

Uriah Environmental Services Inc.

2401 East Orangeburg Avenue #675-218, Modesto, CA 95355

(510) 455-4991
San Francisco/Bay Area

(209) 551-3591
Central Valley

(209) 551-1200
FAX

March 31, 1993 ✓

Ms. Leah Champion
P.O. Box 489
Moss Beach, CA 94038

STID 819

RE: The Installation, Development, and Sampling of Three
Groundwater Monitoring Wells at the City of Paris Cleaners
Site, 3516 Adeline Street, Oakland, CA

Dear Ms. Champion:

Uriah, Inc. is pleased to submit this report concerning the installation, development, and sampling of three, 2-inch inside diameter, groundwater monitoring wells at the above referenced site. While our records indicate that this report was completed and mailed during December, 1992, this was apparently not the case. Uriah apologizes for this oversight and any inconvenience that it may have caused.

The tasks described herein were performed in response to site specific requirements set forth by the Alameda County Health Care Services Agency Hazardous Materials Program (ACoHCSA), and are also intended to conform to general guidelines for such work promulgated by the ACoHCSA and the San Francisco Bay Regional Water Quality Control Board (RWQCB).

The most significant document previously submitted by Uriah concerning assessment and remediation activities at the site is the May 19, 1992 report entitled "Interim Report Concerning Assessment and Remediation of Stoddard Solvent Contamination at"

GEOLOGICAL AND HYDROGEOLOGICAL SETTING

The subject site is located on flatlands, approximately one mile southeast of the eastern edge of the present Bay of Emeryville. Underlying deposits, known as "Bay Mud", are generally composed of unconsolidated olive gray, blue gray, brown or black silty clay. This clay varies from soft to stiff and is typically plastic. Organic remains such as shells and peat are common. Permeability is generally low except where lenses of sand occur. The Franciscan Formation, a complex assemblage of deformed and altered sediments and volcanic rocks commonly forming the bedrock in the San Francisco Bay region, has been documented underlying the sediments in the area.

General subsoil conditions encountered during the drilling of the three on-site monitoring wells (designated MW-1, MW-2, and MW-3) were consistent with regional conditions. A brown sandy gravel was encountered to a depth of approximately 12.5 feet. A moist, medium, olive gray, medium clayey sand of medium density was encountered from 12.5 feet to 27.5 feet below ground surface (bgs). This clayey sand was, in turn, underlain by a stiff brown sandy clay that exhibited low plasticity.

Groundwater was first encountered during drilling at 19 to 20 feet bgs. The static water level was measured in each well on November 18, 1992 and found to be 13.99 feet in MW-1, 13.18 feet in MW-2, and 13.93 in MW-3. The wells are scheduled to be surveyed with respect to mean seal level datum during the first part of April, 1993.

SITE DESCRIPTION AND OVERVIEW OF ENVIRONMENTAL COMPLIANCE ACTIVITIES

3516 Adeline Street is located in the northwest portion of the City of Oakland (Alameda County), California. It is one mile east of the San Francisco Bay, 60 feet south of State Highway 580 (an elevated structure), and 3/4 mile west of the Highway 580-Highway 980 interchange (Figure 1). The site occupies the southeast corner of Adeline and 35th Streets at an elevation approximately 30 feet above mean sea level. It is on an alluvial plain that slopes gently westward toward the (San Francisco) bay. The buildings which remain on site, unused at the present time, formerly housed the City of Paris Cleaners...a full service laundry and dry cleaning business.

One 750 gallon capacity and two 1,000 gallon capacity underground stoddard solvent storage tanks were excavated and removed from the site on October 4, 1990 by the Semco Company of San Mateo (a California licensed contractor). Six discrete soil samples acquired attendant to the removal of the tanks were submitted for certified laboratory analysis and found to contain between 1 and 1,000 parts per million (ppm) Total Petroleum Hydrocarbons as Gasoline (TPH-G), and some elevated levels of ethylbenzene and total xylenes. Although reported as TPH-G, the TPH compound(s) detected are believed to have been stoddard solvent.

On July 31, and August 1-2, 1991, Uriah performed a soil vapor survey at the site in an effort to define the approximate boundaries of the area of soil contamination. Vapors were found to be widely distributed across the site, however, a discrete soil plume could not be defined due to the presence of buildings, subsurface utilities, and the public roadway.

On August 30, 1991, employees of W.A. Craig, Inc., a California

licensed contractor, overexcavated the eastern portion of the tank pit to a depth of approximately 15 feet. While digging in the southeastern corner of the pit, the excavator encountered at 250 gallon capacity underground stoddard solvent storage tank. This tank was subsequently excavated and disposed of in accordance with requirements set forth by ACoHCSA Inspector Dennis Byrne.

Additional excavation was performed, and 59 cubic yards of contaminated soil was subsequently bioremediated on site and later used to backfill the tank pit. Although soil samples acquired from boundaries of the remedial excavation revealed that some residual contamination remained unexcavated (9.8 to 140 ppm TPH-Stoddard Solvent and 15 to 110 ppm TPH-Diesel), Inspector Byrne advised that his office would require no additional excavation as the integrity of significant structures (both on site and upon contiguous properties) could be jeopardized if further excavation was attempted.

MONITORING WELL INSTALLATION, DEVELOPMENT, AND SAMPLING

The well borings were drilled and the three monitoring wells constructed on October 29 and 30, 1992 by employees of Soils Exploration Services of Vacaville, CA (SES). The wells were placed at locations approved by ACoHCSA (i.e. at those locations shown in Figure 2). The borings were advanced with a truck-mounted drill rig equipped with 8-inch outside diameter, continuous flight, hollow-stem augers. Drilling, logging (in accordance with the Unified Soil Classification System), and sampling were performed by/under the direction of a Uria staff hydrogeologist.

Discrete soil samples were collected from the borings at five foot intervals beginning at five (5) feet bgs in a 2-inch inside diameter, split-spoon sampler fitted with clean brass tubes 1.9 inches in diameter by 6.0 inches in length. The sampler was driven 18 inches into undisturbed soil using a standard 30-inch drop of a 140 pound hammer. Upon being retrieved from the sampler, the ends of the lower-most brass tube were covered with teflon sheeting, fitted with plastic caps, and sealed with duct tape. Each tube was then labeled and placed on blue ice for transportation to a California-state certified hazardous waste analytical laboratory under chain of custody.

The soil samples acquired from vadose soils (those from 5 and 10 feet bgs) were subsequently analyzed for Total Petroleum Hydrocarbons as Stoddard Solvent (TPH-SS), Total Petroleum Hydrocarbons as Diesel (TPH-D), and benzene, toluene, ethylbenzene, and total xylenes (BTEX) as well as chlorobenzene, and dichlorobenzenes using EPA Methods 3550/8015-8020 (602).

Analytical results are presented in Table 1, and copies of the laboratory reports are enclosed as a portion of Appendix C.

The drilling augers and sampling equipment were steam cleaned or thoroughly scrubbed with Alconox solution followed by a distilled water rinse prior to being brought on site and between all samplings.

