October 7, 2008
DELTA Project SCA152751
SAP: 129460

Mr. Jerry Wickham
Alameda County Health Care Services Agency
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502-6577

Subject: **Soil Vapor Investigation Report**
Former Shell-Branded Service Station
15275 Washington Avenue
San Leandro, California

DELTA

Dear Mr. Wickham:

Delta Consultants, Inc. (Delta), on behalf of Shell Oil Products US (Shell), has prepared this report for a soil vapor investigation at the site referenced above. In a letter, dated June 15, 2007, the Alameda County Environmental Health (ACEH) requested that a soil vapor investigation be conducted at the site in order to evaluate the vapor intrusion potential from site soils.

BACKGROUND

Site background is provided in the June 15, 2007 work plan. Existing groundwater monitoring well locations and the general site layout are shown on Figure 1 of this report.

Soil Vapor Investigation

The following sections describe work that was performed during the soil vapor investigation at the site on June 10, 11, and 12, 2008. Delta collected soil vapor samples at fourteen locations (P-10 through P-23, presented in Figure 2). The locations were selected in order to meet the ACEH guidelines provided in a letter dated July 10, 2007 stating: 1) request for additional soil vapor sample locations near existing well S-9, 2) include additional locations in the proposed site area, 3) collect sub-slab soil vapor samples within former building area, and 4) a minimum of two hydrogeologic cross sections.

Boring Advancement and Soil Sampling Activities

On June 10-12, 2008, Geoprobe drilling equipment operated by Gregg Drilling and Testing (Gregg) was used to advance the soil vapor probe boreholes (3-inches in diameter). Delta obtained the necessary drilling and installation permits from the Alameda County Public Works Agency (Attachment A). Prior to soil vapor collection with the Geoprobe rig, the

initial 5.5 feet of each boring was excavated by air-knife equipment in orderto minimize the possibility of encountering any unidentified underground utilities or hazards. The excavated soil was then returned to the boreholes and given a minimum of two weeks to equilibrate in order to provide undisturbed soil vapor conditions required for sampling. After this equilibration period the site was revisited and at each boring location a soil vapor probe was advanced to a depth of 5.5 feet below the ground surface (bgs) using the Geoprobe equipment.

Soil Vapor Sampling

On June 10-12, 2008, Delta field staff and Gregg Drilling representatives met on-site to collect soil vapor samples. During the collection of soil vapor samples, a Summa® purge canister and a Summa® sample canister, both equipped with a vacuum gauge and flow regulator, were connected to the vapor tight Swagelock® valve via ¼-inch Teflon sample collection tubing. The sample tubing was then connected to the down-hole side of a laboratory air filter, and a laboratory calibrated flow regulator set at a flow rate of approximately 200 milliliters/minute.

Vacuum Test

Prior to sample collection, a vacuum test between the purge Summa® canister and the vapor tight valve was performed for ten minutes by opening and closing only the purge canister valve. The vapor tight Swagelock® lock remained closed. If vacuum could not be maintained for ten minutes, all sampling activities were terminated, fittings were inspected and adjusted, and the vacuum test repeated until the vacuum could be maintained for ten minutes.

Vapor Purging

Prior to sample collection, the vapor tight valve and purge canister valve were opened and one volume of air from the sample tubing (dead air volume) was purged. Purging one dead volume removed any stagnant, non-representative air that existed within the sample tubing and equipment with minimal subsurface air influence. The appropriate purge time for one dead air volume was calculated based on the length and diameter of the tubing and the flow rate, preset by the laboratory at an average of 200 milliliters/minute. When purging was complete, the vapor tight valve and purge canister valve were closed.

Leak Test

During sample collection, a Delta field staff continually applied an isopropyl alcohol leak tracer in order to evaluate the integrity of the system. To complete this activity, gauze saturated with isopropyl alcohol (IPA) was placed in the vicinity of each tubing joint within the sampling system and near all valve connections. Laboratory analytical results for IPA (2-propanol) were used to determine the air-tightness of the sampling system. IPA results are included on Table 1.

Vapor Sample Collection

Sample collection began by opening the sample canister valve and recording the initial vacuum reading. Next, the vapor tight Swagelock® valve was opened, allowing vapors to be collected. When the vacuum gauge on the sampling canister decreased to approximately five inches of mercury (inches Hg), the vapor tight valve and the sample canister valve were closed consecutively, and the final vacuum reading was recorded. Approximately 6 liters of soil vapors were collected from each soil vapor probe location.

Soil Vapor Sample Analysis

All Summa® canisters were submitted within 72-hours of sample collection to Air Toxics Ltd., a California-certified laboratory under proper chain-of-custody documentation, and analyzed for TPH-g, BTEX, MTBE, and TBA using Modified EPA Method TO-14A. Samples were also analyzed for the leak test compound (IPA) by Modified EPA Method TO-14A at a DTSC acceptable reporting limit (<10 ug/L) via ASTM D-1946.

Soil Vapor Analytical Results

- Petroleum hydrocarbons were detected in all 14 soil vapor samples (P-10 through P-23) and the three duplicate samples (P-17D, P-20LD and P-23LD). TPH-g was detected at concentrations ranging from 450 $\mu g/m^3$ to 9,000,000 $\mu g/m^3$. A total of eight samples (seven samples and one duplicate sample) had detected concentrations of TPH-g in excess of 1,000,000 $\mu g/m^3$ (see Table 1 and Figure 3).

- Benzene was detected at concentrations ranging from 3.2 $\mu g/m^3$ to12,000 $\mu g/m^3$. A total of six samples (five samples and one duplicate sample) had detected concentrations of benzene in excess of 1,000 $\mu g/m^3$ (see Table 1 and Figure 4)

- IPA was detected in the soil vapor collected from boring P-20 and the duplicate sample, P-20LD, at concentrations of 27 $\mu g/m^3$ and 29 $\mu g/m^3$. Analytical results are summarized on Table 1.

The certified laboratory report is included as Attachment B.

SUMMARY AND CONCLUSIONS

Soil vapor samples collected from 5.5 feet bgs were used to evaluate the potential for indoor air intrusion from shallow soils.

- TPH-g was detected in the vapor samples collected from all 14 soil probe locations.

- TPH-g was detected at concentrations in excess of 1,000,000 $\mu g/m^3$, in seven soil vapor probe locations. The maximum detected concentration of 9,000,000 $\mu g/m^3$ was detected in the soil vapor collected from boring location P-19.

- Benzene was detected in the soil vapor samples collected from eight soil probe locations.

- Benzene was detected at concentrations in excess of 1,000 $\mu g/m^3$ in five soil vapor probe locations. The maximum detected concentration of 12,000 $\mu g/m^3$ was detected in sample P-23.

- Although the leak detector compound, IPA was detected in the sample from S-20 and it duplicate (S-20LD), the detected concentrations are very low (representing only 0.1 % of the total detected concentrations) and is considered to degrade the analytical results but not invalidate the results.

- The affected area is currently occupied by an automotive emissions testing facility and a trailer park. During business hours the emissions testing facility is open and experiences frequent customer traffic and vapor from emissions testing. The entry and exit activities of the trailer park occupants are not known.

Based on these findings, Delta performed a Tier I and Tier II RBCA assessment, included in the attached Site Conceptual Model.

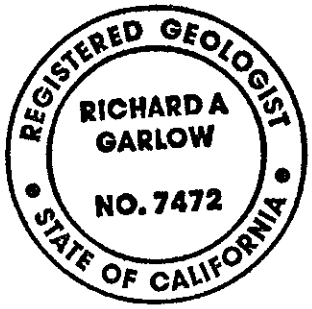
On behalf of Shell, Delta recommends evaluation of soil and groundwater remedial measures for the site and adjacent trailer park.

REMARKS

The recommendations contained in this report represent Delta's professional opinions based upon the currently available information and are arrived at in accordance with currently acceptable professional standards. This report is based upon a specific scope of work requested by the client. The Contract between Delta and its client outlines the scope of work, and only those tasks specifically authorized by that contract or outlined in this report were performed. This report is intended only for the use of Delta's Client and anyone else specifically listed on this report. Delta will not and cannot be liable for unauthorized reliance by any other third party. Other than as contained in this paragraph, Delta makes no express or implied warranty as to the contents of this report.

If you have any questions or comments regarding this report, please contact Elisabeth Silver (Delta) at (425) 498-7736 or Denis Brown (Shell) at (707) 865-0251.

Sincerely,
Delta Consultants, Inc.



Elisabeth Silver
Senior Project Manager

Richard A. Garlow, M.S., P.G.
Project Specialist

Attachments: Table 1 – Soil Vapor Sampling Analytical Data

Figure 1 – Site Location Map
Figure 2 – Site Layout with Soil Vapor Sample Locations
Figure 3 – TPH-g Concentrations and TPH-g > 1,000,000 µg/m^3 Isocontour Map
Figure 4 – Benzene Concentrations and Benzene > 1,000 µg/m^3 Isocontour Map

Attachment A - Alameda County Well Permit
Attachment B - Certified Analytical Report and Chain-of-Custody Documentation for Soil Vapor Samples (Air Toxics)
Attachment C – RWCQB ESL Table E-2
Attachment D – Site Conceptual Model

cc: Denis Brown, Shell Oil Products US, Carson
Mike Bakaldin, San Leandro Fire Department, San Leandro
Salel Enterprises c/o Foothill Hardware, Oakland

TABLE 1
SOIL VAPOR SAMPLING ANALYTICAL DATA
Former Shell Service Station
15275 Washington Boulevard
San Leandro, CA

Well ID	Date	Depth (feet)	TPH-g (ug/m3)	B (ug/m3)	T (ug/m3)	E (ug/m3)	X (ug/m3)	MTBE (ug/m3)	TBA (ug/m3)	2-Propanol
P-10	6/11/2008	5.5 ft	100,000	<2.7	14	3.9	11.8	<3.0	43	<8.2
P-11	6/11/2008	5.5 ft	8,000,000	1,100	240	<180	<180	<150	<520	<420
P-12	611/2008	5.5 ft	7,800,000	810	<630	<730	<730	<600	<5,100	<1,600
P-13	6/10/2008	5.5 ft	5,300	<2.5	5.6	<3.4	3.6	<2.8	<24	<7.8
P-14	6/10/2008	5.5 ft	2,100,000	1400	<130	4,700	280	<120	<1,000	<340
P-15	6/11/2008	5.5 ft	160,000	<54	<63	<73	<73	<60	<150	<160
P-16	6/10/2008	5.5 ft	130,000	<13	<15	26	<17	<14	<120	<120
P-17	6/10/2008	5.5 ft	450	<2.5	5.4	<3.4	3.6	<2.8	<23	<7.6
P-17D	6/10/2008	5.5 ft	1,100	<2.5	4.0	<3.4	<3.4	<2.8	<24	<7.8
P-18	6/10/2008	5.5 ft	13,000	3.2	6.0	<3.6	4.0	<3.0	36	<8.2
P-19	6/10/2008	5.5 ft	9,000,000	600	270	<180	<180	<150	<510	<410
P-20	6/10/2008	5.5 ft	26,000	<2.5	240	<3.4	<3.4	<2.8	55	27
P-20LD	6/10/2008	5.5 ft	26,000	<2.5	230	<3.4	<3.4	<2.8	52	29
P-21	6/10/2008	5.5 ft	8,200,000	6,400	280	27,000	3,500	<100	<340	<280
P-22	6/10/2008	5.5 ft	8,200,000	1,400	<320	14,000	<360	<300	<1,000	<820
P-23	6/10/2008	5.5 ft	6,500,000	12,000	190	46,000	25,120	<56	<190	<150
P-23LD	6/10/2008	5.5 ft	6,500,000	11,000	180	44,000	23,110	<56	<190	<150

Abbreviations:

TPH-g = Total petroleum hydrocarbons as gasoline by EPA Method T0-14/T0-15

BTEX = Benzene, toluene, ethylbenzene, total xylenes by EPA Method T0-14A/T0-15

MTBE = Methyl tert-butyl ether

TBA = Tert-butyl-alcohol

2-Propanol= Isopropyl alcohol

ug/m3 = Microgram per cubic meter

<n = Not detected, below method detection limit

D = Duplicate sample

LD = Lab duplicate

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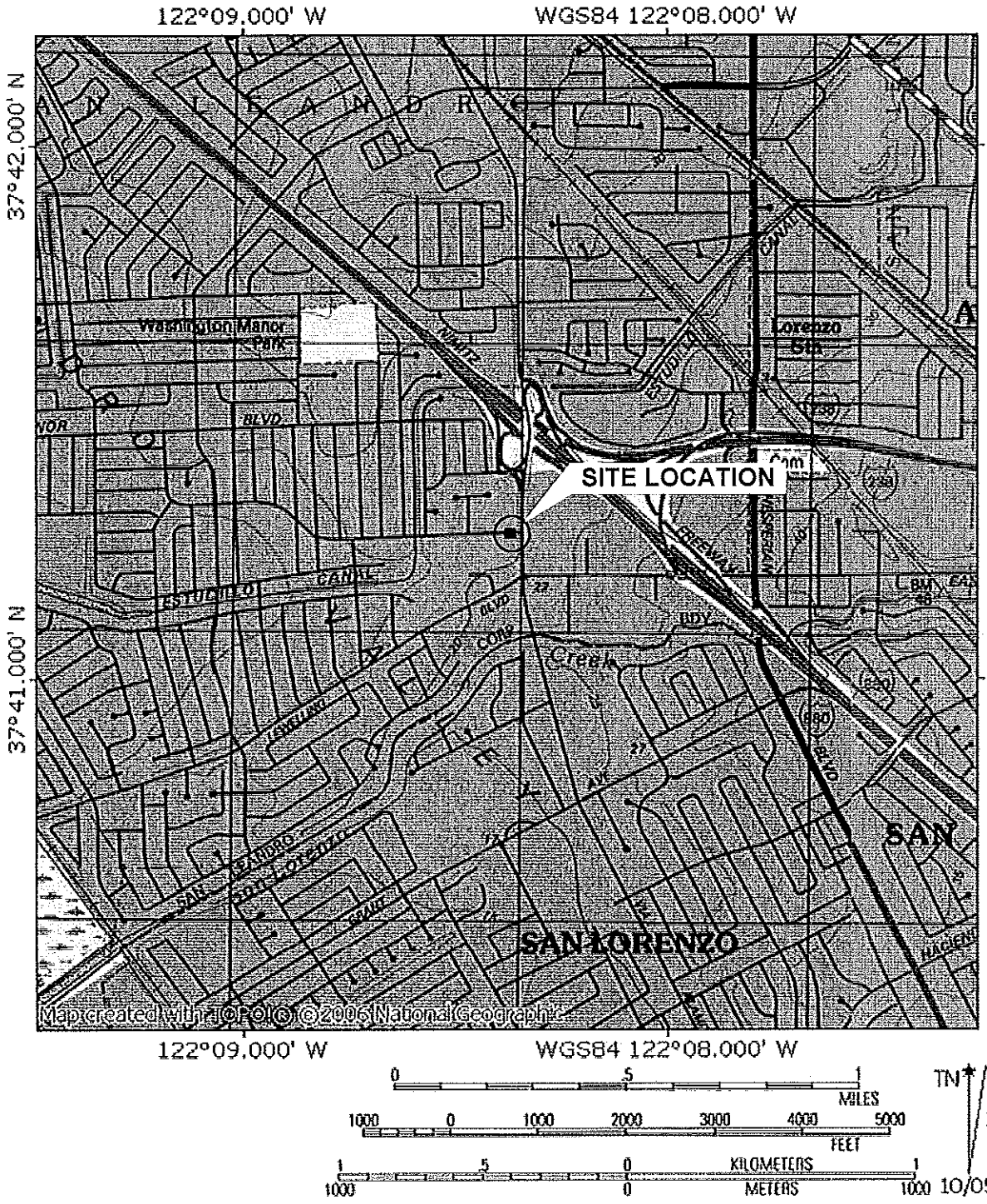
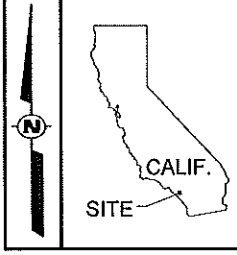
J.F.F.			SCA152751



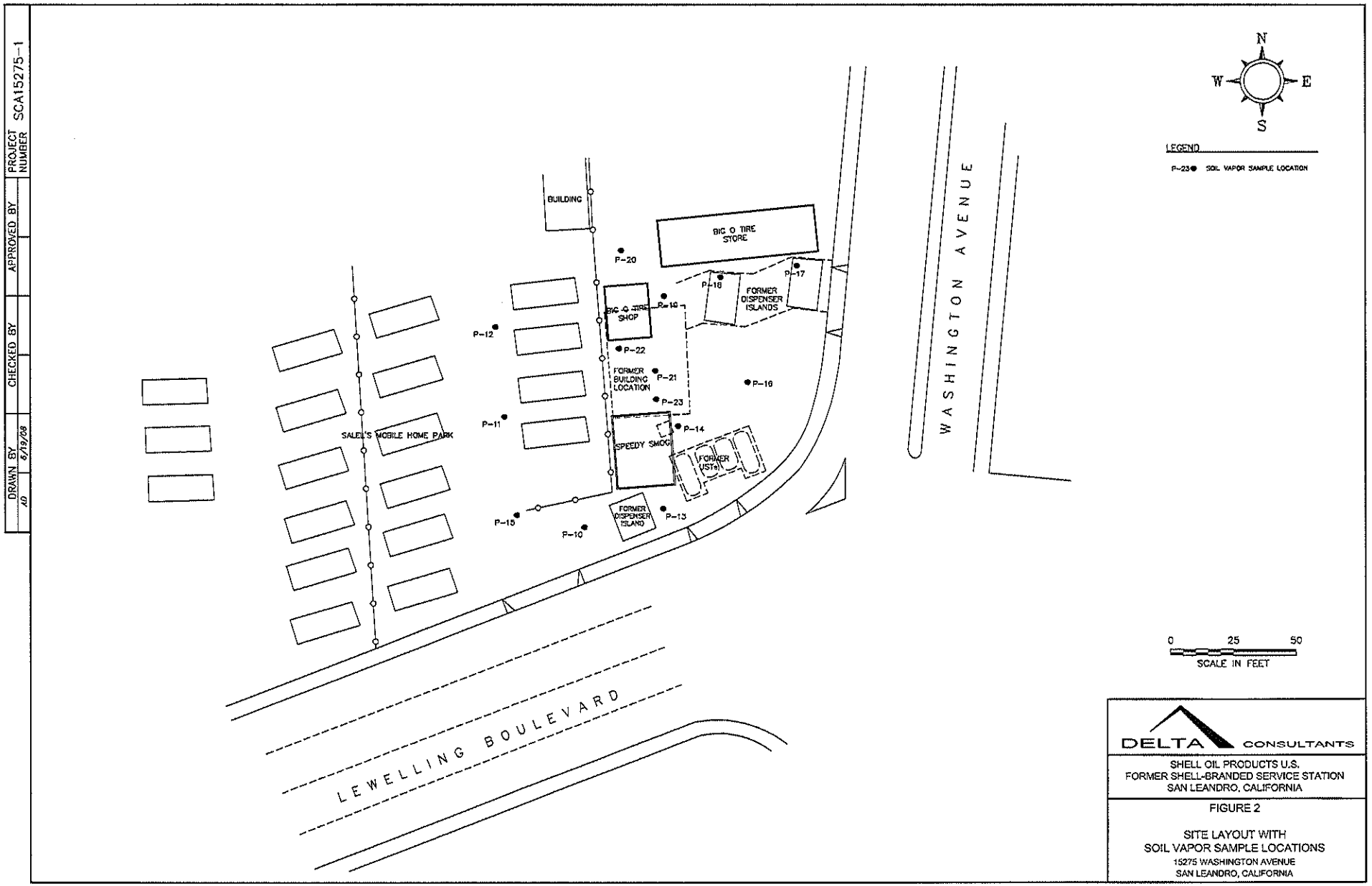


DELTA CONSULTANTS

SHELL OIL PRODUCTS US
FORMER SHELL SERVICE STATION
SAN LEANDRO, CALIFORNIA

FIGURE 1
SITE LOCATION MAP

15275 WASHINGTON AVENUE
SAN LEANDRO, CALIFORNIA



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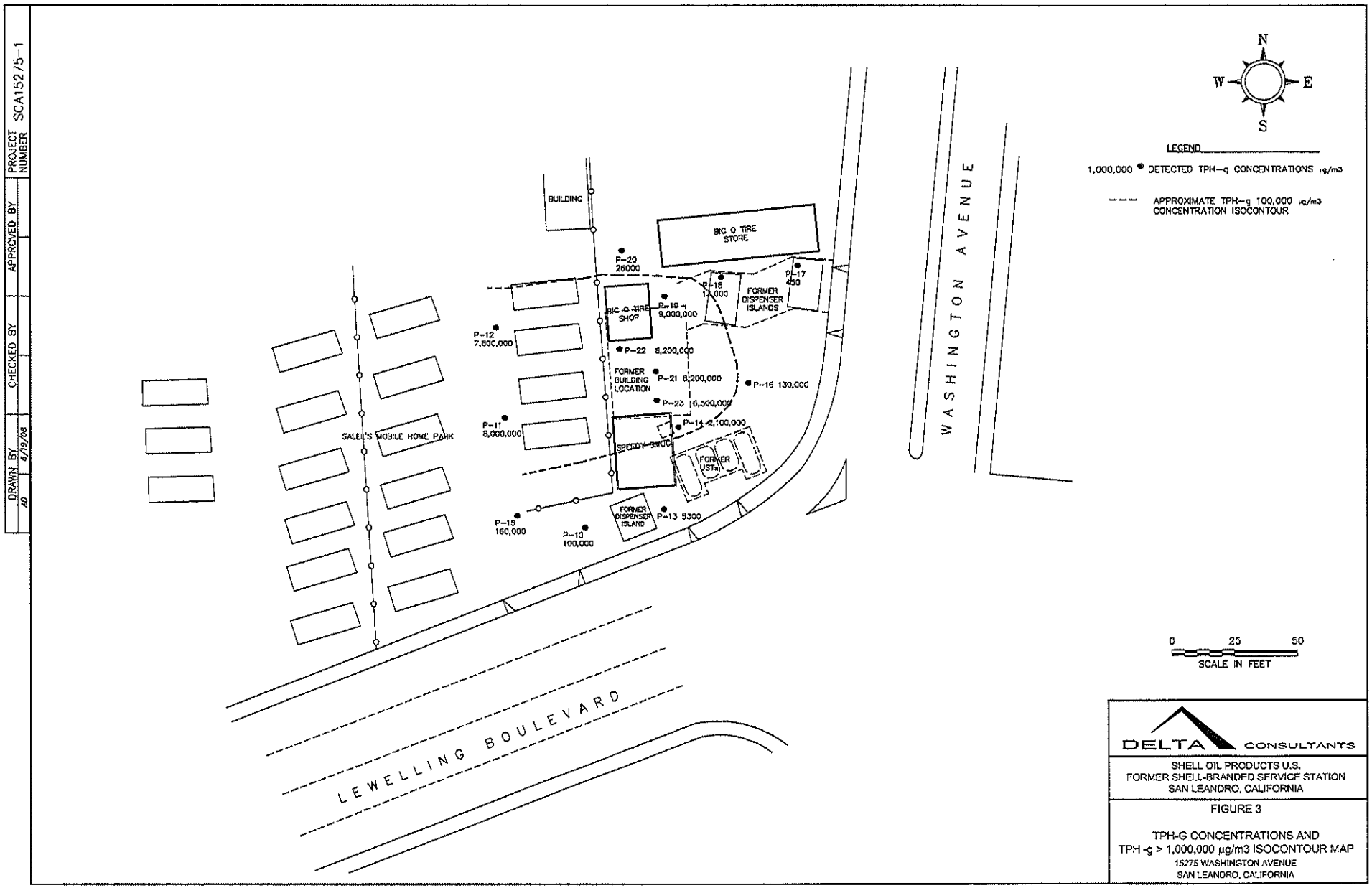
AD 6/19/08			SCA15275-1

DELTA CONSULTANTS

SHELL OIL PRODUCTS U.S.
FORMER SHELL-BRANDED SERVICE STATION
SAN LEANDRO, CALIFORNIA

FIGURE 2

SITE LAYOUT WITH
SOIL VAPOR SAMPLE LOCATIONS
15275 WASHINGTON AVENUE
SAN LEANDRO, CALIFORNIA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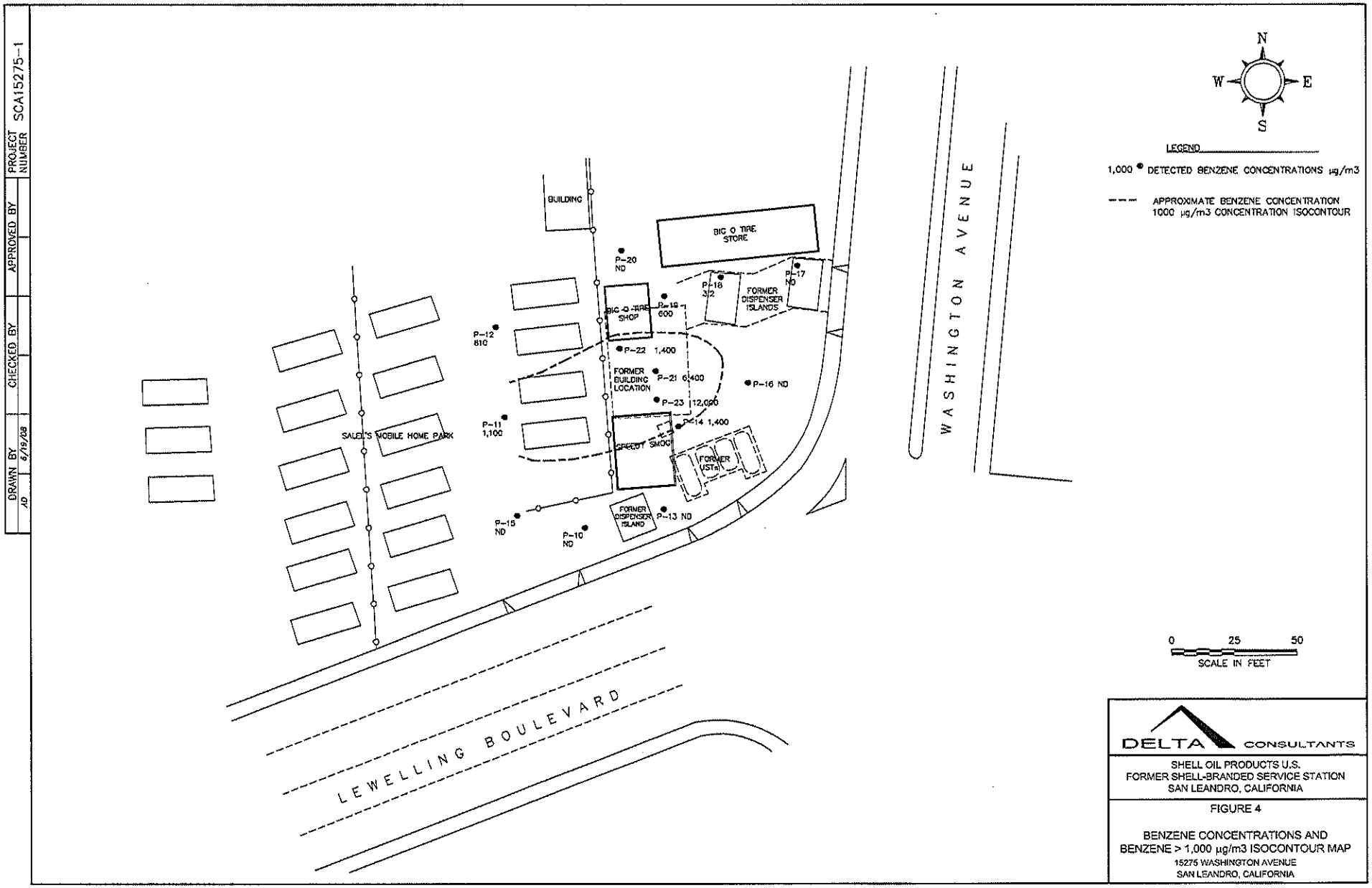
LEGEND
1,000,000 DETECTED TPH-g CONCENTRATIONS µg/m3
APPROXIMATE TPH-g 100,000 µg/m3 CONCENTRATION ISOCONTOUR
BUILDING
BIG O TIRE STORE
P-20 26000
P-18 13,000
P-17 450
FORMER DISPENSER ISLANDS
BIG O TIRE SHOP
P-19 9,000,000
P-12 7,800,000
P-22 8,200,000
FORMER BUILDING LOCATION
P-21 8,200,000
P-16 130,000
P-23 6,500,000
P-11 8,000,000
P-14 2,100,000
SALEH'S MOBILE HOME PARK
SPEEDY SHOP
FORMER USTs
FORMER DISPENSER ISLAND
P-13 5300
P-15 160,000
P-10 100,000
WASHINGTON AVENUE
LEWELLING BOULEVARD
0 25 50
SCALE IN FEET
DELTA CONSULTANTS
SHELL OIL PRODUCTS U.S.
FORMER SHELL-BRANDED SERVICE STATION
SAN LEANDRO, CALIFORNIA
FIGURE 3
TPH-G CONCENTRATIONS AND
TPH -g > 1,000,000 µg/m3 ISOCONTOUR MAP
15275 WASHINGTON AVENUE
SAN LEANDRO, CALIFORNIA
DRAWN BY AD 6/19/08
CHECKED BY
APPROVED BY
PROJECT NUMBER SCA15275-1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1,000 DETECTED BENZENE CONCENTRATIONS µg/m3
APPROXIMATE BENZENE CONCENTRATION
1000 µg/m3 CONCENTRATION ISOCONTOUR
BUILDING
BIG O TIRE STORE
P-20 ND
P-17 ND
P-18 3.2
FORMER DISPENSER ISLANDS
BIG O TIRE SHOP
P-19 600
P-12 810
P-22 1,400
FORMER BUILDING LOCATION
P-21 6,400
P-16 ND
P-23 12,000
P-11 1,100
P-14 1,400
SALEH'S MOBILE HOME PARK
SPECOT SMOG
FORMER USTs
FORMER DISPENSER ISLAND
P-13 ND
P-15 ND
P-10 ND
WASHINGTON AVENUE
LEWELLING BOULEVARD
0
25
50
SCALE IN FEET
DELTA CONSULTANTS
SHELL OIL PRODUCTS U.S.
FORMER SHELL-BRANDED SERVICE STATION
SAN LEANDRO, CALIFORNIA
FIGURE 4
BENZENE CONCENTRATIONS AND
BENZENE > 1,000 µg/m3 ISOCONTOUR MAP
15275 WASHINGTON AVENUE
SAN LEANDRO, CALIFORNIA
DRAWN BY JD 6/19/08
CHECKED BY
APPROVED BY
PROJECT NUMBER SCA15275-1

ATTACHMENT A

Alameda County Well Permit

Alameda County Public Works Agency - Water Resources Well Permit

399 Elmhurst Street
Hayward, CA 94544-1395
Telephone: (510)670-6633 Fax:(510)782-1939

Application Approved on: 05/20/2008 By jamesy

Permit Numbers: W2008-0274
Permits Valid from 06/10/2008 to 06/12/2008

Application Id: 1210782250997
Site Location: 15241 Washington Avenue, San Leandro, CA
Project Start Date: 06/10/2008

City of Project Site: San Leandro
Completion Date: 06/12/2008

Requested Inspection: 06/10/2008
Scheduled Inspection: 06/10/2008 at 3:00 PM(Contact your inspector, Vicky Hamlin at (510) 670-5443, to confirm.)

Applicant: Delta Consultants - Abhik Dutta
312 Piercy Road, San Jose, CA 95138
Phone: 408-826-1869

Property Owner: Salei Enterprises Mr. Frank Salei
6733 Foothill Blvd., Oakland, CA 94605
Phone: --

Client: ** same as Property Owner **

	Total Due:	$200.00
Receipt Number: WR2008-0165	**Total Amount Paid:**	$200.00
Payer Name : Delta Consultants	Paid By: CHECK	**PAID IN FULL**

Works Requesting Permits:

Borehole(s) for Investigation-Geotechnical Study/CPT's - 14 Boreholes
Driller: Gregg Drilling - Lic #: 485165 - Method: auger

Work Total: $200.00

Specifications

Permit Number	Issued Dt	Expire Dt	# Boreholes	Hole Diam	Max Depth
W2008-0274	05/20/2008	09/08/2008	14	4.00 in.	5.50 ft

Specific Work Permit Conditions

1. Backfill bore hole by tremie with cement grout or cement grout/sand mixture. Upper two-three feet replaced in kind or with compacted cuttings. All cuttings remaining or unused shall be containerized and hauled off site.

2. Boreholes shall not be left open for a period of more than 24 hours. All boreholes left open more than 24 hours will need approval from Alameda County Public Works Agency, Water Resources Section. All boreholes shall be backfilled according to permit destruction requirements and all concrete material and asphalt material shall be to Caltrans Spec or County/City Codes. No borehole(s) shall be left in a manner to act as a conduit at any time.

3. Permittee shall assume entire responsibility for all activities and uses under this permit and shall indemnify, defend and save the Alameda County Public Works Agency, its officers, agents, and employees free and harmless from any and all expense, cost, liability in connection with or resulting from the exercise of this Permit including, but not limited to, properly damage, personal injury and wrongful death.

4. Prior to any drilling activities, it shall be the applicant's responsibility to contact and coordinate an Underground Service Alert (USA), obtain encroachment permit(s), excavation permit(s) or any other permits or agreements required for that Federal, State, County or City, and follow all City or County Ordinances. No work shall begin until all the permits and requirements have been approved or obtained. It shall also be the applicants responsibilities to provide to the Cities or to Alameda County an Traffic Safety Plan for any lane closures or detours planned. No work shall begin until all the permits and requirements have been approved or obtained.

5. Applicant shall contact Vicky Hamlin for an inspection time at 510-670-5443 or email to vickyh@acpwa.org at least five

(5) working days prior to starting, once the permit has been approved. Confirm the scheduled date(s) at least 24 hours prior to drilling.

6. Permitte, permittee's contractors, consultants or agents shall be responsible to assure that all material or waters generated during drilling, boring destruction, and/or other activities associated with this Permit will be safely handled, properly managed, and disposed of according to all applicable federal, state, and local statutes regulating such. In no case shall these materials and/or waters be allowed to enter, or potentially enter, on or off-site storm sewers, dry wells, or waterways or be allowed to move off the property where work is being completed.

7. Cuttings may also be left on site or spread out as long as the applicants has approval from the property owner and the cuttings will not violate the State and County Clean Water laws (NPDES).

8. Prior to any drilling activities onto any public right-of-ways, it shall be the applicants responsibilities to contact and coordinate a Underground Service Alert (USA), obtain encroachment permit(s), excavation permit(s) or any other permits required for that City or to the County and follow all City or County Ordinances. It shall also be the applicants responsibilities to provide to the Cities or to Alameda County a Traffic Safety Plan for any lane closures or detours planned. No work shall begin until all the permits and requirements have been approved or obtained.

9. Permit is valid only for the purpose specified herein. No changes in construction procedures, as described on this permit application. Boreholes shall not be converted to monitoring wells, without a permit application process.

ATTACHMENT B

Certified Analytical Report and Chain of Custody Documentation for Soil Vapor Samples (Air Toxics)

Air Toxics LTD.

AN ENVIRONMENTAL ANALYTICAL LABORATORY

Air Toxics Ltd. Introduces the Electronic Report

Thank you for choosing Air Toxics Ltd. To better serve our customers, we are providing your report by e-mail. This document is provided in Portable Document Format which can be viewed with Acrobat Reader by Adobe.

This electronic report includes the following:

- Work order Summary;
- Laboratory Narrative;
- Results; and
- Chain of Custody (copy).

180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 95630

(916) 985-1000 .FAX (916) 985-1020
Hours 8:00 A.M to 6:00 P.M. Pacific

Air Toxics LTD.
AN ENVIRONMENTAL ANALYTICAL LABORATORY

WORK ORDER #: 0806254R1

Work Order Summary

CLIENT:	Mr. Abhik Dutta Delta Environmental Consultants 312 Piercy Rd San Jose, CA 95138	**BILL TO:**	Mr. Abhik Dutta Delta Environmental Consultants 312 Piercy Rd San Jose, CA 95138
PHONE:	408-224-4724	**P.O. #**	
FAX:	408-225-8506	**PROJECT #**	SCA 15275 Soil Vapor
DATE RECEIVED:	06/13/2008	**CONTACT:**	Kyle Vagadori
DATE COMPLETED:	07/07/2008		
DATE REISSUED:	07/08/2008		

FRACTION #	NAME	TEST	RECEIPT VAC./PRES.	FINAL PRESSURE
01A	P-20	Modified TO-14A	4.5 "Hg	5 psi
01AA	P-20 Lab Duplicate	Modified TO-14A	4.5 "Hg	5 psi
02A	P-21	Modified TO-14A	6.5 "Hg	5 psi
03A	P-16	Modified TO-14A	10.0 "Hg	5 psi
04A	P-22	Modified TO-14A	6.0 "Hg	5 psi
05A	P-19	Modified TO-14A	6.0 "Hg	5 psi
06A	P-17	Modified TO-14A	4.0 "Hg	5 psi
07A	Duplicate 1	Modified TO-14A	4.5 "Hg	5 psi
08A	P-13	Modified TO-14A	4.5 "Hg	5 psi
09A	P-14	Modified TO-14A	6.5 "Hg	5 psi
10A	P-18	Modified TO-14A	6.0 "Hg	5 psi
11A	P-10	Modified TO-14A	6.0 "Hg	5 psi
12A	P-15	Modified TO-14A	6.0 "Hg	5 psi
13A	P-12	Modified TO-14A	6.0 "Hg	5 psi
14A	P-11	Modified TO-14A	6.5 "Hg	5 psi
15A	P-23	Modified TO-14A	4.0 "Hg	5 psi
15AA	P-23 Lab Duplicate	Modified TO-14A	4.0 "Hg	5 psi

Continued on next page

Air Toxics LTD.

AN ENVIRONMENTAL ANALYTICAL LABORATORY

WORK ORDER #: 0806254R1

Work Order Summary

CLIENT:	Mr. Abhik Dutta Delta Environmental Consultants 312 Piercy Rd San Jose, CA 95138	**BILL TO:**	Mr. Abhik Dutta Delta Environmental Consultants 312 Piercy Rd San Jose, CA 95138
PHONE:	408-224-4724	**P.O. #**	
FAX:	408-225-8506	**PROJECT #**	SCA 15275 Soil Vapor
DATE RECEIVED:	06/13/2008	**CONTACT:**	Kyle Vagadori
DATE COMPLETED:	07/07/2008		
DATE REISSUED:	07/08/2008		

FRACTION #	NAME	TEST	RECEIPT VAC./PRES.	FINAL PRESSURE
16A	Lab Blank	Modified TO-14A	NA	NA
16B	Lab Blank	Modified TO-14A	NA	NA
17A	CCV	Modified TO-14A	NA	NA
17B	CCV	Modified TO-14A	NA	NA
18A	LCS	Modified TO-14A	NA	NA
18B	LCS	Modified TO-14A	NA	NA

CERTIFIED BY: Linda J. Fruman DATE: 07/08/08

Laboratory Director

Certfication numbers: CA NELAP - 02110CA, LA NELAP/LELAP- AI 30763, NJ NELAP - CA004
NY NELAP - 11291, UT NELAP - 9166389892, AZ Licensure AZ0719
Name of Accrediting Agency: NELAP/Florida Department of Health, Scope of Application: Clean Air Act,
Accreditation number: E87680, Effective date: 07/01/07, Expiration date: 06/30/08
Air Toxics Ltd. certifies that the test results contained in this report meet all requirements of the NELAC standards

180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 95630
(916) 985-1000 . (800) 985-5955 . FAX (916) 985-1020

LABORATORY NARRATIVE
Modified TO-14A Std & Soil Gas
Delta Environmental Consultants
Workorder# 0806254R1

Fifteen 6 Liter Summa Canister samples were received on June 13, 2008. The laboratory performed analysis via modified EPA Method TO-14A using GC/MS in the Full Scan mode. The method involves concentrating up to 1.0 liter of air. The concentrated aliquot is then flash vaporized and swept through a water management system to remove water vapor. Following dehumidification, the sample passes directly into the GC/MS for analysis.

This workorder was independently validated prior to submittal using 'USEPA National Functional Guidelines' as generally applied to the analysis of volatile organic compounds in air. A rules-based, logic driven, independent validation engine was employed to assess completeness, evaluate pass/fail of relevant project quality control requirements and verification of all quantified amounts.

Method modifications taken to run these samples are summarized in the table below. Specific project requirements may over-ride the ATL modifications.

Requirement	*TO-14A*	*ATL Modifications*
Daily CCV	+- 30% Difference	</= 30% Difference with two allowed out up to </=40%.; flag and narrate outliers
Initial Calibration criteria	RSD<30%	RSD</=30%, two compounds allowed up to 40%
BFB absolute abundance criteria	Within 10% of that from previous day	CCV internal standard area counts are compared to ICAL, corrective action for > 40% D
Blank acceptance criteria	<0.20 ppbv	<Reporting Limit
Moisture control	Nafion Dryer	Multisorbent trap
Sample collection media	Summa canister	ATL recommends use of summa canisters to insure data defensibility, but will report results from Tedlar bags at client request

Receiving Notes

There were no receiving discrepancies.

Analytical Notes

The recovery of surrogate 1,2-Dichloroethane-d4 in samples P-21, P-19, P-11, P-23 and P-23 Lab Duplicate was outside control limits due to high level hydrocarbon matrix interference. Data is reported as qualified.

Dilution was performed on samples P-21, P-16, P-22, P-19, P-14, P-15, P-12, P-11, P-23 and P-23 Lab Duplicate due to the presence of high level non-target species.

THE WORK ORDER WAS REISSUED ON 7/8/08 TO CORRECT IDENTIFICATION OF SAMPLE P-10 AND TO ADD 2-PROPANOL TO THE LIST OF REPORTED ANALYTES PER CLIENT

REQUEST.

ALSO, AS PART OF THIS REISSUE, THE METHOD NAME IN THE SAMPLE HEADER WAS CORRECTED FOR SAMPLES ANALYZED ON MSD-C TO MATCH THOSE SAMPLES ANALYZED ON MSD-8.

Definition of Data Qualifying Flags

Eight qualifiers may have been used on the data analysis sheets and indicates as follows:

B - Compound present in laboratory blank greater than reporting limit (background subtraction not performed).

J - Estimated value.

E - Exceeds instrument calibration range.

S - Saturated peak.

Q - Exceeds quality control limits.

U - Compound analyzed for but not detected above the reporting limit.

UJ- Non-detected compound associated with low bias in the CCV

N - The identification is based on presumptive evidence.

File extensions may have been used on the data analysis sheets and indicates as follows:

a-File was requantified

b-File was quantified by a second column and detector

r1-File was requantified for the purpose of reissue

Air Toxics LTD.

AN ENVIRONMENTAL ANALYTICAL LABORATORY

Summary of Detected Compounds
MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN

Client Sample ID: P-20

Lab ID#: 0806254R1-01A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
2-Propanol	3.2	11	7.8	27
Toluene	0.79	62	3.0	240
TPH ref. to Gasoline (MW=100)	16	6200	65	26000
tert-Butyl alcohol	7.9	18	24	55

Client Sample ID: P-20 Lab Duplicate

Lab ID#: 0806254R1-01AA

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
2-Propanol	3.2	12	7.8	29
Toluene	0.79	61	3.0	230
TPH ref. to Gasoline (MW=100)	16	6300	65	26000
tert-Butyl alcohol	7.9	17	24	52

Client Sample ID: P-21

Lab ID#: 0806254R1-02A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Benzene	28	2000	91	6400
Toluene	28	75	110	280
Ethyl Benzene	28	6100	120	27000
m,p-Xylene	28	800	120	3500
TPH ref. to Gasoline (MW=100)	570	2000000	2300	8200000

Client Sample ID: P-16

Lab ID#: 0806254R1-03A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Ethyl Benzene	4.0	6.1	17	26
TPH ref. to Gasoline (MW=100)	80	32000	330	130000

Client Sample ID: P-22

Lab ID#: 0806254R1-04A

Summary of Detected Compounds
MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN

Client Sample ID: P-22

Lab ID#: 0806254R1-04A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Benzene	84	450	270	1400
Ethyl Benzene	84	3200	360	14000
TPH ref. to Gasoline (MW=100)	1700	2000000	6900	8200000

Client Sample ID: P-19

Lab ID#: 0806254R1-05A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Benzene	42	190	130	600
Toluene	42	72	160	270
TPH ref. to Gasoline (MW=100)	840	2200000	3400	9000000

Client Sample ID: P-17

Lab ID#: 0806254R1-06A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Toluene	0.78	1.4	2.9	5.4
m,p-Xylene	0.78	0.84	3.4	3.6
TPH ref. to Gasoline (MW=100)	16	110	63	450

Client Sample ID: Duplicate 1

Lab ID#: 0806254R1-07A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Toluene	0.79	1.0	3.0	4.0
TPH ref. to Gasoline (MW=100)	16	280	65	1100

Client Sample ID: P-13

Lab ID#: 0806254R1-08A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Toluene	0.79	1.5	3.0	5.6
m,p-Xylene	0.79	0.82	3.4	3.6
TPH ref. to Gasoline (MW=100)	16	1300	65	5300

Summary of Detected Compounds
MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN

Client Sample ID: P-14

Lab ID#: 0806254R1-09A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Benzene	34	430	110	1400
Ethyl Benzene	34	1100	150	4700
m,p-Xylene	34	64	150	280
TPH ref. to Gasoline (MW=100)	680	510000	2800	2100000

Client Sample ID: P-18

Lab ID#: 0806254R1-10A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Benzene	0.84	1.0	2.7	3.2
Toluene	0.84	1.6	3.2	6.0
m,p-Xylene	0.84	0.93	3.6	4.0
TPH ref. to Gasoline (MW=100)	17	3100	69	13000
tert-Butyl alcohol	8.4	12	25	36

Client Sample ID: P-10

Lab ID#: 0806254R1-11A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Toluene	0.84	3.8	3.2	14
Ethyl Benzene	0.84	0.90	3.6	3.9
m,p-Xylene	0.84	1.8	3.6	7.9
o-Xylene	0.84	0.91	3.6	3.9
TPH ref. to Gasoline (MW=100)	17	25000	69	100000
tert-Butyl alcohol	8.4	14	25	43

Client Sample ID: P-15

Lab ID#: 0806254R1-12A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
TPH ref. to Gasoline (MW=100)	340	40000	1400	160000

Client Sample ID: P-12

Lab ID#: 0806254R1-13A

Air Toxics LTD.

AN ENVIRONMENTAL ANALYTICAL LABORATORY

Summary of Detected Compounds
MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN

Client Sample ID: P-12

Lab ID#: 0806254R1-13A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Benzene	170	250	540	810
TPH ref. to Gasoline (MW=100)	3400	1900000	14000	7800000

Client Sample ID: P-11

Lab ID#: 0806254R1-14A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Benzene	43	350	140	1100
Toluene	43	64	160	240
TPH ref. to Gasoline (MW=100)	860	2000000	3500	8000000

Client Sample ID: P-23

Lab ID#: 0806254R1-15A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Benzene	16	3600	50	12000
Toluene	16	52	58	190
Ethyl Benzene	16	11000	67	46000
m,p-Xylene	16	5700	67	25000
o-Xylene	16	28	67	120
TPH ref. to Gasoline (MW=100)	310	1600000	1300	6500000

Client Sample ID: P-23 Lab Duplicate

Lab ID#: 0806254R1-15AA

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Benzene	16	3400	50	11000
Toluene	16	49	58	180
Ethyl Benzene	16	10000	67	44000
m,p-Xylene	16	5400	67	23000
o-Xylene	16	26	67	110
TPH ref. to Gasoline (MW=100)	310	1600000	1300	6500000

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AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: P-20

Lab ID#: 0806254R1-01A

MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN

File Name:	**8062410R1**	**Date of Collection: 6/10/08**	
Dil. Factor:	**1.58**	**Date of Analysis: 6/24/08 03:39 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
2-Propanol	3.2	11	7.8	27
Benzene	0.79	Not Detected	2.5	Not Detected
Toluene	0.79	62	3.0	240
Ethyl Benzene	0.79	Not Detected	3.4	Not Detected
m,p-Xylene	0.79	Not Detected	3.4	Not Detected
o-Xylene	0.79	Not Detected	3.4	Not Detected
TPH ref. to Gasoline (MW=100)	16	6200	65	26000
Methyl tert-butyl ether	0.79	Not Detected	2.8	Not Detected
tert-Butyl alcohol	7.9	18	24	55

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	96	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	95	70-130

Air Toxics LTD.

AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: P-20 Lab Duplicate

Lab ID#: 0806254R1-01AA

MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN

File Name:	**8062411R1**	**Date of Collection: 6/10/08**	
Dil. Factor:	**1.58**	**Date of Analysis: 6/24/08 04:22 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
2-Propanol	3.2	12	7.8	29
Benzene	0.79	Not Detected	2.5	Not Detected
Toluene	0.79	61	3.0	230
Ethyl Benzene	0.79	Not Detected	3.4	Not Detected
m,p-Xylene	0.79	Not Detected	3.4	Not Detected
o-Xylene	0.79	Not Detected	3.4	Not Detected
TPH ref. to Gasoline (MW=100)	16	6300	65	26000
Methyl tert-butyl ether	0.79	Not Detected	2.8	Not Detected
tert-Butyl alcohol	7.9	17	24	52

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	98	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	96	70-130

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AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: P-21

Lab ID#: 0806254R1-02A

MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN

File Name:	**c062414R1**	**Date of Collection: 6/10/08**	
Dil. Factor:	**5.70**	**Date of Analysis: 6/24/08 04:04 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Benzene	28	2000	91	6400
Toluene	28	75	110	280
Ethyl Benzene	28	6100	120	27000
m,p-Xylene	28	800	120	3500
o-Xylene	28	Not Detected	120	Not Detected
Methyl tert-butyl ether	28	Not Detected	100	Not Detected
tert-Butyl alcohol	110	Not Detected	340	Not Detected
TPH ref. to Gasoline (MW=100)	570	2000000	2300	8200000
2-Propanol	110	Not Detected	280	Not Detected

Q = Exceeds Quality Control limits of 70% to 130%, due to matrix effects.

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	142 Q	70-130
Toluene-d8	109	70-130
4-Bromofluorobenzene	98	70-130

Air Toxics LTD.

AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: P-16

Lab ID#: 0806254R1-03A

MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN

File Name:	**8062412R1**	**Date of Collection: 6/10/08**	
Dil. Factor:	**8.04**	**Date of Analysis: 6/24/08 04:58 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
2-Propanol	16	Not Detected	40	Not Detected
Benzene	4.0	Not Detected	13	Not Detected
Toluene	4.0	Not Detected	15	Not Detected
Ethyl Benzene	4.0	6.1	17	26
m,p-Xylene	4.0	Not Detected	17	Not Detected
o-Xylene	4.0	Not Detected	17	Not Detected
TPH ref. to Gasoline (MW=100)	80	32000	330	130000
Methyl tert-butyl ether	4.0	Not Detected	14	Not Detected
tert-Butyl alcohol	40	Not Detected	120	Not Detected

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	105	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	96	70-130

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AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: P-22

Lab ID#: 0806254R1-04A

MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN

File Name:	**c062415R1**	**Date of Collection: 6/10/08**	
Dil. Factor:	**16.8**	**Date of Analysis: 6/24/08 04:41 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Benzene	84	450	270	1400
Toluene	84	Not Detected	320	Not Detected
Ethyl Benzene	84	3200	360	14000
m,p-Xylene	84	Not Detected	360	Not Detected
o-Xylene	84	Not Detected	360	Not Detected
Methyl tert-butyl ether	84	Not Detected	300	Not Detected
tert-Butyl alcohol	340	Not Detected	1000	Not Detected
TPH ref. to Gasoline (MW=100)	1700	2000000	6900	8200000
2-Propanol	340	Not Detected	820	Not Detected

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	106	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	97	70-130

Air Toxics LTD.

AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: P-19

Lab ID#: 0806254R1-05A

MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN

File Name:	**c062416R1**	**Date of Collection: 6/10/08**	
Dil. Factor:	**8.40**	**Date of Analysis: 6/24/08 05:20 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Benzene	42	190	130	600
Toluene	42	72	160	270
Ethyl Benzene	42	Not Detected	180	Not Detected
m,p-Xylene	42	Not Detected	180	Not Detected
o-Xylene	42	Not Detected	180	Not Detected
Methyl tert-butyl ether	42	Not Detected	150	Not Detected
tert-Butyl alcohol	170	Not Detected	510	Not Detected
TPH ref. to Gasoline (MW=100)	840	2200000	3400	9000000
2-Propanol	170	Not Detected	410	Not Detected

Q = Exceeds Quality Control limits of 70% to 130%, due to matrix effects.

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	166 Q	70-130
Toluene-d8	103	70-130
4-Bromofluorobenzene	97	70-130

AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: P-17

Lab ID#: 0806254R1-06A

MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN

File Name:	**8062413R1**	**Date of Collection: 6/10/08**	
Dil. Factor:	**1.55**	**Date of Analysis: 6/24/08 05:40 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
2-Propanol	3.1	Not Detected	7.6	Not Detected
Benzene	0.78	Not Detected	2.5	Not Detected
Toluene	0.78	1.4	2.9	5.4
Ethyl Benzene	0.78	Not Detected	3.4	Not Detected
m,p-Xylene	0.78	0.84	3.4	3.6
o-Xylene	0.78	Not Detected	3.4	Not Detected
TPH ref. to Gasoline (MW=100)	16	110	63	450
Methyl tert-butyl ether	0.78	Not Detected	2.8	Not Detected
tert-Butyl alcohol	7.8	Not Detected	23	Not Detected

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	94	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	94	70-130

Air Toxics LTD.

AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: Duplicate 1

Lab ID#: 0806254R1-07A

MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN

File Name:	**8062414R1**	**Date of Collection: 6/10/08**	
Dil. Factor:	**1.58**	**Date of Analysis: 6/24/08 06:23 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
2-Propanol	3.2	Not Detected	7.8	Not Detected
Benzene	0.79	Not Detected	2.5	Not Detected
Toluene	0.79	1.0	3.0	4.0
Ethyl Benzene	0.79	Not Detected	3.4	Not Detected
m,p-Xylene	0.79	Not Detected	3.4	Not Detected
o-Xylene	0.79	Not Detected	3.4	Not Detected
TPH ref. to Gasoline (MW=100)	16	280	65	1100
Methyl tert-butyl ether	0.79	Not Detected	2.8	Not Detected
tert-Butyl alcohol	7.9	Not Detected	24	Not Detected

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	98	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	94	70-130

Air Toxics LTD.

AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: P-13

Lab ID#: 0806254R1-08A

MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN

File Name:	**8062415R1**	**Date of Collection: 6/10/08**	
Dil. Factor:	**1.58**	**Date of Analysis: 6/24/08 07:05 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
2-Propanol	3.2	Not Detected	7.8	Not Detected
Benzene	0.79	Not Detected	2.5	Not Detected
Toluene	0.79	1.5	3.0	5.6
Ethyl Benzene	0.79	Not Detected	3.4	Not Detected
m,p-Xylene	0.79	0.82	3.4	3.6
o-Xylene	0.79	Not Detected	3.4	Not Detected
TPH ref. to Gasoline (MW=100)	16	1300	65	5300
Methyl tert-butyl ether	0.79	Not Detected	2.8	Not Detected
tert-Butyl alcohol	7.9	Not Detected	24	Not Detected

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	100	70-130
Toluene-d8	101	70-130
4-Bromofluorobenzene	97	70-130

Air Toxics LTD.

AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: P-14

Lab ID#: 0806254R1-09A

MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN

File Name:	**8062418R1**	**Date of Collection: 6/10/08**	
Dil. Factor:	**68.4**	**Date of Analysis: 6/24/08 09:03 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
2-Propanol	140	Not Detected	340	Not Detected
Benzene	34	430	110	1400
Toluene	34	Not Detected	130	Not Detected
Ethyl Benzene	34	1100	150	4700
m,p-Xylene	34	64	150	280
o-Xylene	34	Not Detected	150	Not Detected
TPH ref. to Gasoline (MW=100)	680	510000	2800	2100000
Methyl tert-butyl ether	34	Not Detected	120	Not Detected
tert-Butyl alcohol	340	Not Detected	1000	Not Detected

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	125	70-130
Toluene-d8	101	70-130
4-Bromofluorobenzene	92	70-130

Air Toxics LTD.

AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: P-18

Lab ID#: 0806254R1-10A

MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN

File Name:	**8062417R1**	**Date of Collection:**	**6/10/08**
Dil. Factor:	**1.68**	**Date of Analysis:**	**6/24/08 08:13 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
2-Propanol	3.4	Not Detected	8.2	Not Detected
Benzene	0.84	1.0	2.7	3.2
Toluene	0.84	1.6	3.2	6.0
Ethyl Benzene	0.84	Not Detected	3.6	Not Detected
m,p-Xylene	0.84	0.93	3.6	4.0
o-Xylene	0.84	Not Detected	3.6	Not Detected
TPH ref. to Gasoline (MW=100)	17	3100	69	13000
Methyl tert-butyl ether	0.84	Not Detected	3.0	Not Detected
tert-Butyl alcohol	8.4	12	25	36

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	99	70-130
Toluene-d8	97	70-130
4-Bromofluorobenzene	101	70-130

Air Toxics LTD.

AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: P-10

Lab ID#: 0806254R1-11A

MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN

File Name:	**8062419R1**	**Date of Collection:**	**6/11/08**
Dil. Factor:	**1.68**	**Date of Analysis:**	**6/24/08 10:13 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
2-Propanol	3.4	Not Detected	8.2	Not Detected
Benzene	0.84	Not Detected	2.7	Not Detected
Toluene	0.84	3.8	3.2	14
Ethyl Benzene	0.84	0.90	3.6	3.9
m,p-Xylene	0.84	1.8	3.6	7.9
o-Xylene	0.84	0.91	3.6	3.9
TPH ref. to Gasoline (MW=100)	17	25000	69	100000
Methyl tert-butyl ether	0.84	Not Detected	3.0	Not Detected
tert-Butyl alcohol	8.4	14	25	43

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	97	70-130
Toluene-d8	103	70-130
4-Bromofluorobenzene	104	70-130

Air Toxics LTD.

AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: P-15

Lab ID#: 0806254R1-12A

MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN

File Name:	**8062429R1**	**Date of Collection: 6/11/08**	
Dil. Factor:	**33.6**	**Date of Analysis: 6/25/08 05:40 AM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
2-Propanol	67	Not Detected	160	Not Detected
Benzene	17	Not Detected	54	Not Detected
Toluene	17	Not Detected	63	Not Detected
Ethyl Benzene	17	Not Detected	73	Not Detected
m,p-Xylene	17	Not Detected	73	Not Detected
o-Xylene	17	Not Detected	73	Not Detected
TPH ref. to Gasoline (MW=100)	340	40000	1400	160000
Methyl tert-butyl ether	17	Not Detected	60	Not Detected
tert-Butyl alcohol	170	Not Detected	510	Not Detected

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	107	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	99	70-130

Air Toxics LTD.

AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: P-12

Lab ID#: 0806254R1-13A

MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN

File Name:	**8062421R1**	**Date of Collection: 6/11/08**	
Dil. Factor:	**336**	**Date of Analysis: 6/24/08 11:17 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
2-Propanol	670	Not Detected	1600	Not Detected
Benzene	170	250	540	810
Toluene	170	Not Detected	630	Not Detected
Ethyl Benzene	170	Not Detected	730	Not Detected
m,p-Xylene	170	Not Detected	730	Not Detected
o-Xylene	170	Not Detected	730	Not Detected
TPH ref. to Gasoline (MW=100)	3400	1900000	14000	7800000
Methyl tert-butyl ether	170	Not Detected	600	Not Detected
tert-Butyl alcohol	1700	Not Detected	5100	Not Detected

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	114	70-130
Toluene-d8	106	70-130
4-Bromofluorobenzene	96	70-130

Air Toxics LTD.

AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: P-11

Lab ID#: 0806254R1-14A

MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN

File Name:	**c062411R1**	**Date of Collection: 6/11/08**	
Dil. Factor:	**8.55**	**Date of Analysis: 6/24/08 01:36 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Benzene	43	350	140	1100
Toluene	43	64	160	240
Ethyl Benzene	43	Not Detected	180	Not Detected
m,p-Xylene	43	Not Detected	180	Not Detected
o-Xylene	43	Not Detected	180	Not Detected
Methyl tert-butyl ether	43	Not Detected	150	Not Detected
tert-Butyl alcohol	170	Not Detected	520	Not Detected
TPH ref. to Gasoline (MW=100)	860	2000000	3500	8000000
2-Propanol	170	Not Detected	420	Not Detected

Q = Exceeds Quality Control limits of 70% to 130%, due to matrix effects.

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	236 Q	70-130
Toluene-d8	108	70-130
4-Bromofluorobenzene	99	70-130

Air Toxics LTD.

AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: P-23

Lab ID#: 0806254R1-15A

MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN

File Name:	**c062412R1**	**Date of Collection: 6/10/08**	
Dil. Factor:	**3.10**	**Date of Analysis: 6/24/08 02:56 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Benzene	16	3600	50	12000
Toluene	16	52	58	190
Ethyl Benzene	16	11000	67	46000
m,p-Xylene	16	5700	67	25000
o-Xylene	16	28	67	120
Methyl tert-butyl ether	16	Not Detected	56	Not Detected
tert-Butyl alcohol	62	Not Detected	190	Not Detected
TPH ref. to Gasoline (MW=100)	310	1600000	1300	6500000
2-Propanol	62	Not Detected	150	Not Detected

Q = Exceeds Quality Control limits of 70% to 130%, due to matrix effects.

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	204 Q	70-130
Toluene-d8	113	70-130
4-Bromofluorobenzene	98	70-130

Air Toxics LTD.

AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: P-23 Lab Duplicate

Lab ID#: 0806254R1-15AA

MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN

File Name:	**c062413R1**	**Date of Collection: 6/10/08**	
Dil. Factor:	**3.10**	**Date of Analysis: 6/24/08 03:29 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Benzene	16	3400	50	11000
Toluene	16	49	58	180
Ethyl Benzene	16	10000	67	44000
m,p-Xylene	16	5400	67	23000
o-Xylene	16	26	67	110
Methyl tert-butyl ether	16	Not Detected	56	Not Detected
tert-Butyl alcohol	62	Not Detected	190	Not Detected
TPH ref. to Gasoline (MW=100)	310	1600000	1300	6500000
2-Propanol	62	Not Detected	150	Not Detected

Q = Exceeds Quality Control limits of 70% to 130%, due to matrix effects.

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	184 Q	70-130
Toluene-d8	113	70-130
4-Bromofluorobenzene	98	70-130

Air Toxics LTD.

AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: Lab Blank

Lab ID#: 0806254R1-16A

MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN

File Name:	**c062405**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 6/24/08 02:07 AM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
Benzene	5.0	Not Detected	16	Not Detected
Toluene	5.0	Not Detected	19	Not Detected
Ethyl Benzene	5.0	Not Detected	22	Not Detected
m,p-Xylene	5.0	Not Detected	22	Not Detected
o-Xylene	5.0	Not Detected	22	Not Detected
Methyl tert-butyl ether	5.0	Not Detected	18	Not Detected
tert-Butyl alcohol	20	Not Detected	61	Not Detected
TPH ref. to Gasoline (MW=100)	100	Not Detected	410	Not Detected
2-Propanol	20	Not Detected	49	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	97	70-130
Toluene-d8	102	70-130
4-Bromofluorobenzene	100	70-130

Air Toxics LTD.

AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: Lab Blank

Lab ID#: 0806254R1-16B

MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN

File Name:	**8062405**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 6/24/08 09:18 AM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (uG/m3)	Amount (uG/m3)
2-Propanol	2.0	Not Detected	4.9	Not Detected
Benzene	0.50	Not Detected	1.6	Not Detected
Toluene	0.50	Not Detected	1.9	Not Detected
Ethyl Benzene	0.50	Not Detected	2.2	Not Detected
m,p-Xylene	0.50	Not Detected	2.2	Not Detected
o-Xylene	0.50	Not Detected	2.2	Not Detected
TPH ref. to Gasoline (MW=100)	10	Not Detected	41	Not Detected
Methyl tert-butyl ether	0.50	Not Detected	1.8	Not Detected
tert-Butyl alcohol	5.0	Not Detected	15	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	95	70-130
Toluene-d8	98	70-130
4-Bromofluorobenzene	90	70-130

Air Toxics LTD.

AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: CCV

Lab ID#: 0806254R1-17A

MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN

File Name:	**c062403**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 6/24/08 12:56 AM**	

Compound	%Recovery
Benzene	96
Toluene	98
Ethyl Benzene	101
m,p-Xylene	101
o-Xylene	104
Methyl tert-butyl ether	86
tert-Butyl alcohol	67
TPH ref. to Gasoline (MW=100)	Not Spiked
2-Propanol	93

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	103	70-130
Toluene-d8	103	70-130
4-Bromofluorobenzene	101	70-130

Air Toxics LTD.

AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: CCV

Lab ID#: 0806254R1-17B

MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN

File Name:	8062403	Date of Collection: NA	
Dil. Factor:	1.00	Date of Analysis: 6/24/08 08:02 AM	

Compound	%Recovery
2-Propanol	79
Benzene	74
Toluene	83
Ethyl Benzene	83
m,p-Xylene	85
o-Xylene	82
TPH ref. to Gasoline (MW=100)	Not Spiked
Methyl tert-butyl ether	95
tert-Butyl alcohol	93

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	105	70-130
Toluene-d8	103	70-130
4-Bromofluorobenzene	102	70-130

Air Toxics LTD.

AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: LCS

Lab ID#: 0806254R1-18A

MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN

File Name:	**c062404**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 6/24/08 01:38 AM**	

Compound	%Recovery
Benzene	88
Toluene	89
Ethyl Benzene	95
m,p-Xylene	94
o-Xylene	95
Methyl tert-butyl ether	78
tert-Butyl alcohol	66
TPH ref. to Gasoline (MW=100)	Not Spiked
2-Propanol	89

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	103	70-130
Toluene-d8	104	70-130
4-Bromofluorobenzene	101	70-130

Air Toxics LTD.

AN ENVIRONMENTAL ANALYTICAL LABORATORY

Client Sample ID: LCS

Lab ID#: 0806254R1-18B

MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN

File Name:	**8062404**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 6/24/08 08:29 AM**	

Compound	%Recovery
2-Propanol	99
Benzene	103
Toluene	117
Ethyl Benzene	114
m,p-Xylene	116
o-Xylene	112
TPH ref. to Gasoline (MW=100)	Not Spiked
Methyl tert-butyl ether	123
tert-Butyl alcohol	108

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	99	70-130
Toluene-d8	103	70-130
4-Bromofluorobenzene	103	70-130

ATTACHMENT C

Regional Water Quality Control Board
Environmental Screening Levels
November 2007
Table E-2

Screening for Environmental Concerns at Sites with Contaminated Soil and Groundwater

Prepared by:
California Regional Water Quality Control Board
San Francisco Bay Region
1515 Clay Street, Suite 1400
Oakland, California 94612

INTERIM FINAL - November 2007
(Revised May 2008)

Table E-2. Shallow Soil Gas Screening Levels for Evaluation of Potential Vapor Intrusion Concerns (volatile chemicals only)

			Residential Exposure			Commercial/Industrial Land Use		
	Physical State		Lowest Residential	Carcinogenic Effects	Noncarcinogenic Effects	Lowest C/I	Carcinogenic Effects	Noncarcinogenic Effects
Chemical			(µg/m³)	(µg/m³)	(µg/m³)	(µg/m³)	(µg/m³)	(µg/m³)
Acenaphthene	V	S	4.4E+04		4.4E+04	1.2E+05		1.2E+05
Acenaphthylene	V	S	2.2E+04		2.2E+04	6.1E+04		6.1E+04
Acetone	V	L	6.6E+05		6.6E+05	1.8E+06		1.8E+06
Aldrin	NV	S						
Anthracene	V	S	2.2E+05		2.2E+05	6.1E+05		6.1E+05
Antimony	NV	S						
Arsenic	NV	S						
Barium	NV	S						
Benzene	V	L	8.4E+01	8.4E+01	6.3E+03	2.8E+02	2.8E+02	1.8E+04
Benzo(a)anthracene	NV	S						
Benzo(b)fluoranthene	NV	S						
Benzo(k)fluoranthene	NV	S						
Benzo(g,h,i)perylene	NV	S						
Benzo(a)pyrene	NV	S						
Beryllium	NV	S						
1,1-Biphenyl	V	S						
Bis(2-chloroethyl) ether	V	L	7.4E+00	7.4E+00		2.5E+01	2.5E+01	
Bis(2-chloroisopropyl) ether	V	L	3.4E+00	3.4E+00	2.9E+04	1.2E+01	1.2E+01	8.2E+04
Bis(2-ethylhexyl) phthalate	NV	S						
Boron	NV	S						
Bromodichloromethane	V	L	1.4E+02	1.4E+02	1.6E+04	4.6E+02	4.6E+02	4.1E+04
Bromoform (Tribromomethane)	NV	S						
Bromomethane	V	G	1.0E+03		1.0E+03	2.9E+03		2.9E+03
Cadmium	NV	S						
Carbon tetrachloride	V	L	1.9E+01	1.9E+01	8.3E+03	6.3E+01	6.3E+01	2.3E+04
Chlordane	NV	S						
o-Chloroaniline	NV	S						
Chlorobenzene	V	L	2.1E+05		2.1E+05	5.8E+05		5.8E+05
Chloroethane	V	G	2.1E+04		2.1E+04	5.8E+04		5.8E+04
Chloroform	V	L	4.6E+02	4.6E+02	6.3E+04	1.5E+03	1.5E+03	1.8E+05
Chloromethane	V	G	1.9E+04		1.9E+04	5.3E+04		5.3E+04
2-Chlorophenol	V	L	3.7E+03		3.7E+03	1.0E+04		1.0E+04
Chromium (total)	NV	S						
Chromium III	NV	S						
Chromium VI	NV	S						

Table E-2. Shallow Soil Gas Screening Levels for Evaluation of Potential Vapor Intrusion Concerns (volatile chemicals only)

Chemical	Physical State		Residential Exposure			Commercial/Industrial Land Use		
			Lowest Residential ($\mu g/m^3$)	Carcinogenic Effects ($\mu g/m^3$)	Noncarcinogenic Effects ($\mu g/m^3$)	Lowest Of ($\mu g/m^3$)	Carcinogenic Effects ($\mu g/m^3$)	Noncarcinogenic Effects ($\mu g/m^3$)
Chrysene	NV	S						
Cobalt	NV	S						
Copper	NV	S						
Cyanide	NV	S	1.5E+04		1.5E+04	4.1E+04		4.1E+04
Dibenz(a,h)anthracene	NV	S						
Dibromochloromethane	V	S						
1,2-dibromo-3-chloropropane	V	L	1.3E+00	1.3E+00	4.2E+01	4.3E+00	4.3E+00	1.2E+02
1,2-Dibromoethane	V	S	4.1E+00	4.1E+00	1.9E+03	1.4E+01	1.4E+01	5.3E+03
1,2-Dichlorobenzene	V	L	4.2E+04		4.2E+04	1.2E+05		1.2E+05
1,3-Dichlorobenzene	V	L	2.2E+04		2.2E+04	6.1E+04		6.1E+04
1,4-Dichlorobenzene	V	S	2.2E+02	2.2E+02	1.7E+05	7.4E+02	7.4E+02	4.7E+05
3,3-Dichlorobenzidine	NV	S						
Dichlorodiphenyldichloroethane (DDD)	NV	S						
Dichlorodiphenyldichloroethene (DDE)	NV	S						
Dichlorodiphenyltrichloroethane (DDT)	NV	S						
1,1-Dichloroethane	V	L	1.6E+03	1.5E+03	1.0E+05	5.1E+03	5.1E+03	2.9E+05
1,2-Dichloroethane	V	L	9.4E+01	9.4E+01	1.0E+03	3.1E+02	3.1E+02	2.9E+03
1,1-Dichloroethene	V	L	4.2E+04		4.2E+04	1.2E+05		1.2E+05
cis-1,2-Dichloroethene	V	L	7.3E+03		7.3E+03	2.0E+04		2.0E+04
trans-1,2-Dichloroethene	V	L	1.5E+04		1.5E+04	4.1E+04		4.1E+04
2,4-Dichlorophenol	NV	S						
1,2-Dichloropropane	V	L	2.4E+02	2.4E+02	8.3E+02	8.2E+02	8.2E+02	2.3E+03
1,3-Dichloropropene	V	L	1.5E+02	1.5E+02	4.2E+03	5.1E+02	5.1E+02	1.2E+04
Dieldrin	NV	S						
Diethyl phthalate	NV	S						
Dimethyl phthalate	NV	S						
2,4-Dimethylphenol	V	S						
2,4-Dinitrophenol	NV	S						
2,4-Dinitrotoluene	NV	S						
1,4-Dioxane	NV	L						
Dioxin (2,3,7,8-TCDD)	NV	S						
Endosulfan	NV	S						
Endrin	NV	S						
Ethylbenzene	V	L	9.8E+02	9.8E+02	2.1E+05	3.3E+03	3.3E+03	6.8E+05
Fluoranthene	NV	S						

Table E-2. Shallow Soil Gas Screening Levels for Evaluation of Potential Vapor Intrusion Concerns (volatile chemicals only)

Chemical	Physical State		Residential Exposure			Commercial/Industrial Land Use		
			Lowest Residential	Carcinogenic Effects	Noncarcinogenic Effects	Lowest C/I	Carcinogenic Effects	Noncarcinogenic Effects
			($\mu g/m^3$)	($\mu g/m^3$)	($\mu g/m^3$)	($\mu g/m^3$)	($\mu g/m^3$)	($\mu g/m^3$)
Fluorene	V	S	2.9E+04		2.9E+04	6.2E+04		6.2E+04
Heptachlor	NV	S						
Heptachlor epoxide	NV	S						
Hexachlorobenzene	NV	S						
Hexachlorobutadiene	NV	S						
γ-Hexachlorocyclohexane (Lindane)	NV	S						
Hexachloroethane	NV	S						
Indeno(1,2,3-c,d)pyrene	NV	S						
Lead	NV	S						
Mercury (elemental)	V	S	1.9E+01		1.9E+01	5.3E+01		5.3E+01
Methoxychlor	NV	S						
Methylene chloride	V	L	5.2E+03	5.2E+03	8.3E+04	1.7E+04	1.7E+04	2.3E+05
Methyl ethyl ketone	V	L	1.0E+06		1.0E+06	2.9E+06		2.9E+06
Methyl isobutyl ketone	V	L	6.3E+05		6.3E+05	1.8E+06		1.8E+06
Methyl mercury	NV	S						
2-Methylnaphthalene	V	S						
tert-Butyl methyl ether	V	L	9.4E+03	9.4E+03	6.3E+05	3.1E+04	3.1E+04	1.8E+06
Molybdenum	NV	S						
Naphthalene	V	S	7.2E+01	7.2E+01	6.3E+02	2.4E+02	2.4E+02	1.6E+03
Nickel	NV	S						
Pentachlorophenol	NV	S						
Perchlorate	NV	S						
Phenanthrene	V	S	2.2E+04		2.2E+04	6.1E+04		6.1E+04
Phenol	NV	S						
Polychlorinated biphenyls (PCBs)	NV	S						
Pyrene	V	S	2.2E+04		2.2E+04	6.1E+04		6.1E+04
Selenium	NV	S						
Silver	NV	S						
Styrene	V	L	1.9E+05		1.9E+05	6.3E+05		6.3E+05
tert-Butyl alcohol	V	L						
1,1,1,2-Tetrachloroethane	V	L	3.2E+02	3.2E+02		1.1E+03	1.1E+03	
1,1,2,2-Tetrachloroethane	V	L	4.2E+01	4.2E+01	4.4E+04	1.4E+02	1.4E+02	1.2E+05
Tetrachloroethene	V	L	4.1E+02	4.1E+02	8.3E+04	1.4E+03	1.4E+03	2.3E+05
Thallium	NV	S						
Toluene	V	L	6.3E+01		6.3E+04	1.8E+05		1.8E+05

Table E-2. Shallow Soil Gas Screening Levels for Evaluation of Potential Vapor Intrusion Concerns (volatile chemicals only)

Chemical	Physical State		Residential Exposure			Commercial/Industrial Land Use		
			Lowest Residential	Carcinogenic Effects	Noncarcinogenic Effects	Lowest C/I	Carcinogenic Effects	Noncarcinogenic Effects
			($\mu g/m^3$)	($\mu g/m^3$)	($\mu g/m^3$)	($\mu g/m^3$)	($\mu g/m^3$)	($\mu g/m^3$)
Toxaphene	NV	S						
TPH (gasolines)	V	L	1.0E+04		1.0E+04	2.9E+04		2.9E+04
TPH (middle distillates)	V	L	1.0E+04		1.0E+04	2.9E+04		2.9E+04
TPH (residual fuels)	NV	LIS						
1,2,4-Trichlorobenzene	V	L	8.3E+02		8.3E+02	2.3E+03		2.3E+03
1,1,1-Trichloroethane	V	L	4.6E+05		4.6E+05	1.3E+06		1.3E+06
1,1,2-Trichloroethane	V	L	1.5E+02	1.5E+02	2.9E+03	5.1E+02	5.1E+02	8.2E+03
Trichloroethene	V	L	1.2E+03	1.2E+03	1.3E+05	4.1E+03	4.1E+03	3.5E+05
2,4,5-Trichlorophenol	V	S	7.3E+04		7.3E+04	2.0E+05		2.0E+05
2,4,6-Trichlorophenol	NV	S						
Vanadium	NV	S						
Vinyl chloride	V	G	3.1E+01	3.1E+01	2.1E+04	1.0E+02	1.0E+02	5.8E+04
Xylenes	V	L	2.1E+04		2.1E+04	5.8E+04		5.8E+04
Zinc	NV	S						

Notes:

Soil gas screening levels intended to be protective of indoor air quality, calculated for volatile chemicals only.
Physical state of chemical at ambient conditions (V - volatile, NV - nonvolatile, S - solid, L - liquid, G - gas).
Chemical considered to be volatile if Henry's Law constant (atm m^3/mole) $>10^{-5}$ and molecular weight <200 (see Table E-1).
Dibromochloromethane, dibromochloropropane and pyrene considered volatile for purposes of modeling (USEPA 2004).
Target cancer risk = 1E-06, Target Hazard Quotient = 0.2 for all chemicals.
Residential soil gas:indoor air attenuation factor = 0.001 (1/1000). Commercial/industrial soil gas:indoor air attenuation factor = 0.0005 (1/2000).
Soil gas screening level for ethanol based on potential indoor air nuisance concerns (refer to Section 5.3.3 and Table H series).
soils or limited soil impacts and no groundwater source of VCCs.

