TO BE FILLED IN BY RECEIVING LAB

			Relinquished by:	Date	Time	Received by:
Samples Intact	Yes ✓	No		5/28/99	0730	
Samples Properly Cooled	Yes ✓	No	Relinquished by:			
Samples Accepted	Yes ✓	No		5/28	1630	
If Not Why:			Relinquished by:	Date	Time	Received by:
			Relinquished by:	Date	Time	Received by:

AA Project No. A135652-15

DISTRIBUTION: White - Laboratory, Canary - Laboratory, Pink - Acc...



LEGEND

- A-9 ◉ GROUNDWATER MONITORING WELL LOCATION AND DESIGNATION
- AR-1 ⊙ GROUNDWATER EXTRACTION WELL LOCATION AND DESIGNATION
- AV-2 ▲ SOIL VAPOR EXTRACTION WELL LOCATION AND DESIGNATION
- AS-2 ✦ AIR SPARGING WELL LOCATION AND DESIGNATION
- AS-1 △ DUAL AIR SPARGE/SOIL VAPOR EXTRACTION WELL LOCATION AND DESIGNATION
- SB-3 ● SOIL BORING LOCATION AND DESIGNATION

GROUNDWATER CONTOUR MAP

THRIFTY OIL CO.

4-29-99

SCALE

0 40 80 FEET

ARCO SERVICE STATION 5387
20200 Hesperian Boulevard at West Sunset Drive
Hayward, California

WELL LOCATION MAP

FIGURE: 1

TABLE 1
GROUNDWATER DATA
THRIFTY OIL STATION #052, HAYWARD, CA

DATE SAMPLED	ANALYTICAL PARAMETERS						DEPTH TO GROUNDWATER (feet)	DEPTH TO PRODUCT (feet)	PRODUCT THICKNESS (feet)	CASING ELEVATION (feet)	GROUNDWATER ELEVATION (feet)
	TPH (ug/L)	BENZENE (ug/L)	TOLUENE (ug/L)	Ethylbenzene (ug/L)	XYLENE (ug/L)	MTBE (ug/L)					
05/03/94	<50	<0.5	<0.5	<0.5	<0.5	-	12.60	NP	0.00	37.98	25.38
08/17/94	3,000	140	140	220	91	-	13.86	NP	0.00	38.18	24.32
11/18/94	623	10.5	10.5	27.9	8.0	-	13.33	NP	0.00	38.18	24.85
09/26/95	ND	ND	ND	ND	ND	-	11.67	NP	0.00	37.98	26.31
12/06/95	320	12	12	23	2.1	-	12.32	NP	0.00	37.98	25.66
02/14/96	ND	ND	ND	ND	0.76	-	10.74	NP	0.00	37.98	27.24
10/29/96	ND	ND	ND	ND	ND	-	11.95	NP	0.00	37.98	26.03
01/29/97	<50	<0.3	<0.3	<0.3	<0.5	<20	11.35	NP	0.00	37.98	26.63
04/30/97	<20	<0.3	<0.3	<0.3	<0.5	<50	12.15	NP	0.00	37.98	25.83
07/31/97	<50	<0.3	<0.3	<0.3	<0.5	<20	11.20	NP	0.00	37.98	26.78
10/22/97	<50	<0.3	<0.3	<0.3	<0.5	<20	12.14	NP	0.00	37.98	25.84
01/28/98	<50	<0.3	<0.3	<0.3	<0.5	<20	10.05	NP	0.00	37.98	27.93
04/22/98	<50	<0.3	<0.3	<0.3	<0.5	<20	12.10	NP	0.00	37.98	25.88
07/08/98	<50	<0.3	<0.3	<0.3	<0.5	<5	9.50	NP	0.00	37.98	28.48
10/22/98	<50	<0.3	<0.3	<0.3	<0.5	<5	10.45	NP	0.00	37.98	27.53
01/13/99	<50	<0.3	0.40	<0.3	0.53	<20	10.50	NP	0.00	37.98	27.48
04/29/99	<50	<0.3	<0.3	<0.3	0.82	<5	11.48	NP	0.00	37.98	26.50
Monitoring Well #MW-1											
08/08/86	7,040	132	8.7	439	230	-	11.25	NP	0.00	38.36	27.11
12/24.91	2,200	190	8.5	6.9	2.6	-	16.12	NP	0.00	38.36	22.24
03/10/92	2,800	270	29	56	39	-	13.34	NP	0.00	38.36	25.02
06/09/92	2,900	960	27	99	63	-	14.12	NP	0.00	38.36	24.24
09/14/92	2,600	450	<5.0	45	21	-	15.34	NP	0.00	38.36	23.02
11/12/92	1,600	310	7.2	22	8.9	-	15.46	NP	0.00	38.36	22.90
02/11/93	4,000	510	47	200	91	-	11.95	NP	0.00	38.36	26.41
04/14/93	1,700	260	20	100	70	-	11.65	NP	0.00	38.36	26.71
08/12/93	830	60	3.8	39	3.6	-	12.93	NP	0.00	38.36	25.43
10/26/93	8,800	140	<10	41	<10	-	14.13	NP	0.00	38.36	24.23
02/17/94	1,200	130	12	54	58	-	11.86	NP	0.00	37.26	25.40
05/03/94	-	-	-	-	-	-	11.58	NP	0.00	37.26	25.68
08/17/94	3,900	86	5.1	78	9.4	-	12.78	NP	0.00	37.33	24.55

