RO293

Applied Remediation Company
Environmental Services and Engineering

Telephone (408) 453-0188
Fax (408) 453-0757

FINAL REPORT FOR

HYDRAULIC LIFT OIL SPILL CLEANUP

AT

CITY OF OAKLAND
MUNICIPAL SERVICE CENTER, BLDG 5
7101 EDGEWATER DRIVE
OAKLAND, CALIFORNIA

JUNE 13, 1995

PREPARED FOR:

CITY OF OAKLAND-OGS
7101 EDGEWATER DRIVE
OAKLAND, CALIFORNIA 94621-3001

BY:

APPLIED REMEDIATION COMPANY
1430 KOLL CIRCLE, SUITE 109
P.O. BOX 612421
SAN JOSE, CA 95161-2421

B:\AR172

Applied Remediation Company

Environmental Services and Engineering

Telephone (408) 453-0188
Fax (408) 453-0757

FINAL REPORT FOR

HYDRAULIC LIFT OIL SPILL CLEANUP

AT

CITY OF OAKLAND MUNICIPAL SERVICE CENTER, BLDG. 5
7101 EDGEWATER DRIVE
OAKLAND, CA 94621-3001

JUNE 13, 1995

Prepared For:
City of Oakland-OGS
7101 Edgewater Drive
Oakland, CA 94621-3001
ATTN: Okey Ozoh

Prepared By:
Applied Remediation Company
1430 Koll Circle, Ste. 109
P.O. Box 612421
San Jose, CA 95161-2421

David L. Goldberg
Project Manager

Briggs O. Ogamba, P.E.
President

Mark A. Mestressat
Project Geologist

TABLE OF CONTENTS

1.0 INTRODUCTION

This report describes the technical approach, methods and procedures, findings, conclusions and recommendations in the Hydraulic Lift Oil Spill cleanup project. The hydraulic lift oil spill cleanup was conducted to remediate all the hydraulic lift oil and residuals that occurred when a pipe leaked spilling approximately one 55 gallon drum worth of hydraulic lift oil in a lift and ground. The hydraulic lift is located in the equipment/auto garage shop located at 7101 Edgewater Drive, Oakland, California.

The project was performed by Applied Remediation Company for the City of Oakland, California. The project was performed on May 24, 1995 for the need to remove the hydraulic lift oil spill so that both the soil and groundwater would not be impacted.

This report was based on the Alameda County, Dept. of Environmental Health, Environmental Protection Division guidelines for investigation and remediation at Fuel Leak Sites and Tri-Regional Board Staff Recommendations for Preliminary Evaluation of Underground Storage Tank Sites.

1.1 LOCATION OF SITE

The project site is the City of Oakland Municipal Service Center, Bldg. 5 located at 7101 Edgewater Drive, California (figure 2-1). The site is used as a equipment/auto garage shop.

The surrounding land is predominantly light industrial and commercial. The site is located approximately 3 miles East of the San Francisco Bay and is situated between San Leandro Bay Park to the West and the Oakland Alameda Co. Coliseum Complex to the East.

1.2 BACKGROUND/SITE HISTORY

The site occupies a piece of land bounded to the north by Damon Slough, to west by San Leandro Bay and San Leandro Bay Park and to the south and east by light industries and commercial operations.

On January 20, 1995 a hydraulic lift oil spill occurred at the City of Oakland Municipal Service Center located at 7101 Edgewater Drive, Oakland, California. The spill occurred when a hydraulic lift oil line leaked while adding one 55 gallon drum of hydraulic lift oil into the oil chamber that supplies 3 hydraulic lifts. The hydraulic lift oil leaked/disappeared from the closed loop system of the jacks.

The Alameda County Dept. of Environmental Health, Environmental Protection Division was notified by phone (Don Wang) and by mail (Madula Logan). See Appendix C for a copy of the incident report.

1.2.1 CURRENT OWNER/TYPE OF BUSINESS

The property is owned by The City of Oakland located in Oakland, California. This site is the City of Oakland Municipal Service Center.

The main contact person is Mr. Okey Ozoh who is an Architectural Assistant at the Office of General Services.

1.3 PROJECT OBJECTIVES

The overall project objective was to cleanup the hydraulic oil spill and dispose of all the wastes generated according to current Federal, State and Local environmental regulations.

1.4 SCOPE OF WORK PERFORMED/APPROACH

The specific scope of work performed in order to accomplish the above objective was to:

* Collect a discrete sample from the East and West end(away from the spill) of the excavation as well as a composite sample for an analyze for Cl HC, Oil and Grease, Total Petroleum Hydrocarbon(TPH) as diesel and gasoline as well as benzene, toluene, ethylbenzene and total Xylenes(BTE&X). Also samples are to be collected for Metals(Cd, Cr, Pb and Zn). This would help to determine the extent of the spill contamination.

* Remove areas of hydraulic oil contamination and stockpile it for disposal after analysis has been completed.

* Obtain the necessary well drilling permit from the Alameda County Flood Control And Water Conservation District, Zone 7. See Appendix B for a copy of the drilling permit.

* Drill one soil boring upgradient from the excavation and sampling every 5 feet. Analyze the samples for Cl, HC, Oil and Grease and Total Petroleum Hydrocarbon(TPH) as diesel and gasoline as well as benzene, toluene, ethylbenzene and total Xylenes(BTE&X). Also samples are to be collected for analyze for Metals(Cd, Cr, Pb, and Zn). This would help determine the extent of the spill contamination.

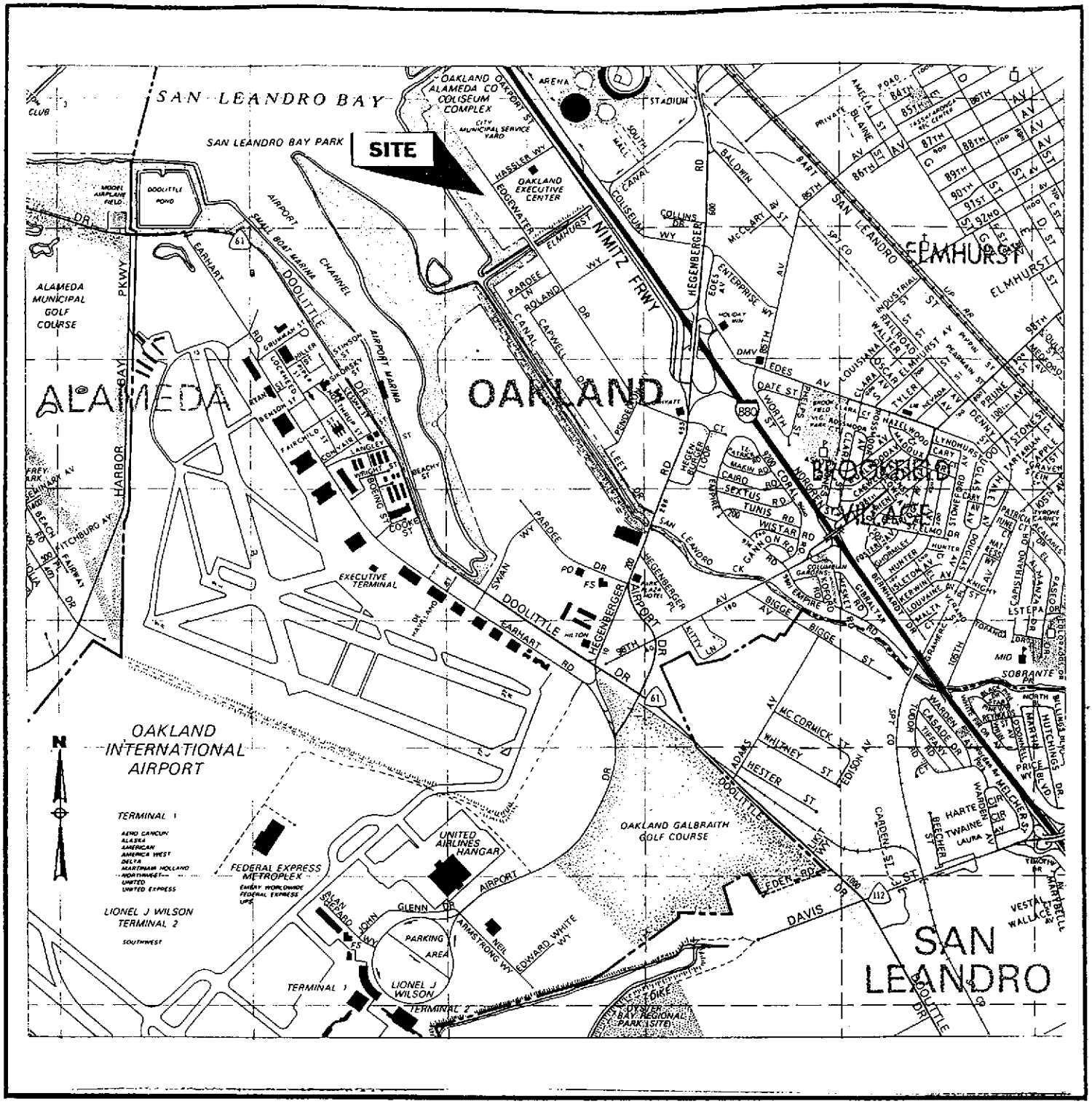
* Prepare and submit this brief report to the City of Oakland, the Alameda County, Department of Environmental Health, Environmental Protection Division and the Regional Water Quality Control Board(RWQCB).