ATTACHMENT D

Site Conceptual Model

SITE CONCEPTUAL MODEL

FORMER SHELL-BRANDED SERVICE STATION
15275 WASHINGTON AVENUE
SAN LEANDRO, CALIFORNIA

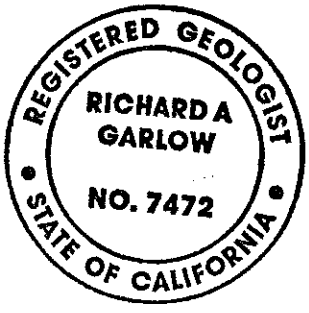
Prepared for:

Shell Oil Products US

Prepared by:

Delta Consultants, Inc.
312 Piercy Road
San Jose, California 95138

October 7, 2008



Richard A. Garlow, M.S., P.G.
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1.0 INTRODUCTION

Delta Consultants, Inc. (Delta), on behalf of Shell Oil Products US has prepared this Site Conceptual Model (SCM) for the former Shell-branded service station located at 15275 Washington Avenue, San Leandro, California (site) (Figure 1). The SCM provides a working hypothesis regarding the current and future distribution of petroleum hydrocarbons detected in soil and groundwater beneath the site.

The key elements of the SCM are:

Site Location and Description
Regional Hydrogeologic Setting
Nature and Extent of the Petroleum Hydrocarbon Source(s)
Contaminant Fate and Transport Characteristics
Potential Exposure Pathways
Potential Receptors

2.0 SITE LOCATION AND DESCRIPTION

The following sections provide a description of the site and surrounding area.

2.1 Site Location

The subject site is located in the northwest corner of the intersection of Washington Avenue and Lewelling Boulevard in San Leandro, California. (Figures 1 and 2). The site is designated by Alameda County Environmental Health Services (ACEHS) as Fuel Leak Case No. RO0000372. The Geotracker Global ID is T0600101226.

2.2 Site Description

The subject site, formerly a Shell-branded service station, is currently an automotive emissions testing facility (Speed Smog Check). The surrounding area is a mix of residential (primarily multi-family units) and commercial properties (Figure 3). The site is bounded on the west by a mobile home park, on the south by Lewelling Boulevarad, on the east by Washington Avenue, and on the north by commercial buildings. An ARCO service station is located on the southwest corner of the intersection and is an open leaking underground fuel tank (LUFT) case.

2.3 Site Owner

The site property is currently owned by Mr. Frank Salel, Salel Enterprises, P.O. Box 5099, Oakland, California 94605.

3.0 SITE GEOLOGIC/HYDROGEOLOGIC SETTING

The following sections provide a summary of the regional geologic and hydrogeologic setting.

3.1 Regional Geologic Setting

The site is located on the East Bay Plain approximately two miles east of the edge of San Francisco Bay. (Figure 4). The East Bay Plain is a northwest trending strip of land between foothills to the east and San Francisco Bay to the west. As mapped by E.J. Helley and others (1979), soil in the site vicinity consists of late Pleistocene alluvium consisting of weakly consolidated slightly weathered poorly sorted irregularly interbedded clay, silt, sand, and gravel. Sediments become finer-grained near the edge of San Franciso Bay.

3.2 Regional Hydrogeologic Setting

The site is located in the central portion of the East Bay Plain Groundwater Subbasin (DWR Bulletin 118). The East Bay Plain subbasin aquifer system consists of unconsolidated sediments of Quaternary age. Shallow aquifers are recharged by numerous creeks that cross the subbasin in a eastward direction. In the site area, streams discharge to San Francisco Bay. The total depth of domestic wells reportedly ranges from 32 to 525 feet below the ground surface (bgs) with an average of 206 feet bgs. Total depth of municipal and irrigation wells range from 29 to 630 feet bgs with an average of 191 feet bgs(DWR Bulletin 118). Groundwater flow is typically to the west toward San Francisco Bay. Water agencies in the area include East Bay Municipal Utility District (East Bay MUD) and Alameda County Flood Control and Water Conservation District.

TRC completed a well survey of the site area in 2006. Thirty-nine wells were identified within approximately ½-mile radius of the site (see table and map in Attachment A). Twenty-nine of the wells were classified as "irrigation", six as "domestic", one as "cathodic", and three were of unknown use. The depth of irrigation wells ranged from 34 feet to 720 feet bgs The depth of domestic wells ranged from 28 feet to 84 feet bgs. No municipal water supply wells were identified within the search radius.

3.3 Site Hydrogeologic Conditions

Borings have encountered primarily clay to a depth of approximately 25 feet bgs. Some clay samples were described as containing fractures and root holes. Interbedded layers of silty sand/clayey sand were indentified in borings S-1 through S-5, S-9, S-17, SG-3, and SR-1 at depths of approximately 4 to 6 feet bgs. Silty sand and sand were found from approximately 25 feet to 40.5 feet bgs, the total depth explored. Copies of boring logs and well construction diagrams are provided in Appendix B. Hydrogeologic cross-sections are shown on Figures 5 and 6.

Groundwater was first encountered in site borings at depths ranging from approximately 6 feet to 20 feet bgs within clay deposits. Enviros in 1997 concluded "the upper water-bearing zone appears to extend to a depth of approximately 6 feet to 20 feet bgs. Water in this upper zone is most likely yielded from the discreet sandy interbeds and possibly from silty horizons in the predominantly clayey (CL and CH) matrix." All groundwater monitoring wells are screened in this upper groundwater zone. Groundwater monitoring construction information is contained in Appendix B.

Groundwater flow is predominantly to the west-southwest. Copies of selected groundwater contour maps are included in Appendix C. A step-test was performed at the site on March 27, 1990 using well SR-1. The well dewatered after 52 minutes of pumping at 2 gallons per minute. Slug tests were performed in wells S-1, S-3, S-5, S-7, S-9, S-13, S-14, and S-16. Analysis of the slug test data indicated coefficient of permeability values ranging from 7.27 to 99.9 feet per day. GeoStrategies, Inc. (June 23, 1990) concluded "The wide

range in values are most likely attributed to the heterogeneity of the clay (especially the complexity of the interbedded sandy horizons) in the subsurface as well as inherent well construction difficulties in low-permeable, fine grained aquifers where classic well design procedures fail."

4.0 NATURE AND EXTENT OF SOURCE

The following sections describe the source(s) of the petroleum hydrocarbons that have been detected in soil and groundwater beneath and adjacent to the site.

4.1 Former USTs (1985-1987)

Elevated concentrations of total petroleum hydrocarbons as gasoline (TPH-g) were detected in groundwater in the first site groundwater monitoring wells installed in August 1985 (S-1 through S-4, Figure 2). Separate phase hydrocarbons (SPH) were detected in well S-3 (0.5 feet). Well S-3 was located west and downgradient of the site underground fuel storage tanks (USTs). In 1986, four borings (S-A through S-D) were drilled to obtain soil and groundwater samples in areas of potential petroleum hydrocarbons; waste oil tank (S-A) and USTS (S-B, SB-C, S-D, Figure 2). TPH-g was detected in the tank pit backfill at 1,700 milligrams per kilogram (mg/kg) and at the bottom of tank pit at 1,500 mg/kg (boring S-B). Soil analytical data is contained in Appendix D. Boring S-B was converted to a groundwater monitoring well. SPH (0.4 feet) was detected in well S-B. Wells S-B, S-2, and S-4 were destroyed in May 1987 during on-site construction activities.

4.2 Waste Oil Tank Removal (1987)

The site waste oil tank was replaced in June 1987. Soils were excavated to a depth of approximately 13 feet bgs. Soil samples collected from beneath the waste oil tank contained 280 mg/kg TPH-g and 14 mg/kg benzene. The soil samples did not contain total petroleum hydrocarbons as diesel (TPH-d) or any volatile organic compounds (VOCs).

4.3 UST Replacements (1987)

The four fuel USTs were removed in June 1987 (Figure 2). A total of four soil samples were collected from the tank pit walls (Samples A-D). Soil samples, with the exception of sample D, contained less than 100 mg/kg TPH-g. Soil sample D contained 910 mg/kg TPH-g.

In 1987, three trenches were excavated away from the former tank pit area. The trenches were dug to a depth of approximately 8.5 feet bgs. TPH-g was detected in soil samples at from 100 mg/kg to 730 mg/kg.

4.4 Additional Groundwater Monitoring Well Installations (1988-1989)

In November 1988, seven monitoring wells S-6 through S-12 were installed (Figure 2). A soil gas survey was also performed. Groundwater samples collected from wells S-1 through S-12 contained TPH-G from 50 micrograms per liter (ug/l) to 70,000 ug/l (well S-3). Soil gas samples contained TPH-g at concentrations of 0.63 parts per million (ppm) to 5,800 ppm. Soil survey data is contained in Attachment E. In March 1989, groundwater monitoring wells S-13 through S-17 and recovery well SR-1 were installed (Figure 2). In 1991, well S-18 was installed.

4.5 Groundwater Monitoring Data (1985 – 2008)

Groundwater monitoring reports dating back to 1985 indicate that levels of petroleum hydrocarbons have, with the exception of well S-9, declined over time apparently due to natural attenuation and soil vapor extraction. Concentrations in well S-9 remain elevated.

Historic groundwater monitoring data is contained in Appendix F. The highest concentrations of TPH-g have been detected in groundwater samples from wells S-3, S-5, and S-9 located adjacent to the fuel USTs

and the downgradient area to the west. TPH-G was greater than 10,000 ug/l in well S-3 from its installation in 1985 through January 2003. In 1993, wells S-11 through S-15 were paved over by the City of San Leandro (Enviros, 1997).

4.6 Soil Gas Survey (1997)

In March 1997, a second soil gas survey was performed at the site and adjacent trailer park property (Figure 2). Soil gas samples were collected using GeoProbe direct-push soil vapor sampling equipment at nine locations (SG-01 through SG-09). At five locations (SG-01, SG-02, SG-05, SG-06, and SG-09) soil vapor samples were collected at a depth of 4 feet bgs. At four locations (SG-03, SG-04, SG-07, and SG-08) soil vapor samples were collected at depths of 2 feet, 4 feet, and 6 feet bgs. An ambient air sample (AMB-01) was collected at a location between the service station and the trailer park. Soil samples were collected at four locations; SG-03, SG-04, SG-07, and SG-08).

Soil vapor analytical results are summarized in a table contained in Appendix E. The highest TPH-g concentrations were detected at locations SG-01, at 100,000,000 micrograms per cubic meter (ug/m3) and SG-007 at 130,000,000 ug/m3. The highest benzene concentrations were detected in soil vapor samples SG-01 at 750,000 ug/m3, SG-03 at 90,000 ug/m3 and SG-07 at 450,000 ug/m3.

The highest concentrations of TPH-g were detected in SG-03 at 4 to 6 feet bgs at 4,200 mg/kg and 6 to 8 feet at 3,600 mg/kg. The highest benzene concentration was detected at location SG-3 at 4 to 6 feet bgs at 10 mg/kg.

4.7 Soil Gas Survey (2008)

In June 2008, Delta performed a post-remediation soil gas survey (see map in Appendix E). Soil gas samples were collected from 14 locations (P-10 through P-23). Sample points P-10, P-11, P-12, and P-15 were located on the adjacent mobile home park. Soil vapor samples were collected at a depth of 5.5 feet bgs, just above the top of the saturated zone. TPH-g was detected at concentrations greater than 5,000,000 ug/m3 at locations P-11, P-12, P-19, and P-21 through P-23, located in the western or downgradient portion of the site and adjacent trailer park.. Soil vapor analytical data is summarized on a table in Appendix E. Benzene was detected at greater than 1,000 ug/m3 at locations P-11, P-14, and P-21 through P-23.

4.8 Residual Soils as On-Going Source

The depth to groundwater beneath the site is approximately 6 feet bgs. Petroleum hydrocarbons are primarily concentrated in the dissolved phase. The saturated clay soils beneath the USTs are anticipated to contain a small mass of petroleum hydrocarbons. Previous reports indicate that no over-excavation was performed during UST removal in 1987. Declining TPH-g concentrations in groundwater samples from well S-3, located downgradient of the former USTs, indicates that most of TPH-g has been leached from the soil. A soil vapor extraction (SVE) system operated at the site from 1998 to 1999. The system appears to have been effective in removing petroleum hydrocarbons from the thin vadose zone (see Section 6.0)

4.9 Summary

A release of gasoline from the former site USTs occurred sometime before 1985 when SPH was first detected in well S-3. MTBE is not a chemical of concern due to the age of the release.

5.0 FATE AND TRANSPORT CHARACTERISTICS

The following sections describe potential contaminant migration pathways for petroleum hydrocarbons. Plume migration and contaminant concentration trends are discussed.

5.1 Underground Utility Conduits

The exact location and depth information of utility trenches both on-site and in the site vicinity has not been determined. Based on the documents in Delta files, a survey of nearby utilities for the purpose of a preferential pathway evaluation has not been performed.

5.2 Soil Migration Pathways

Soils beneath the site area are generally fine-grained and do not provide pathways for rapid spread of contaminants. Borings have encountered primarily clay to a depth of approximately 25 feet bgs. Silty sand and sand were found from approximately 25 feet bgs to 40.5 feet, the total depth explored. Copies of boring logs and well construction diagrams are provided in Appendix B. Hydrogeologic cross-sections are shown on Figures 4 and 5.

5.3 Hydrogeologic Pathways

Migration of dissolved contaminants through clay soil appears to be limited since its release more than 20 years ago. TPH-G has migrated beyond well S-9 located approximately 50 feet downgradient and S-8 located approximately 70 feet downgradient. TPH-G is not detected in wells S-10 and S-13 located approximately 150 feet downgradient (Figure 2).

The groundwater flow direction beneath the site has consistently been to the west and southwest. The groundwater gradient at the site historically has been approximately 0.01 feet/foot (ft/ft). Historic groundwater contour maps are contained in Appendix C.

The groundwater flow rate beneath the site can be approximated based on the hydraulic conductivity of the soil, groundwater flow gradient and effective soil porosity. The linear groundwater flow rate or velocity (V) can be calculated from the formula:

$V = (K \times I)/N$

where K = soil coefficient of hydraulic conductivity
I = groundwater gradient
N = effective soil porosity

The predominant soil types observed beneath the site was clay. Slug tests were performed in 1990, however, the results were interpreted as reflecting the well sand pack rather than the surrounding soil. The average K for a clay is estimated in the range of 1 x 10-6 to 1 x 10-8 centimeters per second and the effective porosity at 45% (Freeze and Cherry, 1979). The site hydraulic gradient has been approximately 0.01 ft/ft. Using the above estimated parameters, a groundwater velocity of less than 1-foot feet per year is calculated.

The flow rate for TPH-G can also be estimated based on historic groundwater monitoring data. The TPH-G appears to have migrated approximately 100 feet since before 1985 when the first groundwater monitoring wells were installed (approximately 25 years). The resulting calculated flow rate is 4 feet per year which

would be typical for a sandy silt than a clay. The discrepancy may be the result of secondary permeability consisting of fractures and root holes reported in some clay samples.

5.4 Contaminant Migration Model

It appears that a release occurred prior to 1985 from the former site USTs removed in 1987. The USTs were submerged below the top of the saturated zone at approximately 5 to 10 feet bgs. Petroleum hydrocarbons moved directly from the USTs into the groundwater, where they were dissolved and began migrating with the groundwater to the west-southwest. By January 2008, dissolved petroleum hydrocarbons had migrated more than 100 feet downgradient and were detected in the sample from well S-9 at 11,000 ug/l (Figure 2). The downgradient extent of TPH-g has been defined by off-site wells S-10, S-13, S-17, and S-18. TPH-g in the January 2008 samples from these wells was below the laboratory reporting limit.

An ARCO service station is located approximately 125 feet southeast of the site (Figure 3). The ARCO service station is cross-gradient from the site. The 76 station does not appear to have any impact on the ARCO station.

5.5 Concentration Trends

TPH-g concentrations in wells has generally declined over time. TPH-g concentration graphs for wells S-3, S-8, and S-9 are presented as Attachment G. TPH-g concentrations in on-site well S-3 have steadily declined from high in 1992-1994. Well S-3 is located immediately downgradient of the site USTs. Wells S-8 and S-9 are located approximately 75 feet and 50 feet, respectively, west and southwest of well S-3. TPH-g concentrations began to increase in well S-8 in 1991-1993 reaching a maximum concentration of 2,000 ug/l in July 2004. The TPH-g concentration in well S-8 was 560 ug/l in January 2008.

The TPH-g concentration in well S-9 began to increase in late 1992 reaching a maximum concentration of 22,500 ug/l in July 2006. The TPH-G concentration in well S-9 was 11,000 ug/l in January 2008.

6.0 SITE REMEDIATION

The site fuel USTs were removed and replaced in June 1987. A total of 500 cubic yards of soil were removed from the tank pit and transported off-site for disposal. An additional 200 cubic yards of soil were excavated from trenches in the dispenser areas. Approximately 1,410 pounds of vapor phase hydrocarbons were removed by the soil vapor extraction (SVE) system in 1998-1999. The SVE system was removed from the site in 2002 (Delta, June 2007).

7.0 RISK-BASED CORRECTIVE ACTION EVALUATIONS

The following sections evaluate the various potential impacts to sensitive receptors from petroleum hydrocarbons detected in soil and groundwater.

7.1 Previous Risk-Based Corrective Action (RBCA) Evaluation

Weiss Associates, in December 1996, prepared a Tier I RBCA evaluation (Weiss, June 23, 1997). Tier I risk-based screening levels (RBSLs) were established for benzene, ethylbenzene, toluene, xylene, and methyl tert-butyl ether (MTBE) using the "models and recommended parameters in the ASTM Standard." A copy of the computer out-put is contained in Appendix H. Based on the Tier I RBCA evaluation, RBSLs were found to be exceeded for the following potentially complete pathways:

Volatilization of benzene and toluene from subsurface soils (>3 feet depth) to indoor air;
Volatilization of benzene from subsurface soils to outdoor air;
Leaching of benzene and toluene from subsurface soils to groundwater;
Volatilization of benzene from groundwater to indoor air;
Ingestion of benzene contaminated groundwater.

Weiss Associates next completed a Tier II evaluation using site specific data. Weiss used a risk of 10-5 for carcinogenic chemicals and a hazard quotient of 1.0 for non-carcinogenic chemicals for residential land use. Site specific target levels (SSTL) were calculated. Comparison of representative benzene concentrations in the site soils and groundwater to the Tier 2 SSTLs indicated that SSTLs were exceeded for the following potentially complete pathways:

Volatilization of benzene in soil to indoor air;
Volatilization of benzene in the groundwater to indoor air;
Ingestion of benzene in groundwater above drinking water standard (maximum contaminant limit - MCL).

The Weiss report concluded that there was a potential risk associated with indoor air quality at the site and adjacent trailer park. As a result of these evaluations, a SVE system was installed at the site. The system operated from 1998 to 1999.

7.2 Environmental Screening Levels

Additional soil gas sampling was performed in June 2008. Results of soil gas analysis indicated that TPH-g and benzene concentrations in soil and groundwater beneath the site and adjacent trailer part remained above RBSLs. The California Regional Water Quality Control Board, San Francisco Bay Region (RWQCB) has published Environmental Screening Levels (ESLs) for chemicals commonly found in soil and groundwater at sites where releases of chemicals have occurred. The RWQCB notes "The ESLs are considered to be conservative." "Within noted limits, risks to human health and the environment can be considered to be insignificant at sites where concentrations of chemicals of concern do not exceed the respective ESLs. The presence of chemicals of concern above the ESLs does not necessarily indicate that a significant risk exists at the site." The tables below compare site specific soil and groundwater concentrations for TPH-g and benzene with ESLs for various potential sensitive receptors. The ESL tables for various sensitive receptors, as found in the November 2007 publication, are referenced.

	ESL Table	TPH-g (mg/kg)	Benzene (mg/kg)	Exceeds ESL
Maximum ShallowSoil Concentration; SG samples; <5 feet, March 1997, pre-remediation		5,600 (SG-8)	31 (SG-8)	
Direct Exposure - Residential	K-1	110	0.12	Yes
Direct Exposure – Commercial	K-2	450	0.27	Yes
Direct Exposure – Construction/Trench Workers	K-3	42,000	12	Yes

	ESL Table	TPH-g (ug/m3)	Benzene (ug/m3)	Exceeds ESL
Max. Soil Vapor Concentrations, P samples, 2008		9,000,000 (P-19)	12,000 (P-23)	
Potential Vapor Intrusion - Residential	E	10,000	84	Yes
Potential Vapor Intrusion - Commercial	E	29,000	280	Yes

	ESL Table	TPH-g (ug/L)	Benzene (ug/L)	Exceeds ESL
Max. Groundwater Concentrations (1/15/08)		11,000 (S-9)	68 (S-9)	
Potential Vapor Intrusion - Residential	E-1	NA	540	No
Potential Vapor Intrusion - Commercial	E-1	NA	1,800	No
California Maximum Contaminant Level (MCL)	F-3	NA	1.0	Yes

A comparison of ESLs with June 2008 soil vapor samples indicates ESLs are exceeded for direct exposure and indoor air inhalation beneath the site and adjacent trailer park.

7.3 RBCA Tier II Analysis

Delta prepared a Risk Based Corrective Action Plan (RBCA) for removal of petroleum hydrocarbon impacted soil at the above referenced site. The following input data were used in the site analysis;
Chemicals of concern were considered total petroleum hydrocarbons as gasoline (TPH-g; C-07-C08 aromatics) and benzene.
Depth to groundwater of 6 feet below ground surface (bgs).
Surface soils from 0 to 3 feet bgs (upper vadose zone).
Subsurface soils from 3 to 6 feet bgs (lower vadose zone).
Acceptable risk of 1 x 10-6 for carcinogenic chemicals and a target hazard quotient of 1.0 for non-carcinogenic chemicals
Cleanup levels based on residential land use.
Program default parameters were used for soil vapor migration and standard building construction details.
Johnson & Ettinger model was used for air migration calculations.

7.4 Calculations of SSTLs

Delta calculated site RBCA Site Specific Target Levels (SSTLs) using software produced by Groundwater Services, Inc. titled RBCA Tool Kit for Chemical Releases, Version 2.01. The RBCA program divides the

subsurface into surface soils, subsurface soils, and groundwater. The program does not allow for analysis of impacted soils within the groundwater zone.
Cleanup levels or SSTLs were calculated for soil volatilization to indoor air, soil volatilization to outdoor air, inhalation for excavation workers with impacted soil, and groundwater volatilization to outdoor and indoor air . A copy of the program input and out-put tables and illustrations is provided as Attachment H.

Model out- put results are summarized below.

SSTLs Surface Soil (0 to 3.3 feet)	TPH-g (mg/kg)	Benzene (mg/kg)	Exceeds SSTL
Max. Surface Soil Concentrations (March 1997)	5.1	0.22	
Soil volatilization to indoor air	1,000	0.59	No
Direct contact: residential inhalation	33,000	450	No
Direct contact: trench workers inhalation	1,000,000	26,000	No

SSTLs Subsurface Soil (3.3 to 6.0 feet)	TPH-g (mg/kg)	Benzene (mg/kg)	Exceeds SSTL
Max. Subsurface Soil Concentrations (March 1997)	5,600	31	
Soil volatilization to indoor air	1,000	0.59	Yes

SSTLs Groundwater	TPH-g (mg/l)	Benzene (mg/l)	Exceeds SSTL
Max. Groundwater Concentrations (1/15/08)	11,000	68	
Groundwater volatilization to outdoor air (residential)	>SL	1,800	No
Groundwater volatilization to indoor air (residential)	>SL	2.7	Yes

> SL indicates risk-based target concentrations greater than constituent solubility

7.5 SSTL Evaluation

Delta's RBCA Tier II evaluation indicates that SSTLs are exceeded for subsurface soils for TPH-g and benzene volatilization to indoor air and for groundwater for benzene volatilization to indoor air beneath the site and adjacent trailer park.

7.6 Impact to Drinking Water Supply Wells

A review of Department of Water Resources (DWR) files was performed in 2006 by TRC to identify any wells within a ½-mile radius of the site. The well search did not identify any water supply wells within ½ mile of the site. A copy of the TRC well survey study is provided as Appendix A.

8.0 SUMMARY

Delta prepared this SCM to describe the occurrence, migration, and fate of petroleum hydrocarbons identified beneath the site and downgradient adjacent property (trailer park). The following are the key observations and conclusions;

Site soils are generally fine-grained clay to a depth of approximately 25 feet bgs. Silty sand and sand are found from approximately 25 feet to 40.5 feet bgs, the total depth explored. The groundwater flow direction is to the west/southwest. The flow rate is estimated at approximately 4 feet per year.

Groundwater typically occurs at a depth of approximately 6 feet below top of casing. Monitoring wells are typically screened from 5 feet to 20 feet bgs.

A release of gasoline from the former site USTs appears to have occurred prior to March 1985.

SPH was detected in well S-B near the former USTs in 1986 at a thickness of 0.4 feet. A TPH-g and BTEX plume has migrated off-site to the west/southwest beneath an adjacent trailer park. The downgradient extent of the plume has been defined (wells S-10, S-17, and S-18). Well S-9, located within the trailer park, currently has the highest concentrations of TPH-g (11,000 ug/l) and benzene (68 ug/l). The TPH-g concentration in well S-9 appears to be increasing.

A RBCA Tier I and II evaluation was performed in 1997 by Weiss Associates. The report concluded that there was a potential risk associated with indoor air quality at the site and adjacent trailer park. As a result of these evaluations, a SVE system was installed at the site.

Approximately 1,410 pounds of vapor phase hydrocarbons were removed by the SVE system in 1998-1999. The SVE system was removed from the site in 2002 (Delta, June 2007).

Soil vapor sampling in June 2008 detected concentrations of TPH-G and benzene as high as 9,000,000 ug/m3 and 12,000 ug/m3, respectively, on site. TPH-G and benzene were detected beneath the trailer park at concentrations as high as 8,000,000 ug/m3 and 1,100 ug/m3, respectively.

A RBCA Tier I evaluation was performed as part this report. A comparison of TPH-G and benzene concentrations in site soil vapor, soil, and groundwater with RWQCB ESLs indicates that they pose a risk to indoor air quality both at the site and adjacent trailer park.

A RBCA Tier II evaluation was performed as part this report. A comparison of TPH-G and benzene concentrations in site soil vapor, soil, and groundwater with SSTLs indicates they pose a risk to indoor air quality both at the site and adjacent trailer park.

9.0 RECOMMENDATIONS

Risk based soil and groundwater cleanup evaluations indicate that remedial measures need to be performed to reduce TPH-G and benzene concentrations in groundwater beneath the site and adjacent trailer park.

10.0 LIMITATIONS

The recommendations contained in this report represent Delta's professional opinions based upon the currently available information and are arrived at in accordance with currently acceptable professional standards. This report is based upon a specific scope of work requested by the client. The Contract between Delta and its client outlines the scope of work, and only those tasks specifically authorized by that contract or outlined in this report were performed. This report is intended only for the use of Delta's Client and anyone else specifically listed on this report. Delta will not and cannot be liable for unauthorized reliance by any other third party. Other than as contained in this paragraph, Delta makes no express or implied warranty as to the contents of this report.

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FIGURES

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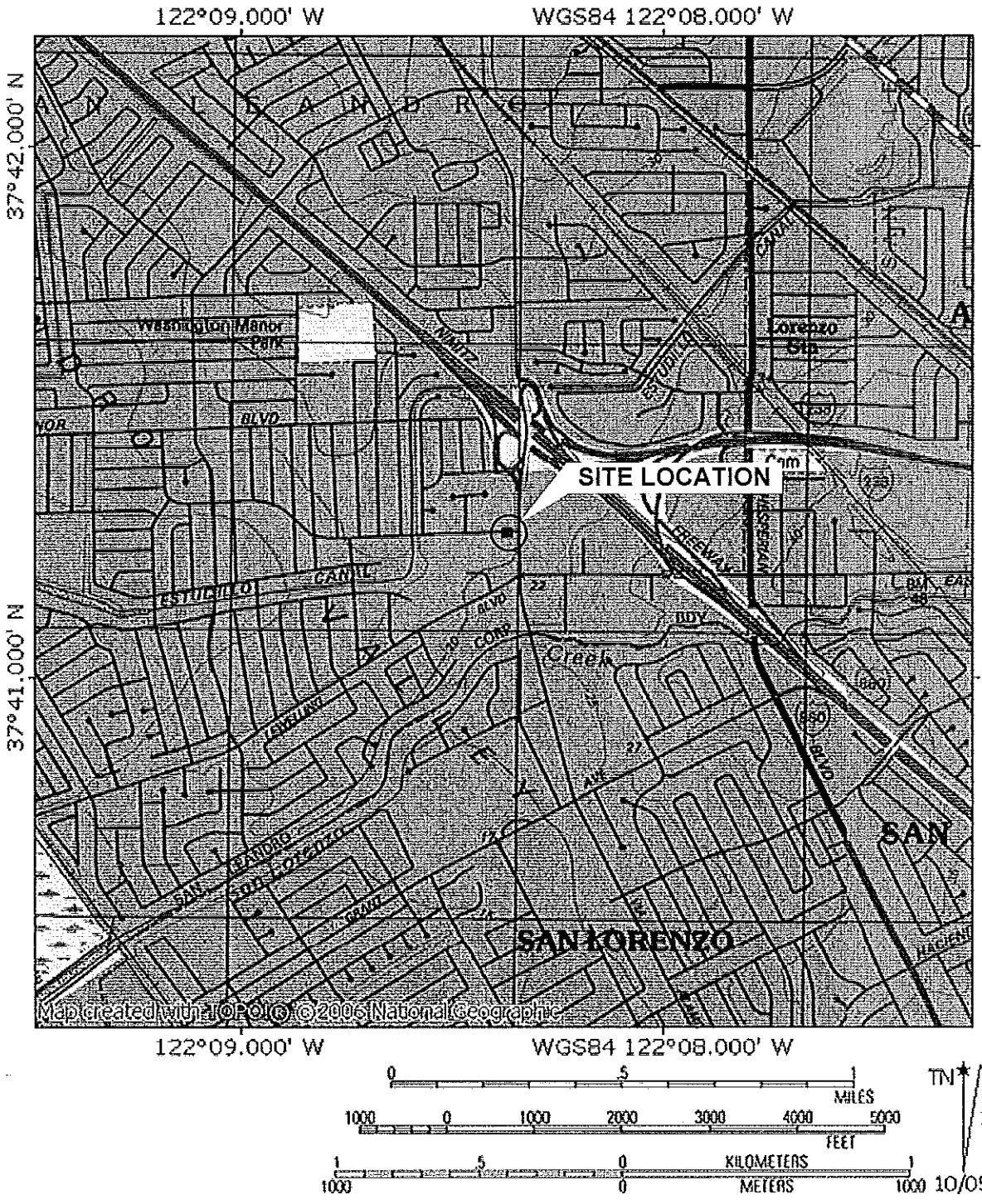
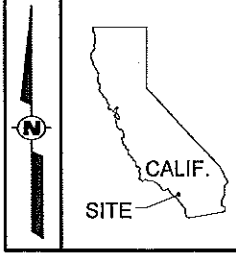
J.F.F.			SCA152751



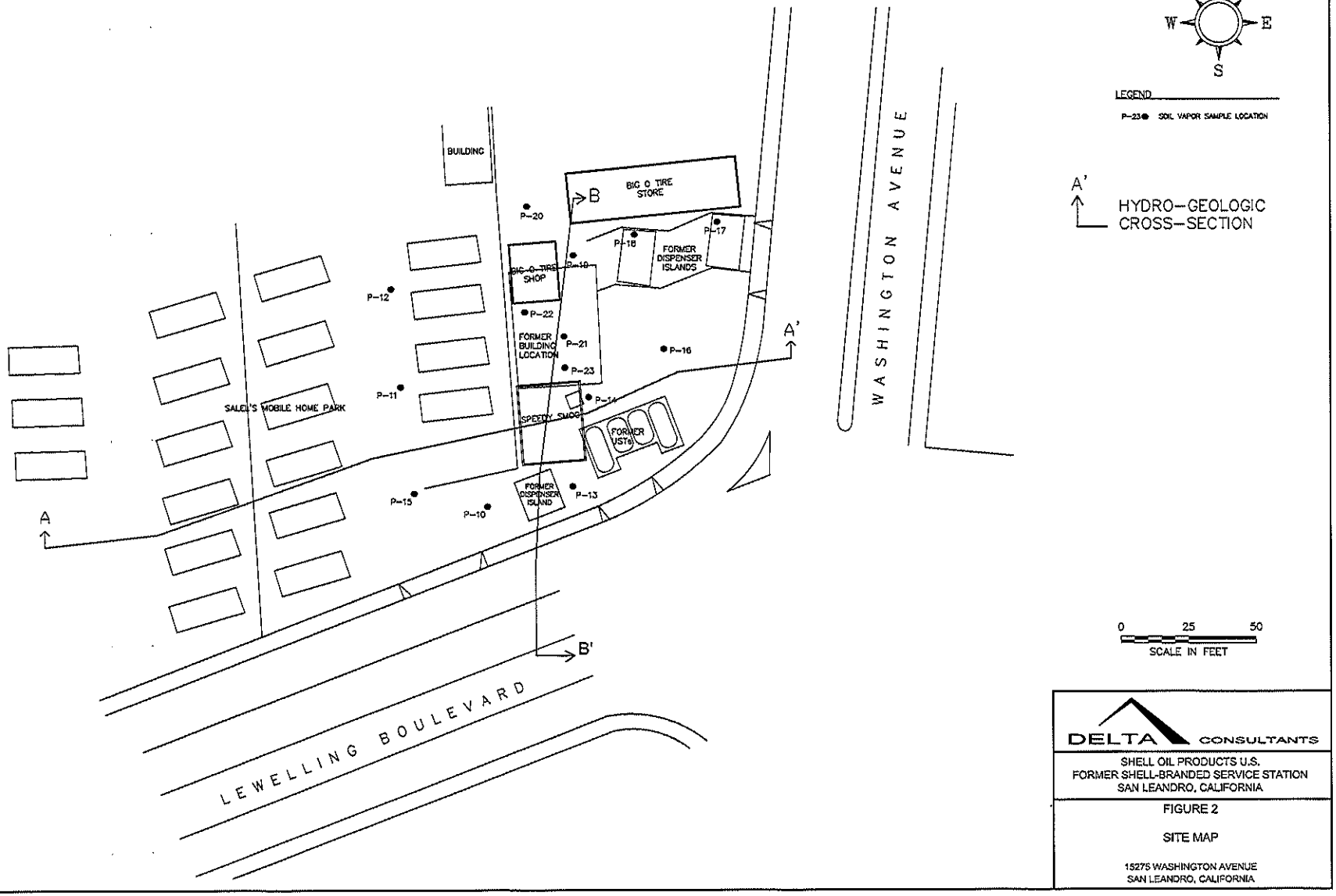


DELTA CONSULTANTS

SHELL OIL PRODUCTS US
SHELL SERVICE STATION
SAN LEANDRO, CALIFORNIA

FIGURE 1
SITE LOCATION MAP

15275 WASHINGTON AVENUE
SAN LEANDRO, CALIFORNIA



DRAWN BY	CHECKED BY	APPROVED BY	PROJECT NUMBER
CO 9/11/08	AD 9/11/08		SCA15275-1

DELTA CONSULTANTS

SHELL OIL PRODUCTS U.S.
FORMER SHELL-BRANDED SERVICE STATION
SAN LEANDRO, CALIFORNIA

FIGURE 2

SITE MAP

15275 WASHINGTON AVENUE
SAN LEANDRO, CALIFORNIA

Figure 3 – Aerial Photograph of Site Area

Former Shell-branded Service Station

15275 Washington Boulevard

San Leandro, California

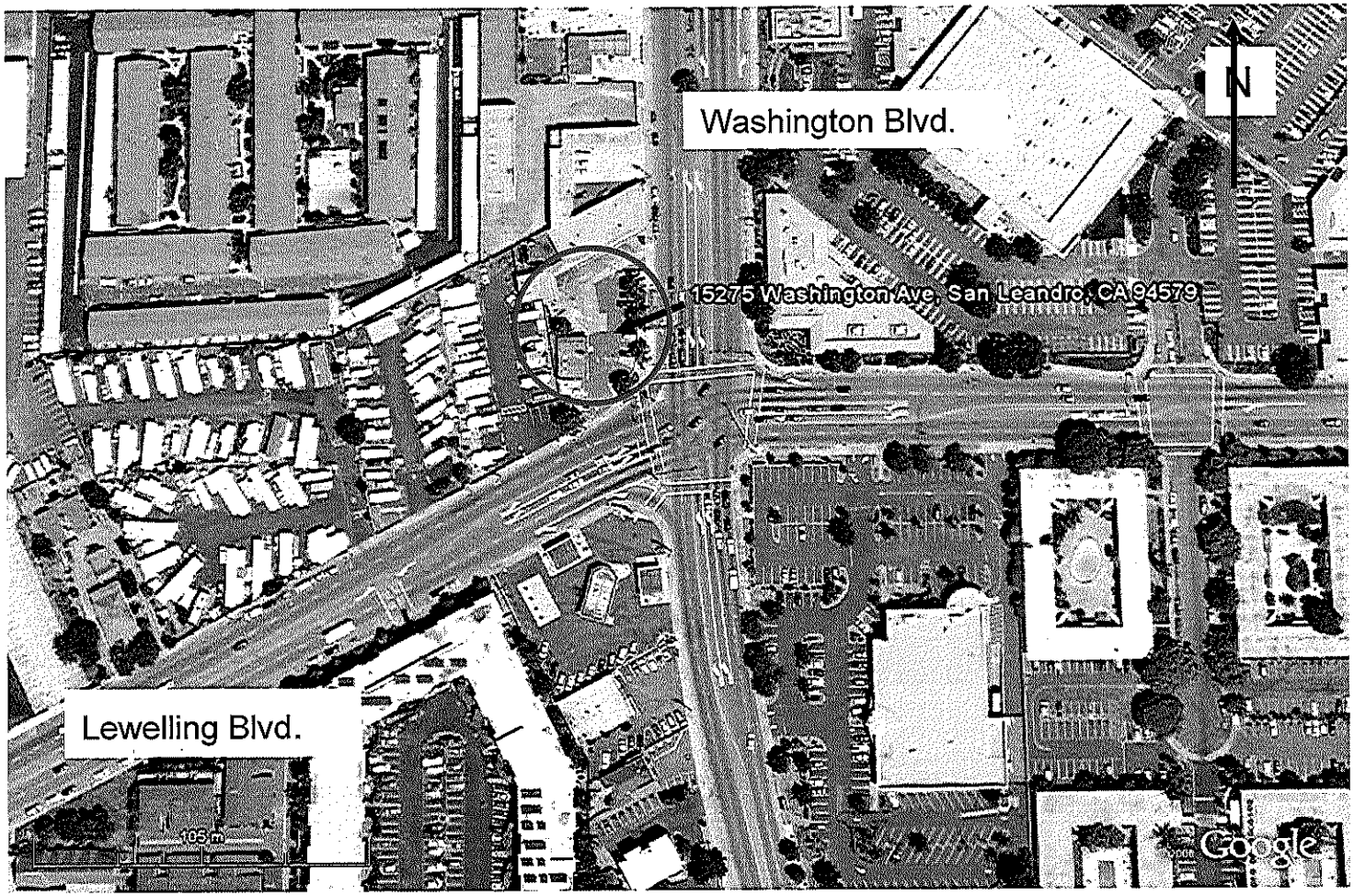
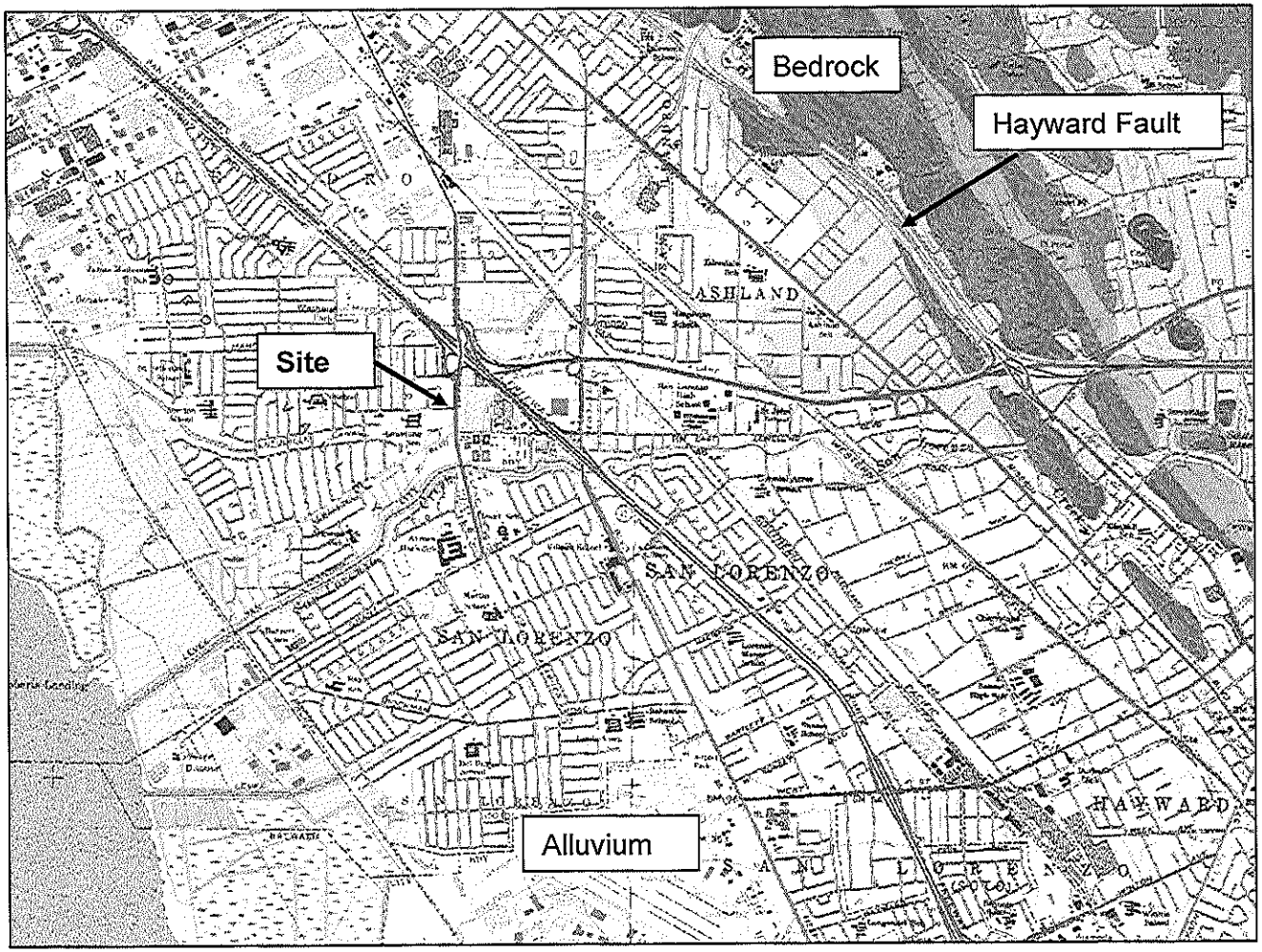
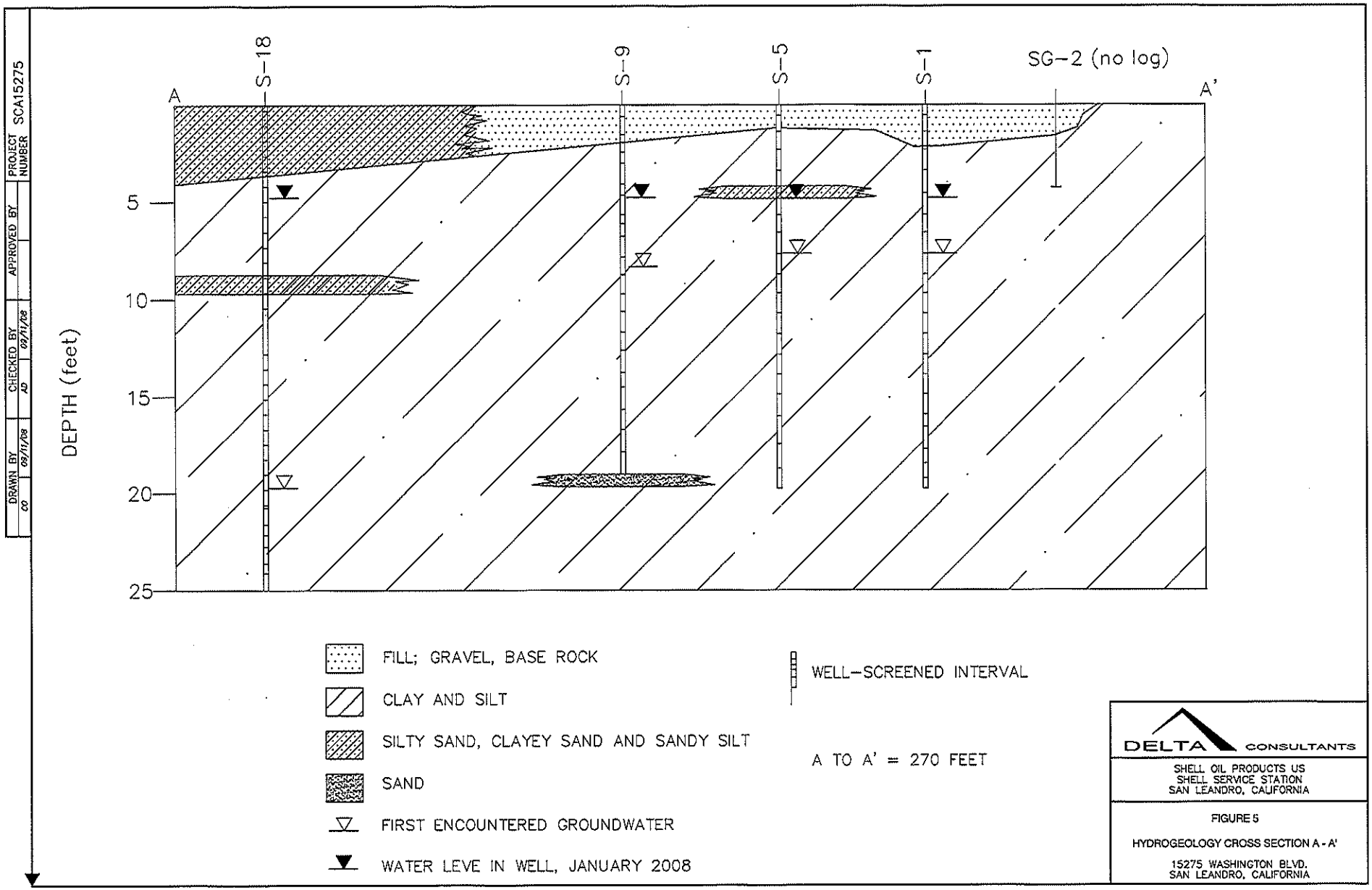
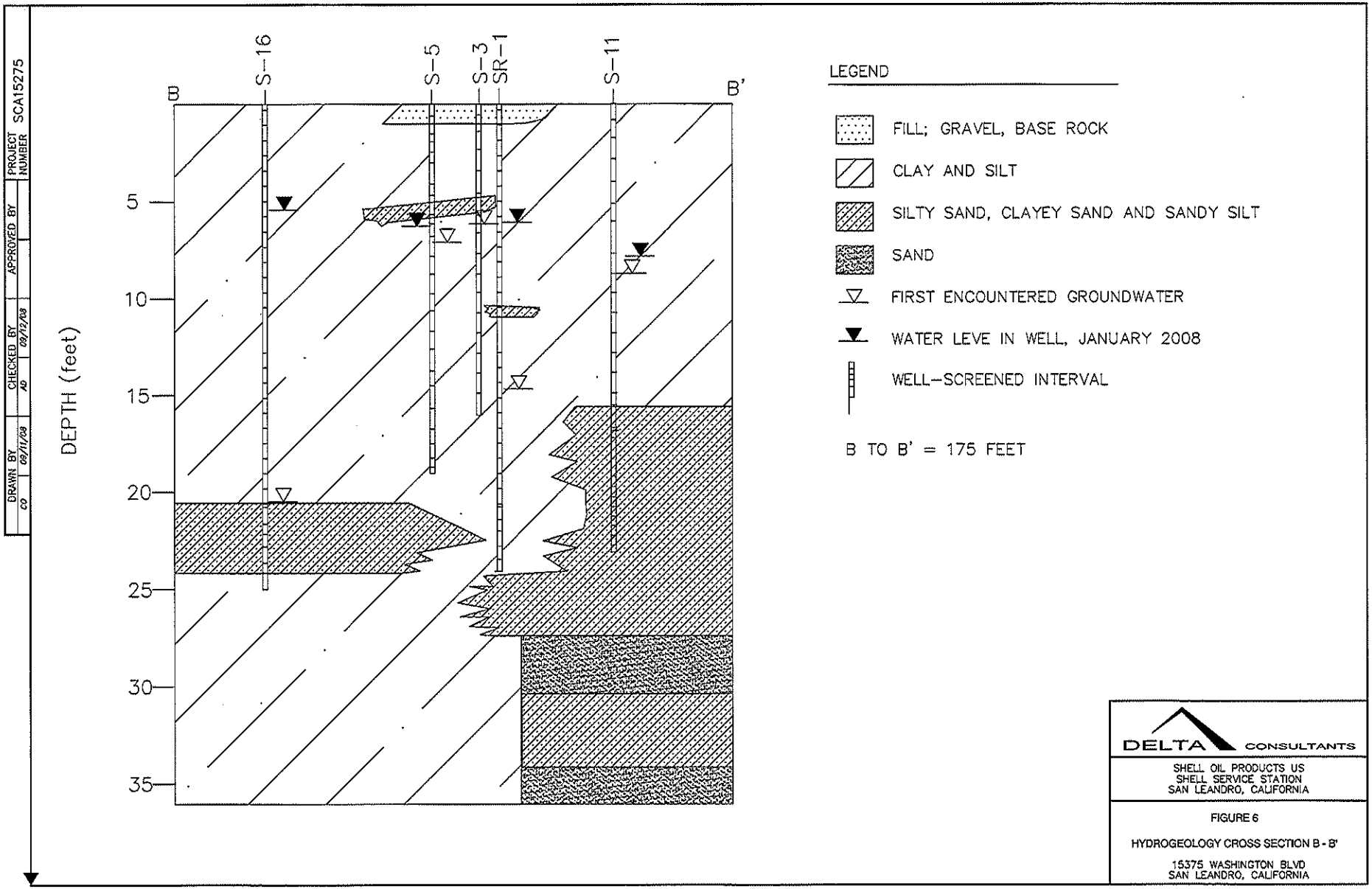


Figure 4 – Geologic Map

Former Shell-branded Service Station
15275 Washington Avenue
San Leandro, California

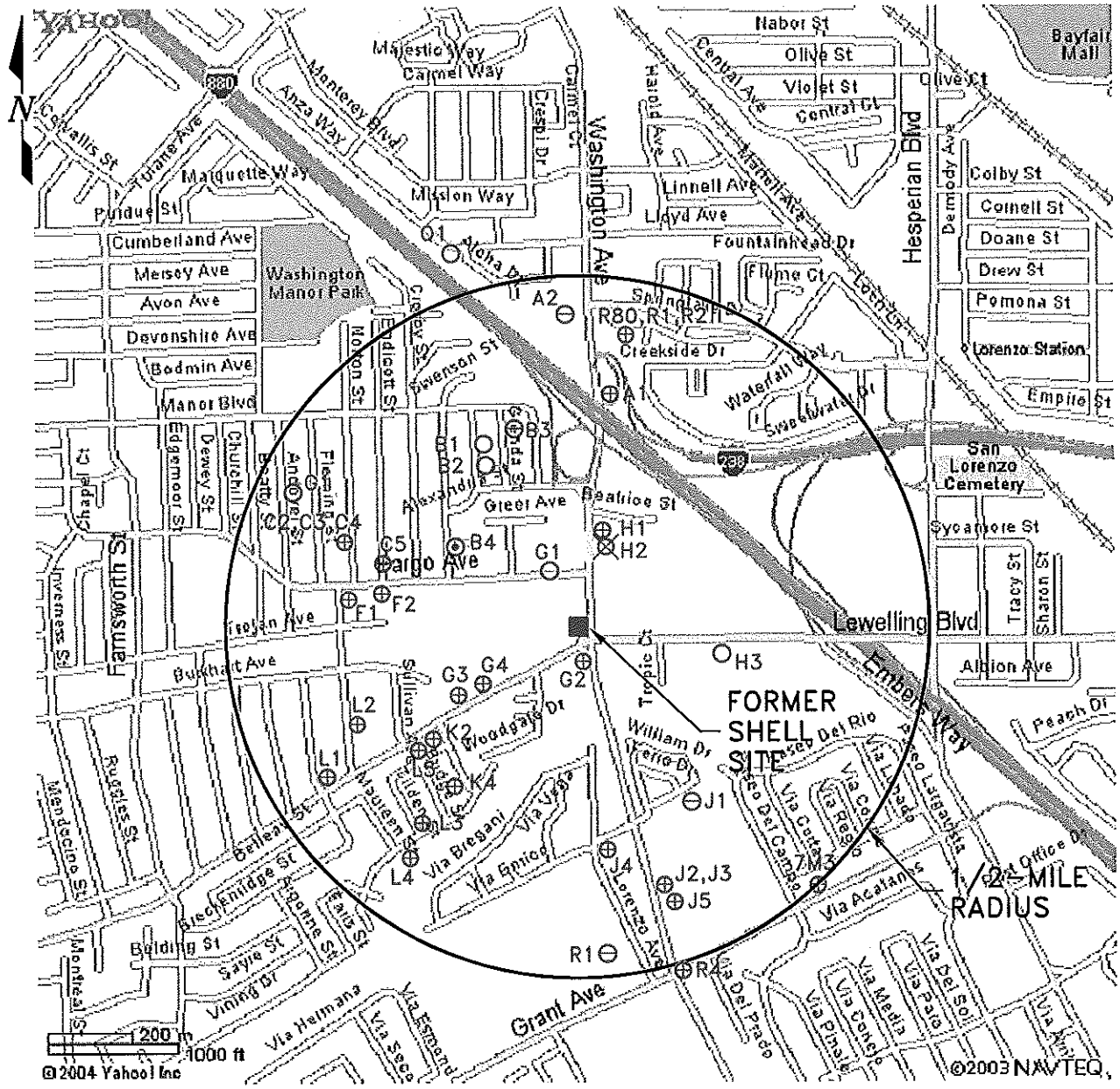



PROJECT NUMBER SCA15275
APPROVED BY
CHECKED BY AD 09/11/08
DRAWN BY CO 09/11/08
DEPTH (feet)
5
10
15
20
25
A
A'
S-18
S-9
S-5
S-1
SG-2 (no log)
FILL; GRAVEL, BASE ROCK
CLAY AND SILT
SILTY SAND, CLAYEY SAND AND SANDY SILT
SAND
FIRST ENCOUNTERED GROUNDWATER
WATER LEVE IN WELL, JANUARY 2008
WELL-SCREENED INTERVAL
A TO A' = 270 FEET
DELTA CONSULTANTS
SHELL OIL PRODUCTS US
SHELL SERVICE STATION
SAN LEANDRO, CALIFORNIA
FIGURE 5
HYDROGEOLOGY CROSS SECTION A - A'
15275 WASHINGTON BLVD.
SAN LEANDRO, CALIFORNIA


PROJECT NUMBER SCA15275
APPROVED BY
CHECKED BY AD 09/12/08
DRAWN BY CO 09/11/08
DEPTH (feet)
B
B'
S-16
S-5
S-3
SR-1
S-11
5
10
15
20
25
30
35
LEGEND
FILL; GRAVEL, BASE ROCK
CLAY AND SILT
SILTY SAND, CLAYEY SAND AND SANDY SILT
SAND
FIRST ENCOUNTERED GROUNDWATER
WATER LEVE IN WELL, JANUARY 2008
WELL-SCREENED INTERVAL
B TO B' = 175 FEET
DELTA CONSULTANTS
SHELL OIL PRODUCTS US
SHELL SERVICE STATION
SAN LEANDRO, CALIFORNIA
FIGURE 6
HYDROGEOLOGY CROSS SECTION B - B'
15375 WASHINGTON BLVD
SAN LEANDRO, CALIFORNIA

APPENDIX A

Sensitive Receptor Study



EXPLANATION

- ⊗ ABANDONED WELL
- ⊕ AGRICULTURE/IRRIGATION WELL
- ⊙ CATHODIC PROTECTION
- ○ DOMESTIC WELL
- ⊖ UNKNOWN WELL

Ref. EQ-75.1a/WELL SURVEY.DWG
Basemap from Yahoo Maps, July 2004

PREPARED BY **TOXICHEM Management Systems, Inc.** Environmental & Occupational Health Services	Former Shell-Branded Service Station 15275 Washington Avenue San Leandro, California SITE VICINITY AND WELL SURVEY MAP	FIGURE: 1 PROJECT: EQ-75

Table 4
Well Location Details
Shell-branded Service Station
15275 Washington Avenue, San Leandro

Map Number	Well Number	Source of Information	Well Location	Approximate Distance and Direction from Site (Feet)	Total Depth ft.	Date Installed	Use
Q1	3S/3W -1Q1	DWR	No distances on log, see approximate location on map	3,000'NNW	84	1977	Domestic
R80	3S/3W -1R80	DWR	350'E of Washington St, 600'N of Nimitz Freeway	2,400'N	603	1961	Irrigation
R1	3S/3W -1Rx	EMCON	Washington Street	2,400'N	335	1936	Irrigation
R2	3S/3W -1Rx	EMCON	Washington Street	2,400'N	325	1936	Irrigation
H1	3S/3W -12H1	DWR/APWA	Washington Street	900'N	525	1957	Irrigation
H2	3S/3W -12H2	DWR/APWA	Washington Street	900'N	720	1947	Irrigation/Abandoned
H3	3S/3W -12xx	EMCON	Lewelling Street	900'E	75	1937	Domestic
J1	3S/3W -12J1	DWR	No distances on log, see approximate location on map	900-2,000'SSE	370	1940	NA
J2	3S/3W -12Jx	APWA	Washington Avenue	2,100'SSE	460	1964	Irrigation
J3	3S/3W -xxxx	APWA	Washington Avenue	2,100'SSE	550	1948	Irrigation
J4	3S/3W -12J4	APWA	Lorenzo Avenue	1,800'S	80	1978	Irrigation
J5	3S/3W -12Jx	EMCON	Washington Avenue	2,100'SSE	350	1932	Irrigation
R1	3S/3W -12Rx	DWR	Grant Street, San Lorenzo	2,600'S	600	1955	NA
R4	3S/3W -12R4	APWA	Grant Avenue at Washington Avenue	2,600'S	38	1989	Irrigation
K2	3S/3W -12K2	APWA	Lewelling Street	1,400'WSW	42	NA	Irrigation
K4	3S/3W -12K4	APWA	Sedgeman Street	1,500'SW	30	1977	Irrigation
L1	3S/3W -12L1	APWA	Andover Street	2,300'SW	30	1977	Irrigation
L2	3S/3W -12L2	APWA	Norton Street	2,000'SW	30	1953	Irrigation
L3	3S/3W -12L3	APWA	Tilden Street	2,000'SW	30	1977	Irrigation
L4	3S/3W -12L4	APWA	Kramer Street	2,000'SW	30	1977	Irrigation
L5	3S/xx-xxxx	APWA	Lewelling Boulevard	1,500'WSW	211	1942	Irrigation
7M3	3S/2W -7M3	EMCON/DWR	Grant Avenue, San Lorenzo	2,600'SSE	31	1977	Domestic/Irrigation
G1	3S/3W -12Gx	EMCON/APWA	Fargo Avenue	500'NW	42	NA	Domestic
G2	3S/3W -12Gx	EMCON/APWA	Washington Avenue	<200'S	130	1920	Irrigation
G3	3S/3W -12xx	APWA	Lewelling Street	1,000'SW	120	1925	Irrigation

Table 4
Well Location Details
Shell-branded Service Station
15275 Washington Avenue, San Leandro

Map Number	Well Number	Source of Information	Well Location	Approximate Distance and Direction from Site (Feet)	Total Depth ft.	Date Installed	Use
G4	3S/3W -12xx	EMCON	Lewelling Street	1,000'SW	150	1920	Irrigation
A1	3S/3W -12xx	EMCON	Location taken from Emcon map	1,900'NNE	545	1934	Irrigation?
A2	3S/3W -12xx	EMCON	Washington Avenue	2,400'N	60	1920	NA
B1	3S/3W -12Bx	APWA	Alexandria Avenue	1,500'NW	29	1977	Domestic
B2	3S/3W -12Bx	APWA	Alexandria Avenue	1,500'NW	28	1977	Domestic
B3	3S/3W -12Bx	APWA	Grenda Street	1,500'NW	28	1977	Domestic
B4	3S/3W -12Bx	APWA	Swenson Street at Swenson Court	1,100'WNW	122	1991	Other (Cathodic?)
C1	3S/3W -12Cx	APWA	Andover Street	2,400'WNW	34	1977	Irrigation
C2	3S/3W -12Cx	APWA	Norton Street	2,000'W	46	1977	Irrigation
C3	3S/3W -12Cx	APWA	Norton Street	2,000'W	40	1977	Irrigation
C4	3S/3W -12Cx	APWA	Norton Street	2,000'W	35	1977	Irrigation
C5	3S/3W -12Cx	APWA	Endicott Street	1,500'WNW	20	1977	Irrigation
F1	3S/3W -12F1	APWA	Norton Street	1,800'W	18	1952	Irrigation
F2	3S/3W -12Fx	APWA	Fargo Avenue	1,500'WNW	26	1977	Irrigation

NA = Information Not Available
DWR = Department of Water Resource
APWA = County of Alameda Public Works Agency

Table 5
Well Construction Details
Shell-branded Service Station
15275 Washington Avenue, San Leandro

Map Number	Total Depth	Depth to Water (ft. bgs)	Casing Type	Casing Diameter (in.)	Screen Interval (ft. bgs)	Gravel Pack Interval (ft. bgs)	Annular Seal Depth (ft. bgs)	Annular Seal Material	Well Construction Method	Driller's log Number	Pumping Test Rate (gpm)	Test Duration (hours)
Q1	84	12	PVC	6	64-84	NA	22	Sand/Grout	Auger	33438	10	6
R80	603	NA	Steel	30/12	Various from 112 to 576	600	65	NA	Rotary	62015	1160	55
H1	525	32	NA	12	341-354, 490-511	NA	NA	NA	NA	NA	NA	NA
H2	720	NA	NA	28/12	660-720	NA	NA	NA	NA	NA	NA	NA
H3	75	NA	NA	8	NA	NA	NA	NA	NA	NA	NA	NA
J1	370	NA	NA	12	275-358	NA	NA	NA	NA	NA	NA	NA
J2	460	NA	NA	12	NA	NA	NA	NA	NA	NA	750	NA
J3	550	NA	NA	12	NA	NA	NA	NA	NA	NA	750	NA
J4	80	9	NA	8	NA	NA	NA	NA	NA	NA	20	NA
J5	350	NA	NA	12	340-350	NA	NA	NA	NA	NA	NA	NA
R1	600	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
R4	38	NA	NA	8	NA	NA	NA	NA	NA	NA	NA	NA
K2	42	NA	NA	6	NA	NA	NA	NA	NA	NA	NA	NA
K4	30	13	NA	6	NA	NA	NA	NA	NA	NA	NA	NA
L1	22	NA	NA	6	NA	NA	NA	NA	NA	NA	NA	NA
L2	30	NA	NA	6	NA	NA	NA	NA	NA	NA	NA	NA
L3	30	12	NA	4	NA	NA	NA	NA	NA	NA	6	NA
L4	30	14	NA	6	NA	NA	NA	NA	NA	NA	NA	NA
L5	211	14	NA	10	NA	NA	NA	NA	NA	NA	200	NA
7M3	31	10.5	NA	NA	10.5-31	NA	NA	NA	NA	NA	NA	NA
G1	42	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
G2	130	NA	NA	10	NA	NA	NA	NA	NA	NA	NA	NA
G3	120	NA	NA	12	NA	NA	NA	NA	NA	NA	NA	NA
G4	150	NA	NA	12	NA	NA	NA	NA	NA	NA	NA	NA
A1	545	NA	NA	12	Various from 487-540	NA	NA	NA	NA	NA	NA	NA
A2	60	NA	NA	8	NA	NA	NA	NA	NA	NA	NA	NA
B1	28	8	NA	4	NA	NA	NA	NA	NA	NA	NA	NA

Table 5
Well Construction Details
Shell-branded Service Station
15275 Washington Avenue, San Leandro

Map Number	Total Depth	Depth to Water (ft. bgs)	Casing Type	Casing Diameter (in.)	Screen Interval (ft. bgs)	Gravel Pack Interval (ft. bgs)	Annular Seal Depth (ft. bgs)	Annular Seal Material	Well Construction Method	Driller's log Number	Pumping Test Rate (gpm)	Test Duration (hours)
B2	29	7	NA	4	NA	NA	NA	NA	NA	NA	15	NA
B3	28	8	NA	4	NA	NA	NA	NA	NA	NA	NA	NA
B4	122	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
C1	34	8	NA	4	NA	NA	NA	NA	NA	NA	NA	NA
C2	46	38	NA	5	NA	NA	NA	NA	NA	NA	NA	NA
C3	40	31	NA	4	NA	NA	NA	NA	NA	NA	NA	NA
C4	35	2	NA	6	NA	NA	NA	NA	NA	NA	NA	NA
C5	20	11	NA	4	NA	NA	NA	NA	NA	NA	NA	NA
F1	18	NA	NA	6	NA	NA	NA	NA	NA	NA	NA	NA
F2	26	NA	NA	4	NA	NA	NA	NA	NA	NA	NA	NA

NA = Information Not Available
ft. bgs = Feet below ground surface
gpm = Gallons per minute

APPENDIX B

Boring Logs

LOG OF EXPLORATORY BORING

BORING NO. S-1

PROJECT NUMBER 738-08.01 PAGE 1 OF 2

PROJECT NAME Gettler-Ryan, Shell @ Washington & Lewelling , San Leandro SURFACE ELEV.

BY JB DATE 6/18/85

TORVANE (TSF)	POCKET PENETROMETER (TSF)	PENETRATION (Blows/Ft.)	GROUND WATER LEVELS	DEPTH IN FT.	SAMPLES	LITHOGRAPHIC COLUMN	DESCRIPTION
				0		GC FILL	ASPHALT CLAYEY GRAVEL; Fill; dark olive gray (5Y, 3/2); fine to coarse gravel; 30-35% fines; damp; no product odor.
				3		CL	CLAY; dark gray (5Y, 4/1); trace fine sand; slightly silty; moist; no product odor.
			▽	5			
	1.25	28		10			@8.5': black (2.5Y, 3/0); no product odor. @10'; grayish brown (2.5Y, 5/2); stiff; wet; slight product odor.
	3.0	25		15			
	1.5	12		20			@20': light olive brown (2.5Y, 5/4); very silty; firm; wet; no product odor.

REMARKS Drilled using 8-inch continuous flight hollow-stem auger.
Converted to a 3-inch monitoring well, detailed on Plate C.

EMCON ASSOCIATES

PLATE A

LOG OF EXPLORATORY BORING

PROJECT NUMBER 738-08.01 BORING NO. S-1

PROJECT NAME Gettler-Ryan, Shell @ Washington & Lewelling, PAGE 2 OF 2

BY JB DATE 6/18/85 San Leandro SURFACE ELEV.

TORVANE (TSF)	POCKET PENETROMETER (TSF)	PENETRATION (Blows/Ft.)	GROUND WATER LEVELS	DEPTH IN FT.	SAMPLES	LITHOGRAPHIC COLUMN	DESCRIPTION
				20			HOLE TERMINATED AT 21½ FEET.
				25			

REMARKS

EMCON ASSOCIATES

PLATE B

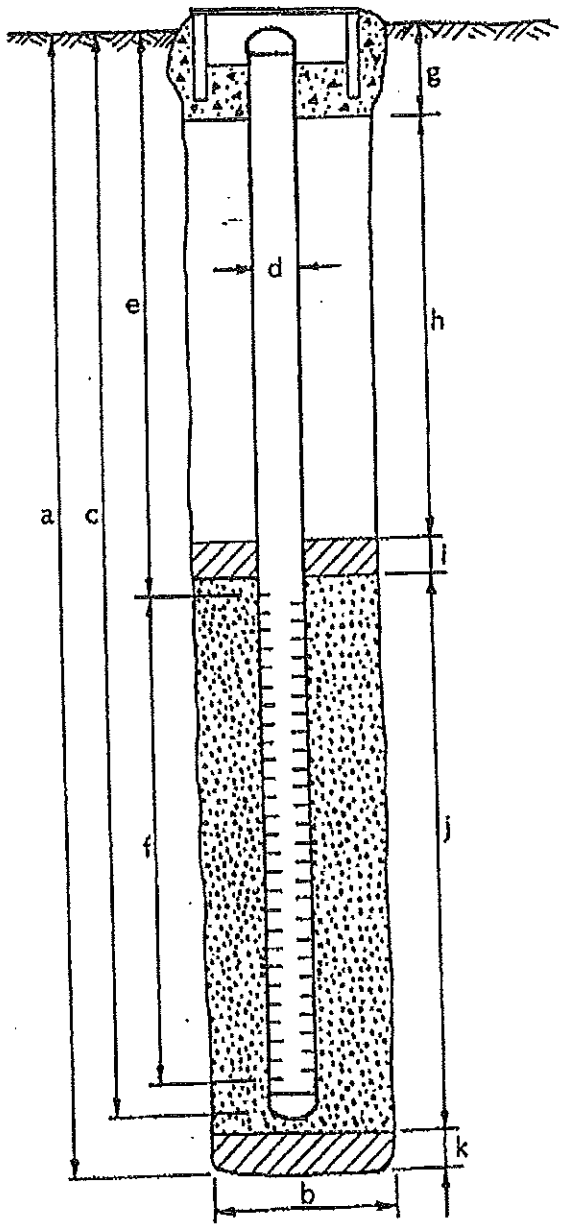
WELL DETAILS

EMCON ASSOCIATES

PROJECT NUMBER 738-08.01
PROJECT NAME Gettler-Ryan, Shell @ Washington & Lewelling
COUNTY Alameda
WELL PERMIT NO.

BORING / WELL NO. S-1
TOP OF CASING ELEV.
GROUND SURFACE ELEV.
DATUM

G-5 vault box (Std.)



