HEALTH CARE SERVICES

AGENCY



DAVID J. KEARS, Agency Director

May 28, 1997

Mr. Jerry Sherman 2429 Lincoln Avenue Alameda, CA 94501 **ENVIRONMENTAL HEALTH SERVICES**

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

Re: Fuel Leak Site Case Closure-Goodman Property (a.k.a., Jerry's Tire & Auto Center), located at 2501 Santa Clara Avenue, Alameda, CA 94501

Dear Mr. Sherman,

This letter transmits the enclosed underground storage tank (UST) case closure letter in accordance with Chapter 6.75 (Article 4, Section 25299.37[h]). The State Water Resources Control Board adopted this letter on February 20, 1997. As of March 1, 1997, the Alameda County Environmental Protection Division is required to use this case closure letter for all UST leak sites. We are also transmitting to you the enclosed case closure summary. These documents confirm the completion of the investigation and cleanup of the reported release at the subject site. The subject fuel leak case is closed.

SITE INVESTIGATION AND CLEANUP SUMMARY

Please be advised that the following conditions exist at the site:

- o Residual concentrations of TPHg, at 3,000ppm, and BTEX (at 0.4ppm, 0.6ppm, 3.7ppm, and 0.9ppm) remain in the soil.
- o Low levels of TPHg, at 230ppb, and BTEX (at 2.8ppb, 0.58ppb, 4.8ppb, and 24ppb) remain in the groundwater beneath the site.

If you have any questions, please contact me at (510)567-6700. Thank you.

Sincerely,

Juliet Shin

Senior Hazardous Materials Specialist

Enclosures:

1. Case Closure Letter

2. Case Closure Summary

ALAMEDA COUNTY

HEALTH CARE SERVICES





DAVID J. KEARS, Agency Director

May 28, 1997

STID 2063

ENVIRONMENTAL HEALTH SERVICES

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

REMEDIAL ACTION COMPLETION CERTIFICATION

Ms. Helen Goodman 3239 Thompson Avenue Alameda, CA 94501

RE: Goodman Property (a.k.a., Jerry's Tire & Auto Center, located at 2501 Santa Clara Avenue, Alameda, CA

Dear Ms. Goodman,

This letter confirms the completion of a site investigation and remedial action for the underground storage tanks formerly located at the above described location. Thank you for your cooperation throughout this investigation. Your willingness and promptness in responding to our inquiries concerning the former underground storage tanks are greatly appreciated.

Based upon the available information in the above-referenced file and with the provision that the information provided to this agency was accurate and representative of site conditions, no further action related to the underground storage tank release is required.

This notice is issued pursuant to a regulation contained in Section 2721(e) of Title 23 of the California Code of Regulations.

Please contact our office if you have any questions regarding this matter.

Sincerely,

Mee Ling Tung

Director of Environmental Health Services

enclosure

c: Chief, Hazardous Materials Division - files Juliet Shin, ACDEH Kevin Graves, RWQCB Lori Casias, SWRCB Cheryl Gordon, State Cleanup Fund

() 1-0764

CASE CLOSURE SUMMARY Leaking Underground Fuel Storage Tank Program

I. AGENCY INFORMATION

Date: December 5, 1996 /

Alameda County-HazMat Address: 1131 Harbor Bay Pkwy. Agency name:

City/State/Zip: Alameda, CA 94502 (510) 567-6700 Phone: Responsible staff person: Juliet Shin Title: Senior HMS

II. CASE INFORMATION

Site facility name: Goodman Property (a.k.a., Jerry's Tire & Auto Center)

Site facility address: 2501 Santa Clara Ave., Alameda, CA 94501 Local Case No./LOP Case No.: 2063 RB LUSTIS Case No: N/A

URF filing date: 5/19/88 SWEEPS No: N/A

Responsible Parties:	Addresses:	Phone Numbers:
Jerry Sherman	2429 Lincoln Ave. Alameda, CA 94501	(510)769-7852
Helen Goodman	3239 Thompson Ave. Alameda, CA 94501	(510)522-4030

Tank No:	<u>Size in</u> gal.:	Contents:	<pre>Closed in-place or removed?:</pre>	<u>Date:</u>
1.	5,000	Gasoline	removed	8/14/92
2	5,000	Gasoline	removed	8/14/92
3	6,000	Gasoline	removed	8/14/92
4	250	Waste Oil	removed	8/14/92

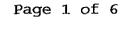
RELEASE AND SITE CHARACTERIZATION INFORMATION

Cause and type of release: Holes were noted in several of the tanks.

Site characterization complete?

Date approved by oversight agency: December 5, 1996

Monitoring Wells installed? YES Number: A total of four (However, one was destroyed during overexcavation activities). 21 Contracto



Leaking Underground Fuel Storage Tank Program

Proper screened interval? YES. Wells are screened from 5- to 25-feet below ground surface (bgs).

Highest GW depth below ground surface: 4.83'bgs Lowest depth: 9.65'bgs

Flow direction: northeasterly

Most sensitive current use: Unknown

Are drinking water wells affected? NO

Aquifer name: Unknown

Is surface water affected?

Nearest affected SW name: None

Off-site beneficial use impacts (addresses/locations): None

Report(s) on file? YES Where is report(s) filed? Alameda County

1131 Harbor Bay Pkwy.

Alameda, CA 94502

Treatment and Disposal of Affected Material:

<u>Material</u>	Amount (include units)	Action (Treatment or Disposal w/destination)	<u>Date</u>
Tanks	four	Erickson, Inc. 255 Parr Blvd. Richmond, CA 94801	8/14/92
Product & rinseate	600 gallons	Demenno Kerdoon 2000 N. Alameda Compton, CA	8/14/92
Soil	198 cubic yards	Durham Road Landfill Fremont, CA	12/18/92
	42 tons	Port Costa Materials Port Costa, CA	1/5/93
	536 cy	Durham Road Landfill Fremont, CA	3/17/93

Leaking Underground Fuel Storage Tank Program

RELEASE AND SITE CHARACTERIZATION INFORMATION (Continued) III. Maximum Documented Contaminant Concentrations - - Before and After Cleanup

Contaminant	Soil (p	pm)	Water (p	
	Before1	After ⁵	<u>Before³</u>	After ⁶
TPH (Gas)	7,200	3,000	330,000	230
TPH (Diesel)	250^{2}	ND^4	NA	
Oil & Grease	$12,000^{2}$	ND^4	NA	
Benzene	4.9	0.4	1,600	2.8
Toluene	11	0.6	2,600	0.58
Xylene	36	3.7	6,400	4.8
Ethylbenzene	12	0.9	1,800	24

¹⁻Sample SW-6-N collected from the northern wall of the gasoline tank pit August 1992.

IV. CLOSURE

Does completed corrective action protect existing beneficial uses per the Regional Board Basin Plan? Undetermined

Does completed corrective action protect potential beneficial uses per the Undetermined Regional Board Basin Plan?

Does corrective action protect public health for current land use? YES

Site management requirements: NA

Should corrective action be reviewed if land use changes? NO

Monitoring wells Decommisioned: One. The others will be decommisioned upon receipt of case closure.

Number Retained: 3 Number Decommisioned: 1

List enforcement actions taken: None

²⁻Sample W/O-3-B collected from the waste oil tank pit in August 1992.

^{3-&}quot;grab" groundwater sample collected from the gasoline tank pit in August 1992. 4-Confirmatory soil samples collected from overexcavation of waste oil tank pit in September 1992.

⁵⁻Confirmatory soil sample collected from overexcavation of the gasoline tank pit in January 1993.

⁶⁻Sample collected from Well MW-3 in the October 1996 sampling event.

Leaking Underground Fuel Storage Tank Program

v. LOCAL AGENCY REPRESENTATIVE DATA

Name: Juliet Shin

Signature:

Reviewed by Name: Eva Chu

Signature:

Name: Thomas Peacock

Signature:

VI. RWOCB NOTIFICATION

Date Submitted to RB:

RWQCB Staff Name: Kevin Graves

Title: Senior HMS

Date: (2/24/9)

Title: Hazardous Materials Specialist

Date: 122419

Title: Supervising HMS

Date:

RB Response:

Title: San mbgineering Asso,

VII. ADDITIONAL COMMENTS, DATA, ETC.

The site is located on the corner of Everett St. and Santa Clara Avenue in Alameda, California (refer to attached figure 1). It is currently used as an automobile repair facility.

