GROWTH
Growth Environmental Services, Inc.

August 17, 1995

Eva Chu
Alameda County Health Agency
Department of Environmental Health
1131 Harbor Bay Parkway, 2nd Floor
Alameda, Ca 94502
(510) 567-6762
(510) 337-9335 Fax

RE: Underground Storage Tank (UST) Removal and Soil Sampling at 4951 Arroyo Road, Veterans Administration Medical Center, Livermore, California

Dear Ms. Chu:

The enclosed Underground Storage Tank (UST) Removal Addendum documents soil sampling and sample analysis that occurred at the VA Medical Center on May 25, 1995. Soil samples were collected from beneath the fire house garage. This area was suspected of being impacted by petroleum hydrocarbons associated with a fuel oil tank formerly in operation on site.

Please contact us at (707) 745-0171 if you have any questions concerning the tank removal activities.

Respectfully,

Michael T. Davis
Project Geologist

Mark Lafferty, R.G.
Director of Geosciences

Attachment

INTRODUCTION

Soil samples were collected on May 25, 1995 by Growth Environmental Services, Inc. with the use of Geoprobe sampling equipment. One probe was advanced in a location eighteen feet into the Fire House, eight feet southwest of the lunch room door to a depth of sixteen feet below grade. The former fuel oil tank was located beneath the area presently occupied by the fire house garage. An over-excavation of contaminated soil in front of the fire house garage is documented in the Tank Removal report dated August 17, 1995.

SOIL SAMPLING AND ANALYTICAL RESULTS

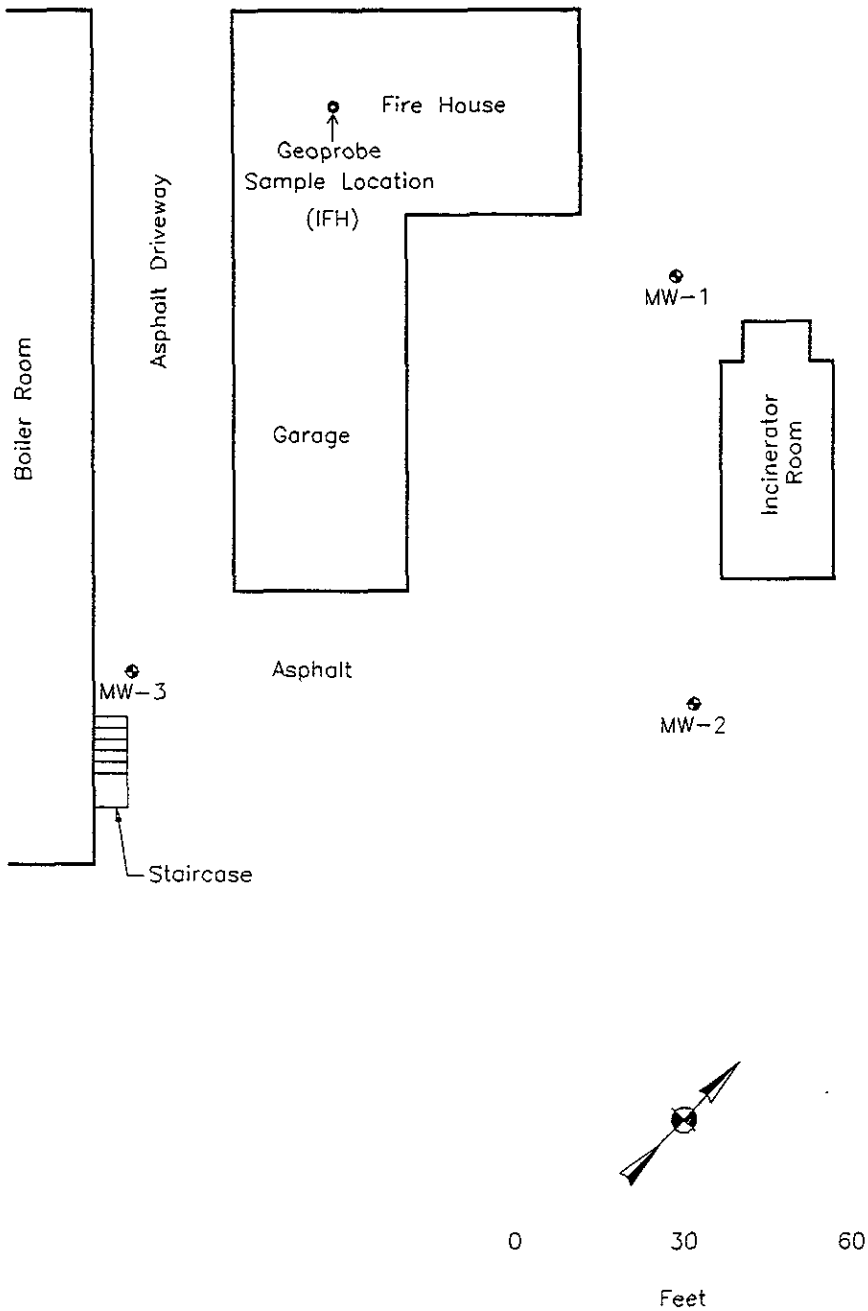
Soil Sampling. One soil probe was advanced using GROWTH's truck mounted Geoprobe sampling equipment. Three soil samples were collected at depths of 5, 10 and 15 feet below grade. The soil samples consisted of medium brown, medium grained sand with silt and occasional angular gravel. The hardness increased at approximately ten feet below grade and sampling refusal was encountered at sixteen feet below grade. No odor or staining was observed in the field until 15 feet below grade. Soon after, sampling refusal was encountered. At the lowest sample interval obtained by GROWTH, stained soil was noted to extend to the base of the sample (16 feet below grade). Soil samples were delivered on ice under GROWTH chain of custody protocol to McCampbell Analytical of Pacheco, California, a state certified laboratory.

Analytical Results. The three soil samples collected on May 25, 1995 inside the fire house were analyzed for Total Petroleum Hydrocarbons as gasoline (TPH-G), as diesel (TPH-D) and benzene, toluene, ethylbenzene and total xylenes (BTEX) by EPA GCFID modified method 8015/8020. None of these analytes were detected in the samples collected from 5 and 10 feet below grade. The third sample was collected in stained soil at the 15 feet below grade surface interval. A summary of the sample results is presented in Table 1.

Table 1
Soil Sample Analytical Results
Sampling Inside the Fire House
May 25, 1995

Sample I.D.	TPH-G	TPH-D	Benzene	Toluene	Ethyl-benzene	Total Xylenes
IFH1-1	ND	ND	ND	ND	ND	ND
IFH1-2	ND	ND	ND	ND	ND	ND
IFH1-3	24	950	ND	0.016	ND	0.026
Detection Limits	1.0 mg/kg	1.0 mg/kg	0.005 mg/kg	0.005 mg/kg	0.005 mg/kg	0.005 mg/kg

ND - Below Detection Limits ** mg/kg = parts per million



Growth Environmental Services, Inc.	DESCRIPTION: Sample Location	FIGURE: FIGURE 1	PROJECT NUMBER: VA009201
	PROJECT LOCATION: VA MEDICAL CENTER, 4951 ARROYO ROAD, LIVERMORE, CA. 94550	PROJECT MANAGER: GLR	FILE NAME: 173-631.DWG
		DRAWING DATE: MAR. 29, 1995	DRAWN BY: K. ANDREWS

The soil sample collected from 15 feet below grade surface contained minor gasoline contamination (24 ppm), trace toluene (0.016 ppm) and trace xylenes (0.026). The analytical results indicated diesel range contaminants in the soil at a level of 950 ppm.

CONCLUSIONS/RECOMMENDATIONS

Petroleum hydrocarbon contamination was detected beneath the fire house at the Veterans Administration Medical Center. Gasoline and diesel range hydrocarbons were detected at approximately 15 feet below grade. Trace toluene and xylenes were detected whereas no benzene was detected in the soil samples collected. GROWTH recommends that additional site characterization activities, including soil borings and soil sampling, be performed at this location to determine the extent of soil contamination.

4207 AGX785

GROWTH ENVIRONMENTAL SERVICES, Inc.
(Formerly CEC/WRA)

SAN FRANCISCO DISTRICT
536 Stone Road, Suite J
Benicia, CA 94510
(707) 745-0171
(707) 745-0163 FAX

CHAIN OF CUSTODY RECORD

Laboratory Analysis P.O. No. ________

Date 5/25/95 Sheet 1 of 1

Lab Name McCampbell Analytical
Address ________
Phone Number ________

Turnaround Time: ☐ Rush ☐ 24 Hour ☐ 48 Hour ☒ 5 Day

Report to: ________

Project Number: VA009201
Project Name: VA Med Center
Address: Arroyo Rd. Livermore

Sampler's Name: Michael Davis
Sampler's Signature: Michael Davis

Parameters: TPH as Gasoline 8015; TPH as Diesel 8015; TPH-G and B.T.E.X 8015/8020; B.T.X & E 8020; Oil and Grease 5520; Volatile Organics (8010); CAM Metals (17); Pr. Pollutant Metals (13); Base/Neu/Acids (Organic); Pesticides 8140/8141; Matrix (Soil/Water)

Sample Number	Location	Date	Time	TPH as Diesel 8015	B.T.X & E 8020	Comments
A.B.-1	14'	5/25/95	10:50 A.M.	X	X	52834
IFH1-1	5'		12:30 P.M.	↓	↓	52835
IFH1-2	10'		12:45 P.M.	↓	↓	52836
IFH1-3	15'		12:58 P.M.	↓	↓	52837
~~IFH1-4~~	~~20'~~					
Bld 65-N-2	9'		1:30 P.M.	↓	↓	52838
Bld 65-T-1	2'		1:45 P.M.	↓	↓	52839
Bld 65 Stkp 1B			1:50 P.M.	↓	↓	52840

Relinquished By	Date	Time	Received By	Date	Time
1. Michael Davis	5/25/95	3:20 P.M.	1. [signature]	5/25/95	3:20
2.			2.		
3.			3.		

Dispatched By	Date	Time	Received in Lab By	Date	Time

Total Number of Containers This Sheet: 7

Method of Shipment: Delivered

Special Shipment / Handling or Storage Requirements: on ice

ICE/T° ✓
GOOD CONDITION ✓
HEAD SPACE ABSENT ✓
PRESERVATIVE
APPROPRIATE CONTAINERS ✓

VOAS | O&G | METALS | OTHER

McCAMPBELL ANALYTICAL INC. | 110 2nd Avenue South, #D7, Pacheco, CA 94553
Tele: 510-798-1620 Fax: 510-798-1622

Growth Environmental Services 536 Stone Road, Suite J Benicia, CA 94510	Client Project ID: VA009201; VA Med Center	Date Sampled: 05/25/95
		Date Received: 05/25/95
	Client Contact: Michael Davis	Date Extracted: 05/25/95
	Client P.O:	Date Analyzed: 05/25-05/26/95

Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline*, with BTEX*

EPA methods 5030, modified 8015, and 8020 or 602; California RWQCB (SF Bay Region) method GCFID(5030)

Lab ID	Client ID	Matrix	TPH(g)+	Benzene	Toluene	Ethylbenzene	Xylenes	% Rec. Surrogate
52834	A,B,-1	S	ND	ND	ND	ND	ND	99
52835	IFH1-1	S	ND	ND	ND	ND	ND	101
52836	IFH1-2	S	ND	ND	ND	ND	ND	100
52837	IFH1-3	S	24,g	ND	0.016	ND	0.026	101
52838	Bld 65-N-2	S	1.6,g	ND	ND	ND	ND	100
52839	Bld 65-T-1	S	ND	ND	ND	ND	ND	102
52840	Bld 65-Stkp1B	S	6.1,g	ND	ND	ND	ND	101
Reporting Limit unless otherwise stated; ND means not detected above the reporting limit		W	50 ug/L	0.5	0.5	0.5	0.5	
		S	1.0 mg/kg	0.005	0.005	0.005	0.005	

* water and vapor samples are reported in ug/L, soil samples in mg/kg, and all TCLP extracts in mg/L

cluttered chromatogram; sample peak coelutes with surrogate peak

+ The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation: a) unmodified or weakly modified gasoline is significant; b) heavier gasoline range compounds are significant(aged gasoline?); c) lighter gasoline range compounds (the most mobile fraction) are significant; d) gasoline range compounds having broad chromatographic peaks are significant; biologically altered gasoline?; e) TPH pattern that does not appear to be derived from gasoline (?); f) one to a few isolated peaks present; g) strongly aged gasoline or diesel range compounds are significant; h) lighter than water immiscible sheen is present; i) liquid sample that contains greater than ~ 5 vol. % sediment; j) no recognizable pattern.

DHS Certification No. 1644

Edward Hamilton, Lab Director

McCAMPBELL ANALYTICAL INC. | 110 2nd Avenue South, #D7, Pacheco, CA 94553
Tele: 510-798-1620 Fax: 510-798-1622

Growth Environmental Services 536 Stone Road, Suite J Benicia, CA 94510	Client Project ID: VA009201; VA Med Center	Date Sampled: 05/25/95
		Date Received: 05/25/95
	Client Contact: Michael Davis	Date Extracted: 05/25/95
	Client P.O:	Date Analyzed: 05/26-05/27/95

Diesel Range (C10-C23) Extractable Hydrocarbons as Diesel *

EPA methods modified 8015, and 3550 or 3510; California RWQCB (SF Bay Region) method GCFID(3550) or GCFID(3510)

Lab ID	Client ID	Matrix	TPH(d)+	% Recovery Surrogate
52834	A,B,-1	S	ND	101
52835	IFH1-1	S	ND	98
52836	IFH1-2	S	ND	101
52837	IFH1-3	S	950,e	102
52838	Bld 65-N-2	S	56,a	102
52839	Bld 65-T-1	S	11,g	106
52840	Bld 65-Stkp1B	S	64,a	103
Reporting Limit unless otherwise stated; ND means not detected above the reporting limit		W	50 ug/L	
		S	1.0 mg/kg	

* water samples are reported in ug/L, soil samples in mg/kg, and all TCLP and STLC extracts in mg/L

cluttered chromatogram resulting in coeluted surrogate and sample peaks, or; surrogate peak is on elevated baseline, or; surrogate has been diminished by dilution of original extract.

+ The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation: a) unmodified or weakly modified diesel is significant; b) diesel range compounds are significant; no recognizable pattern; c) aged diesel? is significant); d) gasoline range compounds are significant; e) medium boiling point pattern that does not match diesel (fuel oil?); f) one to a few isolated peaks present; g) oil range compounds are significant; h) lighter than water immiscible sheen is present; i) liquid sample that contains greater than ~ 5 vol. % sediment.

DHS Certification No. 1644

EH Edward Hamilton, Lab Director

CHROMALAB, INC.

Environmental Services (SDB)

June 14, 1995

Submission #: 9506091
Re-issued September 7, 1995

MCCAMPBELL ANALYTICAL, INC.

Atten: Ed Hamilton/Mike Davis

Project: V.A. MED. CENTER *Project#:* VA009201
Received: June 7, 1995

re: One sample for Polynuclear Aromatic Hydrocarbons (PAHs) analysis.

Sample ID: IFH1-3
Spl#: 91442 *Matrix:* SOIL *Extracted:* June 8, 1995
Sampled: May 25, 1995 *Run#:* 7145 *Analyzed:* June 12, 1995
Method: EPA 3550/8270

ANALYTE	RESULT (mg/Kg)	REPORTING LIMIT (mg/Kg)	BLANK RESULT (mg/Kg)	BLANK SPIKE RESULT (%)
NAPHTHALENE	N.D.	5	N.D.	--
2- METHYLNAPHTHALENE	N.D.	5	N.D.	--
2- CHLORONAPHTHALENE	N.D.	5	N.D.	--
ACENAPHTHYLENE	N.D.	5	N.D.	--
ACENAPHTHENE	N.D.	5	N.D.	75
FLUORENE	N.D.	5	N.D.	--
PHENANTHRENE	N.D.	5	N.D.	--
ANTHRACENE	N.D.	5	N.D.	--
FLUORANTHRENE	N.D.	5	N.D.	--
PYRENE	N.D.	5	N.D.	84
BENZO(A)ANTHRACENE	N.D.	5	N.D.	--
CHRYSENE	N.D.	5	N.D.	--
BENZO(B)FLUORANTHENE	N.D.	5	N.D.	--
BENZO(K)FLUORANTHENE	N.D.	5	N.D.	--
BENZO(A)PYRENE	N.D.	5	N.D.	--
IDENO(1,2,3-CD)PYRENE	N.D.	5	N.D.	--
DIBENZO(A,H)ANTHRACENE	N.D.	5	N.D.	--
BENZO(GHI)PERYLENE	N.D.	5	N.D.	--

Alex Tam
Chemist

Ali Kharrazi
Organic Manager

GROWTH
Growth Environmental Services, Inc.

UNDERGROUND STORAGE TANK REMOVALS AND REQUEST FOR CASE CLOSURE

Project Site:
Veterans Administration Medical Center
4951 Arroyo Road
Livermore, California 94550

Prepared For:

Mr. Jim Pitzer
Veterans Administration Medical Center
4951 Arroyo Road
Livermore, Ca 94550
(510) 447-2560 Ext. 6401
(510) 455-7428 FAX

Submitted To:

Eva Chu
Alameda County Health Agency
Department of Environmental Health
1131 Harbor Bay Parkway, 2nd Floor
Alameda, California 94502
(510) 567-6762
(510) 337-9335 FAX

Job #SF079508

August 17, 1995

TABLE OF CONTENTS

LIST OF FIGURES

INTRODUCTION

The purpose of this report is to document the removal of eight underground storage tank's (UST's) that were previously in use at the Veterans Administration Medical Center, 4951 Arroyo Rd., Livermore, California and to request closure of the eight tank sites. Growth Environmental Services Inc., (GROWTH) has provided environmental oversight for the tank removal and sampling. This report documents tank removal activities, over-excavation activities, confirmation soil sampling from stockpiles and tank excavation backfilling activities at the subject site.

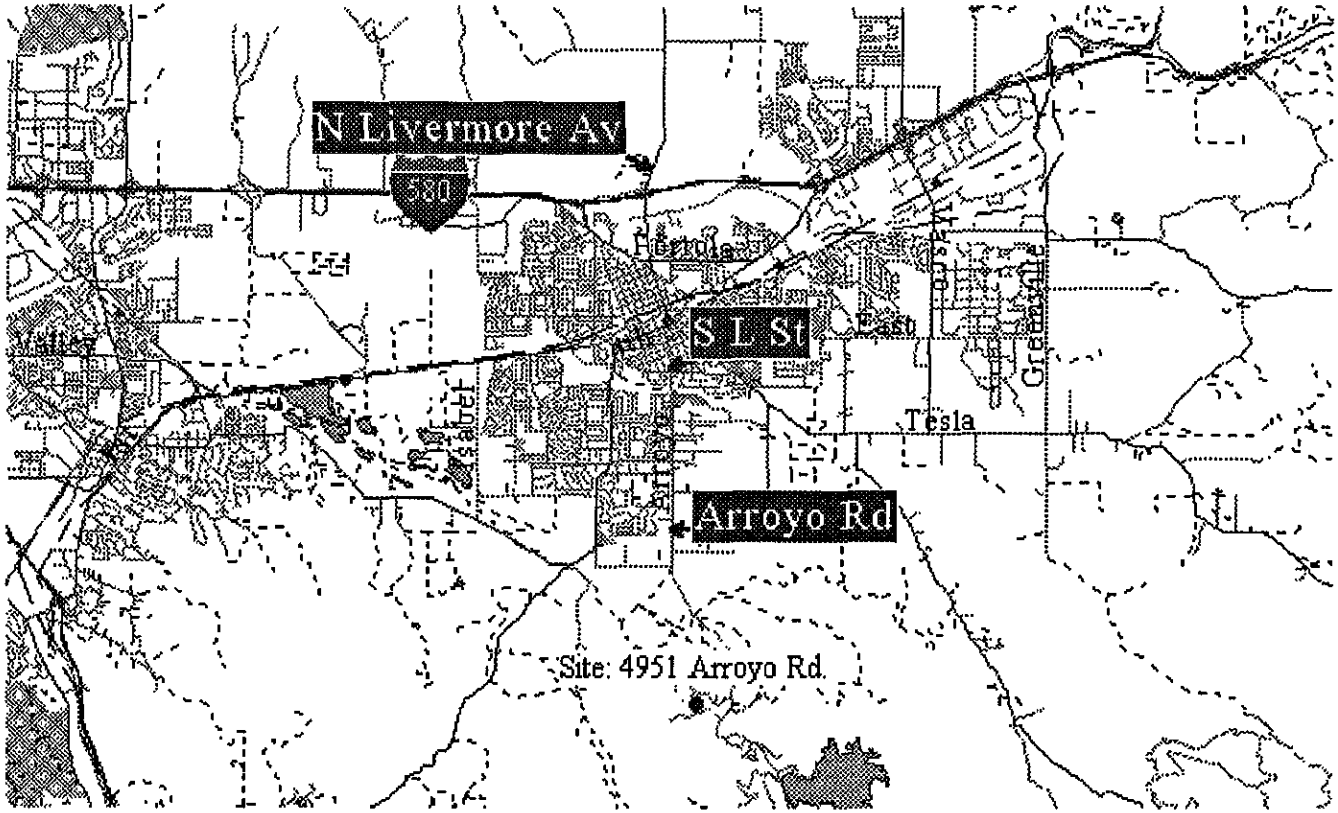
BACKGROUND

Site Location and Description. The subject property is located at 4951 Arroyo Road in Livermore, California (Figure 1). The elevation of the site is approximately 650 feet above mean sea level. Eight tanks were maintained on site ranging in size and content as follows: One 750 gallon unleaded gasoline tank, one 750 gallon leaded gasoline tank and one 2,000 gallon unleaded gasoline tank in the vicinity of Building 6; one 560 gallon diesel tank behind Building 64; one 1,000 gallon diesel tank adjacent to Building 88; one 2,000 gallon diesel tank in the southeast corner of Building 90; one 500 gallon diesel tank adjacent to Building 62; and one 2,000 gallon diesel tank adjacent to the existing 20,000 gallon above ground diesel tank near Building 65. Figure 2 is a site map showing the former and existing tank locations.