2.0 DESCRIPTION

A general description of the site detailing the vicinity and site maps are presented below.

2.1 VICINITY MAP

A vicinity map showing the general area of the site and the surrounding is presented in figure 2-1.



Vicinity Map: Figure 2-1

2.2 SITE MAP

A site map illustrating the nearby infrastructures, soil boring and the location of the excavation site is presented in figure 2-2.

3.0 METHODS AND PROCEDURES

The scope of this hydraulic oil spill cleanup, included the review of Applied Remediation Company's removal of the soil contaminated by the hydraulic oil spill, containment of the waste generated, collection and analysis of soil samples and conclusions and recommendations.

3.1 HYDRAULIC OIL CLEANUP, SOIL SAMPLING(EXCAVATION AND SOIL BORING) AND ANALYSIS

On May 24, 1995, Applied Remediation Company's personnel went to excavate the soil where a hydraulic oil spill occurred near one of the hydraulic lifts at the Municipal Service Center City of Oakland, Auto Shop - Building 5.

A total of three soil samples were collected. The soil samples were collected from the locations illustrated in figure 3-1. Sample CO-1 was collected form the west side of the pit. CO-2 was collected form the east side of the pit. CO-3(composite sample) was collected form the soil pile. All the samples were collected in 2" x 6.0" brass tubes.

On May 26,1995, Applied Remediation Company's personnel went to the site to cleanup the hydraulic oil spill. Approximately 205 gallons of oil waste was removed from the pit. A signed manifest showing the final disposal of the liquid waste is presented in Appendix C.

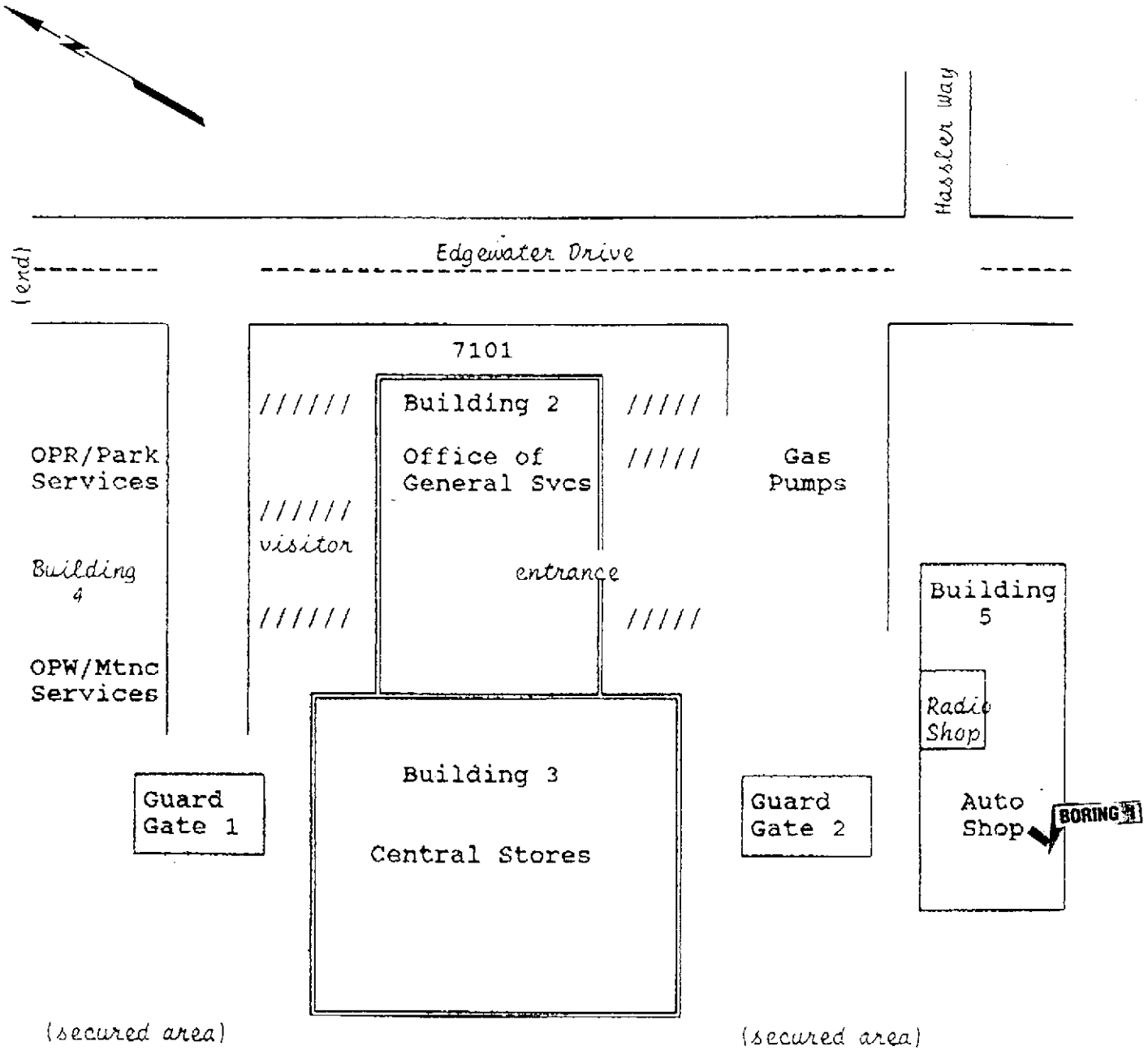
On June 5,1995 Applied Remediation Company's personnel was on site to proceed with the drilling of one soil boring. The soil boring was drilled using a 4 - inch hand auger by Soil Exploration Services of Vacaville, California personnel. The soil boring was drilled to a total depth of 10'. Samples were collected at 5 feet intervals up to the depth of 10 feet. The signed soil boring logs is in Appendix B. The logs indicate soil lithology and debris.

Figure 2 - 2 indicates the location of the soil boring (SB - 1) that was drilled during this project.

A total of two samples were collected from the bore hole. The soil samples were collected every five feet as illustrated in Appendix B. The samples were collected in 2" X 6" brass tubes.

Applied Remediation Environmental Laboratory a DHS Certified Laboratory in San Jose, California analyzed all the five samples. All the five samples were analyzed for Total Petroleum Hydrocarbons(TPH) as diesel and gasoline using DHS method M8015. The samples were also analyzed for benzene, toluene, ethylbenzene and total Xylenes(BTE&X) using EPA method 8015 Modified. The samples were analyzed for Oil and Grease by Modified Method 5520B. They were also analyzed for CL,HC using EPA method 8010. Also, the samples were analyzed for metals (Cd,Cr,Pb and Zn). The soil sample brass tubes were placed in an ice chest and maintained at 4°C. The ice chest was then transported in a company truck to the office of Applied Remediation Environmental Laboratory.