Table 1

Results of Certified Laboratory Analyses of Soil Samples Acquired from the Borings for Monitoring Wells MW-1, MW-2, and MW-3 on October 29 and 30, 1992

Sample I.D.	TPH-SS (ppm)	TPH-D (ppm)	B	T (ppb)	E	X	*Ch/Dich-benzenes (ppb)
MW1-5'	N.D.	N.D.	0.3	12	N.D.	N.D.	N.D.
MW1-10'	210	N.D.	1.1	21	12	N.D.	23
MW2-5'	N.D.	N.D.	N.D.	63	130	210	40
MW2-10'	17	N.D.	N.D.	120	N.D.	360	N.D.
MW3-5'	N.D.	N.D.	1.4	120	47	160	110
MW3-10'	30	N.D.	1.6	550	N.D.	N.D.	230

Method Detect Limit	10	10	5	5	5	5	5

TPH-SS...Total Petroleum Hydrocarbons as Stoddard Solvent
 TPH-D...Total Petroleum Hydrocarbons as Diesel
 BTEX...Benzene, toluene, ethylbenzene, total xylenes
 *Ch/Dich benzenes...Chlorobenzene, 1,3 Dichlorobenzene, 1,4 Dichlorobenzene, and 1,2 Dichlorobenzene (verbal results only)
 ppm...Parts per million
 ppb...Parts per billion (1 ppm = 1,000 ppb)

Following completion of the drilling, logging, and soil sampling, each boring was converted into a 2-inch inside diameter ground-water monitoring well. The wells were constructed of 2-inch inside diameter, threaded, Schedule 40 PVC risers attached to 0.020-inch slotted PVC well screen. The screened interval was extended more than five feet above the water table to account for anticipated fluctuations in the depth to water. The annular space around the well screen was filled with #3 Monterey Silica Sand. The sand was covered by a one foot thick bentonite seal

to protect groundwater from surface water infiltration. The wells were finished by covering the bentonite with cement from the top of the seal to 0.5 feet below ground surface followed by concrete aggregate to grade. Each well was then covered with a locked traffic cover. Well construction details are enclosed in Appendix B.

The newly installed wells were allowed to equilibrate for a period exceeding 48 hours prior to development. Subsequent to this period, the depth to water and total well depth were measured with an electric water level meter and the volume of water contained in the well casing computed. The well was then developed using a vented surge block to release and draw fines (silts, clays, and fine sands) by forcing water in and out of the well screen and adjacent annular pack. The wells were then purged using a clean disposable polyethylene bailer until the groundwater was free of significant sediment and other grit material; and pH, electrical conductivity, and temperature readings stabilized. Measurements of pH, conductivity, and temperature were acquired and recorded on the Well Monitoring Forms enclosed in Appendix B.

A water sample from each developed well was obtained with a clean, disposable, polyethylene bailer lowered into the well to a point immediately below the water surface. The sample was promptly transferred into two (2) amber glass sample bottles and two (2) Volatile Organic Analysis (VOA) vials containing hydrochloric acid preservative. Each container was sealed with a teflon-lined screw cap, labeled, and placed on blue ice for transportation to a California-state certified hazardous waste analytical laboratory under chain of custody. Analyses were subsequently performed for TPH-SS, TPH-D, and BTEX using EPA Methods 3510/8015-8020 (602). Analytical results are summarized in Table 2, below; and a copy of the laboratory report and chain of custody document appear in Appendix C.

Table 2

Results of Certified Laboratory Analyses of the Groundwater Samples Acquired from Developed Monitoring Wells MW-1, MW-2, and MW-3 on November 18, 1992

Sample I.D.	TPH-SS (ppb)	TPH-D (ppb)	B	T (ppb)	E	X
MW-1	1800	N.D.	N.D.	N.D.	N.D.	N.D.
MW-2	630	N.D.	N.D.	N.D.	N.D.	N.D.

Table 2, continued

Sample I.D.	TPH-SS (ppb)	TPH-D (ppb)	B	T (ppb)	E	X
MW-3	11,000	N.D.	N.D.	N.D.	N.D.	N.D.

Method						
Detect	50	50	0.5	0.5	0.5	0.5
Limit						

TPH-SS...Total Petroleum Hydrocarbons as Stoddard Solvent
 TPH-D...Total Petroleum Hydrocarbons as Diesel
 BTEX...Benzene, toluene, ethylbenzene, total xylenes
 ppb...Parts per billion (1 ppm = 1,000 ppb)

Cuttings from the boring and rinsate generated from steam cleaning of the augers were each placed in a labeled, covered 55-gallon DOT drum and stored on site pending receipt of laboratory analyses and development of an appropriate disposal protocol.

CONCLUSIONS AND RECOMMENDATIONS

Although all soil samples contained detectable concentrations of some target analytes, it is proposed that the only significant presence is that of ~~210 parts per million (ppm) stoddard solvent~~ at MW1-10. This sample was acquired from slightly moist sandy gravel overlaying less permeable clayey sand. As the soil sample acquired from this area during the course of remedial excavation contained only ~~11 ppm stoddard solvent~~, it is believed that the 210 ppm level is either representative of what may reasonably be considered a small, environmentally insignificant area of residual contamination, or indicative of contamination that has moved as a non-aqueous phase liquid with groundwater during a period when the water table was higher.

In consideration of the data acquired at the site by Uriah and others, it is proposed that ~~no additional environmental~~ compliance activities be required at the present time other than ~~quarterly monitoring of wells MW-1, MW-2, and MW-3 with~~ subsequent laboratory analyses for TPH-SS, TPH-D, and BTEX. If contaminants remain at ~~significant levels during an~~ appropriate period of monitoring, a ~~remedial action plan will~~ be prepared and submitted to ACOHCSA and the RWOCB.

For your convenience, copies of this report are enclosed. It is recommended that one be forwarded to each of the following

agencies for review and comment:

Alameda County Health Care Services Agency
Hazardous Materials Program
80 Swan Way, Room 200
Oakland, CA 94621
Attention: ~~Ms. Juliett Shin~~ *Jessie Hugo*

Alameda County Flood Control and
Water Conservation District
5997 Parkside Drive
Pleasanton, CA 94588
Attention: Mr. Craig Mayfield

San Francisco Bay Regional Water Quality Control Board
2101 Webster Street, Suite 500
Oakland, CA 94612
Attention: Mr. Randy Lee

The work described herein was performed under the direction of a California Registered Civil Engineer in accordance with protocol referenced within the approved Health and Safety Plan submitted as part of Uriah's May, 1992 interim report.

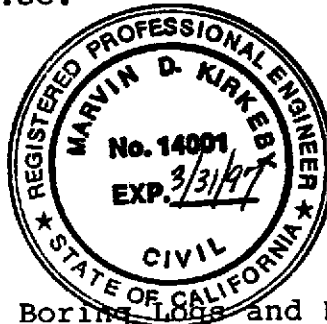
Should you have any questions regarding this report, or if we may otherwise be of assistance, please contact either of the undersigned at (510) 455-4991 or (209) 551-3591.