Two steel 5,000-gallon gasoline underground storage tanks (USTs), one steel 6,000-gallon gas UST, and one 250-gallon waste oil UST were removed from the above site on August 14, 1992. Associated piping and vent lines were removed. The three gas USTs were located within the same excavation pit (refer to attached figure 2 and tables 1 and 2). Within the gas tank pit, stained soils, approximately 1 foot thick, were encountered at three feet below ground surface (bgs), and less severe stained soils were observed from 4- to 9-feet bgs. A strong petroleum odor was detected throughout the entire excavation. Tank bottoms of these gas USTs were measured at approximately 11- to 12-feet bgs. The tank bottom of the waste oil UST was measured at approximately 5-feet bgs. The waste oil tank and its piping showed signs of corrosion.

Tank A (5,000-gallon capacity) was noted to have a 1-inch hole in the north siewall above the interface of groundwater on the fill end of the tank. Tank B (5,000-gallon capacity) was noted to have a crack in the seam of the southwest end of the tank. Tank C (6,000-gallon capacity) had minor signs of corrosion and no apparent holes. Tank D (waste oil tank) had a 1/2-inch hole in the south end.

One soil sample, W/O-3-B, was collected from beneath the waste oil UST at approximately 7-feet bgs. The sample was analyzed for TPHg, TPHd, BTEX, 8240, and Oil & Grease. Analysis of this sample identified 12,000ppm Oil & Grease, 250ppm TPHd, and 19ppm benzene (refer to figure 3).

Leaking Fuel Underground Storage Tank Program

Three soil samples, (SW-4-W, SW-5-S, SW-6-N), were collected from the sidewalls of the gas tank excavation at approximately 8.5-feet bgs (i.e., groundwater/soil interface). Soil samples were analyzed for TPHg, TPHd, BTEX, and lead. One "grab" groundwater sample was collected from the gas tank pit and analyzed for TPHg and BTEX. Up to 7,200ppm TPHg and 4,900ppb benzene were identified in the soil samples. The "grab" groundwater sample identified 330ppm TPHg and 1,600ppb benzene.

On September 25, 1992, overexcavation was conducted in the area of the former waste oil UST. The pit was originally 6'x6'x5' deep, and was enlarged to 8'x9'x11' deep. Approximately 30 cubic yards of soil was removed. Four soil samples (OE-E, OE-N, OE-S, OE-W), one from each of the four sidewalls, were collected from 7.5- to 8-feet bgs (refer to figure 4 and table 3). These samples were analyzed for TPHg, TPHd, BTEX, and Oil & Grease. No contaminants were detected.

Three monitoring wells, MW-1 through MW-3, were installed at the site on October 20, 1992. One additional boring, SB-1, was placed by the dispenser island at the site (refer to figure 5 and attached borings). Soil samples were collected from 5- and 10-feet bgs from MW-1 and MW-2. Sol samples were collected from 5- and 11-feet bgs from MW-3. One soil sample was collected from SB-1 at 9.5-feet bgs. Samples collected from MW-1 were analyzed for TPHg, TPHd, BTEX, Oil & Grease, and 8010. Samples collected from other borings were analyzed for TPHg and BTEX. The soil sample collected from MW-2 at 5-feet bgs identified 2,500ppm TPHg and 1,200ppb benzene. The soil sample collected from SB-1 identified 740ppm TPHg and 860ppb benzene (soil at 2-feet bgs did not exhibit any petroleum odor). Traces of TPHg and BTEX were also identified in MW-3 (refer to table 4).

No free product was observed in these wells, however, a strong petroleum odor was noted from MW-2. Groundwater samples identified 32,000ppb TPHg and 76ppb benzene from MW-2 and 320ppb TPHg and 2.2ppb benzene in MW-3. The groundwater flow direction was noted to be towards the northeast. Wells were screened from 5- to 25-feet bgs.

On December 18, 1992, 198 cubic yards of stockpiled soil, resulting from excavation of the gas tank pit, was hauled off site to Durham Road Landfill in Fremont. On January 5, 1993, 42 tons of soil resulting from the former waste oil tank pit was hauled off site to Port Costa Materials Facility in Port Costa, California.

On January 21 and 22, 1993, the canopy, dispenser islands, and concrete pads were removed and disposed of in order to allow access for further soil excavation. The area around the former gasoline tanks and dispenser islands was overexcavated down to 6-feet bgs. The presence of groundwater at 6-feet bgs restricted the vertical extent of the excavation. The eastern and western extent of the excavation was limited by the on-site building and Santa Clara Avenue. Approximately 525 cubic yards of soil was excavated and eventually hauled off site to Durham Road Landfill.

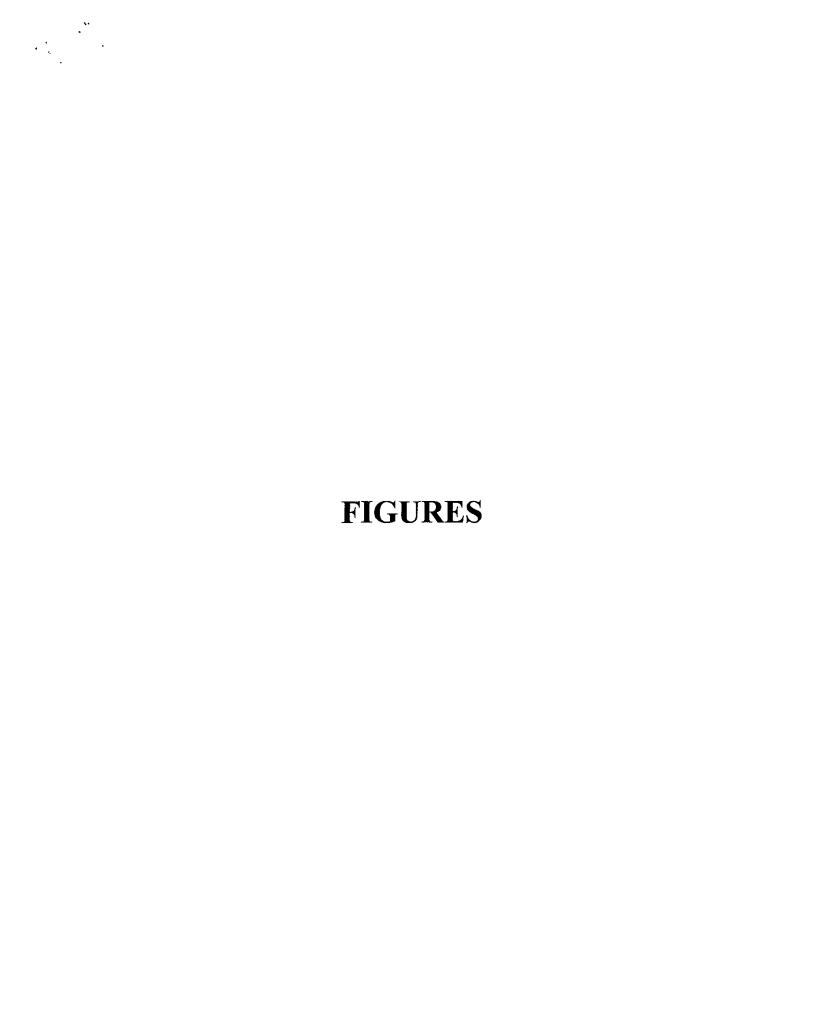
Leaking Fuel Underground Storage Tank Program