Geology and Hydrogeology. The site is located on the southeastern end of the Amador Valley. The valley is bounded on the west by the Calaveras fault. Local valley fill consists of young Quaternary age alluvium approximately 400 feet thick which was eroded from the uplands on the west side of the fault. The Calaveras fault is a right lateral, northwest-trending, strike-slip fault. The VA Medical Center lies directly southwest of the Las Politas fault. The thick nature of the alluvium conceals the fault trace although structural analysis of the area implies its existence.

Rocks exposed in the uplands directly southwest of the VA Medical Center are dominantly marine sedimentary rocks. The consolidated sedimentary units above the VA Medical Center have been mapped as the Cierbo Sandstone, a marine unit with a dip of 35 to 45 degrees to the northwest. Miocene aged light gray arkosic sandstones are present within the Cierbo Sandstone. This unit is underlain by the upper Cretaceous Panoche Formation which consists of marine shales, siltstone and sandstone with interbedded nonmarine conglomerates and arkosic sandstone. Eastward across Arroyo Del Valle, the Livermore Formation, a non-marine unit consisting mostly of conglomerates with some claystones and minor sandstones, unconformably overlies the Cierbo Sandstone (Dibblee, Livermore Quadrangle, U.S.G.S., 1980). The subject property lies upon pliocene/peistocene terrace deposits.

The VA Medical Center is located in the Dublin sub-basin of the Livermore-Amador Valley groundwater basin. Groundwater flow in the sub-basin is relatively flat from the southeast toward the western portion of the Amador sub-basin where significant municipal groundwater pumping occurs. The elevated location of the subject property implies significant depth to groundwater (on the order of 50 to 100 feet bgs) although perched water may be present in coarse-grained geologic units.



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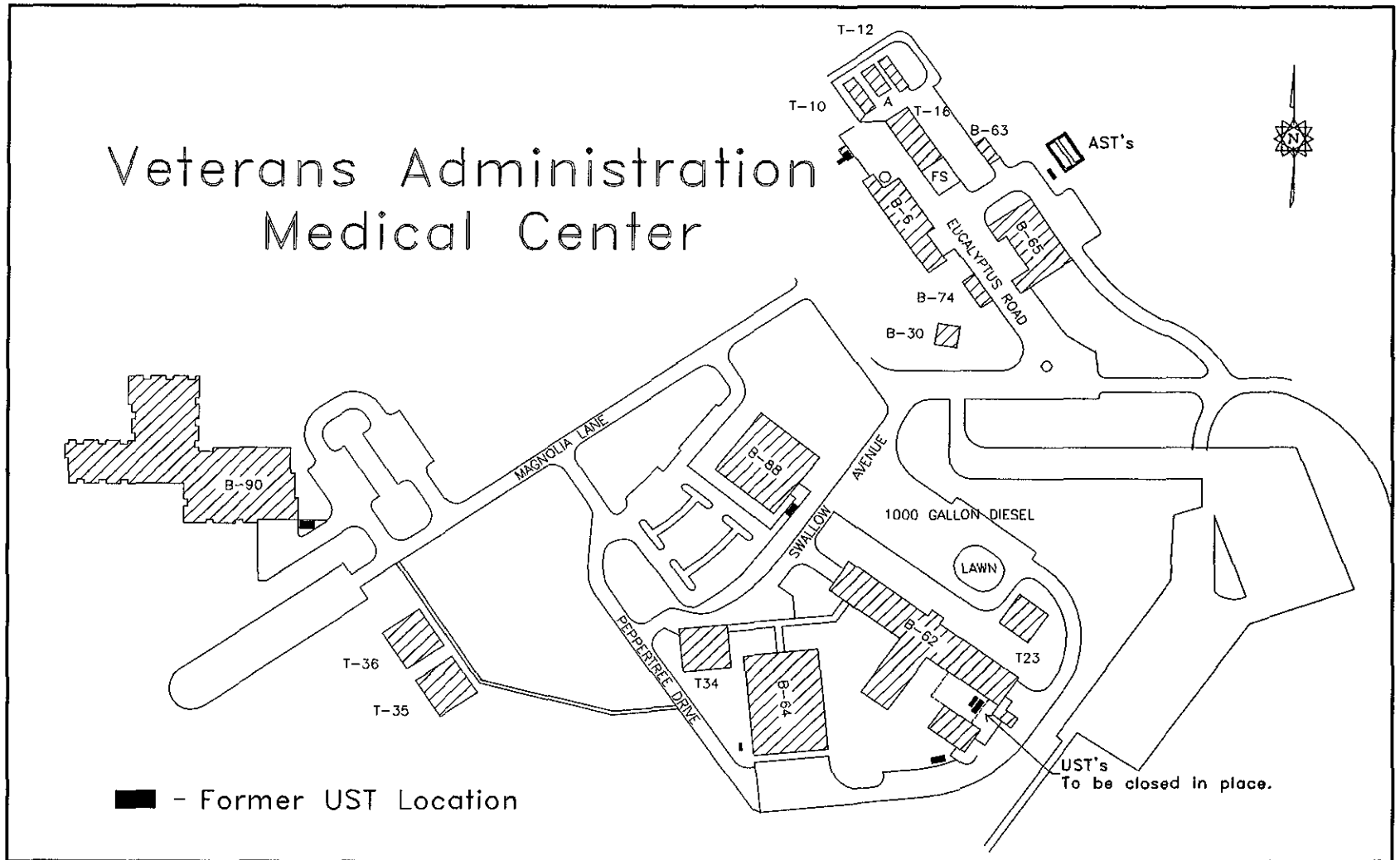
DESCRIPTION: Site Location Map		FIGURE: Figure 1	PROJECT NUMBER: SF009201
		DRAWN BY:	
PROJECT/LOCATION: 4951 Arroyo Rd. Livermore, CA		REVISED: M. Davis	FILE NAME: VA Med. Center
		DRAWING DATE: 6/2/95	PM: G. Rogers



Growth Environmental Services, Inc.	DESCRIPTION: Site Plan	FIGURE: Figure 2	PROJECT NUMBER: SF079508
		DRAWN BY: SLK	
	PROJECT/LOCATION: 4951 Arroyo Rd. Livermore, CA	REVISED: M. Davis	FILE NAME: VA Med. Center
		DRAWING DATE: 6/2/95	P.M.: G. Rogers

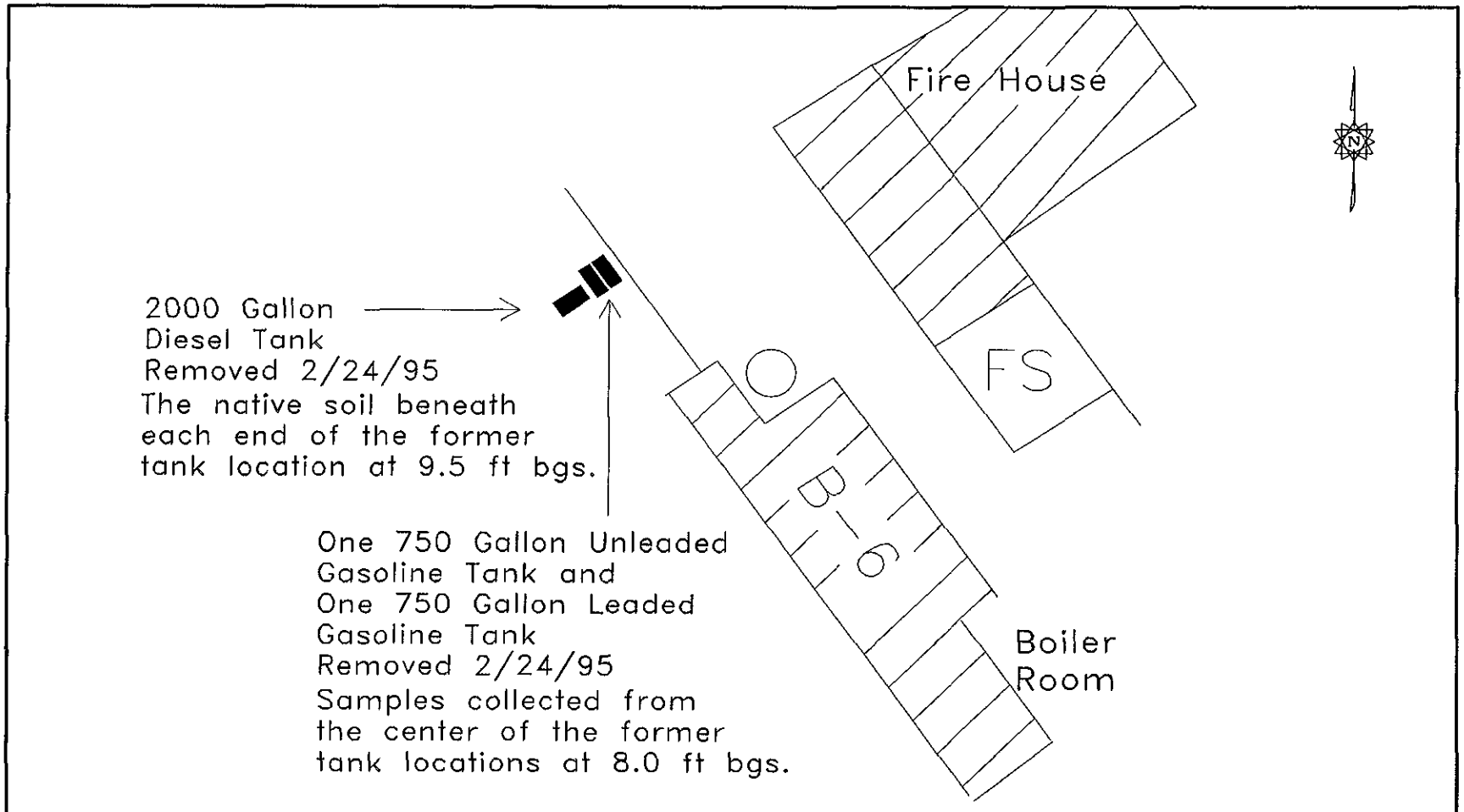
Subsurface soils observed during the tank removal activities included homogeneous brown silt as well as interbedded silts, sands and gravels. The sediments beneath the subject property exhibited normal grading, from coarser units of sandy gravel near the bottom of the excavation (approximately 10 feet bgs) to finer lithologies, in this case silts, near the top. Silts were again encountered in areas where the excavation exceeded 10.5 feet below grade surface (bgs) and this change was marked by a sharp basal contact between the graded beds and the underlying silt. This type of deposition is commonly associated with gravitationally driven alluvial fan and landslide processes.

Tank Removals Near Buildings 6 and 64

Tank Removals. On February 24, 1995 four UST's were exposed, excavated soils were stockpiled and the tanks were removed by Remedial Construction Inc. (RCI), using a 580 K backhoe. Three UST's were located in the vicinity of Building 6 and one on the west side of Building 64. Two 750 gallon gasoline tanks, one leaded and one unleaded, and one 2,000 gallon unleaded gasoline tank located near Building 6 (Figure 3) had their lower explosive limits (LEL's) lowered using 30 lbs. of dry ice in each of the two 750 gallon tanks and 50 lbs. in the 2,000 gallon tank. The two 750 gallon tanks were constructed of ½-inch-thick steel. Rust and some pitting were noted, but no holes were observed. The 2,000 gallon diesel tank was constructed of double walled fiberglass encased in a tar wrap and no holes were noted. Concrete footers and steel strap tie downs were encountered beneath each of the three tanks in this location. The straps were removed and disposed of with the tank. The concrete slabs were covered in place with clean backfill.

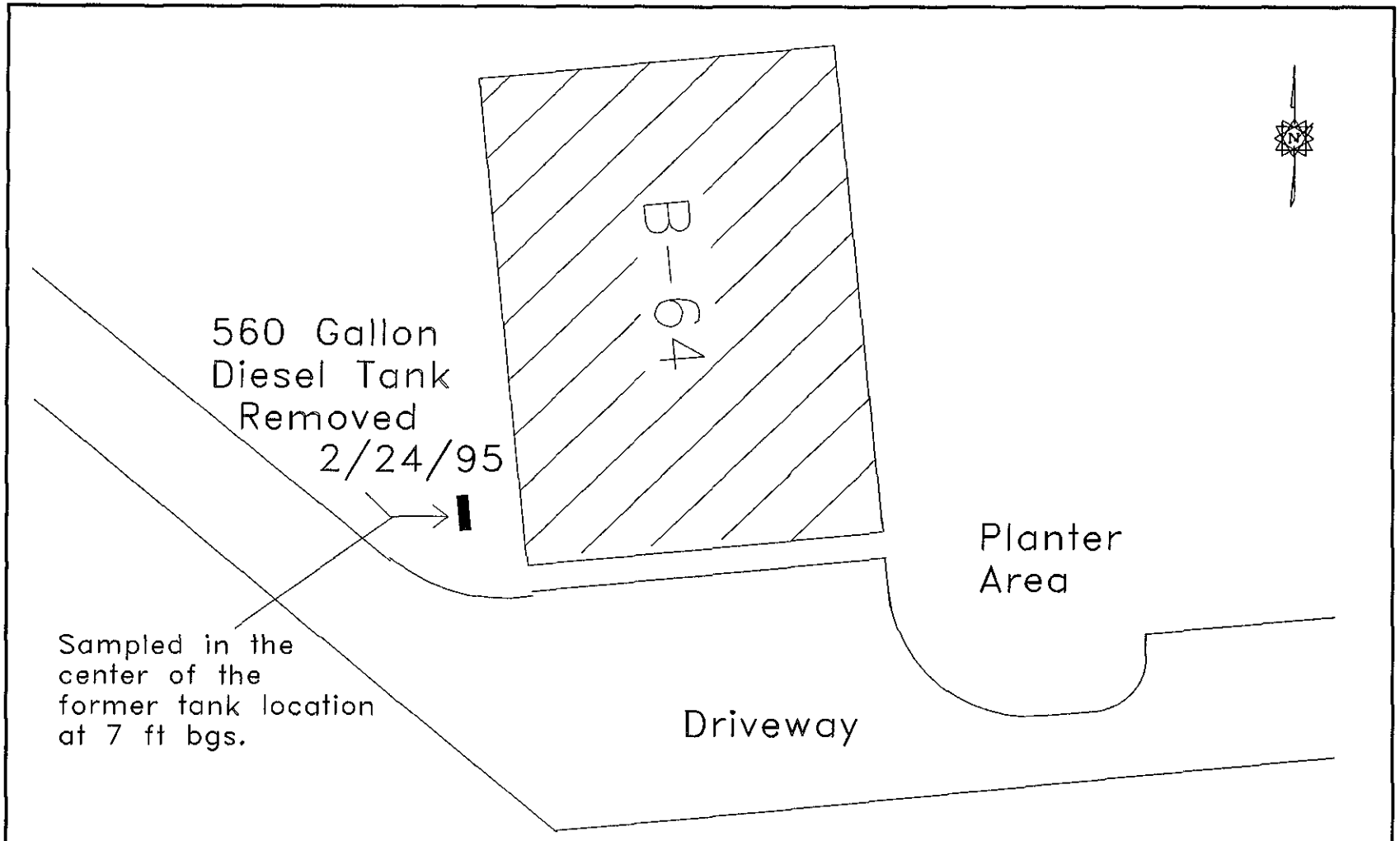
One 560 gallon diesel tank was also removed on February 24, 1995 from the western side of Building 64 (Figure 4). This tank was in good condition with no evidence of any holes. A small amount of corrosion was noted but it did not compromise the integrity of the tank. No concrete was encountered in this location. Following removal, the tanks and their associated product lines and tie downs were hauled as non-hazardous scrap to Erickson Inc., for recycling under Uniform Hazardous Waste Manifest # 95206251 (see Appendix A).

Soil Sampling and Analytical Results. Confirmatory bottom samples were collected at the Building 6 tank site. The soil samples were collected using a slide hammer, extension rods and 2 inch diameter brass tubes following over-excavation activities. Two samples were collected from the two 750 gallon tank excavation. The samples were collected between the concrete footers at 8 feet below grade. The analytical results for the soil sample collected from the northern 750 gallon tank location were below detection limits for both Total Petroleum Hydrocarbons as gasoline (TPH-G) and Benzene, Toluene, Ethylbenzene and Total Xylenes (BTEX). McCampbell Analytical of Pacheco California, a state certified laboratory, analyzed all samples collected by GROWTH. The soil samples were analyzed by EPA modified Method 8015, EPA Method 8020 and LUFT metals by EPA Method 6010. Minor amounts of these metals were detected in soils collected from near the southern 750 gallon gasoline tank, but they fell well below county action levels (see Table 1A). Copies of the original laboratory reports are provided in Appendix B.



GROWTH
Growth Environmental Services, Inc.

DESCRIPTION: Former UST Locations	FIGURE: Figure 3	PROJECT NUMBER: SF079508
DRAWN BY:		
PROJECT/LOCATION: Building 6	REVISED:	FILE NAME: VA Med. Ctr.
	DRAWING DATE: 6/2/95	PM: G. Rogers



GROWTH Growth Environmental Services, Inc.	DESCRIPTION: Former UST Locations	FIGURE: Figure 4	PROJECT NUMBER: SF079508
	PROJECT/LOCATION: Building 64	DRAWN BY: M. Davis	FILE NAME: VA Med. Center
		REVISED:	PM: G. Rogers
		DRAWING DATE: 6/2/95	

Table 1A

Analytical Results from Soil Samples Collected 2/24/95
Near Buildings 6 and 64
Sample Results Reported in mg/kg (equivalent to ppm)

Sample I.D.	TPH-G	TPH-D	Benzene	Toluene	Ethylbenzene	Xylenes
560-D @7'	NA	ND	ND	ND	ND	ND
560-D Stkp	NA	9.9	ND	ND	ND	ND
750-G N@8'	ND	NA	ND	ND	ND	ND
750-G S@8'	1.7	NA	ND	0.005	0.005	0.042
2000-G N@9.5'	4.4	NA	0.013	0.081	0.040	0.29
2000-G S@9.5'	ND	NA	ND	ND	ND	ND
750-G Stkp 1	ND	NA	ND	ND	ND	ND
750-G Stkp 2	4.6	NA	ND	0.013	ND	0.062
2000-G Stkp 1	ND	NA	ND	ND	ND	ND
2000-G Stkp 2	ND	NA	ND	ND	ND	ND
Detection Limits	1.0 (mg/Kg)	10 (mg/Kg)	0.005 (mg/Kg)	0.005 (mg/Kg)	0.005 (mg/Kg)	0.005 (mg/Kg)

NA - Not Analyzed
ND - Below detection limits

Because one of the 750 gallon gasoline tanks stored leaded gasoline, a TTLC analysis for total lead was run on both of the samples collected from this excavation (Table 1B). None of the levels detected required any further action by Alameda County Department of Environmental Health.

Table 1B
Total Lead Results from Soil Samples Collected 2/24/95
Near Building 6

Sample I.D.	Extraction	Total Lead
750G N@8'	TTLC	26
750G S@8'	TTLC	42
750G Stkp 1	TTLC	30
750G Stkp 2	TTLC	31
Detection Limits mg/kg	TTLC	4.0 mg/Kg

Soil samples were collected from the 2,000 gallon gasoline tank excavation in a similar fashion. One soil sample was collected from both the northern and southern ends of the tank excavation, both from 9.5 feet below grade. Both samples were analyzed for TPH-G/BTEX by EPA modified method 8015 and EPA Method 8020.