EXPLORATORY BORING

a. Total depth 21½ ft.
b. Diameter 8 in.
Drilling method Hollow-Stem Auger

WELL CONSTRUCTION

c. Casing length 19 ft.
Material Schedule 40 PVC
d. Diameter 3 in.
e. Depth to top perforations 4 ft.
f. Perforated length 15 ft.
Perforated interval from 4 to 19 ft.
Perforation type Machined Slot
Perforation size 0.020 inch
g. Surface seal 1 ft.
Seal material Cement
h. Backfill 2 ft.
Backfill material Cement
i. Seal ½ ft.
Seal material Bentonite
j. Gravel pack (3½ to 19') 15½ ft.
Pack material 6 x 12 Monterey Sand
k. Bottom seal 2½ ft.
Seal material Bentonite 20-21½
Compacted Clay 19-20

PLATE C

LOG OF EXPLORATORY BORING

PROJECT NUMBER 738-08.01 BORING NO. S-2

PROJECT NAME Gettler-Ryan, Shell @ Washington & Lewelling, San Leandro PAGE 1 OF 1

BY JB DATE 6/18/85 SURFACE ELEV.

TORVANE (TSF)	POCKET PENETROMETER (TSF)	PENETRATION (Blows/Ft.)	GROUND WATER LEVELS	DEPTH IN FT.	SAMPLES	LITHOGRAPHIC COLUMN	DESCRIPTION
				0		GC FILL	ASPHALT GRAVEL; Fill; 30% fines
						CL	CLAY; dark gray (5Y, 3/1); trace fine sand; slightly silty; moist; slight product odor.
			▽	5		SM	SILTY SAND; very dark gray (5Y, 3/1); 50% fine sand; 50% silt; loose; wet; strong product odor.
						CL	CLAY; black (2.5Y, 2/0); slightly silty; very stiff; very moist; slight product odor.
	2.0	32		10			
							@13.5': grayish brown (2.5Y, 5/2); stiff; wet; no product odor.
	3.0	28		15			
							@18.5': light brownish gray (2.5Y, 6/2); 40% silt; trace fine sand; stiff; wet; no product odor.
	1.75	15		20			HOLE TERMINATED AT 20 FEET.

REMARKS Drilled using 8-inch continuous flight hollow-stem auger. Converted to 3-inch monitoring well, detailed on Plate E.

EMCON ASSOCIATES

PLATE D

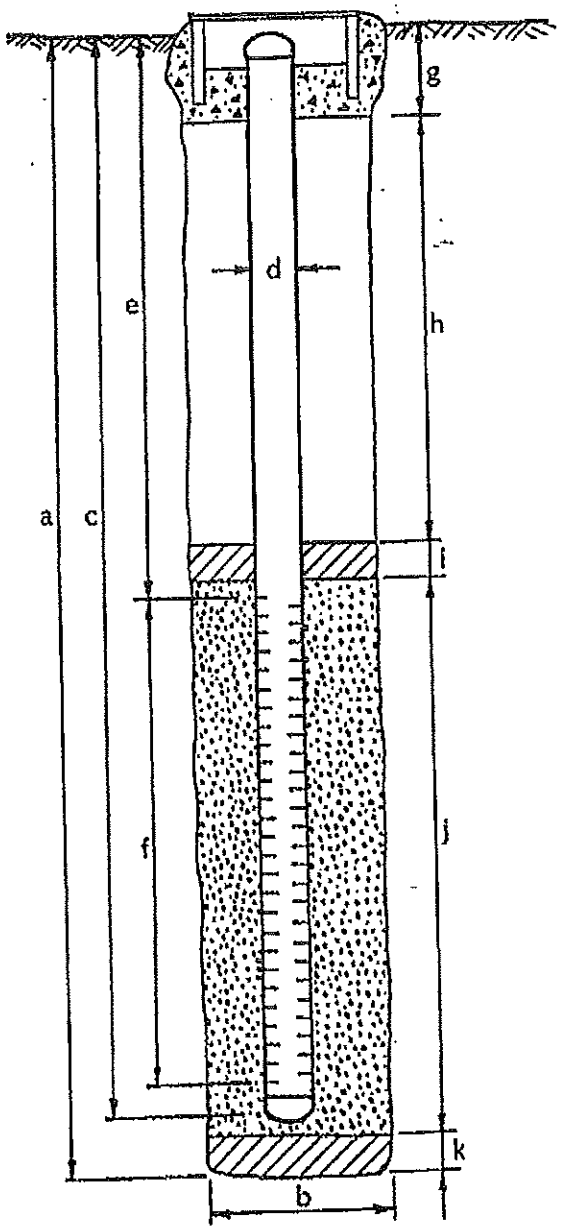
WELL DETAILS

EMKON ASSOCIATES

PROJECT NUMBER 738-08.01
PROJECT NAME Gettler-Ryan, Inc. @ Washington & Lewelling
COUNTY Alameda
WELL PERMIT NO.

BORING / WELL NO. S-2
TOP OF CASING ELEV.
GROUND SURFACE ELEV.
DATUM

G-5 vault box (Std.)



EXPLORATORY BORING

a. Total depth 20 ft.
b. Diameter 8 in.
Drilling method Hollow-Stem Auger

WELL CONSTRUCTION

c. Casing length 18½ ft.
Material Schedule 40 PVC
d. Diameter 3 in.
e. Depth to top perforations 4 ft.
f. Perforated length 14½ ft.
Perforated interval from 4 to 18½ ft.
Perforation type Machined Slot
Perforation size 0.020 inch
g. Surface seal 1 ft.
Seal material Cement
h. Backfill 2 ft.
Backfill material Cement
i. Seal ½ ft.
Seal material Bentonite
j. Gravel pack (3½ to 18½') 15 ft.
Pack material 6 x 12 Monterey Sand
k. Bottom seal 1½ ft.
Seal material Compacted clay

PLATE E

LOG OF EXPLORATORY BORING

PROJECT NUMBER 738-08.01 BORING NO. S-3

PROJECT NAME Gettler-Ryan, Shell @ Washington & Lewelling, San Leandro PAGE 1 OF 1

BY JB DATE 6/18/85 SURFACE ELEV.

TORVANE (TSF)	POCKET PENETROMETER (TSF)	PENETRATION (Blows/Ft.)	GROUND WATER LEVELS	DEPTH IN FT.	SAMPLES	LITHOGRAPHIC COLUMN	DESCRIPTION
				0			ASPHALT
					GP		GRAVEL; Fill
				2	CL		CLAY; dark gray (5Y, 3/1); slightly silty; trace fine sand; moist; slight product odor.
				3			
				5	SM-ML		SILTY SAND TO SANDY SILT; very dark gray (5Y, 3/1); 50% fine sand; 50% silt; loose; wet; strong product odor; saturated with product
		12	▽	6			
				7	CL		CLAY; dark gray (5Y, 4/1); silty; firm; very moist; slight product odor.
				8			
				9			
				10			@ 10': no product odor.
	1.25	11					
				15			@ 15': stiff; wet; no product odor.
	3.0	24					HOLE TERMINATED AT 16½ FEET.
				20			

REMARKS Drilled using 8-inch continuous flight hollow-stem auger. Converted to 3-inch monitoring well, detailed on Plate G.

EMCON ASSOCIATES

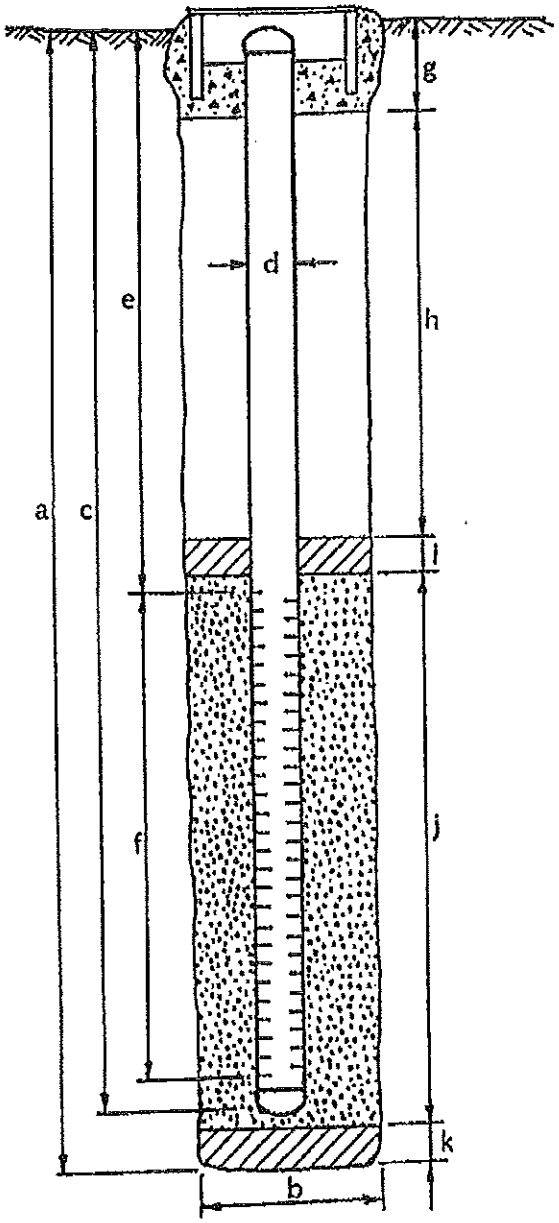
PLATE F

WELL DETAILS

PROJECT NUMBER 738-08.01
PROJECT NAME Gettler-Ryan, Shell @ Washington & Lewelling
COUNTY Alameda
WELL PERMIT NO.

BORING / WELL NO. S-3
TOP OF CASING ELEV.
GROUND SURFACE ELEV.
DATUM

G-5 vault box (Std.)



EXPLORATORY BORING

a. Total depth 16½ ft.
b. Diameter 8 in.
Drilling method Hollow-Stem Auger

WELL CONSTRUCTION

c. Casing length 16½ ft.
Material Schedule 40 PVC
d. Diameter 3 in.
e. Depth to top perforations 4 ft.
f. Perforated length 12½ ft.
Perforated interval from 4 to 16½ ft.
Perforation type Machined Slot
Perforation size 0.020 inch
g. Surface seal 1 ft.
Seal material Cement
h. Backfill 1 ft.
Backfill material Cement
i. Seal 1 ft.
Seal material Bentonite
j. Gravel pack (3 to 16½') 13½ ft.
Pack material 6x12 Monterey Sand
k. Bottom seal - ft.
Seal material -

PLATE G

LOG OF EXPLORATORY BORING

PROJECT NUMBER 738-08.01 BORING NO. S-4

PROJECT NAME Gettler-Ryan, Shell @ Washington & Lewelling, San Leandro PAGE 1 OF 1

BY JDB DATE 6/18/85 SURFACE ELEV.

TORVANE (TSF)	POCKET PENETROMETER (TSF)	PENETRATION (Blows/Ft.)	GROUND WATER LEVELS	DEPTH IN FT.	SAMPLES	LITHOGRAPHIC COLUMN	DESCRIPTION
				0			CONCRETE.
						GW	GRAVEL FILL.
						CL	CLAY; dark gray (2.5Y, 3/2); slightly silty; moist; slight product odor.
				5		SP-ML	SILTY SAND to SANDY SILT; very dark gray (5Y, 3/1); loose; wet; strong product odor; saturated with product.
		11	▽				
						CL	CLAY; dark gray (5Y, 4/1); very silty; firm; wet; moderate product odor.
	2.0	9		10			
				15			@ 15': less silt; stiff; no product odor.
	2.75	24					
							HOLE TERMINATED AT 18 FEET.
				20			

REMARKS Drilled using 8-inch continuous flight hollow-stem auger, converted to 3-inch monitoring well as detailed on Plate I.

EMCON ASSOCIATES

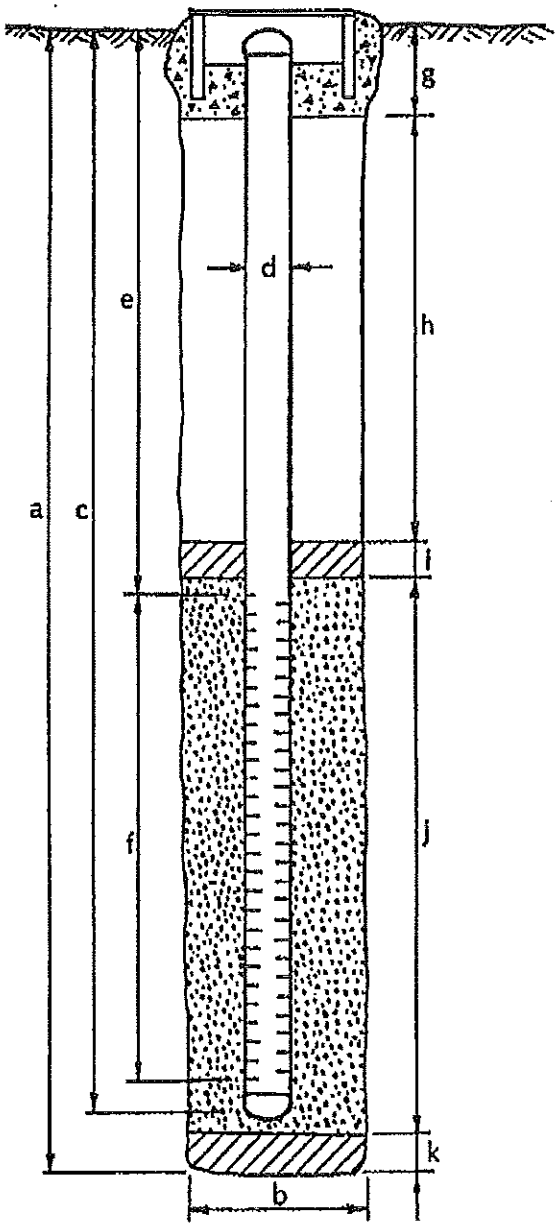
PLATE H

WELL DETAILS

PROJECT NUMBER 738-08.01
PROJECT NAME Gettler-Ryan, Shell @ Washington & Lewelling
COUNTY Alameda
WELL PERMIT NO. _____

BORING / WELL NO. S-4
TOP OF CASING ELEV. _____
GROUND SURFACE ELEV. _____
DATUM _____

G-5 vault box (Std.)



EXPLORATORY BORING

a. Total depth 18 ft.
b. Diameter 8 in.
Drilling method Hollow-Stem Auger

WELL CONSTRUCTION

c. Casing length 18 ft.
Material Schedule 40 PVC
d. Diameter 3 in.
e. Depth to top perforations 4 ft.
f. Perforated length 14 ft.
Perforated interval from 4 to 18 ft.
Perforation type Machined Slot
Perforation size 0.020 inch
g. Surface seal 1 ft.
Seal material Cement
h. Backfill 1 ft.
Backfill material Cement
i. Seal 1 ft.
Seal material Bentonite
j. Gravel pack (3 to 18') 15 ft.
Pack material 6x12 Monterey Sand
k. Bottom seal - ft.
Seal material -

PLATE 1

LOG OF EXPLORATORY BORING

PROJECT NUMBER 738-08.02 BORING NO. S-A

PROJECT NAME Gettler-Ryan,Shell,Lewelling Bl. & Washington Av. PAGE 1 OF 1

BY EBL DATE 8/15/86 San Leandro SURFACE ELEV. 22'±

TORVANE (TSF)	POCKET PENETRO-METER (TSF)	PENETRATION (Blows/Ft.)	GROUND WATER LEVELS	DEPTH IN FT.	SAMPLES	LITHO-GRAPHIC COLUMN	DESCRIPTION
							ASPHALT, SAND, AND GRAVEL-FILL.
						ML	SANDY SILT; very dark gray (10YR, 3/1); 30-40% fine sand; soft; wet; strong product odor.
	2.0	10	▽	5		CH	CLAY; black (10YR,2/1); 10-20% fine sand; stiff; wet; strong product odor.
				10			BOTTOM OF BORING AT 8 FEET.
				15			
				20			
				25			
				30			
				35			
				40			

REMARKS

Drilled by 8-inch continous-flight, hollow-stem auger; samples collected with 2-inch California modified split-spoon sampler. Boring backfilled with cuttings to 1 foot; concrete to surface.

PLATE A

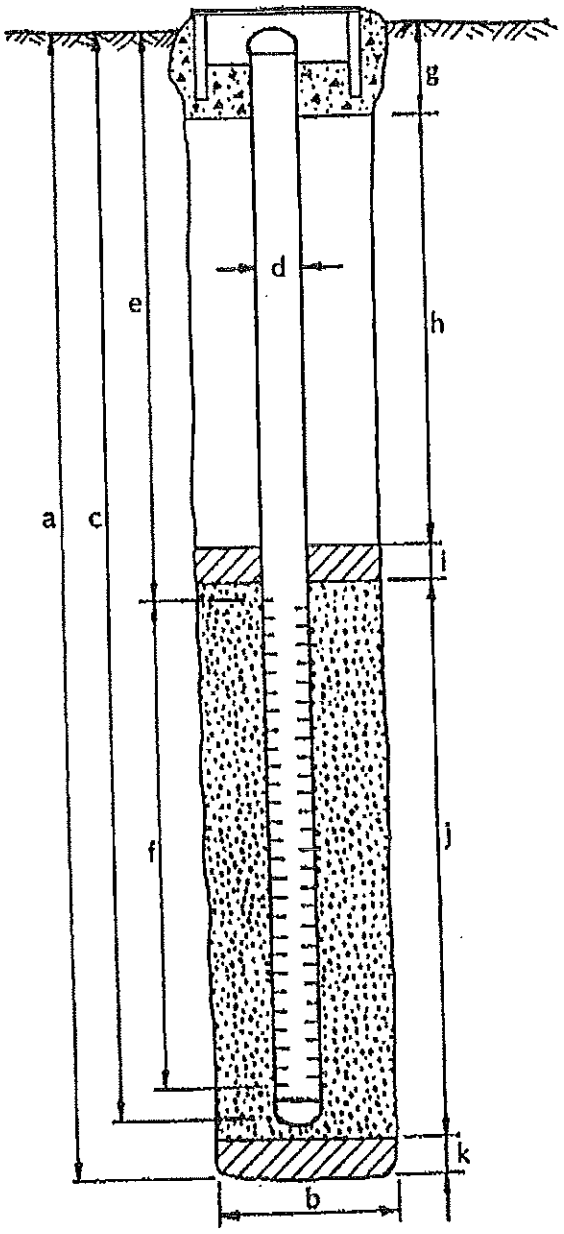
WELL DETAILS

EMCON ASSOCIATES

PROJECT NUMBER 738-08.02
PROJECT NAME G-R Shell, San Leandro
COUNTY Alameda
WELL PERMIT NO.

BORING / WELL NO. S-B
TOP OF CASING ELEV.
GROUND SURFACE ELEV. 22' MSL
DATUM USGS

G-5 vault box (Std.)



EXPLORATORY BORING

a. Total depth 15.5 ft.
b. Diameter 8 in.
Drilling method Hollow-Stem Auger

WELL CONSTRUCTION

c. Casing length 15.5 ft.
Material Schedule 40 PVC
d. Diameter 3 in.
e. Depth to top perforations 1 ft.
f. Perforated length 14.5 ft.
Perforated interval from 14.5 to 1 ft.
Perforation type Machined Slot
Perforation size .020 inch
g. Surface seal 0.3 ft.
Seal material Bentonite
h. Backfill 0 ft.
Backfill material
i. Seal 0.7 ft.
Seal material Concrete
j. Gravel pack (13.9 to 1 Ft.) 12.9 ft.
Pack material Coarse Aquarium Sand
k. Bottom seal 0 ft.
Seal material
Note: Borehole caved to 13.9 feet.

PLATE C

LOG OF EXPLORATORY BORING

PROJECT NUMBER 738-08.02 BORING NO. S-C

PROJECT NAME Gettler-Ryan,Shell,Lewelling Bl. & Washington Av. PAGE 1 OF 1

BY EBL DATE 8/15/86 San Leandro SURFACE ELEV. 22'± MSL

TORVANE (TSF)	POCKET PENETRO-METER (TSF)	PENETRATION (Blows/Ft.)	GROUND WATER LEVELS	DEPTH IN FT.	SAMPLES	LITHO-GRAPHIC COLUMN	DESCRIPTION
				0			CONCRETE, SAND, and GRAVEL- FILL.
					1	SW	SAND-FILL; dark gray (10YR, 4/1); < 10% fines; fine to coarse sand; loose; damp; strong product odor.
				5		CL	CLAY-FILL; very dark gray (2.5Y, N3); 10-20% fine sand; soft; moist; strong product odor.
		4	▽		2	SW	SAND-FILL; dark gray (10YR, 4/1); < 10% fines; fine to coarse sand; loose; wet; strong product odor.
				10			
	1.5	13			3	CH	CLAY; very dark grayish brown (2.5Y, 3/2); 15-25% fine sand; stiff; wet; faint product odor.
	3.0	21		15	4		@ 14': very stiff; faint product odor.
	2.5				5		@ 15-1/2': stiff; moist; no product odor.
				20			BOTTOM OF BORING AT 17 FEET.
				25			
				30			
				35			
				40			

REMARKS

Drilled by 8-inch continous-flight, hollow-stem auger; samples collected with 2-inch California modified split-spoon sampler. Boring backfilled with Bentonite to 12 feet, cuttings to 1 foot, and concrete to surface.

PLATE D

LOG OF EXPLORATORY BORING

PROJECT NUMBER 738-08.02 BORING NO. S-D

PROJECT NAME Gettler-Ryan,Shell,Lewelling Bl. & Washington Av. PAGE 1 OF 1

BY EBL DATE 8/15/86 San Leandro SURFACE ELEV. 22'± MSL

TORVANE (TSF)	POCKET PENETRO-METER (TSF)	PENETRATION (Blows/Ft.)	GROUND WATER LEVELS	DEPTH IN FT.	SAMPLES	LITHO-GRAPHIC COLUMN	DESCRIPTION
				0			CONCRETE, SAND, and GRAVEL-FILL.
				5	1	SP	SAND; very dark gray (10YR, 3/1); < 10% fines; fine sand; loose; moist; strong product odor.
		2	▽		2		@ 7': moderate product odor.
				10	3		@ 11': wet; strong product odor; product sheen on sampler.
		12				CL	CLAY; very dark grayish brown; (2.5Y, 3/2); 10-20% fine sand; very stiff; moist; no product odor.
	3.0	26		15	4		BOTTOM OF BORING AT 15-1/2 FEET.
				20			
				25			
				30			
				35			
				40			

REMARKS

Drilled by continous-flight, hollow-stem auger; samples collected with 2-inch California modified split-spoon sampler. Boring backfilled with Bentonite to 12 feet, cuttings to 1 foot, and concrete to surface.

PLATE E

LOG OF EXPLORATORY BORING

PROJECT NUMBER 738-08.03 BORING NO. S-5

PROJECT NAME Gettler-Ryan, Shell, Washington & Lewelling PAGE 1 OF 2

BY JOB DATE 12/24/86 SURFACE ELEV. 21.71'

TORVANE (TSF)	POCKET PENETROMETER (TSF)	PENETRATION (Blows/Ft.)	GROUND WATER LEVELS	DEPTH IN FT.	SAMPLES	LITHOGRAPHIC COLUMN	DESCRIPTION
				0		GP	ASPHALT GRAVEL-FILL; coarse baserock.
				2		CL	CLAY; dark gray (5Y, 4/1); 98-100% low- to moderate-plasticity fines; <2% fine sand; stiff; damp; no gasoline odor. @4': slight gasoline odor.
	1.25	9		5	1	SC	CLAYEY SAND; dark gray (5Y, 4/1); 20-40% low-plasticity fines; 60-80% fine sand; loose; moist; slight to moderate gasoline odor.
			▽	7		ML CH- CL	SANDY SILT; dark gray (5Y, 4/1); 70-90% non-plastic fines; 10-30% fine sand; stiff; moderate gasoline odor. CLAY; black (5Y, 2.5/1); 100% moderate- to high-plasticity fines; occasionally calcareous; stiff to very stiff; wet in voids; slight gasoline odor to 10 feet.
	1.5	17		10	2		
						CH	@14': gray (5Y, 5/1); 100% high-plasticity fines; very stiff; very moist; no gasoline odor. @19': abundant caliche disseminated; no gasoline odor.
	2.25	22		15	3		
	2.0	29		20	4		

REMARKS

Drilled with 8- and 12-inch continuous-flight, hollow-stem auger drilling equipment. Converted to a 4-inch monitoring well as detailed on Plate B.

PLATE A

LOG OF EXPLORATORY BORING

PROJECT NUMBER 738-08.03 BORING NO. S-5

PROJECT NAME Gettler-Ryan, Shell, Washington & Lewelling PAGE 2 OF 2

BY JDB DATE 12/24/86 SURFACE ELEV. 21.71'

TORVANE (TSF)	POCKET PENETROMETER (TSF)	PENETRATION (Blows/Ft.)	GROUND WATER LEVELS	DEPTH IN FT.	SAMPLES	LITHOGRAPHIC COLUMN	DESCRIPTION
				20			BOTTOM OF BORING AT 20.5 FEET
				25			
				30			
				35			
				40			

REMARKS

PLATE B

WELL DETAILS

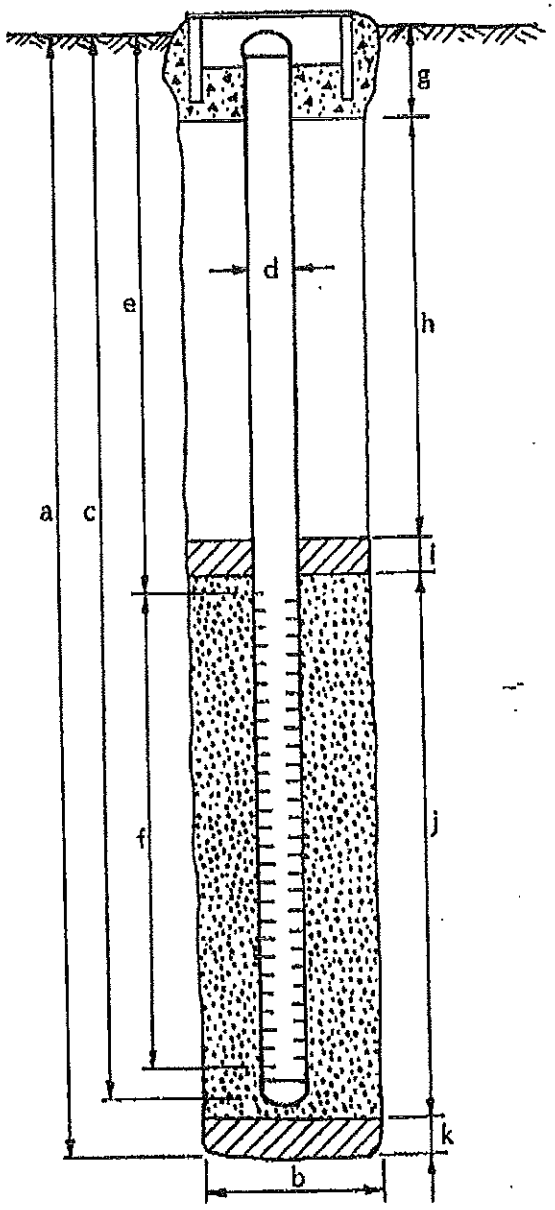
PROJECT NUMBER 738-08.03 BORING / WELL NO. S-5

PROJECT NAME Shell, Washington & Lewelling, San Leandro TOP OF CASING ELEV. 21.24'

COUNTY Alameda GROUND SURFACE ELEV. 21.71'

WELL PERMIT NO. DATUM Project

G-5 vault box (Std.)



EXPLORATORY BORING

a. Total depth 20½ ft.

b. Diameter 12 in.

Drilling method Hollow-stem auger

WELL CONSTRUCTION

c. Casing length 18½ ft.

Material schedule 40 PVC

d. Diameter 4 in.

e. Depth to top perforations 3½ ft.

f. Perforated length 15 ft.

Perforated interval from 18½ to 3½ ft.

Perforation type machined slot

Perforation size 0.020 inch

g. Surface seal (1 - 0') 1 ft.

Seal material concrete

h. Backfill (1½ - 1') ½ ft.

Backfill material concrete

i. Seal (2½ - 1½') 1 ft.

Seal material bentonite

j. Gravel pack (18½ - 2½') 16 ft.

Pack material 6x12 Monterey Sand

k. Bottom seal (20½ - 18½') 2 ft.

Seal material compacted clay

PLATE C

Woodward-Clyde Cor . nts

PROJECT N. SETTLER-RYAN NO. 8820011A

MONITORING WELL LOCATION 15275 Washington Ave., San Leandro, CA (S-7)			ELEVATION AND DATUM
DRILLING AGENCY Bay Land Drilling	DRILLER Tom/Mack		DATE STARTED 11/3/88 DATE FINISHED
DRILLING EQUIPMENT CME - 55			COMPLETION DEPTH 24.5' SAMPLER Modified California
DRILLING METHOD 8" Hollow stem auger	DRILL BIT CME Carbide		NO. OF SAMPLES: DIST. 5 UNDIST. 5
SIZE AND TYPE OF CASING Sch 40 3" PVC	FROM 24.0 TO 0.5 FT.		WATER LEVEL FIRST ~8' COMPL. 24 HRS.
TYPE OF PERFORATION 0.02"	FROM 24.0 TO 4.0 FT.		LOGGED BY: R. Siegel CHECKED BY: M. Honkowski
SIZE AND TYPE OF PACK 2/12 Monterey Sand	FROM 24.5 TO 3.0 FT.		
TYPE OF SEAL NO. 1 Bentonite	FROM 3 TO 2.5 FT.		
NO. 2 Cement grout	FROM 2.5 TO 0.5 FT.		

Depth (feet)	Samples	Blows	MATERIAL DESCRIPTION		USCS	Well Construction
			Asphaltic Concrete			
5	1'	pushed @ 200 lbs	FILL - CLAY silty sandy clay with large pebbles to 2" diameter, plastic, moist to wet, cohesive, Note: pipe encountered at ~5', moved auger over slightly	OVM = 9.0 ppm	CL	
10	2'	5 6 10	CLAY black mottled with green, low plastiviey, stiff, dry, moderate cohesion	OVM = 32 ppm	CL	
15	3	6 9 12	SILTY CLAY mottled black and brown, gravelly clay present in top, stiff, dry, moderate cohesion	OVM = 2.2 ppm	CL	
20	4	3 7 8	same as Silty Clay above	OVM = 1.8 ppm	CL	
	5	1 2 4	same as Silty Clay above but some fine sands present	OVM = 0.6 ppm		
25			Total Depth = 24.5 feet ' = Laboratory Sample			
30						

LOG OF MONITORING WELL NO. S-7 SHEET 1 OF 1

Woodward-Clyde Consultants

PROJECT NAME SETTLER-RYAN NO. 88200114

MONITORING WELL LOCATION 15275 Washington Ave., San Leandro, CA (S-9)		ELEVATION AND DATUM	
DRILLING AGENCY Bay Land Drilling	DRILLER Tom/Mack	DATE STARTED / DATE FINISHED 11/4/88	
DRILLING EQUIPMENT CME - 55		COMPLETION DEPTH 18'	SAMPLER Modified California
DRILLING METHOD 8" Hollow stem auger	DRILL BIT CME Carbide	NO. OF SAMPLES DIST. 4	UNDIST. ----
SIZE AND TYPE OF CASING Sch 40 3" PVC	FROM 18.0 TO 0.5 FT.	WATER LEVEL FIRST 6' +/-	COMPL. 8.2 / 24 HRS. ----
TYPE OF PERFORATION 0.02"	FROM 17.5 TO 4.0 FT.	LOGGED BY: G. Heyman	CHECKED BY: M Borkowski
SIZE AND TYPE OF PACK 2/12 Monterey Sand	FROM 16 TO 3.0 FT.		
TYPE OF SEAL NO. 1 1/2" Bentonite Pellets	FROM 3 TO 2.5 FT.		
NO. 2 Cement grout	FROM 2.5 TO surface FT.		

Depth (feet)	Samples	Blows	MATERIAL DESCRIPTION	USCS	Well Construction
			Asphaltic Concrete		
			FILL - SAND and GRAVEL		
			SILTY CLAY to CLAYEY SILT (cuttings)		
			dark gray, little to some very fine sand, low to medium plasticity, moist to wet — Moderate Hydrocarbon odor		
5	1'		SILTY CLAY to CLAYEY SILT		
			dark gray, some very fine sand, low plasticity, soft, moist, homogeneous — OVM = 540 ppm, Strong Hydrocarbon odor	CL	
			SANDY SILT to SANDY CLAY		
10	2'		medium gray grading down to medium brown, very fine sand, low plasticity, wet, few vesicles less than 1 mm diameter, few root traces — OVM = 27 ppm, Weak Hydrocarbon odor	CL	
			CLAY to SILTY CLAY		
15	3	6, 9, 12	medium gray brown to green brown, occasionally little very fine sand, little to some silt, medium plasticity, moist with wet to saturated areas adjacent to vesicles, few root fragments, few vesicles — OVM = 8 ppm, No Hydrocarbon odor	CL-CH	
			CLAYEY SILT to SILTY CLAY		
20	4		medium gray brown, medium plasticity, firm, wet — OVM = 5 ppm, No Hydrocarbon odor	CL-ML	
			SANDY SILT to SILTY SAND	SM	
			light yellow brown, very fine sand, little to some clay, wet to saturated		
			Total Depth = 20.5 feet		
			* = Laboratory Sample		
25					
30					
35					

LOG OF MONITORING WELL NO. S-9 SHEET 1 OF 1

Woodward-Clyde Consultants

PROJECT NAME: SETTLER-RYAN NO. 88200114

MONITORING WELL LOCATION: 15275 Washington Ave., San Leandro, CA (S-10)		ELEVATION AND DATUM	
DRILLING AGENCY: Bay Land Drilling	DRILLER: TomMack	DATE STARTED / DATE FINISHED: 11/4/88	
DRILLING EQUIPMENT: CME - 55		COMPLETION DEPTH: 16'	SAMPLER: Modified California
DRILLING METHOD: 8" Hollow stem auger	DRILL BIT: CME Carbide	NO. OF SAMPLES: DIST. 4	UNDIST. ----
SIZE AND TYPE OF CASING: Sch 40 3" PVC	FROM 18.0 TO 0.5 FT.	WATER LEVEL: FIRST 8' +/-	COMPL. 7'1" / 24 HRS. ----
TYPE OF PERFORATION: 0.02"	FROM 17.5 TO 4.0 FT.	LOGGED BY: G. Heyman	CHECKED BY: M. Benkowski
SIZE AND TYPE OF PACK: 2/12 Monterey Sand	FROM 16 TO 3.0 FT.		
TYPE OF SEAL: NO. 1 1/2" Bentonite Pellets	FROM 3 TO 2.5 FT.		
NO. 2 Cement grout	FROM 2.5 TO surface FT.		

Depth (feet)	Samples	Blows	MATERIAL DESCRIPTION		USCS	Well Construction
			Asphaltic Concrete			
5	1'	pushed @ top-Rod	SILTY to SANDY SILT dark gray, very fine sand, low plasticity, soft, moist, homogeneous	OVM = 0 ppm No Hydrocarbon odor	CL	
10	2'	3 5 7	Interlayered SILTY CLAY and CLAYEY SAND dark greenish gray, little very fine sand in clay, low plasticity, moist, wet with few saturated areas	OVM = 3.7 ppm No Hydrocarbon odor Weak Hydrocarbon odor in 20 minutes	CL-SC	
15	3	5 8 9	CLAY to SILTY CLAY light to medium brown, low to medium plasticity, moist, few off-white brittle veinlets 2 - 3 mm thick	OVM = 0 ppm No Hydrocarbon odor	CL-CH	
20	4	5 6 7	SILTY CLAY medium gray brown, some very fine sand, trace fine gravel, medium plasticity, wet to occasionally saturated	No Hydrocarbon odor	CL-CH	
			Total Depth = feet			
25			' = Laboratory Sample			
30						

LOG OF MONITORING WELL NO. S-10 SHEET 1 OF 1

Woodward-Clyde Consultants

PROJECT NAME GETTLER-RYAN NO. 8820011A

MONITORING WELL LOCATION 15275 Washington Ave., San Leandro, CA (S-12)		ELEVATION AND DATUM	
DRILLING AGENCY Bay Land Drilling	DRILLER Tom/Mack	DATE STARTED 11/4 DATE FINISHED	
DRILLING EQUIPMENT CME - 55		COMPLETION DEPTH 24.5'	SAMPLER Modified California
DRILLING METHOD 8" Hollow stem auger	DRILL BIT CME Carbide	NO. OF SAMPLES DIST. 5	UNDIST. 5
SIZE AND TYPE OF CASING Sch 40 3" PVC	FROM 24.0 TO 0.5 FT.	WATER LEVEL FIRST 8'	COMPL. — 24 HRS. —
TYPE OF PERFORATION 0.02"	FROM 23.5 TO 3.5 FT.	LOGGED BY: G. Heyman	CHECKED BY: M. Benkowski
SIZE AND TYPE OF PACK 2/12 Monterey Sand	FROM 24.0 TO 3.0 FT.		
TYPE OF SEAL NO. 1 1/2" Bentonite Pellets	FROM 3 TO 2.5 FT.		
NO. 2 Cement grout	FROM 2.5 TO surface FT.		

Depth (feet)	Samples	Blows	MATERIAL DESCRIPTION	USCS	Well Construction
			Asphaltic Concrete		
5	1	pushed @ 200 lbs	CLAYEY SAND to SANDY CLAY grading down to SILTY CLAY TO CLAYEY SILT greenish gray at top with gray mottling in middle and bottom of sample, very fine sand, low plasticity, moist, generally homogeneous OVM jumped to 190 ppm then settled at 120 ppm Weak Hydrocarbon odor	CL	
10	2	4 5 7	SILTY CLAY dark brownish gray, some very fine sand, low plasticity, firm, moist to wet, few beds of clay, sand to 1/4" thick OVM = 20 ppm Weak Hydrocarbon odor	CL	
15	3	5 8 11	CLAY to SILTY CLAY medium grayish brown, some silt grading to silty clay, medium plasticity, wet homogeneous Driller indicates drilling through a series of 2 - 4" gravel layers from 16 - 19' OVM = 0 ppm No Hydrocarbon odor	CL	
20	4	3 4 5	CLAY to SANDY CLAY medium grayish brown, little to some very fine sand occasionally grading to sandy clay, low to medium plasticity, firm, saturated No Hydrocarbon odor	CL	
			CLAYEY SAND to SANDY CLAY medium yellow brown, very fine sand, saturated OVM = 1 ppm No Hydrocarbon odor		
	5	4 6 7	SILTY CLAY to CLAYEY SILT medium yellow brown, up to some very fine sand, low to medium plasticity, saturated OVM = 0 ppm No Hydrocarbon odor	CL	
25			Total Depth = 24.5 feet		
			* = Laboratory Sample		
30					
35					

Field location of boring:

Project No.: 7615 | Date: 4/26/89 | Boring No.: S-13
Client: Shell
Location: 15275 Washington Ave/Lewelling
City: San Leandro | Sheet 1 of 2
Logged by: DAF | Driller: Bayland
Casing installation data:

Drilling method: Hollow Stem Auger
Hole diameter: 8 inch
Top of Box Elevation: | Datum:

Water Level	8.4'	7.3'		
Time	11:50am			
Date	4/26	5/10		

PID (ppm)	Blowsft. or Pressure (psi)	Type of Sample	Sample Number	Depth (ft.)	Sample	Well Detail	Soil Group Symbol (USCS)	Description
				1				PAVEMENT SECTION - 2 feet.
				2				CLAY (CL)- dark gray (10YR 4/1); soft; damp; low plasticity; trace gravel; no chemical odor.
				3				
				4				
350	150	S&H	S-13-5'	5				color change to dark olive gray (5Y 3/2); no chemical odor.
		push						
				6				
				7				
				8				
				9				▽
50	2	S&H	S-13-	10				SILTY SAND (SM)- light olive brown (2.5Y 5/4); loose; damp; 20-30% silt; mottled brown; no chemical odor.
	3		10'					
	6							
				11				
				12				CLAY (CL)- dark olive gray (5Y 3/2), medium stiff; damp; low plasticity; trace gravel; rootholes; no chemical odor.
				13				
				14				
40	3	S&H	S-13-	15				color change to very dark gray (5Y 3/1) mottled; organics present; no chemical odor.
	5		15'					
	7							
				16				
				17				▽ becoming saturated at 17.5 feet.
				18				
				19				
0	2	S&H	S-13-	20				SANDY SILT (ML)- light yellowish brown (2.5Y 6/4); medium stiff; saturated;
	3		20'					

Remarks:

BORING NO. S-13

GeoStrategies Inc.

JOB NUMBER	REVIEWED BY RG/CEG	DATE	REVISED DATE	REVISED DATE
7615	CEG 1262	5/89		

Field location of boring:

Project No.: 7615	Date: 4/26/89	Boring No: S-13	
Client: Shell			
Location: 15275 Washington Ave/Lewelling			
City: San Leandro		Sheet 1 of 2	
Logged by: DAF	Driller: Bayland		

Casing installation data:

Drilling method: Hollow Stem Auger

Hole diameter: 8 inch

Top of Box Elevation: Datum:

Water Level	8.4'	7.3'		
Time	11:50am			
Date	4/26	5/10		

PID (ppm)	Blowsft. or Pressure (psi)	Type of Sample	Sample Number	Depth (ft.)	Sample	Well Detail	Soil Group Symbol (USCS)	Description
				1				PAVEMENT SECTION - 2 feet.
				2				CLAY (CL)- dark gray (10YR 4/1); soft; damp; low plasticity; trace gravel; no chemical odor.
				3				
				4				
350	150	S&H	S-13-5'	5				color change to dark olive gray (5Y 3/2); no chemical odor.
		push						
				6				
				7				
				8				
				9				▽
50	2	S&H	S-13-	10				SILTY SAND (SM)- light olive brown (2.5Y 5/4); loose; damp; 20-30% silt; mottled brown; no chemical odor.
	3		10'					
	6			11				
				12				CLAY (CL)- dark olive gray (5Y 3/2), medium stiff; damp; low plasticity; trace gravel; rootholes; no chemical odor.
				13				
				14				
40	3	S&H	S-13-	15				color change to very dark gray (5Y 3/1) mottled; organics present; no chemical odor.
	5		15'					
	7			16				
				17				▽ becoming saturated at 17.5 feet.
				18				
				19				
0	2	S&H	S-13-	20				SANDY SILT (ML)- light yellowish brown (2.5Y 6/4); medium stiff; saturated;
	3		20'					

Remarks:

BORING NO.

GeoStrategies Inc.

S-13

JOB NUMBER	REVIEWED BY RG/CEG	DATE	REVISED DATE	REVISED DATE
7615	CEG 1262	5/89		

Field location of boring:

Project No.: 7615 | Date: 4/26/89 | Boring No: S-13

Client: Shell

Location: 15275 Washington Ave/Lewelling

City: San Leandro | Sheet 2 of 2

Logged by: DAF | Driller: Bayland

Casing installation data:

Drilling method: Hollow Stem Auger

Hole diameter: 8 inch

Top of Box Elevation: | Datum:

Water Level				
Time				
Date				

PID (ppm)	Blowsft. or Pressure (psi)	Type of Sample	Sample Number	Depth (ft.)	Sample	Well Detail	Soil Group Symbol (USCS)	Description
	4							15% very fine to fine sand; 10% clay;
				21				trace organics; rootholes; mottled
				22				brown & black; no chemical odor.
				23				
				24				
25	2	S&H	S-13-					SILTY CLAY (CL-ML)- light olive brown
	3		25'	25				(2.5Y 5/4); medium stiff; moist; trace
	4							organics; mottled brown & black;
								no chemical odor.
								Bottom of boring 24.0 feet,
								Sampled to 25.5 feet
								4/26/89

Remarks:

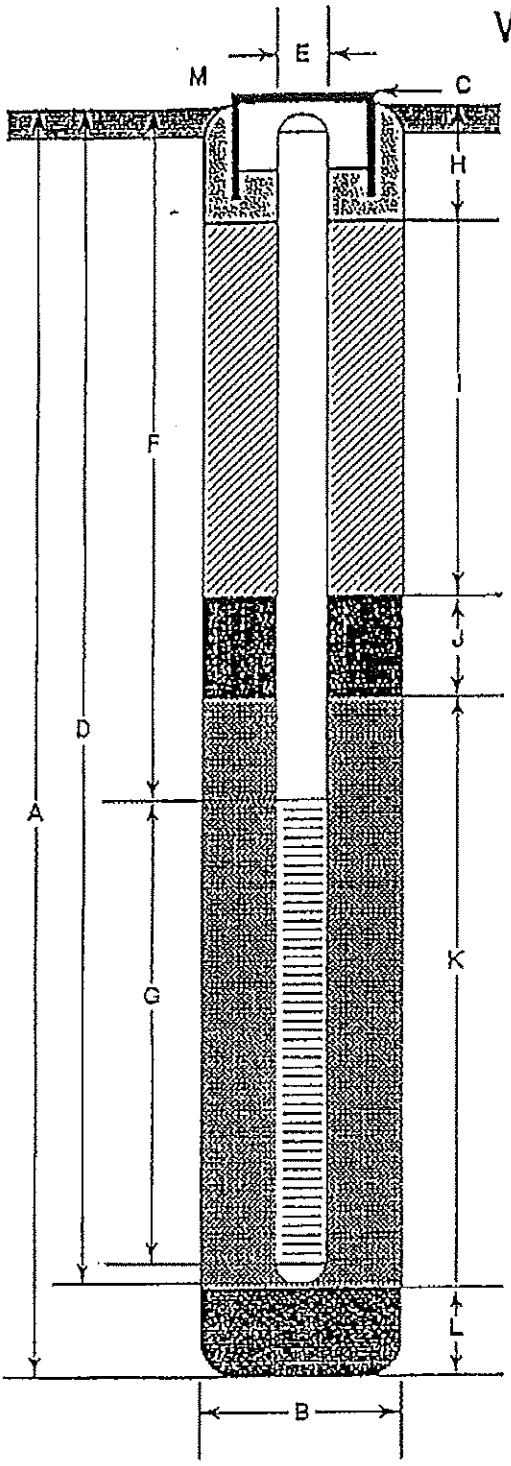
BORING NO.

GeoStrategies Inc.

S-13

JOB NUMBER	REVIEWED BY	DATE	REVISED DATE	REVISED DATE
7615	RJ/CEG	5/89		

WELL CONSTRUCTION DETAIL



A Total Depth of Boring 24 ft.

B Diameter of Boring 8 in.
Drilling Method HOLLOW STEM AUGER

C Top of Box Elevation 20.57 ft.
☐ Referenced to Mean Sea Level
☒ Referenced to Project Datum

D Casing Length 23.5 ft.
Material SCH 40 PVC

E Casing Diameter 3 in.

F Depth to Top Perforations 4 ft.

G Perforated Length 20 ft.
Perforated Interval from 4 to 24 ft.
Perforation Type FACTORY SLOTTED
Perforation Size 0.020

H Surface Seal 2.5 ft.
Seal Material CONCRETE

I Backfill ft.
Backfill Material

J Seal 0.5 ft.
Seal Material BENTONITE

K Gravel Pack 21 ft.
Pack Material LONESTAR 2/12 & #3

L Bottom Seal ft.
Seal Material

M CHRISTY BOX

GSI GeoStrategies Inc.

Well Construction Detail
Former Shell Service Station
15275 Washington Ave.
San Leandro

WELL NO. S-13

JOB NUMBER	REVIEWED BY RG/CEG	DATE	REVISED DATE	REVISED DATE
7615	Chip CEG 1262	5/89		

Field location of boring:

Project No.: 7615 | Date: 4/26/89 | Boring No: S-14

Client: Shell

Location: 15275 Washington Ave/Lewelling

City: San Leandro | Sheet 1 of 2

Logged by: DAF | Driller: Bayland

Casing installation data:

Drilling method: Hollow Stem Auger

Hole diameter: 8 inch

Top of Box Elevation: | Datum:

Water Level: 9'

Time: 10:00am

Date: 4/26/89

PID (ppm)	Blowsft. or Pressure (psi)	Type of Sample	Sample Number	Depth (ft.)	Sample	Well Detail	Soil Group Symbol (USCS)	Description
				1				PAVEMENT SECTION - 2 feet.
				2				
				3				SILTY CLAY (CL-ML)- dark gray (2.5Y N4); soft; damp, becoming firm at 5 feet; with slight odor.
500	150	S&H push	S-14-5'	4				
				5				
				6				
				7				SILTY SAND (SM)- olive (5Y 4/3); loose; damp; 30% medium sand; 20% very fine to fine sand; trace clay; no chemical odor, comment: drill cuttings.
				8				
				9				▼ CLAY (CL)- dark gray (2.5Y N4); stiff; damp; low plasticity; no chemical odor.
50	2	S&H	S-14-	10				
	3		10'					
	4							CLAY WITH SAND (CL)- light yellowish brown (2.5Y 6/4); medium stiff; damp; 10% very fine to fine sand; 5-10% silt; trace caliche nodules; mottled; no chemical odor.
				11				
				12				
				13				
				14				CLAY (CL)- dark gray (2.5Y N4); stiff; damp; low plasticity; pockets of silt; trace black & brown organics; no chemical odor.
0	2	S&H	S-14-	15				
	6		15'					
	7							color change to grayish brown (2.5Y 5/2) at 15 feet.
				16				
				17				
				18				
				19				▽ becoming saturated at 19 feet.
50	2	S&H	S-14-	20				
	6		20'					

Remarks:

GeoStrategies Inc.

BORING NO. S-14

JOB NUMBER	REVIEWED BY RG/CEG	DATE	REVISED DATE	REVISED DATE
7615	CEG 1262	5/89		

Field location of boring:

Project No.: 7615 | Date: 4/26/89 | Boring No: S-14

Client: Shell

Location: 15275 Washington Ave/Lewelling

City: San Leandro | Sheet 2 of 2

Logged by: DAF | Driller: Bayland

Casing installation data:

Drilling method: Hollow Stem Auger

Hole diameter: 8 inch

Top of Box Elevation: | Datum:

Water Level | Time | Date

PID (ppm)	Blowsft. or Pressure (psi)	Type of Sample	Sample Number	Depth (ft.)	Sample	Well Detail	Soil Group Symbol (USCS)	Description
	7							
				21				SANDY SILT (ML)- light yellowish brown (2.5Y 6/4); medium stiff; saturated; 30% very fine to fine sand; 5-10% clay; trace caliche nodules; mottled brown & black; no chemical odor.
				22				
				23				
				24				
	2	SPT						
	2			25				CLAY (CL)- grayish brown (2.5Y 5/2); medium stiff; damp; low plasticity; trace caliche nodules; no chemical odor
	4							
								Bottom of boring 24.0 feet, sampled to 25.5 feet 4/26/89

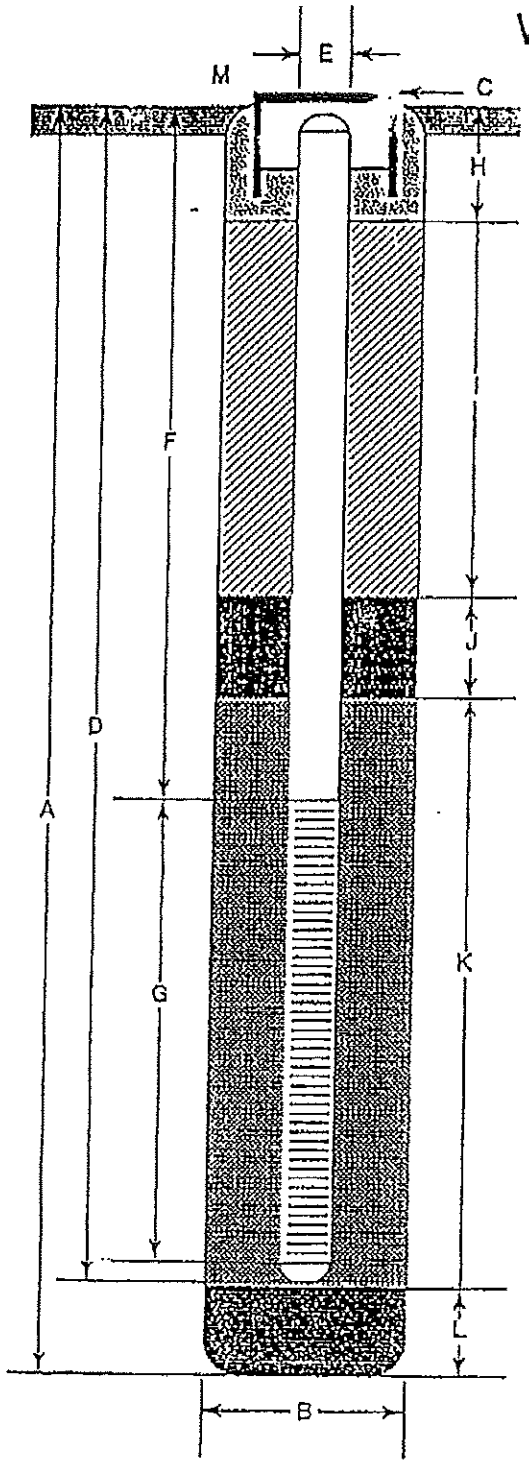
Remarks:

GeoStrategies Inc.

BORING NO. S-14

JOB NUMBER	REVIEWED BY RG/CEG	DATE	REVISED DATE	REVISED DATE
7615		5/89		

WELL CONSTRUCTION DETAIL



A Total Depth of Boring 24 ft.

B Diameter of Boring 8 in.
Drilling Method HOLLOW STEM AUGER

C Top of Box Elevation 20.44 ft.
☐ Referenced to Mean Sea Level
☒ Referenced to Project Datum

D Casing Length 23.5 ft.
Material SCH 40 PVC

E Casing Diameter 3 in.

F Depth to Top Perforations 4 ft.

G Perforated Length 20 ft.
Perforated Interval from 4 to 24 ft.
Perforation Type FACTORY SLOTTED
Perforation Size 0.020

H Surface Seal 2.5 ft.
Seal Material CONCRETE

I Backfill ft.
Backfill Material

J Seal 0.5 ft.
Seal Material BENTONITE

K Gravel Pack 21 ft.
Pack Material LONESTAR 2/12 & #3

L Bottom Seal ft.
Seal Material

M CHRISTY BOX

GSI GeoStrategies Inc.

Well Construction Detail
Former Shell Service Station
15275 Washington Ave.
San Leandro

WELL NO. S-14

JOB NUMBER	REVIEWED BY RG/CEG	DATE	REVISED DATE	REVISED DATE
7615	CWP CEG 12 6 2.	5/89		

Field location of boring:

Project No.: 7615 | Date: 4/26/89 | Boring No.: S-15

Client: Shell

Location: 15275 Washington Ave/Lewelling

City: San Leandro | Sheet 1 of 2

Logged by: DAF | Driller: Bayland

Casing installation data:

Drilling method: Hollow Stem Auger

Hole diameter: 8 inch

Top of Box Elevation: | Datum:

Water Level: 8.3'

Time: 2:25pm

Date: 4/26/89

PID (ppm)	Blowsft. or Pressure (psi)	Type of Sample	Sample Number	Depth (ft.)	Sample	Well Detail	Soil Group Symbol (USCS)	Description
				1				PAVEMENT SECTION - 2.5 feet.
				2				
				3				CLAY (CL)- very dark grayish brown (2.5Y 3/2); medium stiff; damp; low plasticity; trace gravel.
				4				
55	150	S&H	S-15-5'	5				SILTY CLAY (CL-ML) -olive (5Y 4/3); soft; damp; low plasticity; mottled brown.
		push		6				
Driller notes change @ 7'				7				SILTY SAND (SM) -olive brown (2.5Y 4/4); loose; moist; poorly graded; trace clay.
				8				
				9				▼
35	2	S&H	S-15-	10				CLAY (CL) -very dark gray (5Y 3/1); stiff; damp; low plasticity; trace gravel; mottled brown; rootholes.
	2		10'					
	4							
				11				
				12				
				13				
				14				becoming soft; 5% silt; trace caliche nodules at 14 feet.
55	1	S&H	S-15-	15				CLAY (CL) -olive gray (5Y 4/2); stiff; damp; low plasticity; mottled; trace caliche nodules.
	4		15'					
	8							
				16				
				17				
				18				becoming saturated at 18.5 feet. ▽
				19				SILTY CLAY (CL-ML) -light olive brown (2.5Y 5/4); medium stiff; saturated; trace organics; trace caliche nodules.
NM	3	SPT		20				
	2							

Remarks:

BORING NO.

GeoStrategies Inc.

S-15

JOB NUMBER	REVIEWED BY RG/CEG	DATE	REVISED DATE	REVISED DATE
7615	CEG 1262	5/89		

Field location of boring:

Project No.: 7615 | Date: 4/26/89 | Boring No: S-15

Client: Shell

Location: 15275 Washington Ave/Lewelling

City: San Leandro | Sheet 2 of 2

Logged by: DAF | Driller: Bayland

Casing installation data:

Drilling method: Hollow Stem Auger

Hole diameter: 8 inch

Top of Box Elevation: | Datum:

Water Level			
Time			
Date			

PID (ppm)	Blowsft. or Pressure (psi)	Type of Sample	Sample Number	Depth (ft.)	Sample	Well Detail	Soil Group Symbol (USCS)	Description
	4							
				21				
				22				
				23				CLAY (CL) -very dark gray (5Y 3/1); medium stiff; damp; low plasticity.
				24				
NM	1	SPT						SILTY CLAY (CL-ML) - light olive brown
	3			25				(2.5Y 5/4); medium stiff; damp; some sandy lenses.
	5							
								Bottom of boring 24.0 feet,
								Sampled to 25.5 feet
								4/26/89

Remarks:

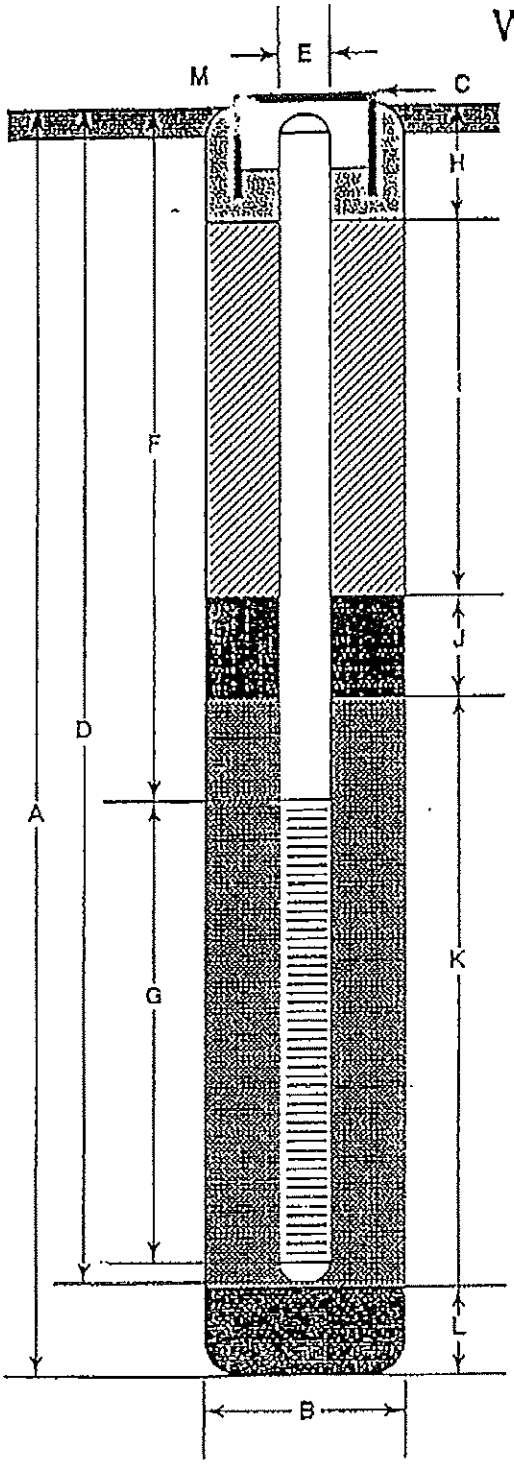
BORING NO.

GeoStrategies Inc.

S-15

JOB NUMBER	REVIEWED BY RG/CEG	DATE	REVISED DATE	REVISED DATE
7615		5/89		

WELL CONSTRUCTION DETAIL



A Total Depth of Boring 24 ft.

B Diameter of Boring 8 in.
Drilling Method HOLLOW STEM AUGER

C Top of Box Elevation 22.22 ft.
☐ Referenced to Mean Sea Level
☒ Referenced to Project Datum

D Casing Length 23.5 ft.
Material SCH 40 PVC

E Casing Diameter 3 in.

F Depth to Top Perforations 4 ft.

G Perforated Length 20 ft.
Perforated Interval from 4 to 24 ft.
Perforation Type FACTORY SLOTTED
Perforation Size 0.020

H Surface Seal 2.5 ft.
Seal Material CONCRETE

I Backfill ft.
Backfill Material

J Seal 0.5 ft.
Seal Material BENTONITE

K Gravel Pack 21 ft.
Pack Material LONESTAR 2/12 & #3

L Bottom Seal ft.
Seal Material

M CHRISTY BOX

GSI GeoStrategies Inc.

Well Construction Detail
Former Shell Service Station
15275 Washington Ave.
San Leandro

WELL NO. S-15

JOB NUMBER	REVIEWED BY RG/CEG	DATE	REVISED DATE	REVISED DATE
7615	DMP CEG 1262	5/89		

Field location of boring:

Project No.: 7615 | Date: 4/25/89 | Boring No.: S-16

Client: Shell

Location: 15275 Washington Ave/Lewelling

City: San Leandro | Sheet 2 of 2

Logged by: DAF | Other: Bayland

Casing installation data:

Drilling method: Hollow Stem Auger

Hole diameter: 8 inch

Top of Box Elevation: | Datum:

Water Level			
Time			
Date			

PID (ppm)	Blowsft. or Pressure (psi)	Type of Sample	Sample Number	Depth (ft.)	Sample	Well Detail	Soil Group Symbol (USCS)	Description
	5			21				▽
				22				CLAYEY SAND (SC) -pale brown (10 YR 6/3); loose; saturated:
				23				
				24				
0	1	S&H	S-16-25'	25				SILTY CLAY (CL-ML) -brown (10YR 5/3); soft; damp; 10% silt; <10% fine sand; trace organics; mottled gray & orange.
	1							
	1							
								Bottom of boring 24.0 feet, sampled to 25.5 feet.
								4/25/89

Remarks:

BORING NO.

GeoStrategies Inc.

S-16

JOB NUMBER	REVIEWED BY RG/CEG	DATE	REVISED DATE	REVISED DATE
7615		5/89		

Field location of boring:

Project No.: 7615 | Date: 4/25/89 | Boring No.: S-16

Client: Shell

Location: 15275 Washington Ave/Lewelling

City: San Leandro | Sheet 2 of 2

Logged by: DAF | Driller: Bayland

Casing installation data:

Drilling method: Hollow Stem Auger

Hole diameter: 8 inch

Top of Box Elevation: | Datum:

Water Level				
Time				
Date				

PID (ppm)	Elevation or Pressure (psi)	Type of Sample	Sample Number	Depth (ft.)	Sample	Well Detail	Soil Group Symbol (USCS)	Description
	5							▽
				21				CLAYEY SAND (SC) -pale brown (10 YR 6/3); loose; saturated;
				22				
				23				
				24				
0	1	S&H	S-16-					SILTY CLAY (CL-ML) -brown (10YR 5/3);
	1		25'	25				soft; damp; 10% silt; <10% fine sand;
	1							trace organics; mottled gray & orange.
								Bottom of boring 24.0 feet,
								sampled to 25.5 feet.
								4/25/89

Remarks:

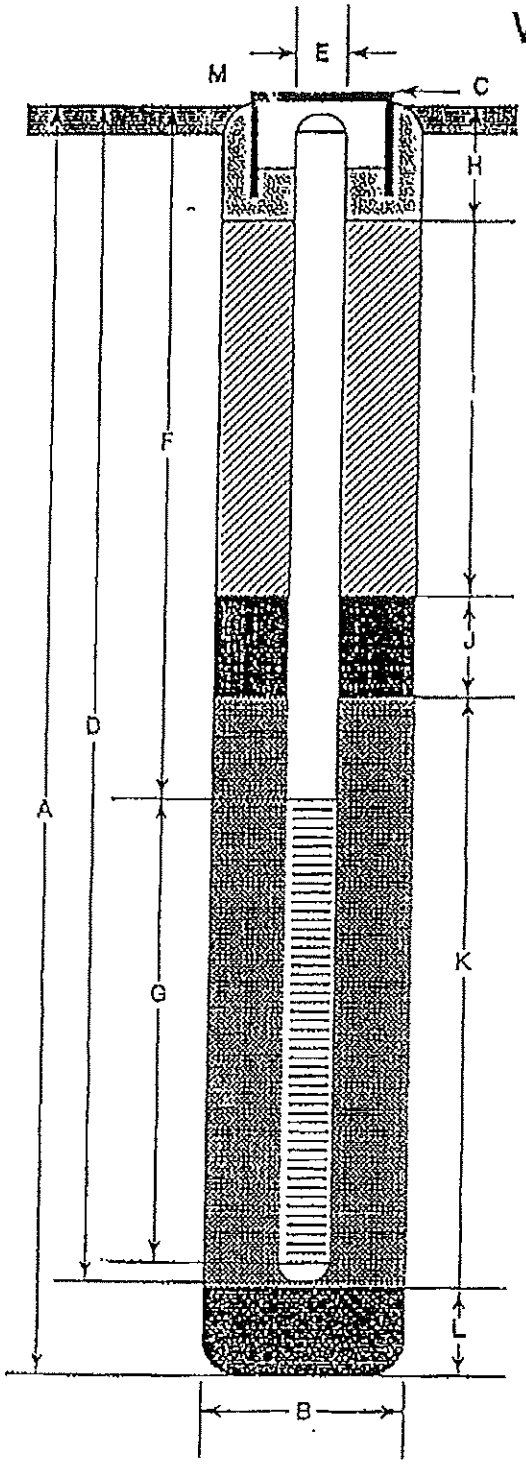
BORING NO.

GeoStrategies Inc.

S-16

JOB NUMBER	REVIEWED BY RG/CEG	DATE	REVISED DATE	REVISED DATE
7615		5/89		

WELL CONSTRUCTION DETAIL



A Total Depth of Boring 24 ft.

B Diameter of Boring 8 in.
Drilling Method HOLLOW STEM AUGER

C Top of Box Elevation 21.82 ft.
☐ Referenced to Mean Sea Level
☒ Referenced to Project Datum

D Casing Length 23.5 ft.
Material SCH 40 PVC

E Casing Diameter 3 in.

F Depth to Top Perforations 4 ft.

G Perforated Length 20 ft.
Perforated Interval from 4 to 24 ft.
Perforation Type FACTORY SLOTTED
Perforation Size 0.020

H Surface Seal 2.5 ft.
Seal Material CONCRETE

I Backfill ft.
Backfill Material

J Seal 0.5 ft.
Seal Material BENTONITE

K Gravel Pack 21 ft.
Pack Material LONESTAR 2/12 & #3

L Bottom Seal ft.
Seal Material

M CHRISTY BOX

GSI GeoStrategies Inc.

Well Construction Detail
Former Shell Service Station
15275 Washington Ave.
San Leandro

WELL NO. S-16

JOB NUMBER	REVIEWED BY RG/CEG	DATE	REVISED DATE	REVISED DATE
7615	Chip Lee 1262	5/89		

Field location of boring:

Drilling method: Hollow Stemm Auger

Hole diameter: 8 inch

Project No.: 7615	Date: 4/25/89
Client: Shell	Boring No: S-17
Location: 15275 Washington Ave/Lewelling	
City: San Leandro	Sheet 1 of 2
Logged by: DAF	Driller: Bayland
Casing installation date:	
Top of Box Elevation:	Datum:
Water Level: 7.5'	
Time: 12.50 pm	
Date: 4/25/89	

PID (ppm)	Blowcts or Pressure (psi)	Type of Sample	Sample Number	Depth (ft.)	Sample	Well Detail	Soil Group Symbol (USCS)	Description
				1				PAVEMENT SECTION - 2 feet.
				2				SILTY SAND (SM) -very dark gray (5Y 3/1); loose; dry; >50% very fine to fine sand; trace clay.
				3				
				4				
12.5	150	S&H	S-17-5'	5				SILTY CLAY (CL-ML) -dark greenish gray (5GY 4/1); medium stiff; damp; 5% very fine to fine sand; slight mottling - olive green & gray; moderate chemical odor.
		push						
				6				
				7				
				8				SANDY SILT (ML) -dark greenish gray (5GY 4/1); loose; saturated; 40% fine to very fine sand; 10% clay; weak chemical odor.
				9				
0	3	S&H	S-17-	10				
	4		10'					SILTY CLAY WITH SAND (CL-ML) -dark gray (5Y 4/1), stiff; damp; 15-20% very fine to fine sand; trace caliche nodules; trace organics; mottled; rootholes.
	7			11				
				12				
				13				
				14				gravels up to 1 cm at 14 feet.
NM	2	SPT		15				CLAY (CL) -grayish brown (5Y 5/2); stiff; damp; trace caliche nodules up to 1 cm; mottled; occasional sand lens.
	4							
	7			16				
				17				
				18				SANDY SILT (ML) -light yellowish brown (10 YR 6/4); loose; saturated; 30% very fine to fine sand; trace clay; trace caliche nodules; trace medium grain sized sand.
				19				
NM	2	SPT						
	2			20				

Remarks:

BORING NO.

GeoStrategies Inc.

S-17

JOB NUMBER	REVIEWED BY RS/CEG	DATE	REVISED DATE	REVISED DATE
7615	CEG 1262	5/89		

Field location of boring:

Project No.: 7615 | Date: 4/25/89 | Boring No: S-17

Client: Shell

Location: 15275 Washington Ave/Lewelling

City: San Leandro | Sheet 2 of 2

Logged by: DAF | Driller: Bayland

Casing installation data:

Drilling method: Hollow Stemm Auger

Hole diameter: 8 inch

Top of Box Elevation: | Datum:

	Water Level			
	Time			
	Date			

PID (ppm)	Blowct. or Pressure (psi)	Type of Sample	Sample Number	Depth (ft.)	Sample	Well Detail	Soil Group Symbol (USCS)	Description
	4							increasing clay at 20.5 feet.
				21				
				22				
				23				SILTY CLAY (CL-ML) olive (5Y 5/3); firm; damp; 10% very fine to fine sand; trace caliche nodules; trace medium to coarse grain sized sand; trace organics; trace saturated silt pockets.
				24				
NM	NM	SPT		25				
								Bottom of boring 24.0 feet. Sampled to 25.5 feet. 4/25/89

Remarks:

GeoStrategies Inc.

BORING NO. S-17

JOB NUMBER	REVIEWED BY	DATE	REVISED DATE	REVISED DATE
7615	RGYCEG	5/89		

Field location of boring:

(See Plate 2)

Project No.: 7615	Date: 10/27/89	Boring No: SR-1	
Client: Shell Oil Company			
Location: 15275 Washington Avenue			
City: San Leandro, California		Sheet 1 of 3	
Logged by: M.J.J.	Driller: Bayland		
Casing installation data: Pilot Boring			
Top of Box Elevation:		Datum:	
Water Level	12.5	10.9	
Time			
Date	10/27/89	10/27/89	

Drilling method: Hollow-Stem Auger

Hole diameter: 8-inches

PID (ppm)	Blowcnt. or Pressure (psi)	Type of Sample	Sample Number	Depth (ft.)	Sample	Well Detail	Soil Group Symbol (USCS)	Description
				1				PAVEMENT SECTION - 4 inches
				2				FILL - Gravel (GW) - dark brown (10YR 3/3), damp, very loose.
				3				FILL - Clay with Silt (CL) - black (5Y 2.5/1), damp, soft, high plasticity; < 5% coarse sand; strong chemical odor.
				4				
231	2							
	3	S&H	SR1-5	5				
	4							CLAY (CL) - black (2.5Y N3/2), damp, soft, medium plasticity; interbeds of clayey sand (SP-SC); sand is very fine to fine; interbeds occur as discrete units 3 to 5 inches thick; contain 10-20% fines; strong chemical odor.
	3			6				
243	4	S&H	SR1-6.5					
	5			7				
	1							
296	2	S&H	SR1-8	8				
	3							
	2			9				
	4							moderate chemical odor.
373	6	S&H	SR1-10	10				
	2							COLOR CHANGE to black (10YR 3.3) at 10.5 feet.
108	4	S&H		11		▼		SILTY SAND (SM) - moist, loose, interbedded with
	6		SR1-11.5	12				clayey silt (ML-CL), medium plasticity; no chemical odor.
				13				CLAY (CL) - very dark grayish brown (10YR 3/2), damp, stiff, high plasticity; fractured texture; no chemical odor.
				14				
	2							
4.3	4	S&H	SR1-15	15				
	8							first encountered water at 16.0 feet. Increasing sand at 16 feet. Interbedded clay with sand and clayey sand (observed during drilling with bucket auger, 11/16/89)
				16		▽		
				17				
				18				
				19				

Remarks:

Log of Boring

BORING NO.

SR-1

GeoStrategies Inc.

JOB NUMBER	REVIEWED BY PG/CEG	DATE	REVISED DATE	REVISED DATE
7615	CEG 1262	11/89		

Field location of boring:

(See Plate 2)

Project No.: 7615	Date: 10/27/89	Boring No: SR-1	
Client: Shell Oil Company			
Location: 16275 Washington Avenue			
City: San Leandro, California		Sheet 2 of 3	
Logged by: M.J.J.	Driller: Bayland		
Casing installation data: Pilot Boring			
Top of Box Elevation:		Datum:	
Water Level			
Time			
Date			

Drilling method: Hollow-Stem Auger

Hole diameter: 8-inches

PID (ppm)	Blows/ft. or Pressure (psi)	Type of Sample	Sample Number	Depth (ft.)	Sample	Well Detail	Soil Group Symbol (USCS)	Description
	2							
80	4	S&H	SR1-20	20				
	6							
				21				CLAYEY SILT (ML-CL) - light olive brown (2.5Y 5/4), saturated, medium plasticity; 30% clay; 5% fine to medium sand; no chemical odor.
				22				
				23				
				24				CLAY with SAND (CL) - olive gray (5Y 4/2), saturated, stiff, high plasticity; 20% very fine to fine sand; no chemical odor.
	3							
66	3	S&H	SR1-30	25				
	6							
				26				SILT with SAND (ML) - light olive brown (2.5Y 5/4), saturated, stiff; 15% fine to medium sand; 20-30% clay; no chemical odor.
				27				
				28				
				29				SAND with SILT (SP-SM) - light olive brown (5Y 4/2), fine sand, saturated, medium dense; well sorted; 10% silt; trace clay; laminae of silt 0.25 inches thick in shoe; iron oxide staining; no chemical odor.
	3							
10	8	S&H	SR1-30	30				
	10							
				31				
				32				
				33				
				34				SILTY SAND (SM) - light olive brown (5Y 4/2), saturated, dense; very fine to medium sand; 15% silt; trace clay; no chemical odor.
	5							
34	7	S&H	SR1-35	35				
	18							
				36				
				37				
				38				
				39				SAND (SP) - dark grayish brown (2.5Y 3/2), saturated, dense, very fine to medium sand; interbeds of fine

Remarks:

GSI GeoStrategies Inc.