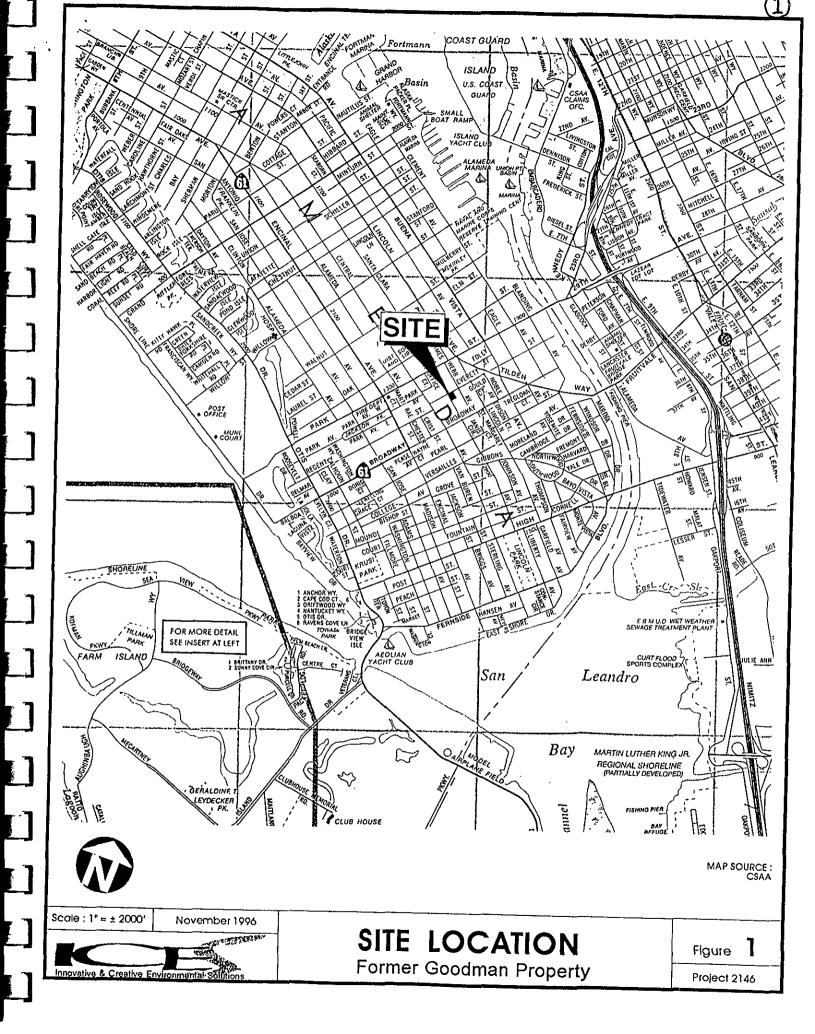
Nine sidewall soil samples were collected from the overexcavation at 5.5-to 6-feet bgs (refer to figure 6 and table 5). These samples were analyzed for TPHg and BTEX. Only one soil sample, SWE-3, collected from the eastern sidewall alongside the building, identified any contamination above detection limits (3,000ppm TPHg, 0.4ppm benzene, 0.6ppm toluene, 0.9ppm ethylbenzene, and 3.7ppm total xylenes).

During this overexcavation, Well MW-2 was destroyed. On April 23, 1993, a replacement well, MW-2A, was installed near former Well MW-2. During the installation of Well MW-2A, two soil samples were collected from this location at 5- and 10-feet bgs. No TPHg or BTEX was identified in these samples above detection limits. Well MW-2A is screened from 5- to 25-feet bgs.

In summary, this office is recommending this case for closure for the following reasons:

- o The source of the observed contamination has been removed from the site. A total of 776 cubic yards of gasoline- and waste oil-contaminated soil has been excavated and hauled off site.
- o The only remaining soil contamination identified at the site is from Sample SWE-3, which was a confirmatory soil sample collected from the eastern sidewall of the gasoline tank pit overexcavation, alongside the on-site building (3,000ppm TPHg, 0.4ppm benzene, 0.6ppm toluene, 0.9ppm ethylbenzene, and 3.7ppm total xylenes). All other areas where soil contamination was identified has been overexcavated to Non Detect.
- O Based on the consistently attenuating groundwater contaminant concentrations at the site, the contaminant plume appears to be stable (refer to attached table 6).
- O The residual soil and groundwater contamination at the site does not pose a threat to human health based on the Tier 1 table given in the American Society for Testing and Materials' Risk-Based Corrective Action Guidelines (E 1739-95), for a 10⁻⁴ excess cancer risk in a commercial area.





LEGEND

Santa Clara Avenue

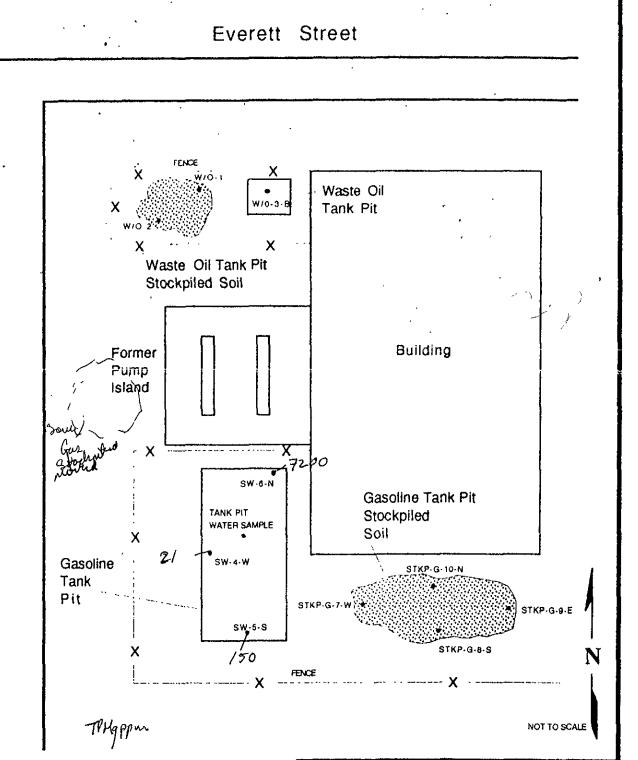
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SITE PLAN

