

P & D ENVIRONMENTAL

4020 Panama Court
Oakland, CA 94611
Telephone (510) 658-6916

January 22, 1995
Report 0101.R1

Mr. Jeff Hammond
Merritt Construction Corporation
1044 5th Avenue
Oakland, CA 94606

SUBJECT: Underground Storage Tank Removal Report
Merritt Construction Corporation Facility
1044 5th Avenue
Oakland, California

3887

Dear Mr. Hammond:

P&D Environmental (P&D) is pleased to present this report documenting underground storage tank removal and soil sample collection at the subject site. The underground storage tank consisted of one 1,000-gallon capacity gasoline fuel tank, which was removed from the site on October 18, 1995. A Site Location Map is attached with this report as Figure 1, and a Site Plan is attached as Figure 2.

BACKGROUND

The subject site is located in a developed portion of the City of Oakland approximately 3,000 feet to the south of Lake Merritt. The site and surrounding topography are relatively flat.

It is P&D's understanding that the subject facility was previously used Merritt Construction as a storage yard for equipment and materials. Based upon discussions with Mr. Jeff Hammond of Merritt Construction Corporation, the underground storage tank was installed some time in the 1950's. The underground storage tank was reported to always have contained gasoline. It is P&D's understanding that the tank was most recently pressure tested in October, 1994 and was reported to have passed the pressure test with no indication of leaks.

Use of the tank was reported to have been discontinued at the end of 1994, at which time the tank was reported to have been emptied of its contents. The tank capacity was 1,000 gallons. The fill port for the gasoline tank was located directly above the tank, at the west end of the tank. One vent line was reported to have been connected to the tank, with one dispenser located adjacent and to the south of the tank. The dispenser line and vent line were also reported to have been connected to the tank at the west end of the tank. The tank was located beneath the sidewalk at the facility on 5th Avenue. The location of the tank at the facility is shown in Figure 2.

FIELD ACTIVITIES

Prior to the beginning of tank removal activities, it is P&D's understanding that permits were obtained from the Alameda County Department of Environmental Health (ACDEH), the City of Oakland Fire Department and the Bay Area Air Quality Management District, that notification was provided to these agencies and Underground Service Alert, and that a health and safety plan was prepared.

Tank Removal

On September 14, 1995 Merritt Construction Corporation uncovered one 1,000 gallon capacity gasoline underground storage tank and prepared the tank for removal. However, because of scheduling difficulties, it was necessary to postpone the removal of the tank.

On October 18, 1995 Merritt Construction Corporation removed the 1,000-gallon capacity gasoline fuel tank from the tank pit at the subject site. The tank was constructed of single wall steel. Groundwater was not encountered in the tank pit.

Prior to removal of the tank, the tank atmosphere was inerted using dry ice. The oxygen content and Lower Explosive Limit (LEL) of the atmosphere in the tank were monitored using a Gastech oxygen and LEL meter to determine that the tank atmosphere had been sufficiently inerted prior to tank removal. Prior to tank removal, the oxygen content was measured as 9 percent and the LEL was measured as 8 percent in the tank. Mr. Barney Chan of the ACDEH was present to observe the tank removal.

Following removal of the tank from the tank pit, the tank was visually inspected for signs of holes, cracks, leaks or corrosion. Evidence of localized corrosion and pits were observed at several locations on the tank. The seam at the east end of the tank at the bottom of the tank was observed to be split along a six-inch interval. However, the split appeared to have been associated with the tank removal activities. In addition, three holes were observed in a pitted area near the east end of the tank on the southern side of the tank, approximately one half way between the top and the bottom of the tank. The holes each measured approximately one quarter inch in diameter. The tank was constructed of single wall bare steel, and measured 46 inches in diameter and 144 inches in length.

The tank was loaded onto a flatbed trailer and transported by Dexanna Limited of Concord, California to the Erickson Inc. facility in Richmond, California. Dexanna Limited is a State-certified hazardous waste hauler, and Erickson, Inc. operates a State-approved tank disposal facility. Copies of the uniform hazardous waste manifest and the certificate of destruction for the underground storage tank are attached with this report.