MUNICIPAL SERVICE CENTER
City of Oakland



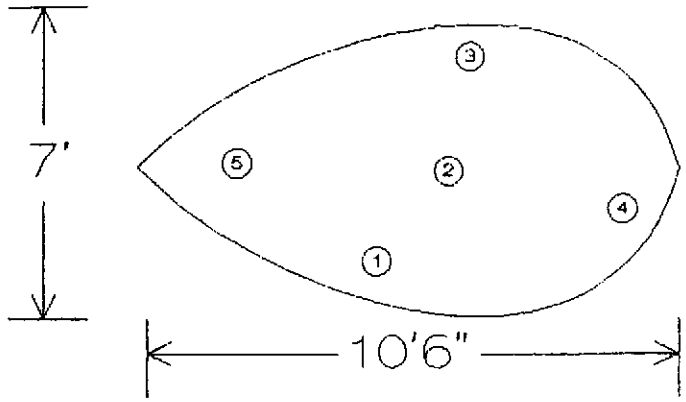
1 - Main Gate, Security Guard
2 - General Services (offices)
3 - Central Stores/Purchasing Warehouse and Crafts Shops
4 - Maintenance Svcs; Park Svcs
5 - Equipment Division Shops
5 - Radio Shop - OCIS

■ - Excavation

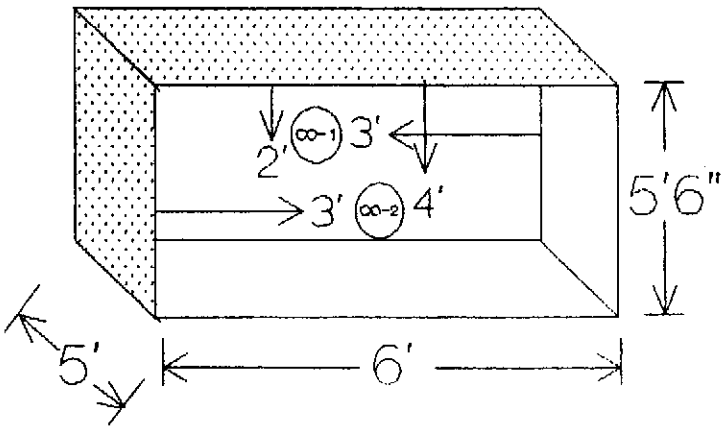
Note: All parking is RESERVED. Park in "Visitor" stalls.

(map not to scale)
7-1-92 vc

Site Map Figure 2 - 2



Sampling Locations
(Soil Pile Composite Samples)



Sampling Locations
(Pit Samples)

City of Oakland
7101 Edgewater Drive, Oakland, CA

Figure 3-1

The Chain of custody record which accompanied the samples during transportation was used to track the possession of the samples from the time of collection through analysis.

The soil sample laboratory results are presented in Appendix A. Diesel was non - detectable in all the five samples. Gasoline was non - detectable in all five samples. BTE&X was non-detectable in all five samples. Oil and Grease was detectable in five samples (CO-1: 75 mg/Kg, CO-2: 70 mg/Kg, CO-3: 1,100 mg/Kg, SB-1-5': 35 mg/Kg, SB-1-10': 99 mg/Kg). CL HC was detectable four samples. Methylene Chloride was detected in samples (CO-1: 8.6 ug/Kg, CO-2: 8.2 ug/Kg, CO-3: 8.8 ug/Kg and SB-1-5': 8.9 ug/Kg). Metals results were as followed: Cadmium was non - detectable in all samples, but Chromium, Lead and Zinc was detected in all samples (CO - 1: Cr 27.3 mg/Kg, Pb 7 mg/Kg and Zn 91.3 mg/Kg, CO - 2: Cr 41.3 mg/Kg, Pb 11 mg/Kg and Zn 31.9 mg/Kg, CO - 3: Cr 31.1 mg/Kg, Pb 12 mg/Kg and Zn 79.5 mg/Kg,SB - 1 - 5': Cr 27 mg/Kg, Pb 29 mg/Kg and Zn 79 mg/Kg , and SB - 1 - 10': Cr 25 mg/Kg,Pb 19 mg/Kg and Zn 73 mg/Kg).

3.2 SOIL DISPOSAL AND MANIFEST

On June 12, 1995, the contaminated soil generated during the hydraulic oil spill excavation and drilling was profiled, manifested and disposed of at Altamont Class III/II Landfill located near Livermore, California. See a copy of the manifest in Appendix C.

4.0 CONCLUSIONS

The soil samples (CO - 1, CO - 2, SB - 1 -5', and SB - 1 - 10') Laboratory results for Oil and Grease indicated that moderate levels of Oil and Grease were found in the pit and the soil boring. Based on the results, we fill that the spill has been removed and disposed at a proper class 2 - 3 landfill (Altomont Landfill near Livermore, CA).

Applied Remediation Company recommends that further remedial investigations be carried out within the building.

5.0 LIMITATIONS

The information, interpretations, data, conclusions and recommendations contained in this report are presented solely as preliminary base and guides to the existing environmental conditions of the property located at 7101 Edgewater Drive,Oakland, California. The conclusions and professional opinions presented herein were developed by Applied Remediation Company in accordance with generally accepted environmental engineering principles and practices. As with all geotechnical and environmental reports, the opinions expressed here are subject to revisions in light of new information which may be developed in the future, and no warranties are expressed or implied.

The report has been prepared for use by parties other than the responsible parties in the Municipal Service Center City of Oakland. It may not contain sufficient information for the purposes of other parties or other uses. If any charges are made in the project as described in this report, the conclusions and recommendations contained herein should not be considered valid, unless the changes are review by Applied Remediation Company, and the conclusions and recommendations modified or approved in writing.

Soil deposits may vary in type, strength and many other important properties between points of observation and exploration. Additionally, changes can occur in groundwater and soil moisture conditions due to seasonal variations, or other reasons.

Furthermore, the distribution of chemical concentrations in the soil and groundwater can vary spatially and over time. The chemical analysis results, valid at the present time only, are based on data collected at the sampling locations only. Therefore, it must be recognized that Applied Remediation Company does not and cannot have complete knowledge of the subsurface conditions underlying the subject site. The opinions presented are based upon the findings at the points of exploration, observation and upon interpretative data, including interpolation and extrapolation of information obtained at points of observation.

APPENDIX A-SOIL SAMPLE LABORATORY RESULTS AND CHAIN OF CUSTODY RECORD

Applied Remediation Environmental Laboratory
Certification No.: 1602

5 Days Turnaround

REPORT

Organic Analysis Data Sheet
Total Petroleum Hydrocarbons-Diesel by EPA 3540/8015 Modified

Project Number:	AR172	Instrument ID:	OI-GC
Site Name:	City Of Oak.Muni.S.C.	Analyst:	Aihe Zhou
Matrix:	Soil	Date Sampled:	5/24/95
Date Analyzed:	5/30/95	Date Reported:	5/31/95

Sample I.D.	TPH-D (mg/Kg)	PQL (mg/Kg)
MB	ND	5.0
CO-1	ND	5.0
CO-2	ND	5.0
CO-3	ND	5.0

LEGEND:
PQL = Practical Quantification Limit
ND = Not detected at above the PQL for the method
MB = Method blank
TPH-D = Total petroleum hydrocarbons, as diesel

These analyses were performed under California Department of Health Services "Environmental Laboratory Accreditation/Registration", Certificate No. 1602.