TABLE 1
GROUNDWATER DATA
THRIFTY OIL STATION #052, HAYWARD, CA

DATE SAMPLED	ANALYTICAL PARAMETERS						DEPTH TO GROUNDWATER (feet)	DEPTH TO PRODUCT (feet)	PRODUCT THICKNESS (feet)	CASING ELEVATION (feet)	GROUNDWATER ELEVATION (feet)
	TPH (ug/L)	BENZENE (ug/L)	TOLUENE (ug/L)	EthylBenzene (ug/L)	XYLENE (ug/L)	MTBE (ug/L)					
Monitoring Well AR-1											
09/14/92	820	67	<1.0	8.8	6.7	-	15.21	NP	0.00	38.11	22.90
11/12/92	140	66	<0.5	4.3	3.7	-	15.36	NP	0.00	38.11	22.75
02/11/93	360	190	<2.5	8.6	<2.5	-	12.81	NP	0.00	38.11	25.30
04/14/93	420	240	5.2	30	8.7	-	11.77	NP	0.00	38.11	26.34
08/12/93	370	150	<2	11	<2	-	13.55	NP	0.00	38.11	24.56
10/26/93	240	98	<2	11	<2	-	13.98	NP	0.00	38.11	24.13
02/17/94	4,700	1,100	<10	140	26	-	12.15	NP	0.00	37.46	25.31
05/03/94	620	130	1.3	48	4.3	-	12.03	NP	0.00	37.46	25.43
08/17/94	3,600	630	<5	200	12	-	12.92	NP	0.00	37.33	24.41
11/18/94	12,100	720	6.1	337	15	-	12.41	NP	0.00	37.33	24.92
09/26/95	ND	8.3	ND	ND	ND	-	11.34	NP	0.00	37.46	26.12
12/06/95	120	20	ND	20	0.6	-	11.87	NP	0.00	37.46	25.59
02/14/96	ND	ND	ND	ND	0.52	-	10.48	NP	0.00	37.46	26.98
10/29/96	ND	ND	0.99	ND	ND	-	11.80	NP	0.00	37.46	25.66
01/29/97	<50	0.41	<0.3	<0.3	<0.3	<20	11.25	NP	0.00	37.46	26.21
04/30/97	<20	<0.3	<0.3	<0.3	<0.5	<50	12.24	NP	0.00	37.46	25.22
07/31/97	<50	<0.3	<0.3	<0.3	<0.5	<20	10.80	NP	0.00	37.46	26.66
10/22/97	<50	<0.3	<0.3	<0.3	<0.5	<20	11.90	NP	0.00	37.46	25.56
01/28/98	<50	<0.3	<0.3	<0.3	<0.5	<20	11.20	NP	0.00	37.46	26.26
04/22/98	<50	<0.3	<0.3	<0.3	<0.5	<20	12.20	NP	0.00	37.46	25.26
07/08/98	<50	<0.3	<0.3	<0.3	<0.5	<5	9.10	NP	0.00	37.46	28.36
10/22/98	270	2.1	<0.3	3.6	<0.5	190	9.80	NP	0.00	37.46	27.66
01/13/99	<50	<0.3	<0.3	<0.3	<0.5	<20	10.10	NP	0.00	37.46	27.36
04/29/99	<50	<0.3	<0.3	<0.3	<0.5	<5	11.35	NP	0.00	37.46	26.11
Monitoring Well AR-2											
03/30/93	390	4.1	1.6	<0.5	47	-	11.53	NP	0.00	38.39	26.86
04/14/93	310	18	<0.5	0.67	36	-	11.87	NP	0.00	38.39	26.52
08/12/93	130	16	<0.5	1.7	0.57	-	13.59	NP	0.00	38.39	24.80
10/26/93	110	15	<0.5	1.8	<0.5	-	14.25	NP	0.00	38.39	24.14
02/17/94	130	2.9	<0.5	15	0.8	-	12.76	NP	0.00	37.98	25.22

TABLE 1
GROUNDWATER DATA
THRIFTY OIL STATION #052, HAYWARD, CA

DATE SAMPLED	ANALYTICAL PARAMETERS						DEPTH TO GROUNDWATER (feet)	DEPTH TO PRODUCT (feet)	PRODUCT THICKNESS (feet)	CASING ELEVATION (feet)	GROUNDWATER ELEVATION (feet)
	TPH (ug/L)	BENZENE (ug/L)	TOLUENE (ug/L)	EthylBenzene (ug/L)	XYLENE (ug/L)	MTBE (ug/L)					
12/06/95	810	34	23	11	11	-	12.82	NP	0.00	37.99	25.17
02/14/96	420	0.75	0.54	0.64	0.53	-	10.87	NP	0.00	37.99	27.12
10/29/96	670	1.7	1.3	0.6	0.8	-	12.95	NP	0.00	37.99	25.04
01/29/97	<50	<0.3	<0.3	<0.3	<0.5	<20	11.15	NP	0.00	37.99	26.84
04/30/97	<20	<0.3	<0.3	<0.3	<0.5	<50	11.09	NP	0.00	37.99	26.90
07/31/97	330	<0.3	0.58	0.53	<0.5	<20	11.70	NP	0.00	37.99	26.29
10/22/97	<50	<0.3	<0.3	<0.3	<0.5	<20	11.05	NP	0.00	37.99	26.94
01/28/98	<50	<0.3	<0.3	<0.3	<0.5	<20	9.50	NP	0.00	37.99	28.49
04/22/98	<50	<0.3	<0.3	<0.3	<0.5	<20	11.15	NP	0.00	37.99	26.84
07/08/98	78	<0.3	<0.3	<0.3	<0.5	97	10.20	NP	0.00	37.99	27.79
10/22/98	270	0.37	2.0	0.91	0.73	26	11.10	NP	0.00	37.99	26.89
01/13/99	650	5.8	1.0	1.4	1.1	<20	11.10	NP	0.00	37.99	26.89
04/29/99	<50	<0.3	<0.3	<0.3	<0.5	* 23 / 16	11.05	NP	0.00	37.99	26.94
Monitoring Well #MW-3											
08/08/86	7,450	510	549	409	1,380	-	10.61	NP	0.00	37.77	27.16
12/24/91	6,800	450	10	610	45	-	15.60	NP	0.00	37.77	22.17
03/10/92	11,000	2,500	75	400	560	-	12.90	NP	0.00	37.77	24.87
06/09/92	16,000	2,000	69	1,300	2,600	-	13.60	NP	0.00	37.77	24.17
09/14/92	14,000	630	<50	1,500	2,400	-	14.78	NP	0.00	37.77	22.99
11/12/92	7,400	400	<25	860	330	-	14.92	NP	0.00	37.77	22.85
02/11/93	8,600	580	<20	710	300	-	11.65	NP	0.00	37.77	26.12
04/14/93	6,900	300	8.8	580	99	-	11.16	NP	0.00	37.77	26.61
08/12/93	3,400	56	<5	190	<5	-	12.82	NP	0.00	37.77	24.95
10/26/93	2,900	42	<10	76	<10	-	13.60	NP	0.00	37.77	24.17
02/17/94	3,100	160	<10	36	8.6	-	11.53	NP	0.00	36.80	25.27
05/03/94	2,300	44	<2.5	8.0	<2.5	-	11.36	NP	0.00	36.80	25.44
08/17/94	1,900	7.0	<9.5	4.4	<5	-	12.38	NP	0.00	36.87	24.49
11/18/94	909	1.1	<0.5	0.9	4.0	-	11.93	NP	0.00	36.87	24.94
09/26/95	410	1.3	1.9	2.3	3.3	-	10.96	NP	0.00	36.80	25.84
12/06/95	-	0.9	4.6	3.0	4.3	-	11.56	NP	0.00	36.80	25.24
02/14/96	99	ND	0.49	0.46	ND	-	7.47	NP	0.00	36.80	29.33