Log of Boring

BORING NO. SR-1

JOB NUMBER	REVIEWED BY RK/CEG	DATE	REVISED DATE	REVISED DATE
7615	CEG 1262	11/89		

Field location of boring: (See Plate 2)	Project No.: 7615	Date: 10/27/89	Boring No.: SR-1
	Client: Shell Oil Company		
	Location: 15275 Washington Avenue		
	City: San Leandro, California		Sheet 3 of 3
	Logged by: M.J.J.	Drill . Bayland	
Drilling method: Hollow-Stem Auger	Casing installation data: Pilot Boring		
Hole diameter: 8-inches	Top of Box Elevation:	Datum:	

	Water Level			
	Time			
	Date			

PID (ppm)	Blowsft. or Pressure (psi)	Type of Sample	Sample Number	Depth (ft.)	Sample	Well Detail	Soil Group Symbol (USCS)	Description
	9							silty sand 0.5 to 3.0 inches thick; no chemical odor.
8.2	13	S&H	SR1-40	40				
	17							Bottom of boring at 40.5 feet.
				41				Bottom of sample at 40.5 feet.
								10/27/89
				42				
				43				
				44				
				45				
				46				
				47				
				48				
				49				
				50				
				51				
				52				
				53				
				54				
				55				
				56				
				57				
				58				
				59				

Remarks: Boring caved to 30 feet, Bentonite from 19 to 30 feet.

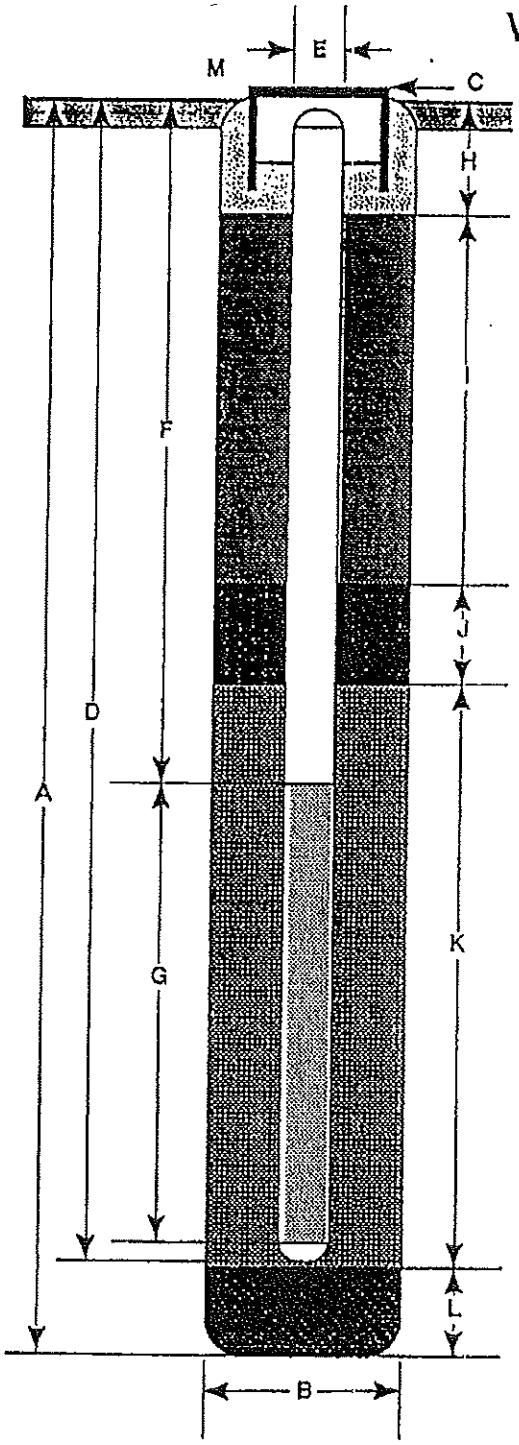
GeoStrategies Inc.

Log of Boring

BORING NO. SR-1

JOB NUMBER	REVIEWED BY RG/CEG	DATE	REVISED DATE	REVISED DATE
7615	CWP 12/6/89	11/89		

WELL CONSTRUCTION DETAIL



A Total Depth of Boring 40.5 ft.

B Diameter of Boring 20 in.
Drilling Method Bucket Auger

C Top of Box Elevation ft.
☐ Referenced to Mean Sea Level
☐ Referenced to Project Datum

D Casing Length 21 ft.
Material Schedule 40 PVC

E Casing Diameter 6 in.

F Depth to Top Perforations 6.5 ft.

G Perforated Length 15 ft.
Perforated Interval from 6.5 to 21.5 ft.
Perforation Type Machine Slot
Perforation Size 0.020 in.

H Surface Seal from 0.5 to 1.0 ft.
Seal Material concrete

I Backfill from 1.0 to 4.5 ft.
Backfill Material cement

J Seal from 4.5 to 5.5 ft.
Seal Material Bentonite

K Gravel Pack from 5.5 to 21.5 ft.
Pack Material 2/12 Lonestar sand

L Bottom Seal 21.5-30 ft.
Seal Material Bentonite

M Christy Box

Note: 30 to 40.5 Native Material (slough)

GeoStrategies Inc.

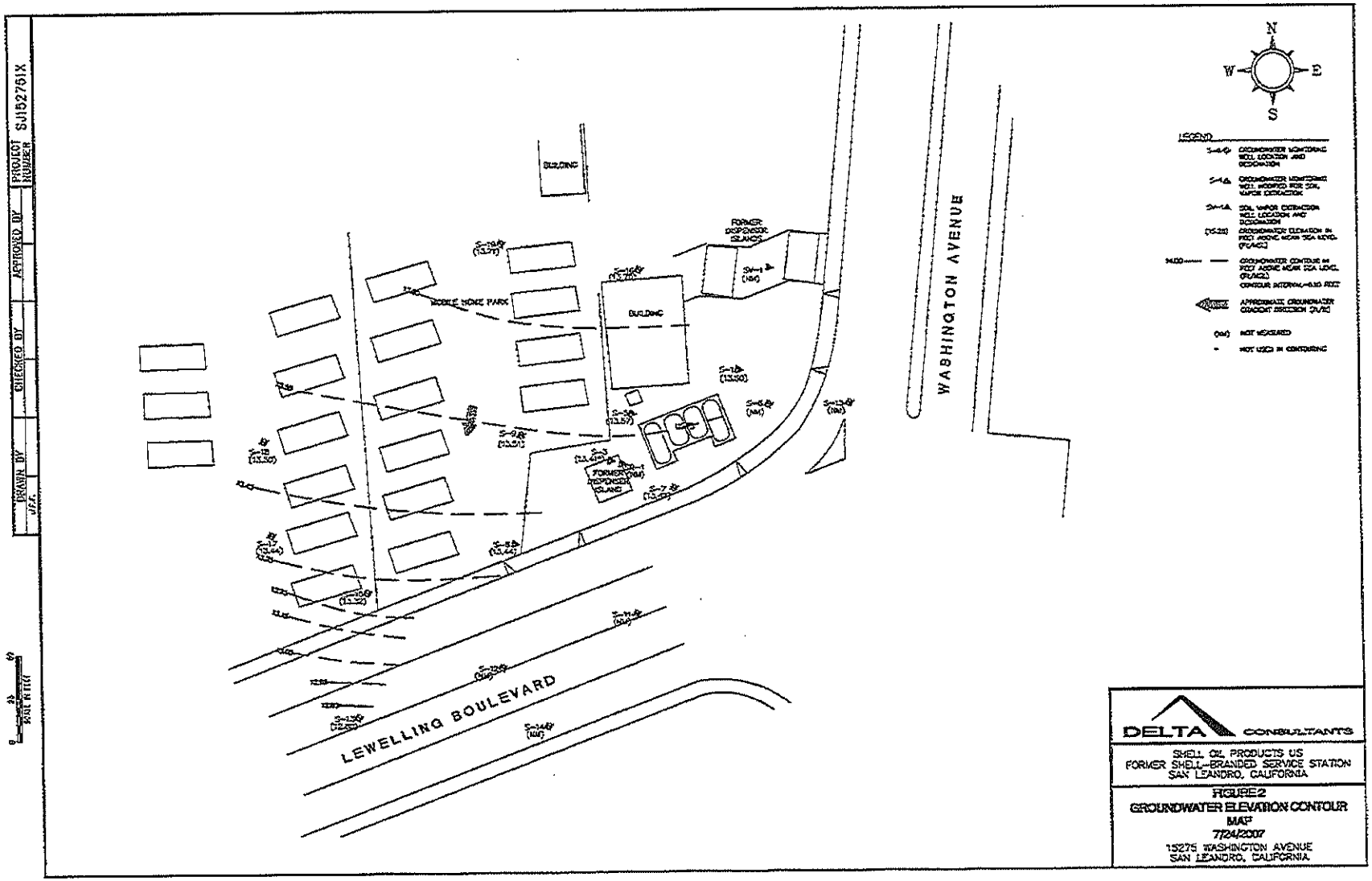
Well Construction Detail

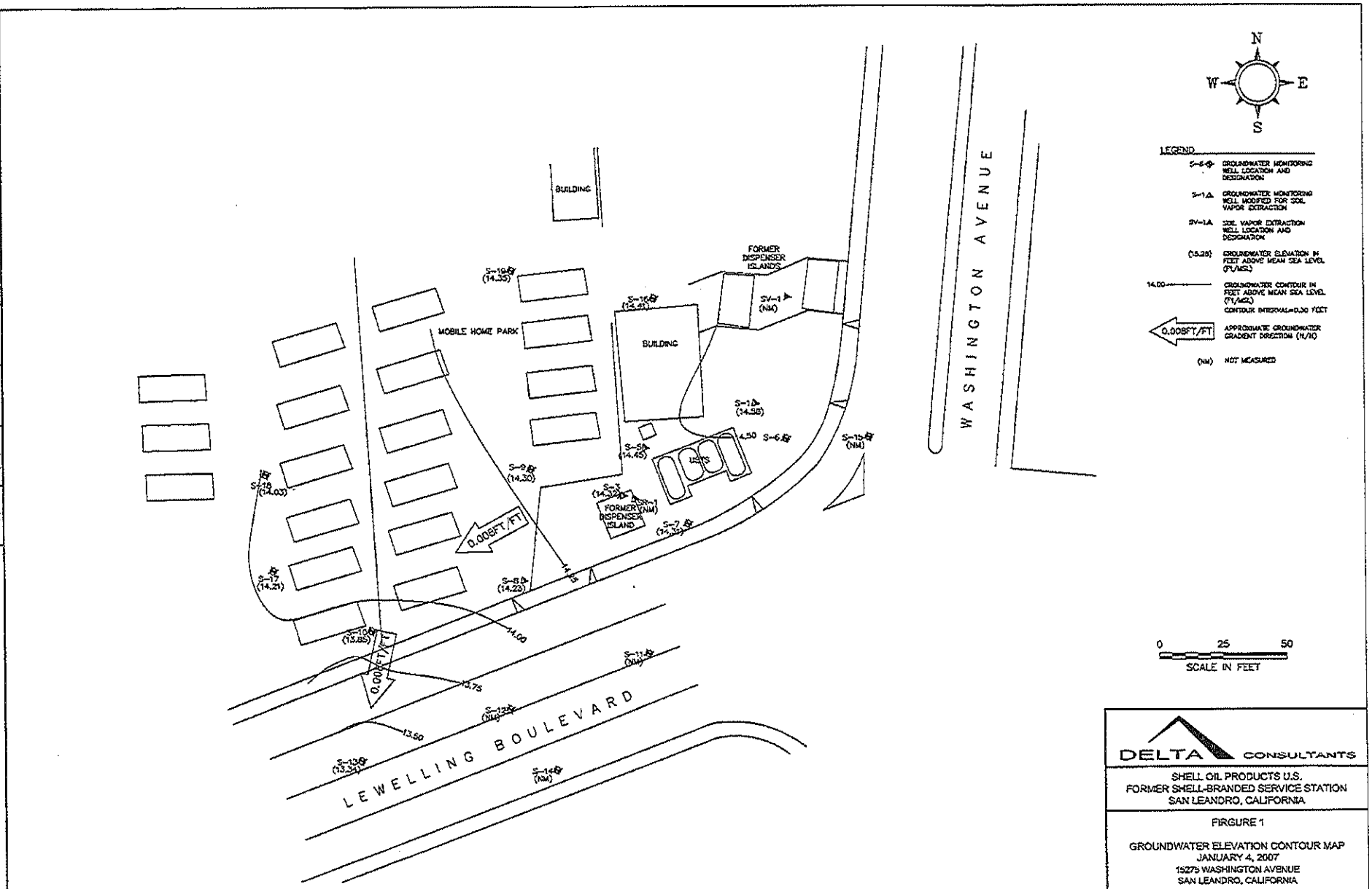
WELL NO. SR-1

JOB NUMBER	REVIEWED BY RG/CEG	DATE	REVISED DATE	REVISED DATE
7615	CWP CEG 1262.	10/89		

APPENDIX C

Historic Groundwater Contour Maps


DRAWN BY
JFF
CHECKED BY
APPROVED BY
PROJECT NUMBER
SJ1527761X
N
W
E
S
LEGEND
BUILDING
FORMER DISPENSER ISLANDS
MOBILE HOME PARK
BUILDING
WASHINGTON AVENUE
FORMER DISPENSER ISLANDS
LEWELLING BOULEVARD
DELTA CONSULTANTS
SHELL OIL PRODUCTS US
FORMER SHELL-BRANDED SERVICE STATION
SAN LEANDRO, CALIFORNIA
FIGURE 2
GROUNDWATER ELEVATION CONTOUR MAP
7/24/2007
15275 WASHINGTON AVENUE
SAN LEANDRO, CALIFORNIA



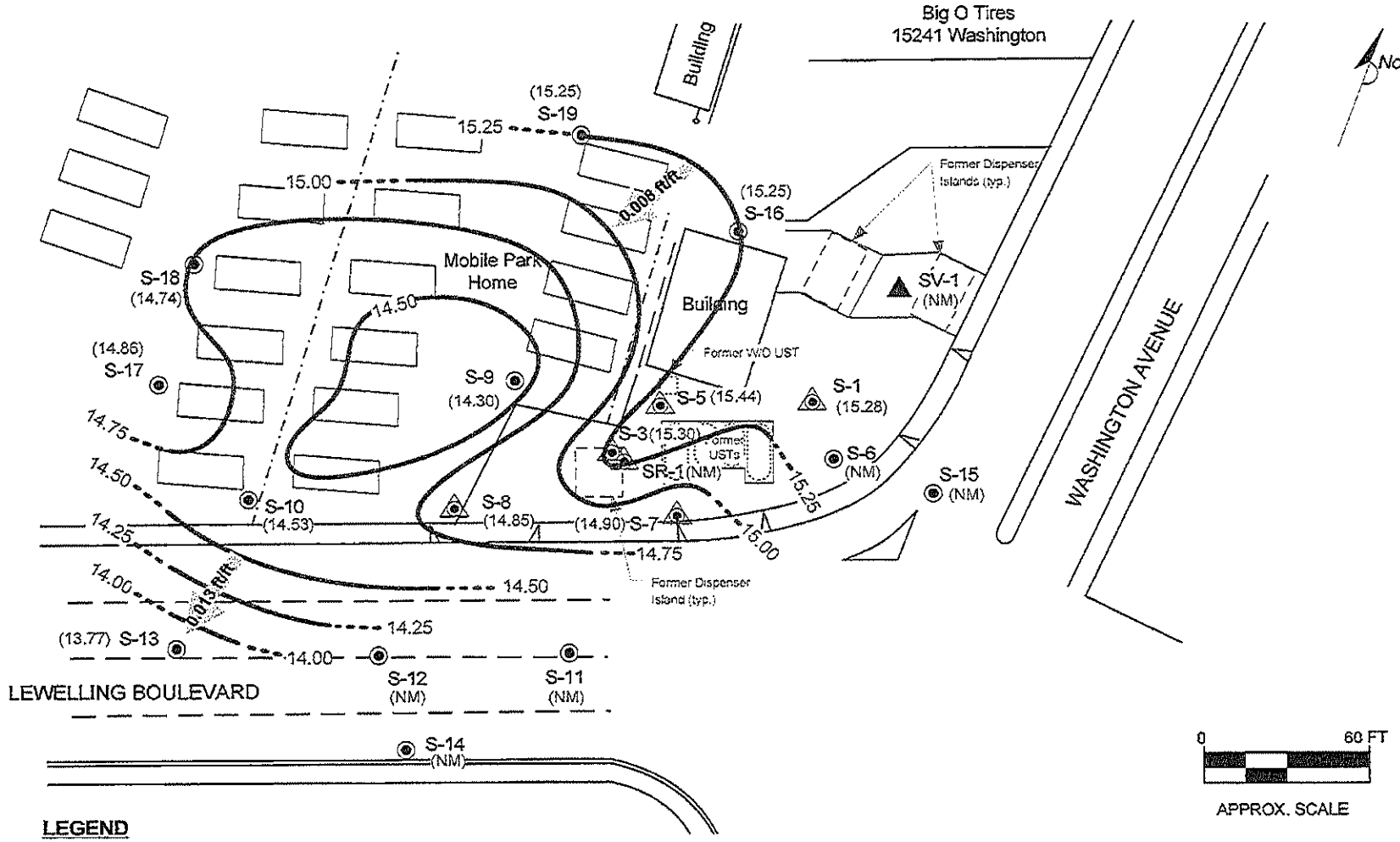
DRAWN BY	CHECKED BY	APPROVED BY	PROJECT NUMBER
AP 4/10/07	AP 4/10/07	JR 4/10/07	SJ152-75W-1

DELTA CONSULTANTS

SHELL OIL PRODUCTS U.S.
FORMER SHELL-BRANDED SERVICE STATION
SAN LEANDRO, CALIFORNIA

FIRGURE 1

GROUNDWATER ELEVATION CONTOUR MAP
JANUARY 4, 2007
15275 WASHINGTON AVENUE
SAN LEANDRO, CALIFORNIA



LEGEND

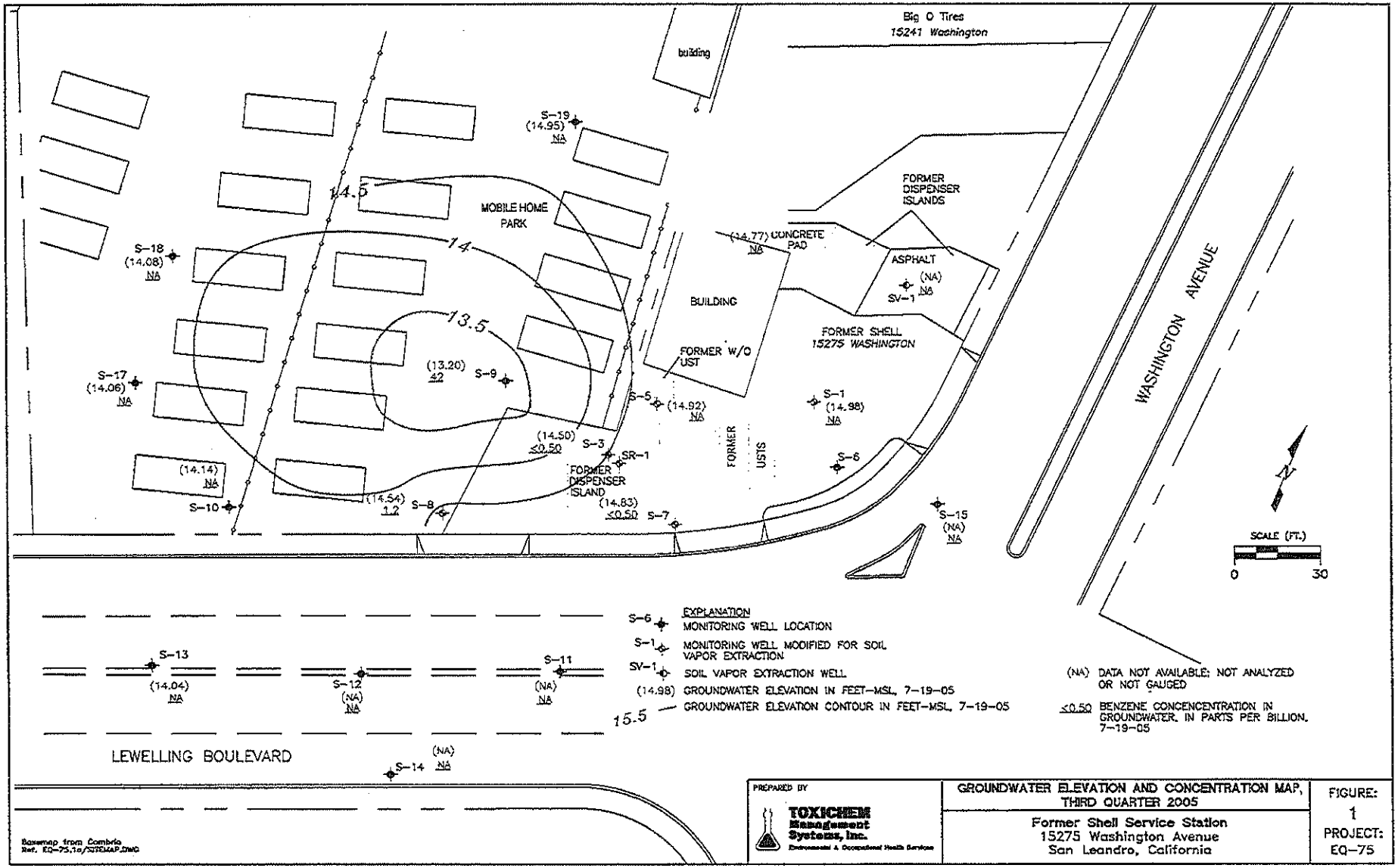
- S-6 ◉ **GROUNDWATER MONITORING WELL**
- S-1 ◬ **GROUNDWATER MONITORING WELL MODIFIED FOR SOIL VAPOR EXTRACTION**
- SV-1 ▲ **SOIL VAPOR EXTRACTION WELL**
- (15.28) **GROUNDWATER ELEVATION (FEET - MSL), 01/27/06**
- 14.00 **GROUNDWATER ELEVATION CONTOUR**
- 0.013 ft/ft **APPROXIMATE GROUNDWATER GRADIENT AND DIRECTION**
- NM **NOT MEASURED**

FIGURE 1
GROUNDWATER ELEVATION CONTOUR MAP,
JANUARY 27, 2006

FORMER SHELL-BRANDED SERVICE STATION
15275 Washington Avenue
San Leandro, CA

PROJECT NO. SJ15275-1.2006	DRAWN BY JL 04/10/06
FILE NO. SJ15275-1.2006	PREPARED BY JL
REVISION NO. 1	REVIEWED BY

Delta Environmental Consultants, Inc.



PREPARED BY

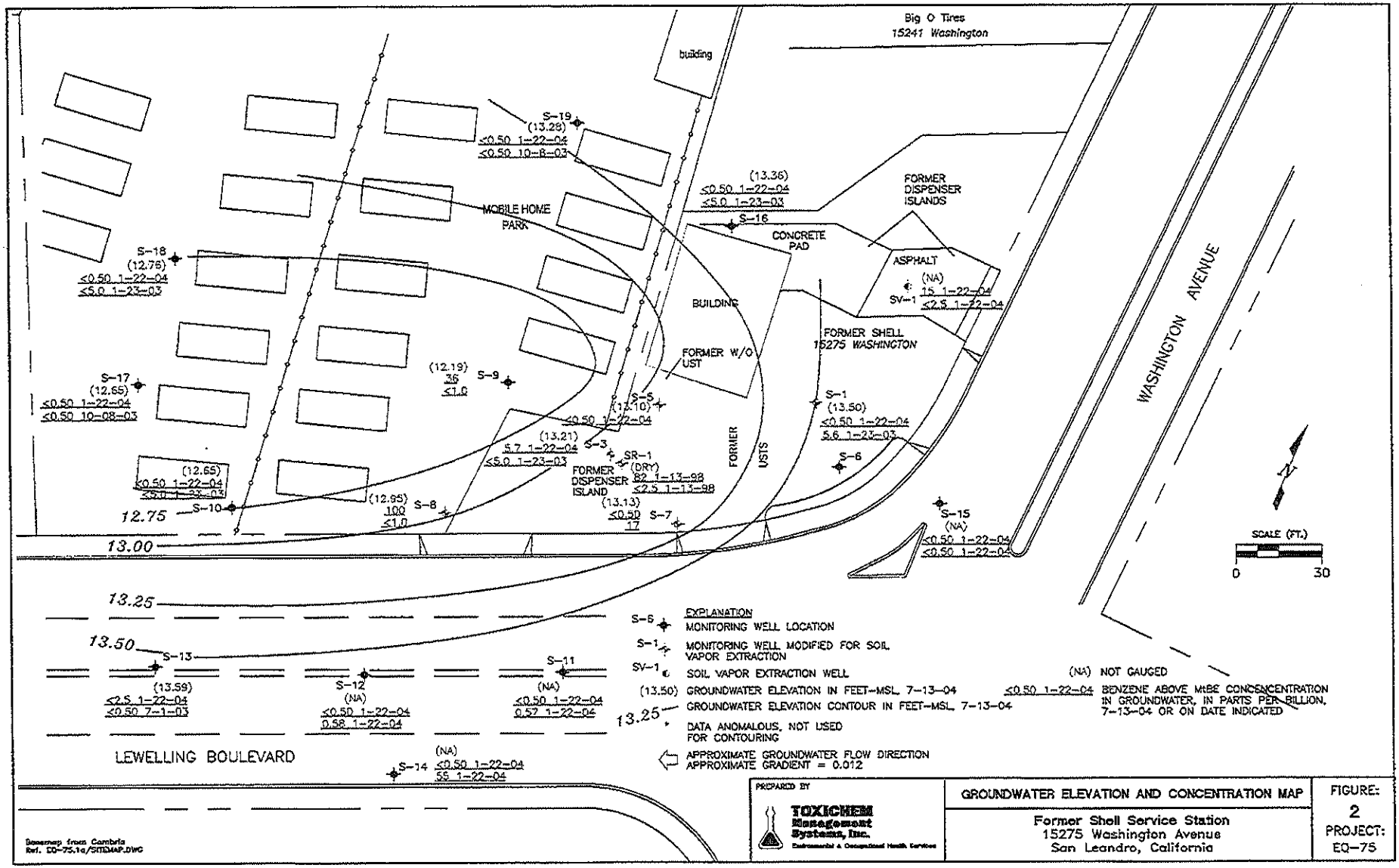
TOXICHEM Management Systems, Inc.
Environmental & Occupational Health Services

GROUNDWATER ELEVATION AND CONCENTRATION MAP, THIRD QUARTER 2005

Former Shell Service Station
15275 Washington Avenue
San Leandro, California

FIGURE: 1

PROJECT: EQ-75



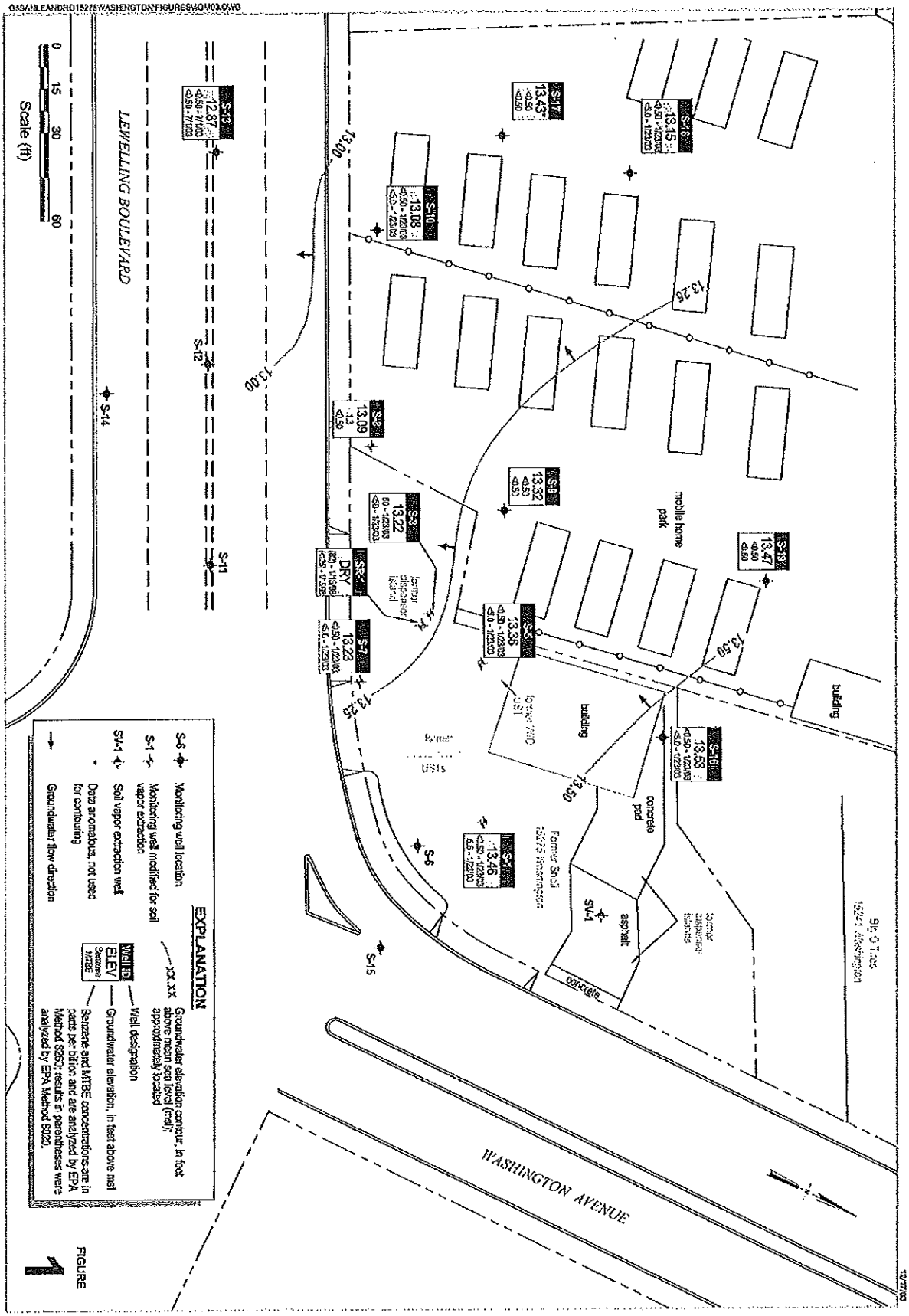
Basemap from Cambria
Ref. EQ-75.1a/SITEMAP.DWG

PREPARED BY
TOXICHEM Management Systems, Inc.
Environmental & Occupational Health Services

GROUNDWATER ELEVATION AND CONCENTRATION MAP

Former Shell Service Station
15275 Washington Avenue
San Leandro, California

FIGURE:
2
PROJECT:
EQ-75



Former Shell Service Station
15275 Washington Avenue
San Leandro, California
Incident #97088270

CAMBRIA

Groundwater Elevation Contour Map

October 8, 2003

APPENDIX D

Soil Analytical Data

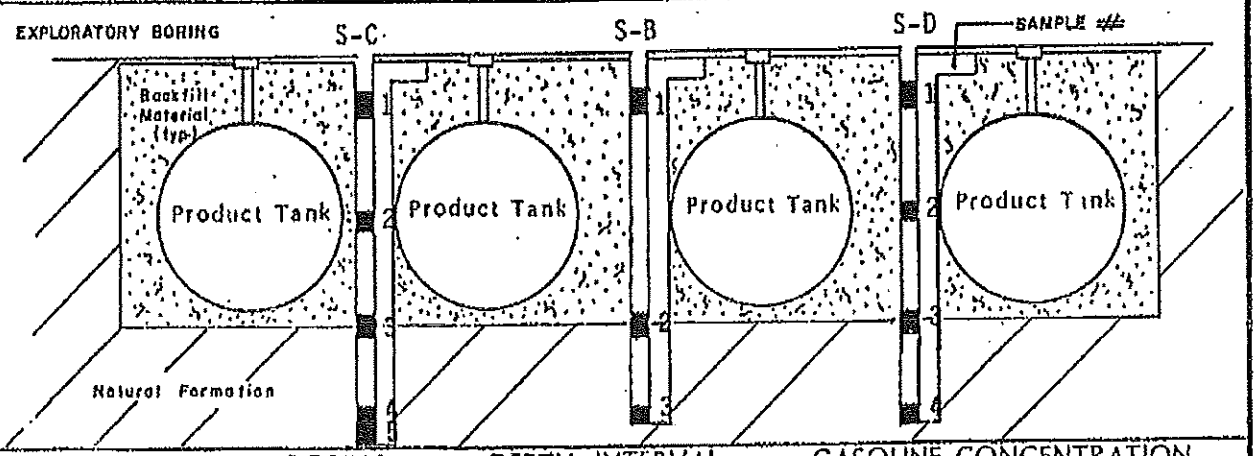
EMCON ASSOCIATES

GETTLER-RYAN, INC.

GENERALIZED PROFILE OF SUBSURFACE TANK COMPLEX AND GASOLINE CONCENTRATIONS WITHIN BACKFILL MATERIAL

PROJECT NUMBER 738-08.02
PROJECT NAME G-R Shell, San Leandro
NUMBER OF TANKS IN COMPLEX 4

MAPVIEW DIMENSIONS 27' x 42'
APPROXIMATE DEPTH 12 feet



SAMPLE #	BORING	DEPTH INTERVAL	GASOLINE CONCENTRATION (parts per million)
1	S-B	3-1/2 to 5	1,700
2	S-B	11 to 12-1/2	1,500
3	S-B	14 to 15-1/2	nd*
1	S-C	3-1/2 to 5	310
2	S-C	7-1/2 to 9	nd[1]
3	S-C	11-1/2 to 13	nd*
4	S-C	14 to 15-1/2	300
5	S-C	15-1/2 to 17	nd*
1	S-D	3-1/2 to 5	nd[2]
2	S-D	7 to 8-1/2	nd*
3	S-D	11 to 12-1/2	nd*
4	S-D	14 to 15-1/2	nd*

nd = no detection.

* Detection limit = 5 parts per million.

1 Detection limit = 200 ppm due to matrix interferences.

2 Detection limit = 100 ppm due to matrix interferences.

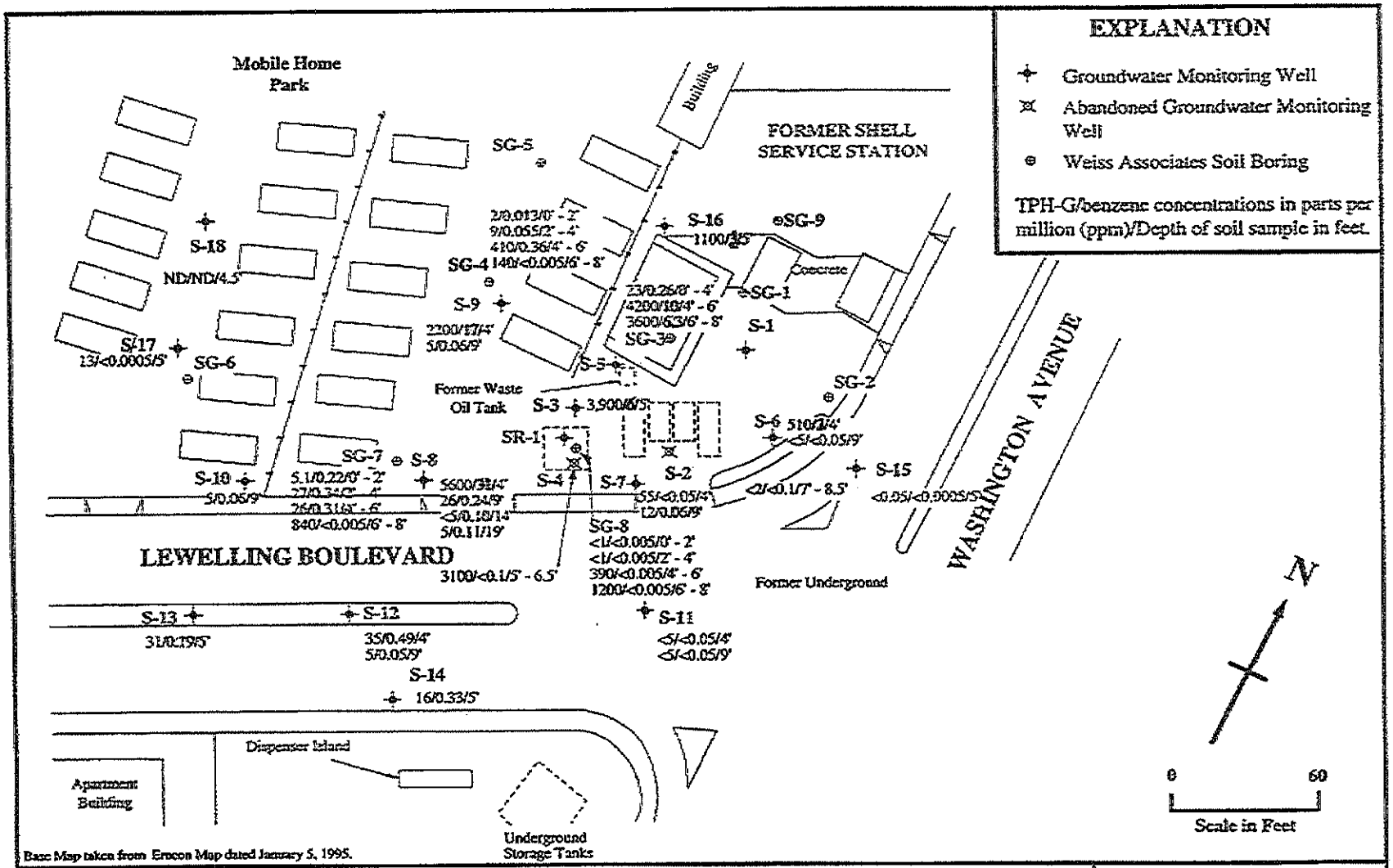


PLATE **3**

SOIL QUALITY MAP
Shell Oil Company
15275 Washington Avenue
San Leandro, California

enviros ®
95276.01

Drawn By: DML | Date: 6-19-97 | Approved By: _____ | Date: 6-26-97

APPENDIX E

Soil Gas Survey Data

Table 2. Soil Vapor Survey Data: Sorted by Depth
Former Shell Service Station WIC #204-6852-1008, 15275 Washington Avenue, San Leandro, California

WA Sample ID	Depth below ground surface	TPH (C_4+ as gas)	MtBE	Benzene	Toluene	Ethylbenzene	m,p,o-Xylene	Carbon Dioxide	Oxygen	Nitrogen	Methane	Comments
		Air Toxics LTD Data (ug/m³)						InterPhase Data (%)				Comments
SG-02-2ft	2 ft	46,000	73	250	96	250	880	9.2%	11.3%	79.5%	< 0.1%	No flow, sample collected at 2 ft
SG-03-2ft	2 ft	54,000,000	260,000	390,000	190,000	370,000	310,000	15.8%	3.8%	78.9%	1.6%	Good flow, gravel
SG-04-2ft	2 ft	220,000	310	420	150	1,700	3,200	0.7%	19.8%	79.4%	< 0.1%	Pretty good/medium flow
SG-07-2ft	2 ft	62,000,000	330,000	220,000	210,000	230,000	110,000	0.9%	19.7%	79.4%	< 0.1%	Good flow
SG-08-2ft	2 ft	15,000	22	10	38	190	220	0.1%	20.6%	79.3%	< 0.1%	Good flow
Mean	2 ft	23,256,200	118,081	122,136	80,057	120,428	84,860	5.3%	15.0%	79.3%	0.4%	
SG-01-4ft	4 ft	100,000,000	700,000	750,000	280,000	370,000	1,300,000	19.7%	3.9%	68.6%	7.8%	Good flow, tight soil
SG-03-4ft	4 ft	33,000,000	150,000	230,000	110,000	210,000	330,000	1.6%	18.1%	80.3%	< 0.1%	Somewhat restricted flow
SG-04-4ft	4 ft	350,000	550	1,000	2,300	2,600	4,400	1.4%	19.2%	79.4%	< 0.1%	
SG-05-4ft	4 ft	8,700,000	6,200	20,000	42,000	75,000	130,000	0.3%	20.3%	79.4%	< 0.1%	Very tight
SG-06 4ft	4 ft	66,000	22	8	150	380	790	0.5%	19.9%	79.6%	< 0.1%	Good flow
SG-07-4ft	4 ft	130,000,000	510,000	450,000	420,000	440,000	180,000	13.4%	9.5%	67.9%	9.3%	Good flow, high permeability
SG-08-4ft	4 ft	7,100,000	3,200	15,000	46,000	44,000	62,000	12.6%	4.8%	82.7%	< 0.1%	Good flow
SG-09-4ft	4 ft	540,000	1,600	18,000	610	17,000	15,000	0.9%	20.0%	79.1%	< 0.1%	Pretty good flow
Mean	4 ft	34,969,500	171,447	185,501	112,633	144,873	252,774	6.3%	14.5%	77.1%	2.2%	
SG-03-6ft	6 ft	5,000,000	16,000	39,000	18,000	71,000	190,000	4.7%	16.4%	78.9%	< 0.1%	Somewhat restricted flow
SG-04-6ft	6 ft	310,000	200	1,000	2,200	4,000	4,800	1.2%	19.5%	79.3%	< 0.1%	Medium flow
SG-04-6ft (dup)	6 ft	NA	NA	NA	NA	NA	NA	1.0%	19.2%	79.8%	< 0.1%	Medium flow
SG-07-6ft	6 ft	3,000,000	17,000	19,000	6,500	20,000	6,600	1.9%	18.7%	78.5%	1.0%	Low flow/very low permeability
SG-07-6ft (dup)	6 ft	3,400,000	19,000	21,000	7,300	22,000	7,500	NA	NA	NA	NA	Low flow/very low permeability
SG-08-6ft	6 ft	20,000,000	8,400	49,000	130,000	140,000	290,000	0.3%	20.0%	79.7%	< 0.1%	Low flow, a little tighter than 2 ft and 4 ft depths
SG-08-6ft (dup)	6 ft	NA	NA	NA	NA	NA	NA	0.2%	20.0%	79.8%	< 0.1%	Low flow, a little tighter than 2 ft and 4 ft depths
Mean	6 ft	6,342,000	12,120	25,800	32,800	51,400	99,780	1.6%	19.0%	79.3%	0.3%	

Notes: < - Below the method detection limit.
M - reported value may be biased due to apparent matrix interferences.

Table 3. Soil Vapor Survey Data: Sorted by Location
Former Shell Service Station WIC #204-6852-1008, 15275 Washington Avenue, San Leandro, California

WA Sample ID	Depth below ground surface	TPH (C_4+ as gas)	MTBE	Benzene	Toluene	Ethylbenzene	m,p,o-Xylene	Carbon Dioxide	Oxygen	Nitrogen	Methane	Comments
		Air Toxics LTD Data (ug/m^3)						InterPhase Data (%)				
SG-01-4ft	4 ft	100,000,000	700,000	750,000	280,000	370,000	1,300,000	19.7%	3.9%	68.6%	7.8%	Good flow, tight soil
SG-02-2ft	2 ft	46,000	73	250	96	250	880	9.2%	11.3%	79.5%	< 0.1%	No flow, sample collected at 2 ft
SG-03-2ft	2 ft	54,000,000	260,000	390,000	190,000	370,000	310,000	15.8%	3.8%	78.9%	1.6%	Good flow, gravel
SG-03-4ft	4 ft	33,000,000	150,000	230,000	110,000	210,000	330,000	1.6%	18.1%	80.3%	< 0.1%	Somewhat restricted flow
SG-03-6ft	6 ft	5,000,000	16,000	39,000	18,000	71,000	190,000	4.7%	16.4%	78.9%	< 0.1%	Somewhat restricted flow
SG-04-2ft	2 ft	220,000	310	420	150	1,700	3,200	0.7%	19.8%	79.4%	< 0.1%	Pretty good/medium flow
SG-04-4ft	4 ft	350,000	550	1,000	2,300	2,600	4,400	1.4%	19.2%	79.4%	< 0.1%	
SG-04-6ft	6 ft	310,000	200	1,000	2,200	4,000	4,800	1.2%	19.5%	79.3%	< 0.1%	Medium flow
SG-04-6ft (dup)	6 ft	NA	NA	NA	NA	NA	NA	1.0%	19.2%	79.8%	< 0.1%	Medium flow
SG-05-4ft	4 ft	8,700,000	6,200	20,000	42,000	75,000	130,000	0.3%	20.3%	79.4%	< 0.1%	Very tight
SG-06 4ft	4 ft	66,000	22	8	150	380	790	0.5%	19.9%	79.6%	< 0.1%	Good flow
SG-07-2ft	2 ft	62,000,000	330,000	220,000	210,000	230,000	110,000	0.9%	19.7%	79.4%	< 0.1%	Good flow
SG-07-4ft	4 ft	130,000,000	510,000	450,000	420,000	440,000	180,000	13.4%	9.5%	67.9%	9.3%	Good flow, high permeability
SG-07-6ft	6 ft	3,000,000	17,000	19,000	6,500	20,000	6,600	1.9%	18.7%	78.5%	1.0%	Low flow/very low permeability
SG-07-6ft (dup)	6 ft	3,400,000	19,000	21,000	7,300	22,000	7,500	NA	NA	NA	NA	Low flow/very low permeability
SG-08-2ft	2 ft	15,000	22	10	38	190	220	0.1%	20.6%	79.3%	< 0.1%	Good flow
SG-08-4ft	4 ft	7,100,000	3,200	15,000	46,000	44,000	62,000	12.6%	4.8%	82.7%	< 0.1%	Good flow
SG-08-6ft	6 ft	20,000,000	8,400	49,000	130,000	140,000	290,000	0.3%	20.0%	79.7%	< 0.1%	Low flow, a little tighter than 2 ft and 4 ft depl
SG-08-6ft (dup)	6 ft	NA	NA	NA	NA	NA	NA	0.2%	20.0%	79.8%	< 0.1%	Low flow, a little tighter than 2 ft and 4 ft dep
SG-09-4ft	4 ft	540,000	1,600	18,000	610	17,000	15,000	0.9%	20.0%	79.1%	< 0.1%	Pretty good flow

Notes: < - Below the method detection limit.

M - **reported value may be biased due to apparent matrix interferences.**

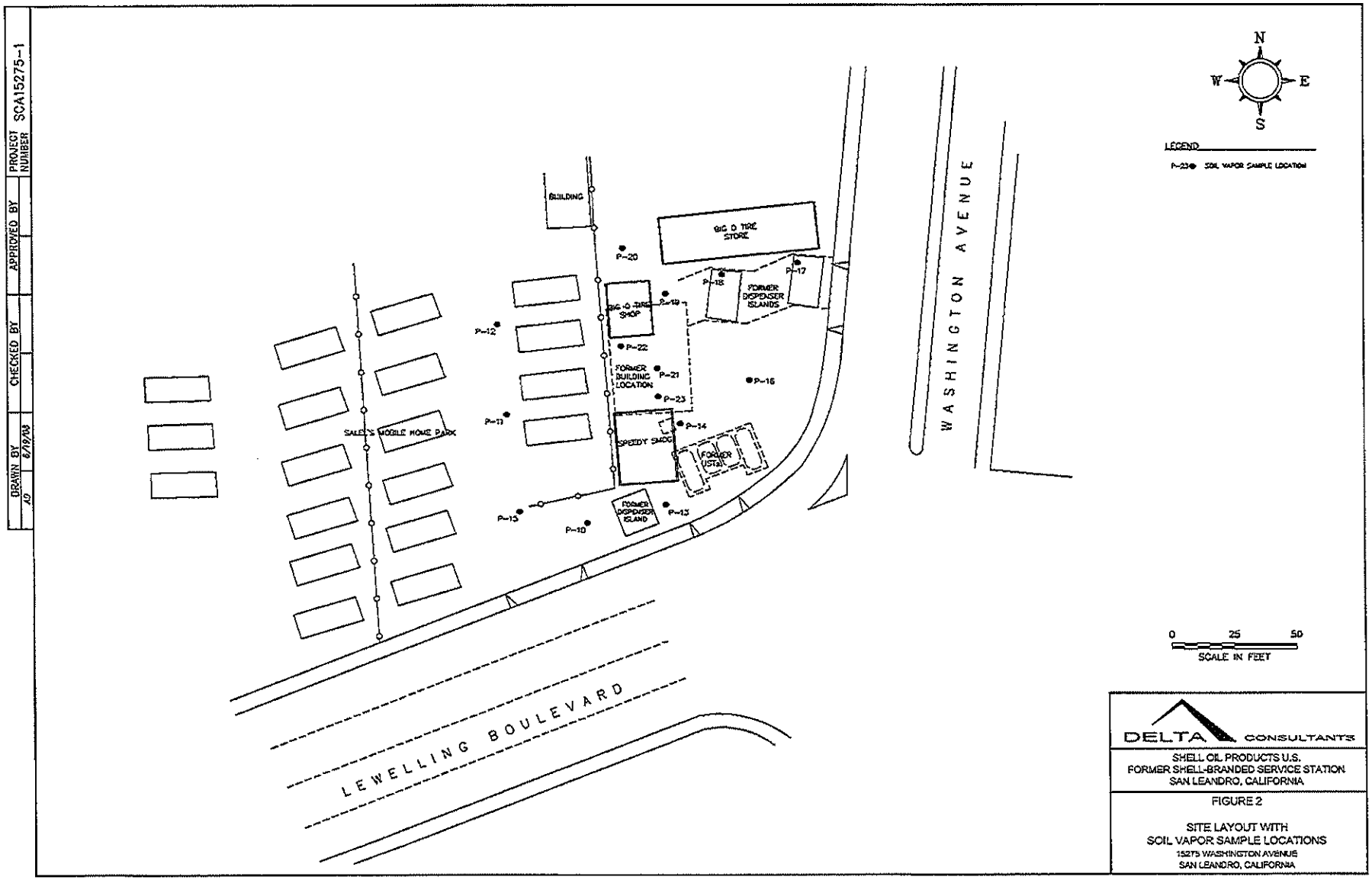

N
W
E
S
LEGEND
P-23● SOIL VAPOR SAMPLE LOCATION
BUILDING
BIG O TIRE STORE
P-20
P-18
P-17
FORMER DISPENSER ISLANDS
BIG O TIRE SHOP
P-19
P-12
P-22
FORMER BUILDING LOCATION
P-21
P-16
P-23
P-11
P-14
SALES & MOBILE HOME PARK
SPEEDY SHOP
FORMER UST
FORMER DISPENSER ISLAND
P-13
P-15
P-10
WASHINGTON AVENUE
LEWELLING BOULEVARD
0
25
50
SCALE IN FEET
DELTA CONSULTANTS
SHELL OIL PRODUCTS U.S.
FORMER SHELL-BRANDED SERVICE STATION
SAN LEANDRO, CALIFORNIA
FIGURE 2
SITE LAYOUT WITH
SOIL VAPOR SAMPLE LOCATIONS
15275 WASHINGTON AVENUE
SAN LEANDRO, CALIFORNIA
DRAWN BY AD 6/19/08
CHECKED BY
APPROVED BY
PROJECT NUMBER SCA15275-1

TABLE 1
SOIL VAPOR SAMPLING ANALYTICAL DATA
Former Shell Service Station
15275 Washington Boulevard
San Leandro, CA

Well ID	Date	Depth (feet)	TPH-G (ug/m3)	B (ug/m3)	T (ug/m3)	E (ug/m3)	X (ug/m3)	MTBE (ug/m3)	TBA (ug/m3)	2-Propanol
P-10	6/11/2008	5.5 ft	100,000	<2.7	14	3.9	11.8	<3.0	43	<8.2
P-11	6/11/2008	5.5 ft	8,000,000	1,100	240	<180	<180	<150	<520	<420
P-12	611/2008	5.5 ft	7,800,000	810	<630	<730	<730	<600	<5,100	<1,600
P-13	6/10/2008	5.5 ft	5,300	<2.5	5.6	<3.4	3.6	<2.8	<24	<7.8
P-14	6/10/2008	5.5 ft	2,100,000	1400	<130	4,700	280	<120	<1,000	<340
P-15	6/11/2008	5.5 ft	160,000	<54	<63	<73	<73	<60	<150	<160
P-16	6/10/2008	5.5 ft	130,000	<13	<15	26	<17	<14	<120	<120
P-17	6/10/2008	5.5 ft	450	<2.5	5.4	<3.4	3.6	<2.8	<23	<7.6
P-17D	6/10/2008	5.5 ft	1,100	<2.5	4.0	<3.4	<3.4	<2.8	<24	<7.8
P-18	6/10/2008	5.5 ft	13,000	3.2	6.0	<3.6	4.0	<3.0	36	<8.2
P-19	6/10/2008	5.5 ft	9,000,000	600	270	<180	<180	<150	<510	<410
P-20	6/10/2008	5.5 ft	26,000	<2.5	240	<3.4	<3.4	<2.8	55	27
P-20LD	6/10/2008	5.5 ft	26,000	<2.5	230	<3.4	<3.4	<2.8	52	29
P-21	6/10/2008	5.5 ft	8,200,000	6,400	280	27,000	3,500	<100	<340	<280
P-22	6/10/2008	5.5 ft	8,200,000	1,400	<320	14,000	<360	<300	<1,000	<820
P-23	6/10/2008	5.5 ft	6,500,000	12,000	190	46,000	25,120	<56	<190	<150
P-23LD	6/10/2008	5.5 ft	6,500,000	11,000	180	44,000	23,110	<56	<190	<150

Abbreviations:

TPH-g = Total petroleum hydrocarbons as gasoline by EPA Method T0-14/T0-15

BTEX = Benzene, toluene, ethylbenzene, total xylenes by EPA Method T0-14A/T0-15

MTBE = Methyl tert-butyl ether

TBA = Tert-butyl-alcohol

2-Propanol= Isopropyl alcohol

ug/m3 = Microgram per cubic meter

<n = Not detected, below method detection limit

D = Duplicate sample

LD = Lab duplicate

APPENDIX F

Groundwater Monitoring Data

Shell Oil Products US

May 8, 2008

Re: **Semi-Annual Monitoring Report – First Quarter 2008**
Former Shell-branded Service Station
15275 Washington Avenue
San Leandro, California

Dear Mr. Wickham:

I declare, under penalty of perjury, that the information and/or recommendations contained in the attached document or report is true and correct to the best of my knowledge.

Sincerely,
Shell Oil Products US

Denis L. Brown
Project Manager

20945 S. Wilmington Avenue, Carson, CA 90810 P: (559) 645-9306; F: (559) 645-5643

May 8, 2008
DELTA Project SCA152751
SAP: 129460

Mr. Jerry Wickham
Alameda County Health Care Services Agency
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502-6577

Re: SEMI-ANNUAL GROUNDWATER MONITORING REPORT-FIRST QUARTER 2008
Former Shell-Branded Service Station
15275 Washington Avenue
San Leandro, California

DELTA

Dear Mr. Wickham:

On behalf of Shell Oil Products (SHELL), Delta Consultants, Inc. (DELTA) has prepared this *First Quarter 2008 Semi-Annual Groundwater Monitoring Report* for the above referenced site. The sampling activities at the site were conducted by Blaine Tech Services, Inc. under contract to SHELL and included the collection of groundwater samples and static water level measurements. A DELTA staff member, under the supervision of a California Registered Civil Engineer or a California Professional Geologist, performed the data evaluation.

This semi-annual report represents DELTA's professional opinions based upon the currently available information and is arrived at in accordance with currently acceptable professional standards. This report is based upon a specific scope of work requested by the client. The Contract between DELTA and its client outlines the scope of work, and only those tasks specifically authorized by that contract or outlined in this report were performed. This report is intended only for the use of DELTA's Client and anyone else specifically listed on this report. DELTA will not and cannot be liable for unauthorized reliance by any other third party. Other than as contained in this paragraph, DELTA makes no express or implied warranty as to the contents of this report.

If you have any questions regarding this site, please contact Mr. Richard Garlow (DELTA) at (408) 826-1880 or Mr. Denis Brown (SHELL) at (707) 865-0251.

Sincerely,
Delta Consultants

Richard A. Garlow, M.S., PG
Project Manager

Attachment: First Quarter 2008 Semi-annual Groundwater Monitoring Report

cc: Denis Brown, Shell Oil Products US, Carson
Mike Bakaldin, San Leandro Fire Department, San Leandro
Jonathan Redding, Wendell, Rosen, Black & Dean, Oakland
Richard Waxman, Wendell, Rosen, Black & Dean, Oakland
Salel Enterprises c/o Foothill Hardware, Oakland

May 8, 2008

SHELL QUARTERLY STATUS REPORT

Station Address:	15275 Washington Avenue, San Leandro, CA
DELTA Project No.:	SCA152751
SHELL Project Manager / Phone No.:	Denis Brown / (707) 865-0251
DELTA Site Manager / Phone No.:	Richard Garlow / (408) 826-1880
Primary Agency / Regulatory ID No.:	Alameda County Health Care Services Agency (ACHCSA) / Jerry Wickham
Other Agencies to Receive Copies:	San Leandro Fire Department / Mike Bakaldin

WORK PERFORMED THIS QUARTER (FIRST – 2008):

1. Semi-annual groundwater monitoring and sampling. Submitted status report.
2. Obtained access agreement, meet with property owners.

WORK PROPOSED FOR NEXT QUARTER (SECOND – 2008):

1. Conduct soil vapor sample investigation.

Current Phase of Project:	Groundwater monitoring
Site Use:	Former Shell-branded Service Station
Frequency of Sampling:	Semi-annual (S-3 and S-7 through S-9) Annual (S-1, S-5, S-10, S-13, and S-16 through S-19)
Frequency of Monitoring:	Semi-annual
Is Separate Phase Hydrocarbon Present On-site (Well #'s):	☐ Yes ☒ No
Cumulative SPH Recovered to Date:	NA
SPH Recovered This Quarter :	None
Groundwater Removed this Quarter:	None
Sensitive Receptor(s) and Respective Direction(s):	No municipal wells are located within a half mile from the site.
Site Lithology:	Silt, silty sand, and clay were encountered to the total depth explored, with minor sand interbeds noted.
Current Remediation Techniques:	None
Permits for Discharge:	None
Approximate Depth to Groundwater:	4.72 to 6.10 feet below top of well casing
Groundwater Gradient	South at approximately 0.012 ft/ft; generally consistent with previous data
Current Agency Correspondence:	ACHCSA letter dated August 31, 2007

May 8, 2008

SHELL QUARTERLY STATUS REPORT

Site History:

Case Opening	1985 – four on-site wells installed, TPH-G detected in groundwater, as well as separate phase product in one well.
On-Site Assessment	1985-1987 – on-site wells and soil borings
Off-Site Assessment	1988-1991 – off-site wells installed 1997 – on- and off-site soil vapor survey
Passive Remediation	Natural attenuation since source and tank removal in 1987
Active Remediation	1987 – over 700 cubic yards of petroleum hydrocarbon impacted soil was excavated during UST and dispenser removal. 1998-1999 – Soil vapor extraction system removed 1,410 pounds of vapor-phase hydrocarbons from the site
Closure	Evaluate closure request following soil vapor survey
Summary of Unusual Activity:	TPH-G and benzene concentrations increased in Well S-9, but remain well below the historic highs.

Discussion:

Soil vapor investigation will be conducted to evaluate the effectiveness of past soil vapor extraction and natural attenuation in lowering soil vapor hydrocarbon (particularly benzene) levels at the site. Following the soil vapor sampling investigation, a Sensitive Receptor Survey will be conducted, a Site Conceptual Model will be developed, especially to evaluate elevated hydrocarbon levels remaining in off-site well S-9 and a Tier I/Tier II Risk Based Corrective Action evaluation will be completed.

ATTACHED:

- Table 1 – Groundwater Gauging and Analytical Data
- Figure 1 – Site Map Location
- Figure 2 – Groundwater Elevation Contour Map
- Figure 3 – Hydrocarbon Distribution in Groundwater Map
- Appendix A – Field Data Sheets
- Appendix B – Field Procedures
- Appendix C – Laboratory Report and Chain-of-Custody Document

TABLE

TABLE 1
GROUNDWATER GUAGING ANALYTICAL DATA
Former Shell Service Station
15275 Washington Boulevard
San Leandro, CA

Well ID	Date	TPPH (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE 8020 (ug/L)	MTBE 8260 (ug/L)	TOC (MSL)	Depth to Water (ft.)	GW Elevation (MSL)	SPH Thickness (ft.)	DO Reading (ppm)
S-1	7/8/1985	520	NA	NA	NA	NA	NA	NA	21.55	NA	NA	NA	NA
S-1	9/6/1988	<50	<0.5	<1	<1	<0.3	NA	NA	21.55	NA	NA	NA	NA
S-1	11/16/1988	<50	<0.5	<1	<1	<0.3	NA	NA	21.55	8.01	13.54	NA	NA
S-1	2/27/1989	<50	0.5	<1	<1	<0.3	NA	NA	21.55	NA	NA	NA	NA
S-1	5/4/1989	<50	1.0	<1	<1	<0.3	NA	NA	21.55	NA	NA	NA	NA
S-1	8/10/1989	<50	0.7	<1	<1	<0.3	NA	NA	21.55	7.93	13.62	NA	NA
S-1	10/10/1989	<50	<0.5	<1	<1	<0.3	NA	NA	21.55	8.09	13.46	NA	NA
S-1	1/25/1990	<50	<0.5	<0.5	<0.5	<1	NA	NA	21.55	7.73	13.82	NA	NA
S-1	4/18/1990	<50	<0.5	<0.5	<0.5	<1	NA	NA	21.55	7.91	13.64	NA	NA
S-1	7/23/1990	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	21.55	7.72	13.83	NA	NA
S-1	10/18/1990	80	5	<0.5	<0.5	3.0	NA	NA	21.55	8.55	13.00	NA	NA
S-1	1/28/1991	<50	4.5	<0.5	<0.5	2.0	NA	NA	21.55	8.52	13.03	NA	NA
S-1	4/25/1991	80a	3.7	<0.5	0.7	2.0	NA	NA	21.55	7.18	14.37	NA	NA
S-1	7/9/1991	200	16	<0.5	1.3	5.8	NA	NA	21.55	8.22	13.33	NA	NA
S-1	10/8/1991	<50	2.3	<0.5	<0.5	<0.5	NA	NA	21.55	8.70	12.85	NA	NA
S-1	2/5/1992	160	8.9	<0.5	2.1	6.0	NA	NA	21.55	8.14	13.41	NA	NA
S-1	4/28/1992	<50	2.4	<0.5	<0.5	0.9	NA	NA	21.55	7.52	14.03	NA	NA
S-1	7/27/1992	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	21.55	8.28	13.27	NA	NA
S-1	10/26/1992	57	3.0	1.6	1.4	1.7	NA	NA	21.55	8.74	12.81	NA	NA
S-1	1/14/1993	490	53	1.2	20	33	NA	NA	21.55	5.91	15.64	NA	NA
S-1	4/16/1993	240	20	<0.5	15	240	NA	NA	21.55	6.66	14.89	NA	NA
S-1	7/23/1993	<50	0.5	<0.5	<0.5	<0.5	NA	NA	21.55	7.53	14.02	NA	NA
S-1	10/27/1993	60	5.9	<0.5	2.5	1.7	NA	NA	21.55	8.20	13.35	NA	NA
S-1	1/27/1994	<50	2.1	<0.5	<0.5	0.63	NA	NA	21.55	7.26	14.29	NA	NA
S-1	5/5/1994	57	3.9	<0.5	1.9	1.9	NA	NA	21.27	7.38	13.89	NA	NA
S-1	7/26/1994	<50	2.2	<0.3	<0.3	<0.6	NA	NA	21.27	7.86	13.41	NA	NA
S-1	10/28/1994	<50	0.8	<0.3	<0.3	0.8	NA	NA	21.27	7.86	13.41	NA	NA

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S-1	1/2/1995	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	21.27	6.85	14.42	NA	NA
S-1	4/14/1995	NA	NA	NA	NA	NA	NA	NA	21.27	6.08	15.19	NA	NA
S-1	7/28/1995	60	2.2	<0.5	1.3	1.2	NA	NA	21.27	6.79	14.48	NA	NA
S-1	10/17/1995	60	2.6	<0.5	1.2	1.3	NA	NA	21.27	7.04	14.23	NA	NA
S-1	1/11/1996	<50	2.0	<0.5	<0.5	<0.5	<2	NA	21.27	6.40	14.87	NA	NA
S-1	4/2/1996	NA	NA	NA	NA	NA	NA	NA	21.27	5.84	15.43	NA	NA
S-1	7/9/1996	NA	NA	NA	NA	NA	NA	NA	21.27	6.50	14.77	NA	NA
S-1	10/10/1996	NA	NA	NA	NA	NA	NA	NA	21.27	7.31	13.96	NA	NA
S-1	1/9/1997	<50	<0.50	<0.50	<0.50	<0.50	6.7	NA	21.27	5.50	15.77	NA	NA
S-1	4/8/1997	NA	NA	NA	NA	NA	NA	NA	21.27	7.03	14.24	NA	NA
S-1	7/21/1997	NA	NA	NA	NA	NA	NA	NA	21.27	7.00	14.27	NA	NA
S-1	10/8/1997	NA	NA	NA	NA	NA	NA	NA	21.27	7.51	13.76	NA	NA
S-1	1/15/1998	420	16	<0.50	4.6	3.9	26	NA	21.27	5.43	15.84	NA	NA
S-1	4/14/1998	NA	NA	NA	NA	NA	NA	NA	21.27	5.55	15.72	NA	NA
S-1	7/14/1998	NA	NA	NA	NA	NA	NA	NA	21.33	6.38	14.95	NA	NA
S-1	10/20/1998	NA	NA	NA	NA	NA	NA	NA	21.33	7.48	13.85	NA	NA
S-1	1/22/1999	<50.0	<0.500	<0.500	<0.500	<0.500	2.53	NA	21.33	6.37	14.96	NA	NA
S-1	4/8/1999	NA	NA	NA	NA	NA	NA	NA	21.33	5.93	15.40	NA	NA
S-1	7/23/1999	NA	NA	NA	NA	NA	NA	NA	21.33	7.20	14.13	NA	NA
S-1	10/26/1999	NA	NA	NA	NA	NA	NA	NA	21.33	7.61	13.72	NA	NA
S-1	1/3/2000	<50.0	<0.500	<0.500	<0.500	<0.500	4.73	NA	21.33	7.76	13.57	NA	NA
S-1	4/14/2000	NA	NA	NA	NA	NA	NA	NA	21.33	6.35	14.98	NA	NA
S-1	7/12/2000	NA	NA	NA	NA	NA	NA	NA	21.33	7.05	14.28	NA	NA
S-1	11/1/2000	NA	NA	NA	NA	NA	NA	NA	21.33	6.51	14.82	NA	NA
S-1	1/3/2001	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	NA	21.33	7.49	13.84	NA	NA
S-1	4/24/2001	NA	NA	NA	NA	NA	NA	NA	21.33	6.85	14.48	NA	NA
S-1	7/2/2001	NA	NA	NA	NA	NA	NA	NA	21.33	7.65	13.68	NA	NA

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S-1	11/2/2001	NA	NA	NA	NA	NA	NA	NA	21.33	7.84	13.49	NA	NA
S-1	1/16/2002	<50	<0.50	<0.50	<0.50	<0.50	NA	<5.0	21.33	6.16	15.17	NA	NA
S-1	4/1/2002	NA	NA	NA	NA	NA	NA	NA	21.33	6.57	14.76	NA	NA
S-1	7/11/2002	NA	NA	NA	NA	NA	NA	NA	21.33	7.52	13.81	NA	NA
S-1	10/28/2002	NA	NA	NA	NA	NA	NA	NA	21.33	7.99	13.34	NA	NA
S-1	1/23/2003	<50	<0.50	<0.50	<0.50	<0.50	NA	5.6	21.33	6.46	14.87	NA	NA
S-1	4/30/2003	NA	NA	NA	NA	NA	NA	NA	21.33	6.18	15.15	NA	NA
S-1	7/1/2003	NA	NA	NA	NA	NA	NA	NA	21.33	7.38	13.95	NA	NA
S-1	10/8/2003	NA	NA	NA	NA	NA	NA	NA	21.33	7.87	13.46	NA	NA
S-1	1/22/2004	<50	<0.50	<0.50	<0.50	<1.0	NA	NA	21.33	6.90	14.43	NA	NA
S-1	7/13/2004	NA	NA	NA	NA	NA	NA	NA	21.33	7.83	13.50	NA	NA
S-1	1/20/2005	<50	<0.50	<0.50	<0.50	<1.0	NA	NA	21.33	5.68	15.65	NA	NA
S-1	7/19/2005	NA	NA	NA	NA	NA	NA	NA	21.33	6.35	14.98	NA	NA
S-1	1/27/2006	<50.0	<0.500	<0.500	<0.500	<0.500	NA	NA	21.33	6.05	15.28	NA	NA
S-1	7/25/2006	NA	NA	NA	NA	NA	NA	NA	21.33	7.12	14.21	NA	NA
S-1	1/4/2007	<50	<0.50	<0.50	<0.50	<1.0	NA	NA	21.33	6.75	14.58	NA	NA
S-1	7/24/2007	NA	NA	NA	NA	NA	NA	NA	21.33	7.73	13.60	NA	NA
S-1	**1/15/2008**	**<50 g**	**<0.50**	**<1.0**	**<1.0**	**<1.0**	**NA**	**NA**	**21.33**	**6.10**	**15.23**	**NA**	**NA**
S-3	9/6/1988	96000	3400	9500	2700	17000	NA	NA	21.14	NA	NA	NA	NA
S-3	11/16/1988	70000	4600	8400	2500	13000	NA	NA	21.14	7.76	13.38	NA	NA
S-3	2/27/1989	32000	2400	3100	1500	6400	NA	NA	21.14	NA	NA	NA	NA
S-3	5/4/1989	47000	4400	300	2400	15000	NA	NA	21.14	NA	NA	NA	NA
S-3	8/10/1989	110000	5700	5700	3200	19000	NA	NA	21.14	7.92	13.22	NA	NA
S-3	10/10/1989	52000	4600	3300	2600	15000	NA	NA	21.14	8.00	13.14	NA	NA
S-3	1/25/1990	420000	5200	4100	6700	34000	NA	NA	21.14	7.54	13.60	NA	NA
S-3	4/18/1990	58000	3800	1400	2400	12000	NA	NA	21.14	7.74	13.40	NA	NA

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S-3	7/23/1990	49000	3400	1800	2300	12000	NA	NA	21.14	7.55	13.59	NA	NA
S-3	10/18/1990	44000	3500	650	2400	11000	NA	NA	21.14	8.47	12.67	NA	NA
S-3	1/28/1991	64000	40900	570	1940	8090	NA	NA	21.14	8.38	12.76	NA	NA
S-3	4/25/1991	120000	3900	3600	2400	8900	NA	NA	21.14	6.91	14.23	NA	NA
S-3	7/9/1991	50000	3600	2300	1800	10000	NA	NA	21.14	8.07	13.07	NA	NA
S-3	10/8/1991	130000	3600	1000	2800	8400	NA	NA	21.14	8.61	12.53	NA	NA
S-3	2/5/1992	150000	2500	670	2700	10000	NA	NA	21.14	7.80	13.34	NA	NA
S-3	4/28/1992	120000	2200	1200	2000	5800	NA	NA	21.14	7.27	13.87	NA	NA
S-3	7/27/1992	190000	1400	<1250	<1250	3400	NA	NA	21.14	8.10	13.04	NA	NA
S-3	10/26/1992	950000	2000	8400	16000	36000	NA	NA	21.14	8.62	12.52	NA	NA
S-3	1/14/1993	41000	2700	2500	1800	6900	NA	NA	21.14	5.16	15.98	NA	NA
S-3	4/16/1993	40000	930	2800	1900	14000	NA	NA	21.14	7.18	13.96	NA	NA
S-3	7/23/1993	87000	1600	<5	1300	4000	NA	NA	21.14	7.34	13.80	NA	NA
S-3	10/27/1993	36000	2200	<500	1500	3200	NA	NA	21.14	8.03	13.11	NA	NA
S-3	1/27/1994	190000	3200	3100	4100	15000	NA	NA	21.14	6.79	14.35	NA	NA
S-3	5/5/1994	36000	1100	490	1600	4700	NA	NA	20.48	6.75	13.73	NA	NA
S-3	7/26/1994	18000	1039	170.5	845.4	967.5	NA	NA	20.48	7.30	13.18	NA	NA
S-3	10/28/1994	25869	467.9	294	546.2	343.3	NA	NA	20.48	8.36	12.12	NA	NA
S-3	1/2/1995	23000	850	260	900	2100	NA	NA	20.48	6.36	14.12	NA	NA
S-3	4/14/1995	33000	720	670	1600	6600	NA	NA	20.48	5.87	14.61	NA	NA
S-3	7/28/1995	12000	540	<10	580	780	NA	NA	20.48	6.33	14.15	NA	NA
S-3	10/17/1995	Well inaccessible		NA	NA	NA	NA	NA	20.48	6.48	14.00	NA	NA
S-3	1/11/1996	16000	520	290	740	2600	<200	NA	20.48	5.80	14.68	NA	NA
S-3	4/2/1996	NA	NA	NA	NA	NA	NA	NA	20.48	5.00	15.48	NA	NA
S-3	7/9/1996	NA	NA	NA	NA	NA	NA	NA	20.48	5.93	14.55	NA	NA
S-3	10/10/1996	NA	NA	NA	NA	NA	NA	NA	20.48	6.73	13.75	NA	NA
S-3	1/9/1997	30000	420	330	1500	6300	<500	NA	20.48	4.72	15.76	NA	NA