Soil Sample Collection

After the tank had been inspected and loaded onto the trailer for removal from the site, two soil samples were collected from beneath the ends of the tank from the bottom of the tank pit. The bottom of the fuel tank was located at a depth of approximately eight feet below grade. Gray staining was visible in the soil in the bottom of the pit. The samples, designated as T1-10 and T2-10, were collected at a depth of approximately ten feet below grade, approximately two feet into the native material, beneath the former ends of the tank. Very slight petroleum hydrocarbon odors which were qualitatively identified in the field as resembling gasoline were detected in the soil removed from the bottom of the fuel tank pit and in the soil samples. The sample collection locations are shown in Figure 2.

Mr. Barney Chan of the ACDEH was present to observe sample collection procedures. The sample collection locations and depths were identified by Mr. Chan. The soil samples were collected from the bottom of the tank pit by Mr. Jeff Hammond of Merritt Construction Corporation in the following manner. Following removal with a shovel of approximately two feet of soil from the bottom of the tank pit at the sample collection location, a six-inch long, two-inch diameter brass tube was hammered into the soil at the bottom of the hole which had been excavated with the shovel. The brass tube was then dug out of the hole in the bottom of the pit and the ends of the tube sequentially sealed with aluminum foil and plastic endcaps. The samples were then labeled, placed in ziplock storage bags, and stored in a cooler with ice pending delivery to McCampbell Analytical, Inc. in Pacheco, California. McCampbell Analytical, Inc. is a State-certified hazardous waste testing laboratory. Chain of custody procedures were observed for sample handling.

Soil excavated from the gasoline tank pit was stockpiled onsite and covered with visqueen. On October 18, 1995 P&D personnel measured the stockpiled soil pile dimensions with Mr. Chan and estimated a stockpiled soil volume of approximately 50 cubic yards. A total of four soil samples were collected from the soil stockpile into brass tubes using methods described above. The locations of the samples were approximately equi-distantly spaced in the stockpile. The four soil samples were subsequently transported to McCampbell Analytical, Inc. to be composited at the laboratory prior to analysis as composite sample COMP A. Chain of custody procedures were observed for sample handling.

Over-Excavation and Disposition of Excavated Soil

Soil excavated from the gasoline tank pit prior to sample collection from the tank pit was stockpiled onsite and covered with visqueen. Following removal of the tank from the tank pit and sample collection from the stockpiled soil pile and from the tank pit, It is P&D's understanding that the tank pit bottom was over-excavated an additional two feet in depth. The over-excavated soil was segregated from the previously excavated soil, stockpiled on site, and covered with visqueen pending appropriate disposal. Following over-excavation, the soil excavated from the tank pit prior to over-excavation was placed back into the tank pit. The soil was placed into the pit following discussions and verbal approval from Mr. Chan.

What about the "contaminated soil"?

GEOLOGY AND HYDROGEOLOGY

Based on review of regional geologic maps from U.S. Geological Survey Professional Paper 943, "Flatland Deposits - Their Geology and Engineering Properties and Their Importance to Comprehensive Planning," by E.J. Helley and K.R. Lajoie, 1979 the subject site is underlain by Pleistocene beach and dune sand deposits (Merrit Sand). The deposits are described as typically consisting of loose well-sorted fine to medium sand.

Based on observations of the subsurface materials encountered in the walls and floor of the pit, the subsurface materials consist of a brown silty clay with minor fine sand to the total depth explored of approximately 12 feet.

Groundwater was not encountered to the total depth explored of approximately 12 feet. The depth to groundwater and groundwater flow direction at the site are unknown. However, the site groundwater flow direction is assumed to be southerly or westerly, towards the channel separating Oakland from Alameda. The channel is connected to San Francisco Bay, and is tidally influenced. It is possible that the groundwater flow direction at the site may be tidally influenced.

LABORATORY ANALYSIS

All of the soil samples collected from beneath the gasoline tank (samples T1-10.0 and T2-10.0) and the stockpiled soil (sample COMP A) were analyzed for Total Petroleum Hydrocarbons as Gasoline (TPH-G) using EPA Method 3550 in conjunction with modified EPA Method 5030; for benzene, toluene, ethylbenzene and xylenes (BTEX) using EPA Method 8020; and for total lead using EPA Method 6010.