TABLE 1
GROUNDWATER DATA
THRIFTY OIL STATION #052, HAYWARD, CA

DATE SAMPLED	ANALYTICAL PARAMETERS						DEPTH TO GROUNDWATER (feet)	DEPTH TO PRODUCT (feet)	PRODUCT THICKNESS (feet)	CASING ELEVATION (feet)	GROUNDWATER ELEVATION (feet)
	TPH (ug/L)	BENZENE (ug/L)	TOLUENE (ug/L)	EthylBenzene (ug/L)	XYLENE (ug/L)	MTBE (ug/L)					
11/18/94	6,350	112	8.4	107	35	-	12.31	NP	0.00	37.33	25.02
09/26/95	ND	ND	ND	ND	ND	-	11.26	NP	0.00	37.26	26.00
12/06/95	4,100	0.86	0.46	0.38	0.92	-	12.16	NP	0.00	37.26	25.10
02/14/96	ND	ND	0.56	ND	0.82	-	8.53	NP	0.00	37.26	28.73
10/29/96	130	ND	ND	ND	ND	-	10.23	NP	0.00	37.26	27.03
01/29/97	<50	<0.3	<0.3	<0.3	<0.5	<20	8.15	NP	0.00	37.26	29.11
04/30/97	<20	<0.3	<0.3	<0.3	<0.5	<50	8.05	NP	0.00	37.26	29.21
07/31/97	<50	<0.3	<0.3	<0.3	<0.5	<20	10.50	NP	0.00	37.26	26.76
10/22/97	<50	<0.3	<0.3	<0.3	<0.5	<20	11.15	NP	0.00	37.26	26.11
01/28/98	<50	<0.3	<0.3	<0.3	<0.5	<20	4.95	NP	0.00	37.26	32.31
04/22/98	<50	<0.3	<0.3	<0.3	<0.5	<20	8.10	NP	0.00	37.26	29.16
07/08/98	<50	<0.3	<0.3	<0.3	<0.5	40	8.02	NP	0.00	37.26	29.24
10/22/98	230	0.43	1.9	0.99	0.99	33	9.70	NP	0.00	37.26	27.56
01/13/99	<50	0.43	<0.3	<0.3	<0.5	<20	9.60	NP	0.00	37.26	27.66
04/29/99	<50	<0.3	<0.3	<0.3	<0.5	* 31 / 17	8.05	NP	0.00	37.26	29.21
Monitoring Well #MW-2											
08/08/86	1,910	20.1	2.8	1.8	-	-	11.62	NP	0.00	38.58	26.96
12/24/91	23,000	1,500	1,100	480	1,400	-	16.50	NP	0.00	38.58	22.08
03/10/92	210,000	44,000	3,900	1,700	5,800	-	13.50	NP	0.00	38.58	25.08
06/09/92	33,000	2,300	370	780	2,600	-	14.52	NP	0.00	38.58	24.06
09/14/92	16,000	3,700	10	470	1,000	-	15.78	NP	0.00	38.58	22.80
11/12/92	16,000	3,800	86	470	910	-	15.98	NP	0.00	38.58	22.60
02/11/93	27,000	3,500	720	1,600	380	-	12.27	NP	0.00	38.58	26.31
04/14/93	27,000	3,500	220	2,200	5,100	-	12.01	NP	0.00	38.58	26.57
08/12/93	16,000	1,600	27	1,300	1,200	-	13.81	NP	0.00	38.58	24.77
10/26/93	12,000	1,200	<25	510	330	-	14.53	NP	0.00	38.58	24.05
02/17/94	15,000	1,800	21	850	540	-	12.81	NP	0.00	38.58	25.77
05/03/94	-	-	-	-	-	-	12.63	NP	0.00	38.58	25.95
08/17/94	14,000	850	13	640	270	-	13.69	NP	0.00	37.99	24.30
11/18/94	14,900	640	3.4	532	156	-	13.18	NP	0.00	38.06	24.88
09/26/95	5,100	40	25	2.5	18	-	12.23	NP	0.00	37.99	25.76

