



January 20, 1993

Ms. Juliet Shin
Hazardous Materials Specialist
Alameda County Health Care Services Agency
Department of Environmental Health
Hazardous Materials Division
80 Swan Way, Room 200
Oakland, CA 94621

**Subject: Groundwater Monitoring Well Installation for
Alameda Collision Repair, 1911 Park Street
Alameda, California
(Project No. 929393)**

Aqua Terra Technologies
Consulting Engineers
& Scientists

2950 Buskirk Avenue
Suite 120
Walnut Creek, CA
94596-2079
FAX 934-0418
510 934-4884

Dear Ms. Shin:

The following letter report, compiled by Aqua Terra Technologies, Inc. (ATT), describes field activities and includes laboratory analytical results associated with the groundwater monitoring well installation at the subject site. The groundwater monitoring well was installed in accordance with the November 18, 1992 ATT Workplan approved by the Alameda County Health Care Services Agency (ACHCSA). The scope of work included drilling one exploratory soil boring with subsequent completion as a groundwater monitoring well, and the collection and analysis of soil and groundwater samples.

SITE SETTING & WELL LOCATION

Alameda Collision Repair is an auto body repair shop located in the City of Alameda, California, approximately 0.5 miles west of Highway 880 (Plate 1, Attachment A). The location of the new groundwater monitoring well, designated MW1, is shown on Plate 2, Attachment A.

SITE INVESTIGATION

Drilling Procedures & Monitoring Well Construction/Development

Prior to drilling, the borehole location was cleared for subsurface utilities by Underground Service Alert (USA). West Hazmat Drilling of Hayward, California, was contracted to provide drilling services. West Hazmat is a California licensed C-57 driller. Drilling and monitoring well installation activities began and were completed on Thursday, December 17, 1992.

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A Mobile B-57 truck-mounted rig was utilized for all drilling, soil sampling, and monitoring well installation activities. The borehole was drilled using 10-inch outside diameter (O.D.) hollow stem augers. All subsurface drilling equipment was steam cleaned prior to and after drilling.

Monitoring well MW1 was installed to a completed depth of 20 feet below grade (B.G.), using four inch inside diameter (I.D.) PVC casing and screen. The completed monitoring well was developed by ATT field personnel on December 29, 1992. Copies of the drilling log, diagram of monitoring well construction details, water well drillers report, and well development record are in Attachment B.

Site Geology/Hydrogeology

The following description of the subsurface hydrogeologic conditions encountered in the vicinity of monitoring well MW1 is based on ATT's soil boring log (Attachment B). Asphalt and fill material was encountered from the surface to 0.5 feet B.G., underlain by fine sand to 2.5 feet B.G., and sandy clay to 20 feet B.G. (the total depth of the borehole).

Groundwater was first encountered at approximately 10 feet B.G. during drilling and installation activities. On December 29, 1992 and January 5, 1993, the equilibrated depth to groundwater was approximately 4.0 feet B.G. The water bearing zone consists of sandy clay with a high content of fine sand.

Soil and Groundwater Sample Collection

Soil samples were collected, during drilling operations, using a California modified split-spoon sampler. The sampler was driven, through the hollow stem augers, using a 140 pound hammer with a 30 inch drop. For each sample drive, the sampler was lined with three precleaned brass tubes. The sampler and tubes were cleaned, before each sample drive, by scrubbing in a solution of Alconox and potable water, followed by two purified water rinses.

On January 5, 1993, ATT field personnel collected a set of groundwater samples from the completed and developed monitoring well. Soil and groundwater samples were submitted for analysis to a California Department

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of Health Services (DHS) certified laboratory under ATT's chain-of-custody documentation protocols. A copy of the groundwater sample collection record is in Attachment B.

LABORATORY SAMPLE ANALYSIS

Copies of the signed laboratory analytical reports and chain-of-custody records are included in Attachment C.

Soil Sample Analytical Methods

Soil samples were analyzed for total petroleum hydrocarbons as diesel (TPH-D) and total petroleum hydrocarbons as gasoline (TPH-G) using U.S. Environmental Protection Agency (EPA) Test Method 3550/8015 and EPA Test Method 5030/8015, respectively. Soil samples were also analyzed for benzene, toluene, ethylbenzene, and total xylenes (BTEX) using EPA Test Method 8020.

Soil Sample Analytical Results

No analytes were detected in the soil samples at or above the test method detection limits.