Sincerely,

Valentin Constantinescu 3/31/93

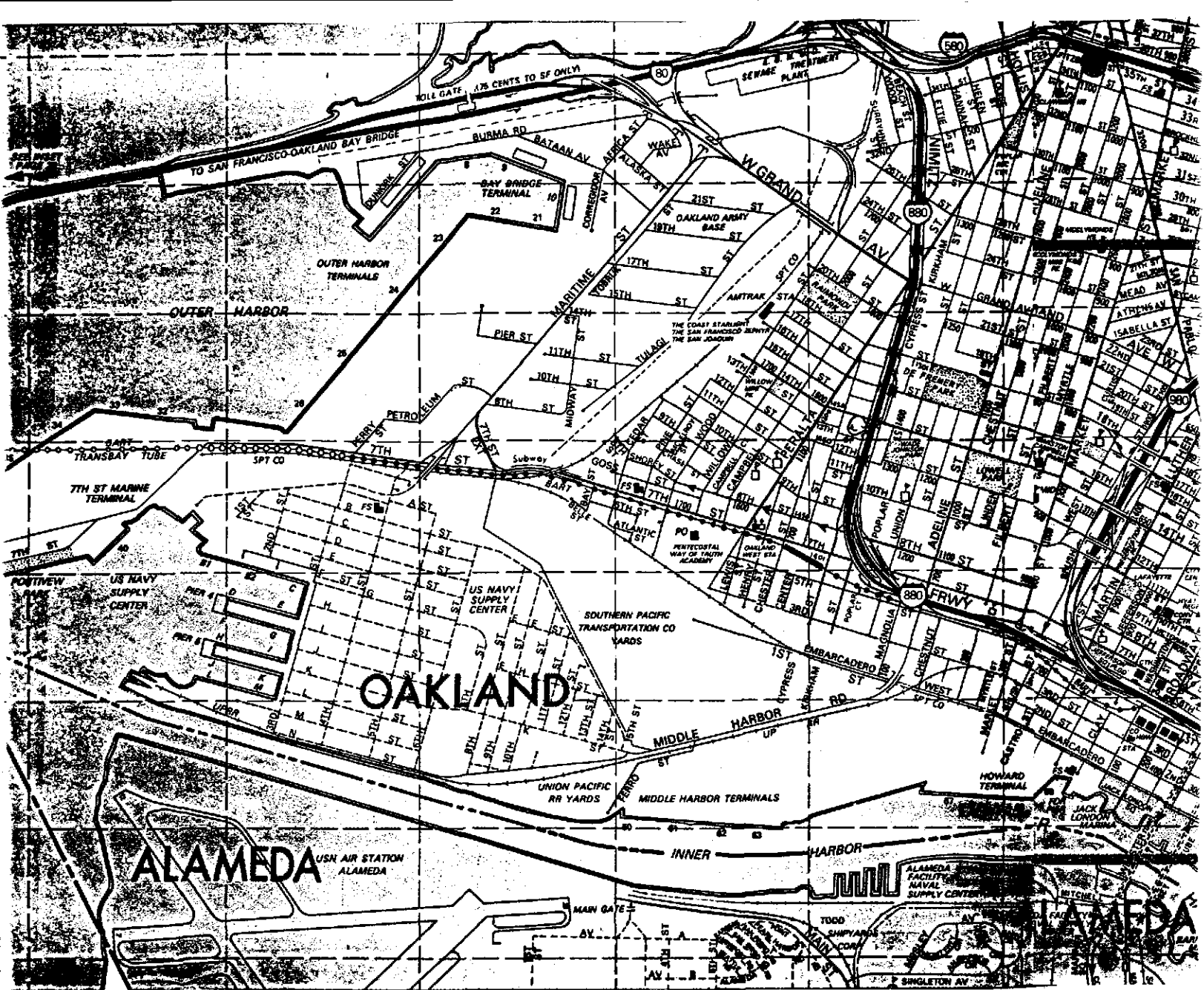
Valentin Constantinescu, M.Sc.
Hydrogeologist

Marvin Kirkeby
Marvin Kirkeby, P.E.
Registered Civil Engineer



VAC/MK:jer
enc.

- Figures 1-3
- Appendix A...Soil Borings Logs and Drilling Permit
- Appendix B...Well Construction Details and Well Monitoring Forms
- Appendix C...Reports of Laboratory Analyses and Chain of Custody Documents



● Colored Circle Denotes Site Location



Figure 1- Area Map for City of Paris Cleaners Site
3516 Adeline Street, Oakland, CA

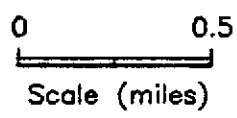
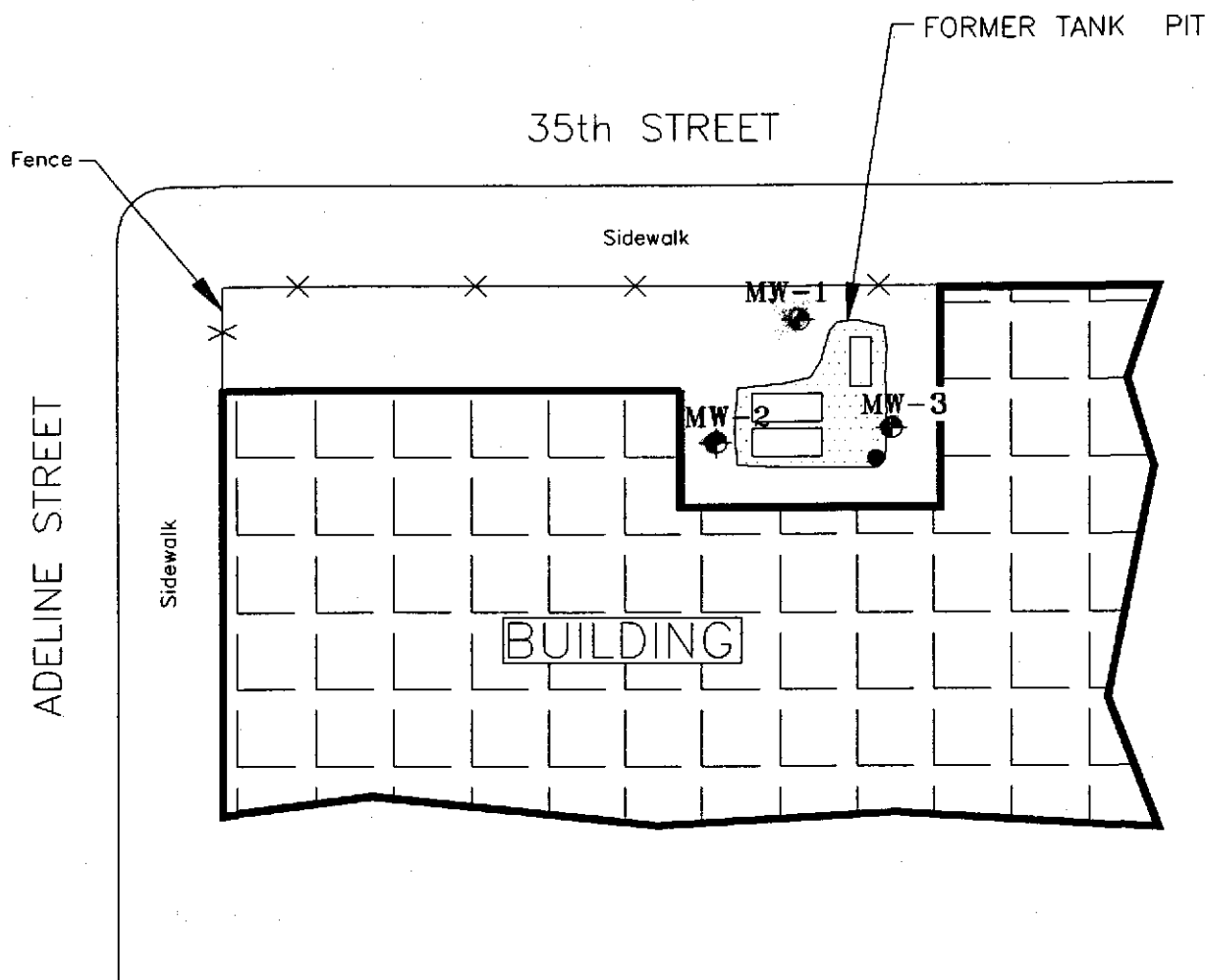