TABLE 1
GROUNDWATER DATA
THRIFTY OIL STATION #052, HAYWARD, CA

DATE SAMPLED	ANALYTICAL PARAMETERS						DEPTH TO GROUNDWATER (feet)	DEPTH TO PRODUCT (feet)	PRODUCT THICKNESS (feet)	CASING ELEVATION (feet)	GROUNDWATER ELEVATION (feet)
	TPH (ug/L)	BENZENE (ug/L)	TOLUENE (ug/L)	EthylBenzene (ug/L)	XYLENE (ug/L)	MTBE (ug/L)					
10/29/96	250	0.7	0.6	ND	ND	-	9.80	NP	0.00	36.80	27.00
01/29/97	170	<0.3	<0.3	<0.3	<0.5	<20	7.50	NP	0.00	36.80	29.30
04/30/97	<20	<0.3	<0.3	<0.3	<0.5	<50	12.10	NP	0.00	36.80	24.70
07/31/97	<50	<0.3	<0.3	<0.3	<0.5	<20	9.90	NP	0.00	36.80	26.90
10/22/97	<50	<0.3	<0.3	<0.3	<0.5	<20	12.10	NP	0.00	36.80	24.70
01/28/98	<50	<0.3	<0.3	<0.3	<0.5	<20	7.50	NP	0.00	36.80	29.30
04/22/98	<50	<0.3	<0.3	<0.3	<0.5	<20	12.30	NP	0.00	36.80	24.50
07/08/98	<50	<0.3	<0.3	<0.3	<0.5	<5	8.30	NP	0.00	36.80	28.50
10/22/98	<50	<0.3	<0.3	<0.3	<0.5	<5	9.10	NP	0.00	36.80	27.70
01/13/99	<50	<0.3	<0.3	<0.3	<0.5	<20	9.50	NP	0.00	36.80	27.30
04/29/99	<50	<0.3	0.35	<0.3	<0.5	<5	5.93	NP	0.00	36.80	30.87
Monitoring Well A-4											
03/06/91	34,000	11,000	870	2,500	2,100	-	13.22	NP	0.00	39.46	26.24
12/24/91	1,900	29	1.9	25	29	-	17.60	NP	0.00	39.86	22.26
03/10/92	7,400	37	<0.60	11	73	-	14.76	NP	0.00	39.86	25.10
06/09/92	4,500	3.2	1.5	37	16	-	15.63	NP	0.00	39.86	24.23
09/14/92	1,300	<2.5	2.5	61	6.8	-	16.83	NP	0.00	39.86	23.03
11/12/92	610	7.2	0.98	34	0.97	-	16.97	NP	0.00	39.86	22.89
02/11/93	740	2.4	<0.5	5.0	3.5	-	13.43	NP	0.00	39.86	26.43
04/14/93	380	<0.5	<0.5	10	1.6	-	13.06	NP	0.00	39.86	26.80
08/12/93	1,200	0.93	<0.5	0.91	<0.5	-	14.94	NP	0.00	39.86	24.92
10/26/93	160	<0.5	<0.5	1.0	<0.5	-	15.52	NP	0.00	39.86	24.34
02/17/94	320	0.5	<0.5	28	0.9	-	14.02	NP	0.00	39.46	25.44
05/03/94	130	<0.5	<0.5	1.1	<0.5	-	13.85	NP	0.00	39.46	25.61
08/17/94	62	<0.5	<0.5	<0.5	<0.5	-	14.95	NP	0.00	39.53	24.58
11/18/94	98	1.3	0.6	<0.5	<0.5	-	14.46	NP	0.00	39.53	25.07
12/06/95	ND	0.6	ND	ND	ND	-	13.82	NP	0.00	39.53	25.71
02/14/96	ND	ND	2.3	ND	0.71	-	11.24	NP	0.00	39.53	28.29
10/29/96	140	ND	ND	ND	ND	-	13.50	NP	0.00	39.53	26.03
01/29/97	<50	<0.3	<0.3	<0.3	<0.5	<20	12.65	NP	0.00	39.53	26.88
04/30/97	<20	<0.3	<0.3	<0.3	<0.5	<50	13.97	NP	0.00	39.53	25.56

TABLE 1
GROUNDWATER DATA
THRIFTY OIL STATION #052, HAYWARD, CA

DATE SAMPLED	ANALYTICAL PARAMETERS						DEPTH TO GROUNDWATER (feet)	DEPTH TO PRODUCT (feet)	PRODUCT THICKNESS (feet)	CASING ELEVATION (feet)	GROUNDWATER ELEVATION (feet)
	TPH (ug/L)	BENZENE (ug/L)	TOLUENE (ug/L)	EthylBenzene (ug/L)	XYLENE (ug/L)	MTBE (ug/L)					
07/31/97	<50	<0.3	<0.3	<0.3	<0.5	<20	12.70	NP	0.00	39.53	26.83
10/22/97	<50	<0.3	<0.3	<0.3	<0.5	<20	13.95	NP	0.00	39.53	25.58
01/28/98	<50	<0.3	<0.3	<0.3	<0.5	<20	11.90	NP	0.00	39.53	27.63
04/22/98	<50	<0.3	<0.3	<0.3	<0.5	<20	13.92	NP	0.00	39.53	25.61
07/08/98	<50	<0.3	<0.3	<0.3	<0.5	<5	10.80	NP	0.00	39.53	28.73
10/22/98	<50	<0.3	<0.3	<0.3	<0.5	<5	12.60	NP	0.00	39.53	26.93
01/13/99	<50	<0.3	<0.3	<0.3	<0.5	<20	12.60	NP	0.00	39.53	26.93
04/29/99	<50	<0.3	<0.3	<0.3	<0.5	<5	12.61	NP	0.00	39.53	26.92
Monitoring Well A-5											
12/24/91	1,600	21	<0.30	32	52	-	16.85	NP	0.00	38.94	22.09
03/10/92	1,000	1.6	<0.30	43	100	-	13.83	NP	0.00	38.94	25.11
06/09/92	680	34	<1.5	14	16	-	14.91	NP	0.00	38.94	24.03
09/14/92	770	12	<0.30	51	65	-	16.14	NP	0.00	38.94	22.80
11/12/92	520	3.0	<2.5	29	36	-	16.35	NP	0.00	38.94	22.59
02/11/93	150	1.6	0.96	5.1	1.5	-	13.21	NP	0.00	38.94	25.73
04/14/93	190	5.4	<0.5	1.5	0.97	-	12.97	NP	0.00	38.94	25.97
08/12/93	230	1.7	<0.5	5.3	0.94	-	14.12	NP	0.00	38.94	24.82
10/26/93	190	2.8	<0.5	5.5	2.0	-	14.72	NP	0.00	38.94	24.22
02/17/94	340	<0.5	<0.5	13	2.9	-	13.20	NP	0.00	38.47	25.27
05/03/94	170	1.4	<0.5	4.0	1.9	-	13.08	NP	0.00	38.47	25.39
08/17/94	270	0.6	<0.5	7.3	1.1	-	14.18	NP	0.00	38.54	24.36
11/18/94	338	-	<0.5	4.6	<0.5	-	13.73	NP	0.00	38.54	24.81
09/26/95	ND	0.63	1.1	ND	1.2	-	12.44	NP	0.00	38.47	26.03
12/06/95	ND	ND	ND	ND	ND	-	12.92	NP	0.00	38.47	25.55
02/14/96	ND	ND	2.0	ND	1.1	-	10.76	NP	0.00	38.47	27.71
10/29/96	ND	ND	ND	ND	ND	-	12.35	NP	0.00	38.47	26.12
01/29/97	<50	<0.3	<0.3	<0.3	<0.5	<20	10.85	NP	0.00	38.47	27.62
04/30/97	<20	<0.3	<0.3	<0.3	<0.5	<50	13.56	NP	0.00	38.47	24.91
07/31/97	<50	<0.3	<0.3	<0.3	<0.5	<20	11.80	NP	0.00	38.47	26.67
10/22/97	<50	<0.3	<0.3	<0.3	<0.5	<20	12.20	NP	0.00	38.47	26.27
01/28/98	<50	<0.3	<0.3	<0.3	<0.5	<20	10.12	NP	0.00	38.47	28.35