Groundwater Sample Analytical Methods

Groundwater samples were analyzed for TPH-D, TPH-G, and BTEX using EPA Test Methods 3510/8015, 5030/8015, and 602, respectively.

Groundwater Sample Analytical Results

No analytes were detected in the groundwater samples at or above the test method detection limits.

CONCLUSIONS & RECOMMENDATIONS

Quarterly groundwater samples should be collected consecutively for a minimum period of one year. The groundwater samples should be analyzed for TPH as diesel and for BTEX. Groundwater level measurements should

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Alameda County Health Care Services Agency
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be recorded when samples are collected. If groundwater sample analytical results remain at non-detectable levels after a year of monitoring, then a letter should be written to the ACHCSA requesting permanent well abandonment and site/case closure.

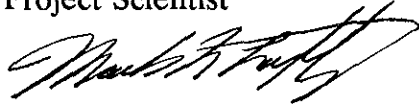
Please contact us if you have any questions or comments regarding the contents of this report.

Sincerely,

AQUA TERRA TECHNOLOGIES, INC.



Benjamin Berman
Technical Services Manager
Project Scientist



Mark Lafferty, R.G.
Registered Geologist #4701
(Expires 6/30/94)



Terrance E. Carter
Senior Environmental Engineer
Project Manager

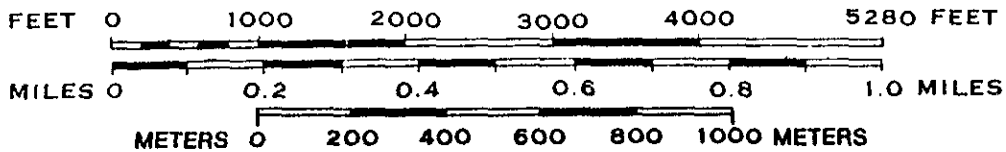
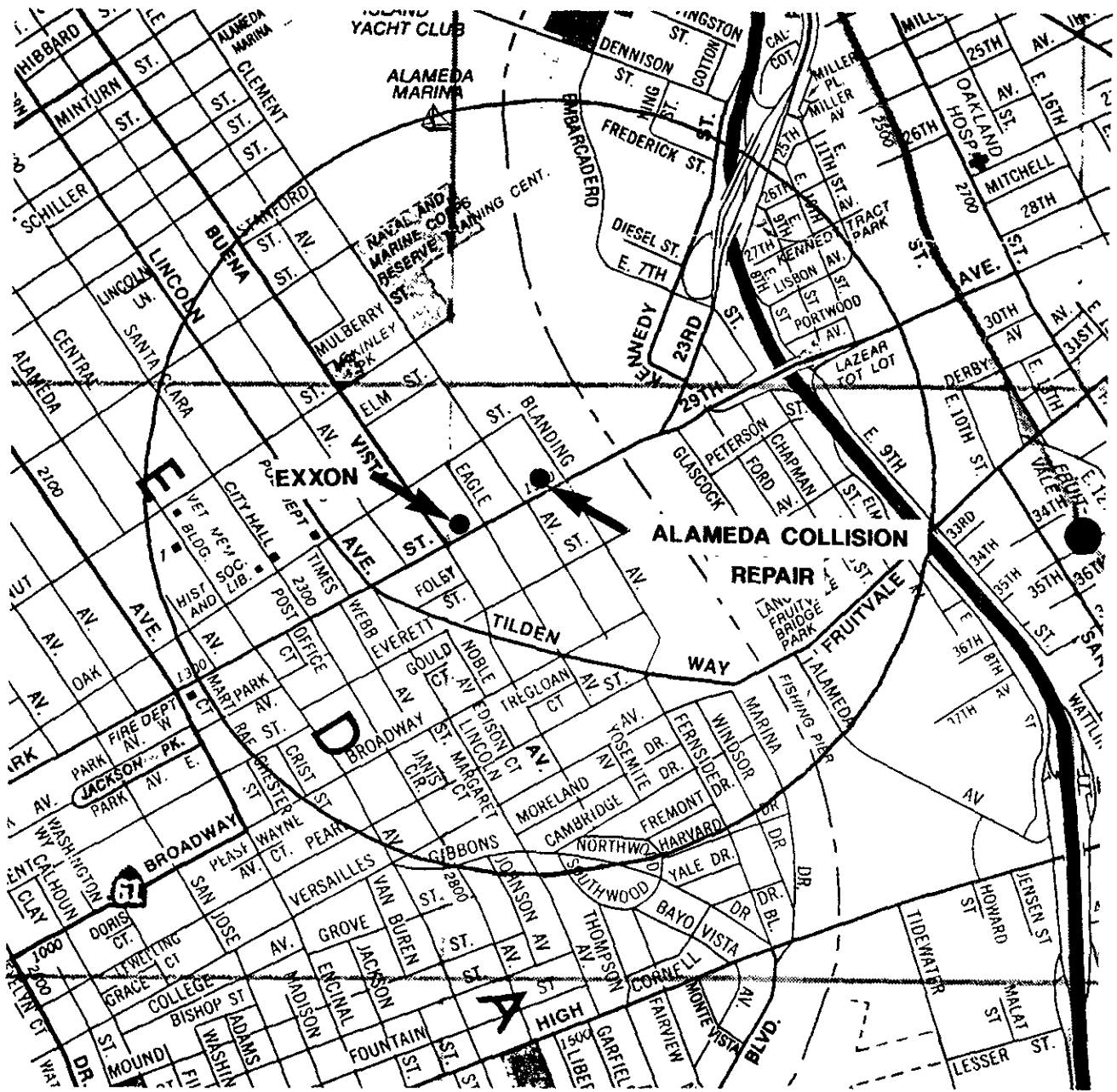
BB/ML/TEC:pd