FIGURE 2



SCALE:
0 10 20
1" = 20'
MONITORING WELL

CITY OF PARIS CLEANERS
3516 ADELINE STREET
OAKLAND, CALIFORNIA

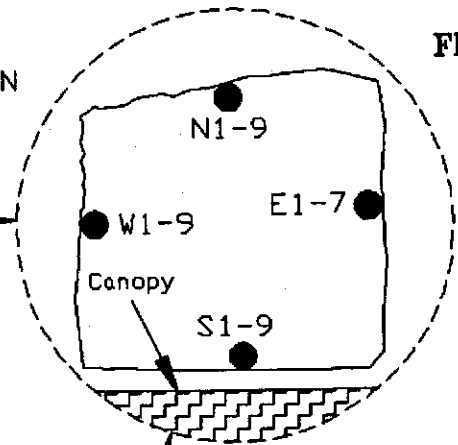
URIAH, INC.
AN ENVIRONMENTAL SERVICES COMPANY

FIGURE 3

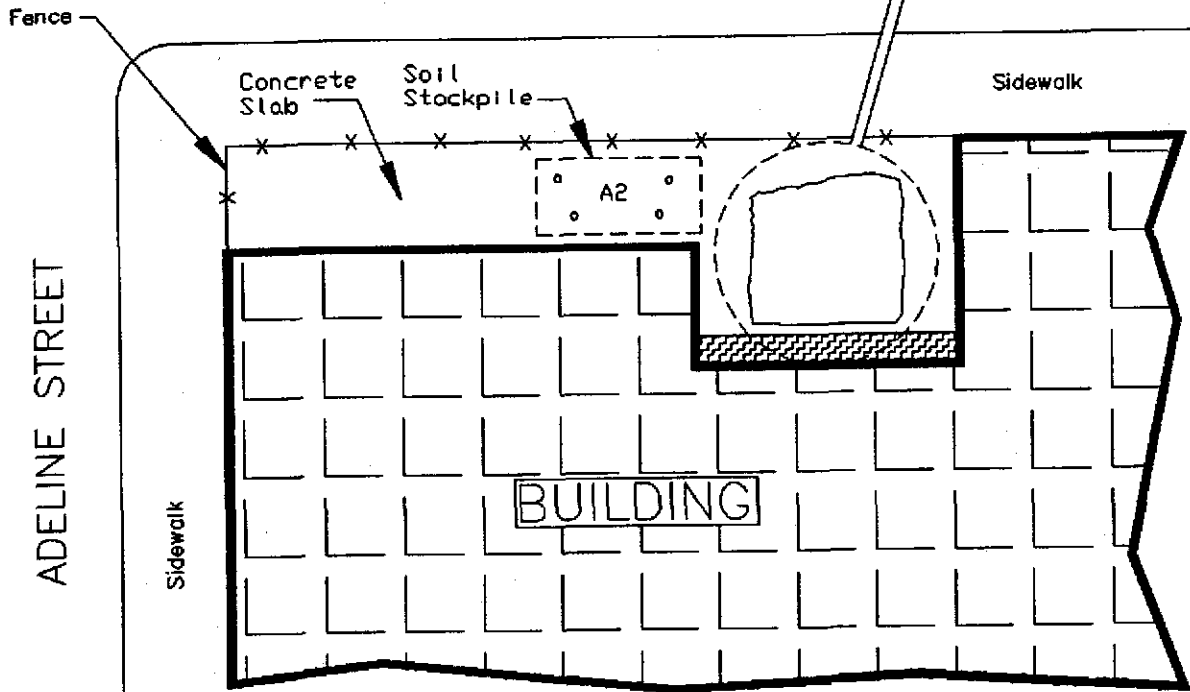


2X MAGNIFICATION
OF UST PIT

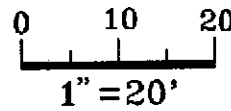
Note:
4 Point Composite Soil
Sample A2 Was Acquired
From Soil Stockpile on
3/31/92. Discrete UST
Pit Samples were
Obtained On 1/27/92.



35th STREET



SCALE:



- 4 Point Composite Soil Sample Locations.
- Discrete Soil Sample Locations.

CITY OF PARIS CLEANERS
3516 ADELINE STREET
OAKLAND, CALIFORNIA

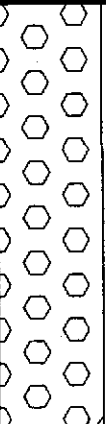
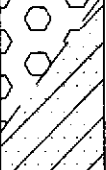
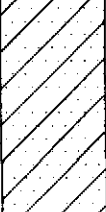
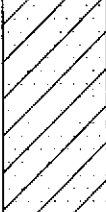
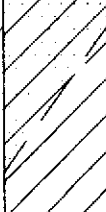
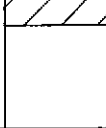
URIAH, INC.
AN ENVIRONMENTAL SERVICES COMPANY

Appendix A

Soil Boring Logs and Drilling Permit

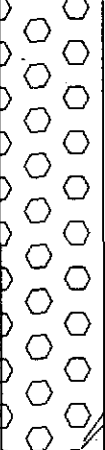

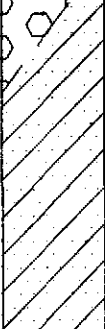
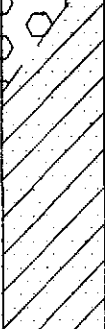
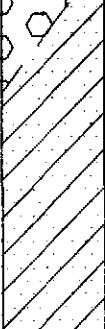
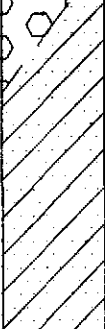
SOIL BORING LOG

CLIENT: *CHAMPION ESTATE* WELL #: *MW-1*
 LOCATION: *3516 ADELINE St., OAKLAND, CA.*
 DATE DRILLED: *10/29-30/92* DRILLED BY: *S.E.S.*
 DRILLING METHOD: *H.S. Augers* SAMPLE METHOD: *Split Spoon*
 LOGGED BY: *ADI CONSTANTINESCU*