Goodman Property 2501 Santa Clara Avenue Alameda, California

Aqua Science Engineers

Figure 1

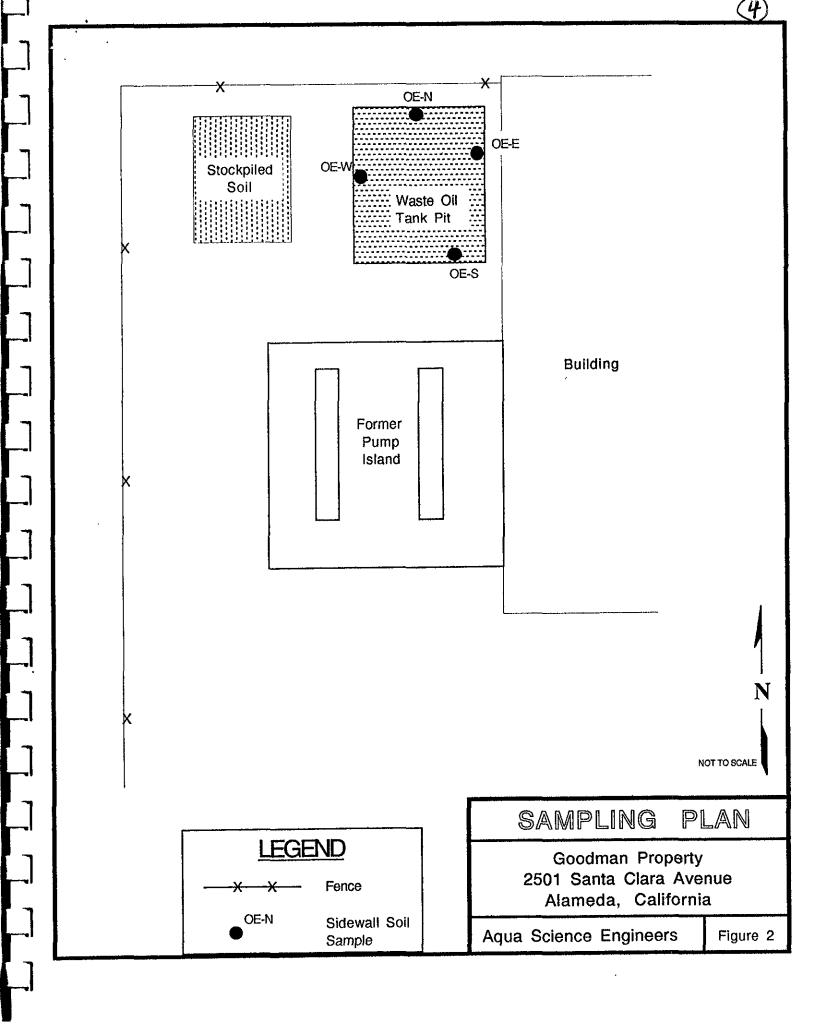


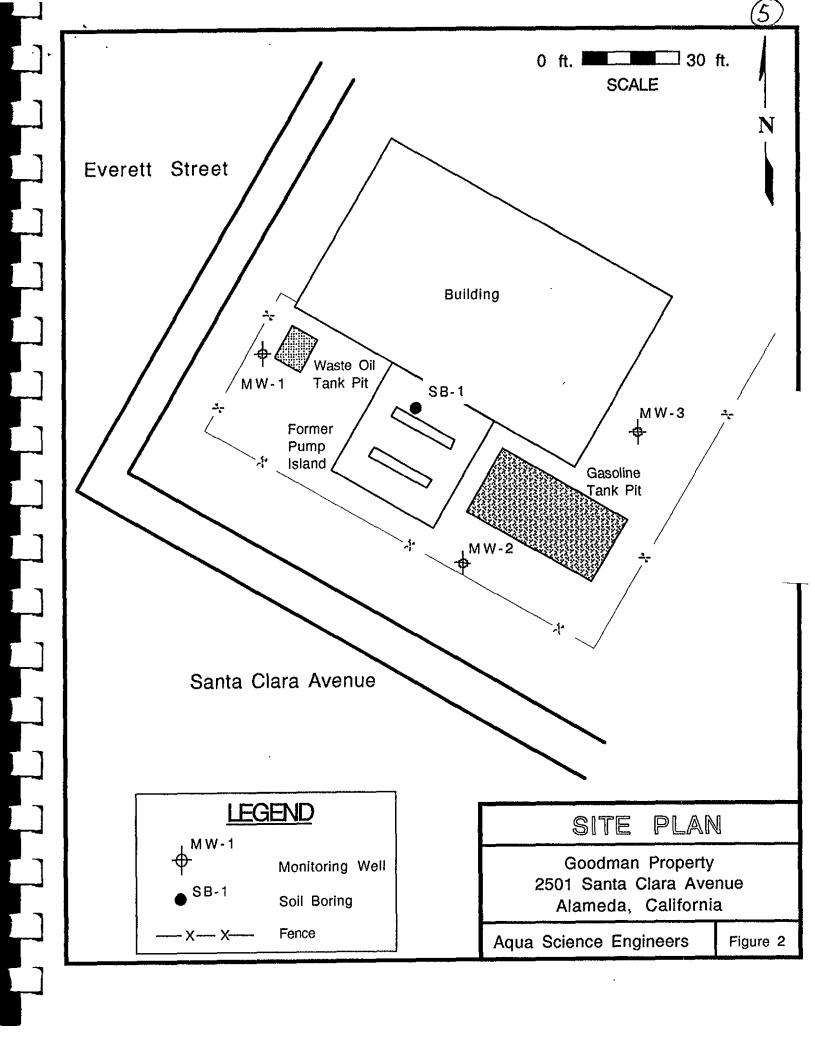
SAMPLING LOCATIONS

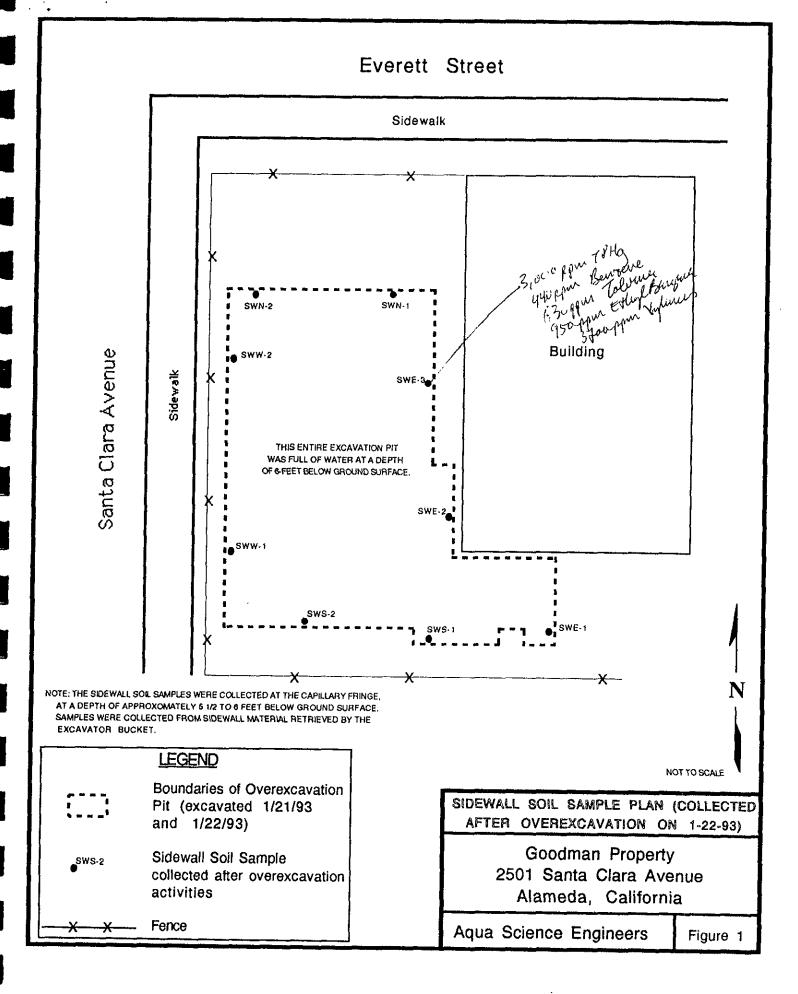
Goodman Property 2501 Santa Clara Avenue Alameda, California

Aqua Science Engineers

Figure 2









using aluminum foil, capped, and sealed with tape and transported directly to the analyzing laboratory under chain of custody procedures. Soil samples were submitted for analysis to the state certified laboratory. Priority Environmental Labs in Milpitas, California (408) 946-9636, and analyzed for Total Petroleum Hydrocarbons as Gasoline (EPA 5030/8015), Diesel (EPA 3550/8015), and BTEX (EPA 8020), Volatile Organics (EPA 8240), and Oil and Grease (EPA 5520 E & F. Analysis results can be found below (Table One), and hard copies in Appendix B. Results of EPA 8240 showed detectable levels of the factions BTEX and other constituents ranging from 14-110 ppb; these results were not tabulated.

TABLE ONE: WASTE-OIL SOIL SAMPLE RESULTS

Sample No.	TPH Gasoline (ppm)	TPH Diesel (ppm)	Benzene (ppb)		Ethyl Benzene (ppb)	Total Xylenes (ppb)	Oil and Grease (ppm)
W/O-1,2*	5.2	38	6.7	19	11 43	130	1800
W/O-3-B	39	250	19	27		150	12000

* - Composited sample

ND - Non Detectable at analytical method limits

ppm - parts per million

ppb - parts per billion

7.2 Gasoline Tank Excavation and Stockpile:

Three soil samples (SW-4-W, SW-5-S, SW-6-N) were extracted from the gasoline tank excavation at approximately 8 1/2 feet below grade (groundwater/soil interface) by use of the backhoe bucket, then a 2"x 6" brass sample tube was inserted to collect a sample (see Figure 2, Sample Location Map). The stockpiled soils were sampled by collecting four samples (STKP-G-7-W, STKP-G-8-S, STKP-G-9-E, and STKP-G-10-N) which were later composited for analysis at the laboratory. samples were secured using aluminum foil, capped, and sealed with tape and transported directly to the analyzing laboratory under chain of custody procedures. Samples were submitted for analysis to the state certified laboratory, Priority Environmental Labs in Milpitas, California The soil samples taken were analyzed for Total (408) 946-9636. Petroleum Hydrocarbons as Gasoline (EPA 5030/8015), Diesel (EPA 3550/8015), and BTEX (EPA 8020) and Total Extractable Lead. Analysis results are shown below (Table Two) and hard copies can be found in Appendix B. A "Tank Pit" water sample was collected and

analyzed for TPH as gasoline and the fractions BTEX (EPA 5030/8015). Results are in the table below.

TABLE TWO: GASOLINE EXCAVATION SOIL AND TANK-PIT WATER SAMPLE RESULTS

Sample No.	TPH Gasoline (ppm)	TPH Diesel (ppm)	Benzene (pph)	Toluene (ppb)	Ethyl Benzene (ppb)	Total Xylenes (ppb)	Lead (mg/kg)
SW-4-W	21		24	31	39	190	6.0
SW-5-S	150		370	1000	1400	4200	6.8
SW-6-N	7200		4900	11000	12000	36000	9.2
STKP-G*	1300		500	1400	1700	5200	20
TANK PIT WATER	330		1600	2600	1800	6400	

* - Composited sample

ND - Non Detectable at analytical method limits

ppm - parts per million ppb - parts per billion

8.0 BACKFILLING AND RESURFACING

The excavations were not backfilled while awaiting soil sample analytical results. Due to levels of contamination found in the soil, a Phase II site assessment was recommended; therefore, the excavations will be left open pending soil boring analysis and groundwater monitoring well installation and sampling.