TABLE 1
GROUNDWATER DATA
THRIFTY OIL STATION #052, HAYWARD, CA

DATE SAMPLED	ANALYTICAL PARAMETERS						DEPTH TO GROUNDWATER (feet)	DEPTH TO PRODUCT (feet)	PRODUCT THICKNESS (feet)	CASING ELEVATION (feet)	GROUNDWATER ELEVATION (feet)
	TPH (ug/L)	BENZENE (ug/L)	TOLUENE (ug/L)	EthylBenzene (ug/L)	XYLENE (ug/L)	MTBE (ug/L)					
04/22/98	<50	<0.3	<0.3	<0.3	<0.5	<20	13.50	NP	0.00	38.47	24.97
07/08/98	<50	<0.3	<0.3	<0.3	<0.5	<5	10.20	NP	0.00	38.47	28.27
10/22/98	<50	<0.3	<0.3	<0.3	<0.5	<5	11.50	NP	0.00	38.47	26.97
01/13/99	<50	0.32	0.38	<0.3	<0.5	<20	10.15	NP	0.00	38.47	28.32
04/29/99	<50	<0.3	<0.3	<0.3	0.58	<5	11.50	NP	0.00	38.47	26.97
Monitoring Well A-6											
12/24/91	<30	<0.3	<0.3	<0.3	<0.3	-	16.88	NP	0.00	39.07	22.19
03/10/92	<30	<0.3	<0.3	<0.3	<0.3	-	13.73	NP	0.00	39.07	25.34
06/09/92	<30	<0.3	<0.3	<0.3	<0.3	-	14.95	NP	0.00	39.07	24.12
09/14/92	<50	<0.5	<0.5	<0.5	<0.5	-	16.20	NP	0.00	39.07	22.87
11/12/92	<50	<0.5	<0.5	<0.5	<0.5	-	16.35	NP	0.00	39.07	22.72
02/11/93	<50	<0.5	<0.5	<0.5	<0.5	-	13.04	NP	0.00	39.07	26.03
04/14/93	<50	<0.5	<0.5	<0.5	<0.5	-	12.23	NP	0.00	39.07	26.84
08/12/93	<50	<0.5	<0.5	<0.5	<0.5	-	14.18	NP	0.00	39.07	24.89
10/26/93	<50	<0.5	<0.5	<0.5	<0.5	-	14.85	NP	0.00	39.07	24.22
05/03/94	<50	<0.5	<0.5	<0.5	<0.5	-	13.66	NP	0.00	39.07	25.41
08/17/94	<50	<0.5	<0.5	<0.5	<0.5	-	14.34	NP	0.00	38.78	24.44
11/18/94	<50	<0.5	<0.5	<0.5	<0.5	-	13.76	NP	0.00	38.78	25.02
09/26/95	ND	ND	ND	ND	ND	-	12.56	NP	0.00	38.78	26.22
12/06/95	ND	ND	ND	ND	ND	-	13.18	NP	0.00	38.78	25.60
02/14/96	ND	ND	ND	ND	ND	-	12.46	NP	0.00	38.78	26.32
10/29/96	50	ND	ND	ND	ND	-	12.40	NP	0.00	38.78	26.38
01/29/97	<50	<0.3	<0.3	<0.3	<0.5	<20	13.85	NP	0.00	38.78	24.93
04/30/97	<20	<0.3	<0.3	<0.3	<0.5	<50	12.49	NP	0.00	38.78	26.29
07/31/97	<50	<0.3	<0.3	<0.3	<0.5	<20	12.10	NP	0.00	38.78	26.68
10/22/97	<50	<0.3	<0.3	<0.3	<0.5	<20	15.20	NP	0.00	38.78	23.58
01/28/98	<50	<0.3	<0.3	<0.3	<0.5	<20	13.80	NP	0.00	38.78	24.98
04/22/98	<50	<0.3	<0.3	<0.3	<0.5	<20	12.45	NP	0.00	38.78	26.33
07/08/98	<50	<0.3	<0.3	<0.3	<0.5	<5	10.30	NP	0.00	38.78	28.48
10/22/98	<50	<0.3	<0.3	<0.3	<0.5	<5	11.10	NP	0.00	38.78	27.68
01/13/99	<50	<0.3	<0.3	<0.3	<0.5	<20	10.40	NP	0.00	38.78	28.38