The laboratory analytical results of the soil samples T1-10 and T2-10 which were collected from the tank pit at a depth of approximately ten feet following tank removal on October 18, 1995 showed that TPH-G was detected at concentrations of 130 and 64 ppm, respectively, and that lead was detected at concentrations of 4.4 and 5.5 ppm, respectively. Benzene was only detected in sample T1-10.0 at a concentration of 0.059. Review of the laboratory analytical reports indicates that the TPH-G results are aged gasoline. The sample results are summarized in Table 1. Copies of the laboratory analytical reports are attached with this report.

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The laboratory analytical results of composite soil sample COMP A which was collected from the stockpiled soil pile prior to over-excavation of the tank pit showed that TPH-G was detected at a concentration of 14 ppm, lead was detected at a concentration of 35 ppm, and benzene was not detected. Review of the laboratory analytical report indicates that the TPH-G results are aged gasoline. The sample results are summarized in Table 2. Copies of the laboratory analytical reports are attached with this report.

DISCUSSION AND RECOMMENDATIONS

On October 18, 1995, one 1,000-gallon capacity underground gasoline tank was removed from the site. At the time of removal, the tank was found to be constructed of single wall steel and to have three holes at mid-level on the end of the tank closest to East 11th Street. In addition, a 6-inch long portion of the seam at the bottom of the tank on the end of the tank closest to East 11th Street was observed to be separated. However, the separation of the seam appeared to be related to the tank removal activities.

A total of two soil samples were collected from the tank pit at a depth of approximately ten feet below the ground surface, which was equivalent to a depth of approximately two feet below the bottom of the tank. In addition, one composite sample was collected from the stockpiled soil which originated in the tank pit. Groundwater was not encountered in the tank pit. The materials encountered in the tank pit consisted primarily of brown silty clay. Gray staining was observed in the tank pit bottom beneath the tank, and a slight petroleum hydrocarbon odor resembling gasoline was detected in the soil from the bottom of the pit.

The results of the soil samples collected from the tank pit showed that TPH-G was detected at concentrations of 130 and 64 ppm, and that lead was detected at concentrations of 4.4 and 5.5 ppm. The lead concentrations are indicative of background lead concentrations. However, the detected petroleum hydrocarbons indicate historical petroleum hydrocarbon release. Review of the laboratory analytical report indicates that the gasoline is aged.

It is P&D's understanding that following tank removal and sample collection, the bottom of the tank pit was over-excavated an additional two feet in depth. The over-excavated soil was stockpiled separately on site and covered with visqueen pending appropriate disposal. Following over-excavation of the tank pit, it is P&D's understanding that the stockpiled soil originating from excavation activities prior to removal of the tank was placed back into the tank pit with the approval of Mr. Chan of the ACDEH.

P&D recommends that groundwater quality in the vicinity of the tank pit be evaluated for the presence of petroleum hydrocarbons, and that the extent of petroleum hydrocarbons detected in the bottom of the tank pit be further evaluated, in accordance with discussions with Mr. Chan of the ACDEH.

DISTRIBUTION

Copies of this report should be sent to Mr. Barney Chan at the ACDEH and to Mr. Kevin Graves at the San Francisco Bay Regional Water Quality Control Board.

LIMITATIONS

This report was prepared solely for the use of Merritt Construction Corporation. The content and conclusions provided by P&D in this assessment are based on information collected during our investigation, which may include, but not be limited to, visual site inspections; interviews with the site owner, regulatory agencies and other pertinent individuals; review of available public

documents; subsurface exploration and our professional judgement based on said information at the time of preparation of this document. Any subsurface sample results and observations presented herein are considered to be representative of the area of investigation; however, geological conditions may vary between borings and pits and may not necessarily apply to the general site as a whole. If future subsurface or other conditions are revealed which vary from these findings, the newly-revealed conditions must be evaluated and may invalidate the findings of this report.

This report is issued with the understanding that it is the responsibility of the owner, or his representative, to ensure that the information contained herein is brought to the attention of the appropriate regulatory agencies, where required by law. Additionally, it is the sole responsibility of the owner to properly dispose of any hazardous materials or hazardous wastes left onsite, in accordance with existing laws and regulations.