TPH-G was detected at a concentration of 4.4 mg/kg, benzene was not detected and the other constituent concentrations were well below regulation action levels. A summary of these soil sample analytical results is provided in Table 1A. The soil sample collected from the 560 gallon diesel tank excavation was collected in the center of the excavation at 7 feet below grade. It was analyzed for TPH-D/BTEX by EPA modified method 8015 and EPA Method 8020. The results were below detection limits for all analytes.

Three stockpiles were generated during these excavation activities. The stockpile soil sample analytical program was the same as that for corresponding tank pit soil samples. Five stockpile soil samples, two from each of the Building 6 stockpiles and one from the Building 64 stockpile, were collected by GROWTH. Based on the analytical results for the five soil stockpile samples, the three stockpiles were approved for use as backfill material by Eva Chu of the Alameda County Department of Environmental Health, and the material was returned to the respective excavation areas. Stockpile soil analytical results are summarized in Tables 1A and 1B.

Tank Removals Near Buildings 88 and 90

Tank Removals. On March 27, 1995 two diesel tanks were removed from the VA Medical Center near Buildings 88 and 90 (Figures 5 and 6). Near Building 88, one 1,000 gallon double walled fiberglass diesel tank was exposed, inerted with 30 lbs. of dry ice and removed by RCI, using a 580 K backhoe. Once the tank was removed, visual inspection revealed that no holes or perforations were present in the tank. No petroleum hydrocarbon staining or odors were detected in the excavation or in the stockpiled soil. The tank rested on a concrete slab.

Near Building 90, one 2,000 gallon, single-walled steel diesel tank was exposed, its lower explosive limit was lowered with 50 lbs. of dry ice and removed by RCI. No petroleum odor was present or staining observed in the tank pit or in the stockpiled soil.

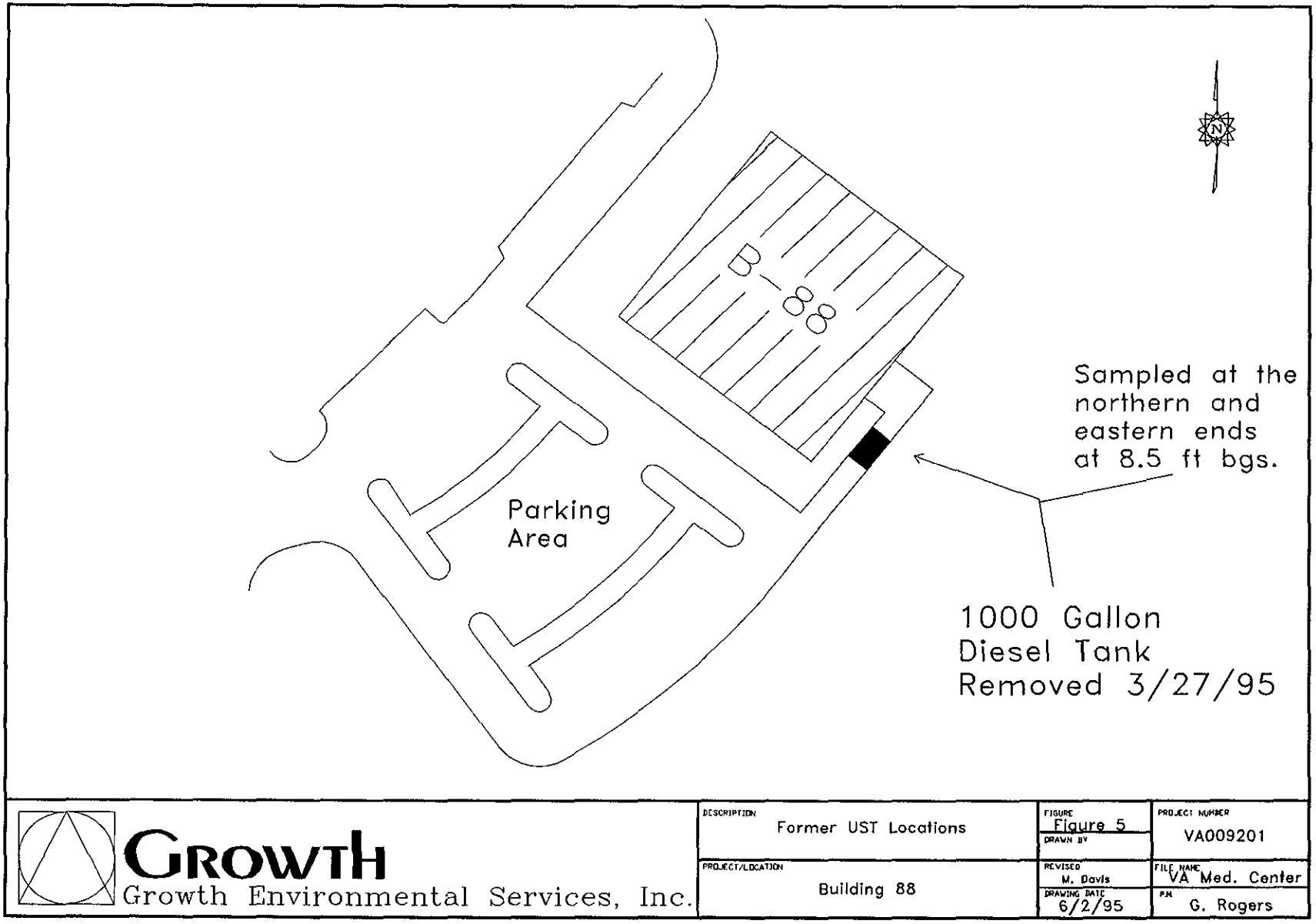
The tanks and their associated product lines were hauled as nonhazardous scrap to Erickson Inc., for recycling under Uniform Hazardous Waste Manifest # 95204830 (see Appendix A).

Soil Sampling and Analytical Results. Two samples of native soil were collected beneath and adjacent to the concrete slab that acted as a footer for the 1,000 gallon Building 88 diesel tank. Soil samples were collected from the northern and southern ends of this former tank location. The northern sample was collected from a depth of 8.5 feet below grade and the southern sample was collected beneath the fill end of the former tank from a depth of 9 feet below grade. One discrete stockpile soil sample was also collected at this time.

The samples were analyzed for TPH-D and BTEX by EPA modified methods 8015 and EPA Method 8020, respectively. Both native soil samples from the Building 88 excavation yielded results which were below detection limits for all analytes. The stockpile soil sample contained 52 ppm TPH-D, whereas, BTEX constituents were not detected. This material was disposed of under manifest #529364 to Browning-Ferris Industries Vasco Road site.

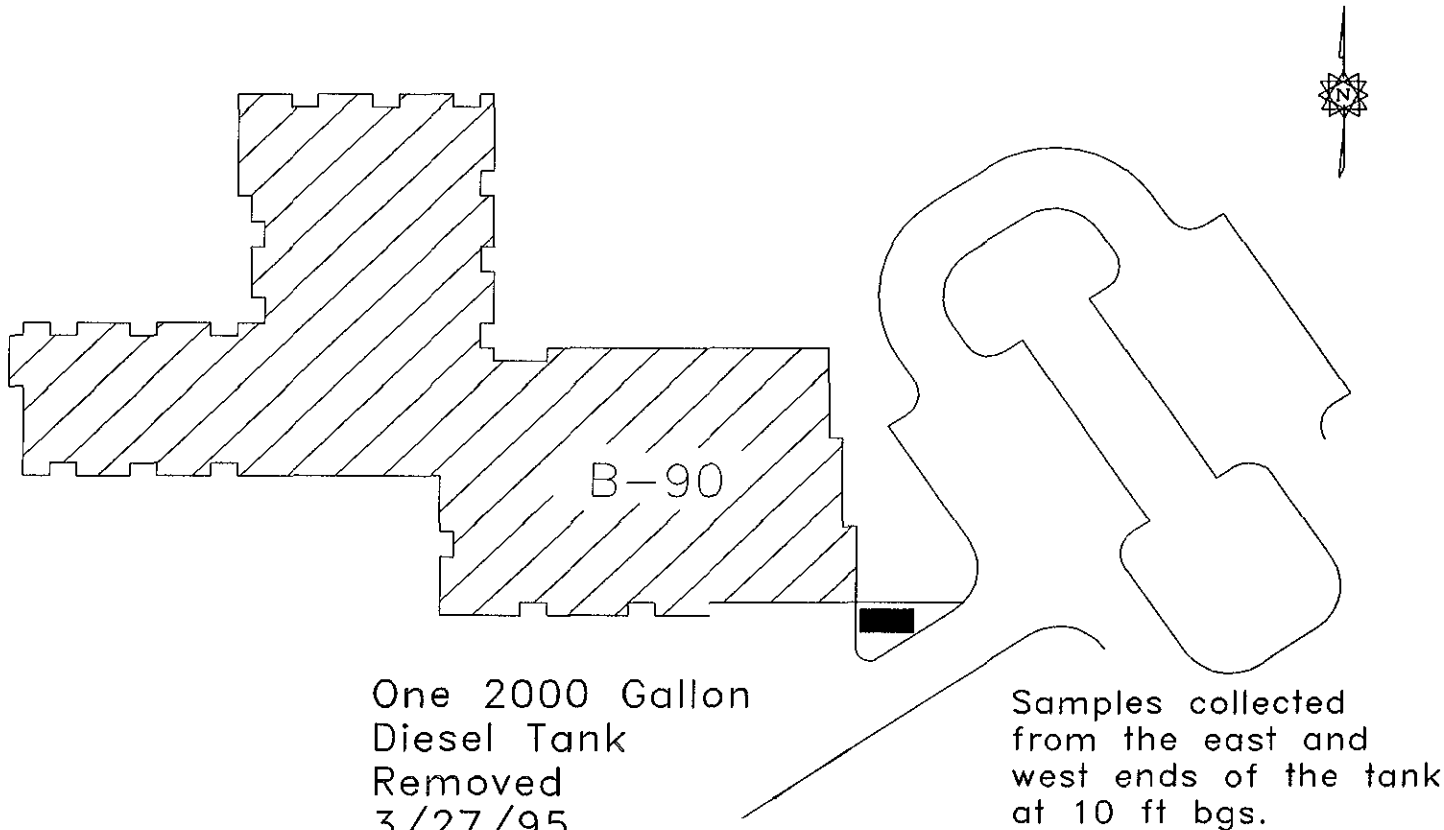
Two soil samples were collected from the excavation near Building 90 and analyzed for TPH-D and BTEX by EPA modified method 8015 and EPA Method 8020, respectively. Both the western and eastern samples were collected in native soil at 10 feet below grade. The results of the laboratory analysies indicated 3.2 ppm diesel in the western sample. The soil sample results were below detection limits for all other analytes. Two discrete soil samples were collected from the stockpiled soil and analyzed for TPH-D and BTEX. Diesel was detected at a level of 11 ppm and no BTEX was detected. GROWTH obtained regulatory approval from Alameda County for this material to be used as backfill. The second Building 90 stockpile soil samples resulted in 26 ppm for diesel and was disposed of under manifest #529364 to Browning-Ferris Industries Vasco Road site (copies of soil disposal manifests are provided in Appendix C).

All analytical results from this sampling event are summarized in Table 2. Copies of the original laboratory reports are provided in Appendix B.



GROWTH
Growth Environmental Services, Inc.

DESCRIPTION: Former UST Locations		FIGURE: Figure 5	PROJECT NUMBER: VA009201
PROJECT/LOCATION: Building 88		DRAWN BY: M. Davis	FILE NAME: VA Med. Center
		REVISED:	PM: G. Rogers
		DRAWING DATE: 6/2/95	



GROWTH Growth Environmental Services, Inc.	DESCRIPTION: Former UST Locations	FIGURE: Figure 6 DRAWN BY:	PROJECT NUMBER: VA009201
	PROJECT/LOCATION: Building 90	REVISED: M. Davis DRAWING DATE: 6/2/95	FILE NAME: VA Med. Center P.M.: G. Rogers

Table 2
Analytical Results from Soil Samples Collected 3/27/95
Near Buildings 88 and 90
Sample Results Reported in mg/Kg (equivalent to ppm)

Sample I.D.	TPH-D	Benzene	Toluene	Ethylbenzene	Xylenes
Bld. 88-N	ND	ND	ND	ND	ND
Bld. 88-S	ND	ND	ND	ND	ND
Bld. 90-W	3.2	ND	ND	ND	ND
Bld. 90-E	ND	ND	ND	ND	ND
Bld. 88 Stkp.	52	ND	ND	ND	ND
Bld. 90 Stkp1	11	ND	ND	ND	ND
Bld. 90 Stkp2	26	ND	ND	ND	ND
Detection Limits	1.0 mg/Kg	0.005 mg/Kg	0.005 mg/Kg	0.005 mg/Kg	0.005 mg/Kg

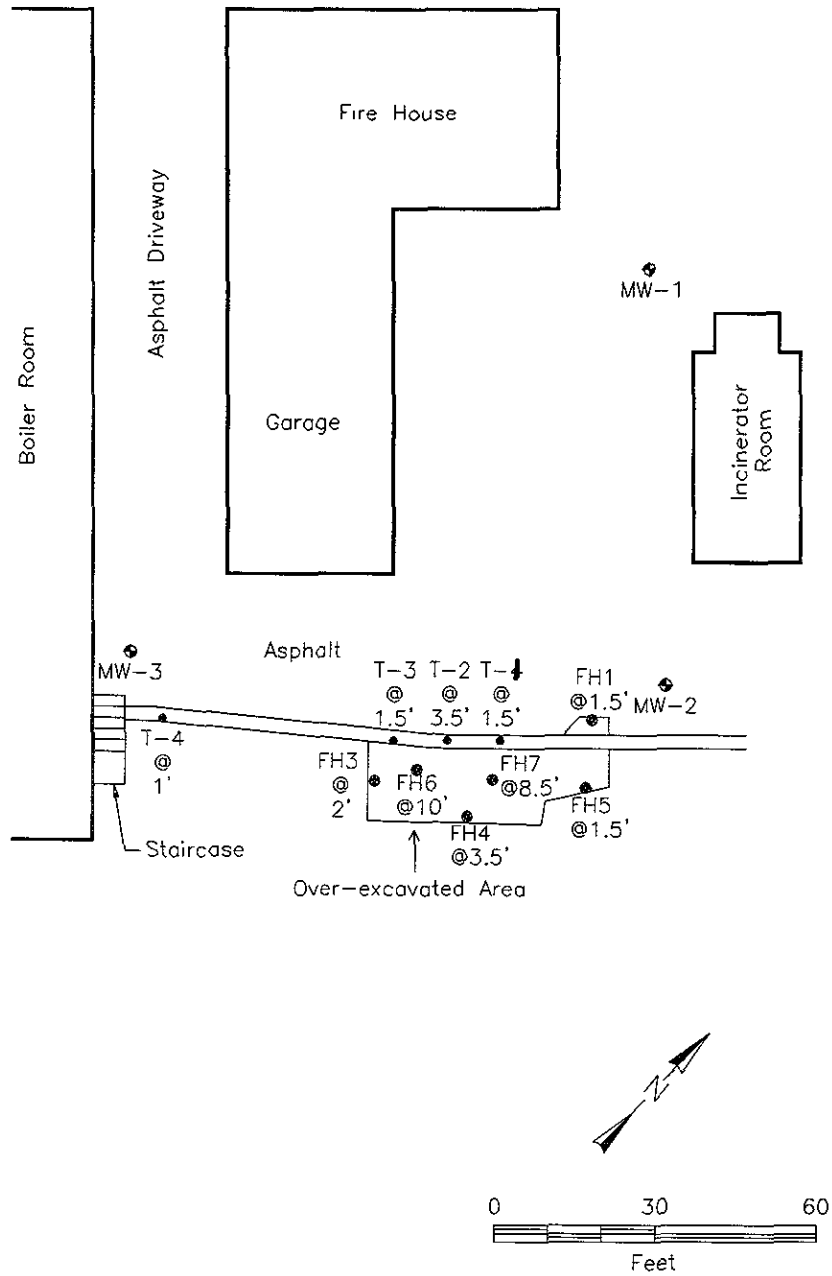
ND - Below Detection Limits

TRENCHING AND OVER-EXCAVATION NEAR THE FIRE STATION

Two 12,000 gallon underground storage tanks (see Figure 7) were excavated and removed from the VA Medical Center Fire Station, located at 4951 Arroyo Road, Livermore, California (Figure 1) in November 1990. The tanks stored No. 5 fuel oil and had not been used since 1965. During tank removal conducted by Augeas Corporation, contamination of subsurface soils and groundwater beneath the site was identified.

In November and December 1990, approximately 4,000 cubic yards of soil were excavated and stockpiled on site. Soil samples collected during excavation revealed levels of contamination at 9,000 ppm Oil and Grease (O+G) and 3,700 ppm of Total Petroleum Hydrocarbons as Diesel (TPH-D) in the excavated soil.

In 1991, Augeas Corporation reported that soil sample analytical results indicated that fuel oil contamination existed only on the northwestern wall extending under the fire house garage. During in-house trenching activities in front of the fire house at the VA Medical Center, operators encountered what appeared to be petroleum hydrocarbon contamination in the soil. On March 17, 1995 a GROWTH geologist collected four soil samples at locations marked T-1 through T-4 on Figure 7. Diesel contamination was detected in the samples up to a level of 5700 ppm, and over-excavation activities were initiated on March 29, 1995. The soil removed extended the middle of the original trench to approximately 12 feet by 45 feet to an average depth of 7 feet



Growth Environmental Services, Inc.	DESCRIPTION: Trench Over-excavation	FIGURE: FIGURE 7	PROJECT NUMBER: SF079508
	PROJECT\LOCATION: VA MEDICAL CENTER, 4951 ARROYO ROAD, LIVERMORE, CA. 94550	PROJECT MANAGER: G. Rogers	FILE NAME: SF079508.dwg
		DRAWING DATE: MAR. 29, 1995	DRAWN BY: K. ANDREWS

below grade. Stockpiled soil was sampled in four to one composites and disposed of, along with stockpiled soil from the Building 65 tank removal activities, to Browning-Ferris Industries under non-hazardous special waste manifest #'s 529365 and 529366 (copies of soil disposal manifests are provided in Appendix A). ~36 cy

The depth and extent of the over-excavation was determined by visual inspection. Subsequent confirmatory bottom and sidewall samples were collected by GROWTH. Five soil samples were collected from the side walls and two from the bottom (Figure 7). Low levels of TPH-D were detected using EPA method 8015 (see Table 3A), although further excavation was not required by Eva Chu of the Alameda Department of Environmental Health. The post-excavation soil sample analytical results ranged from ND to 30 ppm for diesel. All analytical results from this sampling event are provided in Tables 3A and 3B.

Table 3A
Fire Station Excavation Soil Samples Analytical Results
Collected on 3/17/95 and3/29/95
Sample Results Reported in mg/Kg (equivalent to ppm)

Sample I.D.	TPH-G	TPH-D	Benzene	Toluene	Ethylbenzene	Xylenes
Stkp 1 (3/17/95)	NA	19	ND	ND	ND	ND
T-1	NA	5700	0.017	0.022	0.21	0.50
T-2	NA	50	ND	ND	ND	0.009
T-3	NA	3.5	ND	ND	ND	ND
T-4	NA	ND	ND	ND	ND	ND
Stkp 1 (3/29/95)	47	980	ND	0.005	0.022	0.078
Stkp 2	9.2	760	ND	ND	ND	ND
FH-1 @ 1.5'	ND	ND	ND	ND	ND	ND
FH-2 @ 3.5'	ND	3.0	ND	ND	ND	ND
FH-3 @ 2'	ND	6.2	ND	ND	ND	ND
FH-4 @ 3.5'	ND	ND	ND	ND	ND	ND
FH-5 @ 1.5'	ND	22	ND	ND	ND	ND
FH-6 @ 10'	ND	9.7	ND	ND	ND	ND
FH-7 @ 8.5'	ND	30	ND	ND	ND	ND
Detection Limits	1.0 mg/Kg	10 mg/Kg	0.005 mg/Kg	0.005 mg/Kg	0.005 mg/Kg	0.005 mg/Kg

NA - Not Analyzed
ND - Below Detection Limits

Table 3B
LUFT Metal Results from Soil Samples Collected at Trench on 3/17/95 and Over-excavation on 3/29/95
Sample Results Reported in mg/kg (equivalent to ppm)

Sample I.D.	Lead	Cadmium	Chromium	Nickel	Zinc
Stkp 1 (3/17/95)	7.8	ND	17	22	31
T-1	6.1	ND	13	11	19
T-2	6.5	ND	22	20	28
T-3	8.3	ND	17	16	39
T-4	4.9	ND	16	14	23
Stkp 1(3/29/95)	7.6	ND	16	16	30
Stkp 2	7.1	ND	23	21	35
FH-1 @ 1.5'	ND	ND	26	30	27
FH-2 @ 3.5'	7.5	ND	20	20	40
FH-3 @ 2'	14	ND	25	21	45
FH-4 @ 3.5'	6.3	ND	16	17	35
FH-5 @ 1.5'	4.8	ND	16	9.9	19
FH-6 @ 10'	9.9	ND	25	35	41
FH-7 @ 8.5'	8.6	ND	37	51	6
Detection Limits	4.0 mg/kg	1.0 mg/kg	5.0 mg/kg	2.0 mg/kg	1.0 mg/kg

ND - Below Detection Limits

Tank Removals Near Buildings 62 and 65

Tank Removals. On May 19, 1995 two double-walled fiberglass UST's were exposed, the interior LEL lowered, and removed by RCI. The 2,000 gallon double-walled fiberglass diesel tank formerly located near Building 65 (Figure 8) was made inert using 50 lbs. of dry ice. The tank appeared in good condition with no holes or cracks noted. The 500 gallon diesel tank formerly located behind the pump house southwest of Building 62 (Figure 9) was composed of double-walled fiberglass and mounted on a concrete slab. It was made inert using 25 lbs. of dry ice. There was no sign of any holes or perforations on the outside of the tank.