9.0 DISCUSSION AND CONCLUSIONS

Four steel, underground tanks were were removed from the site, 1 - 6,000 gallon gasoline, 2 - 5,000 gallon gasoline, and 1 - 250 gallon waste-oil tank, and transported as hazardous waste to the Erickson Facility in Richmond California, to be cleaned and disposed of as scrap.

The results of laboratory analysis of soil samples from the excavations showed detectable concentrations of Total Petroleum Hydrocarbons (TPH) as gasoline and diesel. A copy of the certified laboratory results appear in Appendix C. The native soil at this elevation below the tanks did not appear clean, dry, or free of petroleum odor. An Underground Storage Tank Unauthorized Release form was prepared by Aqua Science and filed with the Alameda County Health Services Department.

SAMPLING AND ANALYSIS

Four soil sidewall samples were collected at points requested by Ms. Shin, see Figure 2, Sampling Plan. The following soil samples were collected:

SAMPLE	
ID.	DEPTH
OE-E	7 1/2' below ground surface
OE-N	8' below ground surface
OE-S	7 1/2' below ground surface
OE-W	8' below ground surface

These soil samples were collected from the backhoe bucket in 2" x 6" sterile, brass tubes, covered on both ends with aluminum foil, capped, and taped. The samples were labeled and stored in an ice chest for cold storage prior to delivery to Priority Laboratory in Milpitas, California, a State of California Certified Laboratory. The samples were submitted for analysis of Total Petroleum Hydrocarbons as Gasoline (EPA 5030/8015), Total Petroleum Hydrocarbons as Diesel (EPA 3550/8015), BTEX (EPA 8020), and Oil & Grease (EPA 5520 D&F). Copies of the analytical report are attached in Appendix A; results are tabulated below in Table One.

TABLE ONE Overexcavation Soil Sample Results

Sample ID.	TPH Gasoline (ppm)	TPH Diesel (ppm)	Benzene (ppb)	Toluene (ppb)	Ethyl Benzene (ppb)	Total Xylenes (ppb)	Oil and Grease (ppm)
OE-E	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
OE-N OE-S	N.D. N.D.	N.D. N.D.	N.D. N.D.	N.D. N.D.	N.D. N.D.	N.D. N.D.	N.D. N.D.
OE-W	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Test Method	5030/ 8015	3550/ 8015	8020	8020	8020	8020	5520 D&F

ND - Non Detectable at analytical method limits

ppm - parts per million

ppb - parts per billion

TABLE 1
Summary of Chemical Analysis of SOIL Samples
TPH Gasoline and Diesel, BTEX, and Oil and Grease

	TPH	TPH			Ethyl	Total	Oil &
Sample	Gasoline	Diesel	Benzene	Toluene	Benzene	Xylenes	Grease
I.D.	(ppm)	(ppm)	(ppb)	(ppb)	(ppb)	(ppb)	(ppm)
MW1-5'	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	51
MW1-10'	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
MW2-5'	2500		1200	1800	2300	6500	
MW2-10'	1.2		6.8	10	10	39	
MW3-5'	N.D.		N.D.	N.D.	N.D.	N.D.	
MW3-11'	2.5		7.1	6.3	25	45	
SB1-9.5'	740		860	1200	1500	4000	
EPA	5030/	3550/	8020	8020	8020	8020	5520
METHOD	8015	8015					C&F
		_				/	

ND Non Detectable at analytical method limits ppm parts per million ppb parts per billion not analyzed

TABLE 2
Summary of Chemical Analysis of SOIL Samples
Purgeable Halocarbons

ALL 8010 CONSTITUENTS

ND Non Detectable at analytical method limits ppb parts per billion

The samples were collected from the the excavator bucket in stainless steel sample tubes. The samples were covered on each end with double-thickness aluminum foil, capped, and sealed with tape. Each sample was discretely labeled, then immediately stored in an ice chest containing wet ice. The proper chain of custody documents were prepared prior to shipment to Priority Environmental Labs in Milpitas, California. Priority Environmental Labs is a CAL-EPA certified environmental laboratory (DHS No. 1708).

The samples were subject to the following analytical tests: Total Petroleum Hydrocarbons (TPH) as Gasoline (EPA method 5030/8015), and the fractions BTEX (EPA method 8020). Results of the analytical tests are tabulated below as Table Two; copies of the analytical report are contained in Appendix A.

TABLE TWO
Summary of Chemical Analysis of SOIL SIDEWALL Samples
TPH as Gasoline, and BTEX

Sample I.D.	TPH Gas (ppm)	Benzene (ppb)	Toluene (ppb)	Ethyl Benzene (ppb)	Total Xylenes (ppb)
SWS-1	N.D.	N.D.	N.D.	N.D.	N.D.
SWS-2	N.D.	N.D.	N.D.	N.D.	N.D.
SWN-I	N.D.	N.D.	N.D.	N.D.	N.D.
SWN-2	N.D.	N.D.	N.D.	N.D.	N.D.
SWE-1	N.D.	N.D.	N.D.	N.D.	N.D.
SWE-2	N.D.	N.D.	N.D.	N.D.	N.D.
SWE-3	3000	440	630	950	3700
SWW-1	N.D.	N.D.	N.D.	N.D.	N.D.
SWW-2	N.D.	N.D.	N.D.	N.D.	N.D.
EPA METHOD	3510/ 8015	602 8015	602	602	602

ND Non Detectable at analytical method limits

ppm parts per million ppb parts per billion

As detailed, only one sample (taken from the sidewall nearest the north end of the building) detected petroleum-hydrocarbon contamination. All of the other samples resulted in N.D. levels of contamination. Due to the proximity of the building in relation to the pocket of soil contamination that appeared to be identified, further overexcavation/remediation was not recommended.



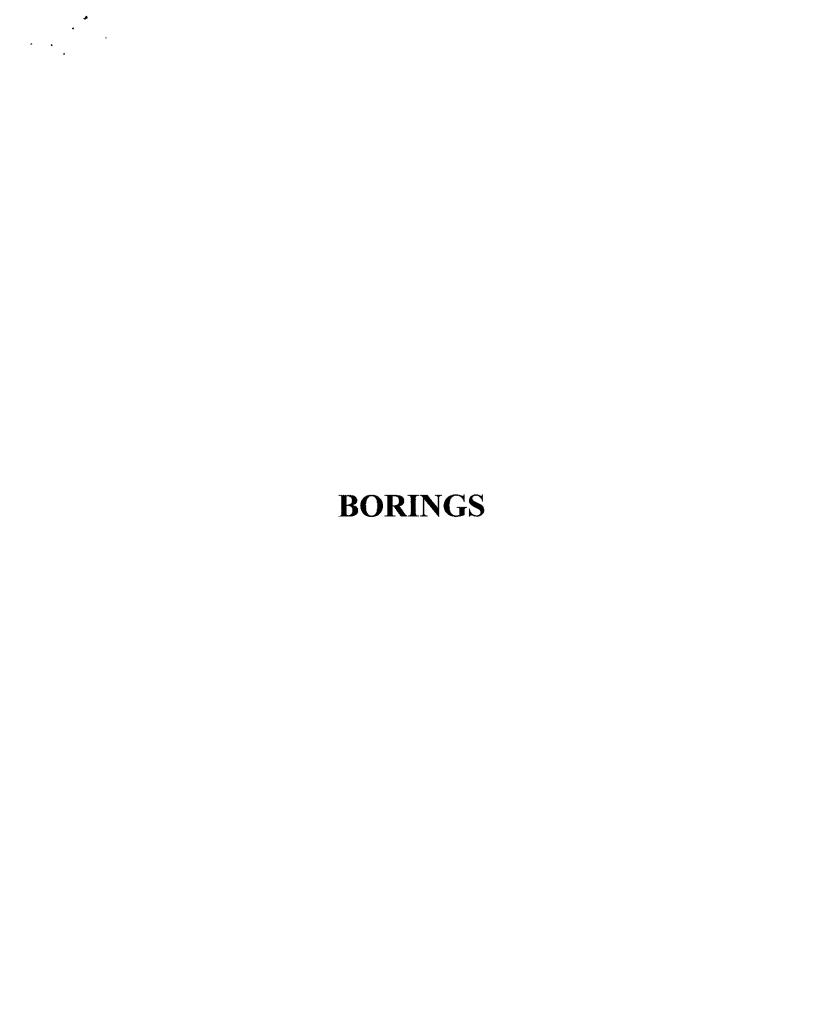
TABLE 1

LABORATORY ANALYTICAL RESULTS FOR TOTAL PETROLEUM HYDROCARBONS DETECTED IN GROUNDWATER OCTOBER 1996

Goodman Property Alameda, California

(concentrations expressed in mg/L)