This report has been prepared in accordance with generally accepted practices using standards of care and diligence normally practiced by recognized consulting firms performing services of a similar nature. P&D is not responsible for the accuracy or completeness of information provided by other individuals or entities which is used in this report. This report presents our professional judgement based upon data and findings identified in this report and interpretation of such data based upon our experience and background, and no warranty, either express or implied, is made. The conclusions presented are based upon the current regulatory climate and may require revision if future regulatory changes occur.

Should you have any questions, please do not hesitate to contact us at (510) 658-6916.

Sincerely,

P&D Environmental

Paul H. King
Hydrogeologist



Don R. Braun
Don R. Braun
Certified Engineering Geologist
Registration No. : 1310
Expires: 6/30/96

PHK
0101.R1

Attachments: Tables 1 & 2
Site Location Map (Figure 1)
Site Plan (Figure 2)
Uniform Hazardous Waste Manifest 95269856
Certificate of Tank Destruction
Laboratory Analytical Reports
Chain of Custody Documentation

TABLE 1
SUMMARY OF LABORATORY ANALYTICAL RESULTS
TANK PIT SOIL SAMPLES
(Samples Collected on October 18, 1995)

Sample No.	TPH-G	Benzene	Toluene	Ethyl-benzene	Total Xylenes	Total Lead
T1-10	130	0.059	0.19	0.60	3.9	4.4
T2-10	64	ND	0.030	0.21	2.3	5.5

TPH-G = Total Petroleum Hydrocarbons as Gasoline.

ND = Not Detected.

Results are in parts per million (ppm), unless otherwise indicated.

TABLE 2

SUMMARY OF LABORATORY ANALYTICAL RESULTS
STOCKPILED SOIL SAMPLE
(Sample Collected on October 18, 1995)

Sample No.	TPH-G	Benzene	Toluene	Ethyl-benzene	Total Xylenes	Total Lead
COMP A	14	ND	ND	ND	0.008	35

TPH-G = Total Petroleum Hydrocarbons as Gasoline.

ND = Not Detected.

Results are in parts per million (ppm), unless otherwise indicated.

P & D ENVIRONMENTAL

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Base Map From:
U.S. Geological Survey
Oakland West, Calif.
7.5 Minute Quadrangle
Photorevised, 1980

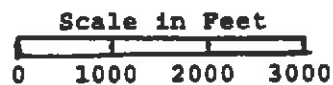
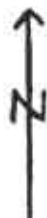


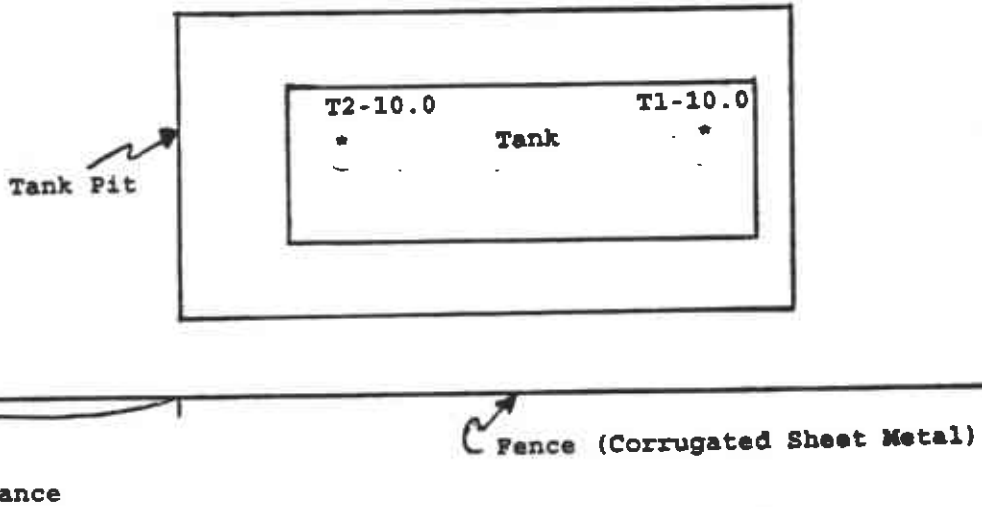
Figure 1
SITE LOCATION MAP
Merritt Construction, Inc.
1044 5th Avenue
Oakland, California