TABLE 1
GROUNDWATER DATA
THRIFTY OIL STATION #052, HAYWARD, CA

DATE SAMPLED	ANALYTICAL PARAMETERS						DEPTH TO GROUNDWATER (feet)	DEPTH TO PRODUCT (feet)	PRODUCT THICKNESS (feet)	CASING ELEVATION (feet)	GROUNDWATER ELEVATION (feet)
	TPH (ug/L)	BENZENE (ug/L)	TOLUENE (ug/L)	EthylBenzene (ug/L)	XYLENE (ug/L)	MTBE (ug/L)					
04/29/99	<50	<0.3	<0.3	<0.3	<0.5	<5	13.80	NP	0.00	38.78	24.98
Monitoring Well A-7											
12/24/91	10,000	88	16	170	610	-	18.11	NP	0.00	39.95	21.84
03/10/92	320	9.3	0.54	8.8	34	-	15.30	NP	0.00	39.95	24.65
06/09/92	340	11	1.1	8.9	26	-	16.12	NP	0.00	39.95	23.83
09/14/92	510	12	<2.0	30	51	-	17.35	NP	0.00	39.95	22.60
11/12/92	760	17	0.83	50	73	-	17.47	NP	0.00	39.95	22.48
02/11/93	260	20	1.0	11	21	-	13.80	NP	0.00	39.95	26.15
04/14/93	1,300	89	2.1	48	87	-	13.60	NP	0.00	39.95	26.35
08/12/93	360	9.0	<0.50	13	9.0	-	15.54	NP	0.00	39.95	24.41
10/26/93	99	1.7	<0.50	4.0	3.0	-	16.28	NP	0.00	39.95	23.67
02/17/94	1,300	38	<1	35	25	-	14.44	NP	0.00	39.38	24.94
05/03/94	330	8.1	<0.5	7.8	3.7	-	14.34	NP	0.00	39.38	25.04
08/17/94	350	2.2	<0.5	9.6	3.6	-	15.40	NP	0.00	39.45	24.05
11/18/94	412	1.3	<0.5	6.2	2.0	-	14.95	NP	0.00	39.45	24.50
09/26/95	ND	ND	ND	ND	ND	-	13.92	NP	0.00	39.38	25.46
12/06/95	ND	ND	ND	ND	ND	-	14.42	NP	0.00	39.38	24.96
02/14/96	ND	ND	1.1	ND	0.59	-	12.38	NP	0.00	39.38	27.00
10/29/96	ND	ND	ND	ND	ND	-	12.33	NP	0.00	39.38	27.05
01/29/97	<50	<0.3	<0.3	<0.3	<0.5	<20	13.10	NP	0.00	39.38	26.28
04/30/97	<20	<0.3	<0.3	<0.3	<0.5	<50	11.70	NP	0.00	39.38	27.68
07/31/97	<50	<0.3	<0.3	<0.3	<0.5	<20	13.25	NP	0.00	39.38	26.13
10/22/97	<50	<0.3	<0.3	<0.3	<0.5	<20	14.42	NP	0.00	39.38	24.96
01/28/98	<50	<0.3	<0.3	<0.3	<0.5	<20	13.00	NP	0.00	39.38	26.38
04/22/98	<50	<0.3	<0.3	<0.3	<0.5	<20	11.65	NP	0.00	39.38	27.73
07/08/98	<50	<0.3	<0.3	<0.3	<0.5	<5	11.20	NP	0.00	39.38	28.18
10/22/98	51	<0.3	<0.3	<0.3	<0.5	<5	13.75	NP	0.00	39.38	25.63
01/13/99	<50	<0.3	<0.3	<0.3	<0.5	<20	14.45	NP	0.00	39.38	24.93
04/29/99	<50	<0.3	<0.3	<0.3	<0.5	<5	13.74	NP	0.00	39.38	25.64

TABLE 1
GROUNDWATER DATA
THRIFTY OIL STATION #052, HAYWARD, CA

DATE SAMPLED	ANALYTICAL PARAMETERS						DEPTH TO GROUNDWATER (feet)	DEPTH TO PRODUCT (feet)	PRODUCT THICKNESS (feet)	CASING ELEVATION (feet)	GROUNDWATER ELEVATION (feet)
	TPH (ug/L)	BENZENE (ug/L)	TOLUENE (ug/L)	EthylBenzene (ug/L)	XYLENE (ug/L)	MTBE (ug/L)					
Monitoring Well A-8											
09/14/92	<50	<0.5	<0.5	<0.5	<0.5	-	14.19	NP	0.00	37.23	23.04
11/12/92	<50	<0.5	<0.5	<0.5	<0.5	-	14.35	NP	0.00	37.23	22.88
02/11/93	<50	<0.5	<0.5	<0.5	<0.5	-	11.25	NP	0.00	37.23	25.98
04/14/93	<50	<0.5	<0.5	<0.5	<0.5	-	12.33	NP	0.00	37.23	24.90
08/12/93	<50	<0.5	<0.5	<0.5	<0.5	-	12.41	NP	0.00	37.23	24.82
10/26/93	<50	<0.5	<0.5	<0.5	<0.5	-	13.02	NP	0.00	37.23	24.21
02/17/94	<50	<0.5	<0.5	<0.5	<0.5	-	11.47	NP	0.00	36.76	25.29
05/03/94	<50	<0.5	<0.5	<0.5	<0.5	-	11.35	NP	0.00	36.76	25.41
08/17/94	<50	<0.5	1.7	<0.5	1.4	-	12.34	NP	0.00	36.84	24.50
11/18/94	<50	1.0	<0.5	<0.5	<0.5	-	11.90	NP	0.00	36.84	24.94
09/26/95	ND	ND	ND	ND	ND	-	10.94	NP	0.00	36.76	25.82
12/06/95	ND	ND	ND	ND	ND	-	11.42	NP	0.00	36.76	25.34
02/14/96	ND	ND	0.48	ND	ND	-	8.80	NP	0.00	36.76	27.96
10/29/96	200	ND	ND	ND	ND	-	11.30	NP	0.00	36.76	25.46
01/29/97	<50	<0.3	<0.3	<0.3	<0.5	<20	7.60	NP	0.00	36.76	29.16
04/30/97	<20	<0.3	<0.3	<0.3	<0.5	<50	10.54	NP	0.00	36.76	26.22
07/31/97	<50	<0.3	<0.3	<0.3	<0.5	<20	11.20	NP	0.00	36.76	25.56
10/22/97	<50	<0.3	<0.3	<0.3	<0.5	<20	12.14	NP	0.00	36.76	24.62
01/28/98	<50	<0.3	<0.3	<0.3	<0.5	<20	4.43	NP	0.00	36.76	32.33
04/22/98	<50	<0.3	<0.3	<0.3	<0.5	<20	10.55	NP	0.00	36.76	26.21
07/08/98	<50	<0.3	<0.3	<0.3	<0.5	<5	9.07	NP	0.00	36.76	27.69
10/22/98	<50	<0.3	<0.3	<0.3	<0.5	<5	12.12	NP	0.00	36.76	24.64
01/13/99	<50	<0.3	<0.3	<0.3	<0.5	<20	9.60	NP	0.00	36.76	27.16
04/29/99	<50	<0.3	<0.3	<0.3	1.5	<5	9.08	NP	0.00	36.76	27.68
Monitoring Well A-9											
09/14/92	<50	<0.5	<0.5	<0.5	<0.5	-	16.12	NP	0.00	38.71	22.59
11/12/92	<50	<0.5	<0.5	<0.5	<0.5	-	16.29	NP	0.00	38.71	22.42
02/11/93	<50	<0.5	<0.5	<0.5	<0.5	-	12.31	NP	0.00	38.71	26.40
04/14/93	<50	<0.5	<0.5	<0.5	<0.5	-	12.01	NP	0.00	38.71	26.70
08/12/93	<50	<0.5	<0.5	<0.5	<0.5	-	13.90	NP	0.00	38.71	24.81