Attachments

cc: Jeff Thompson, Alameda Collision Repair

ATTACHMENT A

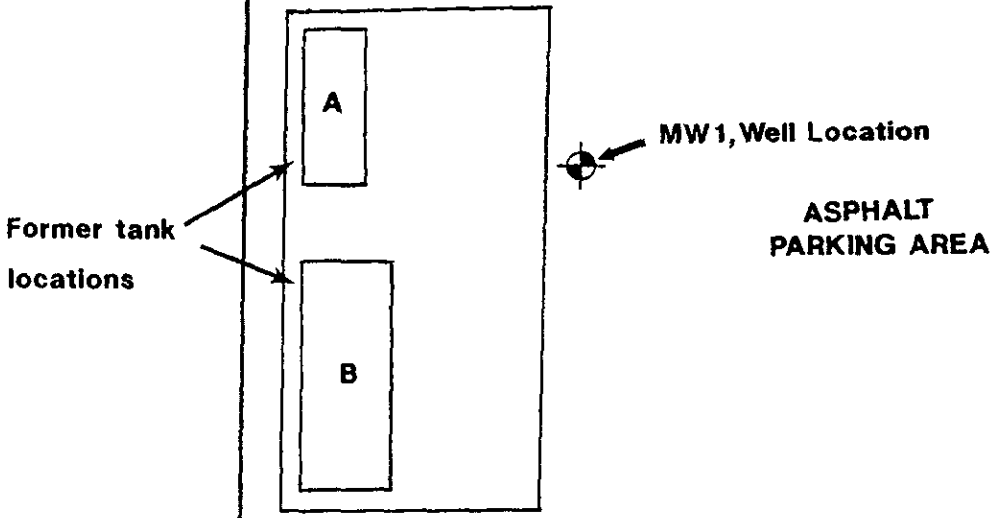
Plates



ALAMEDA COLLISION REPAIR
1911 PARK STREET
ALAMEDA

ATT Aqua Terra Technologies
 Consulting Engineers
 & Scientists

ALAMEDA COLLISION REPAIR		PLATE 1
JOB NUMBER 929393	DATE 10/92	



Monitoring Well & Former Tank Locations
1911 Park Street, Alameda, CA

ALAMEDA COLLISION REPAIR		PLATE 2
JOB NUMBER 929393	DATE 1/93	

ATT Aqua Terra Technologies
 Consulting Engineers
 & Scientists

ATTACHMENT B

**Soil Boring Log
Well Construction Details
Water Well Drillers Report
Well Development Record
Sample Collection Record**

AQUA TERRA TECHNOLOGIES INC.