P & D ENVIRONMENTAL

4020 Panama Court
Oakland, CA 94611
Telephone (510) 658-6916

5th Avenue

Sidewalk



Yard Entrance

To East 11th Street

LEGEND

* Soil Sample
Collection Location

Base Map From:
P&D Environmental
October, 1995

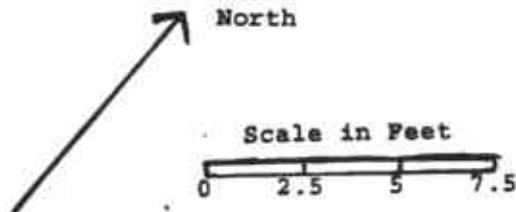


Figure 2
SITE PLAN
Merritt Construction, Inc.
1044 5th Avenue
Oakland, California

966847

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

UNIFORM HAZARDOUS WASTE MANIFEST		1. Generator's US EPA ID No. CAL 000027540		Manifest Document No. 00333		2. Page 1 of 1		Information in the shaded areas is not required by Federal law.	
3. Generator's Name and Mailing Address Marritt Environmental Corp. 1044-5th Avenue - Oakland, Calif.				A. State Manifest Document Number 95269856		B. State Generator's ID			
4. Generator's Phone (510) 834-9104		5. Transporter 1 Company Name Dexanna, Ltd.		6. US EPA ID Number CAD932438555		C. State Transporter's ID 602255		D. Transporter's Phone (510) 687-1292	
7. Transporter 2 Company Name		8. US EPA ID Number		E. State Transporter's ID		F. Transporter's Phone		G. State Facility's ID CAD009466392	
9. Designated Facility Name and Site Address Erickson, Inc. - 255 Parr Blvd. Richmond, Calif. 94801				10. US EPA ID Number CAD009466392		H. Facility's Phone (510) 235-1393		13. Total Quantity	
11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID Number) a. Waste Empty Storage Tank NON-RCRA Hazardous Waste Solid.				12. Containers No. Type 001 T P		14. Unit Wt/Vol 0/000 P		I. Waste Number State 512 EPA/Other NONE	
				12. Containers No. Type		14. Unit Wt/Vol		I. Waste Number State EPA/Other	
J. Additional Descriptions for Materials Listed Above Tank # 16710. Tank has been inerted with 15 lbs. DRY ICE per 1000 gallons capacity.				K. Handling Codes for Wastes Listed Above a. 01		b.		c.	
15. Special Handling Instructions and Additional Information Keep away from sources of ignition. Always wear hardhats when working around U.S.T.'s. - Site Location: 1044-5th Arc. - Oakland, Calif. 24 Hr. Contact Name: Jeff Hammond & Phone # (510) 834-9104									
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 Jeffrey Hammond				Signature <i>Jeffrey Hammond</i>				Month Day Year 1 0 9 5	
17. Transporter 1 Acknowledgement of Receipt of Materials Printed/Typed Name James R. Cox				Signature <i>James R. Cox</i>				Month Day Year 1 0 9 5	
18. Transporter 2 Acknowledgement of Receipt of Materials Printed/Typed Name				Signature				Month Day Year	
19. Discrepancy Indication Space GENERATOR + TRANSPORTER DATE - 10/18/95									
20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19. Printed/Typed Name KAREN RUFFIN				Signature <i>Karen Ruffin</i>				Month Day Year 1 0 1 8 9 5	

DO NOT WRITE BELOW THIS LINE.

DAY OR NIGHT
TELEPHONE
(510) 235-1393

CERTIFICATE
CERTIFIED SERVICES COMPANY
255 Parr Boulevard • Richmond, California 94801

NO. 18030

CUSTOMER
MERRIT CORP.
JOB NO.
966847

FOR: ERICKSON, INC. TANK NO. 16710

LOCATION: RICHMOND DATE: 95/10/19 TIME: 14:38

TEST METHOD VISUAL GASTECH/1314 SMPN LAST PRODUCT UG

This is to certify that I have personally determined that this tank is in accordance with the American Petroleum Institute and have found the condition to be in accordance with its assigned designation. This certificate is based on conditions existing at the time the inspection herein set forth was completed and is issued subject to compliance with all qualifications and instructions.