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S-3	4/8/1997	NA	NA	NA	NA	NA	NA	NA	20.48	6.63	13.85	NA	NA
S-3	7/21/1997	NA	NA	NA	NA	NA	NA	NA	20.48	6.18	14.30	NA	NA
S-3	10/8/1997	NA	NA	NA	NA	NA	NA	NA	20.48	6.83	13.65	NA	NA
S-3	1/15/1998	21000	300	51	770	2800	<100	NA	20.48	4.30	16.18	NA	NA
S-3 (D)	1/15/1998	14000	330	63	920	3400	<250	NA	20.48	NA	NA	NA	NA
S-3	4/14/1998	NA	NA	NA	NA	NA	NA	NA	20.48	4.37	16.11	NA	NA
S-3	7/14/1998	NA	NA	NA	NA	NA	NA	NA	20.48	5.47	15.01	NA	NA
S-3	10/20/1998	Well inaccessible		NA	NA	NA	NA	NA	20.48	NA	NA	NA	NA
S-3	1/22/1999	40000	313	194	2200	8800	<40.0	NA	20.48	5.71	14.77	NA	NA
S-3	4/8/1999	NA	NA	NA	NA	NA	NA	NA	20.48	4.95	15.53	NA	NA
S-3	7/23/1999	NA	NA	NA	NA	NA	NA	NA	20.48	6.78	13.70	NA	NA
S-3	10/26/1999	NA	NA	NA	NA	NA	NA	NA	20.48	7.25	13.23	NA	NA
S-3	1/3/2000	39700	150	61.8	1690	7720	445	NA	20.48	7.46	13.02	NA	NA
S-3	4/14/2000	NA	NA	NA	NA	NA	NA	NA	20.48	5.64	14.84	NA	NA
S-3	7/12/2000	Well inaccessible		NA	NA	NA	NA	NA	20.48	NA	NA	NA	NA
S-3	11/1/2000	NA	NA	NA	NA	NA	NA	NA	20.48	6.72	13.76	NA	NA
S-3	1/3/2001	25000	89.0	<50.0	1270	5180	<250	NA	20.48	7.14	13.34	NA	NA
S-3	4/24/2001	Well inaccessible		NA	NA	NA	NA	NA	20.48	NA	NA	NA	NA
S-3	7/2/2001	NA	NA	NA	NA	NA	NA	NA	20.48	7.28	13.20	NA	3.2
S-3	11/2/2001	NA	NA	NA	NA	NA	NA	NA	20.48	7.64	12.84	NA	3.5
S-3	1/16/2002	Well inaccessible		NA	NA	NA	NA	NA	20.48	NA	NA	NA	NA
S-3	4/1/2002	NA	NA	NA	NA	NA	NA	NA	20.48	5.99	14.49	NA	3.8
S-3	7/11/2002	NA	NA	NA	NA	NA	NA	NA	20.48	7.21	13.27	NA	0.7
S-3	10/28/2002	NA	NA	NA	NA	NA	NA	NA	20.85	7.90	12.95	NA	e
S-3	1/23/2003	28000	60	13	970	3700	NA	<50	20.85	6.00	14.85	NA	0.3
S-3	4/30/2003	NA	NA	NA	NA	NA	NA	NA	20.85	5.34	15.51	NA	1.0
S-3	7/1/2003	NA	NA	NA	NA	NA	NA	NA	20.85	7.28	13.57	NA	1.0

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S-3	10/8/2003	NA	NA	NA	NA	NA	NA	NA	20.85	7.63	13.22	NA	26.9
S-3	1/22/2004	3200	5.7	<2.5	16	320	NA	NA	20.85	6.53	14.32	NA	0.5
S-3	7/13/2004	Well inaccessible		NA	NA	NA	NA	NA	20.85	NA	NA	NA	NA
S-3	7/21/2004	3100	4.1	<2.5	10	130	NA	NA	20.85	7.64	13.21	NA	2.2
S-3	1/20/2005	93	<0.50	<0.50	1.3	1.8	NA	NA	20.85	5.78	15.07	NA	0.8
S-3	7/19/2005	<50	<0.50	<0.50	<0.50	<1.0	NA	NA	20.85	6.35	14.50	NA	NA
S-3	1/27/2006	<50.0	<0.500	<0.500	<0.500	<0.500	NA	NA	20.85	5.55	15.30	NA	NA
S-3	7/25/2006	100	<1.00	<1.00	<1.00	<3.00	NA	NA	20.85	7.09	13.76	NA	NA
S-3	1/4/2007	<50	<0.50	<0.50	<0.50	<1.0	NA	NA	20.85	6.53	14.32	NA	NA
S-3	7/24/2007	590 g,h	0.99	<1.0	0.25 i	0.99 i	NA	NA	20.85	7.44	13.41	NA	NA
S-3	**1/15/2008**	**<50 g**	**<0.50**	**<1.0**	**<1.0**	**<1.0**	**NA**	**NA**	**20.85**	**5.41**	**15.44**	**NA**	**NA**
S-5	1/8/1987	7800	380	510	NA	1000	NA	NA	21.41	NA	NA	NA	NA
S-5	9/6/1988	7000	2600	60	400	700	NA	NA	21.41	NA	NA	NA	NA
S-5	11/16/1988	3000	660	60	120	220	NA	NA	21.41	NA	NA	NA	NA
S-5	2/27/1989	5700	2000	220	260	320	NA	NA	21.41	NA	NA	NA	NA
S-5	5/4/1989	9000	3000	600	630	1700	NA	NA	21.41	NA	NA	NA	NA
S-5	8/10/1989	5100	1100	<50	270	400	NA	NA	21.41	8.28	13.13	NA	NA
S-5	10/10/1989	15000	3300	160	830	2200	NA	NA	21.41	8.32	13.09	NA	NA
S-5	1/25/1990	12000	2400	360	570	1400	NA	NA	21.41	8.20	13.21	NA	NA
S-5	4/18/1990	5200	1100	40	300	460	NA	NA	21.41	8.32	13.09	NA	NA
S-5	7/23/1990	5500	1300	140	320	730	NA	NA	21.41	8.03	13.38	NA	NA
S-5	10/18/1990	12000	3200	40	720	900	NA	NA	21.41	9.03	12.38	NA	NA
S-5	1/28/1991	2550	410	15	110	60	NA	NA	21.41	8.80	12.61	NA	NA
S-5	4/25/1991	67000	5100	3100	2800	11000	NA	NA	21.41	7.40	14.01	NA	NA
S-5	7/9/1991	4900	480	36	360	1000	NA	NA	21.41	8.52	12.89	NA	NA
S-5	10/8/1991	6600	370	7.0	190	380	NA	NA	21.41	9.00	12.41	NA	NA

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S-5	2/5/1992	44000	4800	850	2700	8400	NA	NA	21.41	8.11	13.30	NA	NA
S-5	4/28/1992	33000	1400	320	1600	5200	NA	NA	21.41	7.70	13.71	NA	NA
S-5	7/27/1992	20000	2400	<25	1800	2300	NA	NA	21.41	8.52	12.89	NA	NA
S-5	10/26/1992	21000	1600	140	1500	2800	NA	NA	21.41	9.02	12.39	NA	NA
S-5	1/14/1993	54000	1900	1000	2700	16000	NA	NA	21.41	5.22	16.19	NA	NA
S-5	4/16/1993	42000	2000	1300	4300	18000	NA	NA	21.41	7.04	14.37	NA	NA
S-5	7/23/1993	46000	2500	2200	3400	11000	NA	NA	21.41	7.75	13.66	NA	NA
S-5	10/27/1993	6500	990	31	1100	1000	NA	NA	21.41	8.49	12.92	NA	NA
S-5	1/27/1994	34000	1800	580	2900	9700	NA	NA	21.41	7.04	14.37	NA	NA
S-5	5/5/1994	24000	670	70	1400	2700	NA	NA	21.03	7.20	13.83	NA	NA
S-5	7/27/1994	4700	193.6	33.1	332.3	281.2	NA	NA	21.03	7.72	13.31	NA	NA
S-5	10/28/1994	3200	167.3	18	238.7	104.5	NA	NA	21.03	7.82	13.21	NA	NA
S-5	1/2/1995	18000	1300	220	3400	10000	NA	NA	21.03	6.65	14.38	NA	NA
S-5	4/14/1995	NA	NA	NA	NA	NA	NA	NA	21.03	5.99	15.04	NA	NA
S-5	7/28/1995	25000	440	74	1700	4500	NA	NA	21.03	6.77	14.26	NA	NA
S-5 (D)	7/28/1995	25000	450	<50	1700	4600	NA	NA	21.03	NA	NA	NA	NA
S-5	10/17/1995	18000	360	24	1300	2200	NA	NA	21.03	7.00	14.03	NA	NA
S-5	1/11/1996	41000	420	180	1600	9500	<200	NA	21.03	6.22	14.81	NA	NA
S-5	4/2/1996	NA	NA	NA	NA	NA	NA	NA	21.03	5.44	15.59	NA	NA
S-5	7/9/1996	NA	NA	NA	NA	NA	NA	NA	21.03	6.41	14.62	NA	NA
S-5	10/10/1996	NA	NA	NA	NA	NA	NA	NA	21.03	7.19	13.84	NA	NA
S-5	1/9/1997	38000	130	43	160	6200	<125	NA	21.03	5.03	16.00	NA	NA
S-5 (D)	1/9/1997	36000	130	<50	160	5600	<250	NA	21.03	NA	NA	NA	NA
S-5	4/8/1997	NA	NA	NA	NA	NA	NA	NA	21.03	7.20	13.83	NA	NA
S-5	7/21/1997	NA	NA	NA	NA	NA	NA	NA	21.03	6.82	14.21	NA	NA
S-5	10/8/1997	NA	NA	NA	NA	NA	NA	NA	21.03	7.31	13.72	NA	NA
S-5	1/15/1998	49000	62	<50	93	4100	<250	NA	21.03	4.58	16.45	NA	NA

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S-5	4/14/1998	NA	NA	NA	NA	NA	NA	NA	21.03	4.94	16.09	NA	NA
S-5	7/14/1998	NA	NA	NA	NA	NA	NA	NA	21.27	5.36	15.91	NA	NA
S-5	10/20/1998	NA	NA	NA	NA	NA	NA	NA	21.27	7.53	13.74	NA	NA
S-5	1/22/1999	2550	9.09	<0.500	1.93	112	4.40	NA	21.27	6.35	14.92	NA	NA
S-5	4/8/1999	NA	NA	NA	NA	NA	NA	NA	21.27	5.37	15.90	NA	NA
S-5	7/23/1999	NA	NA	NA	NA	NA	NA	NA	21.27	6.43	14.84	NA	NA
S-5	10/26/1999	NA	NA	NA	NA	NA	NA	NA	21.27	7.51	13.76	NA	NA
S-5	1/3/2000	3310	39.0	<10.0	293	21.7	<50.0	NA	21.27	7.78	13.49	NA	NA
S-5	4/14/2000	NA	NA	NA	NA	NA	NA	NA	21.27	6.15	15.12	NA	NA
S-5	7/12/2000	NA	NA	NA	NA	NA	NA	NA	21.27	7.05	14.22	NA	NA
S-5	11/1/2000	NA	NA	NA	NA	NA	NA	NA	21.27	6.00	15.27	NA	NA
S-5	1/3/2001	516	3.65	0.968	18.0	4.02	18.4	NA	21.27	7.48	13.79	NA	NA
S-5	4/24/2001	NA	NA	NA	NA	NA	NA	NA	21.27	6.58	14.69	NA	NA
S-5	7/2/2001	NA	NA	NA	NA	NA	NA	NA	21.27	7.60	13.67	NA	NA
S-5	11/2/2001	NA	NA	NA	NA	NA	NA	NA	21.27	7.94	13.33	NA	NA
S-5	1/16/2002	<50	<0.50	<0.50	<0.50	<0.50	NA	<5.0	21.27	5.88	15.39	NA	NA
S-5	4/1/2002	NA	NA	NA	NA	NA	NA	NA	21.27	6.27	15.00	NA	NA
S-5	7/11/2002	NA	NA	NA	NA	NA	NA	NA	21.27	7.53	13.74	NA	NA
S-5	10/28/2002	NA	NA	NA	NA	NA	NA	NA	21.27	8.11	13.16	NA	NA
S-5	1/23/2003	<50	<0.50	<0.50	<0.50	<0.50	NA	<5.0	21.27	6.22	15.05	NA	NA
S-5	4/30/2003	NA	NA	NA	NA	NA	NA	NA	21.27	5.48	15.79	NA	NA
S-5	7/1/2003	NA	NA	NA	NA	NA	NA	NA	21.27	7.32	13.95	NA	NA
S-5	10/8/2003	NA	NA	NA	NA	NA	NA	NA	21.27	7.91	13.36	NA	NA
S-5	1/22/2004	<50	<0.50	<0.50	<0.50	<1.0	NA	NA	21.27	6.68	14.59	NA	NA
S-5	7/13/2004	NA	NA	NA	NA	NA	NA	NA	21.27	8.17	13.10	NA	NA
S-5	1/20/2005	<50	<0.50	<0.50	<0.50	<1.0	NA	NA	21.27	5.30	15.97	NA	NA
S-5	7/19/2005	NA	NA	NA	NA	NA	NA	NA	21.27	6.35	14.92	NA	NA

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S-5	1/27/2006	<50.0	<0.500	<0.500	<0.500	<0.500	NA	NA	21.27	5.83	15.44	NA	NA
S-5	7/25/2006	NA	NA	NA	NA	NA	NA	NA	21.27	7.35	13.92	NA	NA
S-5	1/4/2007	<50	<0.50	<0.50	<0.50	<1.0	NA	NA	21.27	6.82	14.45	NA	NA
S-5	7/24/2007	NA	NA	NA	NA	NA	NA	NA	21.27	7.70	13.57	NA	NA
S-5	1/15/2008	<50 g	<0.50	<1.0	<1.0	<1.0	NA	NA	21.27	5.83	15.44	NA	NA
S-6	11/16/1988	50	0.7	<1	<1	<3	NA	NA	22.02	8.58	13.44	NA	NA
S-6	2/27/1989	<50	<0.5	<1	<1	<3	NA	NA	22.02	NA	NA	NA	NA
S-6	5/4/1989	<50	<0.5	<1	<1	<3	NA	NA	22.02	NA	NA	NA	NA
S-6	8/10/1989	<50	<0.5	<1	<1	<3	NA	NA	22.02	8.54	13.48	NA	NA
S-6	10/10/1989	<50	<0.5	<1	<1	<3	NA	NA	22.02	8.58	13.44	NA	NA
S-6	1/25/1990	<50	<0.5	<0.5	<0.5	<1	NA	NA	22.02	8.31	13.71	NA	NA
S-6	4/18/1990	<50	<0.5	0.6	<0.5	1.0	NA	NA	22.02	8.43	13.59	NA	NA
S-6	7/23/1990	<50	<0.5	0.9	<0.5	1.8	NA	NA	22.02	8.24	13.78	NA	NA
S-6	10/18/1990	<50	<0.5	0.7	<0.5	0.8	NA	NA	22.02	9.20	12.82	NA	NA
S-6	1/28/1991	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	22.02	9.10	12.92	NA	NA
S-6	4/25/1991	<50	<0.5	<0.5	<0.5	0.7	NA	NA	22.02	7.74	14.28	NA	NA
S-6	7/9/1991	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	22.02	8.81	13.21	NA	NA
S-6	10/8/1991	<50	0.7	<0.5	<0.5	<0.5	NA	NA	22.02	9.26	12.76	NA	NA
S-6	2/2/1992	NA	NA	NA	NA	NA	NA	NA	22.02	8.47	13.55	NA	NA
S-6	4/28/1992	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	22.02	7.91	14.11	NA	NA
S-6	7/27/1992	NA	NA	NA	NA	NA	NA	NA	22.02	8.83	13.19	NA	NA
S-6	10/26/1992	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	22.02	9.29	12.73	NA	NA
S-6	1/13/1994	NA	NA	NA	NA	NA	NA	NA	22.02	9.43	12.59	NA	NA
S-6	4/16/1993	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	22.02	7.12	14.90	NA	NA
S-6	7/23/1993	NA	NA	NA	NA	NA	NA	NA	22.02	8.14	13.88	NA	NA
S-6	10/27/1993	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	22.02	8.75	13.27	NA	NA

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S-6	1/27/1994	NA	NA	NA	NA	NA	NA	NA	22.02	7.87	14.15	NA	NA
S-6	5/5/1994	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	21.40	7.71	13.69	NA	NA
S-6	7/26/1994	NA	NA	NA	NA	NA	NA	NA	21.40	8.10	13.30	NA	NA
S-6	10/28/1994	<50	<0.3	<0.3	<0.3	<0.6	NA	NA	21.40	8.04	13.36	NA	NA
S-6	1/2/1995	NA	NA	NA	NA	NA	NA	NA	21.40	7.07	14.33	NA	NA
S-6	4/14/1995	<50	<0.5	1.3	<0.5	<0.5	NA	NA	21.40	6.29	15.11	NA	NA
S-6	7/28/1995	NA	NA	NA	NA	NA	NA	NA	21.40	6.91	14.49	NA	NA
S-6	10/17/1995	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	21.40	7.20	14.20	NA	NA
S-6	1/11/1996	NA	NA	NA	NA	NA	NA	NA	21.40	6.60	14.80	NA	NA
S-6	1/22/2004	Unable to locate		NA	NA	NA	NA	NA	21.40	NA	NA	NA	NA
S-7	11/16/1988	100	5.1	15	2.0	13	NA	NA	21.47	8.24	13.23	NA	NA
S-7	2/27/1989	50	0.5	3.0	1.0	11	NA	NA	21.47	NA	NA	NA	NA
S-7	5/4/1989	<50	<0.5	<1	<1	<3	NA	NA	21.47	NA	NA	NA	NA
S-7	8/10/1989	<50	<0.5	<1	<1	<3	NA	NA	21.47	8.18	13.29	NA	NA
S-7	10/10/1989	<50	<0.5	<1	<1	<3	NA	NA	21.47	8.35	13.12	NA	NA
S-7	1/25/1990	<50	<0.5	<0.5	<0.5	<1	NA	NA	21.47	7.95	13.52	NA	NA
S-7	4/18/1990	<50	<0.5	<0.5	<0.5	<1	NA	NA	21.47	8.06	13.41	NA	NA
S-7	7/23/1990	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	21.47	7.89	13.58	NA	NA
S-7	10/18/1990	<50	<0.5	0.5	0.5	4.1	NA	NA	21.47	8.83	12.64	NA	NA
S-7	1/28/1991	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	21.47	8.77	12.70	NA	NA
S-7	4/25/1991	60	<0.5	<0.5	<0.5	<0.5	NA	NA	21.47	7.25	14.22	NA	NA
S-7	7/9/1991	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	21.47	8.41	13.06	NA	NA
S-7	10/8/1991	NA	NA	NA	NA	NA	NA	NA	21.47	8.95	12.52	NA	NA
S-7	2/5/1992	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	21.47	8.04	13.43	NA	NA
S-7	10/8/1991	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	21.47	8.95	12.52	NA	NA
S-7	4/28/1992	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	21.47	7.45	14.02	NA	NA

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S-7	7/27/1992	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	21.47	8.48	12.99	NA	NA
S-7	10/26/1992	570	<0.5	<0.5	<0.5	<0.5	NA	NA	21.47	9.95	11.52	NA	NA
S-7	1/14/1993	56	<0.5	<0.5	<0.5	<0.5	NA	NA	21.47	5.84	15.63	NA	NA
S-7	4/16/1993	110	28	<0.5	<0.5	1.8	NA	NA	21.47	6.38	15.09	NA	NA
S-7	7/23/1993	80	0.48	<0.5	<0.5	0.8	NA	NA	21.47	7.72	13.75	NA	NA
S-7	10/27/1993	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	21.47	7.79	13.68	NA	NA
S-7	1/27/1994	70a	<0.5	<0.5	<0.5	<0.5	NA	NA	21.47	7.85	13.62	NA	NA
S-7	5/5/1994	92	2.1	<0.5	<0.5	<0.5	NA	NA	20.85	9.45	11.40	NA	NA
S-7	7/26/1994	88	<0.3	<0.3	<0.3	<0.6	NA	NA	20.85	7.64	13.21	NA	NA
S-7	10/28/1994	60	<0.3	0.5	<0.3	<0.6	NA	NA	20.85	7.68	13.17	NA	NA
S-7	1/2/1995	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	20.85	6.95	13.90	NA	NA
S-7	4/14/1995	NA	NA	NA	NA	NA	NA	NA	20.85	5.82	15.03	NA	NA
S-7	7/28/1995	170	1.7	<0.5	<0.5	2.2	NA	NA	20.85	6.32	14.53	NA	NA
S-7	10/17/1995	100	<0.5	0.6	<0.5	<0.5	NA	NA	20.85	7.07	13.78	NA	NA
S-7	1/11/1996	80	0.6	<0.5	<0.5	<0.5	54	NA	20.85	6.10	14.75	NA	NA
S-7	4/2/1996	NA	NA	NA	NA	NA	NA	NA	20.85	6.14	14.71	NA	NA
S-7	7/9/1996	NA	NA	NA	NA	NA	NA	NA	20.85	6.40	14.45	NA	NA
S-7	10/10/1996	NA	NA	NA	NA	NA	NA	NA	20.85	6.70	14.15	NA	NA
S-7	1/9/1997	130	1.4	<0.50	<0.50	0.56	70	NA	20.85	5.25	15.60	NA	NA
S-7	4/8/1997	NA	NA	NA	NA	NA	NA	NA	20.85	7.15	13.70	NA	NA
S-7	7/21/1997	NA	NA	NA	NA	NA	NA	NA	20.85	6.67	14.18	NA	NA
S-7	10/8/1997	NA	NA	NA	NA	NA	NA	NA	20.85	7.26	13.59	NA	NA
S-7	1/15/1998	<50	<0.50	<0.50	<0.50	<0.50	39	NA	20.85	5.51	15.34	NA	NA
S-7	4/14/1998	NA	NA	NA	NA	NA	NA	NA	20.85	5.45	15.40	NA	NA
S-7	7/14/1998	NA	NA	NA	NA	NA	NA	NA	21.03	6.48	14.55	NA	NA
S-7	10/20/1998	NA	NA	NA	NA	NA	NA	NA	21.03	7.37	13.66	NA	NA
S-7	1/22/1999	<50.0	<0.500	<0.500	<0.500	<0.500	97.8	NA	21.03	6.21	14.82	NA	NA

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S-7	4/8/1999	NA	NA	NA	NA	NA	NA	NA	21.03	5.30	15.73	NA	NA
S-7	7/23/1999	NA	NA	NA	NA	NA	NA	NA	21.03	7.12	13.91	NA	NA
S-7	10/26/1999	NA	NA	NA	NA	NA	NA	NA	21.03	7.54	13.49	NA	NA
S-7	1/3/2000	615	8.73	2.90	4.00	7.17	17.0	NA	21.03	7.73	13.30	NA	NA
S-7	4/14/2000	NA	NA	NA	NA	NA	NA	NA	21.03	6.27	14.76	NA	NA
S-7	7/12/2000	NA	NA	NA	NA	NA	NA	NA	21.03	6.97	14.06	NA	NA
S-7	11/1/2000	NA	NA	NA	NA	NA	NA	NA	21.03	6.43	14.60	NA	NA
S-7	1/3/2001	460	6.68	<0.500	0.712	0.596	10.2	NA	21.03	7.27	13.76	NA	NA
S-7	4/24/2001	NA	NA	NA	NA	NA	NA	NA	21.03	6.75	14.28	NA	NA
S-7	7/2/2001	NA	NA	NA	NA	NA	NA	NA	21.03	7.55	13.48	NA	NA
S-7	11/2/2001	NA	NA	NA	NA	NA	NA	NA	21.03	7.80	13.23	NA	NA
S-7	1/16/2002	360	<0.50	<0.50	<0.50	<0.50	NA	<5.0	21.03	6.11	14.92	NA	NA
S-7	4/1/2002	NA	NA	NA	NA	NA	NA	NA	21.03	6.54	14.49	NA	NA
S-7	7/11/2002	NA	NA	NA	NA	NA	NA	NA	21.03	7.37	13.66	NA	NA
S-7	10/28/2002	NA	NA	NA	NA	NA	NA	NA	21.01	7.97	13.04	NA	NA
S-7	1/23/2003	160	<0.50	<0.50	<0.50	<0.50	NA	<5.0	21.01	6.45	14.56	NA	NA
S-7	4/30/2003	NA	NA	NA	NA	NA	NA	NA	21.01	6.14	14.87	NA	NA
S-7	7/1/2003	NA	NA	NA	NA	NA	NA	NA	21.01	7.28	13.73	NA	NA
S-7	10/8/2003	NA	NA	NA	NA	NA	NA	NA	21.01	7.78	13.23	NA	NA
S-7	1/22/2004	140	<0.50	<0.50	0.51	<1.0	NA	NA	21.01	6.93	14.08	NA	NA
S-7	7/13/2004	150	<0.50	<0.50	<0.50	<1.0	NA	17	21.01	7.88	13.13	NA	NA
S-7	1/20/2005	200 a	<0.50	<0.50	<0.50	<1.0	NA	NA	21.01	5.68	15.33	NA	NA
S-7	7/19/2005	140 a	<0.50	<0.50	<0.50	<1.0	NA	NA	21.01	6.18	14.83	NA	NA
S-7	1/27/2006	69.8	<0.500	<0.500	<0.500	<0.500	NA	NA	21.01	6.11	14.90	NA	NA
S-7	7/25/2006	78.6	<1.00	<1.00	<1.00	<3.00	NA	NA	21.01	7.01	14.00	NA	NA
S-7	1/4/2007	<50	<0.50	<0.50	<0.50	<1.0	NA	NA	21.01	6.70	14.31	NA	NA
S-7	7/24/2007	63 g,h	<0.50	<1.0	<1.0	<1.0	NA	NA	21.01	7.54	13.47	NA	NA

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Well ID	Date	TPPH (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE 8020 (ug/L)	MTBE 8260 (ug/L)	TOC (MSL)	Depth to Water (ft.)	GW Elevation (MSL)	SPH Thickness (ft.)	DO Reading (ppm)
S-7	1/15/2008	160 g,h	<0.50	<1.0	<1.0	<1.0	NA	NA	21.01	6.08	14.93	NA	NA
S-8	11/16/1988	210	5.0	<1	1.0	5.0	NA	NA	20.72	7.76	12.96	NA	NA
S-8	2/27/1989	<50	2.4	<1	<1	<3	NA	NA	20.72	NA	NA	NA	NA
S-8	5/4/1989	<50	7.5	<1	2.0	<3	NA	NA	20.72	NA	NA	NA	NA
S-8	8/10/1989	<50	0.6	<1	<1	<3	NA	NA	20.72	7.79	12.93	NA	NA
S-8	10/10/1989	<50	<0.5	<1	<1	<3	NA	NA	20.72	7.84	12.88	NA	NA
S-8	1/25/1990	<50	<0.5	<0.5	<0.5	<1	NA	NA	20.72	7.47	13.25	NA	NA
S-8	4/18/1990	<50	<0.5	<0.5	<0.5	<1	NA	NA	20.72	7.59	13.13	NA	NA
S-8	7/23/1990	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	20.72	7.49	13.23	NA	NA
S-8	10/18/1990	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	20.72	8.44	12.28	NA	NA
S-8	1/28/1991	<50	55	0.5	<0.5	1.4	NA	NA	20.72	8.28	12.44	NA	NA
S-8	4/25/1991	130a	19	<0.5	1.3	1.1	NA	NA	20.72	6.72	14.00	NA	NA
S-8	7/9/1991	200	33	<0.5	1.8	2.8	NA	NA	20.72	7.98	12.74	NA	NA
S-8	10/8/1991	580	95	2.2	4.9	6.5	NA	NA	20.72	8.55	12.17	NA	NA
S-8	2/5/1992	90a	18	<0.5	6.2	1.8	NA	NA	20.72	7.50	13.22	NA	NA
S-8	4/28/1992	<50	5.9	<0.5	2.5	<0.5	NA	NA	20.72	7.14	13.58	NA	NA
S-8	7/27/1992	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	20.72	8.06	12.66	NA	NA
S-8	10/26/1992	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	20.72	8.58	12.14	NA	NA
S-8	1/14/1993	270	74	0.9	25	5.5	NA	NA	20.72	5.32	15.40	NA	NA
S-8	4/16/1993	1100	420	<0.5	200	20	NA	NA	20.72	5.76	14.96	NA	NA
S-8	7/23/1993	160	23	<0.5	1.2	1.5	NA	NA	20.72	7.29	13.43	NA	NA
S-8	10/27/1993	420	650	0.7	11	1.7	NA	NA	20.72	7.93	12.79	NA	NA
S-8	1/27/1994	290	65	<1	6.9	2.4	NA	NA	20.72	6.31	14.41	NA	NA
S-8	5/5/1994	120	13	<0.5	<0.5	<0.5	NA	NA	20.32	6.84	13.48	NA	NA
S-8	7/26/1994	115	12.2	1.3	<0.3	2.7	NA	NA	20.32	7.42	12.90	NA	NA
S-8	10/28/1994	733	75.9	3.2	4.9	4.2	NA	NA	20.32	7.56	12.76	NA	NA

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S-8	1/2/1995	290	54	<0.5	10	<0.5	NA	NA	20.32	6.19	14.13	NA	NA
S-8	4/14/1995	230	68	<0.5	10	2.4	NA	NA	20.32	5.54	14.78	NA	NA
S-8	7/28/1995	290	44	<0.5	8.0	<0.5	NA	NA	20.32	6.28	14.04	NA	NA
S-8	10/17/1995	190	24	<0.5	1.0	0.9	NA	NA	20.32	6.64	13.68	NA	NA
S-8	1/11/1996	400	85	1.1	13	3.4	2.3	NA	20.32	5.96	14.36	NA	NA
S-8	4/2/1996	300	110	0.7	4.9	0.9	<2	NA	20.32	5.21	15.11	NA	NA
S-8	7/9/1996	<50	5.4	<0.50	0.63	<0.50	<2.5	NA	20.32	6.05	14.27	NA	NA
S-8	10/10/1996	150	0.53	0.66	2.3	1.0	8.9	NA	20.32	6.83	13.49	NA	NA
S-8	1/9/1997	240	27	<0.50	2.4	<0.50	5.8	NA	20.32	4.51	15.81	NA	NA
S-8	4/8/1997	220	27	0.62	1.9	0.71	5.7	NA	20.32	6.50	13.82	NA	NA
S-8	7/21/1997	1200	140	2.8	21	5.0	27	NA	20.32	6.36	13.96	NA	NA
S-8 (D)	7/21/1997	1200	120	<2.0	19	3.9	25	NA	20.32	NA	NA	NA	NA
S-8	10/8/1997	690	92	1.4	25	2.0	<2.5	NA	20.32	6.83	13.49	NA	NA
S-8 (D)	10/8/1997	700	95	1.3	26	1.9	<2.5	NA	20.32	NA	NA	NA	NA
S-8	1/15/1998	460	110	1.0	3.4	1.7	<5.0	NA	20.32	4.30	16.02	NA	NA
S-8	4/14/1998	780	190	2.9	15	3.4	<2.5	NA	20.32	4.68	15.64	NA	NA
S-8	7/14/1998	1600	240	<5.0	36	<5.0	<25	NA	20.36	6.36	14.00	NA	NA
S-8	10/20/1998	700	55	<5.0	<5.0	<5.0	49	NA	20.36	6.91	13.45	NA	NA
S-8	1/22/1999	<50.0	5.83	<0.500	0.919	<0.500	<2.00	NA	20.36	5.97	14.39	NA	NA
S-8	4/8/1999	684	10.6	1.3	9.75	1.0	10.5	NA	20.36	5.01	15.35	NA	NA
S-8	7/23/1999	1540	86.5	5.20	5.30	6.35	<25.0	NA	20.36	6.61	13.75	NA	NA
S-8	10/26/1999	1680	116	<2.50	22.4	5.58	<12.5	NA	20.36	6.95	13.41	NA	NA
S-8	1/3/2000	Well inaccessible		NA	NA	NA	NA	NA	20.36	NA	NA	NA	NA
S-8	4/14/2000	Well inaccessible		NA	NA	NA	NA	NA	20.36	NA	NA	NA	NA
S-8	7/12/2000	Well inaccessible		NA	NA	NA	NA	NA	20.36	NA	NA	NA	NA
S-8	11/1/2000	2300	118	12.4	51.7	<2.50	<12.5	NA	20.36	5.68	14.68	NA	NA
S-8	1/3/2001	263	4.34	0.620	<0.500	0.643	5.40	NA	20.36	6.95	13.41	NA	NA

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Well ID	Date	TPPH (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE 8020 (ug/L)	MTBE 8260 (ug/L)	TOC (MSL)	Depth to Water (ft.)	GW Elevation (MSL)	SPH Thickness (ft.)	DO Reading (ppm)
S-8	4/24/2001	680	12	<0.50	0.86	<0.50	NA	<0.50	20.36	6.25	14.11	NA	NA
S-8	7/2/2001	330	2.5	<0.50	0.86	<0.50	NA	<5.0	20.36	7.00	13.36	NA	NA
S-8	11/2/2001	1300	71	0.84	14	1.7	NA	<5.0	20.36	7.44	12.92	NA	NA
S-8	1/16/2002	<50	<0.50	<0.50	<0.50	<0.50	NA	<5.0	20.36	5.67	14.69	NA	NA
S-8	4/1/2002	330	2.2	<0.50	<0.50	<0.50	NA	<5.0	20.36	5.99	14.37	NA	NA
S-8	7/11/2002	1400	55	0.83	5.3	0.71	NA	<5.0	20.36	6.94	13.42	NA	NA
S-8	10/28/2002	660	6.2	0.63	0.76	<0.50	NA	<0.50	20.36	7.50	12.86	NA	1.1
S-8	1/23/2003	1600	30	0.56	6.7	<0.50	NA	<5.0	20.36	5.99	14.37	NA	NA
S-8	4/30/2003	890	13	<0.50	0.59	<1.0	NA	<5.0	20.36	5.30	15.06	NA	NA
S-8	7/1/2003	1800	68	1.3	2.6	1.2	NA	<0.50	20.36	6.87	13.49	NA	1.0
S-8	10/8/2003	220	1.3	<0.50	<0.50	<1.0	NA	<0.50	20.36	7.27	13.09	NA	NA
S-8	1/22/2004	1000	6.7	<0.50	0.61	<1.0	NA	NA	20.36	6.50	13.86	NA	NA
S-8	7/13/2004	2000	100	1.7	5.7	<2.0	NA	<1.0	20.36	7.41	12.95	NA	NA
S-8	1/20/2005	380	4.3	<0.50	<0.50	<1.0	NA	NA	20.36	5.02	15.34	NA	NA
S-8	7/19/2005	120	1.2	<0.50	<0.50	<1.0	NA	NA	20.36	5.82	14.54	NA	NA
S-8	1/27/2006	494	2.42	<0.500	<0.500	<0.500	NA	NA	20.36	5.51	14.85	NA	NA
S-8	7/25/2006	382	2.05	<1.00	<1.00	<3.00	NA	NA	20.36	6.66	13.70	NA	NA
S-8	1/4/2007	<50	<0.50	<0.50	<0.50	<1.0	NA	NA	20.36	6.13	14.23	NA	NA
S-8	7/24/2007	210 g,h	1.2	<1.0	<1.0	<1.0	NA	NA	20.36	6.92	13.44	NA	NA
S-8	**1/15/2008**	**560 g,h**	**5.3**	**<1.0**	**0.311**	**<1.0**	**NA**	**NA**	**20.36**	**5.32**	**15.04**	**NA**	**NA**
S-9	11/16/1988	1400	69	3.0	52	180	NA	NA	20.96	7.78	13.18	NA	NA
S-9	2/27/1989	1600	240	4.0	130	180	NA	NA	20.96	NA	NA	NA	NA
S-9	5/4/1989	2600	470	10	240	480	NA	NA	20.96	NA	NA	NA	NA
S-9	8/10/1989	520	73	<10	40	<30	NA	NA	20.96	7.82	13.14	NA	NA
S-9	10/10/1989	380	82	<1	46	13	NA	NA	20.96	7.87	13.09	NA	NA
S-9	1/25/1990	750	140	1.2	69	75	NA	NA	20.96	7.41	13.55	NA	NA

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S-9	4/18/1990	680	150	1.7	50	37	NA	NA	20.96	7.65	13.31	NA	NA
S-9	7/23/1990	490	94	1.2	32	24	NA	NA	20.96	7.58	13.38	NA	NA
S-9	10/18/1990	390	140	0.7	3.3	24	NA	NA	20.96	8.46	12.50	NA	NA
S-9	1/28/1991	1040	450	4.6	85	97	NA	NA	20.96	8.29	12.67	NA	NA
S-9	4/25/1991	5800	880	9.0	360	500	NA	NA	20.96	6.09	14.87	NA	NA
S-9	7/9/1991	1400	220	2.8	82	100	NA	NA	20.96	7.82	13.14	NA	NA
S-9	10/8/1991	890	960	<2.5	16	29	NA	NA	20.96	8.55	12.41	NA	NA
S-9	2/5/1992	950	240	<2.5	28	55	NA	NA	20.96	6.96	14.00	NA	NA
S-9	4/28/1992	1400a	290	3.0	100	81	NA	NA	20.96	6.76	14.20	NA	NA
S-9	7/27/1992	890	190	<2.5	66	68	NA	NA	20.96	8.10	12.86	NA	NA
S-9	10/26/1992	650	160	<2.5	63	89	NA	NA	20.96	8.53	12.43	NA	NA
S-9	1/13/1993	19000	2400	38	1700	2200	NA	NA	20.96	6.80	14.16	NA	NA
S-9	4/16/1993	10000	1500	<5	1100	990	NA	NA	20.96	6.28	14.68	NA	NA
S-9	7/23/1993	1100	400	<5	260	160	NA	NA	20.96	7.26	13.70	NA	NA
S-9	10/27/1993	2500	400	<5	190	110	NA	NA	20.96	8.00	12.96	NA	NA
S-9	1/27/1994	4800	990	16	630	490	NA	NA	20.96	5.96	15.00	NA	NA
S-9	5/5/1994	3700	480	<5	21	120	NA	NA	20.68	6.99	13.69	NA	NA
S-9	7/26/1994	1000	124.6	<0.3	35.8	28.6	NA	NA	20.68	7.56	13.12	NA	NA
S-9	10/28/1994	979	80.3	7.0	21.7	29.2	NA	NA	20.68	7.78	12.90	NA	NA
S-9	1/2/1995	3900	540	2.4	350	150	NA	NA	20.68	6.29	14.39	NA	NA
S-9	4/14/1995	5100	1000	<10	380	230	NA	NA	20.68	5.69	14.99	NA	NA
S-9	7/28/1995	4600	680	<10	120	47	NA	NA	20.68	6.61	14.07	NA	NA
S-9	10/17/1995	1600	150	<0.5	42	15	NA	NA	20.68	7.00	13.68	NA	NA
S-9	1/11/1996	6800	1100	12	720	95	24	NA	20.68	6.20	14.48	NA	NA
S-9	4/2/1996	6000	1300	8.3	430	99	49	NA	20.68	5.19	15.49	NA	NA
S-9 (D)	4/2/1996	6500	1200	8.3	410	90	<20	NA	20.68	NA	NA	NA	NA
S-9	7/9/1996	3400	680	6.7	54	31	<25	NA	20.68	6.43	14.25	NA	NA

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S-9 (D)	7/9/1996	3300	730	<5.0	58	28	<25	NA	20.68	NA	NA	NA	NA
S-9	10/10/1996	6600	1200	<10	160	<10	70	NA	20.68	7.08	13.60	NA	NA
S-9 (D)	10/10/1996	6100	1000	<10	200	15	65	NA	20.68	NA	NA	NA	NA
S-9	1/9/1997	12000	1400	<25	1000	39	<125	NA	20.68	5.03	15.65	NA	NA
S-9	4/8/1997	6600	920	10	230	26	150	NA	20.68	6.78	13.90	NA	NA
S-9	7/21/1997	7800	860	13	260	14	87	NA	20.68	6.77	13.91	NA	NA
S-9	10/8/1997	4600	320	<10	61	<10	28	NA	20.68	6.92	13.76	NA	NA
S-9	1/15/1998	9300	1000	<10	730	24	<50	NA	20.68	4.50	16.18	NA	NA
S-9	4/14/1998	12000	1200	<2.5	960	<2.5	<12	NA	20.68	4.35	16.33	NA	NA
S-9 (D)	4/14/1998	12000	1200	<2.5	930	<2.5	<12	NA	20.68	NA	NA	NA	NA
S-9	7/14/1998	12000	1700	<25	990	39	<125	NA	20.68	5.95	14.73	NA	NA
S-9 (D)	7/14/1998	11000	1800	<25	650	<25	<125	NA	20.68	NA	NA	NA	NA
S-9	10/20/1998	14000	1600	<25	560	<25	340	NA	20.68	7.03	13.65	NA	NA
S-9 (D)	10/20/1998	11000	1100	<10	230	<10	100	NA	20.68	NA	NA	NA	NA
S-9	1/22/1999	9900	1030	26.7	819	27.5	46.8	NA	20.68	6.01	14.67	NA	NA
S-9	4/8/1999	17900	1450	<50.0	1610	73.8	<500	NA	20.68	5.25	15.43	NA	NA
S-9	7/23/1999	12200	1020	<20.0	536	<20.0	<200	NA	20.68	6.71	13.97	NA	NA
S-9	10/26/1999	9580	1170	11.9	566	23.1	<50.0	NA	20.68	7.27	13.41	NA	NA
S-9	10/26/1999	9580	1170	11.9	566	23.1	<50.0	NA	20.68	7.27	13.41	NA	NA
S-9	1/3/2000	9660	689	<50.0	640	<50.0	<250	NA	20.68	7.47	13.21	NA	NA
S-9	4/14/2000	14000	1040	<50.0	1210	<50.0	<250	NA	20.68	5.75	14.93	NA	NA
S-9	7/12/2000	13200	1360	33.9	552	26.8	<100	NA	20.68	6.63	14.05	NA	NA
S-9	11/1/2000	9120	928	13.5	468	<10.0	<50.0	NA	20.68	5.50	15.18	NA	NA
S-9	1/3/2001	355	19.8	0.732	2.23	0.630	5.09	NA	20.68	7.11	13.57	NA	NA
S-9	4/24/2001	3500	300	1.7	150	1.7	NA	<1.0	20.68	6.30	14.38	NA	NA
S-9	7/2/2001	88	3.8	<0.50	<0.50	<0.50	NA	<5.0	20.68	8.18	12.50	NA	2.6
S-9	11/2/2001	210	9.5	<0.50	<0.50	<0.50	NA	<5.0	20.68	8.40	12.28	NA	16.4

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S-9	1/16/2002	15000	520	4.9	580	7.1	NA	<20	20.68	5.71	14.97	NA	0.5
S-9	4/1/2002	15000	530	5.1	920	7.8	NA	<25	20.68	5.99	14.69	NA	3.0
S-9	7/11/2002	10000	520	5.3	97	5.8	NA	<25	20.68	6.99	13.69	NA	0.5
S-9	10/28/2002	11000	580	6.2	65	5.3	NA	<2.5	20.70	7.63	13.07	NA	1.0
S-9	1/23/2003	9300	400	5.6	320	6.5	NA	<5.0	20.70	5.96	14.74	NA	0.5
S-9	4/30/2003	180	4.2	<0.50	3.7	<1.0	NA	<5.0	20.70	5.20	15.50	NA	7.0
S-9	7/1/2003	2200	71	0.94	6.4	<1.0	NA	<0.50	20.70	7.78	12.92	NA	0.9
S-9	10/8/2003	<50	<0.50	<0.50	<0.50	<1.0	NA	<0.50	20.70	7.38	13.32	NA	16.2
S-9	1/22/2004	1400	26	<1.0	14	12	NA	NA	20.70	6.51	14.19	NA	0.7
S-9	7/13/2004	1900	36	<1.0	2.0	<2.0	NA	<1.0	20.70	8.51	12.19	NA	17.1
S-9	1/20/2005	3600	60	1.2	50	<2.0	NA	NA	20.70	5.80	14.90	NA	0.4
S-9	7/19/2005	2800	42	1.4	18	<2.0	NA	NA	20.70	7.50	13.20	NA	NA
S-9	1/27/2006	16800	152	4.74	165	6.77	NA	NA	20.70	6.40	14.30	NA	NA
S-9	7/25/2006	22500	79.3	2.32	27.2	<3.00	NA	NA	20.70	6.92	13.78	NA	NA
S-9	1/4/2007	5800	82	3.2	110	<5.0	NA	NA	20.70	6.40	14.30	NA	NA
S-9	7/24/2007	8900 g,h	91	3.4 i	22	<10	NA	NA	20.70	7.19	13.51	NA	NA
S-9	**1/15/2008**	**11,000 g,h**	**68**	**3.5 i**	**68**	**4.5 i**	**NA**	**NA**	**20.70**	**5.20**	**15.50**	**NA**	**NA**
S-10	11/16/1988	330	0.5	<1	1.0	11	NA	NA	20.86	7.91	12.95	NA	NA
S-10	2/27/1989	140	<0.5	<3	2.0	6.0	NA	NA	20.86	NA	NA	NA	NA
S-10	5/3/1989	220	<0.5	1.0	2.0	7.0	NA	NA	20.86	NA	NA	NA	NA
S-10	8/10/1989	<50	<0.5	<1	<1	<3	NA	NA	20.86	7.94	12.92	NA	NA
S-10	10/9/1989	170	<0.5	<1	<1	<3	NA	NA	20.86	7.99	12.87	NA	NA
S-10	1/25/1990	<50	<0.5	<0.5	1.1	4.0	NA	NA	20.86	7.56	13.30	NA	NA
S-10	4/18/1990	<50	<0.5	0.9	<0.5	2.0	NA	NA	20.86	7.71	13.15	NA	NA
S-10	7/23/1990	590	<0.5	<0.5	1.9	19	NA	NA	20.86	7.64	13.22	NA	NA
S-10	10/18/1990	140	<0.5	0.7	<0.5	7.0	NA	NA	20.86	8.58	12.28	NA	NA

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S-10	1/28/1991	<50	<0.5	<0.5	<0.5	0.5	NA	NA	20.86	8.35	12.51	NA	NA
S-10	4/25/1991	<50	<0.5	<0.5	1.1	0.8	NA	NA	20.69	6.91	13.78	NA	NA
S-10	7/9/1991	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	20.69	8.14	12.55	NA	NA
S-10	10/8/1991	140	<0.5	<0.5	<0.5	<0.5	NA	NA	20.69	8.70	11.99	NA	NA
S-10	2/5/1992	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	20.69	7.57	13.12	NA	NA
S-10	4/28/1992	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	20.69	7.20	13.49	NA	NA
S-10	7/27/1992	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	20.69	8.17	12.52	NA	NA
S-10	10/26/1992	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	20.69	8.68	12.01	NA	NA
S-10	1/13/1993	88	<0.5	0.6	0.6	<0.5	NA	NA	20.69	3.78	16.91	NA	NA
S-10	4/16/1993	80	<0.5	<0.5	<0.5	<0.5	NA	NA	20.69	6.46	14.23	NA	NA
S-10	7/23/1993	<50	1.5	<0.5	0.7	2.7	NA	NA	20.69	7.38	13.31	NA	NA
S-10	10/27/1993	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	20.69	8.09	12.60	NA	NA
S-10	1/27/1994	270	1.1	1.3	2.0	7.4	NA	NA	20.69	5.81	14.88	NA	NA
S-10	5/5/1994	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	20.15	6.82	13.33	NA	NA
S-10	7/26/1994	<50	<0.3	<0.3	<0.3	<0.6	NA	NA	20.15	7.40	12.75	NA	NA
S-10	10/28/1994	<50	2.4	<0.3	0.5	0.8	NA	NA	20.15	7.62	12.53	NA	NA
S-10	1/2/1995	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	20.15	6.13	14.02	NA	NA
S-10	4/14/1995	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	20.15	5.60	14.55	NA	NA
S-10	7/28/1995	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	20.15	6.44	13.71	NA	NA
S-10	10/17/1995	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	20.15	6.85	13.30	NA	NA
S-10	1/11/1996	<50	<0.5	<0.5	<0.5	<0.5	<2	NA	20.15	6.08	14.07	NA	NA
S-10	4/2/1996	NA	NA	NA	NA	NA	NA	NA	20.15	5.21	14.94	NA	NA
S-10	7/9/1996	NA	NA	NA	NA	NA	NA	NA	20.15	6.20	13.95	NA	NA
S-10	10/10/1996	NA	NA	NA	NA	NA	NA	NA	20.15	6.92	13.23	NA	NA
S-10	1/9/1997	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NA	20.15	4.64	15.51	NA	NA
S-10	4/8/1997	NA	NA	NA	NA	NA	NA	NA	20.15	5.82	14.33	NA	NA
S-10	7/21/1997	NA	NA	NA	NA	NA	NA	NA	20.15	6.48	13.67	NA	NA

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Well ID	Date	TPPH (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE 8020 (ug/L)	MTBE 8260 (ug/L)	TOC (MSL)	Depth to Water (ft.)	GW Elevation (MSL)	SPH Thickness (ft.)	DO Reading (ppm)
S-10	10/8/1997	NA	NA	NA	NA	NA	NA	NA	20.15	5.48	14.67	NA	NA
S-10	1/15/1998	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NA	20.15	3.01	17.14	NA	NA
S-10	4/14/1998	NA	NA	NA	NA	NA	NA	NA	20.15	4.30	15.85	NA	NA
S-10	7/14/1998	NA	NA	NA	NA	NA	NA	NA	20.15	5.84	14.31	NA	NA
S-10	10/20/1998	NA	NA	NA	NA	NA	NA	NA	20.15	6.89	13.26	NA	NA
S-10	1/22/1999	<50.0	<0.500	<0.500	<0.500	<0.500	<2.00	NA	20.15	6.00	14.15	NA	NA
S-10	4/8/1999	NA	NA	NA	NA	NA	NA	NA	20.15	4.41	15.74	NA	NA
S-10	7/23/1999	NA	NA	NA	NA	NA	NA	NA	20.15	6.48	13.67	NA	NA
S-10	10/26/1999	NA	NA	NA	NA	NA	NA	NA	20.15	7.07	13.08	NA	NA
S-10	1/3/2000	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	NA	20.15	7.27	12.88	NA	NA
S-10	4/14/2000	NA	NA	NA	NA	NA	NA	NA	20.15	5.75	14.40	NA	NA
S-10	7/12/2000	NA	NA	NA	NA	NA	NA	NA	20.15	6.17	13.98	NA	NA
S-10	11/1/2000	NA	NA	NA	NA	NA	NA	NA	20.15	5.63	14.52	NA	NA
S-10	1/3/2001	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	NA	20.15	6.89	13.26	NA	NA
S-10	4/24/2001	NA	NA	NA	NA	NA	NA	NA	20.15	6.20	13.95	NA	NA
S-10	7/2/2001	NA	NA	NA	NA	NA	NA	NA	20.15	6.80	13.35	NA	NA
S-10	11/2/2001	NA	NA	NA	NA	NA	NA	NA	20.15	7.40	12.75	NA	NA
S-10	1/16/2002	<50	<0.50	<0.50	<0.50	<0.50	NA	<5.0	20.15	5.66	14.49	NA	NA
S-10	4/1/2002	NA	NA	NA	NA	NA	NA	NA	20.15	5.63	14.52	NA	NA
S-10	7/11/2002	NA	NA	NA	NA	NA	NA	NA	20.15	6.72	13.43	NA	NA
S-10	10/28/2002	NA	NA	NA	NA	NA	NA	NA	20.14	7.50	12.64	NA	NA
S-10	1/23/2003	<50	<0.50	<0.50	<0.50	<0.50	NA	<5.0	20.14	5.97	14.17	NA	NA
S-10	4/30/2003	NA	NA	NA	NA	NA	NA	NA	20.14	5.24	14.90	NA	NA
S-10	7/1/2003	NA	NA	NA	NA	NA	NA	NA	20.14	6.82	13.32	NA	NA
S-10	10/8/2003	NA	NA	NA	NA	NA	NA	NA	20.14	7.06	13.08	NA	NA
S-10	1/22/2004	<50	<0.50	<0.50	<0.50	<1.0	NA	NA	20.14	6.50	13.64	NA	NA
S-10	7/13/2004	NA	NA	NA	NA	NA	NA	NA	20.14	7.49	12.65	NA	NA

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Well ID	Date	TPPH (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE 8020 (ug/L)	MTBE 8260 (ug/L)	TOC (MSL)	Depth to Water (ft.)	GW Elevation (MSL)	SPH Thickness (ft.)	DO Reading (ppm)
S-10	1/20/2005	<50	<0.50	<0.50	<0.50	<1.0	NA	NA	20.14	5.09	15.05	NA	NA
S-10	7/19/2005	NA	NA	NA	NA	NA	NA	NA	20.14	6.00	14.14	NA	NA
S-10	1/27/2006	<50.0	<0.500	<0.500	<0.500	<0.500	NA	NA	20.14	5.61	14.53	NA	NA
S-10	7/25/2006	NA	NA	NA	NA	NA	NA	NA	20.14	6.61	13.53	NA	NA
S-10	1/4/2007	<50	<0.50	<0.50	<0.50	<1.0	NA	NA	20.14	6.29	13.85	NA	NA
S-10	7/24/2007	NA	NA	NA	NA	NA	NA	NA	20.14	6.82	13.32	NA	NA
S-10	**1/15/2008**	**<50 g**	**<0.50**	**<1.0**	**<1.0**	**<1.0**	**NA**	**NA**	**20.14**	**5.33**	**14.81**	**NA**	**NA**
S-11	11/16/1988	<50	<0.5	<1	<1	<3	NA	NA	21.26	8.62	12.64	NA	NA
S-11	2/27/1989	<50	<0.5	<1	<1	<3	NA	NA	21.26	NA	NA	NA	NA
S-11	5/3/1989	<50	<0.5	<1	<1	<3	NA	NA	21.26	NA	NA	NA	NA
S-11	8/10/1989	<50	<0.5	<1	<1	<3	NA	NA	21.26	8.65	12.61	NA	NA
S-11	10/9/1989	<50	<0.5	<1	<1	<3	NA	NA	21.26	8.64	12.62	NA	NA
S-11	1/25/1990	<50	<0.5	<0.5	<0.5	<1	NA	NA	21.26	8.43	12.83	NA	NA
S-11	4/18/1990	<50	<0.5	<0.5	<0.5	<1	NA	NA	21.26	8.42	12.84	NA	NA
S-11	7/23/1990	<50	<0.5	0.6	<0.5	1.1	NA	NA	21.26	8.23	13.03	NA	NA
S-11	10/18/1990	<50	<0.5	<0.5	<0.5	0.5	NA	NA	21.26	9.20	12.06	NA	NA
S-11	1/28/1991	63	<0.5	3.3	0.9	7.0	NA	NA	21.26	9.13	12.13	NA	NA
S-11	4/25/1991	<50	<0.5	<0.5	0.8	<0.5	NA	NA	21.26	7.53	13.73	NA	NA
S-11	7/9/1991	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	21.26	8.85	12.41	NA	NA
S-11	10/8/1991	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	21.26	9.34	11.92	NA	NA
S-11	2/5/1991	NA	NA	NA	NA	NA	NA	NA	21.26	8.50	12.76	NA	NA
S-11	4/28/1992	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	21.26	7.80	13.46	NA	NA
S-11	7/27/1992	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	21.26	8.80	12.46	NA	NA
S-11	10/26/1992	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	21.26	9.42	11.84	NA	NA
S-11	1/13/1993	NA	NA	NA	NA	NA	NA	NA	21.26	6.52	14.74	NA	NA
S-11	4/16/1993	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	21.26	6.86	14.40	NA	NA

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S-11	7/23/1993	NA	NA	NA	NA	NA	NA	NA	21.26	8.07	13.19	NA	NA
S-11	10/27/1993	Well inaccessible		NA	NA	NA	NA	NA	21.26	NA	NA	NA	NA
S-11	1/27/1994	NA	NA	NA	NA	NA	NA	NA	21.26	NA	NA	NA	NA
S-11	5/5/1994	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	21.24	7.73	13.51	NA	NA
S-11	7/26/1994	NA	NA	NA	NA	NA	NA	NA	21.24	8.30	12.94	NA	NA
S-11	10/28/1994	<50	<0.3	<0.3	<0.3	<0.6	NA	NA	21.24	8.30	12.94	NA	NA
S-11	1/2/1995	NA	NA	NA	NA	NA	NA	NA	21.24	7.25	13.99	NA	NA
S-11	4/14/1995	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	21.24	6.99	14.25	NA	NA
S-11	7/28/1995	NA	NA	NA	NA	NA	NA	NA	21.24	7.21	14.03	NA	NA
S-11	10/17/1995	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	21.24	7.41	13.83	NA	NA
S-11	1/11/1996	NA	NA	NA	NA	NA	NA	NA	21.24	6.80	14.44	NA	NA
S-11	7/21/1997	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NA	21.24	7.28	13.96	NA	NA
S-11	03/18/2002 d	NA	NA	NA	NA	NA	NA	NA	21.27	NA	NA	NA	NA
S-11	1/22/2004	<50	<0.50	<0.50	<0.50	<1.0	NA	0.57	21.27	7.55	13.72	NA	NA
S-12	11/16/1988	50	3.5	<1	<1	<3	NA	NA	21.05	NA	NA	NA	NA
S-12	2/27/1989	<50	0.8	<1	<1	<3	NA	NA	21.05	NA	NA	NA	NA
S-12	5/3/1989	<50	<0.5	<1	<1	<3	NA	NA	21.05	NA	NA	NA	NA
S-12	8/10/1989	<50	<0.5	<1	<1	<3	NA	NA	21.05	8.32	12.73	NA	NA
S-12	10/9/1989	<50	<0.5	<1	<1	<1	NA	NA	21.05	8.32	12.73	NA	NA
S-12	1/25/1990	<50	<0.5	<0.5	<0.5	<1	NA	NA	21.05	8.18	12.87	NA	NA
S-12	4/18/1990	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	21.05	8.05	13.00	NA	NA
S-12	7/23/1990	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	21.05	7.92	13.13	NA	NA
S-12	10/18/1990	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	21.05	8.90	12.15	NA	NA
S-12	1/28/1991	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	21.05	8.54	12.51	NA	NA
S-12	4/25/1991	90	5.4	<0.5	1.1	0.7	NA	NA	21.05	7.08	13.97	NA	NA
S-12	7/9/1991	<50	2.9	<0.5	<0.5	<0.5	NA	NA	21.05	8.42	12.63	NA	NA

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S-12	10/8/1991	50	<0.5	<0.5	<0.5	<0.5	NA	NA	21.05	8.80	12.25	NA	NA
S-12	2/5/1992	50a	<0.5	<0.5	<0.5	<0.5	NA	NA	21.05	8.07	12.98	NA	NA
S-12	4/28/1992	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	21.05	8.33	12.72	NA	NA
S-12	7/27/1992	94	<0.5	<0.5	<0.5	<0.5	NA	NA	21.05	8.55	12.50	NA	NA
S-12	10/26/1992	86	<0.5	<0.5	<0.5	<0.5	NA	NA	21.05	9.03	12.02	NA	NA
S-12	1/14/1993	120	2.0	<0.5	<0.5	<0.5	NA	NA	21.05	6.38	14.67	NA	NA
S-12	4/16/1993	60	<0.5	<0.5	<0.5	<0.5	NA	NA	21.05	6.56	14.49	NA	NA
S-12	7/23/1993	90	<0.5	<0.5	<0.5	<0.5	NA	NA	21.05	7.76	13.29	NA	NA
S-12	10/27/1993	Well inaccessible		NA	NA	NA	NA	NA	21.05	NA	NA	NA	NA
S-12	1/27/1994	Well inaccessible		NA	NA	NA	NA	NA	21.05	NA	NA	NA	NA
S-12	5/5/1994	<50	2.0	<0.5	<0.5	<0.5	NA	NA	20.71	7.49	13.22	NA	NA
S-12	7/26/1994	128	<0.3	<0.3	<0.3	<0.6	NA	NA	20.71	7.92	12.79	NA	NA
S-12	10/28/1994	167	<0.3	<0.3	<0.3	<0.6	NA	NA	20.71	7.78	12.93	NA	NA
S-12	1/2/1995	50	<0.5	<0.5	<0.5	<0.5	NA	NA	20.71	7.33	13.38	NA	NA
S-12	4/14/1995	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	20.71	6.47	14.24	NA	NA
S-12	7/28/1995	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	20.71	6.90	13.81	NA	NA
S-12	10/17/1995	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	20.71	7.16	13.55	NA	NA
S-12	1/11/1996	<50	<0.5	<0.5	<0.5	<0.6	82	NA	20.71	6.65	14.06	NA	NA
S-12	7/21/1997	<50	<0.50	<0.50	<0.50	<0.50	45	NA	20.71	6.95	13.76	NA	NA
S-12	03/18/2002 d	NA	NA	NA	NA	NA	NA	NA	20.73	NA	NA	NA	NA
S-12	1/22/2004	<50	<0.50	<0.50	<0.50	<1.0	NA	0.58	20.73	7.30	13.43	NA	NA
S-13	5/3/1989	150	4.9	4.0	2.0	14	NA	NA	20.57	NA	NA	NA	NA
S-13	8/10/1989	110	2.9	<1	<1	<3	NA	NA	20.57	8.00	12.57	NA	NA
S-13	10/9/1989	77	1.4	<1	<1	<3	NA	NA	20.57	7.95	12.62	NA	NA
S-13	1/25/1990	51	0.5	<0.5	<0.5	<1	NA	NA	20.57	7.79	12.78	NA	NA
S-13	4/18/1990	85	8.7	<0.5	<0.5	<1	NA	NA	20.57	7.73	12.84	NA	NA

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Well ID	Date	TPPH (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE 8020 (ug/L)	MTBE 8260 (ug/L)	TOC (MSL)	Depth to Water (ft.)	GW Elevation (MSL)	SPH Thickness (ft.)	DO Reading (ppm)
S-13	7/23/1990	80	0.8	<0.5	<0.5	<0.5	NA	NA	20.57	7.63	12.94	NA	NA
S-13	10/18/1990	130	<0.5	<0.5	<0.5	<5	NA	NA	20.57	8.58	11.99	NA	NA
S-13	1/28/1991	<50	<0.5	0.9	1.2	1.0	NA	NA	20.57	8.39	12.18	NA	NA
S-13	4/25/1991	440a	3.8	<0.5	<0.5	0.6	NA	NA	20.57	7.00	13.57	NA	NA
S-13	7/9/1991	320a	0.6	<0.5	<0.5	<0.5	NA	NA	20.57	8.12	12.45	NA	NA
S-13	10/8/1991	310	<0.5	<0.5	<0.5	<0.5	NA	NA	20.57	8.69	11.88	NA	NA
S-13	2/5/1992	NA	NA	NA	NA	NA	NA	NA	20.57	7.62	12.95	NA	NA
S-13	4/28/1992	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	20.57	7.15	13.42	NA	NA
S-13	7/27/1992	NA	NA	NA	NA	NA	NA	NA	20.57	8.20	12.37	NA	NA
S-13	10/26/1992	180	<0.5	<0.5	<0.5	<0.5	NA	NA	20.57	8.73	11.84	NA	NA
S-13	1/13/1993	NA	NA	NA	NA	NA	NA	NA	20.57	5.06	15.51	NA	NA
S-13	4/16/1993	240	4.8	<0.5	1.3	<0.5	NA	NA	20.57	6.38	14.19	NA	NA
S-13	7/23/1993	NA	NA	NA	NA	NA	NA	NA	20.57	7.45	13.12	NA	NA
S-13	10/27/1993	Well inaccessible		NA	NA	NA	NA	NA	20.57	NA	NA	NA	NA
S-13	1/27/1994	NA	NA	NA	NA	NA	NA	NA	20.57	NA	NA	NA	NA
S-13	5/5/1994	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	20.16	6.91	13.25	NA	NA
S-13	7/26/1994	NA	NA	NA	NA	NA	NA	NA	20.16	7.52	12.64	NA	NA
S-13	10/28/1994	368	<0.3	<0.3	<0.3	<0.6	NA	NA	20.16	7.68	12.48	NA	NA
S-13	1/2/1995	NA	NA	NA	NA	NA	NA	NA	20.16	6.37	13.79	NA	NA
S-13	4/14/1995	NA	NA	NA	NA	NA	NA	NA	20.16	5.81	14.35	NA	NA
S-13	7/28/1995	NA	NA	NA	NA	NA	NA	NA	20.16	6.73	13.43	NA	NA
S-13	10/17/1995	<50	1.0	<0.5	<0.5	<0.5	NA	NA	20.16	6.94	13.22	NA	NA
S-13	1/11/1996	NA	NA	NA	NA	NA	NA	NA	20.16	6.20	13.96	NA	NA
S-13	4/2/1996	<50	<0.5	<0.5	<0.5	<0.5	<2	NA	20.16	5.28	14.88	NA	NA
S-13	7/9/1996	NA	NA	NA	NA	NA	NA	NA	20.16	6.35	13.81	NA	NA
S-13	10/10/1996	<50	<0.50	<0.50	<0.50	<0.50	210	160	20.16	7.04	13.12	NA	NA
S-13	1/9/1997	NA	NA	NA	NA	NA	NA	NA	20.16	5.19	14.97	NA	NA

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S-13	4/8/1997	<50	<0.50	<0.50	<0.50	<0.50	81	NA	20.16	6.62	13.54	NA	NA
S-13	7/21/1997	NA	NA	NA	NA	NA	NA	NA	20.16	6.76	13.40	NA	NA
S-13	10/8/1997	<50	<0.50	<0.50	<0.50	<0.50	110	NA	20.16	7.05	13.11	NA	NA
S-13	1/15/1998	NA	NA	NA	NA	NA	NA	NA	20.16	5.27	14.89	NA	NA
S-13	4/14/1998	<50	<0.50	<0.50	<0.50	<0.50	3.2	NA	20.16	5.24	14.92	NA	NA
S-13	7/14/1998	NA	NA	NA	NA	NA	NA	NA	20.16	5.48	14.68	NA	NA
S-13	10/20/1998	NA	NA	NA	NA	NA	NA	NA	20.16	7.08	13.08	NA	NA
S-13	1/22/1999	<50.0	<0.500	<0.500	<0.500	<0.500	92.2	NA	20.16	6.65	13.51	NA	NA
S-13	4/8/1999	NA	NA	NA	NA	NA	NA	NA	20.16	5.61	14.55	NA	NA
S-13	7/23/1999	<50.0	<0.500	<0.500	<0.500	<0.500	<5.00	NA	20.16	6.78	13.38	NA	NA
S-13	10/26/1999	NA	NA	NA	NA	NA	NA	NA	20.16	7.33	12.83	NA	NA
S-13	1/3/2000	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	NA	20.16	7.51	12.65	NA	NA
S-13	4/14/2000	NA	NA	NA	NA	NA	NA	NA	20.16	6.08	14.08	NA	NA
S-13	7/12/2000	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	NA	20.16	6.50	13.66	NA	NA
S-13	11/1/2000	NA	NA	NA	NA	NA	NA	NA	20.16	6.10	14.06	NA	NA
S-13	1/3/2001	<50.0	<0.500	<0.500	<0.500	<0.500	21.2	23.9	20.16	7.09	13.07	NA	NA
S-13	4/24/2001	Well inaccessible		NA	NA	NA	NA	NA	20.16	NA	NA	NA	NA
S-13	7/2/2001	<50	<0.50	<0.50	<0.50	<0.50	NA	<5.0	20.16	7.13	13.03	NA	NA
S-13	11/2/2001	NA	NA	NA	NA	NA	NA	NA	20.16	7.38	12.78	NA	NA
S-13	1/16/2002	<50	<0.50	<0.50	<0.50	<0.50	NA	5.9	20.16	6.02	14.14	NA	NA
S-13	4/1/2002	NA	NA	NA	NA	NA	NA	NA	20.16	6.26	13.90	NA	NA
S-13	7/11/2002	<50	<0.50	<0.50	<0.50	<0.50	NA	<5.0	20.16	7.00	13.16	NA	NA
S-13	10/28/2002	NA	NA	NA	NA	NA	NA	NA	20.19	7.70	12.49	NA	NA
S-13	1/23/2003	<50	<0.50	<0.50	<0.50	<0.50	NA	110	20.19	6.41	13.78	NA	NA
S-13	4/30/2003	NA	NA	NA	NA	NA	NA	NA	20.19	6.12	14.07	NA	NA
S-13	7/1/2003	<50	<0.50	<0.50	<0.50	<1.0	NA	<0.50	20.19	7.65	12.54	NA	1.4
S-13	10/8/2003	NA	NA	NA	NA	NA	NA	NA	20.19	7.32	12.87	NA	NA

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S-13	1/22/2004	<250	<2.5	<2.5	<2.5	<5.0	NA	NA	20.19	6.60	13.59	NA	NA
S-13	7/13/2004	NA	NA	NA	NA	NA	NA	NA	20.19	6.60	13.59	NA	e
S-13	1/20/2005	<50	<0.50	<0.50	<0.50	<1.0	NA	NA	20.19	6.56	13.63	NA	NA
S-13	7/19/2005	NA	NA	NA	NA	NA	NA	NA	20.19	6.15	14.04	NA	NA
S-13	1/27/2006	<50.0	<0.500	<0.500	<0.500	<0.500	NA	NA	20.19	6.42	13.77	NA	NA
S-13	7/25/2006	NA	NA	NA	NA	NA	NA	NA	20.19	7.51	12.68	NA	NA
S-13	1/4/2007	<50	<0.50	<0.50	<0.50	<1.0	NA	NA	20.19	6.85	13.34	NA	NA
S-13	7/24/2007	NA	NA	NA	NA	NA	NA	NA	20.19	7.39	12.80	NA	NA
S-13	**1/15/2008**	**<50 g**	**<0.50**	**<1.0**	**<1.0**	**<1.0**	**NA**	**NA**	**20.19**	**6.00**	**14.19**	**NA**	**NA**
S-14	5/3/1989	5300	750	400	200	800	NA	NA	20.44	NA	NA	NA	NA
S-14	8/10/1989	1800	540	140	42	50	NA	NA	20.44	7.58	12.86	NA	NA
S-14	10/9/1989	1000	360	60	20	30	NA	NA	20.44	7.62	12.82	NA	NA
S-14	1/25/1990	640	160	77	17	39	NA	NA	20.44	7.82	12.62	NA	NA
S-14	4/18/1990	1200	200	110	30	96	NA	NA	20.44	7.37	13.07	NA	NA
S-14	7/23/1990	5000	430	340	140	660	NA	NA	20.44	7.28	13.16	NA	NA
S-14	10/18/1990	1800	770	13	17	120	NA	NA	20.44	8.10	12.34	NA	NA
S-14	1/28/1991	720	200	36	21	78	NA	NA	20.44	8.04	12.40	NA	NA
S-14	4/25/1991	14000	930	430	250	970	NA	NA	20.44	6.40	14.04	NA	NA
S-14	7/9/1991	160	30	5.3	5	16	NA	NA	20.44	7.69	12.75	NA	NA
S-14	10/8/1991	5400	81	57	95	380	NA	NA	20.44	8.24	12.20	NA	NA
S-14	2/2/1992	NA	NA	NA	NA	NA	NA	NA	20.44	7.20	13.24	NA	NA
S-14	4/28/1992	2000	270	140	48	170	NA	NA	20.44	9.75	10.69	NA	NA
S-14	10/26/1992	920	33	12	25	88	NA	NA	20.44	8.32	12.12	NA	NA
S-14	1/13/1993	NA	NA	NA	NA	NA	NA	NA	20.44	5.07	15.37	NA	NA
S-14	4/16/1993	4500	1100	29	91	170	NA	NA	20.44	5.86	14.58	NA	NA
S-14	7/23/1993	NA	NA	NA	NA	NA	NA	NA	20.44	7.06	13.38	NA	NA

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S-14	10/27/1993	Well inaccessible		NA	NA	NA	NA	NA	20.44	NA	NA	NA	NA
S-14	1/27/1994	NA	NA	NA	NA	NA	NA	NA	20.44	NA	NA	NA	NA
S-14	5/5/1994	810	250	<2.5	9.4	19	NA	NA	19.99	6.48	13.51	NA	NA
S-14	7/26/1994	NA	NA	NA	NA	NA	NA	NA	19.99	7.04	12.95	NA	NA
S-14	10/28/1994	5385	290.6	85.8	49.7	186.2	NA	NA	19.99	7.07	12.92	NA	NA
S-14	1/2/1995	NA	NA	NA	NA	NA	NA	NA	19.99	5.95	14.04	NA	NA
S-14	4/14/1995	1600	40	4.7	11	20	NA	NA	19.99	5.22	14.77	NA	NA
S-14	7/28/1995	NA	NA	NA	NA	NA	NA	NA	19.99	6.21	13.78	NA	NA
S-14	10/17/1995	1200	37	<0.5	7.8	11	NA	NA	19.99	6.30	13.69	NA	NA
S-14	1/11/1996	NA	NA	NA	NA	NA	NA	NA	19.99	5.70	14.29	NA	NA
S-14	7/21/1997	220	71	0.71	1.3	1.3	100	NA	19.99	6.14	13.85	NA	NA
S-14	03/18/2002 d	NA	NA	NA	NA	NA	NA	NA	20.01	NA	NA	NA	NA
S-14	1/22/2004	<50	<0.50	<0.50	<0.50	<1.0	NA	55	20.01	6.20	13.81	NA	NA
S-15	5/3/1989	<50	<0.5	<1	<1	<3	NA	NA	22.22	NA	NA	NA	NA
S-15	8/10/1989	<50	<0.5	<1	<1	<3	NA	NA	22.22	8.48	13.74	NA	NA
S-15	10/9/1989	<50	<0.5	<1	<1	<3	NA	NA	22.22	8.46	13.76	NA	NA
S-15	1/25/1990	<50	<0.5	<1	<1	<1	NA	NA	22.22	8.34	13.88	NA	NA
S-15	4/18/1990	<50	<0.5	<0.5	<0.5	<1	NA	NA	22.22	8.45	13.77	NA	NA
S-15	7/23/1990	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	22.22	8.22	14.00	NA	NA
S-15	10/18/1990	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	22.22	9.11	13.11	NA	NA
S-15	1/28/1991	<50	<0.5	0.6	<0.5	0.8	NA	NA	22.22	9.13	13.09	NA	NA
S-15	4/25/1991	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	22.22	7.83	14.39	NA	NA
S-15	7/9/1991	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	22.22	8.93	13.29	NA	NA
S-15	10/8/1991	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	22.22	9.26	12.96	NA	NA
S-15	2/5/1992	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	22.22	8.60	13.62	NA	NA
S-15	4/28/1992	50	0.8	0.9	<0.5	1.4	NA	NA	22.22	8.09	14.13	NA	NA