Analyte		MW-1	Mv	J-2	MW-3	
Ga	soline	ND<0.050	ND<0	0.050	0.230	
Be	enzene	ND<0.000	5 ND<0	0.0005	0.0028	
То	luene	ND<0.000	5 ND<0	0.0005	0.00058	
Et	hylbenzene	ND<0.000	5 ND<0	0.0005	0.024	
Ху	lenes	ND<0.000	5 ND<0	0.0005	0.0048	
ND	Not Detec	カルクラ	nw-ZA	<u>Mw-</u> 320 2.2	3	
93	ND	32,000 TPKy 76,000 B	,	320 2.2	PHg 2 B	
193	ND		ND	Z 3.	200 TPH9 5B	
102	ND		ND	72	00 TPHg 3.9B	
193					(1,4,-2)	
773 6	ND		ND	/.	3 Benjove	



Project Name: Goodman Project Name: Clara Ave., Alameda Page 1 of 1 Driller: WEST HAZMAT Type of Rig: Mobil B-61 Type and Size of Auge: 7-3/4 O.D. Hollow 7-3/4 O.D. Hollo	SOIL BORING LOG AND MONITO	ORING WELI	L CONSTRUCTION	ON DETAILS	WELL NO. MW1
Dollier: WEST HAZMAT Type of Rig: Mobil B-81 Logged By: Ds Date Drilled: 10/20/92 Checked By: David M. Schultz, P.E. WATER AND WELL DATA Depth of Water First Encountered: = 10' Static Depth of Water in Well: 8.4' Below T.O.C. Total Depth of Boring: 25' Total Depth of Boring: 25' Type and Diameter: 2" Diameter Schedule 40 PVC Well Screen Type and Diameter: 2" Diameter Schedule 40 PVC Well Screen Stot Size: 0.020" Type and Diameter: 2" Diameter Schedule 40 PVC Well Screen Stot Size: 0.020" Type and Diameter: 2" Diameter Schedule 40 PVC Well Screen Stot Size: 0.020" Type and Diameter: 2" Diameter Schedule 40 PVC Well Screen Stot Size: 0.020" Type and Diameter: 2" Diameter Schedule 40 PVC Well Screen Stot Size: 0.020" Type and Diameter: 2" Diameter Schedule 40 PVC Well Screen Stot Size: 0.020" Type and Diameter: 2" Diameter Schedule 40 PVC Well Screen Stot Size: 0.020" Type and Diameter: 2" Diameter Schedule 40 PVC Well Screen Stot Size: 0.020" Standard classification, texture, relative moisture, density, stiffness, odor-staining, USCS Seignation. And With Some Trace (40-50%) (40-25%) (25-10%) (10-0%) Approximately S' of Asphalt From 1/2 to 5 feet medium brown Sand with some Silt (SM), moist, no odor. **Static Water Level = 8.4' Medium brown Sand with some Silt (SM), moist, no odor. **Amenium brown Sand with some Silt (SM), moist, no odor. **Amenium brown Sand with some Silt (SM), moist, no odor. **Static Water Level = 8.4' Medium brown Sand with some Silt (SM), moist, no odor.	Project Name: Goodman	Projec	t Location: 2501 S	anta Clara Ave., A	
WATER AND WELL DATA Depth of Water First Encountered: - 10' Well Screen Type and Diameter: 2" Diameter Schedule 40 PVC Stalic Depth of Water In Well: 8.4' Below T.O.C. Total Depth of Water Size in O.020" Type and Size of Soil Sampler: 2" LD., Calif. Split-Spoon DESCRIPTION OF LITHOLOGY Standard classification, texture, relative moisture, density, stiffness, odor-staining, USCS designation. And With Some Trace (density, stiffness, odor-staining, USCS designation.) Approximately 5" of Asphalt From 1/2 to 5 feet medium brown Sand with some Silt (SM), moist, no odor. Provided Description of the street of	Driller: WEST HAZMAT T	ype of Rig: M	lobil B-61	Type and Size of A	11100r
Depth of Water First Encountered: * 10' Stalic Depth of Water in Well: 8.4' Below T.O.C. Total Depth of Boring: 25' Type and Size of Soil Sampler: 2" I.D., Calif. Split-Spoon DESCRIPTION OF LITHOLOGY Standard classification, texture, relative moisture, density, stiffness, odor-staining, USCS designation. And Will Some Trace density, stiffness, odor-staining, USCS designation. And Will Some Trace density, stiffness, odor-staining, USCS designation. And Will Some Trace (40-50%) (40-25%) (25-10%) (10-0%) Approximately 5" of Asphalt From 1/2 to 5 feet medium brown Sand with some Silt (SM), dry, no odor. Static Water Level = 8.4' Medium brown Sand with some Silt (SM), moist, no odor. Static Water Level = 8.4' Medium brown Sand with some Silt (SM), moist, no odor.	Logged By: DS D	ate Drilled:	10/20/92	Checked By: David	d M. Schultz, P.E.
Stalic Depth of Water in Welt: 8.4' Below T.O.C. Total Depth of Boring: 25' Type and Size of Soil Sampler: 2" LD., Calif. Split-Spoon DESCRIPTION OF LITHOLOGY Standard classification, texture, relative moisture, density, stiffness, odor-staining, USCS designation. DETAIL Street Eox Cap Copy Description of Well Screen Slot Size: 0.020" Type and Size of Soil Sampler: 2" LD., Calif. Split-Spoon DESCRIPTION OF LITHOLOGY Standard classification, texture, relative moisture, density, stiffness, odor-staining, USCS designation. And Wilth Some Trace (40-50%) (40-25%) (25-10%) (10-0%) Approximately 5" of Asphalt Approximately 5" of Asphalt From 1/2 to 5 feet medium brown Sand with some Silt (SM), dry, no odor. Static Water Level = 8.4' Medium brown Sand with some Silt (SM), moist, no odor. Medium brown Sand with some Silt (SM), moist, no odor. SAME AS ABOVE	WATER AND WELL DATA		Total Depth of We	ell Completed: 25.0'	
Total Depth of Boring: 25' Type and Size of Soil Sampler: 2" LD., Calif. Split-Spoon DESCRIPTION OF LITHOLOGY Standard classification, texture, relative molsture, density, stiffness, odor-staining, USCS designation. DETAIL Strept Box Cap Strept Box Cap Cap Approximately 5" of Asphalt Type and Size of Soil Sampler: 2" LD., Calif. Split-Spoon DESCRIPTION OF LITHOLOGY Standard classification, texture, relative molsture, density, stiffness, odor-staining, USCS designation. And With Some Trace (40-50%) (40-25%) (25-10%) (10-0%) Approximately 5" of Asphalt From 1/2 to 5 feet medium brown Sand with some Silt (SM), dry, no odor. Static Water Level = 8.4' Medium brown Sand with some Silt (SM), moist, no odor. Medium brown Sand with some Silt (SM), moist, no odor. SAME AS ABOVE	Depth of Water First Encountered: * 10'		Well Screen Type	and Diameter: 2" E	Diameter Schedule 40 PVC
SITE OF LOCKING WELL BORING DETAIL OF DETAIL O	Static Depth of Water in Well: 8.4' Below	7.O.C.	Well Screen Slot	Size: 0.020"	
WELLIBORING DETAIL WELLIBORING DETAIL Strept Eox Locking Well Cap And With Some Trace (40-50%) (40-25%) (25-10%) (10-0%) Approximately 5" of Asphalt From 1/2 to 5 feet medium brown Sand with some Silt (SM), dry, no odor. Strept Eox Locking Well Approximately 5" of Asphalt From 1/2 to 5 feet medium brown Sand with some Silt (SM), moist, no odor. Strept Eox Locking Well Approximately 5" of Asphalt From 1/2 to 5 feet medium brown Sand with some Silt (SM), moist, no odor. Medium brown Sand with some Silt (SM), moist, no odor. Medium brown Sand with some Silt (SM), moist, no odor. SAME AS ABOVE SAME AS ABOVE	Total Depth of Boring: 25'		Type and Size of	Soil Sampler: 2" I.I	D., Calif. Split-Spoon
WELLIBORING DETAIL O O Street E ox Locking USC Cap O And With Some Trace (40-50%) (40-25%) (25-10%) (10-0%) Approximately 5" of Asphalt Approximately 5" of Asphalt From 1/2 to 5 feet medium brown Sand with some Silt (SM), dry, no odor. Static Water Level = 8.4' Medium brown Sand with some Silt (SM), moist, no odor. Medium brown Sand with some Silt (SM), moist, no odor. SAME AS ABOVE	SOIL/ROCK S	AMPLE DATA	ti eee		
Street Eox Locking Well Cap 1 3 6	E WELL\BORING 党 で O	B hic			
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Locking Well Cap Locking Well Cap Locking Well Cap The moderal street of the moder of the moder of the moderal street of the mode	Ctrobt Boy		- (40-0070)		
some Silt (SM), dry, no odor. 13	_ Lockling Well Car	p		,	
The static water Level = 6.4 18	K Sch 40 PV K Sch	10	some Silt		
Medium brown Sand with some Silt (SM), moist, no odor. No. 3 Washed Monterey Sand Sand with some Silt (SM), moist, no odor. No. 3 Washed Monterey Sand with some Silt (SM), moist, no odor. Medium brown Sand with some Silt (SM), moist, no odor. SAME AS ABOVE	- \ \		- Static	Water Level = 8.	4'
-20 -20 -20 -25 SAME AS ABOVE	Sand Sand 22 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	10	, . • ,		odor.
20 -20 -20 -20 -25 SAME AS ABOVE	1		Medium		odor.
ASE Form 20A AQUA SCIENCE ENGINEERS, INC.	2.0 Sch. 52, E.O.H. 52	AONA 501	- SAME AS		