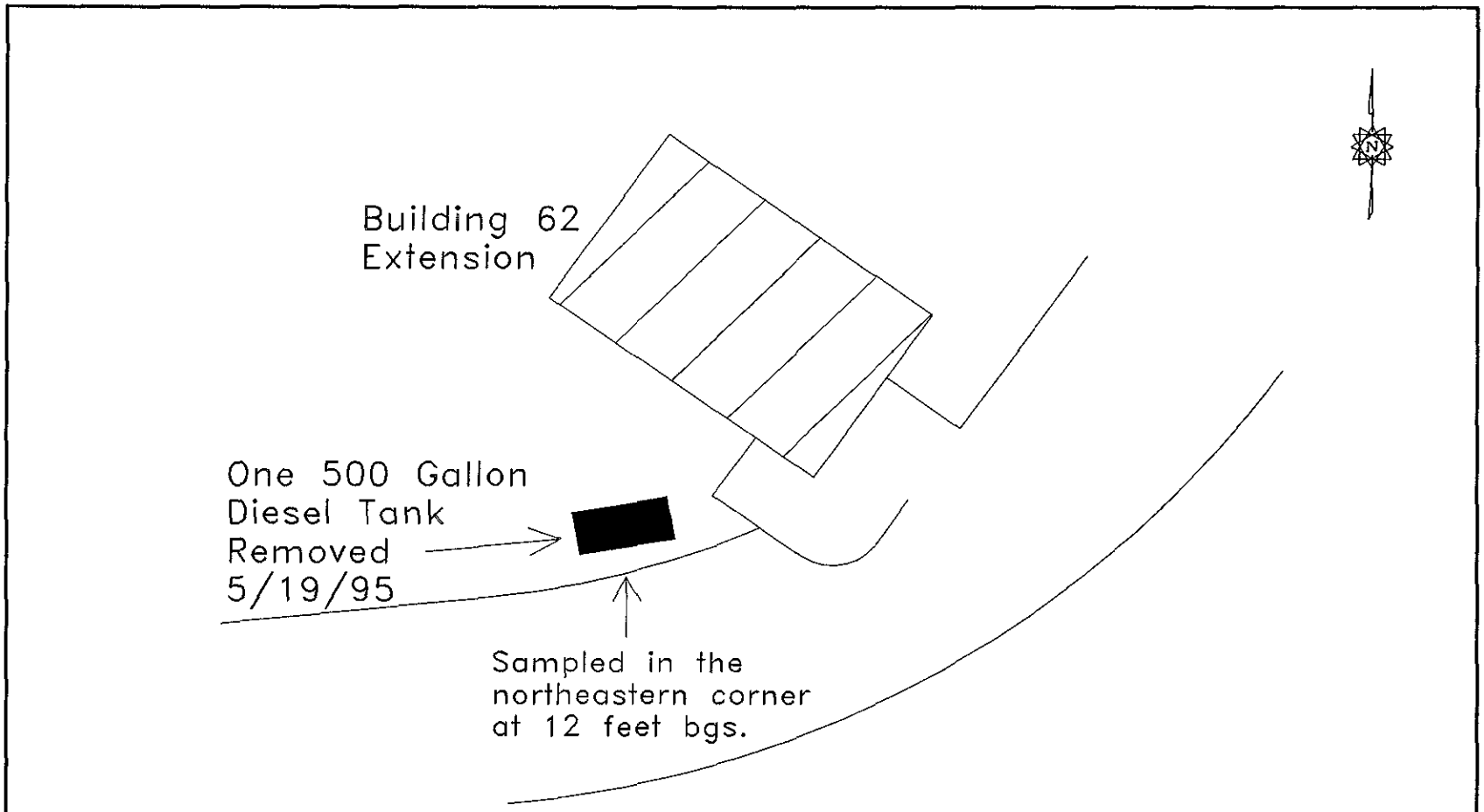
The tanks and their associated product lines were hauled as non-hazardous scrap to Erickson Inc., for recycling under Uniform Hazardous Waste Manifest # 95205623 (see Appendix A).

Sampling and Analytical Results. One soil sample was collected from the northern edge of the Building 65 excavation at 10 feet below grade in stained green clayey gravel. The second sample was collected from the eastern sidewall at 11.5 feet below grade. Both were analyzed for TPH-D and BTEX by EPA methods modified 8015 and 8020 as well as polynuclear aromatic hydrocarbons (PAHs) by EPA Method 8270 and extraction method 3550.

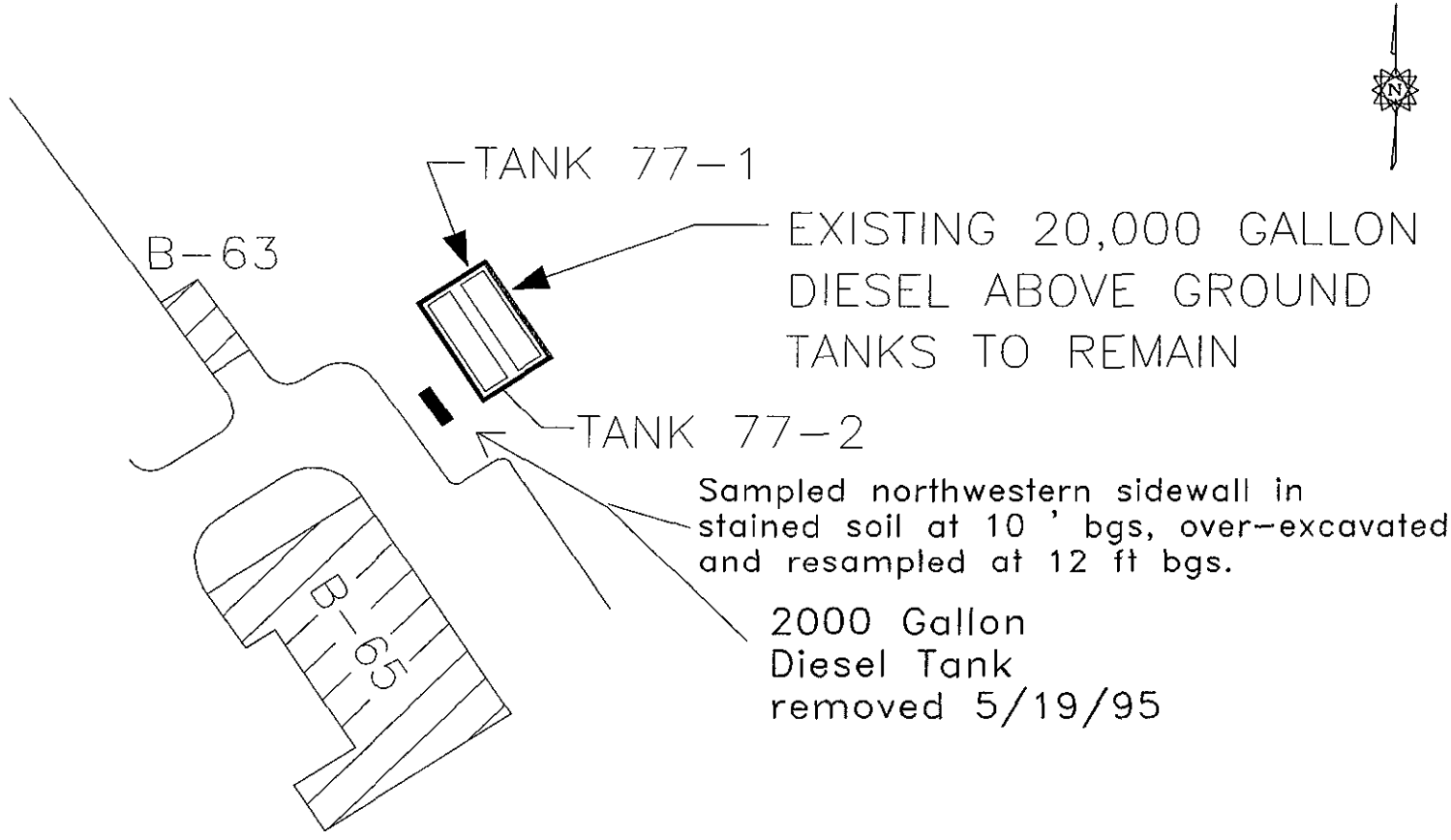
The stockpile was sampled twice and analyzed for the same hydrocarbon parameters as the confirmatory bottom samples.

The sample collected from the eastern portion of the Building 65 excavation yielded analytical results which were below detection limits for all analytes. The northern sample from the Building 65 excavation contained 2100 ppm diesel and a trace of pyrene (0.06 ppm). Over-excavation continued to 12 feet below grade. This area of the excavation was re-sampled along with the trench that contained the associated piping. These samples were analyzed for TPH-G, TPH-D and BTEX. Low level gasoline was detected as well as diesel, although none of the BTEX analytes were detected. No further action was required by Alameda County Department of Environmental Health. Analytical results are summarized in Tables 4 and 5. Copies of the original laboratory reports are provided in Appendix B.

The former 500 gallon diesel tank location was sampled in the center of the excavation at 12 feet below grade. One stockpile sample was also collected. The soil samples were analyzed for TPH-D and BTEX. None of these analytes were detected in the native soil. The backfill material contained 210 ppm diesel, but there was no BTEX constituents detected. This soil was transported to Browning-Ferris Industries under non-hazardous special waste manifest #'s 529365 and 529366.



GROWTH Growth Environmental Services, Inc.	DESCRIPTION: Former UST Locations	FIGURE: Figure 9 DRAWN BY:	PROJECT NUMBER: SF079508
	PROJECT/LOCATION: Building 62	REVISED: M. Davis DRAWING DATE: 6/2/95	FILE NAME: VA Med. Center PM: G. Rogers



Growth Environmental Services, Inc.	DESCRIPTION: Former UST Locations	FIGURE: Figure 8 / DRAWN BY	PROJECT NUMBER: SF09508
	PROJECT/LOCATION: Building 65	REVISED: M. Davis / DRAWING DATE: 6/2/95	FILE NAME: VA Med. Center / P.M.: G. Rogers

Table 4
Analytical Results from Soil Samples Collected 5/19/95
Near Buildings 62 and 65 (mg/Kg equivalent to ppm)

Sample I.D.	TPH-D	Benzene	Toluene	Ethyl-benzene	Xylenes
Bld.-62-500-D	ND	ND	ND	ND	ND
Bld.-62-500-D Stkp	210	ND	ND	ND	ND
Bld.-65-N	2100	ND	ND	ND	ND
Bld.-65-E	21	ND	ND	ND	ND
Bld.-65-Stkp 1	73	ND	ND	ND	ND
Bld.-65-Stkp 1A	8.2	ND	ND	ND	ND
Bld. -65-Stkp2	200	ND	ND	ND	ND
Detection Limits	1.0 (mg/Kg)	0.005 (mg/Kg)	0.005 (mg/Kg)	0.005 (mg/Kg)	0.005 (mg/Kg)

PNAs

.06 ppm Pyrenes

ND - Below Detection Limits

Table 5
Analytical Results from Soil Samples Collected 5/25/95
Near Building 65 (mg/Kg equivalent to ppm)

Sample I.D.	TPH-G	TPH-D	Benzene	Toluene	Ethyl-benzene	Xylenes
Bld.65-N-2	1.6	56	ND	ND	ND	ND
Bld.65-T-1	ND	11	ND	ND	ND	ND
Bld.65-Stkp1B	6.1	64	ND	ND	ND	ND
Detection Limits	1.0 (mg/Kg)	1.0 (mg/Kg)	0.005 (mg/Kg)	0.005 (mg/Kg)	0.005 (mg/Kg)	0.005 (mg/Kg)

ND - Below Detection Limits

BUILDING 62 IN PLACE TANK CLOSURES

Two underground storage tanks (USTs) are currently located behind Building 62. One 5,000 gallon diesel tank is situated in a northeast-southwest orientation and a 2,000 gallon diesel tank lies perpendicular to it on its northwestern side. Since their existence on the subject property, additional construction has enclosed the tank area. The two tanks are now enclosed between Building 62 to the north and northwest, electrical transformers to the south and a sloped, landscaped area to the southeast. Because of the enclosed nature of the tank location, in place closure was considered the best option by Alameda County Department of Environmental Health.

SAMPLING BENEATH THE TANKS

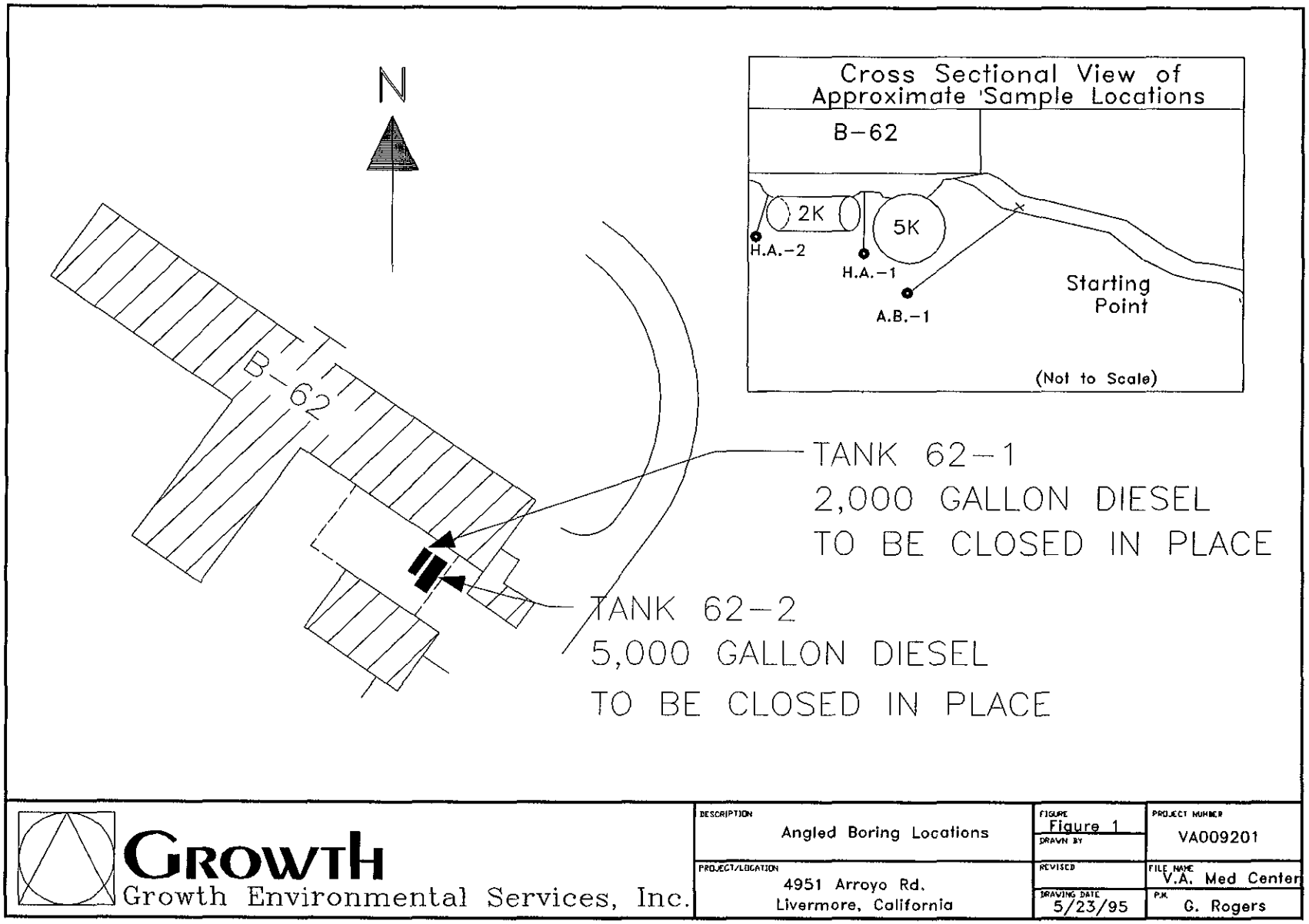
One angled boring was advanced using Geoprobe sampling equipment. The truck-mounted hydraulic foot was tilted and the sampler and rods were advanced at an angle of approximately thirty five degrees. One soil sample was collected at the rod depth of 20 to 24 feet at an approximate vertical depth of 12 to 13.5 feet below grade. This sample, A.B.-1 was collected in native soil beneath the 5,000 gallon diesel tank. The native soil consisted of medium brown, medium grained sand with silt with iron oxide lenses approximately ¼ to ½ inch in diameter. The soil exhibited no hydrocarbon staining or odor.

Due to the limited access, sampling beneath the 2,000 gallon diesel tank required hand augered borings to be advanced. One was advanced vertically at a location between the two tanks. At approximately eleven feet below grade a concrete slab was encountered. A sample of the gray, medium sand backfill material was collected. Because the second sample was not in native soil a third boring, the second hand auger boring, was advanced beneath the northwestern fill end of the 2,000 gallon diesel tank. One soil sample was collected in native, medium brown silty sand with gravel at an approximate depth of 9.5 feet below grade.

ANALYTICAL RESULTS

The three soil samples collected from the vicinity of the Building 62 tanks were collected in plastic Geoprobe sampling tubes. Sample tubes were labeled, sealed at each end with Teflon sheeting and PVC end caps, and stored in an ice chest with ice. Samples were delivered under GROWTH chain-of-custody protocol to McCampbell Analytical, a state-certified analytical laboratory. The samples were analyzed for TPH-D (diesel) and BTEX using EPA GCFID modified methods 8015 and EPA Method 8020, respectively.

Analytical results for all three soil samples were below detection limits for all BTEX constituents. In HA-1, diesel range hydrocarbons were detected at 1.5 ppm. In HA-2, diesel was detected at 290 ppm. A summary of the analytical results is provided in Table 6.



GROWTH
Growth Environmental Services, Inc.

DESCRIPTION: Angled Boring Locations	FIGURE: Figure 1	PROJECT NUMBER: VA009201
PROJECT/LOCATION: 4951 Arroyo Rd. Livermore, California	DRAWN BY	REVISED	FILE NAME: V.A. Med Center
	DRAWING DATE: 5/23/95	P.M.: G. Rogers

Table 6
Building 62, In Place Tank Closures
Sampled May 25 and 26, 1995
Analytical Results Reported in mg/kg (equivalent to ppm)

Sample I.D.	TPH-D	Benzene	Toluene	Ethylbenzene	Xylenes
A.B.-1	ND	ND	ND	ND	ND
H.A.-1	1.5	ND	ND	ND	ND
H.A.-2	290	ND	ND	ND	ND
Detection Limits	1.0 mg/kg	0.005 mg/kg	0.005 mg/kg	0.005 mg/kg	0.005 mg/kg

5K diesel backfill 2K

Fill ent 2K

Need lab results

ND - Below Detection Limits
mg/L = parts per million

TANK CLOSURE

The tanks were vacuumed and their contents were submitted to a waste recycler. All venting pipe was disconnected and the tanks were pumped with 40 cubic yards of 4 sack sand grout by RCI to ensure that no storage space was left for rain water or other substances (Pictures documenting the grouting are provided in Appendix D). The exposed area of the tanks was covered with the displaced surface soil to grade.

CONCLUSIONS/RECOMMENDATIONS

All tank removal and associated over-excavation activities that occurred at the VA Medical center removed the majority of the petroleum hydrocarbon contamination present. The low levels that remain, or were returned as backfill, are within acceptable ranges as indicated by Eva Chu of the Alameda County Department of Environmental Health. GROWTH recommends case closure on the eight tanks that were removed at the Veterans Administration Medical Center, 4951 Arroyo Road, Livermore, California.