Depth Below Surface	Samples Collected		SOIL DESCRIPTION Color, Grain size, Texture, Moisture, Consistency, Odor	Unified Soil Classification	Log	Penetration Collected Blows / 18'	Comments
	INT	Sample No.					
5		MW1-5	SANDY GRAVEL; BROWN; WELL GRADED; LOOSE; DRY; NO HYDROCARBON ODOR.	GW		2, 3, 6	
10		MW1-10	SANDY GRAVEL; GRAY TO BROWN; MEDIUM DENSE; SLIGHTLY MOIST, VAGUE HYDROCARBON ODOR.	GW		4, 5, 8	
15		MW1-15	CLAYEY SAND; GREENISH GRAY; MEDIUM; MEDIUM DENSE; MOIST; VAGUE HYDROCARBON ODOR.	SC		4, 11, 12	
20		MW1-20	CLAYEY SAND; OLIVE GRAY; POORLY GRADED; MEDIUM; MEDIUM DENSE; WET; NO HYDROCARBON ODOR.	SC		3, 5, 10	
25			CLAYEY SAND; OLIVE GRAY; POORLY GRADED; MEDIUM; MEDIUM DENSE; WATER SATURATED; NO HYDROCARBON ODOR.	SC		3, 7, 6	
30			SANDY CLAY; WITH SOME GRAVEL; LIGHT BROWN; WITH LOW PLASTICITY; STIFF; WATER SATURATED; NO HYDROCARBON ODOR.	CL		4, 8, 14	

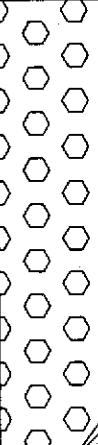

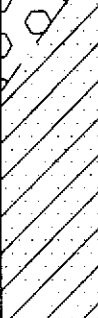
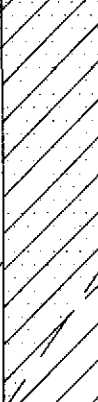
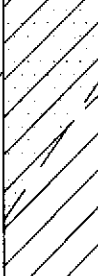
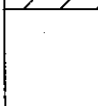
SOIL BORING LOG

CLIENT: *CHAMPION ESTATE* WELL #: *MW-2*
 LOCATION: *3516 ADELIN St., OAKLAND, CA.*
 DATE DRILLED: *10/30/92* DRILLED BY: *S.E.S.*
 DRILLING METHOD: *H.S. Augers* SAMPLE METHOD: *Split Spoon*
 LOGGED BY: *ADI CONSTANTINESCU*

Depth Below Surface	Samples Collected		SOIL DESCRIPTION	Unified Soil Classification	Log	Penetration Collected	Comments
	INT	Sample No.	Color, Grain size, Texture, Moisture, Consistency, Odor			Blows / 18'	
5		MW2-5	SANDY GRAVEL; BROWN; WELL GRADED; LOOSE; DRY; NO HYDROCARBON ODOR.	GW		2, 3, 5	
10		MW2-10	SANDY GRAVEL; GRAY TO BROWN; MEDIUM DENSE; SLIGHTLY MOIST, VAGUE HYDROCARBON ODOR.			3, 6, 14	
15		MW2-15	CLAYEY SAND; GREENISH GRAY; MEDIUM; MEDIUM DENSE; MOIST; HYDROCARBON ODOR;			4, 12, 12	
20		MW2-20	CLAYEY SAND; OLIVE GRAY; POORLY GRADED; MEDIUM; MEDIUM DENSE; WET; NO HYDROCARBON ODOR.	SC		3, 6, 11	
25			CLAYEY SAND; OLIVE GRAY; POORLY GRADED; MEDIUM; MEDIUM DENSE; WATER SATURATED; NO HYDROCARBON ODOR.			4, 7, 5	
30			SANDY CLAY; WITH SOME GRAVEL; LIGHT BROWN; WITH LOW PLASTICITY; STIFF; WATER SATURATED; NO HYDROCARBON ODOR.	CL		3, 9, 15	

SOIL BORING LOG

CLIENT: *CHAMPION ESTATE* WELL #: *MW-3*
 LOCATION: *3516 ADELIN St., OAKLAND, CA.*
 DATE DRILLED: *10/30/92* DRILLED BY: *S.E.S.*
 DRILLING METHOD: *H.S. Augers* SAMPLE METHOD: *Split Spoon*
 LOGGED BY: *ADI CONSTANTINESCU*

Depth Below Surface	Samples Collected		SOIL DESCRIPTION Color, Grain size, Texture, Moisture, Consistency, Odor	Unified Soil Classification	Log	Penetration Collected Blows / 18'	Comments
	INT	Sample No.					
5		MW3-5	SANDY GRAVEL; BROWN; WELL GRADED; LOOSE; DRY; NO HYDROCARBON ODOR.	GW		2, 4, 5	
10		MW3-10	SANDY GRAVEL; GRAY TO BROWN; MEDIUM DENSE; SLIGHTLY MOIST, VAGUE HYDROCARBON ODOR.	GW		3, 10, 13	
15		MW3-15	CLAYEY SAND; GREENISH GRAY; MEDIUM; MEDIUM DENSE; MOIST; HYDROCARBON ODOR.	SC		3, 11, 11	
20		MW3-20	CLAYEY SAND; OLIVE GRAY; POORLY GRADED; MEDIUM; MEDIUM DENSE; MOIST; VAGUE HYDROCARBON ODOR.	SC		4, 6, 10	
25			CLAYEY SAND; OLIVE GRAY; POORLY GRADED; MEDIUM; MEDIUM DENSE; WATER SATURATED; NO HYDROCARBON ODOR.	SC		4, 6, 8	
30			SANDY CLAY; WITH SOME GRAVEL; LIGHT BROWN; WITH LOW PLASTICITY; STIFF; WATER SATURATED; NO HYDROCARBON ODOR.	CL		4, 8, 15	



ALAMEDA COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT

5997 PARKSIDE DRIVE PLEASANTON, CALIFORNIA 94588 (510) 484-2800

DRILLING PERMIT APPLICATION

FOR APPLICANT TO COMPLETE

FOR OFFICE USE

LOCATION OF PROJECT 3516 Adeline St. Oakland, CA

PERMIT NUMBER 92360 LOCATION NUMBER

CLIENT Name CHAMPION Estate Address P.O. Box 273 Phone City Half Moon Bay CA Zip 94019

PERMIT CONDITIONS

Circled Permit Requirements Apply

APPLICANT Name URIAH INC (CASEY LONG)

A. GENERAL

Address 2456 Armstrong St. Phone (510) 455-4991 City Livermore CA Zip 94550

- 1. A permit application should be submitted as as to arrive at the Zone 7 office five days prior to proposed starting date. 2. Submit to Zone 7 within 60 days after completion of permitted work the original Department of Water Resources Water Well Drillers Report or equivalent for well projects, or drilling logs and location sketch for geotechnical projects. 3. Permit is void if project not begun within 90 days of approval date.

TYPE OF PROJECT Well Construction Geotechnical Investigation Cathodic Protection General Water Supply Contamination Monitoring X Well Destruction

B. WATER WELLS, INCLUDING PIEZOMETERS

PROPOSED WATER SUPPLY WELL USE Domestic Industrial Other Municipal Irrigation

- 1. Minimum surface seal thickness is two inches of cement grout placed by tremie. 2. Minimum seal depth is 50 feet for municipal and industrial wells or 20 feet for domestic and irrigation wells unless a lesser depth is specially approved. Minimum seal depth for monitoring wells is the maximum depth practicable or 20 feet.