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Well ID	Date	TPPH (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE 8020 (ug/L)	MTBE 8260 (ug/L)	TOC (MSL)	Depth to Water (ft.)	GW Elevation (MSL)	SPH Thickness (ft.)	DO Reading (ppm)
S-15	7/27/1992	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	22.22	8.83	13.39	NA	NA
S-15	10/26/1992	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	22.22	9.31	12.91	NA	NA
S-15	1/14/1993	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	22.22	6.64	15.58	NA	NA
S-15	4/16/1993	<50	0.6	1.0	<0.5	0.7	NA	NA	22.22	7.14	15.08	NA	NA
S-15	7/23/1993	<50	1.2	<0.5	<0.5	1.6	NA	NA	22.22	8.23	13.99	NA	NA
S-15	10/27/1993	Well inaccessible		NA	NA	NA	NA	NA	22.22	NA	NA	NA	NA
S-15	1/27/1994	Well inaccessible		NA	NA	NA	NA	NA	22.22	NA	NA	NA	NA
S-15	5/5/1994	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	21.42	7.57	13.85	NA	NA
S-15	7/26/1994	<50	<0.3	<0.3	<0.3	<0.6	NA	NA	21.42	8.16	13.26	NA	NA
S-15	10/28/1994	<50	0.3	<0.3	<0.3	<0.6	NA	NA	21.42	7.87	13.55	NA	NA
S-15	1/2/1995	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	21.42	7.02	14.40	NA	NA
S-15	4/14/1995	NA	NA	NA	NA	NA	NA	NA	21.42	6.19	15.23	NA	NA
S-15	7/28/1995	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	21.42	6.72	14.70	NA	NA
S-15	10/17/1995	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	21.42	7.04	14.38	NA	NA
S-15	1/11/1996	<50	<0.5	<0.5	<0.5	<0.5	<2	NA	21.42	6.40	15.02	NA	NA
S-15	03/18/2002 d	NA	NA	NA	NA	NA	NA	NA	21.47	NA	NA	NA	NA
S-15	1/22/2004	<50	<0.50	<0.50	<0.50	<1.0	NA	<0.50	21.47	7.07	14.40	NA	NA
S-16	5/4/1994	380	44	3.0	2.0	<3	NA	NA	21.82	NA	NA	NA	NA
S-16	8/10/1989	<50	0.6	<1	<1	<3	NA	NA	21.82	8.36	13.46	NA	NA
S-16	10/10/1989	<5	<0.5	<1	<1	<3	NA	NA	21.82	8.23	13.59	NA	NA
S-16	1/25/1990	240	160	3.3	0.8	11	NA	NA	21.82	7.88	13.94	NA	NA
S-16	4/18/1990	<50	1.0	<0.5	<0.5	<1	NA	NA	21.82	8.19	13.63	NA	NA
S-16	7/23/1990	<50	1.1	<0.5	<0.5	<0.5	NA	NA	21.82	8.09	13.73	NA	NA
S-16	10/18/1990	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	21.82	8.90	12.92	NA	NA
S-16	1/28/1991	<50	<0.5	0.6	<0.5	0.9	NA	NA	21.82	8.55	13.27	NA	NA
S-16	4/25/1991	60	21	0.5	3.2	4.8	NA	NA	21.82	7.48	14.34	NA	NA

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S-16	7/9/1991	<50	1.0	<0.5	<0.5	<0.5	NA	NA	21.82	8.48	13.34	NA	NA
S-16	10/8/1991	50	17	1.4	1.2	5.5	NA	NA	21.82	8.95	12.87	NA	NA
S-16	2/5/1992	150	65	0.7	<0.5	8.4	NA	NA	21.82	8.20	13.62	NA	NA
S-16	4/28/1992	<50	13	<0.5	<0.5	<0.5	NA	NA	21.82	7.80	14.02	NA	NA
S-16	7/27/1992	510	130	<2.5	<0.5	21	NA	NA	21.82	8.29	13.53	NA	NA
S-16	10/26/1992	<50	<0.5	<0.5	<2.5	<0.5	NA	NA	21.82	9.02	12.80	NA	NA
S-16	1/13/1993	100	25	1.9	<0.5	8.4	NA	NA	21.82	5.78	16.04	NA	NA
S-16	4/16/1993	150	56	1.8	4.6	12	NA	NA	21.82	6.80	15.02	NA	NA
S-16	7/23/1993	<50	0.9	<0.5	<0.5	<0.5	NA	NA	21.82	7.67	14.15	NA	NA
S-16	10/27/1993	<50	1.5	<0.5	<0.5	<0.5	NA	NA	21.82	8.52	13.30	NA	NA
S-16	1/27/1994	140	85	<1	<1	13	NA	NA	21.82	7.20	14.62	NA	NA
S-16	5/5/1994	71	25	<0.5	<0.5	4.2	NA	NA	21.24	7.76	13.48	NA	NA
S-16	7/26/1994	<50	<0.3	<0.3	<0.3	<0.6	NA	NA	21.24	7.84	13.40	NA	NA
S-16	10/28/1994	<50	11.5	<0.3	<0.3	1.8	NA	NA	21.24	7.97	13.27	NA	NA
S-16	1/2/1995	70	64	<0.5	<0.5	4.0	NA	NA	21.24	6.49	14.75	NA	NA
S-16	4/14/1995	NA	NA	NA	NA	NA	NA	NA	21.24	6.08	15.16	NA	NA
S-16	7/28/1995	<50	1.7	<0.5	<0.5	<0.5	NA	NA	21.24	7.00	14.24	NA	NA
S-16	10/17/1995	<50	4.6	<0.5	<0.5	<0.5	NA	NA	21.24	7.15	14.09	NA	NA
S-16	1/11/1996	80	17	0.7	<0.5	2.9	<2	NA	21.24	6.30	14.94	NA	NA
S-16	4/2/1996	NA	NA	NA	NA	NA	NA	NA	21.24	5.84	15.40	NA	NA
S-16	7/9/1996	NA	NA	NA	NA	NA	NA	NA	21.24	6.72	14.52	NA	NA
S-16	10/10/1996	NA	NA	NA	NA	NA	NA	NA	21.24	7.41	13.83	NA	NA
S-16	1/9/1997	80	18	<0.50	1.7	4.8	<2.5	NA	21.24	5.60	15.64	NA	NA
S-16	4/8/1997	NA	NA	NA	NA	NA	NA	NA	21.24	7.34	13.90	NA	NA
S-16	7/21/1997	NA	NA	NA	NA	NA	NA	NA	21.24	7.20	14.04	NA	NA
S-16	10/8/1997	NA	NA	NA	NA	NA	NA	NA	21.24	7.34	13.90	NA	NA
S-16	1/15/1998	650	160	2.7	8.7	62	<12	NA	21.24	4.79	16.45	NA	NA

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Well ID	Date	TPPH (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE 8020 (ug/L)	MTBE 8260 (ug/L)	TOC (MSL)	Depth to Water (ft.)	GW Elevation (MSL)	SPH Thickness (ft.)	DO Reading (ppm)
S-16	4/14/1998	NA	NA	NA	NA	NA	NA	NA	21.24	5.27	15.97	NA	NA
S-16	7/14/1998	NA	NA	NA	NA	NA	NA	NA	21.24	6.32	14.92	NA	NA
S-16	10/20/1998	NA	NA	NA	NA	NA	NA	NA	21.24	6.94	14.30	NA	NA
S-16	1/22/1999	Well inaccessible		NA	NA	NA	NA	NA	21.24	NA	NA	NA	NA
S-16	4/8/1999	NA	NA	NA	NA	NA	NA	NA	21.24	5.80	15.44	NA	NA
S-16	7/23/1999	NA	NA	NA	NA	NA	NA	NA	21.24	6.62	14.62	NA	NA
S-16	10/26/1999	NA	NA	NA	NA	NA	NA	NA	21.24	7.42	13.82	NA	NA
S-16	1/3/2000	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	NA	21.24	7.34	13.90	NA	NA
S-16	4/14/2000	NA	NA	NA	NA	NA	NA	NA	21.24	6.27	14.97	NA	NA
S-16	7/12/2000	NA	NA	NA	NA	NA	NA	NA	21.24	7.02	14.22	NA	NA
S-16	11/1/2000	NA	NA	NA	NA	NA	NA	NA	21.24	6.79	14.45	NA	NA
S-16	1/3/2001	<50.0	<0.500	<0.500	<0.500	<0.500	3.05	NA	21.24	7.18	14.06	NA	NA
S-16	4/24/2001	NA	NA	NA	NA	NA	NA	NA	21.24	6.85	14.39	NA	NA
S-16	7/2/2001	NA	NA	NA	NA	NA	NA	NA	21.24	7.51	13.73	NA	NA
S-16	11/2/2001	NA	NA	NA	NA	NA	NA	NA	21.24	7.68	13.56	NA	NA
S-16	1/16/2002	<50	<0.50	<0.50	<0.50	<0.50	NA	<5.0	21.24	6.40	14.84	NA	NA
S-16	4/1/2002	NA	NA	NA	NA	NA	NA	NA	21.24	6.33	14.91	NA	NA
S-16	7/11/2002	NA	NA	NA	NA	NA	NA	NA	21.24	7.39	13.85	NA	NA
S-16	10/28/2002	NA	NA	NA	NA	NA	NA	NA	21.30	8.00	13.30	NA	NA
S-16	1/23/2003	<50	<0.50	<0.50	<0.50	<0.50	NA	<5.0	21.30	6.36	14.94	NA	NA
S-16	4/30/2003	NA	NA	NA	NA	NA	NA	NA	21.30	6.03	15.27	NA	NA
S-16	7/1/2003	NA	NA	NA	NA	NA	NA	NA	21.30	7.28	14.02	NA	NA
S-16	10/8/2003	NA	NA	NA	NA	NA	NA	NA	21.30	7.77	13.53	NA	NA
S-16	1/22/2004	<50	<0.50	<0.50	<0.50	<1.0	NA	NA	21.30	6.80	14.50	NA	NA
S-16	7/13/2004	NA	NA	NA	NA	NA	NA	NA	21.30	7.94	13.36	NA	NA
S-16	1/20/2005	<50	<0.50	<0.50	<0.50	<1.0	NA	NA	21.30	5.62	15.68	NA	NA
S-16	7/19/2005	NA	NA	NA	NA	NA	NA	NA	21.30	6.53	14.77	NA	NA

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Well ID	Date	TPPH (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE 8020 (ug/L)	MTBE 8260 (ug/L)	TOC (MSL)	Depth to Water (ft.)	GW Elevation (MSL)	SPH Thickness (ft.)	DO Reading (ppm)
S-16	1/27/2006	<50.0	<0.500	<0.500	<0.500	<0.500	NA	NA	21.30	6.05	15.25	NA	NA
S-16	7/25/2006	NA	NA	NA	NA	NA	NA	NA	21.30	7.19	14.11	NA	NA
S-16	1/4/2007	<50	<0.50	<0.50	<0.50	<1.0	NA	NA	21.30	6.89	14.41	NA	NA
S-16	7/24/2007	NA	NA	NA	NA	NA	NA	NA	21.30	7.60	13.70	NA	NA
S-16	**1/15/2008**	**<50 g**	**<0.50**	**<1.0**	**<1.0**	**<1.0**	**NA**	**NA**	**21.30**	**5.82**	**15.48**	**NA**	**NA**
S-17	5/3/1989	<50	<0.5	<1	<1	<3	NA	NA	20.95	NA	NA	NA	NA
S-17	8/10/1989	<50	<0.5	<1	<1	<3	NA	NA	20.95	8.13	12.82	NA	NA
S-17	10/9/1989	<50	<0.5	<1	<1	<3	NA	NA	20.95	8.18	12.77	NA	NA
S-17	1/25/1990	<50	<0.5	<0.5	<0.5	<1	NA	NA	20.95	7.60	13.35	NA	NA
S-17	4/18/1990	<50	<0.5	<0.5	<0.5	<1	NA	NA	20.95	7.95	13.00	NA	NA
S-17	7/23/1990	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	20.95	7.87	13.08	NA	NA
S-17	10/18/1990	390	10	62	22	110	NA	NA	20.95	8.71	12.24	NA	NA
S-17	1/28/1991	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	20.95	8.54	12.41	NA	NA
S-17	4/25/1991	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	20.95	7.15	13.80	NA	NA
S-17	7/9/1991	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	20.95	8.24	12.71	NA	NA
S-17	10/8/1991	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	20.95	8.86	12.09	NA	NA
S-17	2/5/1992	NA	NA	NA	NA	NA	NA	NA	20.95	7.74	13.21	NA	NA
S-17	4/28/1992	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	20.95	7.41	13.54	NA	NA
S-17	7/27/1992	NA	NA	NA	NA	NA	NA	NA	20.95	8.34	12.61	NA	NA
S-17	10/26/1992	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	20.95	8.87	12.08	NA	NA
S-17	1/13/1993	NA	NA	NA	NA	NA	NA	NA	20.95	3.43	17.52	NA	NA
S-17	4/16/1993	130	<0.5	<0.5	<0.5	<0.5	NA	NA	20.95	6.70	14.25	NA	NA
S-17	7/23/1993	NA	NA	NA	NA	NA	NA	NA	20.95	7.53	13.42	NA	NA
S-17	10/27/1993	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	20.95	8.29	12.66	NA	NA
S-17	1/27/1994	NA	NA	NA	NA	NA	NA	NA	20.95	5.78	15.17	NA	NA
S-17	5/5/1994	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	20.45	6.99	13.46	NA	NA

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S-17	7/26/1994	NA	NA	NA	NA	NA	NA	NA	20.45	7.62	12.83	NA	NA
S-17	10/28/1994	<50	<0.3	<0.3	<0.3	<0.6	NA	NA	20.45	7.91	12.54	NA	NA
S-17	1/2/1995	NA	NA	NA	NA	NA	NA	NA	20.45	6.33	14.12	NA	NA
S-17	4/14/1995	NA	NA	NA	NA	NA	NA	NA	20.45	5.53	14.92	NA	NA
S-17	7/28/1995	NA	NA	NA	NA	NA	NA	NA	20.45	6.75	13.70	NA	NA
S-17	10/17/1995	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	20.45	7.15	13.30	NA	NA
S-17	1/11/1996	NA	NA	NA	NA	NA	NA	NA	20.45	6.37	14.08	NA	NA
S-17	4/2/1996	<50	<0.5	<0.5	<0.5	<0.5	<2	NA	20.45	5.31	15.14	NA	NA
S-17	7/9/1996	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NA	20.45	6.30	14.15	NA	NA
S-17	10/10/1996	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NA	20.45	7.80	12.65	NA	NA
S-17	1/9/1997	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NA	20.45	4.80	15.65	NA	NA
S-17	4/8/1997	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NA	20.45	6.83	13.62	NA	NA
S-17 (D)	4/8/1997	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NA	20.45	NA	NA	NA	NA
S-17	7/21/1997	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NA	20.45	6.78	13.67	NA	NA
S-17	10/8/1997	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NA	20.45	6.80	13.65	NA	NA
S-17	1/15/1998	380	<0.50	<0.50	<0.50	0.94	<2.5	NA	20.45	2.91	17.54	NA	NA
S-17	4/14/1998	160	<0.50	<0.50	<0.50	<0.50	<2.5	NA	20.45	4.47	15.98	NA	NA
S-17	7/14/1998	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NA	20.45	6.45	14.00	NA	NA
S-17	10/20/1998	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NA	20.45	7.11	13.34	NA	NA
S-17	1/22/1999	<50.0	<0.500	<0.500	<0.500	<0.500	<2.00	NA	20.45	6.01	14.44	NA	NA
S-17	4/8/1999	145	<0.500	<0.500	<0.500	<0.500	<5.00	NA	20.45	4.69	15.76	NA	NA
S-17	7/23/1999	<50.0	<0.500	<0.500	<0.500	<0.500	<5.00	NA	20.45	6.60	13.85	NA	NA
S-17	10/26/1999	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	NA	20.45	6.68	13.77	NA	NA
S-17	1/3/2000	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	NA	20.45	7.20	13.25	NA	NA
S-17	4/14/2000	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	NA	20.45	5.88	14.57	NA	NA
S-17	7/12/2000	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	NA	20.45	6.45	14.00	NA	NA
S-17	11/1/2000	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	NA	20.45	5.45	15.00	NA	NA

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Well ID	Date	TPPH (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE 8020 (ug/L)	MTBE 8260 (ug/L)	TOC (MSL)	Depth to Water (ft.)	GW Elevation (MSL)	SPH Thickness (ft.)	DO Reading (ppm)
S-17	1/3/2001	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	NA	20.45	7.22	13.23	NA	NA
S-17	4/24/2001	<50	<0.50	<0.50	<0.50	<0.50	NA	<0.50	20.45	6.10	14.35	NA	NA
S-17	7/2/2001	<50	<0.50	<0.50	<0.50	<0.50	NA	<5.0	20.45	6.95	13.50	NA	NA
S-17	11/2/2001	<50	<0.50	<0.50	<0.50	<0.50	NA	<5.0	20.45	7.50	12.95	NA	NA
S-17	1/16/2002	<50	<0.50	<0.50	<0.50	<0.50	NA	<5.0	20.45	5.76	14.69	NA	NA
S-17	4/1/2002	<50	<0.50	<0.50	<0.50	<0.50	NA	<5.0	20.45	6.02	14.43	NA	NA
S-17	7/11/2002	<50	<0.50	<0.50	<0.50	<0.50	NA	<5.0	20.45	6.97	13.48	NA	NA
S-17	10/28/2002	<50	<0.50	<0.50	<0.50	<0.50	NA	<0.50	20.44	7.60	12.84	NA	0.9
S-17	1/23/2003	<50	<0.50	<0.50	<0.50	<0.50	NA	<5.0	20.44	5.77	14.67	NA	NA
S-17	4/30/2003	<50	<0.50	<0.50	<0.50	<1.0	NA	<5.0	20.44	5.35	15.09	NA	NA
S-17	7/1/2003	<50	<0.50	<0.50	<0.50	<1.0	NA	<0.50	20.44	6.95	13.49	NA	1.1
S-17	10/8/2003	<50	<0.50	<0.50	<0.50	<1.0	NA	<0.50	20.44	7.01	13.43	NA	NA
S-17	1/22/2004	<50	<0.50	<0.50	<0.50	<1.0	NA	NA	20.44	6.57	13.87	NA	NA
S-17	7/13/2004	NA	NA	NA	NA	NA	NA	NA	20.36 f	7.71	12.65	NA	NA
S-17	1/20/2005	<50	<0.50	<0.50	<0.50	<1.0	NA	NA	20.36 f	5.09	15.27	NA	NA
S-17	7/19/2005	NA	NA	NA	NA	NA	NA	NA	20.36	6.30	14.06	NA	NA
S-17	1/27/2006	<50.0	<0.500	<0.500	<0.500	<0.500	NA	NA	20.36	5.50	14.86	NA	NA
S-17	7/25/2006	NA	NA	NA	NA	NA	NA	NA	20.36	6.84	13.52	NA	NA
S-17	1/4/2007	<50	<0.50	<0.50	<0.50	<1.0	NA	NA	20.36	6.15	14.21	NA	NA
S-17	7/24/2007	NA	NA	NA	NA	NA	NA	NA	20.36	6.92	13.44	NA	NA
S-17	**1/15/2008**	**<50 g**	**<0.50**	**<1.0**	**<1.0**	**<1.0**	**NA**	**NA**	**20.36**	**5.05**	**15.31**	**NA**	**NA**
S-18	5/31/1991	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	21.03	NA	NA	NA	NA
S-18	7/9/1991	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	21.03	8.23	12.80	NA	NA
S-18	10/8/1991	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	21.03	8.84	12.19	NA	NA
S-18	2/5/1992	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	21.03	7.67	13.36	NA	NA
S-18	4/28/1992	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	21.03	7.40	13.63	NA	NA

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Well ID	Date	TPPH (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE 8020 (ug/L)	MTBE 8260 (ug/L)	TOC (MSL)	Depth to Water (ft.)	GW Elevation (MSL)	SPH Thickness (ft.)	DO Reading (ppm)
S-18	7/27/1992	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	21.03	8.38	12.65	NA	NA
S-18	10/26/1992	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	21.03	8.83	12.20	NA	NA
S-18	1/13/1993	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	21.03	5.86	15.17	NA	NA
S-18	4/16/1993	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	21.03	4.88	16.15	NA	NA
S-18	7/23/1993	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	21.03	7.56	13.47	NA	NA
S-18	10/27/1993	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	21.03	8.30	12.73	NA	NA
S-18	1/27/1994	<50	1.9	<0.5	<0.5	<0.5	NA	NA	21.03	6.84	14.19	NA	NA
S-18	5/5/1994	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	20.57	7.05	13.52	NA	NA
S-18	7/26/1994	<500	<3	1.1	<0.3	1.8	NA	NA	20.57	7.62	12.95	NA	NA
S-18	10/28/1994	<50	<0.3	<0.3	<0.3	<0.6	NA	NA	20.57	8.01	12.56	NA	NA
S-18	1/2/1995	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	20.57	6.26	14.31	NA	NA
S-18	4/14/1995	NA	NA	NA	NA	NA	NA	NA	20.57	4.85	15.72	NA	NA
S-18	7/28/1995	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	20.57	5.80	14.77	NA	NA
S-18	10/17/1995	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	20.57	7.22	13.35	NA	NA
S-18	1/11/1996	<50	<0.5	<0.5	<0.5	<0.5	<2	NA	20.57	6.40	14.17	NA	NA
S-18	4/2/1996	NA	NA	NA	NA	NA	NA	NA	20.57	4.80	15.77	NA	NA
S-18	7/9/1996	NA	NA	NA	NA	NA	NA	NA	20.57	5.74	14.83	NA	NA
S-18	10/10/1996	NA	NA	NA	NA	NA	NA	NA	20.57	6.06	14.51	NA	NA
S-18	1/9/1997	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NA	20.57	4.70	15.87	NA	NA
S-18	4/8/1997	NA	NA	NA	NA	NA	NA	NA	20.57	6.62	13.95	NA	NA
S-18	7/21/1997	NA	NA	NA	NA	NA	NA	NA	20.57	6.94	13.63	NA	NA
S-18	10/8/1997	NA	NA	NA	NA	NA	NA	NA	20.57	6.88	13.69	NA	NA
S-18	1/15/1998	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NA	20.57	3.60	16.97	NA	NA
S-18	4/14/1998	NA	NA	NA	NA	NA	NA	NA	20.57	4.28	16.29	NA	NA
S-18	7/14/1998	NA	NA	NA	NA	NA	NA	NA	20.57	6.13	14.44	NA	NA
S-18	10/20/1998	NA	NA	NA	NA	NA	NA	NA	20.57	7.20	13.37	NA	NA
S-18	1/22/1999	<50.0	<0.500	<0.500	<0.500	<0.500	<2.00	NA	20.57	6.00	14.57	NA	NA

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Well ID	Date	TPPH (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE 8020 (ug/L)	MTBE 8260 (ug/L)	TOC (MSL)	Depth to Water (ft.)	GW Elevation (MSL)	SPH Thickness (ft.)	DO Reading (ppm)
S-18	4/8/1999	NA	NA	NA	NA	NA	NA	NA	20.57	4.95	15.62	NA	NA
S-18	7/23/1999	NA	NA	NA	NA	NA	NA	NA	20.57	6.03	14.54	NA	NA
S-18	10/26/1999	NA	NA	NA	NA	NA	NA	NA	20.57	7.39	13.18	NA	NA
S-18	1/3/2000	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	NA	20.57	7.54	13.03	NA	NA
S-18	4/14/2000	NA	NA	NA	NA	NA	NA	NA	20.57	4.41	16.16	NA	NA
S-18	7/12/2000	NA	NA	NA	NA	NA	NA	NA	20.57	5.31	15.26	NA	NA
S-18	11/1/2000	NA	NA	NA	NA	NA	NA	NA	20.57	6.42	14.15	NA	NA
S-18	1/3/2001	<50.0	<0.500	<0.500	<0.500	<0.500	3.67	NA	20.57	7.30	13.27	NA	NA
S-18	4/24/2001	NA	NA	NA	NA	NA	NA	NA	20.57	6.83	13.74	NA	NA
S-18	7/2/2001	NA	NA	NA	NA	NA	NA	NA	20.57	7.23	13.34	NA	NA
S-18	11/2/2001	Unable to locate		NA	NA	NA	NA	NA	20.57	NA	NA	NA	NA
S-18	1/16/2002	<50	<0.50	<0.50	<0.50	<0.50	NA	<5.0	20.57	6.15	14.42	NA	NA
S-18	4/1/2002	NA	NA	NA	NA	NA	NA	NA	20.57	6.06	14.51	NA	NA
S-18	7/11/2002	NA	NA	NA	NA	NA	NA	NA	20.57	6.98	13.59	NA	NA
S-18	10/28/2002	NA	NA	NA	NA	NA	NA	NA	20.63	7.66	12.97	NA	NA
S-18	1/23/2003	<50	<0.50	<0.50	<0.50	<0.50	NA	<5.0	20.63	6.18	14.45	NA	NA
S-18	4/30/2003	NA	NA	NA	NA	NA	NA	NA	20.63	5.32	15.31	NA	NA
S-18	7/1/2003	NA	NA	NA	NA	NA	NA	NA	20.63	7.20	13.43	NA	NA
S-18	10/8/2003	NA	NA	NA	NA	NA	NA	NA	20.63	7.48	13.15	NA	NA
S-18	1/22/2004	<50	<0.50	<0.50	<0.50	<1.0	NA	NA	20.63	6.74	13.89	NA	NA
S-18	7/13/2004	NA	NA	NA	NA	NA	NA	NA	20.63	7.87	12.76	NA	NA
S-18	1/20/2005	<50	<0.50	<0.50	<0.50	<1.0	NA	NA	20.63	5.33	15.30	NA	NA
S-18	7/19/2005	NA	NA	NA	NA	NA	NA	NA	20.63	6.55	14.08	NA	NA
S-18	1/27/2006	<50.0	<0.500	<0.500	<0.500	<0.500	NA	NA	20.63	5.89	14.74	NA	NA
S-18	7/25/2006	NA	NA	NA	NA	NA	NA	NA	20.63	7.10	13.53	NA	NA
S-18	1/4/2007	<50	<0.50	<0.50	<0.50	<1.0	NA	NA	20.63	6.60	14.03	NA	NA
S-18	7/24/2007	NA	NA	NA	NA	NA	NA	NA	20.63	7.13	13.50	NA	NA

TABLE 1
GROUNDWATER GUAGING ANALYTICAL DATA
Former Shell Service Station
15275 Washington Boulevard
San Leandro, CA

Well ID	Date	TPPH (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE 8020 (ug/L)	MTBE 8260 (ug/L)	TOC (MSL)	Depth to Water (ft.)	GW Elevation (MSL)	SPH Thickness (ft.)	DO Reading (ppm)
S-18	**1/15/2008**	**<50 g**	**<0.50**	**<1.0**	**<1.0**	**<1.0**	**NA**	**NA**	**20.63**	**5.25**	**15.38**	**NA**	**NA**
S-19	10/20/1998	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NA	20.11	6.41	13.70	NA	NA
S-19	1/22/1999	<50.0	<0.500	<0.500	<0.500	<0.500	90.6	NA	20.11	5.42	14.69	NA	NA
S-19	4/8/1999	<50.0	<0.500	<0.500	<0.500	<0.500	<5.00	NA	20.11	4.61	15.50	NA	NA
S-19	7/23/1999	<50.0	<0.500	<0.500	<0.500	<0.500	<5.00	NA	20.11	5.86	14.25	NA	NA
S-19	10/26/1999	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	NA	20.11	6.28	13.83	NA	NA
S-19	1/3/2000	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	NA	20.11	6.62	13.49	NA	NA
S-19	4/14/2000	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	NA	20.11	4.31	15.80	NA	NA
S-19	7/12/2000	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	NA	20.11	5.46	14.65	NA	NA
S-19	11/1/2000	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	NA	20.11	5.05	15.06	NA	NA
S-19	1/3/2001	<50.0	<0.500	<0.500	<0.500	<0.500	9.61	NA	20.11	6.00	14.11	NA	NA
S-19	4/24/2001	<50	<0.50	<0.50	<0.50	<0.50	NA	<0.50	20.11	5.58	14.53	NA	NA
S-19	7/2/2001	<50	<0.50	<0.50	<0.50	<0.50	NA	<5.0	20.11	6.34	13.77	NA	3.4
S-19	11/2/2001	<50	<0.50	<0.50	<0.50	<0.50	NA	<5.0	20.11	6.57	13.54	NA	3.4
S-19	1/16/2002	<50	<0.50	<0.50	<0.50	<0.50	NA	<5.0	20.11	5.05	15.06	NA	0.5
S-19	4/1/2002	<50	<0.50	<0.50	<0.50	<0.50	NA	<5.0	20.11	5.13	14.98	NA	3.3
S-19	7/11/2002	<50	<0.50	<0.50	<0.50	<0.50	NA	<5.0	20.11	5.50	14.61	NA	0.5
S-19	10/28/2002	<50	<0.50	<0.50	<0.50	<0.50	NA	<0.50	20.10	6.35	13.75	NA	0.6
S-19	1/23/2003	<50	<0.50	<0.50	<0.50	<0.50	NA	<5.0	20.10	5.15	14.95	NA	0.3
S-19	4/30/2003	<50	<0.50	<0.50	<0.50	<1.0	NA	<5.0	20.10	4.90	15.20	NA	0.5
S-19	7/1/2003	<50	<0.50	<0.50	<0.50	<1.0	NA	<0.50	20.10	5.50	14.60	NA	1.7
S-19	10/8/2003	58	<0.50	<0.50	<0.50	<1.0	NA	<0.50	20.10	6.63	13.47	NA	0.4
S-19	1/22/2004	<50	<0.50	<0.50	<0.50	<1.0	NA	NA	20.10	5.67	14.43	NA	0.6
S-19	7/13/2004	NA	NA	NA	NA	NA	NA	NA	20.10	6.82	13.28	NA	1.0
S-19	1/20/2005	<50	<0.50	<0.50	<0.50	<1.0	NA	NA	20.10	4.75	15.35	NA	0.6
S-19	7/19/2005	NA	NA	NA	NA	NA	NA	NA	20.10	5.15	14.95	NA	NA

TABLE 1
GROUNDWATER GUAGING ANALYTICAL DATA
Former Shell Service Station
15275 Washington Boulevard
San Leandro, CA

Well ID	Date	TPPH (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE 8020 (ug/L)	MTBE 8260 (ug/L)	TOC (MSL)	Depth to Water (ft.)	GW Elevation (MSL)	SPH Thickness (ft.)	DO Reading (ppm)
S-19	1/27/2006	<50.0	<0.500	<0.500	<0.500	<0.500	NA	NA	20.10	4.85	15.25	NA	NA
S-19	7/25/2006	NA	NA	NA	NA	NA	NA	NA	20.10	6.14	13.96	NA	NA
S-19	1/4/2007	<50	<0.50	<0.50	<0.50	<1.0	NA	NA	20.10	5.75	14.35	NA	NA
S-19	7/24/2007	NA	NA	NA	NA	NA	NA	NA	20.10	6.39	13.71	NA	NA
S-19	**1/15/2008**	**<50 g**	**<0.50**	**<1.0**	**<1.0**	**<1.0**	**NA**	**NA**	**20.10**	**4.72**	**15.38**	**NA**	**NA**
SR-1	3/22/1989	5400	1100	230	350	1300	NA	NA	21.45	NA	NA	NA	NA
SR-1	1/25/1990	2200	470	120	110	510	NA	NA	21.45	7.53	13.92	NA	NA
SR-1	4/18/1990	1000	130	47	47	220	NA	NA	21.45	8.17	13.28	NA	NA
SR-1	7/23/1990	3200	470	320	170	870	NA	NA	21.45	7.58	13.87	NA	NA
SR-1	10/18/1990	1300	280	6.6	110	130	NA	NA	21.45	8.81	12.64	NA	NA
SR-1	1/28/1991	110	120	12	51	110	NA	NA	21.45	8.37	13.08	NA	NA
SR-1	4/25/1991	NA	NA	NA	NA	NA	NA	NA	21.45	6.91	14.54	NA	NA
SR-1	7/9/1991	1400	200	27	130	340	NA	NA	21.45	8.11	13.34	NA	NA
SR-1	10/8/1991	980	79	1.5	44	52	NA	NA	21.45	8.63	12.82	NA	NA
SR-1	2/5/1991	3800	580	36	320	400	NA	NA	21.45	7.68	13.77	NA	NA
SR-1	4/28/1992	38000	1800	460	1900	750	NA	NA	21.45	7.27	14.18	NA	NA
SR-1	7/27/1992	NA	NA	NA	NA	NA	NA	NA	21.45	8.11	13.34	0.01	NA
SR-1	10/26/1992	1800	370	10	130	130	NA	NA	21.45	8.63	12.82	NA	NA
SR-1	1/13/1993	47000	1000	1100	1700	13000	NA	NA	21.45	5.46	15.99	NA	NA
SR-1	4/16/1993	25000	1700	430	2400	8300	NA	NA	21.45	6.28	15.17	NA	NA
SR-1	7/23/1993	33000	2400	2000	3800	14000	NA	NA	21.45	7.34	14.11	NA	NA
SR-1	10/27/1993	2300	340	<12.5	270	440	NA	NA	21.45	8.04	13.41	NA	NA
SR-1	1/27/1994	36000	2000	1700	3000	11000	NA	NA	21.45	6.68	14.77	NA	NA
SR-1	5/5/1994	43000	1500	130	2900	12000	NA	NA	20.57	6.81	13.76	NA	NA
SR-1	7/26/1994	13600	682.7	39.2	996.6	2516	NA	NA	20.57	7.38	13.19	NA	NA
SR-1	10/28/1994	8462	301.5	29.3	384.7	2019	NA	NA	20.57	7.48	13.09	NA	NA

TABLE 1
GROUNDWATER GUAGING ANALYTICAL DATA
Former Shell Service Station
15275 Washington Boulevard
San Leandro, CA

Well ID	Date	TPPH (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE 8020 (ug/L)	MTBE 8260 (ug/L)	TOC (MSL)	Depth to Water (ft.)	GW Elevation (MSL)	SPH Thickness (ft.)	DO Reading (ppm)
SR-1	1/2/1995	13000	400	120	2500	10000	NA	NA	20.57	6.34	14.23	NA	NA
SR-1	4/14/1995	43000	690	370	2500	12000	NA	NA	20.57	5.29	15.28	NA	NA
SR-1	7/28/1995	35000	760	120	2300	8100	NA	NA	20.57	6.36	14.21	NA	NA
SR-1	10/17/1995	9700	310	12	610	1200	NA	NA	20.57	6.62	13.95	NA	NA
SR-1 (D)	10/17/1995	8300	230	9.6	680	840	NA	NA	20.57	NA	NA	NA	NA
SR-1	1/11/1996	18000	410	170	1200	4400	42	NA	20.57	5.66	14.91	NA	NA
SR-1 (D)	1/11/1996	17000	420	180	1100	4000	42	NA	20.57	NA	NA	NA	NA
SR-1	4/2/1996	NA	NA	NA	NA	NA	NA	NA	20.57	5.14	15.43	NA	NA
SR-1	7/9/1996	Well inaccessible		NA	NA	NA	NA	NA	20.57	NA	NA	NA	NA
SR-1	10/10/1996	Well inaccessible		NA	NA	NA	NA	NA	20.57	NA	NA	NA	NA
SR-1	1/9/1997	Well inaccessible		NA	NA	NA	NA	NA	20.57	NA	NA	NA	NA
SR-1	4/8/1997	Well inaccessible		NA	NA	NA	NA	NA	20.57	NA	NA	NA	NA
SR-1	7/21/1997	Well inaccessible		NA	NA	NA	NA	NA	20.57	NA	NA	NA	NA
SR-1	10/8/1997	NA	NA	NA	NA	NA	NA	NA	20.57	6.94	13.63	NA	NA
SR-1	1/15/1998	8100	82	<25	36	2300	<125	NA	20.57	4.30	16.27	NA	NA
SR-1	4/14/1998	Well inaccessible		NA	NA	NA	NA	NA	20.57	NA	NA	NA	NA
SR-1	7/14/1998	NA	NA	NA	NA	NA	NA	NA	20.28	6.48	13.80	NA	NA
SR-1	10/20/1998	NA	NA	NA	NA	NA	NA	NA	20.28	6.61	13.67	NA	NA
SR-1	1/22/1999	Well inaccessible		NA	NA	NA	NA	NA	20.28	NA	NA	NA	NA
SR-1	4/8/1999	NA	NA	NA	NA	NA	NA	NA	20.28	0.97	19.31	NA	NA
SR-1	7/23/1999	Well dry	NA	NA	NA	NA	NA	NA	20.28	NA	NA	NA	NA
SR-1	10/26/1999	Well dry	NA	NA	NA	NA	NA	NA	20.28	NA	NA	NA	NA
SR-1	4/14/2000	Obstruction in well		NA	NA	NA	NA	NA	20.28	NA	NA	NA	NA
SR-1	7/12/2000	Obstruction in well		NA	NA	NA	NA	NA	20.28	NA	NA	NA	NA
SR-1	11/1/2000	Obstruction in well		NA	NA	NA	NA	NA	20.28	NA	NA	NA	NA
SR-1	1/3/2001	Obstruction in well		NA	NA	NA	NA	NA	20.28	NA	NA	NA	NA
SR-1	4/24/2001	Obstruction in well		NA	NA	NA	NA	NA	20.28	NA	NA	NA	NA

TABLE 1
GROUNDWATER GUAGING ANALYTICAL DATA
Former Shell Service Station
15275 Washington Boulevard
San Leandro, CA

Well ID	Date	TPPH (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE 8020 (ug/L)	MTBE 8260 (ug/L)	TOC (MSL)	Depth to Water (ft.)	GW Elevation (MSL)	SPH Thickness (ft.)	DO Reading (ppm)
SR-1	7/2/2001	Obstruction in well		NA	NA	NA	NA	NA	20.28	NA	NA	NA	NA
SR-1	11/2/2001	Well dry	NA	NA	NA	NA	NA	NA	20.28	NA	NA	NA	NA
SR-1	1/16/2002	Well dry	NA	NA	NA	NA	NA	NA	20.28	NA	NA	NA	NA
SR-1	4/1/2002	Obstruction in well		NA	NA	NA	NA	NA	20.28	NA	NA	NA	NA
SR-1	7/11/2002	Obstruction in well		NA	NA	NA	NA	NA	20.28	NA	NA	NA	NA
SR-1	10/28/2002	Obstruction in well		NA	NA	NA	NA	NA	20.27	NA	NA	NA	NA
SR-1	1/23/2003	Obstruction in well		NA	NA	NA	NA	NA	20.27	NA	NA	NA	NA
SR-1	4/30/2003	Obstruction in well		NA	NA	NA	NA	NA	20.27	NA	NA	NA	NA
SR-1	7/1/2003	Obstruction in well		NA	NA	NA	NA	NA	20.27	NA	NA	NA	NA
SR-1	10/8/2003	Well dry	NA	NA	NA	NA	NA	NA	20.27	NA	NA	NA	NA
SV-1	04/15/1998 b	NA	NA	NA	NA	NA	NA	NA	NA	6.02	NA	NA	NA
SV-1	04/15/1998 c	NA	NA	NA	NA	NA	NA	NA	NA	7.15	NA	NA	NA
SV-1	03/18/2002 d	NA	NA	NA	NA	NA	NA	NA	21.31	NA	NA	NA	NA
SV-1	1/22/2004	3000	15	<2.5	34	11	NA	<2.5	21.31	6.67	14.64	NA	NA

Abbreviations:

TPPH = Total petroleum hydrocarbons as gasoline by EPA Method 8260B; prior to April 24, 2001, analyzed by EPA Method 8015.

BTEX = Benzene, toluene, ethylbenzene, xylenes by EPA Method 8260B; prior to April 24, 2001, analyzed by EPA Method 8020.

MTBE = Methyl tertiary butyl ether

TOC = Top of Casing Elevation

SPH = Separate-Phase Hydrocarbons

GW = Groundwater

DO = Dissolved Oxygen

ug/L = Parts per billion

MSL = Mean sea level

ppm = Parts per million

ft. = Feet

TABLE 1
GROUNDWATER GUAGING ANALYTICAL DATA
Former Shell Service Station
15275 Washington Boulevard
San Leandro, CA

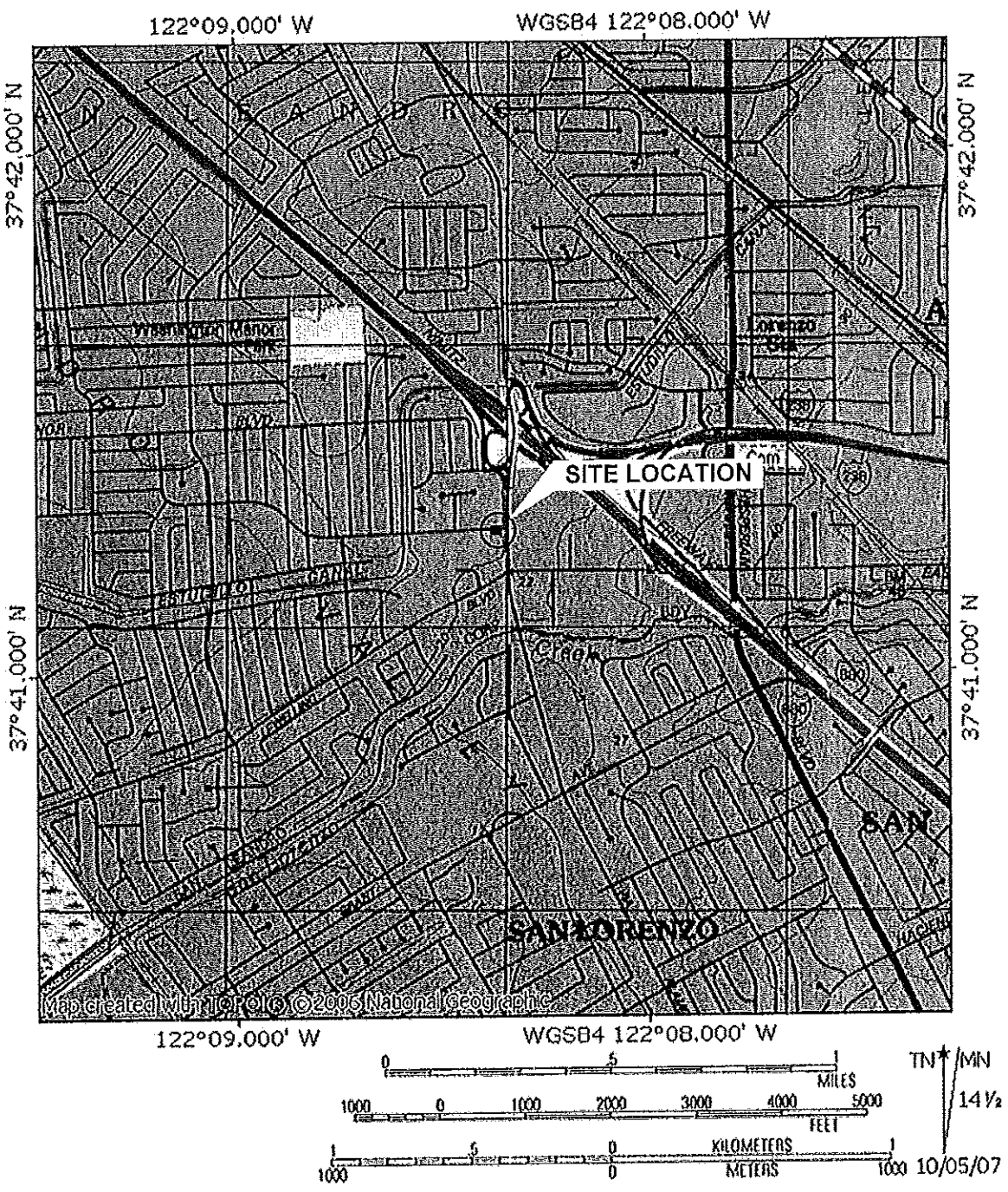
Well ID	Date	TPPH (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE 8020 (ug/L)	MTBE 8260 (ug/L)	TOC (MSL)	Depth to Water (ft.)	GW Elevation (MSL)	SPH Thickness (ft.)	DO Reading (ppm)

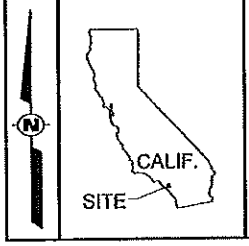
<n = Below detection limit
(D) = Duplicate sample
NA = Not applicable

Notes:
a = Chromatogram pattern indicated an unidentified hydrocarbon.
b = Pre-development sample
c = Post-development sample
d = Survey date only.
e = DO reading not taken.
f = TOC lowered 0.08 feet due to wellhead maintenance on June 3, 2004.
g = Analyzed by EPA Method 8015B (M).
h = The sample chromatographic pattern for TPH does not match the chromatographic pattern of the specified standard. Quantitation of the unknown hydrocarbon(s) in the sample was based upon the specified standard.
I = Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated.
Site surveyed March 18, 2002 by Virgil Chavez Land Surveying of Vallejo, CA.

FIGURES

DRAWN BY	CHECKED BY	APPROVED BY	DRAWING NUMBER
J.F.F.			SCA152751



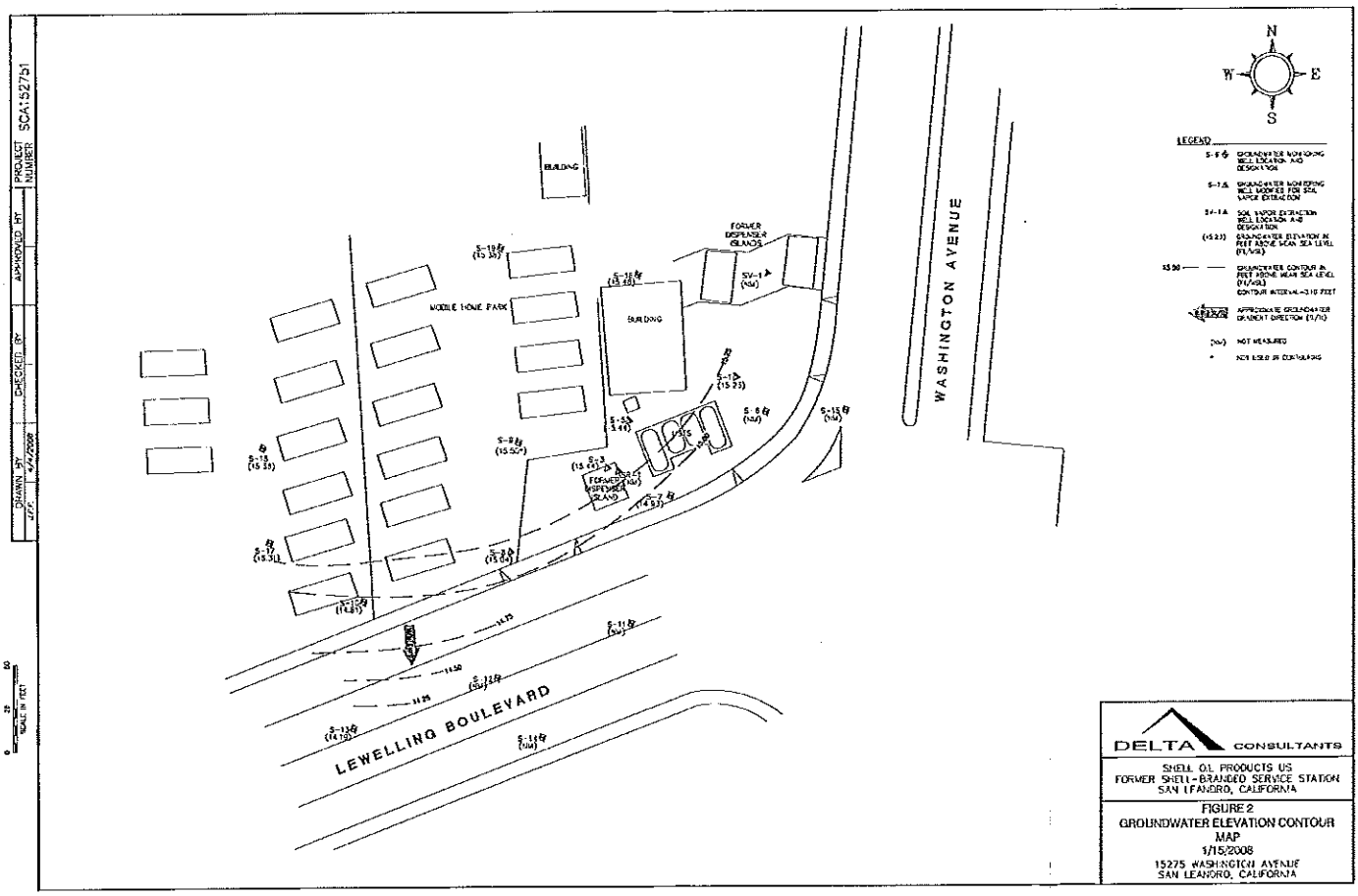


DELTA CONSULTANTS

SHELL OIL PRODUCTS US
SHELL SERVICE STATION
SAN LEANDRO, CALIFORNIA

FIGURE 1
SITE LOCATION MAP

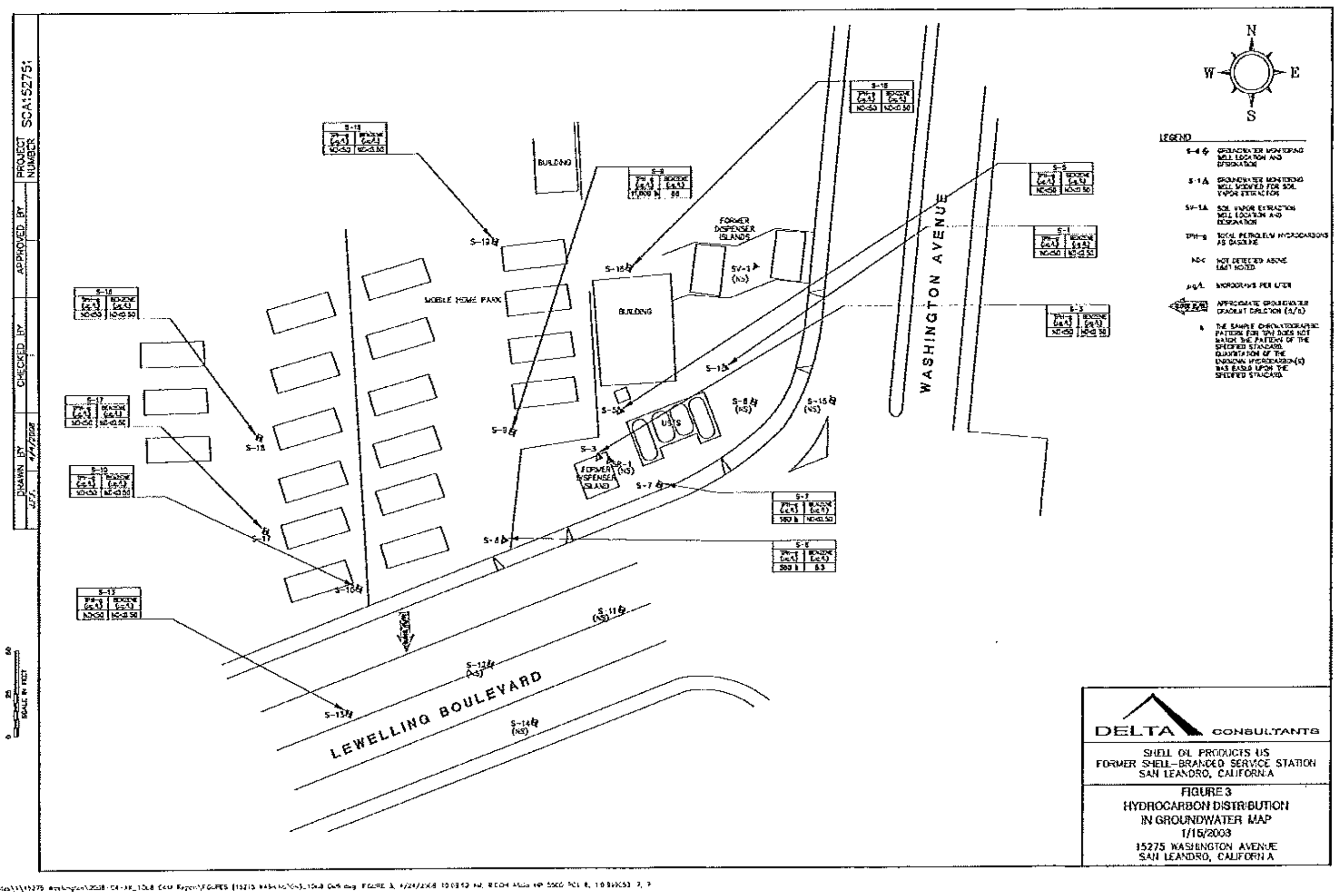
15275 WASHINGTON AVENUE
SAN LEANDRO, CALIFORNIA



DELTA CONSULTANTS

SHELL OIL PRODUCTS US
FORMER SHELL-BRANDED SERVICE STATION
SAN LEANDRO, CALIFORNIA

FIGURE 2
GROUNDWATER ELEVATION CONTOUR MAP
1/15/2008
15275 WASHINGTON AVENUE
SAN LEANDRO, CALIFORNIA



PROJECT NUMBER SCA152751
DRAWN BY
CHECKED BY
APPROVED BY
N
S
E
W
LEGEND
WASHINGTON AVENUE
LEWELLING BOULEVARD
MOBILE HOME PARK
BUILDING
FORMER DISPENSER ISLANDS
FORMER DISPENSER ISLAND
USTs
S-7
S-8
S-10
S-11
S-12
S-13
S-14
S-15
S-16
S-17
S-18
S-19
SV-1
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SHELL OIL PRODUCTS US
FORMER SHELL-BRANDED SERVICE STATION
SAN LEANDRO, CALIFORNIA
FIGURE 3
HYDROCARBON DISTRIBUTION
IN GROUNDWATER MAP
1/15/2003
15275 WASHINGTON AVENUE
SAN LEANDRO, CALIFORNIA

APPENDIX A

FIELD DATA SHEETS

SHELL WELLHEAD INSPECTION FORM

(FOR SAMPLE TECHNICIAN)

Site Address 15275 Washington Ave, San Leandro Date 1/15/08

Job Number 080115-KF2 Technician KF Page 1 of 1

Well ID	Well Inspected - No Corrective Action Required	Well Box Meets Compliance Requirements *See Below	Water Bailed From Wellbox	Cap Replaced	Lock Replaced	Well Not Inspected (explain in notes)	New Deficiency Identified	Previously Identified Deficiency Persists	Notes
S-1	X	X							
S-3									3/4 bolts stripped
S-5								X	1/4 bolts missing
S-7	X	X							
S-8									4/4 bolts missing
S-9	X	X							
S-10	X	X							
S-13	X								christie box
S-16	X	X							
S-17	X	X							
S-18		~~X~~ broken cap							broken cap (still securable)
~~S-19~~	~~X~~								~~christy box~~
S-19		X	X						

*Well box must meet all three criteria to be compliant: 1) WELL IS SECURABLE BY DESIGN (12"or less) 2) WELL IS MARKED WITH THE WORDS "MONITORING WELL" (12"or less) 3) WELL TAG IS PRESENT, SECURE, AND CORRECT

Notes:

WELL GAUGING DATA

Project # 080115-1CF-2 Date 1/15/08 Client Shell

Site 15275 Washington Ave, San Leandro

Well ID	Time	Well Size (in.)	Sheen / Odor	Depth to Immiscible Liquid (ft.)	Thickness of Immiscible Liquid (ft.)	Volume of Immiscibles Removed (ml)	Depth to water (ft.)	Depth to well bottom (ft.)	Survey Point: TOB or (TOC)	Notes
S-1	1432	3					6.10	19.71		
S-3	1512	2					5.41	20.97		
S-5	1354	4					5.83	17.96		
S-7	1442	3					6.08	23.79		
S-8	1453	3					5.32	23.87		
S-9	1501	3					5.20	17.55		
S-10	1320	3					5.33	17.73		
S-13	1230	3					6.00	23.20		
S-16	1414	3					5.82	23.31		
S-17	1145	3					5.05	23.72		
S-18	1121	3					5.25	17.61		
~~S-19~~	~~1230~~	~~3~~					~~6.00~~	~~23.20~~	↓	
S-19	1303	3					4.72	20.12		

SHELL WELL MONITORING DATA SHEET

BTS #: 080115-KF2	Site: 97093412
Sampler: KR, KF	Date: 1/15/08
Well I.D.: S-1	Well Diameter: 2 ~~3~~ ~~4~~ 6 8 ___
Total Well Depth (TD): 19.71	Depth to Water (DTW): 6.10
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: (PVC) Grade	D.O. Meter (if req'd): YSI HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]:	

Purge Method: Bailer; Disposable Bailer; Positive Air Displacement; Electric Submersible; Waterra; Peristaltic; Extraction Pump; Other_____

Sampling Method: X Bailer; Disposable Bailer; Extraction Port; Dedicated Tubing; Other: _____

_____(Gals.) X _____ = _____ Gals.
1 Case Volume | Specified Volumes | Calculated Volume

Well Diameter	Multiplier	Well Diameter	Multiplier
1"	0.04	4"	0.65
2"	0.16	6"	1.47
3"	0.37	Other	radius² * 0.163

Time	Temp (°F)	pH	Cond. (mS or (uS))	Turbidity (NTUs)	Gals. Removed	Observations
1435	61.3	7.93	280.5	145	—	Clear

Did well dewater? Yes No Gallons actually evacuated: —

Sampling Date: 1/15/08 Sampling Time: 1435 Depth to Water: —

Sample I.D.: S-1 Laboratory: STL Other CalScience

Analyzed for: TPH-G BTEX MTBE TPH-D Other: See COC

EB I.D. (if applicable): @ Time Duplicate I.D. (if applicable):

Analyzed for: TPH-G BTEX MTBE TPH-D Other:

D.O. (if req'd):	Pre-purge:	mg/L	Post-purge:	mg/L
O.R.P. (if req'd):	Pre-purge:	mV	Post-purge:	mV

SHELL WELL MONITORING DATA SHEET

BTS #: 080115-KF2	Site: 97093412
Sampler: KF KR	Date: 1/15/08
Well I.D.: S-3	Well Diameter: (2) 3 4 6 8 ___
Total Well Depth (TD): 20.97	Depth to Water (DTW): 5.41
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: (PVC) Grade	D.O. Meter (if req'd): YSI HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]:	

Purge Method: Bailer / Disposable Bailer / Positive Air Displacement / Electric Submersible / Waterra / Peristaltic / Extraction Pump / Other ____

Sampling Method: X Bailer / Disposable Bailer / Extraction Port / Dedicated Tubing / Other: ____

____ (Gals.) X ____ = ____ Gals.
1 Case Volume | Specified Volumes | Calculated Volume

Well Diameter	Multiplier	Well Diameter	Multiplier
1"	0.04	4"	0.65
2"	0.16	6"	1.47
3"	0.37	Other	radius² * 0.163

Time	Temp (°F)	pH	Cond. (mS or µS)	Turbidity (NTUs)	Gals. Removed	Observations
1516	60.0	~~60.8~~ 7.26	1037	24.1	—	clear

Did well dewater? Yes No Gallons actually evacuated: —

Sampling Date: 1/15/08 Sampling Time: 1516 Depth to Water: —

Sample I.D.: S-3 Laboratory: STL Other Cal Science

Analyzed for: TPH-G BTEX MTBE TPH-D Other: see COC

EB I.D. (if applicable): @ Time Duplicate I.D. (if applicable):

Analyzed for: TPH-G BTEX MTBE TPH-D Other:

D.O. (if req'd):	Pre-purge:	mg/L	Post-purge:	mg/L
O.R.P. (if req'd):	Pre-purge:	mV	Post-purge:	mV

SHELL WELL MONITORING DATA SHEET

BTS #: 080115-KF2	Site: 97093412
Sampler: KF	Date: 1/15/08
Well I.D.: S-5	Well Diameter: 2 3 4 6 8 ___
Total Well Depth (TD): 17.96	Depth to Water (DTW): 5.83
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: PVC Grade	D.O. Meter (if req'd): YSI HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]:	

Purge Method: ~~Bailer~~ Disposable Bailer / Positive Air Displacement / Electric Submersible / Waterra / Peristaltic / Extraction Pump / Other ___

Sampling Method: X Bailer / Disposable Bailer / Extraction Port / Dedicated Tubing / Other: ___

~~(Gals.) X~~ = Gals.
1 Case Volume | Specified Volumes | Calculated Volume

Well Diameter	Multiplier	Well Diameter	Multiplier
1"	0.04	4"	0.65
2"	0.16	6"	1.47
3"	0.37	Other	radius² * 0.163

Time	Temp (°F)	pH	Cond. (mS or µS)	Turbidity (NTUs)	Gals. Removed	Observations
1358	62.9	7.41	964	154	—	clear w/sediment

Did well dewater? Yes No Gallons actually evacuated: —

Sampling Date: 1/15/08 Sampling Time: 1358 Depth to Water: —

Sample I.D.: S-5 Laboratory: STL Other CalScience

Analyzed for: TPH-G BTEX MTBE TPH-D Other: See COC

EB I.D. (if applicable): @ Time Duplicate I.D. (if applicable):

Analyzed for: TPH-G BTEX MTBE TPH-D Other:

D.O. (if req'd):	Pre-purge:	mg/L	Post-purge:	mg/L
O.R.P. (if req'd):	Pre-purge:	mV	Post-purge:	mV

SHELL WELL MONITORING DATA SHEET

BTS #: 080115-KF2	Site: 97093412
Sampler: KF, KR	Date: 1/15/08
Well I.D.: S-7	Well Diameter: 2 (3) 4 6 8 ___
Total Well Depth (TD): 23.99	Depth to Water (DTW): 6.08
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: (PVC) Grade	D.O. Meter (if req'd): YSI HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]:	

Purge Method: Bailer / Disposable Bailer / Positive Air Displacement / Electric Submersible / Waterra / Peristaltic / Extraction Pump / Other ____

Sampling Method: X Bailer / Disposable Bailer / Extraction Port / Dedicated Tubing / Other: ____

____ (Gals.) X ____ = ____ Gals.
1 Case Volume / Specified Volumes / Calculated Volume

Well Diameter	Multiplier	Well Diameter	Multiplier
1"	0.04	4"	0.65
2"	0.16	6"	1.47
3"	0.37	Other	radius² * 0.163

Time	Temp (°F)	pH	Cond. (mS or (µS))	Turbidity (NTUs)	Gals. Removed	Observations
1445	59.3	7.39	1119	173		

Did well dewater? Yes No Gallons actually evacuated: ____

Sampling Date: 1/15/08 Sampling Time: 1445 Depth to Water: ____

Sample I.D.: S-7 Laboratory: STL Other CalScience

Analyzed for: TPH-G BTEX MTBE TPH-D Other: See COC

EB I.D. (if applicable): @ Time Duplicate I.D. (if applicable):

Analyzed for: TPH-G BTEX MTBE TPH-D Other:

D.O. (if req'd):	Pre-purge:	mg/L	Post-purge:	mg/L
O.R.P. (if req'd):	Pre-purge:	mV	Post-purge:	mV

SHELL WELL MONITORING DATA SHEET

BTS #: 080115-KF2	Site: 97093412
Sampler: KF, KR	Date: 1/15/08
Well I.D.: S-8	Well Diameter: 2 (3) 4 6 8 ___
Total Well Depth (TD): 23.87	Depth to Water (DTW): 5.32
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: (PVC) Grade	D.O. Meter (if req'd): YSI HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]:	

Purge Method: Bailer; Disposable Bailer; Positive Air Displacement; Electric Submersible; ~~Waterra~~; Peristaltic; Extraction Pump; Other_____

Sampling Method: X Bailer; Disposable Bailer; Extraction Port; Dedicated Tubing; Other: _____

_____(Gals.) X _____ = _____ Gals.
1 Case Volume | Specified Volumes | Calculated Volume

Well Diameter	Multiplier	Well Diameter	Multiplier
1"	0.04	4"	0.65
2"	0.16	6"	1.47
3"	0.37	Other	radius² * 0.163

Time	Temp (°F)	pH	Cond. (mS or (µS))	Turbidity (NTUs)	Gals. Removed	Observations
1455	61.8	7.42	865.7	34	—	clear

Did well dewater? Yes No Gallons actually evacuated: —

Sampling Date: 1/15/08 Sampling Time: 1455 Depth to Water: —

Sample I.D.: S-8 Laboratory: STL Other CalScience

Analyzed for: TPH-G BTEX MTBE TPH-D Other: SEE COC

EB I.D. (if applicable): @ Time Duplicate I.D. (if applicable):

Analyzed for: TPH-G BTEX MTBE TPH-D Other:

D.O. (if req'd):	Pre-purge:	mg/L	Post-purge:	mg/L
O.R.P. (if req'd):	Pre-purge:	mV	Post-purge:	mV

SHELL WELL MONITORING DATA SHEET

BTS #: 080115-KF2	Site: 97093412
Sampler: KF, KR	Date: 1/15/08
Well I.D.: S-9	Well Diameter: 2 (3) 4 6 8 ___
Total Well Depth (TD): 17.55	Depth to Water (DTW): 5.20
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: (PVC) Grade	D.O. Meter (if req'd): YSI HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]:	

Purge Method: Bailer; Disposable Bailer; Positive Air Displacement; Electric Submersible; Waterra; Peristaltic; Extraction Pump; Other_____

Sampling Method: X Bailer; Disposable Bailer; Extraction Port; Dedicated Tubing; Other: _____

_____(Gals.) X _____ = _____Gals.
1 Case Volume | Specified Volumes | Calculated Volume

Well Diameter	Multiplier	Well Diameter	Multiplier
1"	0.04	4"	0.65
2"	0.16	6"	1.47
3"	0.37	Other	radius² * 0.163

Time	Temp (°F)	pH	Cond. (mS or (µS))	Turbidity (NTUs)	Gals. Removed	Observations
1505	63.2	7.32	925	8.4	—	clear

Did well dewater? Yes No Gallons actually evacuated: —

Sampling Date: 1/15/08 Sampling Time: 1505 Depth to Water: —

Sample I.D.: S-9 Laboratory: STL Other Cal Scientific

Analyzed for: TPH-G BTEX MTBE TPH-D Other: See COC

EB I.D. (if applicable): @ Time Duplicate I.D. (if applicable):

Analyzed for: TPH-G BTEX MTBE TPH-D Other:

D.O. (if req'd):	Pre-purge:	mg/L	Post-purge:	mg/L
O.R.P. (if req'd):	Pre-purge:	mV	Post-purge:	mV

SHELL WELL MONITORING DATA SHEET

BTS #: 080115-KF2	Site: 97093412
Sampler: KF	Date: 1/15/08
Well I.D.: S-10	Well Diameter: 2 (3) 4 6 8 ___
Total Well Depth (TD): 17.73	Depth to Water (DTW): 5.33
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: (PVC) Grade	D.O. Meter (if req'd): YSI HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]:	

Purge Method: Bailer; ~~Disposable Bailer~~; ~~Positive Air Displacement~~; ~~Electric Submersible~~; Waterra; Peristaltic; Extraction Pump; Other ___

Sampling Method: Bailer; X Disposable Bailer; Extraction Port; Dedicated Tubing; Other: ___

~~(Gals.) X~~ ___ = ___ Gals.
1 Case Volume | Specified Volumes | Calculated Volume

Well Diameter	Multiplier	Well Diameter	Multiplier
1"	0.04	4"	0.65
2"	0.16	6"	1.47
3"	0.37	Other	radius² * 0.163

Time	Temp (°F)	pH	Cond. (mS or ~~µS~~)	Turbidity (NTUs)	Gals. Removed	Observations
1330	61.9	7.72	817	196	—	clear w/ debris

Did well dewater? Yes No Gallons actually evacuated: —

Sampling Date: 1/15/08 Sampling Time: 1330 Depth to Water: —

Sample I.D.: S-10 Laboratory: STL Other CalScience

Analyzed for: TPH-G BTEX MTBE TPH-D Other: See COC

EB I.D. (if applicable): @ Time Duplicate I.D. (if applicable):

Analyzed for: TPH-G BTEX MTBE TPH-D Other:

D.O. (if req'd):	Pre-purge:	mg/L	Post-purge:	mg/L
O.R.P. (if req'd):	Pre-purge:	mV	Post-purge:	mV

SHELL WELL MONITORING DATA SHEET

BTS #: 080115-KF2	Site: 97093412
Sampler: KF	Date: 1/15/08
Well I.D.: S-13	Well Diameter: 2 (3) 4 6 8 ___
Total Well Depth (TD): 23.20	Depth to Water (DTW): 6.50
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: (PVC) Grade	D.O. Meter (if req'd): YSI HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]:	

Purge Method: ~~Bailer~~ / ~~Disposable Bailer~~ / ~~Positive Air Displacement~~ / ~~Electric Submersible~~ / Waterra / Peristaltic / Extraction Pump / Other_____

Sampling Method: X Bailer / Disposable Bailer / Extraction Port / Dedicated Tubing / Other: _____

_____ (Gals.) X _____ = _____ Gals.
1 Case Volume | Specified Volumes | Calculated Volume

Well Diameter	Multiplier	Well Diameter	Multiplier
1"	0.04	4"	0.65
2"	0.16	6"	1.47
3"	0.37	Other	radius² * 0.163

Time	Temp (°F)	pH	Cond. (mS or ~~µS~~)	Turbidity (NTUs)	Gals. Removed	Observations
1235	61.6	7.68	917	4.2	—	clear

Did well dewater? Yes No Gallons actually evacuated: —

Sampling Date: 1/15/08 Sampling Time: 1235 Depth to Water: —

Sample I.D.: S-13 Laboratory: STL Other Calscience

Analyzed for: TPH-G BTEX MTBE TPH-D Other: See COC

EB I.D. (if applicable): @ Time Duplicate I.D. (if applicable):

Analyzed for: TPH-G BTEX MTBE TPH-D Other:

D.O. (if req'd):	Pre-purge:	mg/L	Post-purge:	mg/L
O.R.P. (if req'd):	Pre-purge:	mV	Post-purge:	mV

SHELL WELL MONITORING DATA SHEET

BTS #: 080115-KF2	Site: 97093412
Sampler: KF	Date: 1/15/08
Well I.D.: S-16	Well Diameter: 2 (3) 4 6 8 ___
Total Well Depth (TD): 23.31	Depth to Water (DTW): 5.82
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: (PVC) Grade	D.O. Meter (if req'd): YSI HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]:	

Purge Method: Bailer / Disposable Bailer / Positive Air Displacement / Electric Submersible / ~~Waterra~~ / Peristaltic / Extraction Pump / Other

Sampling Method: ~~Bailer~~ / Disposable Bailer / Extraction Port / Dedicated Tubing / Other:

Well Diameter	Multiplier	Well Diameter	Multiplier
1"	0.04	4"	0.65
2"	0.16	6"	1.47
3"	0.37	Other	radius² * 0.163

(Gals.) X = Gals.
1 Case Volume | Specified Volumes | Calculated Volume

Time	Temp (°F)	pH	Cond. (mS or (uS))	Turbidity (NTUs)	Gals. Removed	Observations
1420	53.8	7.45	(1257)	56.2	—	clear

Did well dewater? Yes No Gallons actually evacuated: —

Sampling Date: 1/15/08 Sampling Time: 1420 Depth to Water: —

Sample I.D.: S-16 Laboratory: STL Other CalScience

Analyzed for: TPH-G BTEX MTBE TPH-D Other: see COC

EB I.D. (if applicable): @ Time Duplicate I.D. (if applicable):

Analyzed for: TPH-G BTEX MTBE TPH-D Other:

D.O. (if req'd):	Pre-purge:	mg/L	Post-purge:	mg/L
O.R.P. (if req'd):	Pre-purge:	mV	Post-purge:	mV

SHELL WELL MONITORING DATA SHEET

BTS #: 080115-KF2	Site: 97093412
Sampler: KF	Date: 1/15/08
Well I.D.: S-17	Well Diameter: 2 (3) 4 6 8 ___
Total Well Depth (TD): 23.72	Depth to Water (DTW): 5.05
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: (PVC) Grade	D.O. Meter (if req'd): YSI HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: ___	

Purge Method: Bailer, Disposable Bailer, Positive Air Displacement, Electric Submersible, ~~Waterra~~, Peristaltic, Extraction Pump, Other ___

Sampling Method: X Bailer, Disposable Bailer, Extraction Port, Dedicated Tubing, Other: ___

___ (Gals.) X ___ = ___ Gals.
1 Case Volume — Specified Volumes — Calculated Volume

Well Diameter	Multiplier	Well Diameter	Multiplier
1"	0.04	4"	0.65
2"	0.16	6"	1.47
3"	0.37	Other	radius² * 0.163

Time	Temp (°F)	pH	Cond. (mS or (µS))	Turbidity (NTUs)	Gals. Removed	Observations
1150	61.6	7.57	958	17.6	—	clear

Did well dewater? Yes No — Gallons actually evacuated: —

Sampling Date: 1/15/08 Sampling Time: 1150 Depth to Water: —

Sample I.D.: S-17 Laboratory: STL Other CalScience

Analyzed for: TPH-G BTEX MTBE TPH-D Other: See COC

EB I.D. (if applicable): @ Time — Duplicate I.D. (if applicable):

Analyzed for: TPH-G BTEX MTBE TPH-D Other:

D.O. (if req'd):	Pre-purge:	mg/L	Post-purge:	mg/L
O.R.P. (if req'd):	Pre-purge:	mV	Post-purge:	mV

SHELL WELL MONITORING DATA SHEET

BTS #: 080115-KF2	Site: 97093412
Sampler: KF	Date: 1/15/08
Well I.D.: S-18	Well Diameter: 2 (3) 4 6 8 ___
Total Well Depth (TD): 17.61	Depth to Water (DTW): 5.25
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: (PVC) Grade	D.O. Meter (if req'd): YSI HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]:	

Purge Method: Bailer / Disposable Bailer / Positive Air Displacement / Electric Submersible / Waterra / Peristaltic / Extraction Pump / Other_____

Sampling Method: Bailer / X Disposable Bailer / Extraction Port / Dedicated Tubing / Other: _____

_____(Gals.) X _____ = _____ Gals.
1 Case Volume Specified Volumes Calculated Volume

Well Diameter	Multiplier	Well Diameter	Multiplier
1"	0.04	4"	0.65
2"	0.16	6"	1.47
3"	0.37	Other	radius² * 0.163

Time	Temp (°F)	pH	Cond. (mS or (µS))	Turbidity (NTUs)	Gals. Removed	Observations
1130	62.1	7.83	1598	9.8	—	clear

Did well dewater? Yes No Gallons actually evacuated: —

Sampling Date: 1/15/08 Sampling Time: 1130 Depth to Water: —

Sample I.D.: S-18 Laboratory: STL Other CalScience

Analyzed for: TPH-G BTEX MTBE TPH-D Other: See COC

EB I.D. (if applicable): @ Time Duplicate I.D. (if applicable):

Analyzed for: TPH-G BTEX MTBE TPH-D Other:

D.O. (if req'd):	Pre-purge:		mg/L	Post-purge:	mg/L
O.R.P. (if req'd):	Pre-purge:		mV	Post-purge:	mV

SHELL WELL MONITORING DATA SHEET

BTS #: 080115-KF2	Site: 97093412
Sampler: KF	Date: 1/15/08
Well I.D.: S-19	Well Diameter: 2 3 4 6 8 ___
Total Well Depth (TD): 20.12	Depth to Water (DTW): 4.72
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: PVC Grade	D.O. Meter (if req'd): YSI HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: —	

Purge Method: Bailer, Disposable Bailer, Positive Air Displacement, Electric Submersible, Waterra, Peristaltic, Extraction Pump, Other ___

Sampling Method: X Bailer, Disposable Bailer, Extraction Port, Dedicated Tubing, Other: ___

___ (Gals.) X ___ = ___ Gals.
1 Case Volume | Specified Volumes | Calculated Volume

Well Diameter	Multiplier	Well Diameter	Multiplier
1"	0.04	4"	0.65
2"	0.16	6"	1.47
3"	0.37	Other	radius² * 0.163

Time	Temp (°F)	pH	Cond. (mS or µS)	Turbidity (NTUs)	Gals. Removed	Observations
1308	62.7	7.62	1234	790	—	Cloudy

Did well dewater? Yes No Gallons actually evacuated: —

Sampling Date: 1/15/08 Sampling Time: 1308 Depth to Water: —

Sample I.D.: S-19 Laboratory: STL Other CalScience

Analyzed for: TPH-G BTEX MTBE TPH-D Other: See COC

EB I.D. (if applicable): @ Time Duplicate I.D. (if applicable):

Analyzed for: TPH-G BTEX MTBE TPH-D Other:

D.O. (if req'd):	Pre-purge:	mg/L	Post-purge:	mg/L
O.R.P. (if req'd):	Pre-purge:	mV	Post-purge:	mV

APPENDIX B

FIELD PROCEDURES

BLAINE
TECH SERVICES INC.