TABLE 1
GROUNDWATER DATA
THRIFTY OIL STATION #052, HAYWARD, CA

DATE SAMPLED	ANALYTICAL PARAMETERS						DEPTH TO GROUNDWATER (feet)	DEPTH TO PRODUCT (feet)	PRODUCT THICKNESS (feet)	CASING ELEVATION (feet)	GROUNDWATER ELEVATION (feet)
	TPH (ug/L)	BENZENE (ug/L)	TOLUENE (ug/L)	EthylBenzene (ug/L)	XYLENE (ug/L)	MTBE (ug/L)					
10/26/93	<50	<0.5	<0.5	<0.5	<0.5	-	14.86	NP	0.00	38.71	23.85
02/17/94	<50	<0.5	<0.5	<0.5	<0.5	-	12.99	NP	0.00	38.19	25.20
08/17/94	<50	<0.5	<0.5	<0.5	<0.5	-	14.03	NP	0.00	38.19	24.16
11/18/94	<50	<0.5	<0.5	<0.5	<0.5	-	13.44	NP	0.00	37.24	23.80
09/26/95	ND	<0.5	ND	ND	ND	-	12.43	NP	0.00	38.24	25.81
12/06/95	ND	<0.5	ND	ND	ND	-	13.14	NP	0.00	38.19	25.05
02/14/96	ND	ND	1.8	0.49	0.82	-	9.05	NP	0.00	38.19	29.14
10/29/96	ND	ND	ND	ND	ND	-	12.85	NP	0.00	38.19	25.34
01/29/97	<50	<0.3	<0.3	<0.3	<0.5	<20	9.02	NP	0.00	38.19	29.17
04/30/97	<20	<0.3	<0.3	<0.3	<0.5	<50	12.05	NP	0.00	38.19	26.14
07/31/97	<50	<0.3	<0.3	<0.3	<0.5	<20	12.18	NP	0.00	38.19	26.01
10/22/97	<50	<0.3	<0.3	<0.3	<0.5	<20	7.45	NP	0.00	38.19	30.74
01/28/98	<50	<0.3	<0.3	<0.3	<0.5	<20	21.25	NP	0.00	38.19	16.94
04/22/98	<50	<0.3	<0.3	<0.3	<0.5	<20	12.10	NP	0.00	38.19	26.09
07/08/98	<50	<0.3	<0.3	<0.3	<0.5	<5	10.40	NP	0.00	38.19	27.79
10/22/98	<50	<0.3	<0.3	<0.3	<0.5	<5	13.55	NP	0.00	38.19	24.64
01/13/99	<50	<0.3	<0.3	<0.3	<0.5	<20	12.05	NP	0.00	38.19	26.14
04/29/99	<50	<0.3	<0.3	<0.3	<0.5	<5	7.43	NP	0.00	38.19	30.76
Monitoring Well A-10											
12/07/92	660	30	<2.5	<2.5	<2.5	-	16.81	NP	0.00	38.94	22.13
02/11/93	210	<0.5	0.97	<0.5	<0.5	-	13.15	NP	0.00	38.94	25.79
04/14/93	770	<0.5	3.0	0.76	1.9	-	12.19	NP	0.00	38.94	26.75
08/12/93	390	<0.5	<0.5	<0.5	0.84	-	14.87	NP	0.00	38.94	24.07
10/26/93	290	<0.5	<0.5	<0.5	<0.5	-	15.65	NP	0.00	38.94	23.29
02/17/94	52	<0.5	<0.5	<0.5	<0.5	-	14.16	NP	0.00	38.66	24.50
05/03/94	<50	<0.5	<0.5	<0.5	<0.5	-	14.00	NP	0.00	38.66	24.66
08/17/94	<50	<0.5	<0.5	<0.5	<0.5	-	15.08	NP	0.00	38.72	23.64
11/18/94	<50	<0.5	<0.5	<0.5	<0.5	-	14.68	NP	0.00	38.72	24.04
09/26/95	ND	ND	ND	ND	ND	-	13.58	NP	0.00	38.66	25.08
12/06/95	ND	ND	ND	ND	ND	-	14.24	NP	0.00	38.66	24.42
02/14/96	ND	ND	ND	ND	ND	-	6.70	NP	0.00	38.66	31.96

TABLE 1
GROUNDWATER DATA
THRIFTY OIL STATION #052, HAYWARD, CA

DATE SAMPLED	ANALYTICAL PARAMETERS						DEPTH TO GROUNDWATER (feet)	DEPTH TO PRODUCT (feet)	PRODUCT THICKNESS (feet)	CASING ELEVATION (feet)	GROUNDWATER ELEVATION (feet)
	TPH (ug/L)	BENZENE (ug/L)	TOLUENE (ug/L)	EthylBenzene (ug/L)	XYLENE (ug/L)	MTBE (ug/L)					
10/29/96	ND	ND	ND	ND	1.1	-	14.10	NP	0.00	38.66	24.56
01/29/97	<50	0.41	4.8	0.60	4.4	37	11.20	NP	0.00	38.66	27.46
04/30/97	<20	0.40	4.2	0.5	3.8	50	12.66	NP	0.00	38.66	26.00
07/31/97	<50	<0.3	<0.3	<0.3	<0.5	<20	13.20	NP	0.00	38.66	25.46
04/22/98	<50	<0.3	<0.3	<0.3	<0.5	<20	12.60	NP	0.00	38.66	26.06
07/08/98	<50	<0.3	<0.3	<0.3	<0.5	<5	8.08	NP	0.00	38.66	30.58
10/22/98	<50	<0.3	<0.3	<0.3	<0.5	<5	11.15	NP	0.00	38.66	27.51
01/13/99	<50	<0.3	<0.3	<0.3	<0.5	<20	9.60	NP	0.00	38.66	29.06
04/29/99	<50	<0.3	<0.3	<0.3	<0.5	<5	11.15	NP	0.00	38.66	27.51