DRILLING METHOD: Mud Rotary Air Rotary Auger X Cable Other

DRILLER'S LICENSE NO. C-57 (#582196)

C. GEOTECHNICAL. Backfill bore hole with compacted cuttings or heavy bentonite and upper two feet with compacted material. In areas of known or suspected contamination, tremied cement grout shall be used in place of compacted cuttings.

WELL PROJECTS Drill Hole Diameter 8 in. Maximum Casing Diameter 2 in. Depth 30 ft. Surface Seal Depth 2 ft. Number 3

D. CATHODIC. Fill hole above anode zone with concrete placed by tremie.

GEOTECHNICAL PROJECTS Number of Borings Maximum Hole Diameter in. Depth ft.

E. WELL DESTRUCTION. See attached.

ESTIMATED STARTING DATE 7/27 ESTIMATED COMPLETION DATE 7/29

Approved Wyman Hong Date 21 Jul 92

I hereby agree to comply with all requirements of this permit and Alameda County Ordinance No. 73-68.

APPLICANT'S SIGNATURE [Signature] Date 7/20/92

MAJOR DIVISIONS			GRAPHIC SYMBOL	LETTER SYMBOL	TYPICAL DESCRIPTIONS			
COARSE GRAINED SOILS	GRAVEL AND GRAVELLY SOILS	CLEAN GRAVELS (LITTLE OR NO FINES)		GW	WELL-GRADED GRAVELS, GRAVEL-SAND MIXTURES, LITTLE OR NO FINES			
				GP	POORLY-GRADED GRAVELS, GRAVEL-SAND MIXTURES, LITTLE OR NO FINES			
		GRAVELS WITH FINES (APPRECIABLE AMOUNT OF FINES)		GM	SILTY GRAVELS, GRAVEL-SAND-SILT MIXTURES			
				GC	CLAYEY GRAVELS, GRAVEL-SAND-CLAY MIXTURES			
	SAND AND SANDY SOILS	CLEAN SAND (LITTLE OR NO FINES)		SW	WELL-GRADED SANDS, GRAVELLY SANDS, LITTLE OR NO FINES			
				SP	POORLY-GRADED SANDS, GRAVELLY SANDS, LITTLE OR NO FINES			
		SANDS WITH FINES (APPRECIABLE AMOUNT OF FINES)		SM	SILTY SANDS, SAND-SILT MIXTURES			
				SC	CLAYEY SANDS, SAND-CLAY MIXTURES			
			FINE GRAINED SOILS	SILTS AND CLAYS	LIQUID LIMIT <u>LESS THAN 50</u>		ML	INORGANIC SILTS AND VERY FINE SANDS, ROCK FLOUR, SILTY OR CLAYEY FINE SANDS OR CLAYEY SILTS WITH SLIGHT PLASTICITY
							CL	INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY, GRAVELLY CLAYS, SANDY CLAYS, SILTY CLAYS, LEAN CLAYS
	OL	ORGANIC SILTS AND ORGANIC SILTY CLAYS OF LOW PLASTICITY						
MORE THAN 50% OF MATERIAL IS SMALLER THAN NO. 200 SIEVE SIZE	SILTS AND CLAYS	LIQUID LIMIT <u>GREATER THAN 50</u>		MH	INORGANIC SILTS, MICACEOUS OR DIATOMACEOUS FINE SAND OR SILTY SOILS			
				CH	INORGANIC CLAYS OF HIGH PLASTICITY, FAT CLAYS			
				OH	ORGANIC CLAYS OF MEDIUM TO HIGH PLASTICITY, ORGANIC SILTS			
HIGHLY ORGANIC SOILS				PT	PEAT, HUMUS, SWAMP SOILS WITH HIGH ORGANIC CONTENTS			

NOTE: DUAL SYMBOLS ARE USED TO INDICATE BORDERLINE SOIL CLASSIFICATIONS

UNIFIED SOIL CLASSIFICATION SYSTEM

Appendix B

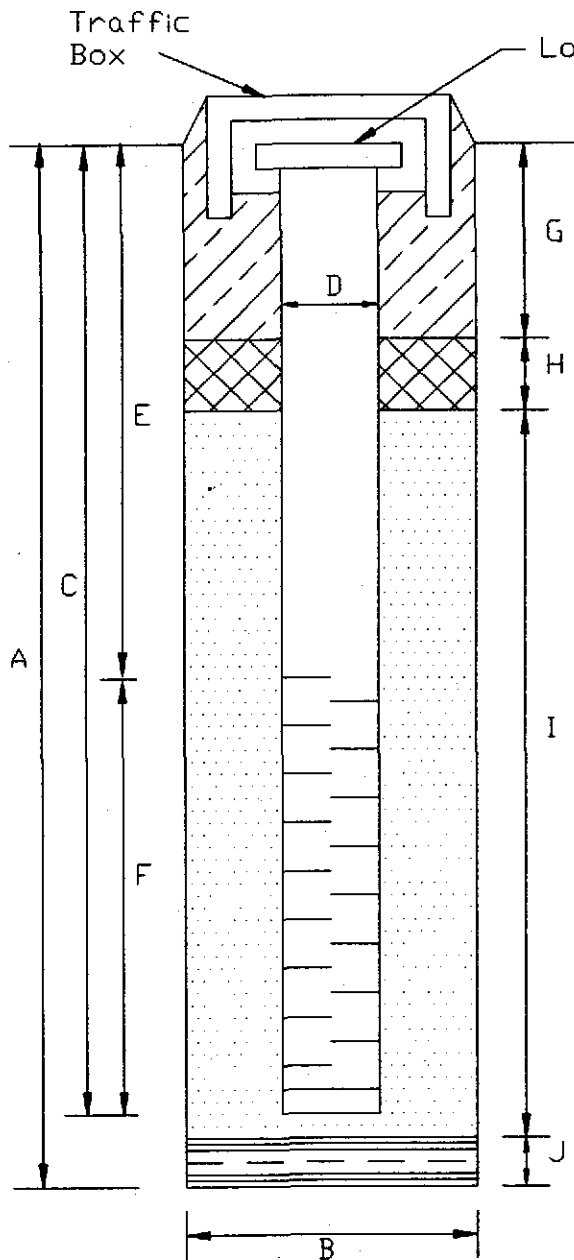
**Well Construction Details
and
Well Monitoring Forms**

WELL DETAILS

Client: Champion Estate

Location: 3561 Adeline St., Oakland, CA

Monitoring Well Number: MW-1 through MW-3



- A. Total Depth: 30 feet
- B. Boring Diameter: 8"
Drilling Method: H.S. Augers
- C. Casing Length: 30 feet
Material: SCH 40 PVC
- D. Casing Diameter: 2"
- E. Depth to Screen: 10 feet bgs.
- F. Screened Length: 20 feet
Screened Interval: 10-30 feet bgs
Slot width: 0.020
- G. Surface Seal: 6-0.5 feet bgs
Material: Grout Cement
- H. Seal: 6-8 feet bgs.
Material: Bentonite
- I. Filter Pack: 8-30 feet bgs.
Material: Sand #3
- J. Bottom Seal: None

Uriah, Inc.