GROUNDWATER SAMPLING SPECIALISTS
SINCE 1985

February 6, 2008

Denis Brown
Shell Oil Products US
20945 South Wilmington Avenue
Carson, CA 90810

First Quarter 2008 Groundwater Monitoring at
Former Shell Service Station
15275 Washington Boulevard
San Leandro, CA

Monitoring performed on January 15, 2008

Groundwater Monitoring Report **080115-KF-2**

This report covers the routine monitoring of groundwater wells at this former Shell facility. In accordance with standard procedures that conform to Regional Water Quality Control Board requirements, routine field data collection includes depth to water, total well depth, thickness of any separate immiscible layer, water column volume, calculated purge volume (if applicable), elapsed evacuation time (if applicable), total volume of water removed (if applicable), and standard water parameter instrument readings. Sample material is collected, contained, stored, and transported to the laboratory in conformance with EPA standards. Purgewater (if applicable) is, likewise, collected and transported to the Martinez Refining Company.

Basic field information is presented alongside analytical values excerpted from the laboratory report in the cumulative table of **WELL CONCENTRATIONS**. The full analytical report for the most recent samples and the field data sheets are attached to this report.

At a minimum, Blaine Tech Services, Inc. field personnel are certified on completion of a forty-hour Hazardous Materials and Emergency Response training course per 29 CFR 1910.120. Field personnel are also enrolled in annual eight-hour refresher courses.

Blaine Tech Services, Inc. conducts sampling and documentation assignments of this type as an independent third party. Our activities at this site consisted of objective data and sample collection only. No interpretation of analytical results, defining of hydrological conditions or formulation of recommendations was performed.

Please call if you have any questions.

Yours truly,

Mike Ninokata
Project Manager

MN/ss

attachments: Cumulative Table of WELL CONCENTRATIONS
Certified Analytical Report
Field Data Sheets

cc: Joe Rounds
Delta Environmental
175 Bernal Rd., Suite 200
San Jose, CA 95119

BLAINE TECH SERVICES, INC.
METHODS AND PROCEDURES
FOR THE ROUTINE MONITORING OF
GROUNDWATER WELLS AT SHELL SITES

Blaine Tech Services, Inc. performs environmental sampling and documentation as an independent third party. We specialize in groundwater monitoring assignments and intentionally limit the scope of our services to those centered on the generation of objective information.

To avoid conflicts of interest, Blaine Tech Services, Inc. personnel do not evaluate or interpret the information we collect. As a state licensed contractor (C-57 well drilling –water – 746684) performing strictly technical services, we do not make any professional recommendations and perform no consulting of any kind.

SAMPLING PROCEDURES OVERVIEW

SAFETY

All groundwater monitoring assignments performed for Shell comply with Shell's safety guidelines, 29 CFR 1910.120 and SB-198 Injury and Illness Prevention Program (IIPP). All Field Technicians receive the full 40-hour 29CFR 1910.120 OSHA SARA HAZWOPER course, medical clearance and on-the-job training prior to commencing any work on any Shell site.

INSPECTION AND GAUGING

Wells are inspected prior to evacuation and sampling. The condition of the wellhead is checked and noted according to a wellhead inspection checklist.

Standard measurements include the depth to water (DTW) and the total well depth (TD) obtained with industry standard electronic water level indicators that are graduated in increments of hundredths of a foot.

The water in each well is inspected for the presence of immiscibles. When free product is suspected, its presence is confirmed using an electronic interface probe (e.g. MMC). No samples are collected from a well containing over two-hundredths of a foot (0.02') of product.

EVACUATION

Depth to water measurements are collected by our personnel prior to purging and minimum purge volumes are calculated anew for each well based on the height of the water column and the diameter of the well. Expected purge volumes are never less than three case volumes and are set at no less than four case volumes in some jurisdictions.

Well purging devices are selected on the basis of the well diameter and the total volume to be evacuated. In most cases the well will be purged using an electric submersible pump (i.e. Grundfos) suspended near (but not touching) the bottom of the well.

PARAMETER STABILIZATION

Well purging completion standards include minimum purge volumes, but additionally require stabilization of specific groundwater parameters prior to sample collection. Typical groundwater parameters used to measure stability are electrical conductivity, pH, and temperature. Instrument readings are obtained at regular intervals during the evacuation process (no less than once per case volume).

Stabilization standards for routine quarterly monitoring of fuel sites include the following: Temperature is considered to have stabilized when successive readings do not fluctuate more than +/- 1 degree Celsius. Electrical conductivity is considered stable when successive readings are within 10%. pH is considered to be stable when successive readings remain constant or vary no more than 0.2 of a pH unit.

DEWATERED WELLS

Normal evacuation removes no less than three case volumes of water from the well. However, less water may be removed in cases where the well dewaters and does not immediately recharge.

MEASURING RECHARGE

Upon completion of well purging, a depth to water measurement is collected and notated to ensure that the well has recharged to within 80% of its static, pre-purge level prior to sampling.

Wells that do not immediately show 80% recharge or dewatered wells will be allowed a minimum of 2 hours to recharge prior to sampling. The water level at time of sampling will be noted.

PURGEWATER CONTAINMENT

All non-hazardous purgewater evacuated from each groundwater monitoring well is captured and contained in on-board storage tanks on the Sampling Vehicle and/or special water hauling trailers. Effluent from the decontamination of reusable apparatus (sounders, electric pumps and hoses etc.), consisting of groundwater combined with deionized water and non-phosphate soap, is also captured and pumped into effluent tanks.

Non-hazardous purgewater is transported under standard Bill of Lading documentation to a Blaine Tech Services, Inc. facility before being transported to a Shell approved disposal facility.

SAMPLE COLLECTION DEVICES

All samples are collected using a stainless steel, Teflon or disposable bailers.

SAMPLE CONTAINERS

Sample material is decanted directly from the sampling bailer into sample containers provided by the laboratory that will analyze the samples. The transfer of sample material from the bailer to the sample container conforms to specifications contained in the USEPA T.E.G.D. The type of sample container, material of construction, method of closure and filling requirements are specific to the intended analysis. Chemicals needed to preserve the sample material are commonly placed inside the sample containers by the laboratory or glassware vendor prior to delivery of the bottle to our personnel. The laboratory sets the number of replicate containers.

TRIP BLANKS

Trip Blanks, if requested, are taken to the site and kept inside the sample cooler for the duration of the event. They are turned over to the laboratory for analysis with the samples from that site.

DUPLICATES

Duplicates, if requested, may be collected at a site. The Field Technician uses their discretion in choosing the well at which the Duplicate is collected, typically one suspected of containing measurable contaminants. The Duplicate sample is labeled "DUP" and the time of collection is omitted from the COC, thus rendering the sample blind.

SAMPLE STORAGE

All sample containers are promptly placed in food grade ice chests for storage in the field and transport (direct or via our facility) to the designated analytical laboratory. These ice chests contain quantities of restaurant grade ice as a refrigerant material. The samples are maintained in either an ice chest or a refrigerator until relinquished into the custody of the laboratory or laboratory courier.

DOCUMENTATION CONVENTIONS

A label must be affixed to all sample containers. In most cases these labels are generated by our office personnel and are partially preprinted. Labels can also be hand written by our field personnel. The site is identified with the store number and site address, as is the particular groundwater well from which the sample is drawn (e.g. MW-1, MW-2, S-1 etc.). The time and date of sample collection along with the initials of the person who collects the sample are handwritten onto the label.

Chain of Custody records are created using client specific preprinted forms following USEPA specifications.

Bill of Lading records are contemporaneous records created in the field at the site where the non-hazardous purgewater is generated. Field Technicians use preprinted Bill of Lading forms.

DECONTAMINATION

All equipment is brought to the site in clean and serviceable condition and is cleaned after use in each well and before subsequent use in any other well. Equipment is decontaminated before leaving the site.

The primary decontamination device is a commercial steam cleaner. The steam cleaner is de-tuned to function as a hot pressure washer that is then operated with high quality deionized water that is produced at our facility and stored onboard our sampling vehicle. Cleaning is facilitated by the use of proprietary fixtures and devices included in the patented workstation (U.S. Patent 5,535,775) that is incorporated in each sampling vehicle. The steam cleaner is used to decon reels, pumps and bailers.

Any sensitive equipment or parts (i.e. Dissolved Oxygen sensor membrane, water level indicator, etc.) that cannot be washed using the high pressure water, will be sprayed with a non-phosphate soap and deionized water solution and rinsed with deionized water.

DISSOLVED OXYGEN READINGS

Dissolved Oxygen readings are taken pre- and/or post-purge using YSI meters (e.g. YSI Model 54, 58 or 95) or HACH field test kits.

The YSI meters are equipped with a stirring device that enables them to collect accurate in-situ readings. The probe/stirring devices are modified to allow downhole measurements to be taken from wells with diameters as small as two inches. The probe and reel is decontaminated between wells as described above. The meter is calibrated between wells as per the instructions in the operating manual. The probe and stirrer is lowered into the water column. The reading is allowed to stabilize prior to collection.

OXYIDATON REDUCTION POTENTIAL READINGS

All readings are obtained with either Corning or Myron-L meters (e.g. Corning ORP-65 or a Myron-L Ultrameter GP). The meter is cleaned between wells as described above. The meter is calibrated at the start of each day according to the instruction manual.

FERROUS IRON MEASUREMENTS

All field measurements are collected at time of sampling with a HACH test kit.

APPENDIX C

LABORATORY REPORT AND CHAIN-OF-CUSTODY DOCUMENT

Calscience
Environmental
Laboratories, Inc.

January 25, 2008

Michael Ninokata
Blaine Tech Services, Inc.
1680 Rogers Avenue
San Jose, CA 95112-1105

Subject: **Calscience Work Order No.:** **08-01-1262**
Client Reference: **15275 Washington, San Leandro, CA**

Dear Client:

Enclosed is an analytical report for the above-referenced project. The samples included in this report were received 1/18/2008 and analyzed in accordance with the attached chain-of-custody.

Unless otherwise noted, all analytical testing was accomplished in accordance with the guidelines established in our Quality Systems Manual, applicable standard operating procedures, and other related documentation. The original report of subcontracted analysis, if any, is provided herein, and follows the standard Calscience data package. The results in this analytical report are limited to the samples tested and any reproduction thereof must be made in its entirety.

If you have any questions regarding this report, please do not hesitate to contact the undersigned.

Sincerely,

Calscience Environmental
Laboratories, Inc.
Danielle Gonsman
Project Manager

Calscience Environmental Laboratories, Inc.

Analytical Report

Blaine Tech Services, Inc.
1680 Rogers Avenue
San Jose, CA 95112-1105

Date Received: 01/18/08
Work Order No: 08-01-1262
Preparation: EPA 5030B
Method: EPA 8015B (M)

Project: 15275 Washington, San Leandro, CA

Client Sample Number	Lab Sample Number	Date Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
S-1	08-01-1262-1-D	01/15/08	Aqueous	GC 30	01/18/08	01/18/08 14:37	080118B01

Parameter	Result	RL	DF	Qual	Units
TPH as Gasoline	ND	50	1		ug/L
Surrogates:	**REC (%)**	**Control Limits**		**Qual**	
1,4-Bromofluorobenzene	96	38-134			

Client Sample Number	Lab Sample Number	Date Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
S-3	08-01-1262-2-D	01/15/08	Aqueous	GC 30	01/18/08	01/18/08 15:11	080118B01

Parameter	Result	RL	DF	Qual	Units
TPH as Gasoline	ND	50	1		ug/L
Surrogates:	**REC (%)**	**Control Limits**		**Qual**	
1,4-Bromofluorobenzene	87	38-134			

Client Sample Number	Lab Sample Number	Date Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
S-5	08-01-1262-3-D	01/15/08	Aqueous	GC 30	01/18/08	01/18/08 15:44	080118B01

Parameter	Result	RL	DF	Qual	Units
TPH as Gasoline	ND	50	1		ug/L
Surrogates:	**REC (%)**	**Control Limits**		**Qual**	
1,4-Bromofluorobenzene	95	38-134			

Client Sample Number	Lab Sample Number	Date Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
S-7	08-01-1262-4-D	01/15/08	Aqueous	GC 30	01/18/08	01/18/08 16:18	080118B01

Comment(s): -The sample chromatographic pattern for TPH does not match the chromatographic pattern of the specified standard. Quantitation of the unknown hydrocarbon(s) in the sample was based upon the specified standard.

Parameter	Result	RL	DF	Qual	Units
TPH as Gasoline	160	50	1		ug/L
Surrogates:	**REC (%)**	**Control Limits**		**Qual**	
1,4-Bromofluorobenzene	97	38-134			

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Blaine Tech Services, Inc.		Date Received:	01/18/08
1680 Rogers Avenue		Work Order No:	08-01-1262
San Jose, CA 95112-1105		Preparation:	EPA 5030B
		Method:	EPA 8015B (M)

Project: 15275 Washington, San Leandro, CA

Client Sample Number	Lab Sample Number	Date Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
S-8	08-01-1262-5-D	01/15/08	Aqueous	GC 30	01/18/08	01/18/08 16:52	080118B01

Comment(s): -The sample chromatographic pattern for TPH does not match the chromatographic pattern of the specified standard. Quantitation of the unknown hydrocarbon(s) in the sample was based upon the specified standard.

Parameter	Result	RL	DF	Qual	Units
TPH as Gasoline	560	50	1		ug/L

Surrogates:	REC (%)	Control Limits	Qual
1,4-Bromofluorobenzene	104	38-134	

Client Sample Number	Lab Sample Number	Date Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
S-9	08-01-1262-6-E	01/15/08	Aqueous	GC 30	01/21/08	01/22/08 5:51	080121B05

Comment(s): -The sample chromatographic pattern for TPH does not match the chromatographic pattern of the specified standard. Quantitation of the unknown hydrocarbon(s) in the sample was based upon the specified standard.

Parameter	Result	RL	DF	Qual	Units
TPH as Gasoline	11000	1200	25		ug/L

Surrogates:	REC (%)	Control Limits	Qual
1,4-Bromofluorobenzene	103	38-134	

Client Sample Number	Lab Sample Number	Date Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
S-10	08-01-1262-7-D	01/15/08	Aqueous	GC 30	01/18/08	01/18/08 18:32	080118B01

Parameter	Result	RL	DF	Qual	Units
TPH as Gasoline	ND	50	1		ug/L

Surrogates:	REC (%)	Control Limits	Qual
1,4-Bromofluorobenzene	94	38-134	

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Blaine Tech Services, Inc.
1680 Rogers Avenue
San Jose, CA 95112-1105

Date Received: 01/18/08
Work Order No: 08-01-1262
Preparation: EPA 5030B
Method: EPA 8015B (M)

Project: 15275 Washington, San Leandro, CA

Client Sample Number	Lab Sample Number	Date Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
S-13	08-01-1262-8-D	01/15/08	Aqueous	GC 30	01/18/08	01/18/08 19:06	080118B01

Parameter	Result	RL	DF	Qual	Units
TPH as Gasoline	ND	50	1		ug/L
Surrogates:	REC (%)	Control Limits		Qual	
1,4-Bromofluorobenzene	98	38-134			

Client Sample Number	Lab Sample Number	Date Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
S-16	08-01-1262-9-D	01/15/08	Aqueous	GC 30	01/18/08	01/18/08 19:40	080118B01

Parameter	Result	RL	DF	Qual	Units
TPH as Gasoline	ND	50	1		ug/L
Surrogates:	REC (%)	Control Limits		Qual	
1,4-Bromofluorobenzene	93	38-134			

Client Sample Number	Lab Sample Number	Date Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
S-17	08-01-1262-10-D	01/15/08	Aqueous	GC 30	01/18/08	01/18/08 20:14	080118B01

Parameter	Result	RL	DF	Qual	Units
TPH as Gasoline	ND	50	1		ug/L
Surrogates:	REC (%)	Control Limits		Qual	
1,4-Bromofluorobenzene	96	38-134			

Client Sample Number	Lab Sample Number	Date Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
S-18	08-01-1262-11-D	01/15/08	Aqueous	GC 30	01/18/08	01/18/08 20:47	080118B01

Parameter	Result	RL	DF	Qual	Units
TPH as Gasoline	ND	50	1		ug/L
Surrogates:	REC (%)	Control Limits		Qual	
1,4-Bromofluorobenzene	94	38-134			

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Blaine Tech Services, Inc. 1680 Rogers Avenue San Jose, CA 95112-1105	Date Received: Work Order No: Preparation: Method:	01/18/08 08-01-1262 EPA 5030B EPA 8015B (M)

Project: 15275 Washington, San Leandro, CA

Client Sample Number	Lab Sample Number	Date Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
S-19	08-01-1262-12-D	01/15/08	Aqueous	GC 30	01/18/08	01/18/08 21:21	080118B01

Parameter	Result	RL	DF	Qual	Units
TPH as Gasoline	ND	50	1		ug/L
Surrogates:	**REC (%)**	**Control Limits**		**Qual**	
1,4-Bromofluorobenzene	92	38-134			

Client Sample Number	Lab Sample Number	Date Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-12-436-1,369	N/A	Aqueous	GC 30	01/18/08	01/18/08 9:34	080118B01

Parameter	Result	RL	DF	Qual	Units
TPH as Gasoline	ND	50	1		ug/L
Surrogates:	**REC (%)**	**Control Limits**		**Qual**	
1,4-Bromofluorobenzene	98	38-134			

Client Sample Number	Lab Sample Number	Date Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-12-436-1,381	N/A	Aqueous	GC 30	01/21/08	01/22/08 2:29	080121B05

Parameter	Result	RL	DF	Qual	Units
TPH as Gasoline	ND	50	1		ug/L
Surrogates:	**REC (%)**	**Control Limits**		**Qual**	
1,4-Bromofluorobenzene	91	38-134			

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Blaine Tech Services, Inc.	Date Received:	01/18/08
1680 Rogers Avenue	Work Order No:	08-01-1262
San Jose, CA 95112-1105	Preparation:	EPA 5030B
	Method:	EPA 8260B
	Units:	ug/L
Project: 15275 Washington, San Leandro, CA		Page 1 of 4

Client Sample Number	Lab Sample Number	Date Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
S-1	08-01-1262-1-C	01/15/08	Aqueous	GC/MS Z	01/22/08	01/22/08 17:54	080122L01

Comment(s): -Results were evaluated to the MDL, concentrations >= to the MDL but < RL, if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qual	Parameter	Result	RL	MDL	DF	Qual
Benzene	ND	0.50	0.14	1		p/m-Xylene	ND	1.0	0.54	1	
Ethylbenzene	ND	1.0	0.23	1		o-Xylene	ND	1.0	0.17	1	
Toluene	ND	1.0	0.27	1							
Surrogates:	REC (%)	Control Limits			Qual	Surrogates:	REC (%)	Control Limits			Qual
Dibromofluoromethane	104	74-140				1,2-Dichloroethane-d4	111	74-146			
Toluene-d8	100	88-112				1,4-Bromofluorobenzene	103	74-110			

Client Sample Number	Lab Sample Number	Date Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
S-3	08-01-1262-2-B	01/15/08	Aqueous	GC/MS S	01/21/08	01/21/08 15:03	080121L01

Comment(s): -Results were evaluated to the MDL, concentrations >= to the MDL but < RL, if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qual	Parameter	Result	RL	MDL	DF	Qual
Benzene	ND	0.50	0.14	1		p/m-Xylene	ND	1.0	0.54	1	
Ethylbenzene	ND	1.0	0.23	1		o-Xylene	ND	1.0	0.17	1	
Toluene	ND	1.0	0.27	1							
Surrogates:	REC (%)	Control Limits			Qual	Surrogates:	REC (%)	Control Limits			Qual
Dibromofluoromethane	102	74-140				1,2-Dichloroethane-d4	106	74-146			
Toluene-d8	99	88-112				1,4-Bromofluorobenzene	98	74-110			

Client Sample Number	Lab Sample Number	Date Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
S-5	08-01-1262-3-C	01/15/08	Aqueous	GC/MS Z	01/22/08	01/22/08 18:25	080122L01

Comment(s): -Results were evaluated to the MDL, concentrations >= to the MDL but < RL, if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qual	Parameter	Result	RL	MDL	DF	Qual
Benzene	ND	0.50	0.14	1		p/m-Xylene	ND	1.0	0.54	1	
Ethylbenzene	ND	1.0	0.23	1		o-Xylene	ND	1.0	0.17	1	
Toluene	ND	1.0	0.27	1							
Surrogates:	REC (%)	Control Limits			Qual	Surrogates:	REC (%)	Control Limits			Qual
Dibromofluoromethane	103	74-140				1,2-Dichloroethane-d4	108	74-146			
Toluene-d8	103	88-112				1,4-Bromofluorobenzene	102	74-110			

Client Sample Number	Lab Sample Number	Date Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
S-7	08-01-1262-4-C	01/15/08	Aqueous	GC/MS Z	01/22/08	01/22/08 18:56	080122L01

Comment(s): -Results were evaluated to the MDL, concentrations >= to the MDL but < RL, if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qual	Parameter	Result	RL	MDL	DF	Qual
Benzene	ND	0.50	0.14	1		p/m-Xylene	ND	1.0	0.54	1	
Ethylbenzene	ND	1.0	0.23	1		o-Xylene	ND	1.0	0.17	1	
Toluene	ND	1.0	0.27	1							
Surrogates:	REC (%)	Control Limits			Qual	Surrogates:	REC (%)	Control Limits			Qual
Dibromofluoromethane	105	74-140				1,2-Dichloroethane-d4	112	74-146			
Toluene-d8	103	88-112				1,4-Bromofluorobenzene	100	74-110			

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Blaine Tech Services, Inc.	Date Received:	01/18/08
1680 Rogers Avenue	Work Order No:	08-01-1262
San Jose, CA 95112-1105	Preparation:	EPA 5030B
	Method:	EPA 8260B
	Units:	ug/L
Project: 15275 Washington, San Leandro, CA		Page 2 of 4

Client Sample Number	Lab Sample Number	Date Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
S-8	08-01-1262-5-C	01/15/08	Aqueous	GC/MS Z	01/22/08	01/22/08 19:27	080122L01

Comment(s): -Results were evaluated to the MDL, concentrations >= to the MDL but < RL, if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qual	Parameter	Result	RL	MDL	DF	Qual
Benzene	5.3	0.50	0.14	1		p/m-Xylene	ND	1.0	0.54	1	
Ethylbenzene	0.31	1.0	0.23	1	J	o-Xylene	ND	1.0	0.17	1	
Toluene	ND	1.0	0.27	1							
Surrogates:	REC (%)	Control Limits			Qual	Surrogates:	REC (%)	Control Limits			Qual
Dibromofluoromethane	103	74-140				1,2-Dichloroethane-d4	105	74-146			
Toluene-d8	106	88-112				1,4-Bromofluorobenzene	99	74-110			

Client Sample Number	Lab Sample Number	Date Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
S-9	08-01-1262-6-C	01/15/08	Aqueous	GC/MS Z	01/22/08	01/22/08 19:57	080122L01

Comment(s): -Results were evaluated to the MDL, concentrations >= to the MDL but < RL, if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qual	Parameter	Result	RL	MDL	DF	Qual
Benzene	68	2.5	0.70	5		p/m-Xylene	3.4	5.0	2.7	5	J
Ethylbenzene	68	5.0	1.1	5		o-Xylene	1.1	5.0	0.84	5	J
Toluene	3.5	5.0	1.4	5	J						
Surrogates:	REC (%)	Control Limits			Qual	Surrogates:	REC (%)	Control Limits			Qual
Dibromofluoromethane	111	74-140				1,2-Dichloroethane-d4	118	74-146			
Toluene-d8	103	88-112				1,4-Bromofluorobenzene	97	74-110			

Client Sample Number	Lab Sample Number	Date Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
S-10	08-01-1262-7-C	01/15/08	Aqueous	GC/MS Z	01/22/08	01/22/08 20:28	080122L01

Comment(s): -Results were evaluated to the MDL, concentrations >= to the MDL but < RL, if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qual	Parameter	Result	RL	MDL	DF	Qual
Benzene	ND	0.50	0.14	1		p/m-Xylene	ND	1.0	0.54	1	
Ethylbenzene	ND	1.0	0.23	1		o-Xylene	ND	1.0	0.17	1	
Toluene	ND	1.0	0.27	1							
Surrogates:	REC (%)	Control Limits			Qual	Surrogates:	REC (%)	Control Limits			Qual
Dibromofluoromethane	103	74-140				1,2-Dichloroethane-d4	106	74-146			
Toluene-d8	103	88-112				1,4-Bromofluorobenzene	98	74-110			

Client Sample Number	Lab Sample Number	Date Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
S-13	08-01-1262-8-C	01/15/08	Aqueous	GC/MS Z	01/22/08	01/22/08 14:18	080122L01

Comment(s): -Results were evaluated to the MDL, concentrations >= to the MDL but < RL, if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qual	Parameter	Result	RL	MDL	DF	Qual
Benzene	ND	0.50	0.14	1		p/m-Xylene	ND	1.0	0.54	1	
Ethylbenzene	ND	1.0	0.23	1		o-Xylene	ND	1.0	0.17	1	
Toluene	ND	1.0	0.27	1							
Surrogates:	REC (%)	Control Limits			Qual	Surrogates:	REC (%)	Control Limits			Qual
Dibromofluoromethane	101	74-140				1,2-Dichloroethane-d4	106	74-146			
Toluene-d8	100	88-112				1,4-Bromofluorobenzene	98	74-110			

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Blaine Tech Services, Inc.	Date Received:	01/18/08
1680 Rogers Avenue	Work Order No:	08-01-1262
San Jose, CA 95112-1105	Preparation:	EPA 5030B
	Method:	EPA 8260B
	Units:	ug/L
Project: 15275 Washington, San Leandro, CA		Page 3 of 4

Client Sample Number	Lab Sample Number	Date Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
S-16	08-01-1262-9-C	01/15/08	Aqueous	GC/MS Z	01/22/08	01/22/08 20:09	080122L01

Comment(s): -Results were evaluated to the MDL, concentrations >= to the MDL but < RL, if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qual	Parameter	Result	RL	MDL	DF	Qual
Benzene	ND	0.50	0.14	1		p/m-Xylene	ND	1.0	0.54	1	
Ethylbenzene	ND	1.0	0.23	1		o-Xylene	ND	1.0	0.17	1	
Toluene	ND	1.0	0.27	1							

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
Dibromofluoromethane	102	74-140		1,2-Dichloroethane-d4	108	74-146	
Toluene-d8	101	88-112		1,4-Bromofluorobenzene	99	74-110	

S-17	08-01-1262-10-C	01/15/08	Aqueous	GC/MS Z	01/22/08	01/22/08 21:30	080122L01

Comment(s): -Results were evaluated to the MDL, concentrations >= to the MDL but < RL, if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qual	Parameter	Result	RL	MDL	DF	Qual
Benzene	ND	0.50	0.14	1		p/m-Xylene	ND	1.0	0.54	1	
Ethylbenzene	ND	1.0	0.23	1		o-Xylene	ND	1.0	0.17	1	
Toluene	ND	1.0	0.27	1							

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
Dibromofluoromethane	104	74-140		1,2-Dichloroethane-d4	110	74-146	
Toluene-d8	101	88-112		1,4-Bromofluorobenzene	98	74-110	

S-18	08-01-1262-11-C	01/15/08	Aqueous	GC/MS Z	01/22/08	01/22/08 22:01	080122L01

Comment(s): -Results were evaluated to the MDL, concentrations >= to the MDL but < RL, if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qual	Parameter	Result	RL	MDL	DF	Qual
Benzene	ND	0.50	0.14	1		p/m-Xylene	ND	1.0	0.54	1	
Ethylbenzene	ND	1.0	0.23	1		o-Xylene	ND	1.0	0.17	1	
Toluene	ND	1.0	0.27	1							

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
Dibromofluoromethane	107	74-140		1,2-Dichloroethane-d4	112	74-146	
Toluene-d8	100	88-112		1,4-Bromofluorobenzene	98	74-110	

S-19	08-01-1262-12-C	01/15/08	Aqueous	GC/MS Z	01/23/08	01/23/08 17:15	080123L03

Comment(s): -Results were evaluated to the MDL, concentrations >= to the MDL but < RL, if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qual	Parameter	Result	RL	MDL	DF	Qual
Benzene	ND	0.50	0.14	1		p/m-Xylene	ND	1.0	0.54	1	
Ethylbenzene	ND	1.0	0.23	1		o-Xylene	ND	1.0	0.17	1	
Toluene	ND	1.0	0.27	1							

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
Dibromofluoromethane	104	74-140		1,2-Dichloroethane-d4	103	74-146	
Toluene-d8	100	88-112		1,4-Bromofluorobenzene	97	74-110	

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Blaine Tech Services, Inc.	Date Received: 01/18/08
1680 Rogers Avenue	Work Order No: 08-01-1262
San Jose, CA 95112-1105	Preparation: EPA 5030B
	Method: EPA 8260B
	Units: ug/L
Project: 15275 Washington, San Leandro, CA	Page 4 of 4

Client Sample Number	Lab Sample Number	Date Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-10-006-24,146	N/A	Aqueous	GC/MS S	01/21/08	01/21/08 14:00	080121L01

Comment(s): -Results were evaluated to the MDL, concentrations >= to the MDL but < RL, if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qual	Parameter	Result	RL	MDL	DF	Qual
Benzene	ND	0.50	0.14	1		p/m-Xylene	ND	1.0	0.54	1	
Ethylbenzene	ND	1.0	0.23	1		o-Xylene	ND	1.0	0.17	1	
Toluene	ND	1.0	0.27	1							

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
Dibromofluoromethane	102	74-140		1,2-Dichloroethane-d4	103	74-146	
Toluene-d8	98	88-112		1,4-Bromofluorobenzene	96	74-110	

Client Sample Number	Lab Sample Number	Date Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-10-006-24,162	N/A	Aqueous	GC/MS Z	01/22/08	01/22/08 12:46	080122L01

Comment(s): -Results were evaluated to the MDL, concentrations >= to the MDL but < RL, if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qual	Parameter	Result	RL	MDL	DF	Qual
Benzene	ND	0.50	0.14	1		p/m-Xylene	ND	1.0	0.54	1	
Ethylbenzene	ND	1.0	0.23	1		o-Xylene	ND	1.0	0.17	1	
Toluene	ND	1.0	0.27	1							

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
Dibromofluoromethane	105	74-140		1,2-Dichloroethane-d4	107	74-146	
Toluene-d8	99	88-112		1,4-Bromofluorobenzene	96	74-110	

Client Sample Number	Lab Sample Number	Date Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-10-006-24,180	N/A	Aqueous	GC/MS Z	01/23/08	01/23/08 13:39	080123L03

Comment(s): -Results were evaluated to the MDL, concentrations >= to the MDL but < RL, if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qual	Parameter	Result	RL	MDL	DF	Qual
Benzene	ND	0.50	0.14	1		p/m-Xylene	ND	1.0	0.54	1	
Ethylbenzene	ND	1.0	0.23	1		o-Xylene	ND	1.0	0.17	1	
Toluene	ND	1.0	0.27	1							

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
Dibromofluoromethane	103	74-140		1,2-Dichloroethane-d4	108	74-146	
Toluene-d8	100	88-112		1,4-Bromofluorobenzene	98	74-110	

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

Blaine Tech Services, Inc. 1680 Rogers Avenue San Jose, CA 95112-1105	Date Received: Work Order No: Preparation: Method:	01/18/08 08-01-1262 EPA 5030B EPA 8015B (M)

Project 15275 Washington, San Leandro, CA

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
08-01-1114-1	Aqueous	GC 30	01/18/08	01/18/08	080118S01

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
TPH as Gasoline	103	94	68-122	9	0-18	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

ACCREDITED IN ACCORDANCE WITH ELAP

Blaine Tech Services, Inc.	Date Received:	01/18/08
1680 Rogers Avenue	Work Order No:	08-01-1262
San Jose, CA 95112-1105	Preparation:	EPA 5030B
	Method:	EPA 8015B (M)

Project 15275 Washington, San Leandro, CA

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
08-01-1369-4	Aqueous	GC 30	01/21/08	01/22/08	080121S03

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
TPH as Gasoline	98	93	68-122	6	0-18	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

Blaine Tech Services, Inc.	Date Received:	01/18/08
1680 Rogers Avenue	Work Order No:	08-01-1262
San Jose, CA 95112-1105	Preparation:	EPA 5030B
	Method:	EPA 8260B

Project 15275 Washington, San Leandro, CA

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
S-3	Aqueous	GC/MS S	01/21/08	01/21/08	080121S01

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	96	96	88-118	0	0-7	
Carbon Tetrachloride	94	97	67-145	3	0-11	
Chlorobenzene	97	98	88-118	1	0-7	
1,2-Dibromoethane	105	106	70-130	0	0-30	
1,2-Dichlorobenzene	100	102	86-116	2	0-8	
1,1-Dichloroethene	90	90	70-130	1	0-25	
Ethylbenzene	100	101	70-130	2	0-30	
Toluene	96	96	87-123	0	0-8	
Trichloroethene	96	94	79-127	2	0-10	
Vinyl Chloride	73	72	69-129	0	0-13	
Methyl-t-Butyl Ether (MTBE)	110	111	71-131	1	0-13	
Tert-Butyl Alcohol (TBA)	91	91	36-168	1	0-45	
Diisopropyl Ether (DIPE)	99	100	81-123	1	0-9	
Ethyl-t-Butyl Ether (ETBE)	111	110	72-126	1	0-12	
Tert-Amyl-Methyl Ether (TAME)	111	111	72-126	0	0-12	
Ethanol	71	66	53-149	5	0-31	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

Blaine Tech Services, Inc.		Date Received:	01/18/08
1680 Rogers Avenue		Work Order No:	08-01-1262
San Jose, CA 95112-1105		Preparation:	EPA 5030B
		Method:	EPA 8260B

Project 15275 Washington, San Leandro, CA

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
S-13	Aqueous	GC/MS Z	01/22/08	01/22/08	080122S01

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	95	98	88-118	4	0-7	
Carbon Tetrachloride	98	100	67-145	1	0-11	
Chlorobenzene	97	103	88-118	6	0-7	
1,2-Dibromoethane	104	111	70-130	6	0-30	
1,2-Dichlorobenzene	99	102	86-116	3	0-8	
1,1-Dichloroethene	98	101	70-130	3	0-25	
Ethylbenzene	101	107	70-130	6	0-30	
Toluene	99	102	87-123	3	0-8	
Trichloroethene	96	101	79-127	5	0-10	
Vinyl Chloride	89	90	69-129	1	0-13	
Methyl-t-Butyl Ether (MTBE)	91	98	71-131	8	0-13	
Tert-Butyl Alcohol (TBA)	77	90	36-168	15	0-45	
Diisopropyl Ether (DIPE)	97	103	81-123	6	0-9	
Ethyl-t-Butyl Ether (ETBE)	92	99	72-126	7	0-12	
Tert-Amyl-Methyl Ether (TAME)	101	108	72-126	6	0-12	
Ethanol	73	83	53-149	9	0-31	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

Blaine Tech Services, Inc.	Date Received:	01/18/08
1680 Rogers Avenue	Work Order No:	08-01-1262
San Jose, CA 95112-1105	Preparation:	EPA 5030B
	Method:	EPA 8260B

Project 15275 Washington, San Leandro, CA

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
08-01-1051-4	Aqueous	GC/MS Z	01/23/08	01/23/08	080123S02

Parameter	MS %REC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	94	99	88-118	5	0-7	
Carbon Tetrachloride	100	102	67-145	2	0-11	
Chlorobenzene	96	102	88-118	6	0-7	
1,2-Dibromoethane	105	109	70-130	4	0-30	
1,2-Dichlorobenzene	100	102	86-116	1	0-8	
1,1-Dichloroethene	99	101	70-130	2	0-25	
Ethylbenzene	102	106	70-130	4	0-30	
Toluene	99	103	87-123	4	0-8	
Trichloroethene	100	100	79-127	0	0-10	
Vinyl Chloride	92	91	69-129	1	0-13	
Methyl-t-Butyl Ether (MTBE)	98	100	71-131	2	0-13	
Tert-Butyl Alcohol (TBA)	87	86	36-168	1	0-45	
Diisopropyl Ether (DIPE)	96	97	81-123	1	0-9	
Ethyl-t-Butyl Ether (ETBE)	95	98	72-126	2	0-12	
Tert-Amyl-Methyl Ether (TAME)	103	107	72-126	4	0-12	
Ethanol	70	66	53-149	3	0-31	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

Blaine Tech Services, Inc.		Date Received:	N/A
1680 Rogers Avenue		Work Order No:	08-01-1262
San Jose, CA 95112-1105		Preparation:	EPA 5030B
		Method:	EPA 8015B (M)

Project: 15275 Washington, San Leandro, CA

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-436-1,369	Aqueous	GC 30	01/18/08	01/18/08	080118B01

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
TPH as Gasoline	108	108	78-120	0	0-10	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

Blaine Tech Services, Inc.		Date Received:	N/A
1680 Rogers Avenue		Work Order No:	08-01-1262
San Jose, CA 95112-1105		Preparation:	EPA 5030B
		Method:	EPA 8015B (M)

Project: 15275 Washington, San Leandro, CA

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-436-1,381	Aqueous	GC 30	01/21/08	01/22/08	080121B05

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
TPH as Gasoline	94	101	78-120	8	0-10	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

Blaine Tech Services, Inc.	Date Received:	N/A
1680 Rogers Avenue	Work Order No:	08-01-1262
San Jose, CA 95112-1105	Preparation:	EPA 5030B
	Method:	EPA 8260B

Project: 15275 Washington, San Leandro, CA

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-10-006-24,146	Aqueous	GC/MS S	01/21/08	01/21/08	080121L01

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	97	98	84-120	0	0-8	
Carbon Tetrachloride	97	97	63-147	0	0-10	
Chlorobenzene	100	100	89-119	0	0-7	
1,2-Dibromoethane	109	106	80-120	3	0-20	
1,2-Dichlorobenzene	102	104	89-119	2	0-9	
1,1-Dichloroethene	91	91	77-125	0	0-16	
Ethylbenzene	106	105	80-120	1	0-20	
Toluene	97	97	83-125	0	0-9	
Trichloroethene	96	97	89-119	1	0-8	
Vinyl Chloride	74	75	63-135	1	0-13	
Methyl-t-Butyl Ether (MTBE)	110	105	82-118	4	0-13	
Tert-Butyl Alcohol (TBA)	104	87	46-154	17	0-32	
Diisopropyl Ether (DIPE)	100	98	81-123	2	0-11	
Ethyl-t-Butyl Ether (ETBE)	109	107	74-122	1	0-12	
Tert-Amyl-Methyl Ether (TAME)	109	110	76-124	0	0-10	
Ethanol	80	72	60-138	10	0-32	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

Blaine Tech Services, Inc.	Date Received:	N/A
1680 Rogers Avenue	Work Order No:	08-01-1262
San Jose, CA 95112-1105	Preparation:	EPA 5030B
	Method:	EPA 8260B

Project: 15275 Washington, San Leandro, CA

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-10-006-24,162	Aqueous	GC/MS Z	01/22/08	01/22/08	080122L01

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	98	92	84-120	6	0-8	
Carbon Tetrachloride	101	95	63-147	6	0-10	
Chlorobenzene	99	96	89-119	3	0-7	
1,2-Dibromoethane	103	99	80-120	4	0-20	
1,2-Dichlorobenzene	101	96	89-119	4	0-9	
1,1-Dichloroethene	104	98	77-125	5	0-16	
Ethylbenzene	105	100	80-120	5	0-20	
Toluene	102	95	83-125	6	0-9	
Trichloroethene	102	95	89-119	8	0-8	
Vinyl Chloride	95	87	63-135	8	0-13	
Methyl-t-Butyl Ether (MTBE)	94	94	82-118	1	0-13	
Tert-Butyl Alcohol (TBA)	93	80	46-154	15	0-32	
Diisopropyl Ether (DIPE)	98	97	81-123	0	0-11	
Ethyl-t-Butyl Ether (ETBE)	94	94	74-122	0	0-12	
Tert-Amyl-Methyl Ether (TAME)	104	99	76-124	5	0-10	
Ethanol	97	89	60-138	9	0-32	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

Blaine Tech Services, Inc.		Date Received:	N/A
1680 Rogers Avenue		Work Order No:	08-01-1262
San Jose, CA 95112-1105		Preparation:	EPA 5030B
		Method:	EPA 8260B

Project: 15275 Washington, San Leandro, CA

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-10-006-24,180	Aqueous	GC/MS Z	01/23/08	01/23/08	080123L03

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	108	111	84-120	3	0-8	
Carbon Tetrachloride	120	122	63-147	2	0-10	
Chlorobenzene	110	111	89-119	1	0-7	
1,2-Dibromoethane	112	113	80-120	1	0-20	
1,2-Dichlorobenzene	106	108	89-119	2	0-9	
1,1-Dichloroethene	118	121	77-125	2	0-16	
Ethylbenzene	119	119	80-120	0	0-20	
Toluene	113	118	83-125	4	0-9	
Trichloroethene	113	118	89-119	5	0-8	
Vinyl Chloride	104	105	63-135	1	0-13	
Methyl-t-Butyl Ether (MTBE)	97	103	82-118	6	0-13	
Tert-Butyl Alcohol (TBA)	105	115	46-154	9	0-32	
Diisopropyl Ether (DIPE)	102	102	81-123	0	0-11	
Ethyl-t-Butyl Ether (ETBE)	97	100	74-122	2	0-12	
Tert-Amyl-Methyl Ether (TAME)	106	111	76-124	4	0-10	
Ethanol	107	125	60-138	15	0-32	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Glossary of Terms and Qualifiers

Work Order Number: 08-01-1262

Qualifier	Definition
*	See applicable analysis comment.
1	Surrogate compound recovery was out of control due to a required sample dilution, therefore, the sample data was reported without further clarification.
2	Surrogate compound recovery was out of control due to matrix interference. The associated method blank surrogate spike compound was in control and, therefore, the sample data was reported without further clarification.
3	Recovery of the Matrix Spike (MS) or Matrix Spike Duplicate (MSD) compound was out of control due to matrix interference. The associated LCS and/or LCSD was in control and, therefore, the sample data was reported without further clarification.
4	The MS/MSD RPD was out of control due to matrix interference. The LCS/LCSD RPD was in control and, therefore, the sample data was reported without further clarification.
5	The PDS/PDSD associated with this batch of samples was out of control due to a matrix interference effect. The associated batch LCS/LCSD was in control and, hence, the associated sample data was reported with no further corrective action required.
A	Result is the average of all dilutions, as defined by the method.
B	Analyte was present in the associated method blank.
C	Analyte presence was not confirmed on primary column.
E	Concentration exceeds the calibration range.
H	Sample received and/or analyzed past the recommended holding time.
J	Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated.
N	Nontarget Analyte.
ND	Parameter not detected at the indicated reporting limit.
Q	Spike recovery and RPD control limits do not apply resulting from the parameter concentration in the sample exceeding the spike concentration by a factor of four or greater.
U	Undetected at the laboratory method detection limit.
X	% Recovery and/or RPD out-of-range.
Z	Analyte presence was not confirmed by second column or GC/MS analysis.

SHELL Chain Of Custody Record

LAB:
- ☐ TA - Irvine, California
- ☐ TA - Morgan Hill, California
- ☐ TA - Sacramento, California
- ☐ TA - Nashville, Tennessee
- ☒ Calscience
- ☐ Other_____

NAME OF PERSON TO BILL: Denis Brown
- ☑ ENVIRONMENTAL SERVICES
- ☐ NETWORK DEV / RE
- ☐ BIL CONSULTANT
- ☐ COMPLIANCE
- ☐ RMT/CHMT

☐ CHECK BOX TO VERIFY IF NO INCIDENT # APPLIES

INCIDENT # (ES ONLY): 9 7 0 9 3 4 1 2

PO #:

SAP or CRMT #:

DATE: 1/15/08

PAGE: 1 of 2

SAMPLING COMPANY: Blaine Tech Services	LOG CODE: BTSS	SITE ADDRESS: Street and City: 15275 Washington, San Leandro	State: CA
GLOBAL ID NO.: T0600101226			
ADDRESS: 1680 Rogers Avenue, San Jose, CA 95112	EDF DELIVERABLE TO (Name, Company, Office Location): Jon Suing, Delta, Manteca Office	PHONE NO.: 626.256.6662	E-MAIL: jsuing@deltaenv.com
CONSULTANT PROJECT NO.: 080115-KF2 BTS #			
PROJECT CONTACT (Hardcopy or PDF Report to): Michael Ninokata	SAMPLER NAME(S) (Print): K. Cordes	LAB USE ONLY: 08-01-1262	
TELEPHONE: 408-573-0555	FAX: 408-573-7771	E-MAIL: mninokata@blainetech.com	

TAT (STD IS 10 BUSINESS DAYS / RUSH IS CALENDAR DAYS): ☑ STD ☐ 5 DAY ☐ 3 DAY ☐ 2 DAY ☐ 24 HOURS ☐ RESULTS NEEDED ON WEEKEND

☐ LA - RWQCB REPORT FORMAT ☐ UST AGENCY: _____

SPECIAL INSTRUCTIONS OR NOTES:
- ☐ EDD NOT NEEDED
- ☐ SHELL CONTRACT RATE APPLIES
- ☐ STATE REIMB RATE APPLIES
- ☑ RECEIPT VERIFICATION REQUESTED

CC Rich Garlow rgarlow@deltaenv.com with final report.

REQUESTED ANALYSIS

LAB USE ONLY	Field Sample Identification	SAMPLING DATE	SAMPLING TIME	MATRIX	NO. OF CONT.	TPH - Gas, Purgeable (8260B)	TPH - Diesel, Extractable (8015M)	BTEX (8260B)	5 Oxygenates (8260B) (MTBE, TBA, DIPE, TAME, ETBE)	MTBE (8260B)	TBA (8260B)	DIPE (8260B)	TAME (8260B)	ETBE (8260B)	1,2 DCA (8260B)	EDB (8260B)	Ethanol (8260B)	Methanol (8015M)	TPH-motor oil (8015M)	TDS (160.1)	Total Iron (6010B)	Total Lead (6010B)	Total Oil and Grease (1664A)		TEMPERATURE ON RECEIPT C°
1	S-1	1/15/08	1435	W	5	X		X																	
2	S-3		1516		5	X		X																	
3	S-5		1358		5	X		X																	
4	S-7		1445		5	X		X																	
5	S-8		1455		5	X		X																	
6	S-9		1505		5	X		X																	
7	S-10		1330		5	X		X																	
8	S-13		1235		5	X		X																	
9	S-16		1420		5	X		X																	
10	S-17		1150		5	X		X																	

FIELD NOTES: Container/Preservative or PID Readings or Laboratory Notes

Relinquished by: (Signature)	Received by: (Signature)	Date: 1/15/08	Time: 1640
Relinquished by: (Signature) (Sample Custodian)	Received by: (Signature)	Date: 1/17/08	Time: 0830
Relinquished by: (Signature)	Received by: (Signature)	Date: 1/18/08	Time: 0915

6/02/06 Revision

SHELL Chain Of Custody Record

LAB:
☐ TA - Irvine, California
☐ TA - Morgan Hill, California
☐ TA - Sacramento, California
☐ TA - Nashville, Tennessee
☒ Calscience
☐ Other

NAME OF PERSON TO BILL: Denis Brown

☒ ENVIRONMENTAL SERVICES ☐ NETWORK DEV / FE ☐ BILL CONSULTANT ☐ COMPLIANCE ☐ RMT/CRMT

☐ CHECK BOX TO VERIFY IF NO INCIDENT # APPLIES

INCIDENT # (ES ONLY): 9 7 0 9 3 4 1 2

PO #

SAP or CRMT #

DATE: 1/15/08

PAGE: 2 of 2

SAMPLING COMPANY: Blaine Tech Services	LOG CODE: BTSS	SITE ADDRESS: Street and City: 15275 Washington, San Leandro	State: CA
ADDRESS: 1680 Rogers Avenue, San Jose, CA 95112		EDF DELIVERABLE TO (Name, Company, Office Location): Jon Suing, Delta, Monrovia Office	PHONE NO.: 626.256.6662
PROJECT CONTACT (Hardcopy or PDF Report to): Michael Ninokata		SAMPLER NAME(S) (Print): K. Cordes	
TELEPHONE: 408-573-0555	FAX: 408-573-7771	E-MAIL: mninokata@blainetech.com	

GLOBAL ID NO.: T0600101226

E-MAIL: jsuing@deltaenv.com

CONSULTANT PROJECT NO.: 080115-KP2

BTS #

LAB USE ONLY: 08-01-1262

TAT (STD IS 10 BUSINESS DAYS / RUSH IS CALENDAR DAYS): ☒ STD ☐ 5 DAY ☐ 3 DAY ☐ 2 DAY ☐ 24 HOURS ☐ RESULTS NEEDED ON WEEKEND

☐ LA - RWQCB REPORT FORMAT ☐ UST AGENCY:

SPECIAL INSTRUCTIONS OR NOTES:

☐ EDD NOT NEEDED
☐ SHELL CONTRACT RATE APPLIES
☐ STATE REIMB RATE APPLIES
☒ RECEIPT VERIFICATION REQUESTED

CC Rich Garlow rgarlow@deltaenv.com with final report.

REQUESTED ANALYSIS

LAB USE ONLY	Field Sample Identification	SAMPLING DATE	SAMPLING TIME	MATRIX	NO. OF CONT.	TPH - Gas, Purgeable (8260B)	TPH - Diesel, Extractable (8015M)	BTEX (8260B)	5 Oxygenates (8260B) (MTBE, TBA, DIPE, TAME, ETBE)	MTBE (8260B)	TBA (8260B)	DIPE (8260B)	TAME (8260B)	ETBE (8260B)	1,2 DCA (8260B)	EDB (8260B)	Ethanol (8260B)	Methanol (8015M)	TPH-motor oil (8015M)	TDS (160.1)	Total Iron (6010B)	Total Lead (6010B)		Total Oil and Grease (1664A)		FIELD NOTES: Container/Preservative or PID Readings or Laboratory Notes
11	S-18	1/15/08	1130	W	5	X		X																		
12	S-19	1/15/08	1308	W	5	X		X																		

TEMPERATURE ON RECEIPT C°

Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
[signature]	[signature]	1/15/08	1640
[signature] (Sample Custodian)	[signature]	1/17/08	1630
[signature] (to 650)	[signature]	1/18/08	0915

05/02/06 Revision

Calscience Environmental Laboratories, Inc.

WORK ORDER #: 08 - 01 - 1262

Cooler 1 of 1

SAMPLE RECEIPT FORM

CLIENT: Blaine Tech DATE: 01/10/08

TEMPERATURE – SAMPLES RECEIVED BY:

CALSCIENCE COURIER:

_____ Chilled, cooler with temperature blank provided.
_____ Chilled, cooler without temperature blank.
_____ Chilled and placed in cooler with wet ice.
_____ Ambient and placed in cooler with wet ice.
_____ Ambient temperature.

_____ °C Temperature blank.

LABORATORY (Other than Calscience Courier):

_____ °C Temperature blank.
_____ °C IR thermometer.
_____ Ambient temperature.

Initial: NC

CUSTODY SEAL INTACT:

Sample(s): _____ Cooler: _____ No (Not Intact) : _____ Not Present: ✓

Initial: NC

SAMPLE CONDITION:

	Yes	No	N/A
Chain-Of-Custody document(s) received with samples	✓		
Sampler's name indicated on COC	✓		
Sample container label(s) consistent with custody papers	✓		
Sample container(s) intact and good condition	✓		
Correct containers and volume for analyses requested	✓		
Proper preservation noted on sample label(s)	✓		
VOA vial(s) free of headspace.	✓		
Tedlar bag(s) free of condensation			✓

Initial: NC

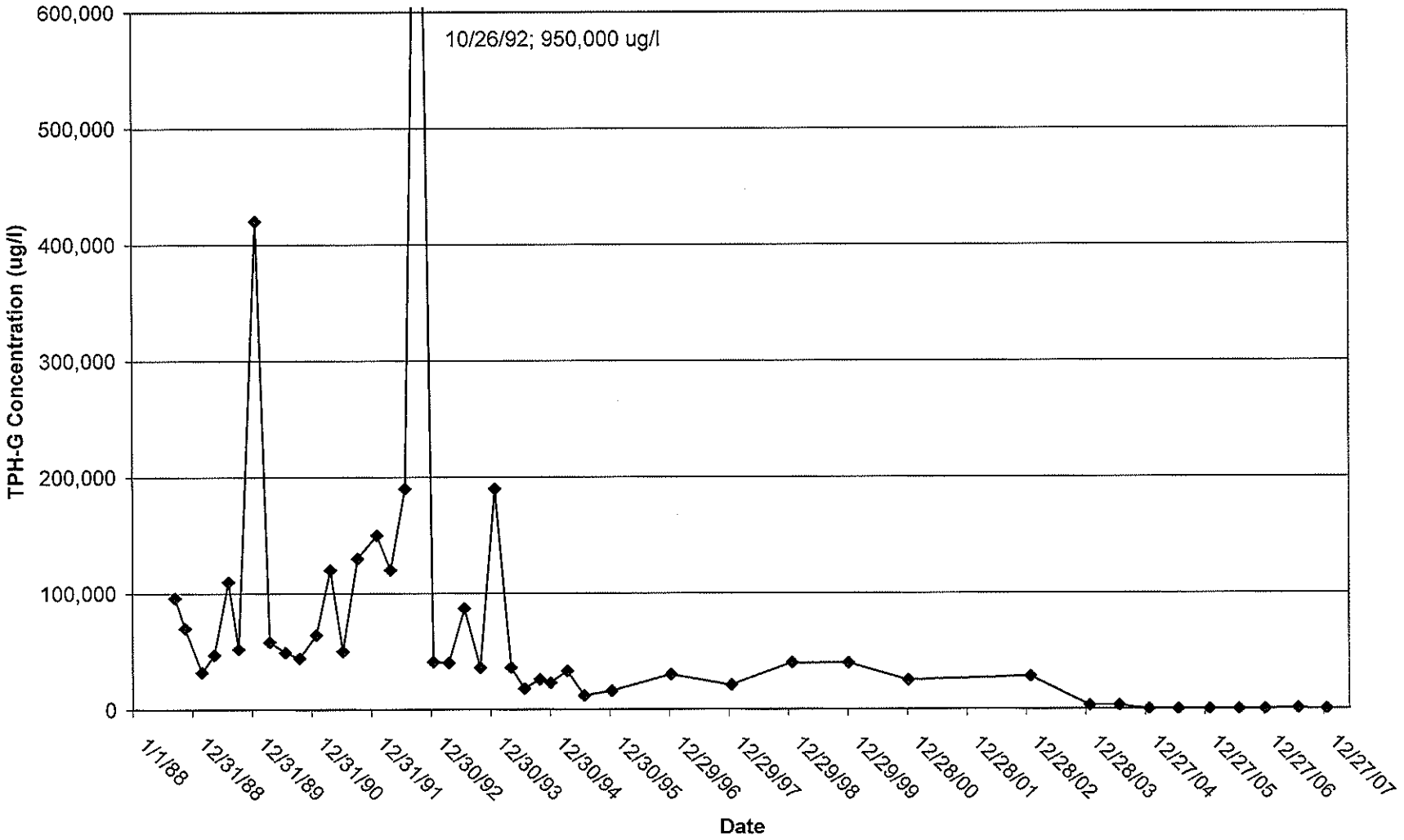
COMMENTS:

APPENDIX G

Concentration Graphs

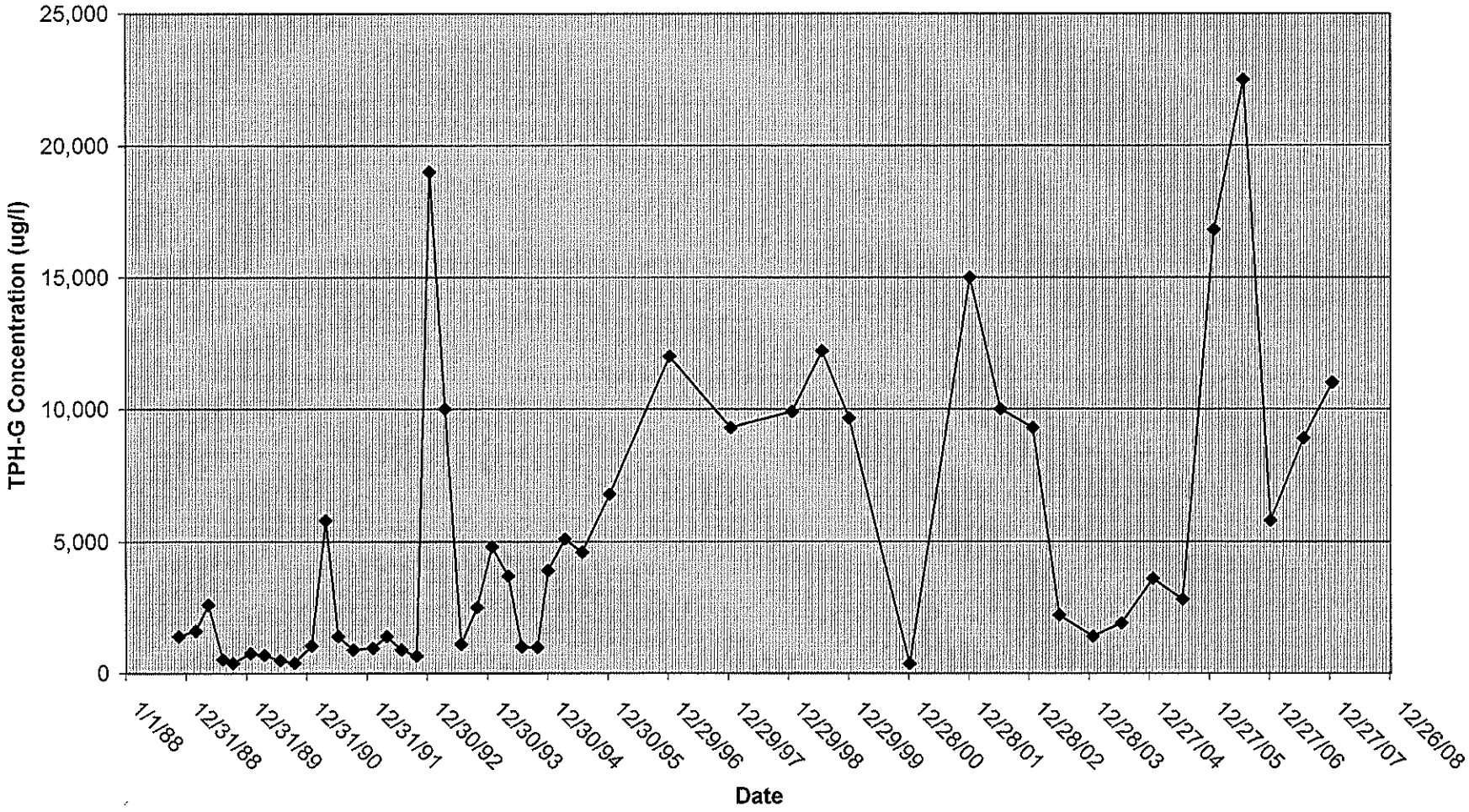
TPH-G Concentration Graph, Well S-3

Former Shell-branded Service Station
15275 Washington Boulevard
San Leandro, Calfornia



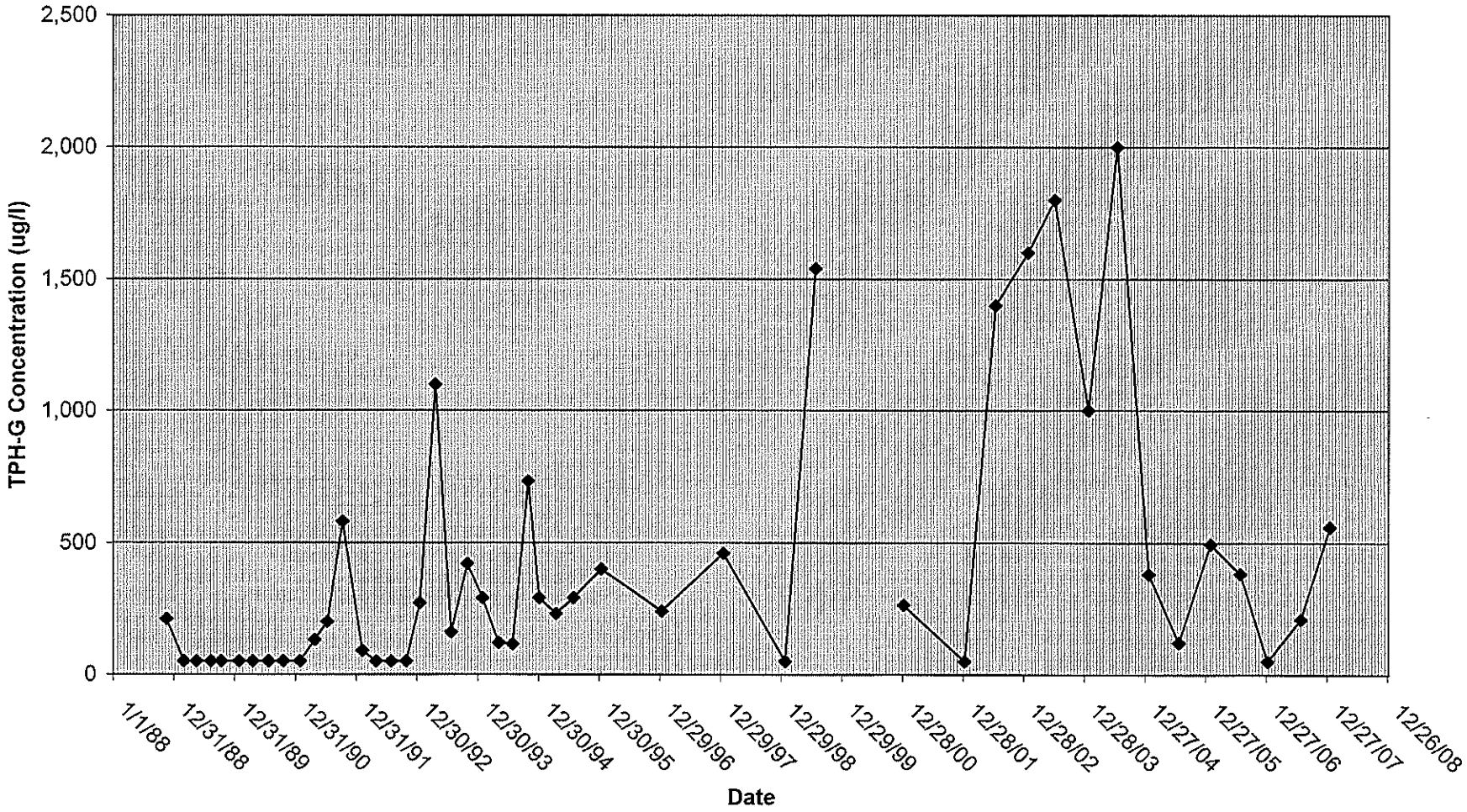
TPH-G Concentration Graph, Well S-9

Former Shell-branded Service Station
15275 Washington Boulevard
San Leandro, Calfornia



TPH-G Concentration Graph, Well S-8

Former Shell-branded Service Station
15275 Washington Boulevard
San Leandro, Calfornia



APPENDIX H

RBCA Studies

WEISS ASSOCIATES

1997

RBCA SUMMARY REPORT

SUMMARY REPORT

☐ TIER 1 / ■ TIER 2 RBCA SITE EVALUATION

FORMER SHELL SERVICE STATION
15275 WASHINGTON AVENUE
SAN LEANDRO, CALIFORNIA

WIC #204-6852-1108

Weiss Associates, Emeryville, California
PREPARED BY

June 18, 1997
DATE ISSUED

REVIEWED BY Steven Lowney

DATE 6/20/97

RBCA SUMMARY REPORT

Table of Contents

Site Name: Former Shell Service Station, WIC #204-6852-1108 Date Completed: June 18, 1997

Site Location: 15275 Washington Avenue, San Leandro, California Completed By: Weiss Associates

TIER 1 / TIER 2 RBCA REPORT INDEX

■ = ENCLOSED

			Tier 1	Tier 2
1.0	**EXECUTIVE SUMMARY**			
1.2	Tier 2 Executive Summary Checklist	*		■
1.3	Executive Summary Discussion		☐	■ (u)
1.4	Baseline Exposure Pathway Flowchart		☐	☐ (u)
1.5	Comparison of Site Data to RBSLs/SSTLs - Commercial/Industrial Receptors		☐	☐ (u)
1.6	Comparison of Site Data to RBSLs/SSTLs - Residential Receptors		■	■ (u)
2.0	**SITE HISTORY**			
2.1	Site Description		☐	☐ (u)
2.2	Site Ownership & Activity Record		☐	☐ (u)
2.3	Past Releases or Source Areas		☐	☐ (u)
2.4	Summary of Current & Completed Site Activities		☐	☐ (u)
2.5	Summary of Potential Near-Term Site Activities		☐	☐ (u)
3.0	**SITE ASSESSMENT INFORMATION**			
3.1	Regional Hydrogeologic Conditions		☐	☐ (u)
3.2	Hydrogeologic Site Conditions		☐	☐ (u)
3.3	Beneficial Use Summary		☐	☐ (u)
3.4	Well Inventory Survey		☐	☐ (u)
3.5	Ecological Assessment Summary		☐	☐ (u)
4.0	**BASELINE EXPOSURE ASSESSMENT**			
4.1	Site Classification Summary		☐	■ (u)
4.2	Baseline Exposure Flowchart		☐	■ (u)
4.3	Tier 2 Exposure Factor Checklist	*	☐	■ (u)
4.4	Tier 2 Exposure Pathway Screening	*		■
4.5	Tier 2 Exposure Scenarios & Risk Goals	*		■
5.0	**SITE PARAMETERS**			
5.1	Site Parameter Checklist for RBSLs		☐	■ (u)
5.2	Summary of Media Investigation and Chemical Analyses		☐	■ (u)
5.3	Summary of Source Zone Characteristics		☐	■ (u)
5.4	Surface Soil Concentration Data Summary		☐	☐ (u)
5.5	Subsurface Soil Concentration Data Summary		☐	■ (u)
5.6	Groundwater Concentration Data Summary		☐	■ (u)
5.7	Tier 2 Exposure Pathway Transport Parameters	*		■
6.0	**TIER 1 RISK-BASED SCREENING LEVEL EVALUATION**			
6.1	Tier 1 RBSL Evaluation: Surface Soil		☐	
6.2	Tier 1 RBSL Evaluation: Subsurface Soil		☐	
6.3	Tier 1 RBSL Evaluation: Groundwater		☐	

* = *Required for Tier 2 Evaluation only* (u) = *For Tier 2, update Tier 1 version as needed.*

Site Name: Former Shell Service Station, WIC #204-6852-1108 Date Completed: June 18, 1997

Site Location: 15275 Washington Avenue, San Leandro, California Completed By: Weiss Associates

TIER 1 / TIER 2 RBCA REPORT INDEX - *continued*

			■ = ENCLOSED	
			Tier 1	Tier 2
7.0	**NATURAL ATTENUATION FACTORS**			
7.1	Tier 2 NAF Calculation Methods & Results	*		☐
8.0	**TIER 2 SSTL EVALUATION**			
8.1	Surface Soil SSTL Values	*		☐
8.2	Subsurface Soil SSTL Values	*		■
8.3	Groundwater SSTL Values	*		■
ATTACHMENTS				
Figure 1	Site Location Map		☐	☐ *(u)*
Figure 2	Extended Site Map		☐	☐ *(u)*
Figure 3	Site Plan		☐	☐ *(u)*
Figure 4	Site Photos		☐	☐ *(u)*
Figure 5	Groundwater Plume Maps	*		☐
Figure 6	Groundwater Elevation Map		☐	☐ *(u)*
Figure 7	Soil Boring Location Map		☐	☐ *(u)*
APPENDICES				
Appendix A	SSTL Calculations		☐	■ *(u)*
Appendix B	SSTL Calculations		☐	■ *(u)*
Appendix C	Well Screen Intervals			■
	(SPECIFY)			

* = *Required for Tier 2 Evaluation only* *(u) = For Tier 2, update Tier 1 version as needed.*

RBCA SUMMARY REPORT — Worksheet 1.2

Site Name: Former Shell Service Station, WIC #204-6852-1108 Date Completed: June 18, 1997

Site Location: 15275 Washington Avenue, San Leandro, California Completed By: Weiss Associates

TIER 2 EXECUTIVE SUMMARY

TIER 2 SSTL CALCULATION METHOD (■ OR ● TO SELECT)

SSTL Calculation Option

- ☐ Option 1: Site-Specific Screening Levels
- ■ Option 2: Individual Constituent SSTL Values
- ☐ Option 3: Cumulative Constituent SSTL Values

NAF Calculation Method

- ☐ Fate and Transport Modeling:
- ☐ ○ RBCA Spreadsheet System
- ☐ ○ Other Model(s)
- ■ Empirical NAF Calculation

SITE DATA INVENTORY

Source Zone Investigation Complete:

- ■ Surface Soil (e.g., < 3 ft BGS)
- ■ Subsurface Soil (e.g., > 3 ft BGS)
- ■ Groundwater

Exposure Pathway Information Compiled:

- ■ Air Pathway
- ■ Groundwater Pathway
- ■ Soil Pathway
- ☐ Surface Water Pathway
- ☐ Land Use Classification (on-site and off-site)

TASKS COMPLETED

- ■ Tier 1 Evaluation
- ☐ Tier 1 Interim Corrective Action
- ■ Tier 2 Evaluation
- ☐ Tier 2 Interim Corrective Action
- ☐ Tier 2 Final Corrective Action
- ☐ Tier 3 Evaluation

CURRENT SITE CLASSIFICATION

Classification No.	Scenario Description	Prescribed Interim Action	Date Implemented
3	Shallow ground water and subsurface soils are impacted. There are no domestic drinking water wells within 1/2 mile.	Evaluate remedial alternatives to reduce site concentrations to or below SSTLs	Planned for 1998

TIER 2 CORRECTIVE ACTION CRITERIA

Affected Medium	Tier 2 SSTL Exceeded ? Yes	No	Applicable Excess Risk Limits (specify values) Indiv. Risk	Total Risk	Hazard Index	Hazard Quotient	Other Applicable Exposure Limits (specify, if any)
• Surface Soil (≤ 3ft bgs)	☐	☐					
• Subsurface Soil (>3ft bgs)	■	☐	10^{-6}			1.0	
• Groundwater	■	☐	10^{-6}			1.0	MCLs at POE

PROPOSED ACTION

- ☐ *No Action:* Tier 2 SSTLs not exceeded. Apply for closure.
- ☐ *Interim Corrective Action:* Address principal, near-term risks sources.
- ■ *Final Corrective Action:* Remediate/control site to meet Tier 2 criteria.
- ☐ *Tier 3 Evaluation:* Improve baseline risk and SSTL estimates.

NOTE:
Rationale for proposed action documented on Worksheets 1.3 and 10.1-10.3.

ALL WORKSHEETS ENCLOSED IN THIS REPORT ARE IDENTIFIED ON THE TABLE OF CONTENTS FORM

RBCA SUMMARY REPORT

Worksheet 1.3

Site Name: Former Shell Service Station, WIC #204-6852-1108 Date Completed: June 18, 1997

Site Location: 15275 Washington Avenue, San Leandro, California Completed By: Weiss Associates

EXECUTIVE SUMMARY

Instructions: *Provide brief description of site history, hydrogeologic conditions, ecological assessment, possible exposure pathways, SSTL results, and the scope of work for proposed corrective action activity. Address proposed methods, implementation schedule, cost, and anticipated risk reduction at or near the site.*

SITE DESCRIPTION AND HISTORY

Update Site History from Tier 1, if necessary

No update from Tier 1.

SITE ASSESSMENT INFORMATION

GEOLOGIC AND HYDROGEOLOGIC SUMMARY

Update from Tier 1, if necessary

No update from Tier 1.

EXPOSURE ASSESSMENT

COMPLETE EXPOSURE PATHWAYS AND APPLICABLE RECEPTORS

Identify those pathway/contaminant pairs to be evaluated at Tier 2 (exceeded Tier 1 criteria)

In Tier 1, potentially complete current and/or future exposure pathways for human exposure were identified as:

- inhalation of indoor and outdoor air via volatilization from subsurface soils
- inhalation of indoor and outdoor air via volatilization from ground water
- leachate to ground water from subsurface soils for ingestion
- ground water ingestion at a hypothetical point of exposure closest to the area of impact.

Residential receptors were considered in the evaluations as the future use of the site is not determined and there is a residential area located adjacent to the site. Pathways involving exposure to surface soil were not considered in the initial Tier 1 evaluations due to lack of field data. In May 1997, a soil vapor survey and soil sampling investigation was conducted to further evaluate site conditions and to collect data for exposure pathways that were not considered in Tier 1 evaluations. These data were used to reevaluate Tier 1 screening levels and to evaluate pathways involving exposure to surface soils.

Potentially complete current and/or future exposure pathways in the updated Tier 1 evaluation were identified as:

- inhalation of indoor and outdoor air via volatilization from subsurface soils
- inhalation of indoor and outdoor air via volatilization from ground water
- inhalation, dermal contact and ingestion of vapors and particulates from surficial soils
- leachate to ground water from subsurface soils for ingestion
- ground water ingestion at a hypothetical point of exposure closest to the area of impact.

Worksheet 1.6 shows the comparison of previous and updated site characterization data to RBSLs. Worst-case concentrations of toluene, ethylbenzene and xylenes were below relevant Tier 1 RBSLs. Therefore the presence of these COCs in site soils and/or ground water is not believed to present a significant risk to human health or the environment. Worst-case benzene concentrations exceeded the conservative Tier 1 RBSLs for the following pathways, which are evaluated further in Tier 2:

- inhalation of *benzene* vapors via volatilization from subsurface soils into buildings and to outdoor air
- inhalation of *benzene* vapors via volatilization from ground water into buildings
- leachate of *benzene* to ground water from subsurface soils for ingestion
- ingestion of *benzene* via ground water at nearest off-site hypothetical point of exposure.