Approved by: _____
Aihe Zhou
Laboratory Director

1445 Koll Circle, Suite 109 Phone (408) 453-0501 San Jose, CA 95112
Fax (408) 453-0540

Applied Remediation Environmental Laboratory
Certification No.: 1602

5 Days Turnaround

REPORT

Quality Assurance Report

Total Petroleum Hydrocarbons-Diesel by EPA 3540/8015 Modified

Project Number:	AR172	Instrument ID:	OI-GC
Site Name:	City of Oak.Muni.S.C.	Analyst:	Aihe Zhou
Matrix:	Soil	Date Sampled:	
Date Analyzed:	5/30/95	Date Reported:	5/31/95

LCS/LCSD Report

Compound	Spike Added (mg/kg)	LCS Conc. (mg/kg)	%REC	%REC Limit
TPH-D	49.2	49.0	99.5	70-130

Compound	Spike Added (mg/kg)	LCSD Conc. (mg/kg)	%REC	%REC Limit	%RPD	%RPD Limit
TPH-D	50.0	56.7	113	70-130	-12.7	+/-20

LEGEND:
%REC = Percent of recovery
%RPD = Relative percent difference
LCS/LCSD = Laboratory control spike/Laboratory control spike duplicate

These analyses were performed under California Department of Health Services "Environmental Laboratory Accreditation/Registration", Certificate No. 1602.

Approved by: _____
Aihe Zhou
Laboratory Director

1445 Koll Circle, Suite 109 Phone (408) 453-0501 San Jose, CA 95112
Fax (408) 453-0540

Applied Remediation Environmental Laboratory
Certification No.: 1602

5 Days Turnaround

REPORT

Total Petroleum Hydrocarbons-Gasoline & BTEX Data Report by EPA 5030/8015 Modified

Project Number:	AR172	Instrument ID:	HUN.GC
Site Name:	City of Oak.Muni.S.C.	Analyst:	Aihe Zhou
Matrix:	Soil	Date Sampled:	5/24/95
Date Analyzed:	5/25/95	Date Reported:	5/30/95

Compound	CO-1 (ug/Kg)	CO-2 (ug/Kg)	CO-3 (ug/Kg)	MB (ug/Kg)	PQL (ug/Kg)	DF
TPH-gasoline	ND	ND	ND	ND	250	1
Benzene	ND	ND	ND	ND	2.5	1
Toluene	ND	ND	ND	ND	2.5	1
Ethylbenzene	ND	ND	ND	ND	2.5	1
Xylenes	ND	ND	ND	ND	2.5	1
% Surrogate Recovery	90.3	85.4	82.3	99.0	70-130	

LEGEND:
PQL = Practical Quantification Limit
ND = Not detected at above the PQL for the method
MB = Method blank
DF = Dilution factor

These analyses were performed under California Department of Health Services "Environmental Laboratory Accreditation/Registration", Certificate No. 1602.

Approved by: _____
Aihe Zhou
Laboratory Director

1445 Koll Circle, Suite 109 Phone (408) 453-0501 San Jose, CA 95112
Fax (408) 453-0540

Applied Remediation Environmental Laboratory
Certification No.: 1602

5 Days Turnaround

REPORT

Quality Assurance Report
Total Petroleum Hydrocarbons-Gasoline & BTEX
by EPA 5030/8015 Modified

Project Number:	AR172		
Site Name:	City of Oak.Muni.S.C.	Instrument ID:	HUN.GC
Matrix:	Soil	Date Analyzed:	5/25/95
Date Reported:	5/30/95	Analyst:	Aihe Zhou

LCS/LCSD Report

Compound	Spike Added (ug/Kg)	LCS Conc. (ug/Kg)	%REC	%REC Limit
TPH-Gasoline	2,170	2,000	92.1	70-130
Benzene	46.3	48.7	105	70-130
Toluene	46.3	47.3	102	70-130
Ethylbenzene	46.3	44.8	96.7	70-130
Xylenes	139.	134.	96.4	70-130

Compound	Spike Added (ug/Kg)	LCSD Conc. (ug/Kg)	%REC	%REC Limit	%RPD	%RPD Limit
TPH-Gasoline	2,120	1,960	92.4	70-130	-0.3	+/-20
Benzene	45.5	46.2	101	70-130	+3.9	+/-20
Toluene	45.5	45.6	100	70-130	+1.9	+/-20
Ethylbenzene	45.5	43.7	96.0	70-130	+0.7	+/-20
Xylenes	136.	130.	95.5	70-130	+0.9	+/-20

LEGEND:
%REC = Percent of recovery
%RPD = Relative percent difference
LCS/LCSD = Laboratory control spike/Laboratory control spike duplicate

These analyses were performed under California Department of Health Services "Environmental Laboratory Accreditation/Registration", Certificate No. 1602.

Approved by:
Aihe Zhou
Laboratory Director

1445 Koll Circle, Suite 109 Phone (408) 453-0501 San Jose, CA 95112
Fax (408) 453-0540

Applied Remediation Environmental Laboratory
Certification No.: 1602

5 Days Turnaround

REPORT

Halogenated Volatile Organics by EPA 601/8010

Project Number:	AR172	Analyst:	Aihe Zhou
Site Name:	City of Oak.Muni.S.C.	Instrument ID:	HUN.GC
Matrix:	Soil	Date Sampled:	5/24/95
Date Analyzed:	5/25/95	Date Reported:	5/31/95

Compound	CO-1 (ug/Kg)	CO-2 (ug/Kg)	CO-3 (ug/Kg)	MB (ug/Kg)	PQL (ug/Kg)	DF
Vinyl Chloride	ND	ND	ND	ND	5.0	1
Chloromethane	ND	ND	ND	ND	5.0	1
Bromomethane	ND	ND	ND	ND	5.0	1
Chloroethane	ND	ND	ND	ND	5.0	1
Dichlorodifluoromethane	ND	ND	ND	ND	5.0	1
Trichlorofluoromethane	ND	ND	ND	ND	5.0	1
1,1-Dichloroethylene	ND	ND	ND	ND	5.0	1
Methylene Chloride	8.6	8.2	8.8	ND	5.0	1
trans-1,2-Dichloroethylene	ND	ND	ND	ND	5.0	1
1,1-Dichloroethane	ND	ND	ND	ND	5.0	1
Chloroform	ND	ND	ND	ND	5.0	1
1,1,1-Trichloroethane	ND	ND	ND	ND	5.0	1
Carbon Tetrachloride	ND	ND	ND	ND	5.0	1
1,2-Dichloroethane	ND	ND	ND	ND	5.0	1
Trichloroethylene	ND	ND	ND	ND	5.0	1
1,2-Dichloropropane	ND	ND	ND	ND	5.0	1
Bromodichloromethane	ND	ND	ND	ND	5.0	1
2-Chloroethyl vinyl ether	ND	ND	ND	ND	5.0	1
cis-1,3-Dichloropropene	ND	ND	ND	ND	5.0	1
trans-1,3-Dichloropropene	ND	ND	ND	ND	5.0	1
1,1,2-Trichloroethane	ND	ND	ND	ND	5.0	1
Tetrachloroethylene	ND	ND	ND	ND	5.0	1
Dibromochloromethane	ND	ND	ND	ND	5.0	1
Chlorobenzene	ND	ND	ND	ND	5.0	1
Bromoform	ND	ND	ND	ND	5.0	1
1,1,2,2-Tetrachloroethane	ND	ND	ND	ND	5.0	1
1,3-Dichlorobenzene	ND	ND	ND	ND	5.0	1
1,4-Dichlorobenzene	ND	ND	ND	ND	5.0	1
1,2-Dichlorobenzene	ND	ND	ND	ND	5.0	1
% Surrogate Recovery	86.5	85.8	81.1	94.6	70-130	

1445 Koll Circle, Suite 109 Phone (408) 453-0501 San Jose, CA 95112
Fax (408) 453-0540

Applied Remediation Environmental Laboratory
Certification No.: 1602

5 Days Turnaround

REPORT

LEGEND:

PQL	= Practical Quantification Limit
ND	= Not detected at above the PQL for the method
MB	= Method blank
DF	= Dilution factor

These analyses were performed under California Department of Health Services "Environmental Laboratory Accreditation/Registration", Certificate No. 1602.