An Environmental Services Company

2456 Armstrong Street
Livermore, CA 94550
(510) 455-4991 Office
(510) 455-4995 FAX

WELL MONITORING FORM:

CLIENT: CITY OF PARIS CLEANERS DATE: NOVEMBER 18, 1992
SITE ADDRESS: 3516 ADELIN STREET COUNTY REPRESENTATIVE: MR. JEFF SHAPIRO
OAKLAND, CA COUNTY REPRESENTATIVE CONTACTED PRIOR TO SAMPLING? YES

Note 1: TOTAL WELL DEPTH & DEPTH TO WATER measurements are read to an accuracy of .01' from a straight edge placed in a north-south orientation on top of the christy box.

Note 2: The 0.17 figure used below to convert WATER COLUMN HEIGHT to gallons has units of gallons/linear foot, and is for a 2" diameter, Schedule 40 PVC pipe with an inside diameter of 2.067". Similarly, use a conversion factor of 0.66 for a 4" pipe, which has a 4.026" I.D.

TOTAL WELL DEPTH 30.04' MONITORING WELL # MW-1
- DEPTH TO WATER 13.99' PURGE METHOD: DISPOSABLE BAILER

= WATER COLUMN HEIGHT 16.05' X 0.17 = 2.73 Gallons (1 well volume)

Multiply 1 well volume by 3 to obtain the minimum number of gallons of water to be purged from monitoring well prior to taking samples.

3 X 2.73 = 8.19 Gallons (3 Well Volumes)

TIME	GALLONS	TEMPERATURE °F	pH	CONDUCTIVITY μmhos/cm
1337	0	65.5	6.9	1785
1344	3	63.6	6.8	1606
1352	6	62.4	6.7	1604
1358	8	62.1	6.7	1574
1402	9	62.1	6.8	1563

CONTAMINANT ODOR? YES TIME OF SAMPLE COLLECTION: 1420
TURBIDITY LEVEL: MODERATE WITNESSED BY: *** NO WITNESS ***
SHEEN ON WATER? YES SAMPLER'S SIGNATURE: J. RAPP for T. FAVARO

Uriah, Inc.

An Environmental Services Company

2456 Armstrong Street
Livermore, CA 94550
(510) 455-4991 Office
(510) 455-4995 FAX

WELL MONITORING FORM:

CLIENT: CITY OF PARIS CLEANERS DATE: NOVEMBER 18, 1992
SITE COUNTY
ADDRESS: 3516 ADELIN STREET REPRESENTATIVE: MR. JEFF SHAPIRO
OAKLAND, CA COUNTY REPRESENTATIVE
CONTACTED PRIOR TO SAMPLING? YES

Note 1: TOTAL WELL DEPTH & DEPTH TO WATER measurements are read to an accuracy of .01' from a straight edge placed in a north-south orientation on top of the christy box.

Note 2: The 0.17 figure used below to convert WATER COLUMN HEIGHT to gallons has units of gallons/linear foot, and is for a 2" diameter, Schedule 40 PVC pipe with an inside diameter of 2.067". Similarly, use a conversion factor of 0.66 for a 4" pipe, which has a 4.026" I.D.

TOTAL WELL DEPTH 30.20' MONITORING WELL # MW-2
- DEPTH TO WATER 13.18' PURGE METHOD: DISPOSABLE BAILER
= WATER COLUMN HEIGHT 17.02' X 0.17 = 2.89 Gallons (1 well volume)

Multiply 1 well volume by 3 to obtain the minimum number of gallons of water to be purged from monitoring well prior to taking samples.

3 X 2.89 = 8.67 Gallons (3 Well Volumes)

TIME	GALLONS	TEMPERATURE °F	pH	CONDUCTIVITY μmhos/cm
1442	0	60.4	6.8	1384
1449	3	60.5	6.9	1390
1457	6	60.2	6.9	1407
1505	8	59.9	6.9	1411
1510	9	60.4	7.0	1413

CONTAMINANT ODOR? SLIGHT TIME OF SAMPLE COLLECTION: 1520
TURBIDITY LEVEL: MODERATE WITNESSED BY: *** NO WITNESS ***
SHEEN ON WATER? NONE SAMPLER'S SIGNATURE: J. RAPP FOR T. FRENCH

Uriah, Inc.

An Environmental Services Company

2456 Armstrong Street
Livermore, CA 94550
(510) 455-4991 Office
(510) 455-4995 FAX

WELL MONITORING FORM:

CLIENT: CITY OF PARIS CLEANERS DATE: NOVEMBER 18, 1992
SITE ADDRESS: 3516 ADELIN STREET COUNTY REPRESENTATIVE: MR. JEFF SHAPIRO
OAKLAND, CA COUNTY REPRESENTATIVE CONTACTED PRIOR TO SAMPLING? YES

Note 1: TOTAL WELL DEPTH & DEPTH TO WATER measurements are read to an accuracy of .01' from a straight edge placed in a north-south orientation on top of the christy box.

Note 2: The 0.17 figure used below to convert WATER COLUMN HEIGHT to gallons has units of gallons/linear foot, and is for a 2" diameter, Schedule 40 PVC pipe with an inside diameter of 2.067". Similarly, use a conversion factor of 0.66 for a 4" pipe, which has a 4.026" I.D.

TOTAL WELL DEPTH 30.05' MONITORING WELL # MW-3
- DEPTH TO WATER 13.93' PURGE METHOD: DISPOSABLE BAILER
= WATER COLUMN HEIGHT 16.12' X 0.17 = 2.74 Gallons (1 well volume)

Multiply 1 well volume by 3 to obtain the minimum number of gallons of water to be purged from monitoring well prior to taking samples.

3 X 2.74 = 8.22 Gallons (3 Well Volumes)

TIME	GALLONS	TEMPERATURE °F	pH	CONDUCTIVITY μmhos/cm
1538	0	59.9	7.0	1586
1545	3	60.0	7.1	1585
1553	6	59.3	7.0	1470
1601	8	59.6	7.1	1491
1605	9	60.1	7.1	1478

CONTAMINANT ODOR? YES TIME OF SAMPLE COLLECTION: 1616
TURBIDITY LEVEL: MODERATE WITNESSED BY: *** NO WITNESS ***
SHEEN ON WATER? YES SAMPLER'S SIGNATURE: J. RAPP FOR T. FAYARD

Appendix C
Reports of Laboratory Analyses
and
Chain of Custody Documents



J L ANALYTICAL SERVICES, INC.

217 Primo Way • P.O. Box 576185 • Modesto, California 95357
Office (209) 538-8111 • FAX (209) 538-3966

11 November 1993

URIAH, INC.

Attn: John Rapp
RE: Soil Samples - Adeline Street, Oakland, CA.