During the sampling activities on May 25 and May 26, 1995, at the Building 62 UST's (designated to be closed in place), twoof the three soil samples collected contained detectable levels of petroleum hydrocarbons. No BTEX constituents, however, were found in any of the three samples collected on May 25 and 26, 1995. The levels and amounts of diesel present are within an acceptable range for closure in place, as communicated by Eva Chu of the Alameda County of Environmental Health. Therefore, GROWTH recommends no additional work be performed and case closure be granted for the two tanks closed in place in the vicinity of the Building 62 at the Veterans Administration Medical Center.

LIMITATIONS

This report has been prepared in accordance with generally accepted environmental, geological and engineering practices. No warranty, either expressed or implied, is made as to the professional advice presented herein. The analysis, conclusions and recommendations contained in this report are based upon site conditions as they existed at the time of the investigation, and they are subject to change.

The conclusions presented in this report are professional opinions based solely upon visual observations of the site and vicinity and interpretation of available information as described in this report. The scope of services performed in execution of this investigation may not be appropriate to satisfy the needs of other users, and any use or reuse of this document or its findings, conclusions or recommendations presented herein is at the sole risk of said user.

Michael T. Davis
Project Geologist

Mark R. Lafferty, R.G.
Director of Geosciences
R.G. No. 4701

APPENDIX A

Uniform Hazardous Waste Transportation and Disposal Manifests

State of California - Environmental Protection Agency
Form Approved OMB No. 2050-0039 (Expires 9-30-96)
Please print or type Form designed for use on elite (12-pitch) typewriter.

See Instructions on back of page 6. 965812

Department of Toxic Substances Control
Sacramento, California

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.	Manifest Document No.	2. Page 1	Information in the shaded areas is not required by Federal law.
CA3360007295		1 of 1	

3. Generator's Name and Mailing Address
VA MEDICAL CENTER
4951 ARROYO RD LIVERMORE CA 94550

4. Generator's Phone (510) 447-2560

A. State Manifest Document Number: 95205623

B. State Generator's ID:

5. Transporter 1 Company Name: ERICKSON INC

6. US EPA ID Number: CAD009146837

C. State Transporter's ID: 616590

D. Transporter's Phone: 510-235-1393

7. Transporter 2 Company Name:

8. US EPA ID Number:

E. State Transporter's ID:

F. Transporter's Phone:

9. Designated Facility Name and Site Address
Erickson, Inc.
255 Parr Blvd.
Richmond, CA. 94801

10. US EPA ID Number: CAD009346212

G. State Facility's ID: CAD009146639121

H. Facility's Phone: (510)235-1393

11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	12. Containers Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste Number
a. NON-RCRA Hazardous Waste Solid Waste Empty Storage Tank.	002	TP	02150	P	State 512 / EPA/Other NONE
b.					State / EPA/Other
c.					State / EPA/Other
d.					State / EPA/Other

J. Additional Descriptions for Materials Listed Above
Qty. 2 Empty Storage Tank(s)#1578, 1582, _____, _____. Tank(s) have been inerted with 15 lbs. Dry Ice Per 1000 Gallon Capacity.

K. Handling Codes for Wastes Listed Above
a. 99 b. c. d.

15. Special Handling Instructions and Additional Information
Keep away from sources of ignition. Always wear hardhats when working around U.G.S.T.'s 24 Hr. Contact Name. Jim Pitzer & Phone. (510) 447-2560 X6405.

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name	Signature	Month	Day	Year
J. PITZER		05	17	95

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year
PAUL JACOBO	Paul Jacobo	05	17	95

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year

19. Discrepancy Indication Space

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Month	Day	Year
DAVID SATO	DAVE SATO	05	17	95

DO NOT WRITE BELOW THIS LINE.

GENERATOR / TRANSPORTER / FACILITY

IN CASE OF EMERGENCY OR SPILL, CALL THE NATIONAL RESPONSE CENTER 1-800-424-8802; WITHIN CALIFORNIA, CALL 1-800-852-7550

DTSC 8022A (9/94)
EPA 8700-22

** TOTAL PAGE.004 **

State of California — Environmental Protection Agency
Form Approved OMB No. 2050-0039 (Expires 9-30-96)
Please print or type. Form designed for use on elite (12-pitch) typewriter.

See Instructions on back of page 6.

Department of Toxic Substances Control
Sacramento, California

R.H. R.H. 46514

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.: CA3360007295 (struck through: CA0000807640)
Manifest Document No.: 06254 (struck through: 0072)
2. Page 1 of 1
Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address: VA MEDICAL CENTER, 4951 ARROYO RD LIVERMORE CA 94550
4. Generator's Phone (510) 447-2560

A. State Manifest Document Number: 95206251
B. State Generator's ID:

5. Transporter 1 Company Name: ERICKSON INC
6. US EPA ID Number: CAD009466392
C. State Transporter's ID: 430346
D. Transporter's Phone: 510 235-1393

7. Transporter 2 Company Name:
8. US EPA ID Number:
E. State Transporter's ID:
F. Transporter's Phone:

9. Designated Facility Name and Site Address:
Erickson, Inc.
255 Parr Blvd.
Richmond, CA. 94801
10. US EPA ID Number: CAD009466392
G. State Facility's ID: CAD009466392
H. Facility's Phone: (510)235-1393

11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste Number
a. NON-RCRA Hazardous Waste Solid Waste Empty Storage Tank.	004	TP	14060	P	State 512; EPA/Other NONE
b.					State; EPA/Other
c.					State; EPA/Other
d.					State; EPA/Other

J. Additional Descriptions for Materials Listed Above
Qty. 4 Empty Storage Tank(s)# 15371, 15372, 15373, 15374. Tank(s) have been inerted with 15 lbs. Dry Ice Per 1000 Gallon Capacity.

K. Handling Codes for Wastes Listed Above
a. 01 b. c. d.

15. Special Handling Instructions and Additional Information
Keep away from sources of ignition. Always wear hardhats when working around U.G.S.T.'s 24 Hr. Contact Name. JIM PITZER & Phone 510 447-2560 X6405

16. **GENERATOR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name: JAMES PITZER — Signature: [signature] — Month Day Year: 02 24 95

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: Robert Haney — Signature: Robert Haney — Month Day Year: 02 24 95

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name: — Signature: — Month Day Year:

19. Discrepancy Indication Space

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: DAVID SATO — Signature: DAVE SATO — Month Day Year: 02 24 95

GENERATOR / TRANSPORTER / FACILITY

IN CASE OF EMERGENCY OR SPILL, CALL THE NATIONAL RESPONSE CENTER 1-800-424-8802; WITHIN CALIFORNIA, CALL 1-800-852-7550

95206251

DO NOT WRITE BELOW THIS LINE.

DTSC 8022A (9/94)
EPA 8700—22

White: TSDF SENDS THIS COPY TO DTSC WITHIN 30 DAYS
To: P.O. Box 3000, Sacramento, CA 95812

State of California—Environmental Protection Agency
Form Approved OMB No. 2050-0039 (Expires 9-30-96)
Please print or type. Form designed for use on elite (12 pitch) typewriter.

See Instructions on back of page 6. 96548 Department of Toxic Substances Control Sacramento, California

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. CA3360007295 | Manifest Document No. 014830 | 2. Page 1 of 1 | Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
VA MEDICAL CENTER
4951 ARROYO RD LIVERMORE CA 94550

4. Generator's Phone (510) 447-2560

A. State Manifest Document Number 95204830

B. State Generator's ID

5. Transporter 1 Company Name: ERICKSON INC | 6. US EPA ID Number: CAD009416639 | C. State Transporter's ID 430334 | D. Transporter's Phone 510-235-1393

7. Transporter 2 Company Name | 8. US EPA ID Number | E. State Transporter's ID | F. Transporter's Phone

9. Designated Facility Name and Site Address
Erickson, Inc.
255 Parr Blvd.
Richmond, CA. 94801

10. US EPA ID Number: CAD009466392

G. State Facility's ID: CAP0994660392

H. Facility's Phone: (510)235-1393

11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste Number
a. NON-RCRA Hazardous Waste Solid Waste Empty Storage Tank.	2	TP	2400	P	State 512 / EPA/Other NONE
b.					State / EPA/Other
c.					State / EPA/Other
d.					State / EPA/Other

J. Additional Descriptions for Materials Listed Above
Qty. 2 Empty Storage Tank(s)#15493 15494
_____, _____.Tank(s) have been inerted with 15 lbs.Dry Ice Per 1000 Gallon Capacity.

K. Handling Codes for Wastes Listed Above
a. 01 | b. | c. | d.

15. Special Handling Instructions and Additional Information
Keep away from sources of ignition. Always wear hardhats when working around U.G.S.T.'s 24 Hr. Contact Name. Randy Pyper & Phone 916.697 3219

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name: Jim Pitzer | Signature | Month 03 Day 27 Year 95

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: DAN BAILEY | Signature: Dan Bailey | Month 3 Day 27 Year 95

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name | Signature | Month | Day | Year

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: DAVID SATO | Signature: DAVE SATO | Month 03 Day 27 Year 95

DO NOT WRITE BELOW THIS LINE.

IN CASE OF EMERGENCY OR SPILL, CALL THE NATIONAL RESPONSE CENTER 1-800-424-8802; WITHIN CALIFORNIA, CALL 1-800-852-7550

GENERATOR

DTSC 8022A (9/91)
EPA 8700-22

BFI® Waste Systems™

BROWNING-FERRIS INDUSTRIES

WCD No. SB 47624

BFI WASTE CODE

WASTE EVALUATION REQUEST

BFI to complete this area:
BFI Initiator:
Location:
Company Number:
Telephone: ( )
Fax: ( )
Date:

Action Requested: ☐ New Waste Approval
☐ Up-Date Approval - Previous Number:
Disposal Site Requested:
Company Number:
Disposal Method Requested: ☐ Working Face ☐ Daily Cover
☐ Other

GENERAL INFORMATION DATA
For Soil Contaminated With Petroleum Products

IMPORTANT: This form is to be used to describe contaminated soils resulting from the release of petroleum products only and is not to be used for hazardous waste or PCB's regulated by a federal or applicable state, provincial, or local authority.

INSTRUCTIONS: A representative of the generator must complete the Waste Characterization Data (WCD) portion of this form. Please be thorough in your answers. The entire form must be completed, answers must be legibly printed in ink or typewritten, and the completed form must be signed and dated. Please attach any additional relevant information such as analytical data that will help to describe the waste and expedite its review. Use the form only one time since this form has a unique WCD number assigned.

GENERATOR INFORMATION

a) Generator's Name: D.V.A. Medical Center
b) Generating Facility's Address: 4951 Arroyo Rd.
City: Livermore State: CA Zip: 94550
c) Generator's Representative: Jim Pitzer
Title: Operation Manager
Telephone: (510) 447-2560 Ext. 6402
Fax: ( )
d) Emergency/Information Contact: Jim Pitzer
Title: Operations Manager
Telephone (510) 447-2560 Ext. 6405

e) Customer's Name: Remedial Constructors, Inc.
f) Customer's Mailing Address: 5030 Shilo Rd.
City: Modesto State: CA Zip: 95358
g) Representative: Joe Doub
Telephone: (510) 371-0488
Fax: (510) 371-0487

GENERAL WASTE STREAM INFORMATION

a) This waste was generated as a result of: 1) ☒ UST Removal 2) ☐ AST Removal 3) ☐ Spill
b) Type of facility generating the contaminated soil: Back up Generator for Medical Facility.
c) Is this waste subject to the UST corrective action regulations under 40 CFR 280? ☐ Yes ☐ No
d) Anticipated Volume: 40 ☒ Cubic Yards ☐ Tons ☐ Gallons ☐ Cubic Meters ☐ Tonnes(metric)
Other _____ Per: ☐ Year ☐ Month ☐ Week ☐ Day ☐ One Time ☐ Other
To be transported in: ☒ Bulk ☐ Drums (type/size) _____ ☐ Other
e) Is this a "Hazardous Waste" as defined by State, Provincial, or local Regulations? ☐ Yes ☒ No
If yes, enter the Waste Identification Number if one has been assigned:
f) Is this a "Special Waste", an "Industrial Process Waste", or a "Pollution Control Waste" as defined by State, Provincial, or local Regulations?
☐ Yes ☒ No If yes, enter Waste Identification Number, if one has been assigned:
g) Recommended personal protection equipment and special handling procedures: Glove, Safety Boots, Hard Hats (Level D)
h) Has a representative sample of the contaminated soil been provided to BFI? ☐ Yes ☒ No

1

/ / /

BFI WASTE CODE

3. THIS WASTE CONTAINS

Note if the waste contains any of the following: If any are checked "Yes", specify type (if applicable) and include its concentration.

- ☐ Free Liquids
- ☐ Free Cyanide
- ☐ Free Sulfide
- ☐ Free Ammonia
- ☐ Dioxins
- ☐ Organic Solvents
- ☐ OSHA Substances
- ☐ Etiological Agents
- ☐ Pathogens
- ☐ Biological Materials
- ☐ Radioactive Materials
- ☐ PCBs not regulated by TSCA 40 CFR 761
- ☒ None of the Above

Type and concentration: _____

4. SPECIAL WASTE COMPOSITION

Description of the waste:

- ☐ Soil contaminated with leaded gasoline
- ☐ Soil contaminated with unleaded gasoline
- ☒ Soil contaminated with diesel fuel
- ☐ Soil contaminated with heating oil
- ☐ Soil contaminated with vehicle drain oil
- ☐ Soil contaminated with other petroleum products

Specify: _____

5. SUPPLEMENTAL INFORMATION

☐ None ☐ MSD Sheets ☒ Analytical Data ☒ Chain of Custody ☐ Memo/Letter ☐ Waste Composition

☐ Other - describe: _____ No. of Pages: _____

6. GENERATOR'S CERTIFICATION

I hereby certify that the above and attached description is complete and accurate to the best of my knowledge and ability to determine, that no deliberate or willful omissions of composition or properties exist, that all known or suspected hazards have been disclosed, and that the waste is not a regulated hazardous waste by the USEPA, by an applicable State or Provincial authority, or by any applicable local authority, and does not contain PCBs regulated by TSCA (i.e., 40 CFR 761) or any Provincial authority.

GENERATOR'S AUTHORIZED SIGNATORY as identified in Section 1 (9):

DATE	PRINT NAME	SIGNATURE	TITLE
6-13-95	James Ritter		Chief. Fin.

REPRESENTATIVE SAMPLE CERTIFICATION

This Section is to be completed by the person obtaining the sample of the above described waste.

I certify that the sample for which analytical data was provided on the waste described above is representative of that waste and was collected and preserved in a manner consistent with accepted technical standards.

Lab sample assigned to: McCampbell Analytical, Inc. (peel off label)

Collector's Name: Michael Davis

Signature: _____

Company: Growth Environmental

Title: Project Manager

Telephone Number: (707) 745-0171

Date Collected: 5/25/95

Generator's Name: D.V.A. Medical Center

Waste Description: Soil contaminated w/Diesel

Date Collected: 5/25/95

WCD No. SB

Telephone (916) 381-6864
FAX (916) 381-1573
P.U.C. PERMIT NUMBER
T 173,038

MANLEY & SONS TRUCKING, INC.

8896 ELDER CREEK RD., SACRAMENTO, CA 95828

HAZARDOUS WASTE HAULER REG. NO. 2843

OFFICIAL USE

FREIGHT BILL NO: 28699

TIME CARD HOURS

START	
STOP	
TOTAL	
DEDUCT	
NET	

DATE: 6-15-95 | MATERIAL: SOIL | TYPE OF LOADING: BELT ☐ HOT PLANT ☐ BUNKER ☐ FRONT LOADER ☑ OTHER.

ESTINATION: WHERE MAT'L DELIVERED: B.F.I. LIVERMORE

POINT OF ORIGIN: WHERE MAT'L WAS LOADED: D.V.A. LIVERMORE

CONSIGNOR: WHO OWNED MAT'L: D.V.A. | CONSIGNOR ADDRESS

CONSIGNEE: WHO REC'D MAT'L: B.F.I. | CONSIGNEE ADDRESS

DEBTOR: CONTRACTOR: R.C.I. | DEBTOR ADDRESS

LOCATION DRIVER REPORTED: JOB | AND TIME: 9:30 | MILEAGE: 477038 | WHEN ZONE RATES APPLY. PROD AREA- DEL ZONE | YARDAGE CAP'Y IF APPLICABLE: CY

	TAG NUMBER	WEIGHT	LOADING TIMES ARRIVE	LOADING TIMES DEPART	LEAVE SCALES	UNLOADING TIMES ARRIVE	UNLOADING TIMES DEPART	REMARKS
M	529364	20.94	9:30	10:00		10:30	10:45	DUMP TAG# 691781
2	529365	23.23	11:15	12:00		12:30	12:45	691879
	529366	18.65	1:15	2:15		2:45	3:00	
4			5:30					
6								
9								
11								
13								
15								
18								

TERMS: PAYMENT DUE BY 20TH OF FOLLOWING MONTH (Section 7108.6 of the California Business & Professions Code). A service charge of 1½% per month (18% per annum) will be charged on past due accounts. Debtor (Contractor) agrees to pay reasonable attorney fees and court costs in case of suit to collect.

BID HOURS

DISPATCH TIME:

(A) START TIME: 9:30

(B) ELAPSED RUNNING TIME (LOADED TRAVEL TIME) OF LAST LOAD IN MINUTES: 30

(C) LINE (E) ADDED TO LAST UNLOAD TIME IS END TIME: 5:30

(D) FROM LINE (A) TO LAST LOAD OR WEIGH TIME PLUS DOUBLE LINE (B) PLUS LINE (C) OR ELAPSED TIME FROM LINE (C) TO LINE (A) IS TOTAL TIME: 8

(E) TIME THAT DEBTOR SHOULD NOT HAVE TO PAY FOR (SHOW DOWN TIME LUNCH ETC IN REMARKS SECTION) DEDUCTIONS: 0

(F) ELAPSED UNLOADING TIME OF LAST LOAD IN MINUTES

LINE (D) LESS LINE (E) IS NET TIME: 8

DRIVER'S SIGNATURE: X Don Adkins

SUBHAULER'S CAL T-NO: 173,038 | NO OF AXLES: 5

LICENSE NUMBERS: TRUCK: 4E06234 | SEMI: 1U44545 | PULL

TRUCK NO.: M11

CHECK IF UNDER 56 BETWEEN 1ST AND LAST AXLES ☐

UNDERLYING CARRIER

ADDRESS

RATE AND CHARGES: TONS OR HRS | RATE | AMOUNT DUE

CONSIGNEE SIGNATURE: [signature]

NON-HAZARDOUS SPECIAL WASTE & ASBESTOS MANIFEST

If waste is asbestos waste, complete Sections I, II, III and IV.
If waste is NOT asbestos waste, complete only Sections I, II and III.

No. 529364

GENERATOR

a. Generator Name: VA MEDICAL CENTER
b. Generating Location: VA MEDICAL CENTER
c. Address: 4951 ARROYO ROAD
d. Address: 4951 ARROYO ROAD
e. City, State, Zip: LIVERMORE, CA. 94550
f. City, State: LIVERMORE, CA
g. Phone No.: (510) 447-2560 X 6405
f. Phone No.: (510) 447-2560 X 6405

If owner of the generating facility differs from the generator, provide:
g. Owner's Name:
h. Owner's Phone No.:

i. WASTE CODE: CA 4050 0613 95 4762 4

Containers — TYPE: DM - METAL DRUM; DP - PLASTIC DRUM; B - BAG; BA - 6 MIL. PLASTIC BAG or WRAP; T - TRUCK; O - OTHER

j. Description of Waste: PETROLEUM CONTAMINATED SOIL

k. Quantity: 18 — Units: Y — No.: 01 — TYPE: T

UNITS: P - POUNDS; Y - YARDS; M³ - CUBIC METERS; Y³ - CUBIC YARDS; O - OTHER

GENERATOR'S CERTIFICATION: I hereby certify that the above named material is not a hazardous waste as defined by 40 CFR Part 261 of any applicable state law; has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations; AND, if the waste is a treatment residue of a previously restricted hazardous waste subject to the Land Disposal Restrictions, I certify and warrant that the waste has been treated in accordance with the requirements of 40 CFR Part 268 and is no longer a hazardous waste as defined by 40 CFR Part 261.

l. Generator Authorized Agent Name: JIM PITZER
Signature
Shipment Date

TRANSPORTER (Generator complete a-d. Transporter I complete e-g. Transporter II complete h-n.)

TRANSPORTER I

e. Name: MANLEY & SONS TRUCKING, INC.
f. Address: 8896 ELDER CREEK ROAD
SACRAMENTO, CA 95828
g. Driver Name/Title: DON ADKINS (PRINT/TYPE)
916-381-6264
h. Phone No.:
i. Truck No.: M11
j. Vehicle License No./State: CA. 9C06234

Acknowledgement of Receipt of Materials.
k. Driver Signature
Shipment Date: 061595

TRANSPORTER II

h. Name:
i. Address:
j. Driver Name/Title: (PRINT/TYPE)
k. Phone No.:
l. Truck No.:
m. Vehicle License No./State:

Acknowledgement of Receipt of Materials.
n. Driver Signature
Shipment Date

DESTINATION (Generator completes a-d, destination site completes e-l)

e. Name: B.F.I.
c. Phone No.: (510) 447-0491

NON-HAZARDOUS SPECIAL WASTE & ASBESTOS MANIFEST

If waste is asbestos waste, complete Sections I, II, III and IV.
If waste is NOT asbestos waste, complete only Sections I, II and III.