Log of Exploratory Boring

Project: Alameda Collision Repair Job No.: 929393
 Location: 1911 Park Street, Alameda, CA Date: 12/17/92
 Boring No.: MW1 Driller: West Hazmat Page 1 of 2
 Logged By: BB Proj. Mgr. TEC Reviewed By: _____

Penetration (Blows/ 6")	Depth (feet)	U.S.C.S. Soil Class.	Field Description	Remarks
	0	Asphalt Base	0'-0.5' Asphalt & gravel base. 0.5'-2.5' Sand; black; fine sand; uniform; loose; slightly damp; minor component of silt/clay (possible backfill). 2.5'-20' Sandy Clay; olive; major component of fine sand (up to 50%); medium to high plasticity; uniform (little or no change in content with depth); slightly damp (incre- mental increase in moisture content with depth).	5' Sample
	1	SC		
	2			
	3			
	4			
	5			
	6			
	7			
	8			
	9	CL		
	10		▼	
	11		10' Sample First Water	
	12			
	13			
	14			
	15			
	16			
	17			



Job No: 929393

Penetration (Blows/ 6")	Depth	U.S.C.S. Soil Class.	MW1 Field Description	Remarks
	17			
	18	CL		
	19			
	20		B.O.H. @ 20'	
	21			
	22			
	23			
	24			
	25			
	26			
	27			
	28			
	29			
	30			
	31			
	32			
	33			
	34			
	35			
	36			
	37			
	38			
	39			

MW 1

Well Designation:

Site Location:

Alameda Collision Repair
1911 Park St, Alameda,
CA.

Date Installed: 12-17-92

Drilling Company:

West Hazmat

Driller: Jeff Smith

Drilling Method:

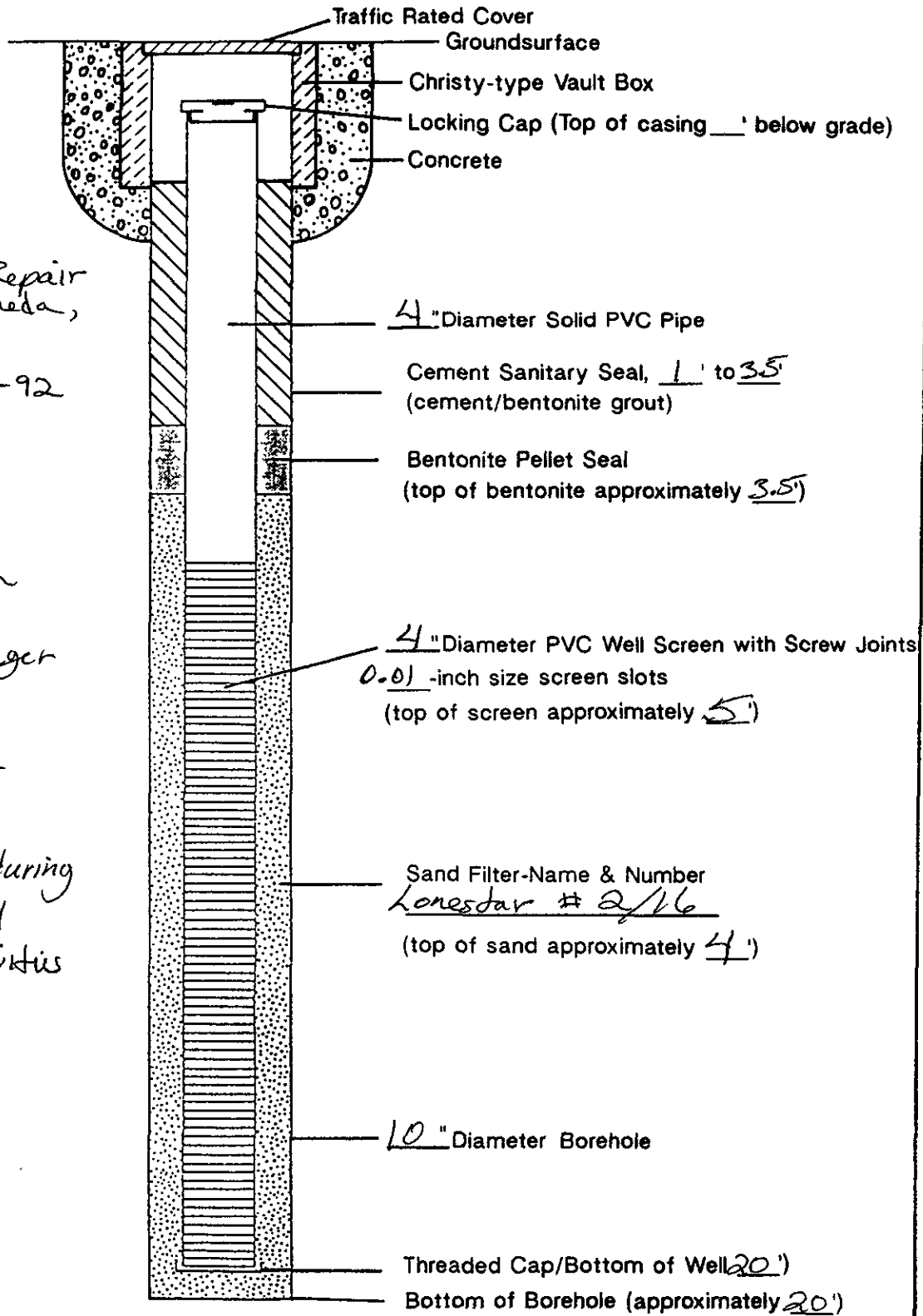
Hollow-stem auger

Logged By:

Benjamin Berman

Notes:

Heavy rainfall during
drilling and well
installation activities



Not to Scale

**Groundwater Monitoring Well
Construction Details**

ATT

Aqua Terra Technologies
Consulting Engineers
& Scientists

Alameda Collision Repair

JOB NUMBER

929393

DATE

12-17-92

PLATE

WELL DEVELOPMENT RECORD

Date: 12 - 29 - 92 Well I.D.: MW1 Project No.: 929393
Project Name: ALEMEDA COLLISION Project Manager: Z. BERMAN
Site location/address: 1911 PARK ST. ALEMEDA

Pre-development data

W.L. (1/100"): 3.69 /Time: 10:03 B.O.W. (1/2): 19.5
W.L. method: electric well sounder, other/
Calculated purge volume (minimum 10 casing volumes): 100 gallons
Floating product: Y / (N) (if yes, record thickness here:)
Sheen: Y / (N) Odor: Y / N Vapor: ppm / % LEL
Water description: clear, slightly cloudy, moderate sediment (color: BROWN), very muddy (color:)

Development data

Development method: hand pump, bailer, other/
Development began: date 12 - 29 - 92 time 10:29
Purge Volume Time Temp. pH Cond. Turb. Yield (GPM)
FIRST: 30 10:47 18 6.99 0.650 7200
SECOND: 60 11:03 18 7.36 0590 7200
THIRD: 90 11:17 18 7.58 0590 7200
Development ended: date 12 - 29 - 92 time 11:15
Total water removed during development: 100 gallons
Purged water discharged to: drums, tank truck, other/

Post development data

W.L. (1/100"): 10.17 /time: 11:17 B.O.W. (1/2): 19.5
Floating product: Y / (N) (if yes, record thickness here:)
Sheen: Y / (N) Odor: Y / (N) Vapor: ppm / % LEL
Water description: clear, slightly cloudy, moderate sediment (color: BROWN), very muddy (color:)

Notes:

Notes: (blank lines for handwritten notes)

Developed by (signature):

(Handwritten signature)

SAMPLE COLLECTION RECORD - MONITOR WELL

ATT

Date: 1-5-93 Sample I.D.: MW1 Job No.: 929393

Site Location: ALAMEDA COLLECTION

No. of Containers : 5 / (check one): Well Samples;

Duplicates from well _____; Travel Blanks;

Field Blanks; Other (explain)/ _____

W.L. (1/100'): 3.71 Time : 10:35 B.O.W. (1/2'): 19.5

Method: Electric Well Sounder; Other/ _____

Meters calibrated: / N Well Loc. Map: / N

Calculated Purge Volume (4 casing volumes): 40 gallons

Purging Method: Disposable Bailer; Teflon Bailer;

Other/ _____

Time Start Purging (24 hr): 10:41, Product: Y / N
 Sheen: Y / N, Odor: Y / N, Vapor: _____ ppm / %LEL
 Turbidity: ~~700~~ 5, Color: CLEAR

Time Stop Purging (24 hr): 11:00, Product: Y / N
 Sheen: Y / N, Odor: Y / N, Vapor: _____ ppm / %LEL
 Turbidity: 4400, Color: Brown