NOTE:

* MTBE 8020 / 8260

ND = Nondetectable

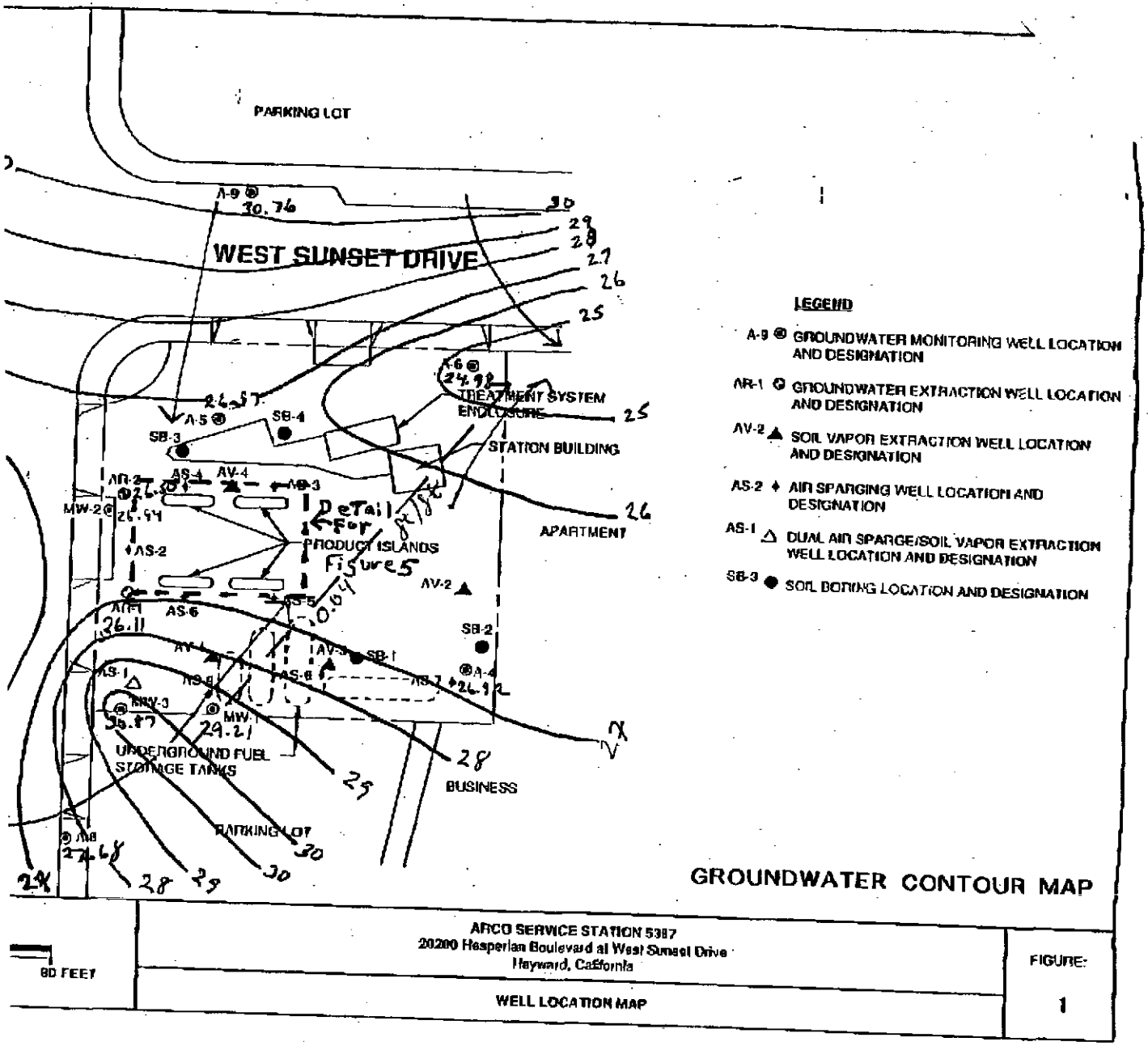
NP = No free hydrocarbon product

" - " = Not analyzed / Not available

Benzene, toluene, ethlybenzene, and xylene analyzed by EPA method 8020.

Total petroleum hydrocarbons (TPH) analyzed by EPA method 8015 modified for gasoline

Methyl-tert Butyl Ether (MTBE) analyzed by EPA method 8020 or 8260



TRANSMIT REPORT

1999-09-10 10:49
510 337 9335
ALAMEDA CO EHS HAZ-OPS

COM No.	REMOTE STATION	START TIME	DURATION	PAGES	RESULT	USER ID	REMARKS
148	5633315	09-10 10:48	00'00	00/08	S OK		

7499402045

TRANSMIT REPORT

1999.09-10 10:49
510 337 9335
ALAMEDA CO EHS HAZ-OPS

COM No.	REMOTE STATION	START TIME	DURATION	PAGES	RESULT	USER ID	REMARKS
147	510 663 3315	09-10 10:45	03'19	10/10	OK		

7499402045

Alameda County Environmental Health

1131 Harbor Bay Pkwy., #250
Alameda CA 94502-6577
Telephone (510) 567-6700 FAX (510) 337-9335

FACSIMILE COVER SHEET

TO: Glen Vanderveen, IT Corp., Fax: 510-663-3315

FROM: Juliet Shin

DATE: 09/10/99

Total number of pages including cover sheet 22

-NOTES- Glen, per our conversation, here is the info on recent dispenser sampling, site figure, o.g.w. sampling results for 20200 Hesperian Blvd., Hayward.

TRANSMIT REPORT

1999,09-10 10:53
510 337 9335
ALAMEDA CO EHS HAZ-OPS

COM No.	REMOTE STATION	START TIME	DURATION	PAGES	RESULT	USER ID	REMARKS
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FACSIMILE COVER SHEET

TO: Glen Vanderveen, IT Corp, Fax: 510-663-3315

FROM: Juliet Shin

DATE: 07/10/99

Total number of pages including cover sheet 02

-NOTES- Glen, here's the page 8 of 11 that you requested.
- Juliet

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