Approved by: _____
Aihe Zhou
Laboratory Director

1445 Koll Circle, Suite 109 Phone (408) 453-0501 San Jose, CA 95112
Fax (408) 453-0540

Applied Remediation Environmental Laboratory
Certification No.: 1602

5 Days Turnaround

Quality Assurance Report by EPA 601/8010

REPORT

Project Number:	AR172	Analyst:	Aihe Zhou
Site Name:	City of Oak.Muni.S.C.	Instrument ID:	HUN.GC
Matrix:	Soil	Date Sampled:	5/24/95
Date Analyzed:	5/25/95	Date Reported:	5/31/95

LCS/LCSD Report

Compound	Spike Added (ug/Kg)	LCS Conc. (ug/Kg)	%REC	%REC Limit
Chlorobenzene	46.3	50.4	109	70-130
1,1-Dichloroethane	46.3	51.0	110	70-130
1,1,1-Trichloroethane	46.3	50.5	109	70-130
Tetrachloroethylene	46.3	50.5	109	70-130

Compound	Spike Added (ug/Kg)	LCSD Conc. (ug/Kg)	%REC	%REC Limit	%RPD	%RPD Limit
Chlorobenzene	45.5	51.8	114	70-130	-4.5	+/-20
1,1-Dichloroethane	45.5	49.1	108	70-130	+1.8	+/-20
1,1,1-Trichloroethane	45.5	50.9	112	70-130	-2.7	+/-20
Tetrachloroethylene	45.5	50.5	111	70-130	-1.8	+/-20

LEGEND:
%REC = Percent of recovery
%RPD = Relative percent difference
LCS/LCSD = Laboratory control spike/Laboratory control spike duplicate

These analyses were performed under California Department of Health Services "Environmental Laboratory Accreditation/Registration", Certificate No. 1602.

Approved by: _____
Aihe Zhou
Laboratory Director

1445 Koll Circle, Suite 109 Phone (408) 453-0501 San Jose, CA 95112
Fax (408) 453-0540

Applied Remediation Environmental Laboratory
Certification No.: 1602

5 Days Turnaround

REPORT

Oil & Grease Analysis Data Sheet
Modified Method 5520B

Project Number:	AR172	Date Sampled:	5/24/95
Site Name:	City of Oak.Muni.S.C.	Date analyzed:	5/26/95
Matrix:	Soil	Date Reported:	5/31/95
		Analyst:	Aihe Zhou AHZ

Sample I.D.	Oil & Grease (mg/Kg)	PQL (mg/Kg)
MB	ND	33.
CO-1	75.	33.
CO-2	70.	33.
CO-3	1,100	33.

LEGEND:
PQL = Practical Quantification Limit
ND = Not detected at above the PQL for the method
MB = Method blank

These analyses were performed under California Department of Health Services "Environmental Laboratory Accreditation/Registration", Certificate No. 1602.

Approved by: _____
Aihe Zhou
Laboratory Director

1445 Koll Circle, Suite 109 Phone (408) 453-0501 San Jose, CA 95112
Fax (408) 453-0540

Applied Remediation Environmental Laboratory
Certification No.: 1602

5 Days Turnaround

REPORT

Quality Assurance Report
Oil & Grease by Modified Method 5520B

Project Number:	AR172	Date Analyzed:	5/26/95
Site Name:	City of Oak.Muni.S.C.	Date Reported:	5/31/95
Matrix:	Soil	Analyst:	Aihe Zhou

LCS/LCSD Report

Compound	Spike Added (mg/kg)	LCS Conc. (mg/kg)	%REC	%REC Limit
Oil & Grease	1514	1311	86.5	70-130

Compound	Spike Added (mg/kg)	LCSD Conc. (mg/kg)	%REC	%REC Limit	%RPD	%RPD Limit
Oil & Rease	1923	1617	84.0	70-130	+2.9	+/-20

LEGEND:
%REC = Percent of recovery
%RPD = Relative percent difference
LCS/LCSD = Laboratory control spike/Laboratory control spike duplicate

These analyses were performed under California Department of Health Services "Environmental Laboratory Accreditation/Registration", Certificate No. 1602.

Approved by: _____
Aihe Zhou
Laboratory Director

1445 Koll Circle, Suite 109 Phone (408) 453-0501 San Jose, CA 95112
Fax (408) 453-0540

Applied Remediation Environmental Laboratory
Certification No.: 1602

5 Days Turnaround

REPORT

INORGANIC ANALYSIS DATA SHEET

Project Number: AR172
Site Name: City of Oakland
Matrix: Soil
Date Sampled: 5/24/95
Date Analyzed : 5/25/95
Sample I.D.: CO-1(1746)
Analyst: HMG HMG
Instrument I.D.: PE5000
Date Reported: 5/25/95

Element	EPA Method	Test Results mg/Kg	Detection Limit mg/Kg
Cadmium (Cd)	213.1/7130	ND	1.0
Chromium (Cr)	218.1/7190	27.3	2.50
Lead (Pb)	239.1/7420	7.0	5.0
Zinc (Zn)	289.1/7950	91.3	5.00

LEGEND:
ND = Not detected below the practical quantification limit for the method
mg/Kg = ppm
MS = Matrix Spike
MSD = Matrix Spike Duplicate

Element	Spike Sample I.D.	Sample Conc. mg/Kg	Spike Added mg/Kg	MS MS Conc.	MS %Rec	MSD MSD Conc.	MSD %Rec	RPD %	Control Limit
Cadmium	1746	ND	50.0	49.0	98	49.5	99	-1.0	±20
Chromium	1746	27.3	50.0	67.1	80	67.0	80	0.0	±20
Lead	1746	7.00	50.0	56.4	99	57.5	101	-2.0	±20
Zinc	1746	91.3	50.0	151	119	148	113	+5.2	±20

These Analyses were performed under California Department of Health Services "Environmental Laboratory Accrediation/Registration", Certificate No. 1602.

Approved By: _____
Aihe Zhou
Laboratory Director

1445 Koll Circle, Suite 109 Phone (408) 453-0501 Fax (408) 453-0540 San Jose, CA 95112

Applied Remediation Environmental Laboratory
Certification No.: 1602

5 Days Turnaround

REPORT

INORGANIC ANALYSIS DATA SHEET

Project Number:	AR172		
Site Name:	City Of Oakland	Sample I.D.:	CO-2 (1747)
Matrix:	Soil	Analyst:	HMG HMG
Date Sampled:	5/24/95	Instrument I.D.:	PE5000
Date Analyed:	5/25/95	Dated Reported:	5/25/95

Element	EPA Method	Test Results mg/Kg	Detection Limit mg/Kg
Cadmium (Cd)	213.1/7130	ND	1.0
Chormium (Cr)	218.1/7190	41.3	2.50
Lead (Pb)	239.1/7420	11	5.0
Zinc (Zn)	289.1/7950	31.9	2.50

Legend:
ND = Not detected below the practical quantification limit for the method
mg/Kg = ppm
MS = Matrix Spike
MSD = Matrix Spike Duplicate

Element	Spike Sample I.D.	Sample Conc. mg/Kg	Spike Added mg/Kg	MS MS Conc	MS % Rec	MSD MSD Conc.	MSD % Rec	RPD %	Control Limit
Cadmium	1746	ND	50.0	49.0	98	49.5	99	-1.0	±20
Chromium	1746	27.3	50.0	67.1	80	67.0	80	0.0	±20
Lead	1746	7.00	50.0	56.4	99	57.5	101	-2.0	±20
Zinc	1746	91.3	50.0	151	119	148	113	+5.2	±20

These Analyses were performed under California Department of Health Services "Environmental Laboratory Accrediation/Registration", Certificate No. 1602.