RESULTS:

Sample	J L SAMPLE NUMBER	Stoddard Solvent (mg/kg)	Diesel (mg/kg)	Benzene (ug/kg)	Toluene (ug/kg)	Ethyl Benzene (ug/kg)	Total Xylenes (ug/kg)
MW1-5	21100594	<10	<10	0.3	12	<0.2	<0.6
MW1-10	21100595	210	<10	1.1	21	12	<0.6
MW2-5	21100596	<10	<10	<0.2	63	130	210
MW2-10	21100597	17	<10	<0.2	120	<0.2	360
MW3-5	21100598	<10	<10	2.4	120	47	160
MW3-10	21100599	30	<10	26	550	<0.2	<0.6
Blank		ND	ND	ND	ND	ND	ND
Detection Limit		10	10	0.2	0.2	0.2	0.6
Method of Analysis		LUFT	LUFT	5030/ 6020	5030/ 6020	5030/ 6020	5030/ 6020

Respectfully Submitted

Mary A. Jacobs, Director

Uriah, Inc.

An Environmental Services Company
 (510) 455-4991 OFFICE (510) 455-4995 FAX

CHAIN OF CUSTODY

DATE: 10/30/92 PAGE: 1 OF 1

PROJ. MGR. <u>ADI CONSTANTINESCU</u>				ANALYSIS REQUEST												REFERENCE NO CONTAINER		
COMPANY <u>Uriah, Inc.</u>				TPHG	TPHG & BTEX	TPHD	BTEX	O & G	METALS <small>Cd, Cr Pb, Zn Ni</small>	HALO CARBONS FURGEABLE	VOLATILES	ORGANICS	ORGANIC LEAD	TOTAL LEAD	SOLUBLE LEAD		TPH-SS <u>500/8015</u>	
ADDRESS <u>2456 Armstrong Street Livermore, CA 94550</u>																		
SAMPLER'S SIGNATURE <u>Giorgia Constantinescu</u>																		
PHONE NO. <u>(510) 455-4991</u>																		
SAMPLE I.D.	DATE	TIME	MATRIX															
<u>594</u> MW1 - 5	<u>10/29/92</u>		SOIL WATER			*	*									*		1
<u>595</u> MW1 - 10	<u>10/29/92</u>		SOIL WATER			↓	↓									↓		
<u>596</u> MW2 - 5	<u>10/30/92</u>		SOIL WATER			↓	↓									↓		
<u>597</u> MW2 - 10	<u>10/30/92</u>		SOIL WATER			↓	↓									↓		
<u>598</u> MW3 - 5	<u>10/30/92</u>		SOIL WATER			↓	↓									↓		
<u>599</u> MW3 - 10	<u>10/30/92</u>		SOIL WATER			↓	↓									↓		

PROJECT I.D./ADDRESS
3516 ADELIN ST
OAKLAND, CA

LABORATORY INSTRUCTIONS/COMMENTS:
 Turn Around Time (Circle One)
 Same Day 24 Hrs 48 Hrs
 72 Hrs Normal

ANALYTICAL LABORATORY J & L Analytical
 CITY MOBISTO

RELINQUISHED BY:
Giorgia Constantinescu
 Signature
GIORGIA ADRIANA CONSTANTINESCU
 Printed Name
URIAH, Inc.
 Company
 Time 2:30pm Date 11/4/92

RECEIVED BY:
Adriana Ilie
 Signature
ADRIANA ILIE
 Printed Name
URIAH, Inc.
 Company
 Time 4:00pm Date 11/4/92

RELINQUISHED BY:
Adriana Ilie
 Signature
ADRIANA ILIE
 Printed Name
URIAH, Inc.
 Company
 Time 11:30 AM Date 11/5/92

RECEIVED BY:
B. Kap
 Signature
JOHN RAPP
 Printed Name
URIAH
 Company
 Time 11:30 AM Date 11-5-92

RELINQUISHED BY:
B. Kap
 Signature
JOHN RAPP
 Printed Name
URIAH
 Company
 Time 1:30pm Date 11-5-92

RECEIVED BY:
Michelle Crisanti
 Signature
Michelle Crisanti
 Printed Name
J & L Analytical
 Company
 Time 1:30pm Date 11-5-92



PRIORITY ENVIRONMENTAL LABS

Precision Environmental Analytical Laboratory

November 23, 1992

PEL # 9211053

URIAH, INC.

Attn: Tony Favero

Re: Three water samples for BTEX and TEPH analyses.

Project name 3516 Adeline St. -Oakland, CA.

Date sampled: Nov 18, 1992


Date submitted: Nov 20, 1992

Date extracted: Nov 20-21, 1992

Date analyzed: Nov 20-21, 1992

RESULTS:

SAMPLE I.D.	Stoddard Solvent (ug/L)	Diesel (ug/L)	Benzene (ug/L)	Toluene (ug/L)	Ethyl Benzene (ug/L)	Total Xylenes (ug/L)
A	1800	N.D.	N.D.	N.D.	N.D.	N.D.
B	630	N.D.	N.D.	N.D.	N.D.	N.D.
C	11000	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	82.4%	103.1%	97.2%	95.3%	104.6%	92.0%
Duplicate Spiked Recovery	---	100.5%	88.4%	90.2%	98.6%	86.1%
Detection limit	50	50	0.5	0.5	0.5	0.5
Method of Analysis	3510 / 8015	3510 / 8015	602	602	602	602


David Duong
Laboratory Director

Uriah, Inc.

An Environmental Services Company
 (510) 455-4991 OFFICE (510) 455-4995 FAX

PEL # 9211053

INV # 23223

CHAIN OF CUSTODY

DATE: 11/19/92 PAGE: 1 OF 2

ANALYSIS REQUEST

PROJ. MGR. Tony Favero
 COMPANY Uriah, Inc.
 ADDRESS 2456 Armstrong Street
Livermore, CA 94550
 SAMPLER'S SIGNATURE Tony Favero
 PHONE NO. (510) 455-4991

T P H G	T P H G & B T E X	T P H D	B T E X	O & G	M E T A L S <small>Cd, Cr Pb, Zn Ni</small>	F U R E L E A B L E	H A L O C A R B O N S	V O L A T I L E	O R G A N I C	O R G A N I C L E A D	T O T A L L E A D	S O L U B L E L E A D	T P H S S T O O D A R D S O L V E N T			
A																4
B																4
C																4

NO CONTAMINATION

PROJECT I.D./ADDRESS
3516 ADELPHINE ST.
OAKLAND, CA

LABORATORY INSTRUCTIONS/COMMENTS:
 Turn Around Time (Circle One)
 Same Day 24 Hrs 48 Hrs
 72 Hrs Normal
 Sample consists of 2 amber
 liters + 2 HCL preserved
 VOA'S

ANALYTICAL LABORATORY PRIORITY LAB
 CITY MILPITAS

RELINQUISHED BY:
Tony Favero
 Signature
Tony Favero
 Printed Name
URIAH, INC.
 Company
 Time 1600 Date 11/20/92

RECEIVED BY:
David Duong
 Signature
DAVID DUONG
 Printed Name
PEL
 Company
 Time 3:50 pm Date 11/20/92

RELINQUISHED BY:
 Signature _____
 Printed Name _____
 Company _____
 Time _____ Date _____

RECEIVED BY:
 Signature _____
 Printed Name _____
 Company _____
 Time _____ Date _____

RELINQUISHED BY:
 Signature _____
 Printed Name _____
 Company _____
 Time _____ Date _____

RECEIVED BY:
 Signature _____
 Printed Name _____
 Company _____
 Time _____ Date _____