Assuming that leachate to ground water is a potentially complete exposure pathway is a conservative approach, because the ground water analytical results do not indicate any significant change in concentrations due to leaching from soils. Ground water ingestion is also conservatively considered a potentially complete pathway and there are no known uses of shallow ground water in the area.

ECOLOGICAL ASSESSMENT SUMMARY

Update from Tier 1, if necessary

No update from Tier 1

EXECUTIVE SUMMARY *continued*

REPRESENTATIVE TIER 2 SSTL EVALUATION

COMPARISON TO SOURCE MEDIA CONCENTRATIONS

For pathways evaluated at Tier 2, compare representative source concentrations to applicable SSTL values.

SSTLs were calculated for inhalation and ground water ingestion exposure pathways using site-specific parameter values and site-specific fate and transport modeling. SSTL calculations and site-specific parameter values are found in Appendices A and B of this Tier 2 evaluation report. Worksheet 1.6 shows the comparison between SSTLs and site soil and ground water concentrations. Site concentrations exceeded Tier 2 SSTLs for the following exposure pathways:

- Inhalation of *benzene* vapors via volatilization from subsurface soils into buildings.
- Inhalation of *benzene* vapors via volatilization from ground water into buildings.

QUALITATIVE UNCERTAINTY ASSESSMENT

Discuss uncertainty / conservatism of the site data and calculation methods used in deriving SSTL values.

In calculating the SSTLs for soils and ground water, only a few site-specific parameters were used in place of Tier 1 default values. These parameters are discussed in Appendices A and B, and in Worksheet 5.1. The site representative concentrations were conservatively selected based on maximum detected concentrations. In addition, conservative assumptions were made for estimating plume thickness in ground water, thickness of contaminated soils and for the location of a hypothetical water supply well in the shallow water-bearing zone.

PROPOSED CORRECTIVE ACTION

Describe rationale for proposed action (i.e., no action, interim action, final action, or tier upgrade), considering site classification and land use. Discuss basis for remedy selection, if applicable.

Based on the results of the Tier 2 analysis, an evaluation of remedial alternatives is proposed to reduce concentrations to or below SSTLs.

REFERENCE DOCUMENTS

List the document sources for the data cited in this report.

See Section 6.0 of the attached report.

RBCA SUMMARY REPORT — Tier 1 Worksheet 1.6

Site Name: Former Shell Service Station, WIC #204-6852-1108 — Date Completed: June 18, 1997

Site Location: 15275 Washington Avenue, San Leandro, California — Completed By: Weiss Associates

RESIDENTIAL RECEPTORS: COMPARISON OF PREVIOUS AND UPDATED SITE CHARACTERIZATION DATA TO RBSLS

Media	Exposure Pathway	Potentially Complete?	Benzene			Toluene			Ethylbenzene			Xylenes		
			RBSL [1]	Representative Concentration [2]		RBSL [3]	Representative Concentration [2]		RBSL [3]	Representative Concentration [2]		RBSL [3]	Representative Concentration [2]	
				Tier 1	Update		Tier 1	Update		Tier 1	Update		Tier 1	Update
Soil (mg/kg)	Volatilization to Outdoor Air	Yes	0.79	31	10	RES [4]	170	5.9	RES	280	52	RES	560	220
	Vapor Intrusion to Buildings	Yes	0.015	31	10	20.6	170	5.9	427	280	52	RES	560	220
	Surficial Soil (0-3 ft depth): Ingestion/Dermal/Inhalation	Yes	16.8	no data	0.34	13,300	no data	0.11	7,830	no data	1.1	145,000	no data	0.47
	Leachate to Ground Water for Ingestion	Yes	0.05	31	10	129	170	5.9	575	280	52	RES	560	220
Ground Water (mg/l)	Volatilization to Outdoor Air	Yes	31.9	0.86	0.99	>S [5]	0.29	0.33	>S	1.5	1.5	>S	5.9	6.3
	Vapor Intrusion to Buildings	Yes	0.069	0.86	0.99	32.8	0.29	0.33	77.5	1.5	1.5	>S	5.9	6.3
	Ingestion	Yes	0.0085	0.86	0.99	7.3	0.29	0.33	3.65	1.5	1.5	73.0	5.9	6.3

Notes:

(1) The RBSLs used for benzene is based on a carcinogenic risk of 1 in 100,000 (10^{-5}), and corrected for the California cancer slope factor.
(2) Methodology for establishing representative COC concentrations shown on worksheets 5.3 - 5.6
(3) The RBSLs used for non-carcinogenic constituents of concern is a chronic hazard quotient of 1.0.
(4) RES = Selected risk level is not exceeded for pure compound present at any concentration in soil.
(5) >S = At pure component solubility (mg/l), selected risk level is not exceeded.

NA = Not applicable.
ND = Not detected
Boldface indicates exceedance on a potentially complete exposure pathway

RBCA SUMMARY REPORT — Tier 2 Worksheet 1.6

Site Name: Former Shell Service Station, WIC #204-6852-1108 | Date Completed: June 18, 1997

Site Location: 15275 Washington Avenue, San Leandro, California | Completed By: Weiss Associates

RESIDENTIAL RECEPTORS: COMPARISON OF SITE CHARACTERIZATION DATA TO SSTLS

Media	Exposure Pathway	Potentially Complete?	Benzene	
			SSTL [1]	Representative Concentration [2]
Soil (mg/kg)	Volatilization to Outdoor Air	Yes	204	10
	Vapor Intrusion to Buildings	Yes	0.25	10
	Leachate to Ground Water for Ingestion	Yes	17	10
Ground Water (mg/l)	Vapor Intrusion to Buildings	Yes	0.86	1.4
	Ingestion	Yes	2.0	1.4

Notes:

(1) The SSTLs used for benzene is based on a carcinogenic risk of 1 in 100,000 (10^{-5}), and corrected for the California cancer slope factor.
(2) Methodology for establishing representative COC concentrations shown on worksheets 5.3 - 5.6
(3) The SSTLs used for non-carcinogenic constituents of concern is a chronic hazard quotient of 1.0.
(4) RES = Selected risk level is not exceeded for pure compound present at any concentration in soil.
(5) >S = At pure component solubility (mg/l), selected risk level is not exceeded.

NA = Not applicable.
ND = Not detected
Boldface indicates exceedance on a potentially complete exposure pathway

RBCA SUMMARY REPORT

Worksheet 4.1

Site Name: Former Shell Service Station, WIC #204-6852-1108 | Date Completed: June 18, 1997

Site Location: 15275 Washington Avenue, San Leandro, California | Completed By: Weiss Associates

RBCA SITE CLASSIFICATION SUMMARY

Instructions: *Determine RBCA Site Classification using site classification flowcharts provided in Tier 1 RBCA Guidance Manual, as follows:*

Evaluate available information on site soils, vapors, groundwater, surface water, and miscellaneous impacts using the corresponding flowcharts. Record two-digit site classification number for each medium.

Compare numerical values from individual media to identify critical site classification(s) (i.e., lowest values).

Record critical site classification scenario and initial response action in space provided. If there is more than one number within the lowest classification group (e.g., Class 2), record both (e.g., 2.1, 2.3).

As site evaluation progresses, update site classification as appropriate by repeating Steps 1 - 3, based upon additional site data or completion of corrective measure.

SITE STATUS		MEDIUM-SPECIFIC CLASSIFICATION VALUES					CRITICAL CLASSIFICATION(S)	
Date	Status Description	Soil	Ground-water	Vapor	Surface Water	Misc.	Classification No. and Scenario	Prescribed Initial Response
INITIAL CLASSIFICATION:								
Aug 1996	Shallow soils and ground water impacted.	3	3	3	4	4	3. Potential for vapor migration, possible long-term threat to human or beneficial ground water use. 4. No potential threat to human health or beneficial ground water use.	Continue ground water monitoring, prepare workplan to collect soil vapor data. Perform Tier 2 evaluation No futher action.
REVISED CLASSIFICATION:								
Nov 1996	COC concentrations in soil and ground water exceed Tier 1 RBSLs.	3	3	3	4	4	3. Potential for vapor migration, possible long-term threat to human or beneficial ground water use. 4. No potential threat to human health or beneficial ground water use.	Continue ground water monitoring, prepare workplan to collect soil vapor data. Perform Tier 2 evaluation No further action.
June 1997	COC concentrations in soil exceed Tier 2 SSTLs	3	4	3	4	4	3. Potential for vapor migration, possible long-term threat to human or beneficial ground water use. 4. No potential threat to human health or beneficial ground water use.	Select remedial alternative to reduce soil concentration to/below SSTLs. No further action.

RBCA SUMMARY REPORT

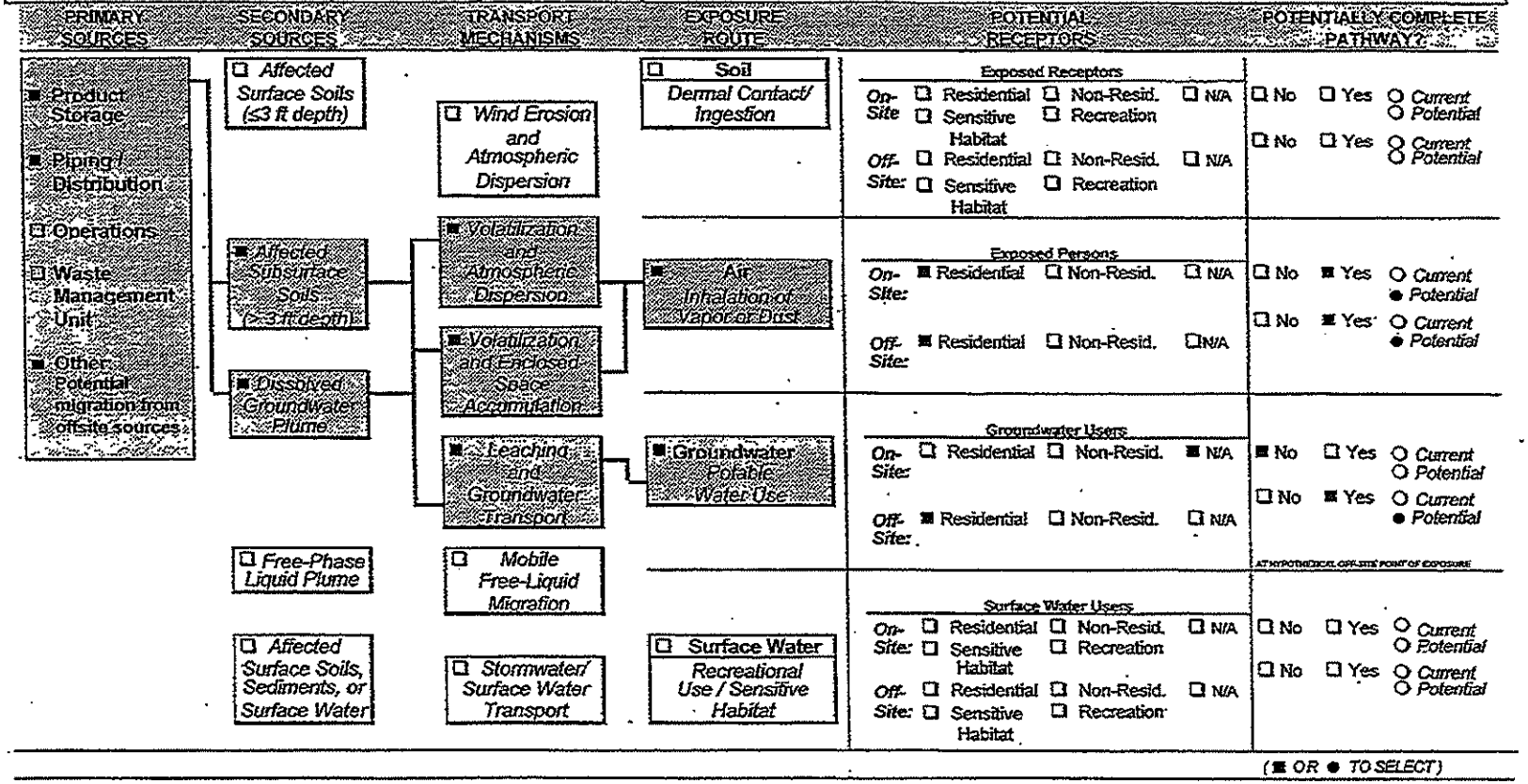
Worksheet 4.2

Site Name: Former Shell Service Station, WIC #204-6852-1108 | Date Completed: June 18, 1997

Site Location: 15275 Washington Avenue, San Leandro, California | Completed By: Weiss Associates

EXPOSURE FLOWCHART

This worksheet shows the Baseline Exposure Flowchart from the tier 1 Analysis.



(■ OR ● TO SELECT)

RBCA SUMMARY REPORT — Worksheet 4.3

Site Name: Former Shell Service Station, WIC #204-6852-1108 Date Completed: June 18, 1997

Site Location: 15275 Washington Avenue, San Leandro, California Completed By: Weiss Associates

EXPOSURE FACTOR CHECKLIST

Instructions: • *Tier 2 Evaluation: Indicate use of either a Reasonable Maximum Exposure (RME) factor or a site-specific exposure factor for both residential and commercial / industrial points of exposure (POEs), as appropriate for each exposure pathway. For Tier 2, data is required for Global Factors and for complete pathways only (see Worksheet 4.4).*

		RESIDENTIAL POE		COMMERCIAL/ INDUSTRIAL POE	
		RME	Site-Specific	RME	Site-Specific
GLOBAL FACTORS		■ TO SELECT			
AT_c	Averaging time for carcinogens	■ 70 yrs	☐ _____	☐ 70 yrs	☐ _____
	Averaging time for non-carcinogens	■ = ED	☐ _____	☐ = ED	☐ _____
BW	Body weight -Adult	■ 70 kg	☐ _____	☐ 70 kg	☐ _____
	-Child (1-6 yrs)	■ 15 kg	☐ _____	☐ NA	☐ _____
ED	Exposure duration	■ 30 yrs	☐ _____	☐ 25 yrs	☐ _____
AIR EXPOSURE FACTORS		■ COMPLETE (provide data)		☐ NOT COMPLETE (skip)	
EF	Exposure frequency (inhalation)	■ 350 dy/yr	☐ _____	☐ 250 dy/yr	☐ _____
IR_{al}	Daily indoor inhalation rate	■ 15 m^3/dy (24-hr/dy)	☐ _____	☐ 20 m^3/dy (8-hr/dy)	☐ _____
IR_{ao}	Daily outdoor inhalation rate	■ 20 m^3/dy (24-hr/dy)	☐ _____	☐ 20 m^3/dy (8-hr/dy)	☐ _____
POTABLE WATER USE EXPOSURE FACTORS		■ COMPLETE (provide data)		☐ NOT COMPLETE (skip)	
EF	Exposure frequency (ingestion/showering)	■ 350 dy/yr	☐ _____	☐ 250 dy/yr	☐ _____
IR_w	Daily water ingestion rate	■ 2 L/dy (24-hr/dy)	☐ _____	☐ 1 L/dy (8-hr/dy)	☐ _____
EP_{sh}	Exposure period (showering)	■ 12 min/dy	☐ _____	☐ 12 min/da	☐ _____
SA_w	Skin surface area (showering) -Adult (70 kg)	■ 0.86 m^2	☐ _____	☐ 0.86 m^2	☐ _____
SOIL EXPOSURE FACTORS		☐ COMPLETE (provide data)		■ NOT COMPLETE (skip)	
EF	Exposure Frequency -Dermal Contact	☐ 350 dy/yr	☐ _____	☐ 40 dy/yr	☐ _____
	-Soil Ingestion	☐ 350 dy/yr	☐ _____	☐ 250 dy/yr	☐ _____
SA_s	Skin surface area (soil contact) -Adult (18 to 31 yrs, 70 kg)	☐ 0.58 m^2	☐ _____	☐ 0.58 m^2	☐ _____
	-Child (1 - 17 yrs, 35 kg)	☐ 0.20 m^2	☐ _____	☐ NA	☐ _____
M	Soil to skin adherance factor	☐ 1.0 mg/cm^2	☐ _____	☐ 1.0 mg/cm^2	☐ _____
IR_s	Soil ingestion rate - Age-adjusted average	☐ 114 mg-yr /kg-dy	☐ _____	☐ NA	☐ _____
	-Adult (7 to 31 yrs, 70 kg)	☐ 100 mg/dy (24-hr/dy)	☐ _____	☐ 50 mg/dy (8-hr/dy)	☐ _____
	-Child (1 - 6 yrs, 15 kg)	☐ 200 mg/dy (24-hr/dy)	☐ _____	☐ NA	☐ _____
SURFACE WATER EXPOSURE FACTORS		☐ COMPLETE (provide data)		■ NOT COMPLETE (skip)	
EF	Exposure Frequency -Fish consumption	☐ 350 dy/yr	☐ _____	☐ NA	☐ _____
	-Swimming	☐ 7 dy/yr	☐ _____	☐ NA	☐ _____
IR_f	Daily fish intake rate -Freshwater	☐ 10 g/dy	☐ _____	☐ NA	☐ _____
	-Saltwater	☐ 15 g/dy	☐ _____	☐ NA	☐ _____
SA_w	Skin surface area (swimming) -Adult (70 kg)	☐ 0.86 m^2	☐ _____	☐ NA	☐ _____
EP_{sw}	Exposure period (swimming)	☐ 2.6 hrs/dy	☐ _____	☐ NA	☐ _____

Site Location: 15275 Washington Avenue, San Leandro, California Completed By: Weiss Associates

SELECTION OF EXPOSURE PATHWAYS FOR TIER 2 EVALUATION

Instructions: *Exposure pathways selection of contaminant pairs for Tier 2 evaluation involves the following steps:*

1) Identify potentially complete exposure pathways from Tier 1.

2) Identify those pathways for which one or more COCs exceed the Tier 1 RBSLs

3) Fill in the COCs with RME concentrations exceeding the Tier 1 RBSLs

4) Check yes for each pathway that is potentially complete and has one or more COCs whose RME concentrations exceed the Tier 1 RBSL

Notes:
RBSL = Risk-Based Screening Level
POE = Point of Exposure
COC = Constituent of Concern
NM = Not Measured

PATHWAY	Potentially Complete Pathway?	Pathway Tier 1 RBSL Exceeded?	CONSTITUENTS: Identify COCs > Tier 1 RBSL	Evaluate at Tier 2?
AIR EXPOSURE PATHWAYS (■ TO SELECT)				
1) Surface Soils: Vapor Inhalation and Dust Ingestion	☐ Current ■ Potential	☐ Yes ■ No ☐ NA	None	■ No ☐ Yes - Current ☐ Yes - Future
2) Subsurface Soils: Volatilization to Ambient Air	■ Current ■ Potential	■ Yes ☐ No ☐ NA	Benzene	☐ No ■ Yes - Current ■ Yes - Future
3) Subsurface Soils: Volatilization to Enclosed Space	■ Current ■ Potential	■ Yes ☐ No ☐ NA	Benzene	☐ No ■ Yes - Current ■ Yes - Future
4) Ground water: Volatilization to Ambient Air	■ Current ■ Potential	☐ Yes ■ No ☐ NA	None	■ No ☐ Yes - Current ☐ Yes - Future
5) Ground water: Volatilization to Enclosed Space	■ Current ■ Potential	■ Yes ☐ No ☐ NA	Benzene	☐ No ■ Yes - Current ■ Yes - Future
GROUND WATER EXPOSURE PATHWAYS				
6) Soil: Leaching to Ground water: Ingestion	■ Current ■ Potential	■ Yes ☐ No ☐ NA	Benzene	☐ No ■ Yes - Current ■ Yes - Future
7) Dissolved or Free-Phase Ground water Plume: Ingestion	■ Current ■ Potential	■ Yes ☐ No ☐ NA	Benzene	☐ No ■ Yes - Current ■ Yes - Future
SOIL EXPOSURE PATHWAY				
8) *Surface Soils:* Dermal Contact /Ingestion	■ Current ■ Potential	☐ Yes ■ No ☐ NA	None	■ No ☐ Yes - Current ☐ Yes - Future

NA = Not Applicable

RBCA SUMMARY REPORT — Worksheet 5.1

Site Name: Former Shell Service Station, WIC #204-6852-1108 Date Completed: June 18, 1997

Site Location: 15275 Washington Avenue, San Leandro, California Completed By: Weiss Associates

SITE PARAMETER CHECKLIST FOR RISK-BASED SCREENING LEVELS

Instructions: *For Tier 1 evaluation (generic screening levels), review specified default parameters (*) to ensure values are conservative for site. For Tier 2 Option 1 SSTL calculation (site-specific screening levels), provide site-specific values for sensitive parameters (§). Indicate parameter value used in evaluation by completing check box (■).*

Note: * Confirm conservatism of these values for Tier 1 evaluation.
§ Provide site-specific measurement or estimate for Tier 2 evaluation.

		Default Value Used		Site-Specific Value Used		
Soil Parameters						
	soil type	■	sandy/clayey soil	□		*§
Θ_T	Soil porosity	□	0.38 (dim)	■	0.25	§
Θ_{ws}	water content - vadose zone	□	0.12 (dim)	■	0.04	§
Θ_{as}	air content - vadose zone ($= \Theta_T - \Theta_{ws}$)	□	0.26 (dim)	■	0.21	
Θ_{wcap}	water content - capillary fringe	■	0.342 (dim)	□		
Θ_{acap}	air content - capillary fringe ($= \Theta_T - \Theta_{wcap}$)	■	0.038 (dim)	□		
ρ_s	Soil density	□	1.7 g/cm^3	■	2.0	§
foc	mass fraction of organic carbon in soil	□	0.01 (dim)	■	0.01	§
Ls	Depth to contaminated soil	□	100 cm	■	122	§
Lgw	Depth to groundwater	□	300 cm	■	305	§
h_{cap}	capillary zone thickness	■	5 cm	□		
hv	vadose zone thickness ($=$ Lgw - ho)	□	295 cm	■	300	
pH	Soil/water pH	■	6.5	□		
Groundwater Parameters						
I	Water infiltration rate	■	30 cm/yr	□		§
V_{gw}	groundwater velocity	□	82.0 ft/yr	■	144	*§
δ_{gw}	groundwater mixing zone depth	■	200 cm	□		*§
DF	aquifer dilution factor ($= 1 + V_{gw}\,\delta_{gw}/(IW)$)	■	12.1	□		
Surface Parameters						
U_{air}	Amb. air velocity in mixing zone	■	225 cm/s	□		*§
δ_{air}	Mixing zone height	■	200 cm	□		*§
A	Contaminated Area	■	2250000 cm^2	□		
W	Width of Contaminated Area	■	1500 cm	□		§
d	Thickness of Surficial Soils	■	100 cm	□		§
Pe	Particulate areal emission rate	■	2.17E-10 g/cm^2-s	□		§
Building Parameters						
L_{crack}	Foundation crack thickness	■	15 cm	□		
η	Foundation crack fraction	■	0.01 (dim)	□		
Lb_r	Building Volume/Foundation Area Ratio (res.)	■	200 cm	□		
Lb_o	Building Volume/Foundation Area Ratio (com./ind.)	■	300 cm	□		
ER_r	Building vapor volume exchange rate (res.)	□	12 dy^{-1}	□		
ER_o	Building vapor volume exchange rate (com./ind.)	■	20 dy^{-1}	□		

Discussion: *Provide rationale for default parameter revision; discuss additional site-specific features of note; etc.*

- Soil porosity, soil density, water and air contents were determined by soil property analysis of collected samples
- Depth to contaminated soil is 4 ft.
- Depth to ground water is 10 ft.

(continue on next page if needed)

RBCA SUMMARY REPORT

Worksheet 5.2

Site Name: Former Shell Service Station, WIC #204-6852-1108 Date Completed: June 18, 1997

Site Location: 15275 Washington Avenue, San Leandro, California Completed By: Weiss Associates

SUMMARY OF MEDIA INVESTIGATION & CHEMICAL ANALYSES

		Site Media Analyzed (■ TO SELECT)					
		Ground-water	Surface Soil	Subsurf. Soil	Soil Vapor	Ambient Vapor	Surface Water
	Applicable?	■	■	■	■	■	□
	Sampled?	■	■	■	■	■	□
Chemical Analysis	EPA Analysis Method	•ana. = chemical analyzed; •det. = chemical detected					
Organic Chemicals		ana./det.	ana./det.	ana./det.	ana./det.	ana./det.	ana./det.
Volatile Organics	*8240 / 624*	■ ■	□ □	■ ■	□ □	□ □	□ □
Semi-Volatile Organics	*8270 / 625*	□ □	□ □	□ □	□ □	□ □	□ □
Polynuclear Aromatic Hydrocarbons	*8310 / 8270*	□ □	□ □	□ □	□ □	□ □	□ □
Purgeable Aromatics	*8020 / 602*	■ ■	■ ■	■ ■	■ ■	■ □	□ □
Total Petroleum Hydrocarbons (GC)	*8015G / 8015D*	■ ■	■ ■	■ ■	■ ■	■ □	□ □
Halogenated Organic Chemicals		ana./det.	ana./det.	ana./det.	ana./det.	ana./det.	ana./det.
Halogenated Volatile Organics	*8010 / 601*	■ □	□ □	□ □	□ □	□ □	□ □
Organochlorine & PCBs	*8080*	□ □	□ □	□ □	□ □	□ □	□ □
Inorganic Chemicals		ana./det.	ana./det.	ana./det.	ana./det.	ana./det.	ana./det.
Metals (Lead)	*6010 / 7xxx series*	■ ■	□ □	■ ■	□ □	□ □	□ □
Others		ana./det.	ana./det.	ana./det.	ana./det.	ana./det.	ana./det.
• Organic Lead		■ ■	□ □	■ ■	□ □	□ □	□ □
• Total Oil and Grease		□ □	□ □	■ ■	□ □	□ □	□ □
• E-Coli form (total and fecal)		■ ■	□ □	□ □	□ □	□ □	□ □
• Chloride,nitrate,TDS		■ ■	□ □	□ □	□ □	□ □	□ □
• Physical Properties		□ □	■ □	■ □	□ □	□ □	□ □

DISCUSSION OF MEDIA INVESTIGATION & CHEMICAL ANALYSES

Items for discussion include: •Selection of sampled media •Selected analysis methods •Planned additional sampling

Items	
Soil	Soil samples from the waste oil tank area, the former UST area and from soil borings were analyzed for volatile organic carbons, purgeable aromatics, total petroleum hydrocarbons, organic lead, and total oil and grease prior to 1997.
Soil Vapor	Soil vapor samples were collected to define the extent of the source area in soils prior to 1997. A soil vapor profile survey was conducted in 1997 to assess the potential exposure due to vapors migrating to ground surface from soil and ground water beneath the site. Vapor samples were anlayzed for BTEX compounds, MTBE, petroleum hydrocarbons, and gas constituents
Ground Water	Ground water monitoring has been conducted at the site since 1989 to determine the extent and migration of of the hydrocarbon-impacted ground water. Additional water samples were collected in August 1996 and analyzed for E. Colliform (total and fecal), chloride, nitrate, total dissolved solids, and halogenated volatile organic carbons.
Surface and Sub-surface Soils	Soil samples were collected in 1997 to determine any impact to site soils. These soil samples were taken from across the site and analyzed for petroleum hydrocarbons, BTEX compounds, and physical properties.

Site Name: Former Shell Service Station, WIC #204-6852-1108 Date Completed: June 18, 1997

Site Location: 15275 Washington Avenue, San Leandro, California Completed By: Weiss Associates

SUMMARY OF SOURCE ZONE CHARACTERISTICS

Instructions: *Provide information regarding presence and dimensions of affected soil and groundwater zones. For each affected medium, list constituents of concern (COCs) and representative concentration data on Worksheets 5.4 - 5.6. Reference figures and Sample #'s used to establish source are characteristics for each media*

AFFECTED SURFACE SOILS (< 3 ft BGS) (■ TO SELECT)

- ☐ Present
- ☐ Not Present
- ■ Not Measured

If present, complete the following[1]:

- Maximum areal extent (ft^2):
- Width of affected zone (ft):
- Length of affected zone (ft) :
- Depth interval (ft,BGS):

(Provide COC data on Worksheet 5.4)

(1) Surface soil concentrations did not exceed Tier 1 RBSLs.

AFFECTED SUBSURFACE SOILS (> 3 ft BGS)

- ■ Present
- ☐ Not Present
- ☐ Not Measured

If present, complete the following[2]:

• Depth to top of affected soil (ft) (min. 3 ft, BGS):	4	*(Provide COC data*
• Depth to base of affected soil (ft, BGS):	10	*on Worksheet 5.5)*
• Maximum areal extent (ft^2):	28,800	(approx. 240 x 120 ft)

(2) The maximum extent of impacted soils was conservatively determined by the area enclosed in between wells S-9, S-10, S-11, S-12, S-15, and S-16. The area that encloses the western product island, former waste oil tank and the former USTs is about 6,400 ft^2 (80 x 60 ft).

AFFECTED GROUNDWATER

- ■ Present
- ☐ Not Present
- ☐ Not Measured

If present, complete the following[3]:

• Maximum areal extent (ft^2):	57,600	(approx. 240 x 240 ft)
• Length of plume (ft):	240	*(Provide COC data*
• Width of plume (ft):	240	*on Worksheet 5.6)*
• Depth to top of affected water-bearing unit (ft, BGS):	10	
• Depth to base of plume (ft, BGS):	16	

(3) The maximum areal extent of the impacted ground water was conservatively determined by the area enclosed by wells S-11, S-12, S-13, S-15, S-16, S-17, and S-18, which define the ND line.

OTHER SOURCE MEDIUM

- ☐ Present
- ■ Not Present

If present, describe nature of material and dimensions:

(Provide COC data on separate table)

RBCA SUMMARY REPORT

Worksheet 5.5

Site Name: Former Shell Service Station, WIC #204-6852-1108 Date Completed: June 18, 1997

Site Location: 15275 Washington Avenue, San Leandro, California Completed By: Weiss Associates

SUBSURFACE SOIL CONCENTRATION DATA SUMMARY (>3 FT BGS)

Source of Data: Vadose Zone Characterization Report, June 1997, Weiss Associates.

Sample ID or Sample Set Used: SG-03, SG-04, and SG-07 at multiple depths

Worse Case Depth to Max. Impact 4 ft

Sample Date: May 5, 1997

Methodology for Establishing Representative Concentrations:

For site surface soils, the representative concentration selection is the Maximum of positively detected results from soil samples > 3 ft BGS within the known source area.

This method establishes a representative concentration appropriate to conservatively evaluate subsurface soil exposure pathways.

CONSTITUENTS DETECTED		ANALYTICAL METHOD		SAMPLE POPULATION		DETECTED CONCENTRATIONS			SELECTED REPRESENTATIVE CONC. (mg/kg)
CAS No.	Name	Method No.	Typical Detection Limit (mg/kg)	No. of Samples	No. of Detects	Max Conc. (mg/kg)	Mean Conc. (mg/kg)	UCL Conc. (mg/kg)	
71-43-2	Benzene	8010	0.005	8	4	10	4.2	NC	10

NC- Not Calculated.

RBCA SUMMARY REPORT

Worksheet 5.6

Site Name: Former Shell Service Station, WIC #204-6852-1108 Date Completed: June 18, 1997

Site Location: 15275 Washington Avenue, San Leandro, California Completed By: Weiss Associates

GROUNDWATER CONCENTRATION DATA SUMMARY

Source of Data: Quarterly Monitoring data from July 9, 1996 to April 8, 1997

Sample ID or Sample Set Used: S-1 through S-18 and SR-1

Worse Case Depth to Max. Impact 6 ft

Sample Date: April 8, 1997

Methodology for Establishing Representative Concentrations:

The representative concentration in ground water is the [Arithmetic] Mean of the last 4 quarters of monitoring data for the most highly impacted [onsite/offsite] within the known source area.

This method establishes a representative concentration appropriate to conservatively evaluate ground water exposure pathways.

CONSTITUENTS DETECTED		ANALYTICAL METHOD		SAMPLE POPULATION		DETECTED CONCENTRATIONS			SELECTED REPRESENTATIVE CONC. (mg/Lg)
CAS No.	Name	Method No.	Typical Detection Limit (mg/Lg)	No. of Samples	No. of Detects	Max Conc. (mg/Lg)	Mean Conc. (mg/Lg)	UCL Conc. (mg/Lg)	
71-43-2	Benzene	8010	0.0005	25	15	1.4	0.45	NC	1.4

NC - Not Calculated.

Site Name: Former Shell Service Station, WIC #204-6852-1108 Date Completed: June 18, 1997

Site Location: 15275 Washington Avenue, San Leandro, California Completed By: Weiss Associates

TIER 2 EXPOSURE PATHWAY TRANSPORT PARAMETERS

Instructions: For complete exposure pathways, provide site-specific values for transport parameters. In absence of direct measurements, default values may be selected for some parameters, as shown below. If no default value shown, site-specific value must be provided.

TRANSPORT PARAMETER	SITE-SPECIFIC VALU (INPUT VALUE BELOW)	DEFAULT VALUE (■ TO SELECT)
AIR PARAMETERS		
δ_{air} Air mixing zone height (cm)		■ 200
U_{air} Ambient air velocity in mixing zone (cm/sec)		■ 225
Pe Soil particulate areal emission rate (g/cm^2-sec)		■ 2.17E-10
σ_y Transverse air dispersion coeff. (m)		■ 100
σ_z Vertical air dispersion coeff. (m)		■ 10
GROUNDWATER PARAMETERS		
δ_{gw} Groundwater mixing zone depth (cm)		■ 200
I Water infiltration rate (cm/yr)		■ 30
V_{gw} Groundwater Darcy velocity (ft/yr)	144	
K Saturated hydraulic conductivity (cm/sec)	0.0036	
i_{grad} Lateral groundwater flow gradient (dim)	0.004	
$(BC)_i$ Available biodegradation capacity of electron acceptors for constituent *i*		
x Distance to POE from point of maximum COC concentration in groundwater (ft)	180	
α_x Longitudinal groundwater dispersion coeff. (cm)		■ 10% of x
α_y Transverse groundwater dispersion coeff. (cm)		■ 33% of α_x
α_z Vertical groundwater dispersion coeff. (cm)		■ 5% of α_z
SOIL PARAMETERS		
Capillary zone thickness (cm)		■ 5
Vadose zone thickness (ft)	10 ft	
Soil bulk density (g/cm^3)	2.0	
Fraction organic carbon in soil leaching zone (dim)	0.01	
Fraction organic carbon in water-bearing unit (dim)		■ 0.001
Depth to groundwater (cm)	304.8	
Soil porosity (dim)	0.25	
Soil volumetric water content (dim)		
• Capillary zone		■ 0.342
• Vadose zone	0.04	□ 0.12
• Foundation crack		■ 0.12

Site Name: Former Shell Service Station, WIC #204-6852-1108 Date Completed: June 18, 1997

Site Location: 15275 Washington Avenue, San Leandro, California Completed By: Weiss Associates

TIER 2 EXPOSURE PATHWAY TRANSPORT PARAMETERS CONTINUED

TRANSPORT PARAMETER		SITE-SPECIFIC VALU (INPUT VALUE BELOW)	DEFAULT VALUE (■ TO SELECT)	
SOIL PARAMETERS (Continued)				
	Soil volumetric air content (dim)			
Θ_{acap}	•Capillary zone		■ 0.38	
Θ_{as}	•Vadose zone	0.21	☐ 0.26	
Θ_{acrack}	•Foundation crack		■ 0.26	
d	Thickness of surficial soil zone (cm)		■ 100 cm	
BUILDING PARAMETERS				
			Resid.	Comm/ Ind.
L_b	Building volume/area ratio (cm)		■ 200	■ 300
ER	Building air exchange rate (dy-1)		■ 12	■ 20
L_{crack}	Foundation crack thickness (cm)		■ 15	
η	Foundation crack fraction		■ 0.01	

Additional Information:

RBCA SUMMARY REPORT

Worksheet 8.2

Site Name: Former Shell Service Station, WIC #204-6852-1108 Date Completed: June 18, 1997

Site Location: 15275 Washington Avenue, San Leandro, California Completed By: Weiss Associates

SUBSURFACE SOIL SSTL VALUES (≥ 3 FT BGS) - COMMERCIAL/INDUSTRIAL OR RESIDENTIAL RECEPTORS

SSTL Calculation Option:

	TR	HI (for HQ)
☐ Option 1: Site-Specific Screening Level		
■ Option 2: Individual Constituent Limits	10^{-6} and MCL	
☐ Option 3: Cumulative Constituent Limits		

Instructions: *Specify target risk limits upon which Tier 2 site-specific screening levels (SSTLs) are based. Identify exposure pathways evaluated at Tier 2 for site (■ = complete). Record site sample measurements for constituents of concern (COCs) and corresponding SSTL values for complete pathways. Identify minimum SSTL value for each COC. Note whether site concentration exceeds minimum SSTL value.*

CONSTITUENTS OF CONCERN		REPRESENTATIVE CONC.	SSTL RESULTS FOR COMPLETE EXPOSURE PATHWAYS (■ IF COMPLETE)				
			■ Leaching to Grdwtr.	■ Vapor Inhal. Outdoor Air	■ Vapor Inhal. Indoor Air	Minimum Value	SSTL Exceeded?
CAS No.	Name	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	■ If yes
71-43-2	Benzene	10	17	204	0.25	0.25	■
							☐
							☐
							☐
							☐
							☐
							☐
							☐
							☐
							☐
							☐
							☐

Note: 1) See Worksheet 4.3 for identification of Complete Pathways.
2) See Worksheet 4.5 for applicable Exposure Scenarios and Risk Goals.
3) See Worksheet 5.4 for derivation of Representative Concentration for each COC in surface soil source zone.
TR = Target risk limit for excess lifetime carcinogenic risk.
HQ = Hazard quotient for individual constituent non-carcinogenic effects.
HI = Hazard index for cumulative constituent non-carcinogenic effects.
RGS = Selected risk level not exceeded for pur compound present at any concentration in soil.

RBCA SUMMARY REPORT

Worksheet 8.2

Site Name: Former Shell Service Station, WIC #204-6852-1108 Date Completed: June 18, 1997

Site Location: 15275 Washington Avenue, San Leandro, California Completed By: Weiss Associates

GROUNDWATER SSTL VALUES

SSTL Calculation Option:

	TR	HI (or HQ)
☐ Option 1: Site-Specific Screening Level		
■ Option 2: Individual Constituent Limits	10^{-5} and MCL	
☐ Option 3: Cumulative Constituent Limits		

Instructions: *Specify target risk limits upon which Tier 2 site-specific screening levels (SSTLs) are based. Identify exposure pathways evaluated at Tier 2 for site (■ complete). Record site sample measurements for constituents of concern (COCs) and corresponding SSTL values for complete pathways. Identify minimum SSTL value for eac COC. Note whether site concentration exceeds minimum SSTL value.*

CONSTITUENTS OF CONCERN		REPRESENTATIV CONC.	SSTL RESULTS FOR COMPLETE EXPOSURE PATHWAYS (■ IF COMPLETE)				
			■ Grdwtr Ingestion	☐ VoL to Ambient Air	■ VoL to Indoor Air	Minimum Value	SSTL Exceeded?
CAS No.	Name	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	■ If yes
71-43-2	Benzene	1.4	2.0		0.86	0.86	■
							☐
							☐
							☐
							☐
							☐
							☐
							☐
							☐
							☐

Note: 1) See Worksheet 4.3 for identification of Complete Pathways.
2) See Worksheet 4.5 for applicable Exposure Scenarios and Risk Goals.
3) See Worksheet 5.6 for derivation of Representative Concentration for each COC in groundwater source zone.
TR = Target risk limit for excess lifetime carcinogenic risk.
HQ = Hazard quotient for individual constituent non-carcinogenic effects.
HI = Hazard index for cumulative constituent non-carcinogenic effects.
>S = At pure compound solubility, selected risk is not exceeded.

APPENDIX A

Parameters and calculations for evaluating exposure pathways via benzene volatilization from soil and ground water.

Parameters

The following soil properties were used in the calculations based on measurements for soil samples collected at the site.

Soil bulk density:	2,000	kg/m3
Soil porosity:	0.25	
Air content:	0.21	
Water content:	0.04	
Fraction organic carbon:	0.01	

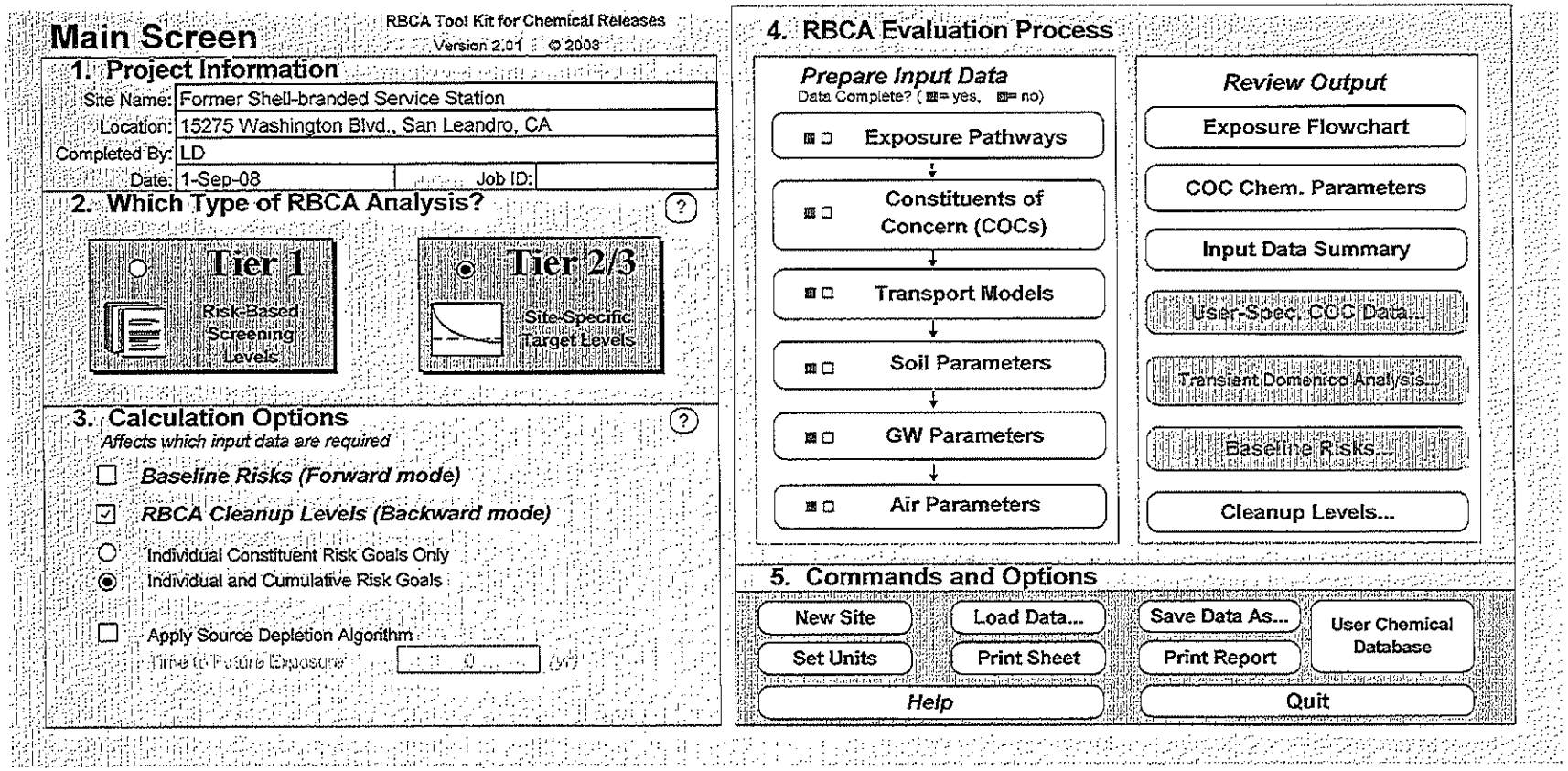
Following parameters were used in the calculation as site representative conditions.

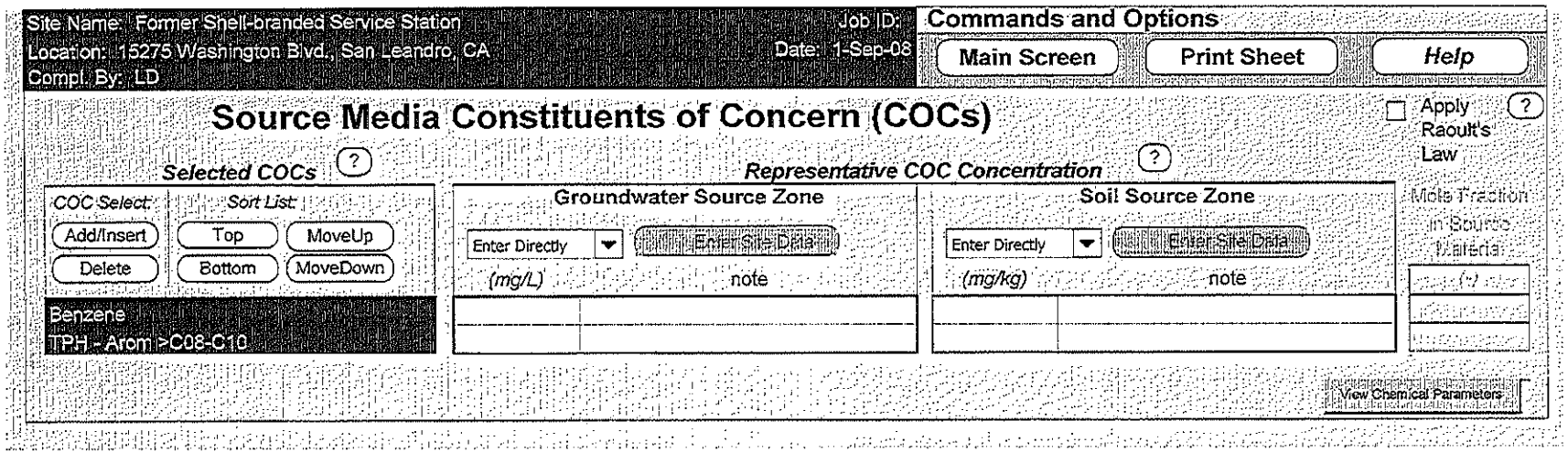
Depth to contamination in soil:	4 ft.	Boring SG-03-4-6
Vertical thickness of contaminated soil:	6 ft.	4 ft to minimum ground water level at 10 ft.
Thickness of shallow aquifer:	10 ft.	Maximum thickness based on water levels.

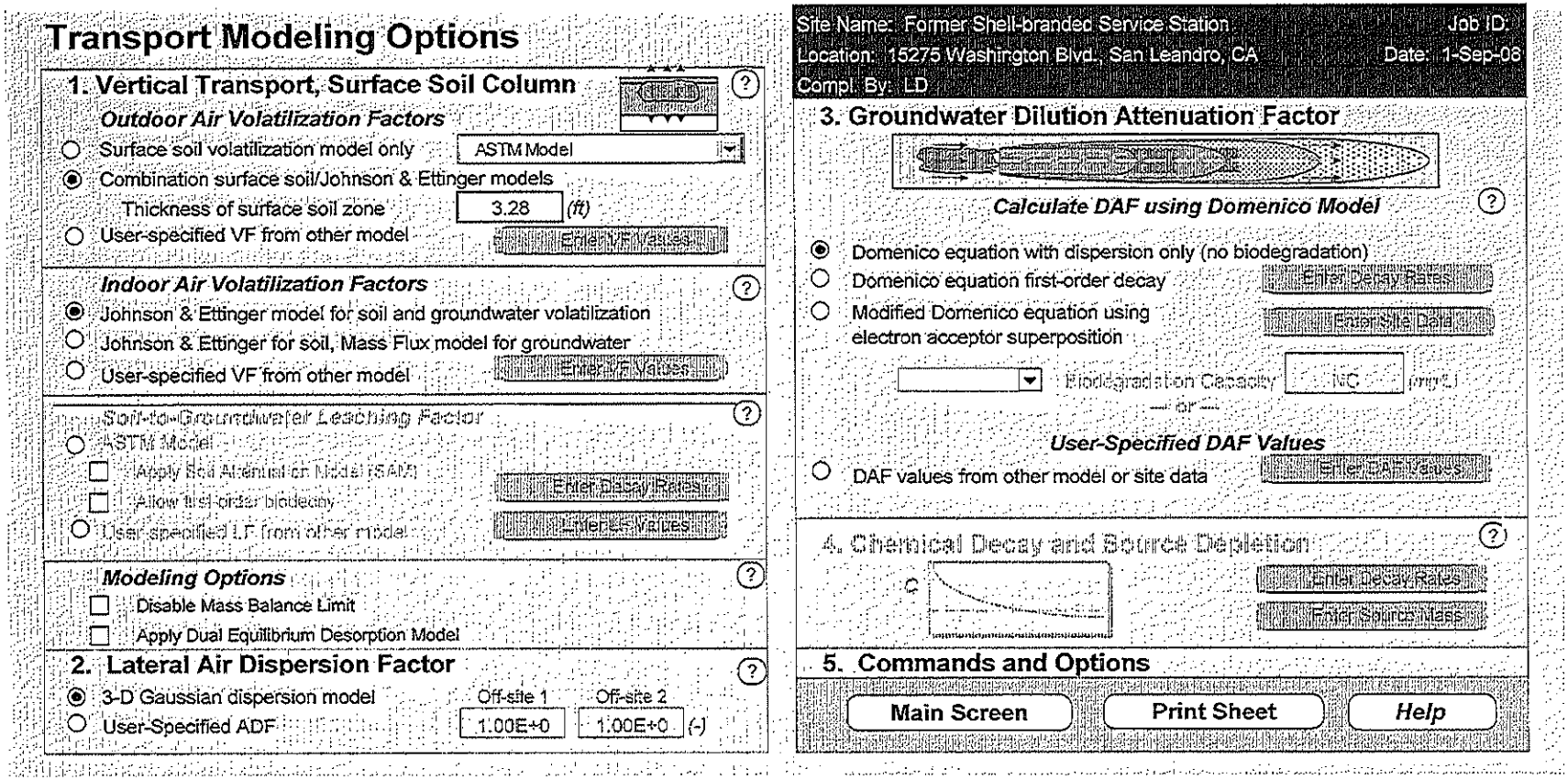
ASTM default parameters were used for other variables.

DELTA CONSULTANTS

2008


Main Screen
RBCA Tool Kit for Chemical Releases
Version 2.01 © 2008
1. Project Information
Site Name: Former Shell-branded Service Station
Location: 15275 Washington Blvd., San Leandro, CA
Completed By: LD
Date: 1-Sep-08
Job ID:
2. Which Type of RBCA Analysis?
Tier 1
Risk-Based Screening Levels
Tier 2/3
Site-Specific Target Levels
3. Calculation Options
Affects which input data are required
Baseline Risks (Forward mode)
RBCA Cleanup Levels (Backward mode)
Individual Constituent Risk Goals Only
Individual and Cumulative Risk Goals
Apply Source Depletion Algorithm
Time to Future Exposure
0
(yr)
4. RBCA Evaluation Process
Prepare Input Data
Data Complete? (= yes, = no)
Exposure Pathways
Constituents of Concern (COCs)
Transport Models
Soil Parameters
GW Parameters
Air Parameters
Review Output
Exposure Flowchart
COC Chem. Parameters
Input Data Summary
User-Spec. COC Data...
Transient Domenico Analysis...
Baseline Risks...
Cleanup Levels...
5. Commands and Options
New Site
Load Data...
Save Data As...
User Chemical Database
Set Units
Print Sheet
Print Report
Help
Quit


Site Name: Former Shell-branded Service Station
Location: 15275 Washington Blvd., San Leandro, CA
Compl. By: LD
Job ID:
Date: 1-Sep-08
Commands and Options
Main Screen
Print Sheet
Help
Source Media Constituents of Concern (COCs)
Apply Raoult's Law
Selected COCs
COC Select:
Sort List:
Add/Insert
Delete
Top
Bottom
MoveUp
MoveDown
Benzene
TPH - Arom >C08-C10
Representative COC Concentration
Groundwater Source Zone
Enter Directly
Enter Site Data
(mg/L)
note
Soil Source Zone
Enter Directly
Enter Site Data
(mg/kg)
note
Mole Fraction in Source Materials
View Chemical Parameters


Transport Modeling Options
1. Vertical Transport, Surface Soil Column
Outdoor Air Volatilization Factors
Surface soil volatilization model only
ASTM Model
Combination surface soil/Johnson & Ettinger models
Thickness of surface soil zone
3.28
(ft)
User-specified VF from other model
Enter VF Values
Indoor Air Volatilization Factors
Johnson & Ettinger model for soil and groundwater volatilization
Johnson & Ettinger for soil, Mass Flux model for groundwater
User-specified VF from other model
Enter VF Values
Soil-to-Groundwater Leaching Factor
ASTM Model
Apply Soil Attenuation Model (SAM)
Allow first-order biodecay
Enter Decay Rates
User-specified LF from other model
Enter LF Values
Modeling Options
Disable Mass Balance Limit
Apply Dual Equilibrium Desorption Model
2. Lateral Air Dispersion Factor
3-D Gaussian dispersion model
Off-site 1
Off-site 2
User-Specified ADF
1.00E+0
1.00E+0
(-)
Site Name: Former Shell-branded Service Station
Job ID:
Location: 15275 Washington Blvd., San Leandro, CA
Date: 1-Sep-08
Compl. By: LD
3. Groundwater Dilution Attenuation Factor
Calculate DAF using Domenico Model
Domenico equation with dispersion only (no biodegradation)
Domenico equation first-order decay
Enter Decay Rates
Modified Domenico equation using electron acceptor superposition
Enter Site Data
Biodegradation Capacity
NC
(mg/L)
— or —
User-Specified DAF Values
DAF values from other model or site data
Enter DAF Values
4. Chemical Decay and Source Depletion
C
Enter Decay Rates
Enter Source Mass
5. Commands and Options
Main Screen
Print Sheet
Help

Site-Specific Soil Parameters

Site Name: Former Shell-branded Service Station — Job ID:
Location: 15275 Washington Blvd., San Leandro, CA — Date: 1-Sep-08
Compl. By: LD

1. Soil Source Zone Characteristics

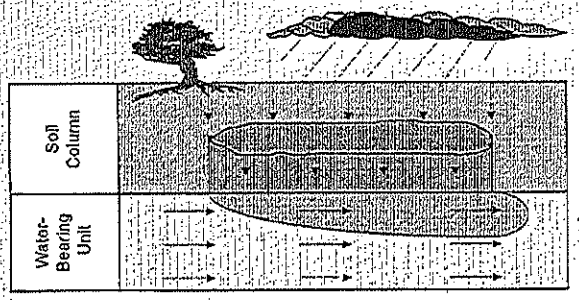
Hydrogeology

Depth to water-bearing unit	6	(ft)
Capillary zone thickness	0.95144357	(ft)
Soil column thickness	5.04855643	(ft)

Affected Soil Zone

Depth to top of affected soils	0	(ft)
Depth to base of affected soils	6	(ft)
Length of affected soil parallel to assumed GW flow direction		(ft)

	Res/Com	Construction	
Affected soil area	2025		(ft^2)
Length of affected soil parallel to assumed wind direction	45	45	(ft)



2. Surface Soil Column

Predominant USCS Soil Type

CL: Silty Clay

Calculate

	Vadose Zone	Capillary Fringe	
Volumetric water content	0.34	0.35	(-)
Volumetric air content	0.02	0.01	(-)
Total porosity	0.36		(-)
Dry bulk density	1.7		(kg/L)
Vertical hydraulic conductivity	0.000283465		(ft/d)
Vapor permeability	1.08E-16		(ft^2)
Capillary zone thickness	0.95144357		(ft)

Net Rainfall Infiltration

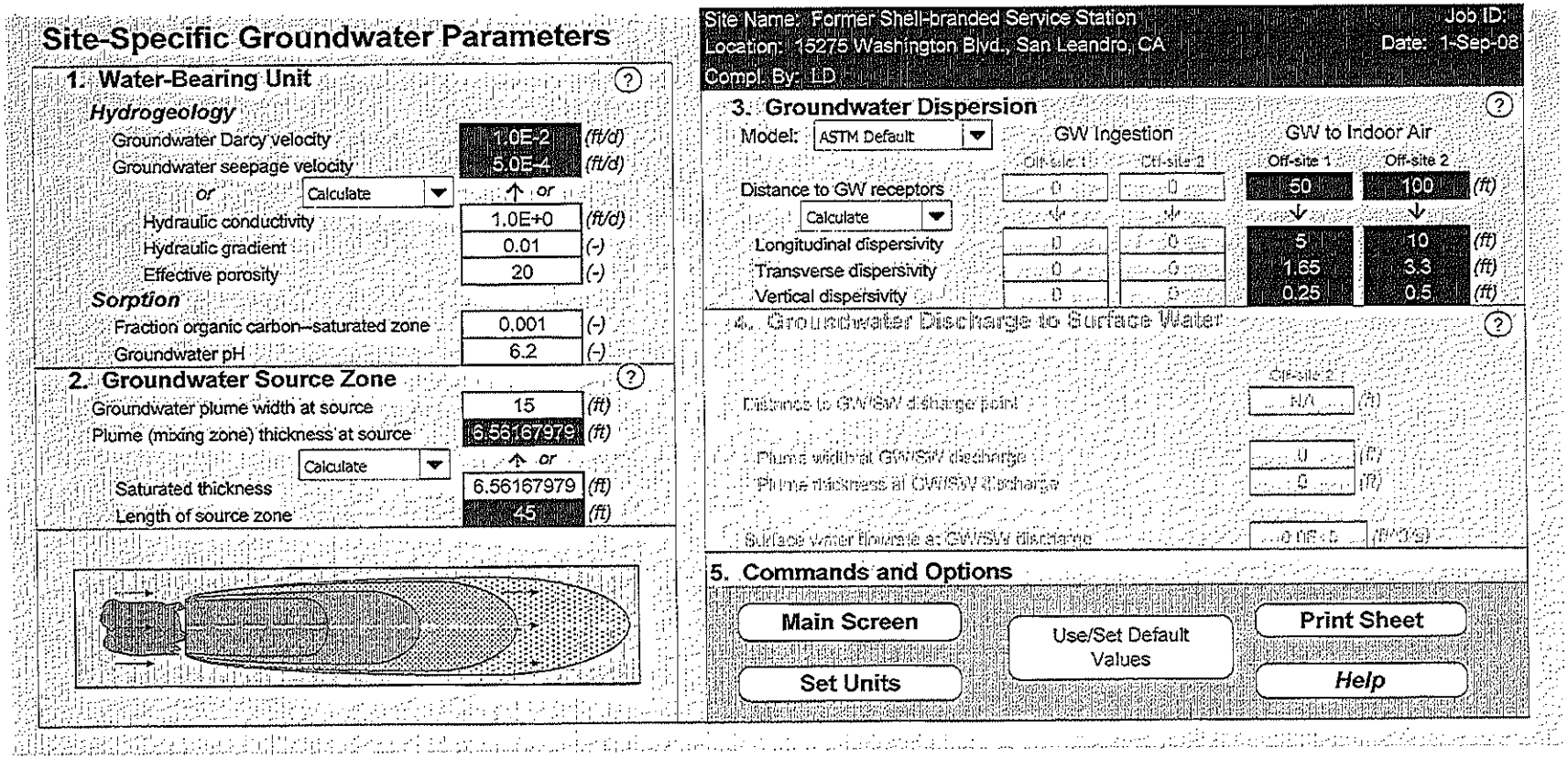
Net infiltration estimate	30	(in/yr)
or	Enter Directly	ft or
Average annual precipitation	0	(in/yr)

Partitioning Parameters

Fraction organic carbon - entire soil column	0.01	(-)
Fraction organic carbon - root zone	0.01	(-)
Soil/water pH	6.8	(-)

3. Commands and Options

Main Screen | Use/Set Default Values | Print Sheet
Set Units | | Help


Site-Specific Groundwater Parameters
Site Name: Former Shell-branded Service Station
Location: 15275 Washington Blvd., San Leandro, CA
Compl. By: LD
Job ID:
Date: 1-Sep-08
1. Water-Bearing Unit
Hydrogeology
Groundwater Darcy velocity 1.0E-2 (ft/d)
Groundwater seepage velocity 5.0E-4 (ft/d)
or Calculate or
Hydraulic conductivity 1.0E+0 (ft/d)
Hydraulic gradient 0.01 (-)
Effective porosity 20 (-)
Sorption
Fraction organic carbon--saturated zone 0.001 (-)
Groundwater pH 6.2 (-)
2. Groundwater Source Zone
Groundwater plume width at source 15 (ft)
Plume (mixing zone) thickness at source 6.56167979 (ft)
Calculate or
Saturated thickness 6.56167979 (ft)
Length of source zone 45 (ft)
3. Groundwater Dispersion
Model: ASTM Default
GW Ingestion
GW to Indoor Air
Off-site 1
Off-site 2
Distance to GW receptors 0 0 50 100 (ft)
Calculate
Longitudinal dispersivity 0 0 5 10 (ft)
Transverse dispersivity 0 0 1.65 3.3 (ft)
Vertical dispersivity 0 0 0.25 0.5 (ft)
4. Groundwater Discharge to Surface Water
Off-site 2
Distance to GW/SW discharge point N/A (ft)
Plume width at GW/SW discharge 0 (ft)
Plume thickness at GW/SW discharge 0 (ft)
Surface water flowrate at GW/SW discharge 0.0E+0 (ft^3/s)
5. Commands and Options
Main Screen
Use/Set Default Values
Print Sheet
Set Units
Help

Site-Specific Air Parameters

Site Name: Former Shell-branded Service Station | Job ID:
Location: 15275 Washington Blvd., San Leandro, CA | Date: 1-Sep-08
Compl. By: LD

1. Outdoor Air Pathway

Dispersion in Air

	Off-site 1	Off-site 2	
Distance to offsite air receptor	50	100	(ft)
Calculate			
Horizontal dispersivity	5.863729	11.25753	(ft)
Vertical dispersivity	4.005088	7.614947	(ft)

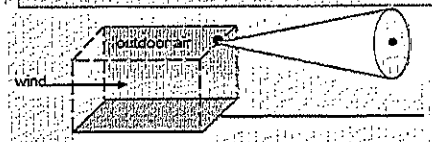
Air Source Zone

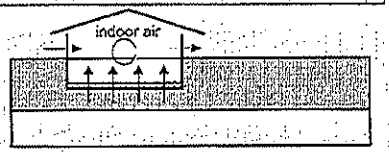
Air mixing zone height	6.56167979	(ft)
Ambient air velocity in mixing zone	7.381889764	(ft/s)
Inverse mean conc. [Q/C term]	79.25	

Particulate Emissions

Model: ASTM Model

Particulate Emission Factor	2.1E-12	(kg/m^3)
or Calculate		
Areal particulate emission flux	6.9E-14	(g/cm^2/s)
Fraction vegetative cover	0.5	(-)
Mean annual air velocity @ 7 m	15.7480315	
Equivalent 7m air vel. threshold	37.13510761	(ft/s)
Windspeed function [Fpo term]	0.224	(-)



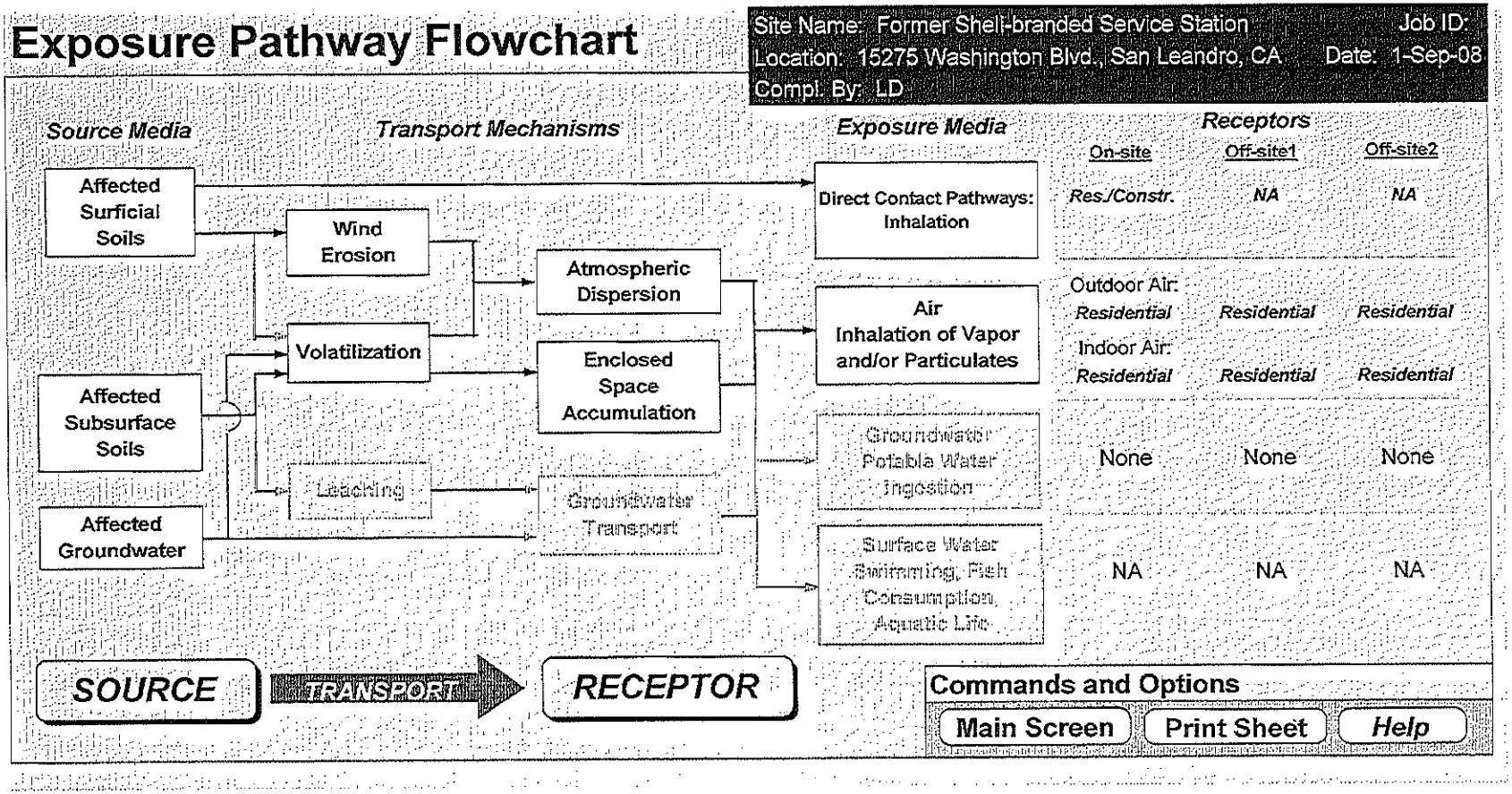


2. Indoor Air Pathway

	Residential	Commercial	
Building volume/area ratio	6.56168	9.84252	(ft)
Foundation area	753.4737	753.4737	(ft^2)
Foundation perimeter	160.7612	111.5486	(ft)
Building air exchange rate	1.4E-4	2.3E-4	(1/s)
Depth to bottom of foundation slab	0.492126	0.492126	(ft)
Convective air flow through cracks	0.0E+0	0.0E+0	(ft^3/s)
Foundation thickness	0.492125984		(ft)
Foundation crack fraction	0.001		(-)
Volumetric water content of cracks	0.12		(-)
Volumetric air content of cracks	0.26		(-)
Indoor/Outdoor differential pressure	0		(g/cm/s^2)
Building Volume	15526.91	15526.91	(ft^3)
Building Width Perpendicular to GW flow	31.52857	31.52857	(ft)
Building Length Parallel to GW flow	31.52857	31.52857	(ft)
Saturated Soil Zone Porosity	20		(-)
Vertical Dispersivity	0.020		(ft)
Groundwater Seepage Velocity	0.00		(cm/s)

3. Commands and Options

Main Screen | Use/Set Default Values | Print Sheet
Set Units | | Help


Exposure Pathway Flowchart
Site Name: Former Shell-branded Service Station
Job ID:
Location: 15275 Washington Blvd., San Leandro, CA
Date: 1-Sep-08
Compl. By: LD
Source Media
Transport Mechanisms
Exposure Media
Receptors
On-site
Off-site1
Off-site2
Affected Surficial Soils
Affected Subsurface Soils
Affected Groundwater
Wind Erosion
Volatilization
Leaching
Atmospheric Dispersion
Enclosed Space Accumulation
Groundwater Transport
Direct Contact Pathways: Inhalation
Air Inhalation of Vapor and/or Particulates
Groundwater Potable Water Ingestion
Surface Water Swimming, Fish Consumption, Aquatic Life
Res./Constr.
NA
NA
Outdoor Air:
Residential
Residential
Residential
Indoor Air:
Residential
Residential
Residential
None
None
None
NA
NA
NA
SOURCE
TRANSPORT
RECEPTOR
Commands and Options
Main Screen
Print Sheet
Help

RBCA SITE ASSESSMENT

Site Name: Former Shell-branded Service Station | Completed By: LD | Job ID:

Site Location: 15275 Washington Blvd., San Leandro, CA | Date Completed: 1-Sep-08 | 1 OF 1

GROUNDWATER SSTL VALUES

Target Risk (Class A & B) 1.0E-6

Target Hazard Quotient 1.0E+0

Groundwater DAF Option: Domenico - No Decay (One-directional vert. dispersion)

SSTL Results For Complete Exposure Pathways (Checked If Pathway is Complete)

CONSTITUENTS OF CONCERN		Representative Concentration	☐ Groundwater Ingestion / Discharge to Surface Water			■ Groundwater Volatilization to Indoor Air			■ Groundwater Volatilization to Outdoor Air			Applicable SSTL	SSTL Exceeded ?	Required CRF
			On-site (0 ft)	Off-site 1 (0 ft)	Off-site 2 (0 ft)	On-site (0 ft)	Off-site 1 (50 ft)	Off-site 2 (100 ft)	On-site (0 ft)	Off-site 1 (50 ft)	Off-site 2 (100 ft)			Only if "Yes" left
CAS No.	Name	(mg/L)	None	None	None	Residential	Residential	Residential	Residential	Residential	Residential	(mg/L)	"=" if yes	
71-43-2	Benzene					2.7E+0	7.4E+0	2.4E+1	>1.8E+3	>1.8E+3	>1.8E+3	2.7E+0	☐	NA
T-ar0810	TPH - Arom >C08-C10					>6.5E+1	>6.5E+1	>6.5E+1	>6.5E+1	>6.5E+1	>6.5E+1	>6.5E+1	☐	NA
NA	Total TPH mixture	0.0E+0	NA	NA	NA	NC	NC	NC	NC	NC	NC	NC	☐	NA

" = Chemical with user-specified data

">" indicates risk-based target concentration greater than constituent solubility value. NA = Not applicable. NC = Not calculated.

RBCA SITE ASSESSMENT

Site Name: Former Shell-branded Service Station
Site Location: 15275 Washington Blvd., San Leandro, CA

Completed By: LD
Date Completed: 1-Sep-08

Job ID:

SURFACE SOIL (0 - 3.3 ft)
SSTL VALUES

Target Risk (Class A & B): 1.0E-6
Target Hazard Quotient: 1.0E+0

Groundwater DAF Option: Domenico - No Decay (One-directional vert. dispersion)

SSTL Results For Complete Exposure Pathways (Checked if Pathway is Complete)

CONSTITUENTS OF CONCERN		Representative Concentration	☐ Soil Leaching to Groundwater Ingestion / Discharge to Surface Water			☐ Soil Leaching to Groundwater/ Groundwater Volatilization to Indoor Air			■ Soil Vol. to Indoor Air	■ Surface Soil Particulates to Outdoor Air				■ Direct Contact Pathways: Inhalation		Applicable SSTL	SSTL Exceeded ?	Required CRF
			On-site (0 ft)	Off-site 1 (0 ft)	Off-site 2 (0 ft)	On-site (0 ft)	Off-site 1 (50 ft)	Off-site 2 (100 ft)	On-site (0 ft)	On-site (0 ft)		Off-site 1 (50 ft)	Off-site 2 (100 ft)	On-site (0 ft)				Only if "yes" left
CAS No.	Name	(mg/kg)	None	None	None	None	None	None	Residential	Residential	Construction Worker	Residential	Residential	Residential	Construction Worker	(mg/kg)	"m" if yes	
71-43-2	Benzene								5.9E-1	>1.5E+3		>1.5E+3	>1.5E+3	4.5E+2	2.5E+4	5.9E-1	☐	NA
T-ar0810	TPH - Arom >C08-C10								>1.0E+3	>1.0E+3		>1.0E+3	>1.0E+3	3.3E+5	1.0E+6	3.3E+5	☐	NA
NA	Total TPH mixture	0.0E+0	NA	NA	NA	NA	NA	NA	NC	NC	NA	NC	NC	NC	NC	NC	☐	NA

* = Chemical with user-specified data

">" indicates risk-based target concentration greater than constituent residual saturation value. NA = Not applicable. NC = Not calculated.

RBCA SITE ASSESSMENT

Site Name: Former Shell-branded Service Station
Site Location: 15275 Washington Blvd., San Leandro, CA

Completed By: LD
Date Completed: 1-Sep-08

Job ID:

SUBSURFACE SOIL (3.3 - 6 ft) SSTL VALUES

Target Risk (Class A & B) 1.0E-6
Target Hazard Quotient 1.0E+0

Groundwater DAF Option: Domenico - No Decay (One-directional vert. dispersion)

SSTL Results For Complete Exposure Pathways (Checked if Pathway is Complete)

CONSTITUENTS OF CONCERN		Representative Concentration	☐ Soil Leaching to Groundwater Ingestion / Discharge to Surface Water			☐ Soil Leaching to Groundwater Groundwater Volatilization to Indoor Air			■ Soil Vol. to Indoor Air	■ Soil Volatilization to Outdoor Air			Applicable SSTL	SSTL Exceeded ?	Required CRF
			On-site (0 ft)	Off-site 1 (0 ft)	Off-site 2 (0 ft)	On-site (0 ft)	Off-site 1 (50 ft)	Off-site 2 (100 ft)	On-site (0 ft)	On-site (0 ft)	Off-site 1 (50 ft)	Off-site 2 (100 ft)			Only if "yes" left
CAS No.	Name	(mg/kg)	None	None	None	None	None	None	Residential	Residential	Residential	Residential	(mg/kg)	"a" if yes	
71-43-2	Benzene								5.9E-1				5.9E-1	☐	
T-ar0810	TPH - Arom >C08-C10								>1.0E+3				>1.0E+3	☐	
NA	Total TPH mixture	0.0E+0	NA	NA	NA	NA	NA	NA	NC	NC	NC	NC	NC	☐	NA

* = Chemical with user-specified data

">" Indicates risk-based target concentration greater than constituent residual saturation value. NA = Not applicable. NC = Not calculated.