Approved By: _____
Aihe Zhou
Laboratory Director

1445 Koll Circle, Suite 109 Phone (408) 453-0501 San Jose, CA 95112
Fax (408) 453-0540

Applied Remediation Environmental Laboratory
Certification No.: 1602

5 Days Turnaround

REPORT

INORGANIC ANALYSIS DATA SHEET

Project Number:	AR172	Sample I.D.:	CO-3 (1748)
Site Name:	City of Oakland	Analysist:	HMG HMG
Matrix:	Soil	Instrument I.D.:	PE 5000
Date Sampled:	5/24/95	Date Reported:	5/25/95
Date Analyzed:	5/25/95		

Element	EPA Method	Test Results mg/Kg	Detection Limit mg/Kg
Cadmium (Cd)	213.1/7130	ND	1.0
Chromium (Cr)	218.1/7190	31.1	2.50
Lead (Pb)	239.1/7420	12	5.0
Zinc (Zn)	289.1/7950	79.5	2.50

Legend:
ND = Not detected below the practical quantification limit for the method
mg/Kg = ppm
MS = Matrix Spike
MSD = Matrix Spike Duplicate

Element	Spike Sample I.D.	Sample Conc mg/Kg	Spike Added mg/Kg	MS MS Conc.	MS %Rec	MSD MSD Conc	MSD %REC	RPD %	Control Limit
Cadmium	1746	ND	50.0	49.0	98	49.5	99	-1.0	±20
Chromium	1746	27.3	50.0	67.1	80	67.0	80	0.0	±20
Lead	1746	7.00	50.0	56.4	99	57.5	101	-2.0	±20
Zinc	1746	91.3	50.0	151	119	148	113	+5.2	±20

These Analyses were performed under California Department of Health Services "Environmental Laboratory Accrediation/Registration", Certificate No. 1602.

Approved By: _____
Aihe Zhou
Laboratory Director

INORGANIC ANALYSIS DATA SHEET

1445 Koll Circle, Suite 109 Phone (408) 453-0501 San Jose, CA 95112
Fax (408) 453-0540

Applied Remediation Environmental Laboratory

Certification No. : 1602

5 DAYS TURNAROUND

CHAIN OF CUSTODY

Site Name: City of Oakland Municipal Service Center, 7101 Edgewater Dr. Bldg 5

Project Number: AR172

Project Manager: D. Goldberg

Sampled by: (Printed & Written SIGNATURE) Mark A. Mestressat

Report Due Date:

Sample ID	DATE	TIME	MATRIX	SAMPLE LOCATION	Number & Type of Containers	PRE-SERVATIVES	ANALYSIS: TPH-g	BTE&X	TPH-d	Oil and Grease	CL, HC, EPA 8010	Metals- Cd, Cr, Pb and Zn			REMARKS
															cool to 4°C
CO-1	5-24-95	10:35	Soil	Pit Up Grade Dir.	1-Brass	NP	X	X	X	X	X	X			1746
CO-2	5-24-95	10:35	Soil	Pit down Grade Dir.	1-Brass	NP	X	X	X	X	X	X			1747
CO-3	5-24-95	12:30	Soil	Soil Pile "Composite"	1-Brass	NP	X	X	X	X	X	X			1748

Relinquished by: Mark A. Mestressat	Date/Time 5-24-95 14:52	Received by: BM 5/24 3:30 PM
Relinquished by:	Date/Time	Received by:
Relinquished by:	Date/Time	Received for lab by:

REMARKS

1445 Koll Circle, Suite 109, P.O. Box 612421 San Jose,CA 95161-2421 (408) 453-0501 FAX (408) 453-0540

Applied Remediation Environmental Laboratory
Certification No.: 1602

5 Days Turnaround

REPORT

Total Petroleum Hydrocarbons-Gasoline & BTEX Data Report by EPA 5030/8015 Modified

Project Number:	AR172	Instrument ID:	HUN.GC
Site Name:	City of Oak.Muni.S.C.	Analyst:	Aihe Zhou
Matrix:	Soil	Date Sampled:	6/5/95
Date Analyzed:	6/6/95	Date Reported:	6/9/95

Compound	SB-1-5' (ug/Kg)	SB-1-10' (ug/Kg)	MB (ug/Kg)	PQL (ug/Kg)	DF
TPH-gasoline	ND	ND	ND	250	1
Benzene	ND	ND	ND	2.5	1
Toluene	ND	ND	ND	2.5	1
Ethylbenzene	ND	ND	ND	2.5	1
Xylenes	ND	ND	ND	2.5	1
% Surrogate Recovery	95.6	95.0	99.6	70-130	

LEGEND:
PQL = Practical Quantification Limit
ND = Not detected at above the PQL for the method
MB = Method blank
DF = Dilution factor

These analyses were performed under California Department of Health Services "Environmental Laboratory Accreditation/Registration", Certificate No. 1602.

Approved by: _____
Aihe Zhou
Laboratory Director

1445 Koll Circle, Suite 109 Phone (408) 453-0501 San Jose, CA 95112
Fax (408) 453-0540

Applied Remediation Environmental Laboratory
Certification No.: 1602

5 Days Turnaround

REPORT

Quality Assurance Report
Total Petroleum Hydrocarbons-Gasoline & BTEX
by EPA 5030/8015 Modified

Project Number:	AR172		
Site Name:	City of Oak.Muni.S.C.	Instrument ID:	HUN.GC
Matrix:	Soil	Analyst:	Aihe Zhou
Date Analyzed:	6/6/95	Date Reported:	6/9/95

LCS/LCSD Report

Compound	Spike Added (ug/Kg)	LCS Conc. (ug/Kg)	%REC	%REC Limit
TPH-Gasoline	2,470	2,130	86.2	70-130
Benzene	43.5	38.7	89.0	70-130
Toluene	43.5	38.3	88.0	70-130
Ethylbenzene	43.5	36.9	84.8	70-130
Xylenes	131.	113.	86.3	70-130

Compound	Spike Added (ug/Kg)	LCSD Conc. (ug/Kg)	%REC	%REC Limit	%RPD	%RPD Limit
TPH-Gasoline	2,420	2,110	87.2	70-130	-1.1	+/-20
Benzene	48.1	46.7	97.0	70-130	-8.6	+/-20
Toluene	48.1	46.2	96.0	70-130	-8.7	+/-20
Ethylbenzene	48.1	46.2	96.0	70-130	-12	+/-20
Xylenes	144.	137.	95.0	70-130	-9.6	+/-20

LEGEND:
%REC = Percent of recovery
%RPD = Relative percent difference
LCS/LCSD = Laboratory control spike/Laboratory control spike duplicate

These analyses were performed under California Department of Health Services "Environmental Laboratory Accreditation/Registration", Certificate No. 1602.

Approved by:
Aihe Zhou
Laboratory Director

1445 Koll Circle, Suite 109 Phone (408) 453-0501 San Jose, CA 95112
Fax (408) 453-0540

Applied Remediation Environmental Laboratory
Certification No.: 1602

5 Days Turnaround

REPORT

Organic Analysis Data Sheet
Total Petroleum Hydrocarbons-Diesel by EPA 3540/8015 Modified

Project Number:	AR172	Instrument ID:	OI-GC
Site Name:	City Of Oak.Muni.S.C.	Analyst:	Aihe Zhou
Matrix:	Soil	Date Sampled:	6/5/95
Date Analyzed:	6/8/95	Date Reported:	6/9/95

Sample I.D.	TPH-D (mg/Kg)	PQL (mg/Kg)
MB	ND	5.0
SB-1-5'	ND	5.0
SB-1-10'	ND	5.0

LEGEND:
PQL = Practical Quantification Limit
ND = Not detected at above the PQL for the method
MB = Method blank
TPH-D = Total petroleum hydrocarbons, as diesel

These analyses were performed under California Department of Health Services "Environmental Laboratory Accreditation/Registration", Certificate No. 1602.

Approved by: _____
Aihe Zhou
Laboratory Director

1445 Koll Circle, Suite 109 Phone (408) 453-0501 San Jose, CA 95112
Fax (408) 453-0540

Applied Remediation Environmental Laboratory
Certification No.: 1602

5 Days Turnaround

REPORT

Quality Assurance Report

Total Petroleum Hydrocarbons-Diesel by EPA 3540/8015 Modified

Project Number:	AR172	Instrument ID:	OI-GC
Site Name:	City of Oak.Muni.S.C.	Analyst:	Aihe Zhou
Matrix:	Soil	Date Sampled:	
Date Analyzed:	6/8/95	Date Reported:	6/9/95

LCS/LCSD Report

Compound	Spike Added (mg/kg)	LCS Conc. (mg/kg)	%REC	%REC Limit
TPH-D	41.6	37.6	90.4	70-130

Compound	Spike Added (mg/kg)	LCSD Conc. (mg/kg)	%REC	%REC Limit	%RPD	%RPD Limit
TPH-D	41.1	39.4	95.8	70-130	-5.8	+/-20

LEGEND:
%REC = Percent of recovery
%RPD = Relative percent difference
LCS/LCSD = Laboratory control spike/Laboratory control spike duplicate

These analyses were performed under California Department of Health Services "Environmental Laboratory Accreditation/Registration", Certificate No. 1602.