No. 529366

GENERATOR

a. Generator Name: VA MEDICAL CENTER
b. Generating Location: VA MEDICAL CENTER
c. Address: 4951 ARROYO ROAD
d. Address: 4951 ARROYO ROAD
LIVERMORE, CA. 94550
LIVERMORE, CA
e. Phone No.: (510) 447-2560 X 6405
f. Phone No.: (510) 447-2560 X 6405

If owner of the generating facility differs from the generator, provide:

g. Owner's Name:
h. Owner's Phone No.:

i. WASTE CODE: CA 405 0613 95 47624

Containers

TYPE
DM - METAL DRUM
DP - PLASTIC DRUM
B - BAG
BA - 6 MIL. PLASTIC BAG or WRAP
T - TRUCK
O - OTHER

j. Description of Waste: PETROLEUM CONTAMINATED SOIL

k. Quantity: 18 Units: Y No.: 01 TYPE: T

UNITS
P - POUNDS
Y - YARDS
M³ - CUBIC METERS
Y³ - CUBIC YARDS
O - OTHER

GENERATOR'S CERTIFICATION: I hereby certify that the above named material is not a hazardous waste as defined by 40 CFR Part 261 any applicable state law, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations; AND, if the waste is a treatment residue of a previously restricted hazardous waste subject to the Land Disposal Restrictions, I certify and warrant that the waste has been treated in accordance with the requirements of 40 CFR Part 268 and is no longer a hazardous waste as defined by 40 CFR Part 261.

JIM PITZER — Generator Authorized Agent Name
Signature
061595 — Shipment Date

TRANSPORTER (Generator complete a-d; Transporter I complete e-g; Transporter II complete h-n)

TRANSPORTER I

a. Name: MANLEY & SONS TRUCKING, INC.
b. Address: 8336 ELDER CREEK ROAD
SACRAMENTO, CA 95828
c. Driver Name/Title: DON ADKINS — PRINT/TYPE
916-381-0364
d. Phone No.:
e. Truck No.: M11
f. Vehicle License No./State: CA. 9CC6274

Acknowledgement of Receipt of Materials.

Driver Signature
061595 — Shipment Date

TRANSPORTER II

h. Name:
i. Address:
j. Driver Name/Title: — PRINT/TYPE
k. Phone No.:
l. Truck No.:
m. Vehicle License No./State:

Acknowledgement of Receipt of Materials.

n. Driver Signature
Shipment Date

DESTINATION (Generator completes a-d; destination site completes e-i)

a. Name: B.F.I.
b. Address: 4001 N. VASCO ROAD
c. Phone No.: (510) 447-0491
4001 N. VASCO ROAD

NON-HAZARDOUS SPECIAL WASTE & ASBESTOS MANIFEST

If waste is asbestos waste, complete Sections I, II, III and IV.
If waste is NOT asbestos waste, complete only Sections I, II and III.

No. 529365

GENERATOR

Generator Name: VA MEDICAL CENTER

b. Generating Location: VA MEDICAL CENTER

Address: 4951 ARROYO ROAD
LIVERMORE. CA. 94550

d. Address: 4951 ARROYO ROAD
LIVERMORE, CA

Phone No.: (510) 447-2560 X 6405

f. Phone No.: (510) 447-2560 X 6405

If owner of the generating facility differs from the generator, provide:

Owner's Name:

h. Owner's Phone No.:

WASTE CODE: C A 405 061395 47624

Description of Waste: PETROLEUM CONTAMINATED SOIL

k. Quantity	Units	Containers No.	Containers TYPE
18	Y	01	T

TYPE	
DM	METAL DRUM
DP	PLASTIC DRUM
B	BAG
BA	6 MIL. PLASTIC BAG or WRAP
T	TRUCK
O	OTHER

UNITS	
P	POUNDS
Y	YARDS
M^3	CUBIC METERS
Y^3	CUBIC YARDS
O	OTHER

GENERATOR'S CERTIFICATION: I hereby certify that the above named material is not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations; **AND, if the waste is a treatment residue of a previously restricted hazardous waste** subject to the Land Disposal Restrictions, I certify and warrant that the waste has been treated in accordance with the requirements of 40 CFR Part 268 and is no longer a hazardous waste as defined by 40 CFR Part 261.

JIM PITZER — Generator Authorized Agent Name
Signature: [signature]
Shipment Date: 061595

Section II — TRANSPORTER (Generator complete a-d, Transporter I complete e-g, Transporter II complete h-n)

TRANSPORTER I

a. Name: MANLEY & SONS TRUCKING, INC.

b. Address: 8896 ELDER CREEK ROAD
SACRAMENTO, CA 95828

c. Driver Name/Title: DON ADKINS (PRINT/TYPE)

d. Phone No.: 916-381-6864

e. Truck No.: 44

Vehicle License No./State: CA 9C06274

Acknowledgement of Receipt of Materials.

Driver Signature: [signature]
Shipment Date: 061595

TRANSPORTER II

h. Name:

i. Address:

j. Driver Name/Title: (PRINT/TYPE)

k. Phone No.:

l. Truck No.:

m. Vehicle License No./State:

Acknowledgement of Receipt of Materials.

n. Driver Signature:
Shipment Date:

Section III — DESTINATION (Generator completes a-d, destination site completes e-f.)

Site Name: B.F.I.

c. Phone No.: (510) 447-0491

4001 N. VASCO ROAD

4001 N. VASCO ROAD

APPENDIX B

Laboratory Reports

3716 ACEC729

CERTIFIED ENVIRONMENTAL CONSULTING INC.
536 Stone Road, Ste. J., Benicia, CA 94510-1016
Ofc. (707) 745-0171 (800) 228-0171 Fax. (707) 745-0163

CHAIN OF CUSTODY RECORD

Laboratory Analysis P.O. No. 1425
Laboratory: Please Call Accounts Payable for P.O. No.

Date 2/24/95 Sheet 1 of 1

Project Number: 173-631
Project Name: Vet. Med. Center
Address: 4900 Arroyo Rd

Sampler's Name: Michael Davis
Sampler's Signature: Michael Davis

Lab Name: McCampbell Analytical
Address:
Phone Number:

Turnaround Time: ☐ Rush ☐ 24 Hour ☐ ☑

Report to:

Parameters

Sample Number	Location	Date	Time	TPH as Gasoline 8015	TPH as Diesel 8015	TPH-G and B.TEX 8015/8020	B.TX&E 8020	Oil and Grease 5520	Volatile Organics (8010)	CAM Metals (17)	Pr. Pollutant Metals (13)	Base/Neu/Acids (Organic)	Pesticides 8140/8141	Total Lead	Matrix (Soil/Water)
510-D	@ 7'	2/24/95	10:25 A.M		X		X								S
560-D	Stkp.		10:30 A.M.		X		X								
750-G	North @ 8'		11:40 A.M			X								X	
750-G	South @ 8'		11:45 A.M.			X								X	
2000 G	North @ 9.5'		12:15 P.M.			X									
2000 G	South @ 9.5'		12:00 P.M.			X									
750-G	stkp. 1		12:35 P.M.			X								X	
750-G	stkp 2		12:35 P.M.			X								X	
2000-G	stkp 1		12:30 P.M.			X									
2000-G	stkp 2		12:30 P.M.			X									

ICE/T ✓
GOOD CONDITION ✓
HEAD SPACE ABSENT ✓
PRESERVATIVE APPROPRIATE ✓
CONTAINERS ✓

VOAS O&G

50440
50441
50442
50443
50444
50445
50446
50447
50448
50449

Relinquished By	Date	Time	Received By	Date	Time
1. Michael Davis	2/24/95	1:50 P.M	1.	2/24/95	1:50PM
2.			2.		
3.			3.		
Dispatched By	Date	Time	Received in Lab By	Date	Time

Total Number of Containers This Sheet: 10
Method of Shipment: Delivered
Special Shipment / Handling or Storage Requirements: on ice in ice chest.

McCAMPBELL ANALYTICAL INC.
110 2nd Avenue South, #D7, Pacheco, CA 94553
Tele: 510-798-1620 Fax: 510-798-1622

Growth Environmental Services 536 Stone Road, Ste. J Benicia, CA 94510-1016	Client Project ID: # 173-631; Vet. Med. Center	Date Sampled: 02/24/95
		Date Received: 02/24/95
	Client Contact: Michael Davis	Date Extracted: 02/24/95
	Client P.O: # 1425	Date Analyzed: 02/24-02/25/95

Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline*, with BTEX*

EPA methods 5030, modified 8015, and 8020 or 602; California RWQCB (SF Bay Region) method GCFID(5030)

Lab ID	Client ID	Matrix	TPH(g)+	Benzene	Toluene	Ethylben-zene	Xylenes	% Rec. Surrogate
50440	560-D @ 7'	S	—	ND	ND	ND	ND	97
50441	560-D Stkp	S	—	ND	ND	ND	ND	96
50442	750-G North 8'	S	ND	ND	ND	ND	ND	94
50443	750-G South 8'	S	1.7,b	ND	0.005	0.005	0.042	91
50444	2000-G North 9.5'	S	4.4,b	0.013	0.081	0.040	0.29	90
50445	2000-G South 9.5'	S	ND	ND	ND	ND	ND	95
50446	750-G Stkp 1	S	ND	ND	ND	ND	ND	96
50447	750-G Stkp 2	S	4.6,d	ND	0.013	ND	0.062	87
50448	2000-G Stkp 1	S	ND	ND	ND	ND	ND	97
50449	2000-G Stkp 2	S	ND	ND	ND	ND	ND	92
Detection Limit unless other-wise stated; ND means Not De-tected		W	50 ug/L	0.5	0.5	0.5	0.5	
		S	1.0 mg/kg	0.005	0.005	0.005	0.005	

*water samples are reported in ug/L, soil samples in mg/kg, and all TCLP extracts in mg/L

cluttered chromatogram; sample peak co-elutes with surrogate peak

+ The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation: a) unmodified or weakly modified gasoline is significant; b) heavier gasoline range compounds are significant(aged gasoline?); c) lighter gasoline range compounds (the most mobile fraction) are significant; d) gasoline range compounds are significant; no recognizable pattern; e) TPH pattern that does not appear to be derived from gasoline (?); f) one to a few isolated peaks present; g) strongly aged gasoline or diesel range compounds are significant; h) lighter than water immiscible phase is present.

DHS Certification No. 1644

Edward Hamilton, Lab Director

McCAMPBELL ANALYTICAL INC.
110 2nd Avenue South, #D7, Pacheco, CA 94553
Tele: 510-798-1620 Fax: 510-798-1622

Growth Environmental Services 536 Stone Road, Ste. J Benicia, CA 94510-1016	Client Project ID: # 173-631; Vet. Med. Center	Date Sampled: 02/24/95
		Date Received: 02/24/95
	Client Contact: Michael Davis	Date Extracted: 02/24/95
	Client P.O: # 1425	Date Analyzed: 02/26-02/27/95

Diesel Range (C10-C23) Extractable Hydrocarbons as Diesel *

EPA methods modified 8015, and 3550 or 3510; California RWQCB (SF Bay Region) method GCFID(3550) or GCFID(3510)

Lab ID	Client ID	Matrix	TPH(d)+	% Recovery Surrogate
50440	560-D @ 7'	S	ND	97
50441	560-D Stkp	S	9.9,a	97
Detection Limit unless otherwise stated; ND means Not Detected		W	50 ug/L	
		S	10 mg/kg	

*water samples are reported in ug/L, soil samples in mg/kg, and all TCLP extracts in mg/L

cluttered chromatogram; surrogate and sample peaks co-elute or surrogate peak is on elevated baseline

+ The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation: a) unmodified or weakly modified diesel is significant; b) diesel range compounds are significant; no recognizable pattern; c) modified diesel?; light(c_L) or heavy(c_H) diesel compounds are significant); d) gasoline range compounds are significant; e) medium boiling point pattern that does not match diesel(?); f) one to a few isolated peaks present; g) oil range compounds are significant; h) lighter than water immiscible phase is present.

DHS Certification No. 1644

Edward Hamilton, Lab Director

McCAMPBELL ANALYTICAL INC. | 110 2nd Avenue South, #D7, Pacheco, CA 94553
Tele: 510-798-1620 Fax: 510-798-1622

Growth Environmental Services 536 Stone Road, Ste. J Benicia, CA 94510-1016	Client Project ID: # 173-631; Vet. Med. Center	Date Sampled: 02/24/95
		Date Received: 02/24/95
	Client Contact: Michael Davis	Date Extracted: 02/27/95
	Client P.O: # 1425	Date Analyzed: 02/27/95

Lead*

EPA analytical method 239.2 or 7420+

Lab ID	Client ID	Matrix	Extraction°	Lead*
50442	750-G North 8'	S	TTLC	26
50443	750-G South 8'	S	TTLC	42
50446	750-G Stkp 1	S	TTLC	30
50447	750-G Stkp 2	S	TTLC	31
Detection Limit unless otherwise stated; ND means Not Detected		W	TTLC	0.005mg/L
		S	TTLC	4.0 mg/kg
		—	STLC,TCLP	0.20 mg/L

* soil samples are reported in mg/kg, and water samples and all STLC & TCLP extracts in mg/L

+ Lead is analysed using EPA method 7420 (AA Flame)for soils, STLC & TCLP extracts and method 239.2 (AA Furnace) for water samples

o EPA extraction methods 1311(TCLP), 3010/3020(water,TTLC), 3040(organic matrices,TTLC), 3050(solids,TTLC); STLC from CA Title 22

DHS Certification No. 1644

Edward Hamilton, Lab Director

3824 ACEC739

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CHAIN OF CUSTODY RECORD

Laboratory Analysis P.O. No. 1479
Laboratory: Please Call Accounts Payable for P.O. No.

Date 3/17/95 Sheet 1 of 1

Project Number: 173-631
Project Name: VA Med Center
Address: 4951 Arroyo Rd.
Livermore CA
Sampler's Name: Michael Davis
Sampler's Signature: Michael Davis

Lab Name: McCampbell Analytical
Address:
Phone Number:

Turnaround Time: ☐ Rush ☐ 24 Hour ☐ 48 Hour ☑ 5 Day
Report to:

Sample Number	Location	Date	Time	TPH as Gasoline 8015	TPH as Diesel 8015	TPH-G and B.TEX 8015/8020	B.TEX & E 8020	Oil and Grease 5520	Volatile Organics (8010)	CAM Metals (17)	Pr. Pollutant Metals (13)	Base/Neu/Acids (Organic)	Pesticides 8140/8141	LUFT Metals					Matrix (Soil/Water)
Stkp1		3/17/95	8:55 AM		X		X	X						X					
Stkp1			8:55 AM																
Stkp1			9:00 AM																
Stkp1			9:00 AM																
T-1			9:10 AM																
T-2			9:15 AM																
T-3			9:20 AM																
T-4			9:30 AM																

Comments: *** 4 to 1 Composite

50964
50965
50966
50967
50968

Relinquished By	Date	Time	Received By	Date	Time
1. Michael Davis	3/17/95	11:20 AM	1. Linda Rieca	3/17/95	11:20 AM
2.			2.		
3.			Received In Lab By	Date	Time

VOAs O&G METALS OTHER

ICE/T ✓
GOOD CONDITION ✓
HEAD SPACE ABSENT ✓

PRESERVATIVE
APPROPRIATE
CONTAINERS ✓

Total Number of Containers This Sheet: 8

Method of Shipment

Special Shipment / Handling or Storage Requirements:

Delivered on Tue

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Growth Environmental Services 536 Stone Road, Ste. J Benicia, CA 94510-1016	Client Project ID: # 173-631; VA Med. Center, Livermore	Date Sampled: 03/17/95
		Date Received: 03/17/95
	Client Contact: Michael Davis	Date Extracted: 03/17-03/20/95
	Client P.O: # 1479	Date Analyzed: 03/17-03/20/95

Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline*, with BTEX*

EPA methods 5030, modified 8015, and 8020 or 602; California RWQCB (SF Bay Region) method GCFID(5030)

Lab ID	Client ID	Matrix	TPH(g)+	Benzene	Toluene	Ethylben-zene	Xylenes	% Rec. Surrogate
50964	Stkp 1	S	—	ND	ND	ND	ND	103
50965	T-1	S	—	0.017	0.022	0.21	0.50	99
50966	T-2	S	—	ND	ND	ND	0.009	101
50967	T-3	S	—	ND	ND	ND	ND	108
50968	T-4	S	—	ND	ND	ND	ND	103
Detection Limit unless other-wise stated; ND means Not Detected		W	50 ug/L	0.5	0.5	0.5	0.5	
		S	1.0 mg/kg	0.005	0.005	0.005	0.005	

*water samples are reported in ug/L, soil samples in mg/kg, and all TCLP extracts in mg/L

cluttered chromatogram; sample peak co-elutes with surrogate peak

+ The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation: a) unmodified or weakly modified gasoline is significant; b) heavier gasoline range compounds are significant(aged gasoline?); c) lighter gasoline range compounds (the most mobile fraction) are significant; d) gasoline range compounds are significant; no recognizable pattern; e) TPH pattern that does not appear to be derived from gasoline (?); f) one to a few isolated peaks present; g) strongly aged gasoline or diesel range compounds are significant; h) lighter than water immiscible phase is present.

DHS Certification No. 1644

Edward Hamilton, Lab Director

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Growth Environmental Services 536 Stone Road, Ste. J Benicia, CA 94510-1016	Client Project ID: # 173-631; VA Med. Center, Livermore	Date Sampled: 03/17/95
		Date Received: 03/17/95
	Client Contact: Michael Davis	Date Extracted: 03/17/95
	Client P.O: # 1479	Date Analyzed: 03/17/95

Diesel Range (C10-C23) Extractable Hydrocarbons as Diesel *

EPA methods modified 8015, and 3550 or 3510; California RWQCB (SF Bay Region) method GCFID(3550) or GCFID(3510)

Lab ID	Client ID	Matrix	TPH(d)+	% Recovery Surrogate
50964	Stkp 1	S	19,b	98
50965	T-1	S	5700,a	99
50966	T-2	S	50,b/e	97
50967	T-3	S	3.5,d,g	98
50968	T-4	S	ND	97
Detection Limit unless otherwise stated; ND means Not Detected		W	50 ug/L	
		S	1.0 mg/kg	

*water samples are reported in ug/L, soil samples in mg/kg, and all TCLP extracts in mg/L

cluttered chromatogram; surrogate and sample peaks co-elute or surrogate peak is on elevated baseline

+ The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation: a) unmodified or weakly modified diesel is significant; b) diesel range compounds are significant; no recognizable pattern; c) modified diesel?; light(C_L) or heavy(C_H) diesel compounds are significant); d) gasoline range compounds are significant; e) medium boiling point pattern that does not match diesel(degraded diesel?); f) one to a few isolated peaks present; g) oil range compounds are significant; h) lighter than water immiscible phase is present.

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Growth Environmental Services 536 Stone Road, Ste. J Benicia, CA 94510-1016	Client Project ID: # 173-631; VA Med. Center, Livermore	Date Sampled: 03/17/95
		Date Received: 03/17/95
	Client Contact: Michael Davis	Date Extracted: 03/17/95
	Client P.O: # 1479	Date Analyzed: 03/17/95

Total Recoverable Petroleum Hydrocarbons as Oil & Grease (with Silica Gel Clean-up) by Scanning IR Spectrometry*

EPA method 418.1 or 9073; Standard Methods 5520 C&F

Lab ID	Client ID	Matrix	TRPH+
50964	Stkp 1	S	250
50965	T-1	S	12,000
50966	T-2	S	150
50967	T-3	S	ND
50968	T-4	S	ND
Detection Limit unless otherwise stated; ND means Not Detected		W	5 mg/L
		S	50 mg/kg

*water samples are reported in mg/L and soils in mg/kg

+ If TPH(d) is not requested then all positive results are run by direct injection chromatography with FID detection. The following comments pertain to these GC results: a) gasoline-range compounds (C6-C12) present; b) diesel range compounds (C10-C23) present; c) oil-range compounds (> C18) present; d) other patterned solvent(?); e) isolated peaks; f) GC compounds are absent or insignificant relative to TRPH inferring that complex biologically derived molecules (lipids?)are the source of IR absorption.