Time (24 hr)	Temp. (C)	pH	Cond. (uS)	H2O (Gal)	Turbid. (NTU)
<u>10:45</u>	<u>17°</u>	<u>7.45</u>	<u>0450</u>	<u>13</u>	<u>720</u>
<u>10:52</u>	<u>17°</u>	<u>7.48</u>	<u>0440</u>	<u>26</u>	<u>1200</u>
<u>11:00</u>	<u>17°</u>	<u>7.48</u>	<u>0420</u>	<u>40</u>	<u>4400</u>
<u>:</u>	<u>_____</u>	<u>_____</u>	<u>_____</u>	<u>_____</u>	<u>_____</u>
<u>:</u>	<u>_____</u>	<u>_____</u>	<u>_____</u>	<u>_____</u>	<u>_____</u>

Sample Collection Time (24 hr): 11:05

Notes: 4" WELL 2 BAILERS USED

Collected By (signature): [Signature]

ATTACHMENT C

**Laboratory Analytical Data
Chain-of-Custody**



PRIORITY ENVIRONMENTAL LABS

Precision Environmental Analytical Laboratory

December 19, 1992

PEL # 129211

AQUA TERRA TECHNOLOGIES, INC.

Attn: Benjamin Berman

Re: One soil sample for Gasoline/BTEX and Diesel analyses.

From 5/1/92

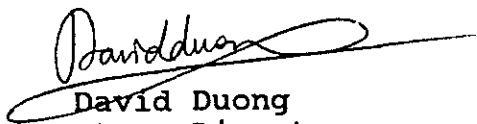
Project number: 929393

Date sampled: Dec 17, 1992
Date extracted: Dec 18, 1992

Date submitted: Dec 18, 1992
Date analyzed: Dec 18, 1992

RESULTS:

SAMPLE I.D.	Gasoline (mg/Kg)	Diesel (mg/Kg)	Benzene (ug/Kg)	Toluene (ug/Kg)	Ethyl Benzene (ug/Kg)	Total Xylenes (ug/Kg)
MW 1-10	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Blank	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Spiked Recovery	89.1%	104.3%	82.4%	87.6%	92.0%	90.9%
Detection limit	1.0	1.0	5.0	5.0	5.0	5.0
Method of Analysis	5030 / 8015	3550 / 8015	8020	8020	8020	8020


David Duong
Laboratory Director

PEL # 129211

INV # 201177

ATT

TAL LABS

CHAIN OF SAMPLE

(original document, please return)

Page 1 of 1

dry

PEL # 9301004

Benjamin Berman

Date Sampled: 12-17-92

Benjamin Berman

ATT Job #: 929393

Benjamin Berman

Lab Name: Priority Env.

standard turnaround (3-day)

Contact: David Downing

Phone #: 408-946-9036

Lab Job #:

ses.

: Jan 06, 1993
Jan 06-07, 1993

Action	Matrix (e.g. Water, Soil)	Number of Containers	Sample Preservation			Sample Containers				Analysis/EPA Method No.			Remarks	
			Ice	HCL	Dry Ice	brass tube					TPH-Diesel	TPH-Gas		BTEX
1	Soil	1			✓	X								Hold
2	"	1			✓	X				X	X	X		see notes.

Total
Xylenes
(ug/L)

N.D.

N.D.

105.4%

0.5

602

analyze sample MW1-10 as indicated, MW1-5 until further notice.

Date	Time	Received by:	Company Affiliation	Date	Time
12/18/92	8:16	<u>David Downing</u>		12/18/92	8:16

CHAIN OF SAMPLE CUS
(original document, p

PEL # 9301004

INV # 23298

ATT

Sampled By: RICHARD BRUSH

Date Sampled: 1-5-93

Signature: [Signature]

ATT Job #: 929393

Lab Name: P.E.L.

Results To Be Sent To: BEN BERMAN

Contact: _____

Results Needed By: NORMAN TURNER

Phone #: (408) 946-9636

Fax Results ASAP

Lab Job #: _____

Sample Collection				Sample Preservation			Sample Containers				Analysis/EPA Method No.				Remarks
Sample I.D.	Time (24 hr)	Matrix (e.g. Water, Soil)	Number of Containers	Ice	HCL	Dry Ice	40ML VIAL'S	1 LT				TPH-G	TPH-D	BTEX	
MW1	11:05	water	5	X	X		X	X				X	X	X	

Notes:

Relinquished by/ Company Affiliation	Date	Time	Received by: Company Affiliation	Date	Time
<u>[Signature]</u>	1-6-93	8:00	<u>[Signature]</u>	01/06/93	8:00 AM

CONFIDENTIAL

STATE OF CALIFORNIA DWR
WELL COMPLETION REPORT
(WELL LOGS)

REMOVED