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SOIL BORING LOG AND MONITORING WELL CONSTRUCTION DETAILS WELL NO. MW2								
Project Name: Goodman Project Location: 2501 Santa Clara Ave., Alameda Page 1 of								
Driller: WEST HAZMAT	Type of Rig: M	10bil B-61 Type and Size of Auger: 7-3/4 O.D. Hollow 3-1/4 I.D. Stem						
Logged By: DS	Date Drilled:	10/20/92 Checked By: David M. Schultz, P.E.						
WATER AND WELL DATA		Total Depth of Well Completed: 25.0'						
Depth of Water First Encountered: ~	10'	Well Screen Type and Diameter: 2" Diameter Schedule 40 PVC						
Static Depth of Water in Well: 8.6' Be	low T.O.C.	Well Screen Slot Size: 0.020"						
Total Depth of Boring: 25'		Type and Size of Soil Sampler: 2" I.D., Calif. Split-Spoon						
SOIL/ROC	K SAMPLE DATA	DESCRIPTION OF LITHOLOGY standard classification, texture, relative moisture,						
E WELL/BORING II DETAIL S	Field VOC (ppmv) Graphic Log	density, stiffness, odor-staining, USCS designation. And With Some Trace						
Stropt Box		다 (40-50%) (40-25%) (25-10%) (10-0%)						
	Cap	Approximately 5" of Asphalt						
Cement		From 1/2 to 2 feet dark brown Sand (SP) dry, moderate petroleum odor.						
		-						
4 Sch 40 PV 7 19 19 19 19 19 19 19 19 19 19 19 19 19								
5 5 10 16 16	900	-5 From 2 to 9 feet gray-brown Sand (SP) _ dry, moderate petroleum odor.						
Blank 3		_						
Olass		Static Water Level = 8.6'						
10		_ =						
$\begin{array}{c c} -10 & = & & \\ \hline \end{array}$	< 10	Gray-brown Sand with trace Silt (SM), small						
ey Sand Bentonite		brown patches, moist, trace petroleum odor.						
ey S. Bent								
3 Washed Montere		_						
-15		-15						
Washe PVC		Gray-brown Sand with trace Silt (SM)						
		moist to wet, trace petroleum odor.						
-20 Z 0000		-20						
- - - - - -								
		SAME AS ABOVE						
2 5 E.O.H. 25' &		-25						
ASE Form 20A AQUA SCIENCE ENGINEERS, INC.								

SOIL BORING LOG AND MONITORING WELL CONSTRUCTION DETAILS WELL NO. MW3							
Project Name: Goodman Project Location: 2501 Santa Clara Ave., Alameda Page 1 of 1							
Driller: WEST HAZMAT Type of Rig: Mobil B-61 Type and Size of Auger: 7-3/4 O.D. 3-1/4 I.D.	Hollow Stem						
Logged By: DS Date Drilled: 10/20/92 Checked By: David M. Schultz, P.E.							
WATER AND WELL DATA Total Depth of Well Completed: 25.0'	Total Depth of Well Completed: 25.0'						
Depth of Water First Encountered: ~ 10' Well Screen Type and Diameter: 2" Diameter Schedule 4	0 PVC						
Static Depth of Water in Well: 9.65' Below T.O.C. Well Screen Slot Size: 0.020"							
Total Depth of Boring: 25' Type and Size of Soil Sampler: 2" I.D., Calif. Split-Spoor)						
SOIL/ROCK SAMPLE DATA STANDARD DESCRIPTION OF LITHOLOGY Standard classification, texture, relative moist	,						
표 welly Boring 등 당 용 등 등 density, stiffness, odor-staining, USCS designa							
WELLIBORING DETAIL DETAIL O O O O O O O O O O O O O	9						
O Approximately 5" of Asphalt							
From 1/2 to 2 feet dark brown Sand with son	ne						
Silt (SM), slightly moist, no odor. Medium brown, slightly moist Sand with som Silt (SM), no odor Medium brown, slightly moist Sand with som Silt (SM), no odor Static Water Level = 9.65' Light gray Sand with some Silt (SM) moist to wet, slight petroleum odor. Light gray Sand with some Silt (SM) moist to wet, slight petroleum odor. Sand A ABOVE Sand A ABOVE	10						
ASE Form 20A AQUA SCIENCE ENGINEERS, INC.							