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Growth Environmental Services 536 Stone Road, Ste. J Benicia, CA 94510-1016	Client Project ID: # 173-631; VA Med. Center, Livermore	Date Sampled: 03/17/95
		Date Received: 03/17/95
	Client Contact: Michael Davis	Date Extracted: 03/17/95
	Client P.O: # 1479	Date Analyzed: 03/20/95

LUFT Metals*

EPA analytical methods				239.2,7420+	213.1,7130	218.1,7190	249.1,7520	289.1,7950
Lab ID	Client ID	Matrix	Extraction°	Lead*	Cadmium*	Chromium*	Nickel*	Zinc*
50964	Stkp 1	S	TTLC	7.8	ND	17	22	31
50965	T-1	S	TTLC	6.1	ND	13	11	19
50966	T-2	S	TTLC	6.5	ND	22	20	28
50967	T-3	S	TTLC	8.3	ND	17	16	39
50968	T-4	S	TTLC	4.9	ND	16	14	23
Detection Limit unless otherwise stated; ND means Not Detected		W	TTLC	0.005mg/L	0.05	0.25	0.10	0.05
		S	TTLC	4.0 mg/kg	1.0	5.0	2.0	1.0
		—	STLC,TCLP	0.20 mg/L	0.05	0.25	0.10	0.05

* soil samples are reported in mg/kg, and water samples and all STLC & TCLP extracts in mg/L

+ Lead is analysed using EPA method 7420 (AA Flame)for soils, STLC & TCLP extracts and method 239.2 (AA Furnace) for water samples

o EPA extraction methods 1311(TCLP), 3010/3020(water,TTLC), 3040(organic matrices,TTLC), 3050(solids,TTLC); STLC from CA Title 22

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Edward Hamilton, Lab Director

3861 ACEC 745

CHAIN OF CUSTODY RECORD

Laboratory Analysis P.O. No. 1496

Laboratory: Please Call Accounts Payable for P.O. No.

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Date 3/27/95 Sheet ___ of ___

Project Number: 173-631

Project Name: VA Med Center

Address: ___

Sampler's Name: Michael Davis

Sampler's Signature: Michael Davis

Sample Number	Location	Date	Time	TPH as Gasoline 8015	TPH as Diesel 8015	TPH-G and B.T.E.X 8015/8020	B.T.X. & E 8020	Oil and Grease 5520	Volatile Organics (8010)	CAM Metals (17)	Pr. Pollutant Metals (13)	Base/Neu/Acids (Organic)	Pesticides 8140/8141	Matrix (Soil/Water)
Bld. 88-N	8.5'	3/27/95	10:50 A.M.		X		X							S
Bld. 88-S	9'		11:05 A.M.											
Bld. 90-W	10'		11:20 A.M.											
Bld. 90-E	10'		11:30 A.M.											
Bld 88 Stkp			11:00 A.M.											
Bld 90 Stkp 1			11:35 A.M.											
Bld 90 Stkp 2			11:35 A.M.											

Parameters

Lab Name ___

Address ___

Phone Number ___

Turnaround Time

☐ Rush ☐ 24 Hour ☐ 48 Hour ☑ 5 Day

Report to: ___

Comments

51099

51100

51101

51102

51103

51104

51105

VOAS PACKED IN THIS COOLER

ICE ✓

GOOD CONDITION ✓

HEAD SPACE ABSENT ✓

PRESERVATIVE ✓

APPROPRIATE CONTAINERS ✓

Relinquished By	Date	Time	Received By	Date	Time
1. Michael Davis	3/27/95	1:20 PM	1.		
2.			2.		
3.			3.		
Dispatched By	Date	Time	Received In Lab By	Date	Time

Total Number of Containers This Sheet: 7

Method of Shipment

Special Shipment / Handling or Storage Requirements:

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Tele: 510-798-1620 Fax: 510-798-1622

Growth Environmental Services 536 Stone Road, Ste. J Benicia, CA 94510-1016	Client Project ID: # 173-631; VA Med. Center	Date Sampled: 03/27/95
		Date Received: 03/27/95
	Client Contact: Michael Davis	Date Extracted: 03/27/95
	Client P.O: # 1496	Date Analyzed: 03/27/95

Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline*, with BTEX*

EPA methods 5030, modified 8015, and 8020 or 602; California RWQCB (SF Bay Region) method GCFID(5030)

Lab ID	Client ID	Matrix	TPH(g)+	Benzene	Toluene	Ethylben-zene	Xylenes	% Rec. Surrogate
51099	Bld. 88 -N	S	---	ND	ND	ND	ND	108
51100	Bld. 88 -S	S	---	ND	ND	ND	ND	98
51101	Bld. 90-W	S	---	ND	ND	ND	ND	106
51102	Bld. 90-E	S	---	ND	ND	ND	ND	109
51103	Bld. 88 Stkp	S	---	ND	ND	ND	ND	99
51104	Bld. 90 Stkp 1	S	---	ND	ND	ND	ND	97
51105	Bld. 90 Stkp 2	S	---	ND	ND	ND	ND	99
Detection Limit unless other-wise stated; ND means Not Detected		W	50 ug/L	0.5	0.5	0.5	0.5	
		S	1.0 mg/kg	0.005	0.005	0.005	0.005	

*water samples are reported in ug/L, soil samples in mg/kg, and all TCLP extracts in mg/L

cluttered chromatogram; sample peak co-elutes with surrogate peak

+ The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation: a) unmodified or weakly modified gasoline is significant; b) heavier gasoline range compounds are significant(aged gasoline?); c) lighter gasoline range compounds (the most mobile fraction) are significant; d) gasoline range compounds are significant; no recognizable pattern; e) TPH pattern that does not appear to be derived from gasoline (?); f) one to a few isolated peaks present; g) strongly aged gasoline or diesel range compounds are significant; h) lighter than water immiscible phase is present.

DHS Certification No. 1644

Edward Hamilton, Lab Director

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Growth Environmental Services 536 Stone Road, Ste. J Benicia, CA 94510-1016	Client Project ID: # 173-631; VA Med. Center	Date Sampled: 03/27/95
		Date Received: 03/27/95
	Client Contact: Michael Davis	Date Extracted: 03/27/95
	Client P.O: # 1496	Date Analyzed: 03/27/95

Diesel Range (C10-C23) Extractable Hydrocarbons as Diesel *

EPA methods modified 8015, and 3550 or 3510; California RWQCB (SF Bay Region) method GCFID(3550) or GCFID(3510)

Lab ID	Client ID	Matrix	TPH(d)+	% Recovery Surrogate
51099	Bld. 88 -N	S	ND	95
51100	Bld. 88 -S	S	ND	96
51101	Bld. 90-W	S	3.2,a	98
51102	Bld. 90-E	S	ND	96
51103	Bld. 88 Stkp	S	52,a	100
51104	Bld. 90 Stkp 1	S	11,a	100
51105	Bld. 90 Stkp 2	S	26,a	99
Detection Limit unless otherwise stated; ND means Not Detected		W	50 ug/L	
		S	1.0 mg/kg	

*water samples are reported in ug/L, soil samples in mg/kg, and all TCLP extracts in mg/L

cluttered chromatogram; surrogate and sample peaks co-elute or surrogate peak is on elevated baseline

+ The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation: a) unmodified or weakly modified diesel is significant; b) diesel range compounds are significant; no recognizable pattern; c) modified diesel?; light(C_L) or heavy(C_H) diesel compounds are significant); d) gasoline range compounds are significant; e) medium boiling point pattern that does not match diesel(?); f) one to a few isolated peaks present; g) oil range compounds are significant; h) lighter than water immiscible phase is present.

DHS Certification No. 1644

Edward Hamilton, Lab Director

3872 ACECX746

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CHAIN OF CUSTODY RECORD

Laboratory Analysis P.O. No. 1500
Laboratory: Please Call Accounts Payable for P.O. No.

Date 3/29/95 Sheet 2 of 2

Project Number: 173-631
Project Name: VA Med Center
Address: Arroyo Rd. Livermore
Sampler's Name: Michael Davis
Sampler's Signature: Michael Davis

Sample Number	Location	Date	Time	Matrix (Soil/Water)	Comments
FH-1	@ 1.5'	3/29/95	10:30 A.M.		51170
FH-2	@ 3.5'		10:35 A.M.		51171
FH-3	@ 2'		10:40 A.M.		51172
FH-4	@ 3.5'		10:45 A.M.		51173
FH-5	@ 1.5'		10:50 A.M.		51174
FH-6	@ 10'		10:55 A.M.		51175
FH-7	@ 8.5'	↓	11:00 A.M.		51176

Parameters	TPH as Gasoline 8015	TPH as Diesel 8015	TPH-G and BTEX 8015/8020	BTX & E 8020	Oil and Grease 5520	Volatile Organics (8010)	CAM Metals (17)	Pr. Pollutant Metals (13)	Base/Neu/Acids (Organic)	Pesticides 8140/8141	LUFT Metals
FH-1		X		X							X
FH-2		X		X							X
FH-3		X		X							X
FH-4		X		X							X
FH-5		X		X							X
FH-6		X		X							X
FH-7		X		X							X

VOAs O&G METALS OTHER

ICE/T° ✓
GOOD CONDITION ✓
HEAD SPACE ABSENT ✓

PRESERVATIVE APPROPRIATE CONTAINERS ✓

Relinquished By	Date	Time	Received By	Date	Time
1. Michael Davis	3/29/95	12:30 P.M.	Heidi Knicen	3-29-95	12:25
2.			2		
3.			3.		
Dispatched By	Date	Time	Received In Lab By	Date	Time

Lab Name
Address
Phone Number

Turnaround Time
☐ Rush ☑ 24 Hour ☐ 48 Hour ☐ 5 Day

Report to:

Total Number of Containers This Sheet: 7

Method of Shipment: Delivered

Special Shipment / Handling or Storage Requirements:

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CHAIN OF CUSTODY RECORD

Laboratory Analysis P.O. No. 1500
Laboratory: Please Call Accounts Payable for P.O. No.

Date 3/29/95 Sheet 1 of 2

Project Number: 173-6.31
Project Name: VA Med Center
Address: Arroyo Rd., Livermore

Sampler's Name: Michael Davis
Sampler's Signature: Michael Davis

Lab Name: McCampbell
Address:
Phone Number:

Turnaround Time: Rush [ ] 24 Hour [✓] 48 Hour [ ] 5 Day [ ]

Report to:

Sample Number	Location	Date	Time	TPH as Gasoline 8015	TPH as Diesel 8015	TPH-G and B.T.E.X 8015/8020	B.T.E.X.& E 8020	Oil and Grease 5520	Volatile Organics (8010)	CAM Metals (17)	Pr. Pollutant Metals (13)	Base/Neu/Acids (Organic)	Pesticides 8140/8141	LUFT Metals	STLC Pb (Rush - Per G. Rogers 3-31-95)				Matrix (Soil/Water)	Comments
Stkp1	Fire House	3/29/95	9:00 AM		X		X							X	X					** 4 to 1 composite 51168
Stkp1	↓	↓	9:02 AM		X		X							X	X					
Stkp1			9:05 AM		X		X							X	X					
Stkp1			9:08 AM		X		X							X	X					
Stkp2			9:10 AM		X		X							X	X					4 to 1 composite 51169
Stkp2			9:12 AM		X		X							X	X					
Stkp2			9:12 AM		X		X							X	X					
Stkp2			9:15 AM		X		X							X	X					

Relinquished By	Date	Time	Received By	Date	Time
1. Michael Davis	3/29/95	12:30	1. Heidi Rocca	3-29-95	12:25
2.			2.		
3.			3.		
Dispatched By	Date	Time	Received In Lab By	Date	Time

Total Number of Containers This Sheet: 8

Method of Shipment: Delivered

Special Shipment / Handling or Storage Requirements:

ICE/T° ✓ | VOAS | O&G | METALS | OTHER
GOOD CONDITION ✓ | PRESERVATIVE
HEAD SPACE ABSENT ✓ | APPROPRIATE CONTAINERS ✓

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Tele: 510-798-1620 Fax: 510-798-1622

Growth Environmental Services 536 Stone Road, Suite J Benicia, Ca. 94510-1016	Client Project ID: # 173-631; VA Med. Center	Date Sampled: 03/29/95
		Date Received: 03/29/95
	Client Contact: Michael Davis	Date Extracted: 03/29/95
	Client P.O:	Date Analyzed: 03/29/95

Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline*, with BTEX*

EPA methods 5030, modified 8015, and 8020 or 602; California RWQCB (SF Bay Region) method GCFID(5030)

Lab ID	Client ID	Matrix	TPH(g)+	Benzene	Toluene	Ethylbenzene	Xylenes	% Rec. Surrogate
51168	Stkp 1	S	47,g	ND	0.005	0.022	0.078	103
51169	Stkp 2	S	9.2,g	ND	ND	ND	0.010	103
51170	FH-1 @ 1.5'	S	ND	ND	ND	ND	ND	106
51171	FH-2 @ 3.5'	S	ND	ND	ND	ND	ND	109
51172	FH-3 @ 2'	S	ND	ND	ND	ND	ND	108
51173	FH-4 @ 3.5'	S	ND	ND	ND	ND	ND	106
51174	FH-5 @ 1.5'	S	ND	ND	ND	ND	ND	99
51175	FH-6 @ 10'	S	ND	ND	ND	ND	ND	100
51176	FH-7 @ 8.5'	S	ND	ND	ND	ND	ND	103
Reporting Limit unless otherwise stated; ND means not detected above the reporting limit		W	50 ug/L	0.5	0.5	0.5	0.5	
		S	1.0 mg/kg	0.005	0.005	0.005	0.005	

* water and vapor samples are reported in ug/L, soil samples in mg/kg, and all TCLP extracts in mg/L

cluttered chromatogram; sample peak coelutes with surrogate peak

+ The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation: a) unmodified or weakly modified gasoline is significant; b) heavier gasoline range compounds are significant(aged gasoline?); c) lighter gasoline range compounds (the most mobile fraction) are significant; d) gasoline range compounds having broad chromatographic peaks are significant; biologically altered gasoline?; e) TPH pattern that does not appear to be derived from gasoline (?); f) one to a few isolated peaks present; g) strongly aged gasoline or diesel range compounds are significant; h) lighter than water immiscible sheen is present; i) liquid sample that contains greater than ~ 5 vol. % sediment; j) no recognizable pattern.

DHS Certification No. 1644

Edward Hamilton, Lab Director

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Tele: 510-798-1620 Fax: 510-798-1622

Growth Environmental Services 536 Stone Road, Suite J Benicia, Ca. 94510-1016	Client Project ID: # 173-631; VA Med. Center	Date Sampled: 03/29/95
		Date Received: 03/29/95
	Client Contact: Michael Davis	Date Extracted: 03/29/95
	Client P.O: # 1500	Date Analyzed: 03/29-03/30/95

Diesel Range (C10-C23) Extractable Hydrocarbons as Diesel *

EPA methods modified 8015, and 3550 or 3510; California RWQCB (SF Bay Region) method GCFID(3550) or GCFID(3510)

Lab ID	Client ID	Matrix	TPH(d)+	% Recovery Surrogate
51168	Stkp 1	S	980,a	107
51169	Stkp 2	S	760,a	107
51170	FH-1 @ 1.5'	S	ND	97
51171	FH-2 @ 3.5'	S	3.0,b/g	92
51172	FH-3 @ 2'	S	6.2,b/g	96
51173	FH-4 @ 3.5'	S	ND	98
51174	FH-5 @ 1.5'	S	22,b/g	104
51175	FH-6 @ 10'	S	9.7,b/g	97
51176	FH-7 @ 8.5'	S	30,b	103
Reporting Limit unless otherwise stated; ND means not detected above the reporting limit		W	50 ug/L	
		S	1.0 mg/kg	

* water samples are reported in ug/L, soil samples in mg/kg, and all TCLP and STLC extracts in mg/L

cluttered chromatogram resulting in coeluted surrogate and sample peaks, or; surrogate peak is on elevated baseline, or; surrogate has been diminished by dilution of original extract.

+ The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation: a) unmodified or weakly modified diesel is significant; b) diesel range compounds are significant; no recognizable pattern; c) aged diesel? is significant); d) gasoline range compounds are significant; e) medium boiling point pattern that does not match diesel (?); f) one to a few isolated peaks present; g) oil range compounds are significant; h) lighter than water immiscible sheen is present; i) liquid sample that contains greater than ~ 5 vol. % sediment.

DHS Certification No. 1644

Edward Hamilton, Lab Director

McCAMPBELL ANALYTICAL INC. | 110 2nd Avenue South, #D7, Pacheco, CA 94553
Tele: 510-798-1620 Fax: 510-798-1622

Growth Environmental Services 536 Stone Road, Suite J Benicia, Ca. 94510-1016	Client Project ID: # 173-631; VA Med. Center	Date Sampled: 03/29/95
		Date Received: 03/29/95
	Client Contact: Michael Davis	Date Extracted: 03/29/95
	Client P.O:	Date Analyzed: 03/29/95

LUFT Metals*

EPA analytical methods 6010/200.7, 239.2+

Lab ID	Client ID	Matrix	Extraction°	Cadmium	Chromium	Lead	Nickel	Zinc	% Rec. Surrogate
51168	Stkp 1	S	TTLC	ND	16	7.6	16	30	95
51169	Stkp 2	S	TTLC	ND	23	7.1	21	35	97
51170	FH-1 @ 1.5'	S	TTLC	ND	26	ND	30	27	85
51171	FH-2 @ 3.5'	S	TTLC	ND	20	7.5	20	40	97
51172	FH-3 @ 2'	S	TTLC	ND	25	14	21	45	95
51173	FH-4 @ 3.5'	S	TTLC	ND	16	6.3	17	35	96
51174	FH-5 @ 1.5'	S	TTLC	ND	16	4.8	9.9	19	94
51175	FH-6 @ 10'	S	TTLC	ND	25	9.9	35	41	98
51176	FH-7 @ 8.5'	S	TTLC	ND	37	8.6	51	69	97
Reporting Limit unless otherwise stated; ND means not detected above the reporting limit		S	TTLC	0.5 mg/L	0.5	3.0	2.0	1.0	
		W	TTLC	0.01 mg/kg	0.005	0.005	0.02	0.01	
		---	STLC,TCLP	0.01 mg/L	0.05	0.2	0.05	0.05	

* soil samples are reported in mg/kg, and water samples and all STLC & TCLP extracts in mg/L

+ Lead is analysed using EPA method 6010 (ICP)for soils, STLC & TCLP extracts and method 239.2 (AA Furnace) for water samples

o EPA extraction methods 1311(TCLP), 3010/3020(water,TTLC), 3040(organic matrices,TTLC), 3050(solids,TTLC); STLC from CA Title 22

surrogate diluted out of range; N/A means surrogate not applicable to this analysis

i) liquid sample that contains greater than ~ 2 vol. % sediment; this sediment is extracted with the liquid, in accordance with EPA methodologies and can significantly effect reported metal concentrations.

DHS Certification No. 1644

Edward Hamilton, Lab Director

McCAMPBELL ANALYTICAL INC. | 110 2nd Avenue South, #D7, Pacheco, CA 94553
Tele: 510-798-1620 Fax: 510-798-1622

Growth Environmental Services 536 Stone Road, Suite J Benicia, Ca. 94510-1016	Client Project ID: # 173-631; VA Med. Center	Date Sampled: 03/29/95
		Date Received: 03/29/95
	Client Contact: Michael Davis	Date Extracted: 03/31-04/02/95
	Client P.O: # 1500	Date Analyzed: 04/02/95

Lead*

EPA analytical methods 6010/200.7, 239.2+

Lab ID	Client ID	Matrix	Extraction°	Lead*	% Recovery Surrogate
51168	Stkp 1	S	STLC	ND	N/A
51169	Stkp 2	S	STLC	ND	N/A
Reporting Limit unless otherwise stated; ND means not detected above the reporting limit		S	TTLC	3.0 mg/kg	
		W	TTLC	0.005 mg/L	
		—	STLC,TCLP	0.2 mg/L	

* soil samples are reported in mg/kg, and water samples and all STLC & TCLP extracts in mg/L

+ Lead is analysed using EPA method 6010 (ICP)for soils, STLC & TCLP extracts and method 239.2 (AA Furnace) for water samples

o EPA extraction methods 1311(TCLP), 3010/3020(water,TTLC), 3040(organic matrices,TTLC), 3050(solids,TTLC); STLC from CA Title 22

surrogate diluted out of range; N/A means surrogate not applicable to this analysis

i) liquid sample that contains greater than ~ 2 vol. % sediment; this sediment is extracted with the liquid, in accordance with EPA methodologies and can significantly effect reported metal concentrations.

DHS Certification No. 1644

Edward Hamilton, Lab Director

4163 ACEC X 780

GROWTH ENVIRONMENTAL SERVICES, INC. (*Formerly CEC/WRA*)

SAN FRANCISCO DISTRICT
536 Stone Road, Suite J
Benicia, CA 94510
(707) 745-0171
(707) 745-0163 FAX

CHAIN OF CUSTODY RECORD

Laboratory Analysis P.O. No.