TANK SIZE 1000 GALLON TANK CONDITION SAFE FOR FIRE

REMARKS: OXYGEN 20.9% LOWER EXPLOSIVE LIMIT LESS THAN 0.1%
ERICKSON, INC. HEREBY CERTIFIES THAT THE ABOVE NUMBERED TANK HAS BEEN
CUT OPEN, PROCESSED, AND THEREFORE DESTROYED AT OUR PERMITTED HAZARDOUS
WASTE FACILITY.
ERICKSON, INC. HAS THE APPROPRIATE PERMITS FOR, AND HAS ACCEPTED THE TANK
SHIPPED TO US FOR PROCESSING.

In the event of any physical or atmospheric changes affecting the gas-free conditions of the above tanks, or if in any doubt, immediately stop all hot work and contact the undersigned. This permit is valid for 24 hours if no physical or atmospheric changes occur.

STANDARD SAFETY DESIGNATION

SAFE FOR MEN: Means that in the compartment or space so designated (a) The oxygen content of the atmosphere is at least 19.5 percent by volume; and that (b) Toxic materials in the atmosphere are within permissible concentrations; and (c) In the judgment of the Inspector, the residues are not capable of producing toxic materials under existing atmospheric conditions while maintained as directed on the Inspector's certificate.

SAFE FOR FIRE: Means that in the compartment so designated (a) The concentration of flammable materials in the atmosphere is below 10 percent of the lower explosive limit; and that (b) In the judgment of the Inspector, the residues are not capable of producing a higher concentration that permitted under existing atmospheric conditions in the presence of fire and while maintained as directed on the Inspector's certificate, and further, (c) All adjacent spaces have either been cleaned sufficiently to prevent the spread of fire, are satisfactorily inerted, or in the case of fuel tanks, have been treated as deemed necessary by the Inspector.

The undersigned representative acknowledges receipt of this certificate and understands the conditions and limitations under which it was issued.

[Signature]
REPRESENTATIVE

TITLE

[Signature]
INSPECTOR

P & D Environmental 4020 Panama Court Oakland, CA 94611	Client Project ID: # 0101; Merritt Construction-Oakland	Date Sampled: 10/18/95
	Client Contact: Paul King	Date Received: 10/19/95
	Client P.O:	Date Extracted: 10/19/95
		Date Analyzed: 10/19-10/20/95

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
57605	T1-10.0	S	130,b,d	0.059	0.19	0.60	3.9	103
57606	T2-10.0	S	64,b	ND< 0.01	0.030	0.21	2.3	95
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	0.5	
	S	1.0 mg/kg	0.005	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.

QC REPORT FOR HYDROCARBON ANALYSES

Date: 10/20/95

Matrix: Soil

Analyte	Concentration (mg/kg)			Amount Spiked	% Recovery		
	Sample	MS	MSD		MS	MSD	RPD
TPH (gas)	0.000	2.072	2.006	2.03	102	99	3.2
Benzene	0.000	0.184	0.180	0.2	92	90	2.2
Toluene	0.000	0.178	0.174	0.2	89	87	2.3
Ethylbenzene	0.000	0.178	0.176	0.2	89	88	1.1
Xylenes	0.000	0.566	0.554	0.6	94	92	2.1
TPH (diesel)	0	308	313	300	103	104	1.6
TRPH (oil & grease)	0.0	21.8	22.0	20.8	105	106	0.9

$$\% \text{ Rec.} = (\text{MS} - \text{Sample}) / \text{amount spiked} \times 100$$

$$\text{RPD} = (\text{MS} - \text{MSD}) / (\text{MS} + \text{MSD}) \times 2 \times 100$$

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4020 Panama Court
Oakland, CA 94611
Telephone (510) 658-6916