Section 2

Project Name: Goodman Project Location: 2501 Santa Clara Ave., Alameda Page 1 of 1 Driller: DA Type of Rig: Hand Auger Type and Size of Auger: Checked By: David M. Schultz, P.E. WATER AND WELL DATA Depth of Water First Encountered: N/A Static Depth of Water First Encountered: N/A Static Depth of Boring: 10' Total Depth of Size: N/A Well Screen Type and Diameter: N/A Well Screen Stot Size: N/A Well Screen Stot Size: N/A Type and Size of Soil Sampler: N/A DESCRIPTION OF LITHOLOGY Standard classification, texture, relative moisture, density, stiffness, dort-staining, USCS designation. And With Some Trace (40-50%) (40-25%) (25-10%) (10-0%) Medium brown, slightly moist Sand with some Sit (SM), no odor. Light gray Sand with some Sit (SM) moist, moderate petroleum odor. E.O.H. 10'	SOIL BORING LOG AND MONITORING WELL CONSTRUCTION DETAILS BORING NO. SB1								
Logged By: DS Date Drilled: 10/20/92 Checked By: David M. Schultz, P.E. WATER AND WELL DATA Depth of Water First Encountered: N/A Static Depth of Water First Encountered: N/A Well Screen Type and Diameter: N/A Total Depth of Boring: 10* Type and Size of Soil Sampler: N/A Type and Size of Soil Sampler: N/A DESCRIPTION OF LITHOLOGY standard classification, texture, relative moisture, clens the sta	Project Name: Goodman Project Location: 2501 Santa Clara Ave., Alameda Page 1 of 1								
WATER AND WELL DATA Depth of Water First Encountered: N/A Well Screen Type and Diameter: N/A Well Screen Size of Soil Sampler: N/A Total Depth of Water First Encountered: N/A Well Screen Size of Soil Sampler: N/A DESCRIPTION OF LITHOLOGY standard classification, texture, relative moisture, density, stiffness, odor-staining, USCS designation. And With Some Trace (40-50%) (40-25%) (25-10%) (10-0%) Medium brown, slightly moist Sand with some Silt (SM), no odor. Light gray Sand with some Silt (SM) moist, moderate petroleum odor. E.O.H. 10'	Driller: DA	Type of Rig: Ha	and Auger Type and Size of Auger:						
Depth of Water First Encountered: N/A Static Depth of Water in Well: N/A Total Depth of Boring: 10' Well Screen Slot Size: N/A Type and Size of Soil Sampler: N/A Well Screen Slot Size: N/A Type and Size of Soil Sampler: N/A DESCRIPTION OF LITHOLOGY standard classification, texture, relative moisture, density, sittiness, odor-staining, USCS designation. And With Some Trace (40-55%) (40-25%) (25-10%) (10-0%) Medium brown, slightly moist Sand with some Sit (SM), no odor. Light gray Sand with some Sit (SM) moist, moderate petroleum odor. E.O.H. 10'	Logged By: DS	Date Drilled:	10/20/92 Checked By: David M. Schultz, P.E.						
Static Depth of Water In Well: N/A Total Depth of Boring: 10' Well Screen Slot Size: N/A Type and Size of Soil Sampler: N/A DESCRIPTION OF LITHOLOGY standard classification, texture, relative moisture, density, stiffness, odor-staining, USCS designation. And Will Some Trace (40-50%) (40-25%) (25-10%) (10-0%) Medium brown, slightly moist Sand with some Silt (SM), no odor. Medium brown, slightly moist Sand with some Silt (SM), no odor. Light gray Sand with some Silt (SM) moist, moderate petroleum odor. E.O.H. 10'	WATER AND WELL DATA		Total Depth of W	ell Completed: N/A	\				
Total Depth of Boring: 10' Type and Size of Soil Sampler: N/A DESCRIPTION OF LITHOLOGY standard classification, texture, relative moisture, density, sittiness, odor-staining, USCS designation. And With Some Trace (40-50%) (25-10%) (10-0%) Medium brown, slightly moist Sand with some Sift (SM), no odor. Light gray Sand with some Sift (SM) moist, moderate petroleum odor. E.O.H. 10' Type and Size of Soil Sampler: N/A DESCRIPTION OF LITHOLOGY standard classification, texture, relative moisture, density, sittiness, odor-staining, USCS designation. Medium brown, slightly moist Sand with some Sift (SM), no odor. Light gray Sand with some Sift (SM) moist, moderate petroleum odor. E.O.H. 10'	Depth of Water First Encountered: N	/A	Well Screen Typ	e and Diameter: N	I/A	<u> </u>			
Solution Description of Lithology Standard classification, texture, relative moisture, density, sithness, odor-staining, USCS designation. And With Some Trace (40-50%) (40-25%) (25-10%) (10-0%) And With Some Trace (40-50%) (40-25%) (25-10%) (10-0%) And Standard classification, texture, relative moisture, density, sithness, odor-staining, USCS designation. And With Some Trace (40-50%) (40-25%) (25-10%) (10-0%) And Standard classification, texture, relative moisture, density, sithness, odor-staining, USCS designation. And With Some Trace (40-50%) (40-25%) (25-10%) (10-0%) And Standard classification, texture, relative moisture, density, sithness, odor-staining, USCS designation. And Standard classification, texture, relative moisture, density, sithness, odor-staining, USCS designation. And Standard classification, texture, relative moisture, density, sithness, odor-staining, USCS designation. And Standard classification, texture, relative moisture, density, sithness, odor-staining, USCS designation. And Standard classification, texture, relative moisture, density, sithness, odor-staining, USCS designation. And Standard classification, texture, relative moisture, density, sithness, odor-staining. USCS designation. And Standard classification, texture, relative moisture, density, sithness, odor-staining. USCS designation. And Standard Classification, texture, relative moisture, density, sithness, odor-staining. USCS designation. And Standard Classification, texture, relative moisture, density, sithness, odor-staining. USCS designation. And Standard Classification, texture, relative moisture, density, sithness, odor-staining. USCS designation. And Standard Classification, texture, relative moisture, density sithness, odor-staining. USCS designation. And Standard Classification. And Standard	Static Depth of Water in Well: N/A		Well Screen Slot	Size: N/A	··· ·				
WELLIBORING DETAIL WELLIBORING DETAIL WELLIBORING DETAIL WELLIBORING DETAIL DETAIL	Total Depth of Boring: 10'		Type and Size of	Soil Sampler: N/A	\				
SET WELLIBORING DETAIL SO DETAIL And With Some Trace (40-50%) (40-25%) (25-10%) (10-0%) Medium brown, slightly molst Sand with some Silt (SM), no odor. Light gray Sand with some Silt (SM) moist, moderate petroleum odor. E.O.H. 10' SO DETAIL And With Some Trace (40-50%) (40-25%) (25-10%) (10-0%) Medium brown, slightly molst Sand with some Silt (SM) moist, moderate petroleum odor. E.O.H. 10' SO DETAIL AND WITH SOME TRACE Light gray Sand with some Silt (SM) Medium brown, slightly molst San	SOIL/ROO	CK SAMPLE DATA	eet						
Medium brown, slightly moist Sand with some Silt (SM), no odor. Light gray Sand with some Silt (SM) moist, moderate petroleum odor. E.O.H. 10'	.도 WELL\BORING 는 교 강	3 & B	⊑ doneity	classification, te stiffness, odor-sta	exture, rela ining, USC	tive moisture, S designation.			
Medium brown, slightly moist Sand with some Silt (SM), no odor. Light gray Sand with some Silt (SM) moist, moderate petroleum odor. E.O.H. 10'	DETAIL Deso	(ppm (ppm Grap Lo	a And	With	Some	Trace			
ASE Form 20A AQUA SCIENCE ENGINEERS, INC.	10		Medium brown, slightly moist Sand with some Silt (SM), no odor. Light gray Sand with some Silt (SM) moist, moderate petroleum odor. E.O.H. 10'						

s	SOIL BORING LOG AND MONITORING WELL CONSTRUCTION DETAILS WELL NO. MW-2A											
Project Name: GOODMAN Project Location: 2501 Santa Clara Ave., Alameda Page 1 of 1												
Driller: GREGG DRILLING Type of Rig: M					Jobil R-61 Type and Size of Auger 7-3/4 O.D. Holl			3/4 O.D. Hollow -1/4 I.D. Stem				
Logged By: WL Date Drilled:					4/23	3-1/4 J.D. Stein						
WA	WATER AND WELL DATA						Tota	Depth of W	ell Completed: 25.0)'		
Dep	Depth of Water First Encountered: ~ 10'					Well	Screen Type	and Diameter: 2"	Diameter S	chedule 40 PVC		
Stat	ic Depth of W	ater in W	/ell: ·	4.9' Be	low T.O.	0.	Well	Screen Slot	Size: 0.020*			
Tota	al Depth of Bo	ring: 25'					Туре	and Size of	Soil Sampler: 2" I.	.D., Calif. S	Split-Spoon	
Feet		ion	SO	IUROC	K SAMPL	E DATA	Feet		DESCRIPTION O			
ri E	WELLIBORING DETAIL	Description	Val	ರ	Field VOC (ppm v)	Graphic Log	≘		classification, tex stiffness, odor-stal		•	
Depth in	DETAIL	Des	Interval	Blow	Field (pp	Gra	Depth	And (40-50%)	With (40-25%) (Some 25-10%)	Trace (10-0%)	
-0		Stre	į.		Can .		- 0	Approxim	ately 5" of Aspha			
-		-	שייין	Well	Сар		-		to 2 feet dark br	own Sand	I (SP)	
		Cement						dry, no p	etroleum odor.			
-											;	
-5		ch 40 PV Portland		9	0		-5	Stati	c Water Level =	4.9'		
-	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	No I		16			-		to <mark>9 feet gray-bro</mark> petroleum odor.	wn Sand	(SP)	
		D Blank Class "F					-	ury, no p	retroreum ouor.			
		2. ID		2.5			_					
10		Seal		25 50 50	0		-10	Gray-brown Sand with trace Silt (SM), small				
-				50			-	brown patches, moist, no petroleum odor.				
-		ey Sand Bentonite					-					
	昌	ntere ig E					_					
-15		ed Monte					15					
-	≣	, •					-	Grav-brow	vn Sand with trad	ca Silt /S	M	
-	=	o. 3 Wash Slot PVC					-	moist to v	ivi)			
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-20		0.020°					20				ļ	
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25 E.O.H. 25' N												
ASE Form 20A AQUA SCIENCE ENGINEERS, INC.												
TOTAL CONTROL CITATION INC.												