Approved by: _____
Aihe Zhou
Laboratory Director

1445 Koll Circle, Suite 109 Phone (408) 453-0501 San Jose, CA 95112
Fax (408) 453-0540

Applied Remediation Environmental Laboratory
Certification No.: 1602

5 Days Turnaround

REPORT

Oil & Grease Analysis Data Sheet
Modified Method 5520B

Project Number:	AR172	Date Sampled:	6/5/95
Site Name:	City of Oak.Muni.S.C.	Date analyzed:	6/7/95
Matrix:	Soil	Date Reported:	6/9/95
		Analyst:	Aihe Zhou

Sample I.D.	Oil & Grease (mg/Kg)	PQL (mg/Kg)
MB	ND	33.
SB-1-5'	35.	33.
SB-1-10'	99.	33.

LEGEND:
PQL = Practical Quantification Limit
ND = Not detected at above the PQL for the method
MB = Method blank

These analyses were performed under California Department of Health Services "Environmental Laboratory Accreditation/Registration", Certificate No. 1602.

Approved by: _____
Aihe Zhou
Laboratory Director

1445 Koll Circle, Suite 109 Phone (408) 453-0501 San Jose, CA 95112
Fax (408) 453-0540

Applied Remediation Environmental Laboratory
Certification No.: 1602

5 Days Turnaround

REPORT

Quality Assurance Report
Oil & Grease by Modified Method 5520B

Project Number:	AR172	Date Analyzed:	6/7/95
Site Name:	City of Oak.Muni.S.C.	Date Reported:	6/9/95
Matrix:	Soil	Analyst:	Aihe Zhou

LCS/LCSD Report

Compound	Spike Added (mg/kg)	LCS Conc. (mg/kg)	%REC	%REC Limit
Oil & Grease	1450	1240	85.5	70-130

Compound	Spike Added (mg/kg)	LCSD Conc. (mg/kg)	%REC	%REC Limit	%RPD	%RPD Limit
Oil & Rease	1420	1250	88.0	70-130	-2.8	+/-20

LEGEND:
%REC = Percent of recovery
%RPD = Relative percent difference
LCS/LCSD = Laboratory control spike/Laboratory control spike duplicate

These analyses were performed under California Department of Health Services "Environmental Laboratory Accreditation/Registration", Certificate No. 1602.

Approved by: _____
Aihe Zhou
Laboratory Director

1445 Koll Circle, Suite 109 Phone (408) 453-0501 San Jose, CA 95112
Fax (408) 453-0540

Applied Remediation Environmental Laboratory
Certification No.: 1602

5 Days Turnaround

REPORT

Halogenated Volatile Organics by EPA 601/8010

Project Number:	AR172	Analyst:	Aihe Zhou
Site Name:	City of Oak.Muni.S.C.	Instrument ID:	HUN.GC
Matrix:	Soil	Date Sampled:	6/5/95
Date Analyzed:	6/6/95	Date Reported:	6/9/95

Compound	SB-1-5' (ug/Kg)	SB-1-10' (ug/Kg)	MB (ug/Kg)	PQL (ug/Kg)	DF
Vinyl Chloride	ND	ND	ND	5.0	1
Chloromethane	ND	ND	ND	5.0	1
Bromomethane	ND	ND	ND	5.0	1
Chloroethane	ND	ND	ND	5.0	1
Dichlorodifluoromethane	ND	ND	ND	5.0	1
Trichlorofluoromethane	ND	ND	ND	5.0	1
1,1-Dichloroethylene	ND	ND	ND	5.0	1
Methylene Chloride	8.9	ND	ND	5.0	1
trans-1,2-Dichloroethylene	ND	ND	ND	5.0	1
1,1-Dichloroethane	ND	ND	ND	5.0	1
Chloroform	ND	ND	ND	5.0	1
1,1,1-Trichloroethane	ND	ND	ND	5.0	1
Carbon Tetrachloride	ND	ND	ND	5.0	1
1,2-Dichloroethane	ND	ND	ND	5.0	1
Trichloroethylene	ND	ND	ND	5.0	1
1,2-Dichloropropane	ND	ND	ND	5.0	1
Bromodichloromethane	ND	ND	ND	5.0	1
2-Chloroethyl vinyl ether	ND	ND	ND	5.0	1
cis-1,3-Dichloropropene	ND	ND	ND	5.0	1
trans-1,3-Dichloropropene	ND	ND	ND	5.0	1
1,1,2-Trichloroethane	ND	ND	ND	5.0	1
Tetrachloroethylene	ND	ND	ND	5.0	1
Dibromochloromethane	ND	ND	ND	5.0	1
Chlorobenzene	ND	ND	ND	5.0	1
Bromoform	ND	ND	ND	5.0	1
1,1,2,2-Tetrachloroethane	ND	ND	ND	5.0	1
1,3-Dichlorobenzene	ND	ND	ND	5.0	1
1,4-Dichlorobenzene	ND	ND	ND	5.0	1
1,2-Dichlorobenzene	ND	ND	ND	5.0	1
% Surrogate Recovery	98.1	96.1	96.7	70-130	

1445 Koll Circle, Suite 109 Phone (408) 453-0501 San Jose, CA 95112
Fax (408) 453-0540

Applied Remediation Environmental Laboratory
Certification No.: 1602

5 Days Turnaround

REPORT

LEGEND:

PQL	= Practical Quantification Limit
ND	= Not detected at above the PQL for the method
MB	= Method blank
DF	= Dilution factor

These analyses were performed under California Department of Health Services "Environmental Laboratory Accreditation/Registration", Certificate No. 1602.

Approved by: _____
Aihe Zhou
Laboratory Director

1445 Koll Circle, Suite 109 Phone (408) 453-0501 San Jose, CA 95112
Fax (408) 453-0540

Applied Remediation Environmental Laboratory
Certification No.: 1602

5 Days Turnaround

Quality Assurance Report by EPA 601/8010

REPORT

Project Number:	AR172		
Site Name:	City of Oak.Muni.S.C.	Instrument ID:	HUN.GC
Matrix:	Soil	Analyst:	Aihe Zhou
Date Analyzed:	6/6/95	Date Reported:	6/9/95

LCS/LCSD Report

Compound	Spike Added (ug/Kg)	LCS Conc. (ug/Kg)	%REC	%REC Limit
Chlorobenzene	43.5	39.4	90.6	70-130
1,1-Dichloroethane	43.5	40.5	93.1	70-130
1,1,1-Trichloroethane	43.5	38.4	88.3	70-130
Tetrachloroethylene	43.5	42.6	97.9	70-130

Compound	Spike Added (ug/Kg)	LCSD Conc. (ug/Kg)	%REC	%REC Limit	%RPD	%RPD Limit
Chlorobenzene	48.1	47.9	99.5	70-130	-9.4	+/-20
1,1-Dichloroethane	48.1	47.8	99.4	70-130	-6.5	+/-20
1,1,1-Trichloroethane	48.1	47.4	98.5	70-130	-11	+/-20
Tetrachloroethylene	48.1	48.5	101	70-130	-3.1	+/-20

LEGEND:
%REC = Percent of recovery
%RPD = Relative percent difference
LCS/LCSD = Laboratory control spike/Laboratory control spike duplicate

These analyses were performed under California Department of Health Services "Environmental Laboratory Accreditation/Registration", Certificate No. 1602.