Date: 5/19/95 Sheet 1 of 1

Project Number:
Project Name: VA Med Center
Address: Arroyo Rd. Livermore

Sampler's Name: Michael Davis
Sampler's Signature: Michael Davis

Lab Name: McCampbell Analytical
Address:
Phone Number:

Turnaround Time: Rush [ ] 24 Hour [ ] 48 Hour [X] 5-Day [ ]

Report to:

Parameters

Sample Number	Location	Date	Time	TPH as Gasoline 8015	TPH as Diesel 8015	TPH-G and B.T.E.X 8015/8020	B.T.X.& E 8020	Oil and Grease 5520	Volitile Organics (8010)	CAM Metals (17)	Pr. Pollutant Metals (13)	Base/Neu/Acids (Organic)	Pesticides 8140/8141	PNA'S					Matrix (Soil/Water)	Comments
Bld-62-500-D	12'	5/19/95	9:50 A.M		X		X												S	52669
Bld-62-500-D Stkp.		↓	9:58 A.M.		↓		↓												↓	52670
Bld-65-N	10'	↓	12:55 P.M.		↓		↓							X					↓	52671
Bld-65-E	11.5'	↓	1:00 P.M		↓		↓												↓	52672
Bld-65 stkp 1		↓	1:10 P.M.		↓		↓												↓	52673
Bld-65 stkp 1A		↓	1:11 P.M.		↓		↓												↓	52674
Bld-65 stkp 2		↓	1:15 P.M.		↓		↓												↓	52675

ICE/t° ✓
GOOD CONDITION ✓
HEAD SPACE ABSENT ✓
PRESERVATIVE
APPROPRIATE CONTAINERS ✓

	Relinquished By	Date	Time	Received By	Date	Time
1.	Michael Davis	5/19/95	15:00	[signature]	5/19	3:45 pm
2.						
3.						

Total Number of Containers This Sheet: 7

Method of Shipment: Delivered

Special Shipment / Handling or Storage Requirements: on ice

Dispatched By	Date	Time	Received in Lab By	Date	Time

McCAMPBELL ANALYTICAL INC. | 110 2nd Avenue South, #D7, Pacheco, CA 94553
Tele: 510-798-1620 Fax: 510-798-1622

Growth Environmental Services 536 Stone Road, Suite J Benicia, Ca. 94510-1016	Client Project ID: VA Med Center, Livermore	Date Sampled: 05/19/95
		Date Received: 05/19/95
	Client Contact: Michael Davis	Date Extracted: 05/19/95
	Client P.O:	Date Analyzed: 05/20/95

Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline*, with BTEX*

EPA methods 5030, modified 8015, and 8020 or 602; California RWQCB (SF Bay Region) method GCFID(5030)

Lab ID	Client ID	Matrix	TPH(g)+	Benzene	Toluene	Ethylbenzene	Xylenes	% Rec. Surrogate
52669	Bld-62-500-D	S	---	ND	ND	ND	ND	104
52670	Bld-62-500-D Stkp	S	---	ND	ND	ND	0.029	100
52671	Bld-65-N	S	---	ND	ND	ND	ND	100
52672	Bld-65-E	S	---	ND	ND	ND	ND	101
52673	Bld-65-Stkp1	S	---	ND	ND	ND	0.011	98
52674	Bld-65-Stkp1A	S	---	ND	ND	ND	ND	108
52675	Bld-65-Stkp2	S	---	ND	ND	ND	ND	109
Reporting Limit unless otherwise stated; ND means not detected above the reporting limit		W	50 ug/L	0.5	0.5	0.5	0.5	
		S	1.0 mg/kg	0.005	0.005	0.005	0.005	

* water and vapor samples are reported in ug/L, soil samples in mg/kg, and all TCLP extracts in mg/L

cluttered chromatogram; sample peak coelutes with surrogate peak

+ The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation: a) unmodified or weakly modified gasoline is significant; b) heavier gasoline range compounds are significant(aged gasoline?); c) lighter gasoline range compounds (the most mobile fraction) are significant; d) gasoline range compounds having broad chromatographic peaks are significant; biologically altered gasoline?; e) TPH pattern that does not appear to be derived from gasoline (?); f) one to a few isolated peaks present; g) strongly aged gasoline or diesel range compounds are significant; h) lighter than water immiscible sheen is present; i) liquid sample that contains greater than ~ 5 vol. % sediment; j) no recognizable pattern.

DHS Certification No. 1644

Edward Hamilton, Lab Director

McCAMPBELL ANALYTICAL INC.
110 2nd Avenue South, #D7, Pacheco, CA 94553
Tele: 510-798-1620 Fax: 510-798-1622

Growth Environmental Services 536 Stone Road, Suite J Benicia, Ca. 94510-1016	Client Project ID: VA Med Center, Livermore	Date Sampled: 05/19/95
		Date Received: 05/19/95
	Client Contact: Michael Davis	Date Extracted: 05/19/95
	Client P.O:	Date Analyzed: 05/22-05/23/95

Diesel Range (C10-C23) Extractable Hydrocarbons as Diesel *

EPA methods modified 8015, and 3550 or 3510; California RWQCB (SF Bay Region) method GCFID(3550) or GCFID(3510)

Lab ID	Client ID	Matrix	TPH(d)+	% Recovery Surrogate
52669	Bld-62-500-D	S	ND	95
52670	Bld-62-500-D Stkp	S	210,a	96
52671	Bld-65-N	S	2100,a	95
52672	Bld-65-E	S	21,a	95
52673	Bld-65-Stkp1	S	73,a	95
52674	Bld-65-Stkp1A	S	8.2,a	98
52675	Bld-65-Stkp2	S	200,a	100
Reporting Limit unless otherwise stated; ND means not detected above the reporting limit		W	50 ug/L	
		S	1.0 mg/kg	

* water samples are reported in ug/L, soil samples in mg/kg, and all TCLP and STLC extracts in mg/L

cluttered chromatogram resulting in coeluted surrogate and sample peaks, or; surrogate peak is on elevated baseline, or; surrogate has been diminished by dilution of original extract.

+ The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation: a) unmodified or weakly modified diesel is significant; b) diesel range compounds are significant; no recognizable pattern; c) aged diesel? is significant); d) gasoline range compounds are significant; e) medium boiling point pattern that does not match diesel (?); f) one to a few isolated peaks present; g) oil range compounds are significant; h) lighter than water immiscible sheen is present; i) liquid sample that contains greater than ~ 5 vol. % sediment.

DHS Certification No. 1644

Edward Hamilton, Lab Director

CHROMALAB, INC.

Environmental Services (SDB)

May 23, 1995

Submission #: 9505265

Re-issued September 7, 1995

MCCAMPBELL ANALYTICAL, INC.

Atten: Ed Hamilton

Project: VIA MED CENTER
Received: May 19, 1995

re: One sample for Polynuclear Aromatic Hydrocarbons (PAHs) analysis.

Sample ID: **B1g-65-N**
Spl#: 89262 *Matrix:* SOIL *Extracted:* May 22, 1995
Sampled: May 19, 1995 *Run#:* 6757 *Analyzed:* May 22, 1995
Method: EPA 3550/8270

ANALYTE	RESULT (mg/Kg)	REPORTING LIMIT (mg/Kg)	BLANK RESULT (mg/Kg)	BLANK SPIKE RESULT (%)
NAPHTHALENE	N.D.	0.05	N.D.	--
2- METHYLNAPHTHALENE	N.D.	0.05	N.D.	--
2- CHLORONAPHTHALENE	N.D.	0.05	N.D.	--
ACENAPHTHYLENE	N.D.	0.05	N.D.	--
ACENAPHTHENE	N.D.	0.05	N.D.	87
FLUORENE	N.D.	0.05	N.D.	--
PHENANTHRENE	N.D.	0.05	N.D.	--
ANTHRACENE	N.D.	0.05	N.D.	--
FLUORANTHRENE	N.D.	0.05	N.D.	--
PYRENE	0.06	0.05	N.D.	78
BENZO(A)ANTHRACENE	N.D.	0.05	N.D.	--
CHRYSENE	N.D.	0.05	N.D.	--
BENZO(B)FLUORANTHENE	N.D.	0.05	N.D.	--
BENZO(K)FLUORANTHENE	N.D.	0.05	N.D.	--
BENZO(A)PYRENE	N.D.	0.05	N.D.	--
IDENO(1,2,3-CD)PYRENE	N.D.	0.05	N.D.	--
DIBENZO(A,H)ANTHRACENE	N.D.	0.05	N.D.	--
BENZO(GHI)PERYLENE	N.D.	0.05	N.D.	--

Alex Tam
Chemist

Ali Kharrazi
Organic Manager

1220 Quarry Lane • Pleasanton, California 94566-4756
(510) 484-1919 • Facsimile (510) 484-1096
Federal ID #68-0140157

4207 A6 X 785

GROWTH ENVIRONMENTAL SERVICES, Inc.
("Formerly GEC/AWRA")

SAN FRANCISCO DISTRICT
536 Stone Road, Suite J
Benicia, CA 94510
(707) 745-0171
(707) 745-0163 FAX

CHAIN OF CUSTODY RECORD

Laboratory Analysis P.O. No. _____

Date 5/25/95 Sheet 1 of 1

Project Number: VA009201
Project Name: VA Med Center
Address: Arroyo Rd. Livermore

Sampler's Name: Michael Davis
Sampler's Signature: Michael Davis

Parameters

Sample Number	Location	Date	Time	TPH as Gasoline 8015	TPH as Diesel 8015	TPH-G and BTEX 8015/8020	BTEX & E 8020	Oil and Grease 5520	Volatile Organics (8010)	CAM Metals (17)	Pri. Pollutant Metals (13)	Base/Neut/Acids (Organic)	Pesticides 8140/8141	Matrix (Soil/Water)	Comments
A.B.-1	14'	5/25/95	10:50 A.M.		X		X								52834
IFH1-1	5'		12:30 P.M.												52835
IFH1-2	10'		12:45 P.M.												52836
IFH1-3	15'		12:58 P.M.												52837
~~IFH1-4~~	~~20'~~														
Bld 65-N-2	9'		1:30 P.M.												52838
Bld 65-T-1	2'		1:45 P.M.												52839
Bld 65 Stke 1B			1:50 P.M.												52840

Lab Name: McCampbell Analytical
Address: _____
Phone Number: _____

Turnaround Time
☐ Rush ☐ 24 Hour ☐ 48 Hour ☒ 5-Day

Report to: _____

Total Number of Containers This Sheet: 7

Method of Shipment: Delivered

Special Shipment / Handling or Storage Requirements: on ice

VOAs O&G METALS OTHER

Relinquished By	Date	Time	Received By	Date	Time
1. Michael Davis	5/25/95	3:20PM	1. Michael Davis	5/25/95	3:20
2.			2.		
3.			3.		
Dispatched By	Date	Time	Received In Lab By	Date	Time

ICE/T ✓
GOOD CONDITION ✓
HEAD SPACE ABSENT
PRESERVATIVE APPROPRIATE ✓
CONTAINERS ✓

McCAMPBELL ANALYTICAL INC.
110 2nd Avenue South, #D7, Pacheco, CA 94553
Tele: 510-798-1620 Fax: 510-798-1622

Growth Environmental Services 536 Stone Road, Suite J Benicia, CA 94510	Client Project ID: VA009201; VA Med Center	Date Sampled: 05/25/95
		Date Received: 05/25/95
	Client Contact: Michael Davis	Date Extracted: 05/25/95
	Client P.O:	Date Analyzed: 05/25-05/26/95

Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline*, with BTEX*

EPA methods 5030, modified 8015, and 8020 or 602; California RWQCB (SF Bay Region) method GCFID(5030)

Lab ID	Client ID	Matrix	TPH(g)+	Benzene	Toluene	Ethylbenzene	Xylenes	% Rec. Surrogate
52834	A,B,-1	S	ND	ND	ND	ND	ND	99
52835	IFH1-1	S	ND	ND	ND	ND	ND	101
52836	IFH1-2	S	ND	ND	ND	ND	ND	100
52837	IFH1-3	S	24,g	ND	0.016	ND	0.026	101
52838	Bld 65-N-2	S	1.6,g	ND	ND	ND	ND	100
52839	Bld 65-T-1	S	ND	ND	ND	ND	ND	102
52840	Bld 65-Stkp1B	S	6.1,g	ND	ND	ND	ND	101
Reporting Limit unless otherwise stated; ND means not detected above the reporting limit		W	50 ug/L	0.5	0.5	0.5	0.5	
		S	1.0 mg/kg	0.005	0.005	0.005	0.005	

* water and vapor samples are reported in ug/L, soil samples in mg/kg, and all TCLP extracts in mg/L

cluttered chromatogram; sample peak coelutes with surrogate peak

+ The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation: a) unmodified or weakly modified gasoline is significant; b) heavier gasoline range compounds are significant(aged gasoline?); c) lighter gasoline range compounds (the most mobile fraction) are significant; d) gasoline range compounds having broad chromatographic peaks are significant; biologically altered gasoline?; e) TPH pattern that does not appear to be derived from gasoline (?); f) one to a few isolated peaks present; g) strongly aged gasoline or diesel range compounds are significant; h) lighter than water immiscible sheen is present; i) liquid sample that contains greater than ~ 5 vol. % sediment; j) no recognizable pattern.

DHS Certification No. 1644

Edward Hamilton, Lab Director

McCAMPBELL ANALYTICAL INC. | 110 2nd Avenue South, #D7, Pacheco, CA 94553
Tele: 510-798-1620 Fax: 510-798-1622

Growth Environmental Services 536 Stone Road, Suite J Benicia, CA 94510	Client Project ID: VA009201; VA Med Center	Date Sampled: 05/25/95
		Date Received: 05/25/95
	Client Contact: Michael Davis	Date Extracted: 05/25/95
	Client P.O:	Date Analyzed: 05/26-05/27/95

Diesel Range (C10-C23) Extractable Hydrocarbons as Diesel *

EPA methods modified 8015, and 3550 or 3510; California RWQCB (SF Bay Region) method GCFID(3550) or GCFID(3510)

Lab ID	Client ID	Matrix	TPH(d)+	% Recovery Surrogate
52834	A,B,-1	S	ND	101
52835	IFH1-1	S	ND	98
52836	IFH1-2	S	ND	101
52837	IFH1-3	S	950,e	102
52838	Bld 65-N-2	S	56,a	102
52839	Bld 65-T-1	S	11,g	106
52840	Bld 65-Stkp1B	S	64,a	103
Reporting Limit unless otherwise stated; ND means not detected above the reporting limit		W	50 ug/L	
		S	1.0 mg/kg	

* water samples are reported in ug/L, soil samples in mg/kg, and all TCLP and STLC extracts in mg/L

cluttered chromatogram resulting in coeluted surrogate and sample peaks, or; surrogate peak is on elevated baseline, or; surrogate has been diminished by dilution of original extract.

+ The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation: a) unmodified or weakly modified diesel is significant; b) diesel range compounds are significant; no recognizable pattern; c) aged diesel? is significant); d) gasoline range compounds are significant; e) medium boiling point pattern that does not match diesel (fuel oil?); f) one to a few isolated peaks present; g) oil range compounds are significant; h) lighter than water immiscible sheen is present; i) liquid sample that contains greater than ~ 5 vol. % sediment.

DHS Certification No. 1644

EH Edward Hamilton, Lab Director

CHROMALAB, INC.

Environmental Services (SDB)

June 14, 1995

Submission #: 9506091
Re-issued September 7, 1995

MCCAMPBELL ANALYTICAL, INC.

Atten: Ed Hamilton/Mike Davis

Project: V.A. MED. CENTER *Project#:* VA009201
Received: June 7, 1995

re: One sample for Polynuclear Aromatic Hydrocarbons (PAHs) analysis.

Sample ID: **IFH1-3**
Spl#: 91442 *Matrix:* SOIL *Extracted:* June 8, 1995
Sampled: May 25, 1995 *Run#:* 7145 *Analyzed:* June 12, 1995
Method: EPA 3550/8270

ANALYTE	RESULT (mg/Kg)	REPORTING LIMIT (mg/Kg)	BLANK RESULT (mg/Kg)	BLANK SPIKE RESULT (%)
NAPHTHALENE	N.D.	5	N.D.	--
2- METHYLNAPHTHALENE	N.D.	5	N.D.	--
2- CHLORONAPHTHALENE	N.D.	5	N.D.	--
ACENAPHTHYLENE	N.D.	5	N.D.	--
ACENAPHTHENE	N.D.	5	N.D.	75
FLUORENE	N.D.	5	N.D.	--
PHENANTHRENE	N.D.	5	N.D.	--
ANTHRACENE	N.D.	5	N.D.	--
FLUORANTHRENE	N.D.	5	N.D.	--
PYRENE	N.D.	5	N.D.	84
BENZO(A)ANTHRACENE	N.D.	5	N.D.	--
CHRYSENE	N.D.	5	N.D.	--
BENZO(B)FLUORANTHENE	N.D.	5	N.D.	--
BENZO(K)FLUORANTHENE	N.D.	5	N.D.	--
BENZO(A)PYRENE	N.D.	5	N.D.	--
IDENO(1,2,3-CD)PYRENE	N.D.	5	N.D.	--
DIBENZO(A,H)ANTHRACENE	N.D.	5	N.D.	--
BENZO(GHI)PERYLENE	N.D.	5	N.D.	--

Alex Tam
Chemist

Ali Kharrazi
Organic Manager

APPENDIX C

Photo-Log of in Place Tank Closures and Grout Recipts

(408) 293-6272
FAX (408) 294-3162
PLEASANTON PLANT
(510) 449-4334
(510) 937-1160
FAX (510) 937-1158

#1887

CENTRAL CONCRETE SUPPLY CO., INC.

Westside BUILDING MATERIALS (408) 947-8606

610 McKENDRIE ST., SAN JOSE, CA 95110-1595
SERVING YOUR READY-MIX CONCRETE & BUILDING MATERIAL NEEDS
SINCE 1948

INVOICE

INVOICE NO. 80032
INVOICE DATE 06/15/95
DATE SHIPPED 06/15/95
INVOICE PAGE NO. 1

REMEDIAL CONSTRUCTORS,INC
5030 SHILOH ROAD
MODESTO CA 95358-0000

CPU#		CUSTOMER NO.
62	2	517700

PROJ No. 00517700-490

JUL 80032 ENGINEERING

CUSTOMER PURCHASE ORDER NUMBER	JOB NUMBER	SHIPPED TO:
	9490	9490/VA MEDICAL HOSPITAL/LVRMR

PLANT NO.	TRUCK NO.	TICKET NO.	QUANTITY	UNITS U/M	PRODUCT NO.	DESCRIPTION	TAX	UNIT PRICE	AMOUNT
2	162	138086	10.00	CYD	104	4 SK SAND GROUT	39.60	48.00	480.00
2	162	138103	10.00	CYD	104	4 SK SAND GROUT	39.60	48.00	480.00
2	148	138109	10.00	CYD	104	4 SK SAND GROUT	39.60	48.00	480.00
2	163	138111	10.00	CYD	104	4 SK SAND GROUT	39.60	48.00	480.00
			10.00		920	OVERTIME/LABOR	0.00	25.00	250.00
			1.00	(3)EA.DRIVERS			0.00	0.00	0.00

652-20-9490
Posted 06AP03

TOTAL READY-MIX YARDS	TOTAL TAXABLE AMOUNT	TAX	TOTAL NON-TAXABLE	INVOICE TOTAL
40.00	1,920.00	158.40	250.00	2,328.40

DISCOUNT AMOUNT	TAX ON DISCOUNT	YOU MAY DEDUCT	IF PAID BY
40.00	3.30	43.30	7/10/95

TERMS – All invoices due and payable on the 10th day of the month following the delivery date; and Customer agrees to pay for the above-described materials, services and/or products not later than 30 days from the delivery date, and to pay FINANCE CHARGES on all past due invoices.

As required by the Truth in Lending Act, be advised that FINANCE CHARGES shall be computed at a periodic rate of 1-1/2% per month (which is an ANNUAL PERCENTAGE RATE of 18%) or a minimum finance charge of $1.00 on balances under $66.00. Customer further agrees to pay Court Costs and attorney's fees in the event action is instituted to collect the amounts due. If any action at law or in equity is necessary to enforce or interpret the terms of this agreement the prevailing party shall be entitled to reasonable attorney's fees and costs in addition to any other relief to which he may be entitled.

THE DISCOUNT SHOWN WILL BE ALLOWED IF PAID BY 10TH OF MONTH FOLLOWING DELIVERY PROVIDED ALL PAST DUE BALANCES ARE PAID.

PLEASE SEND COPY OF INVOICE WITH PAYMENT

REMIT TO: 610 MC KENDRIE STREET SAN JOSE, CA 95110

IMPORTANT: Please see reverse side for terms and conditions of sale.

ORIGINAL