CHAIN OF CUSTODY RECORD

5075 APdx 146 PAGE 1 OF 1

PROJECT NUMBER: 0101			PROJECT NAME: Merritt Construction - Oakland			NUMBER OF CONTAINERS	ANALYSIS(ES):		PRESERVATIVE	REMARKS
SAMPLED BY: (PRINTED AND SIGNATURE) Paul H. King							TPH - Gas	RIEX		
SAMPLE NUMBER	DATE	TIME	TYPE	SAMPLE LOCATION		Total Lead				
T1-10.0	10/18/95		Soil	Tank pit bottom		1	X	X	ICE	Normal Turn Around
T2-10.0	"		"	" " "		1	X	X	"	" " "
										57605
										57606
						ICE/T <input checked="" type="checkbox"/>		PRESERVATIVE <input checked="" type="checkbox"/>		
						GOOD CONDITION <input checked="" type="checkbox"/>		APPROPRIATE <input checked="" type="checkbox"/>		
						HEAD SPACE ABSENT <input checked="" type="checkbox"/>		CONTAINERS <input checked="" type="checkbox"/>		
RELINQUISHED BY: (SIGNATURE) Paul H. King			DATE 10/18/95	TIME 2:51	RECEIVED BY: (SIGNATURE) Janet Enisha #601		TOTAL NO. OF SAMPLES (THIS SHIPMENT) 2	LABORATORY: McCampbell Analytical		
RELINQUISHED BY: (SIGNATURE) Andrew Coe			DATE 10/19	TIME 10:50	RECEIVED BY: (SIGNATURE) Nikki Pina		TOTAL NO. OF CONTAINERS (THIS SHIPMENT) 2	LABORATORY CONTACT: Ed Hamilton LABORATORY PHONE NUMBER: (510) 798-1620		
RELINQUISHED BY: (SIGNATURE)			DATE	TIME	RECEIVED FOR LABORATORY BY: (SIGNATURE)		SAMPLE ANALYSIS REQUEST SHEET ATTACHED: () YES (X) NO			
REMARKS:						Send invoice to Merritt Construction. Send results to Merritt Construction and P&D.				

QC REPORT FOR AA METALS

Date: 10/19/95

Matrix: Soil

Analyte	Concentration (mg/kg, mg/L)			Amount Spiked	% Recovery		
	Sample	MS	MSD		MS	MSD	RPD
Total Lead	0.0	4.5	4.3	5	89	87	3.0
Total Cadmium	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total Chromium	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total Nickel	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total Zinc	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total Copper	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Organic Lead	N/A	N/A	N/A	N/A	N/A	N/A	N/A

$$\% \text{ Rec.} = (\text{MS} - \text{Sample}) / \text{amount spiked} \times 100$$

$$\text{RPD} = (\text{MS} - \text{MSD}) / (\text{MS} + \text{MSD}) \times 2 \times 100$$

P & D Environmental 4020 Panama Court Oakland, CA 94611	Client Project ID: # 0101; Merritt Construction-Oakland	Date Sampled: 10/18/95
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		Date Analyzed: 10/20/95

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
57607	Comp A	S	14,b	ND	ND	ND	0.008	100
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	0.5	
	S	1.0 mg/kg	0.005	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.

QC REPORT FOR HYDROCARBON ANALYSES

Date: 10/20/95

Matrix: Soil

Analyte	Concentration (mg/kg)			Amount Spiked	% Recovery		
	Sample	MS	MSD		MS	MSD	RPD
TPH (gas)	0.000	2.072	2.006	2.03	102	99	3.2
Benzene	0.000	0.184	0.180	0.2	92	90	2.2
Toluene	0.000	0.178	0.174	0.2	89	87	2.3
Ethylbenzene	0.000	0.178	0.176	0.2	89	88	1.1
Xylenes	0.000	0.566	0.554	0.6	94	92	2.1
TPH (diesel)	0	308	313	300	103	104	1.6
TRPH (oil & grease)	0.0	21.8	22.0	20.8	105	106	0.9

$$\% \text{ Rec.} = (\text{MS} - \text{Sample}) / \text{amount spiked} \times 100$$

$$\text{RPD} = (\text{MS} - \text{MSD}) / (\text{MS} + \text{MSD}) \times 2 \times 100$$

QC REPORT FOR AA METALS

Date: 10/19/95

Matrix: Soil

Analyte	Concentration (mg/kg, mg/L)			Amount Spiked	% Recovery		
	Sample	MS	MSD		MS	MSD	RPD
Total Lead	0.0	4.5	4.3	5	89	87	3.0
Total Cadmium	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total Chromium	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total Nickel	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total Zinc	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total Copper	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Organic Lead	N/A	N/A	N/A	N/A	N/A	N/A	N/A

$$\% \text{ Rec.} = (\text{MS} - \text{Sample}) / \text{amount spiked} \times 100$$

$$\text{RPD} = (\text{MS} - \text{MSD}) / (\text{MS} + \text{MSD}) \times 2 \times 100$$