Approved by: _____
Aihe Zhou
Laboratory Director

1445 Koll Circle, Suite 109 Phone (408) 453-0501 San Jose, CA 95112
Fax (408) 453-0540

Applied Remediation Environmental Laboratory
Certification No.: 1602

5 Days Turnaround

REPORT

INORGANIC ANALYSIS DATA SHEET

Project Number:	AR172	Analyst:	HMG
Site Name:	City of Oakland	Instrument I.D.:	PE 5000
Matrix:	Soil	Sample I.D.:	SB-1-5 (1753)
Date Sampled:	6/5/95	Date Reported:	6/7/95
Date Analyzed:	6/7/95		

Element	EPA Method	Test Results mg/Kg	Detection Limit mg/Kg
Cadmium (Cd)	213.1/7130	ND	1.0
Chromium (Cr)	218.1/7190	27	2.5
Lead (Pb)	239.1/7420	29	10
Zinc (Zn)	289.1/7950	79	2.5

LEGEND:
ND = Not detected below the practical quantification limit for the method
mg/Kg = ppm
MS = Matrix Spike
MSD = Matrix Spike Duplicate
RPD = Relative Percent Difference

Element	Spike Sample I.D.	Sample Conc. mg/Kg	Spike Added mg/Kg	MS Conc. mg/Kg	MS Rec. %	MSD Conc. mg/Kg	MSD Rec. %	RPD %	Control Limit
Cadmium	1753	ND	50.0	51.5	103	51.5	103	0	±20
Chromium	1753	27	50.0	67.5	81.0	67.5	81.0	0	±20
Lead	1753	29	50.0	83.0	108	83.0	108	0	±20
Zinc	1753	79	50.0	121	84.0	121	84.0	0	±20

These analyses were performed under California Department of Health Services "Environmental Laboratory Accrediation/Registration", Certificate No. 1602.

Approved By: _____
Aihe Zhou
Laboratory Director

1445 Koll Circle, Suite 109 Phone (408) 453-0501 San Jose, CA 95112
Fax (408) 453-0540

Applied Remediation Environmental Laboratory
Certification No.: 1602

5 Days Turnaround

INORGANIC ANALYSIS DATA SHEET

REPORT

Project Number:	AR172	Analyst:	HMG HMG
Site Name:	City of Oakland	Instrument I.D.:	PE 5000
Matrix:	Soil	Sample I.D.	SB-1-10 (1754)
Date Sampled:	6/5/95	Date Reported:	6/7/95
Date Analyzed:	6/7/95		

Element	EPA Method	Test Results mg/Kg	Detection Limit mg/Kg
Cadmium (Cd)	213.1/7130	ND	1.0
Chromium (Cr)	218.1/7190	25	2.5
Lead (Pb)	239.1/7420	19	10
Zinc (Zn)	289.1/7950	73	2.5

LEGEND
ND = Not detected below the practical quantification limit for the method
mg/Kg = ppm
MS = Matrix Spike
MSD = Matrix Spike Duplicate
RPD = Relative Percent Difference

Element	Spike Sample I.D.	Sample Conc. mg/Kg	Spike Added mg/Kg	MS Conc. mg/Kg	MS Rec. %	MSD Conc. mg/Kg	MSD Rec. %	RPD %	Control Limit
Cadmium	1753	ND	50.0	51.5	103	51.5	103	0	±20
Chromium	1753	27	50.0	67.5	81.0	67.5	81.0	0	±20
Lead	1753	29	50.0	83.0	108	83.0	108	0	±20
Zinc	1753	79	50.0	121	84.0	121	84.0	0	±20

These analyses were performed under California Department of Health Services "Environmental Laboratory Accrediation/Registration", Certificate No. 1602.

Approved By: _____
Aihe Zhou
Laboratory Director

1445 Koll Circle, Suite 109 Phone (408) 453-0501 Fax (408) 453-0540 San Jose, CA 95112

COC # 642

Applied Remediation Environmental Laboratory

Certification No. : 1602

5 DAYS TURNAROUND

CHAIN OF CUSTODY

Site Name: City of Oakland, Municipal Service Center, 7101 Edgewater Dr. Bldg #5

Project Number: AR172

Project Manager: B. Ogamba

Sampled by: (Printed & Written SIGNATURE) Mark A Mestressat

Report Due Date:

Sample ID	DATE	TIME	MATRIX	SAMPLE LOCATION	Number & Type of Containers	PRE-SERVATIVES	ANALYSIS: TPH-g/BTEX	TPH-d	EPA 8010	Oil and Grease	Metals-Cd, Cr, Pb and Zn				REMARKS
SB-1-5'	6-5-95	10:40	Soil	Bore hole-1	1-Brass	NP	X	X	X	X	X				1753
SB-1-10	6-5-95	11:38	Soil	Bore hole-1	1-Brass	NP	X	X	X	X	X				1754

Cool to 4°C

Relinquished by: Mark A Mestressat	Date/Time 6-5-95 16:01	Received by:	REMARKS
Relinquished by:	Date/Time	Received by: 6-5-95 16:01pm	
Relinquished by:	Date/Time	Received for lab by:	

445 Koll Circle, Suite 109, P.O. Box 612421 San Jose, CA 95161-2421 (408) 453-0501 FAX (408) 453-0[illegible]

APPENDIX B - SOIL BORING DRILLING LOG AND DRILLING PERMIT

Soil Boring Drilling Log

Project: City of Oakland, AR172		Log No. SB-1
7101 Edgewater Drive, Oakland, CA		
Total Depth: 10.0 Feet	Sheet 1 of 1	

Depth (feet)	Sample I.D. NO.	Sample Type	P.I.D. (PPM)	Blows/6"	USCS	Description	Remarks	Depth (feet)
	N/A	N/A	N/A	N/A	N/A	Concrete		
1	N/A	N/A	N/A	N/A	GM	Brown Gravel-Sand-Silt Mixture(Backfill) Dry, No Odor		1
2								2
3	N/A	N/A	N/A	N/A	SM	Brown Sand-Silt Mixture, Dry, No Odor		3
4	N/A	N/A	N/A	N/A	GM	Brown Gravel-Sand-Silt Mixture, Dry, No Odor		4
5	N/A	N/A	N/A	N/A	ML	Brown Clayey-Silts, Dry, No Odor		5
6	SB-1-5'	SP	N/A	24	GM	Brown Gravel-Sand-Silt Mixture Dry, No Odor		6
7								7
8								8
9								9
10	SB-1-10'	N/A	N/A	N/A	GM	Brown Gravel-Sand-Silt Mixture Dry, No Odor		10
11								11
12								12
13								13
14								14
15								15

Designated Purpose(s) of Log:
Soil Sample Analysis

Note: Logs to be used only for designated purpose(s).

Logged by: Mark A. Mestressat Date 6/5/95 MAM

Drafted by: Mark A. Mestressat Date 6/13/95 MAM

Supervised by: Mark A. Mestressat Date 6/5/95 MAM

ZONE 7 WATER AGENCY

5997 PARKSIDE DRIVE PLEASANTON, CALIFORNIA 94588 VOICE (510) 484-2600
FAX (510) 462-3914

DRILLING PERMIT APPLICATION

FOR APPLICANT TO COMPLETE

LOCATION OF PROJECT City of Oakland Municipal Service Center Building #5, 7101 Edgewater Dr., Oakland, CA 94621-3001

CLIENT
Name City of Oakland
Address 7101 Edgewater Dr. Voice (510) 615-5514
City Oakland Zip 94621-3001

APPLICANT
Name Applied Remediation Company
Fax (408) 453-0757
Address P.O. Box 612421 Voice (408) 453-0188
City San Jose, Zip 95161-2421

TYPE OF PROJECT

Well Construction		Geotechnical Investigation	
Cathodic Protection	___	General	___
Water Supply	___	Contamination	X
Monitoring	___	Well Destruction	___

PROPOSED WATER SUPPLY WELL USE
Domestic ___ Industrial ___ Other ___
Municipal ___ Irrigation ___

DRILLING METHOD:
Mud Rotary ___ Air Rotary ___ Auger (Hollow Stem)
Cable ___ Other ___

DRILLER'S LICENSE NO. 582696 Classification C57

WELL PROJECTS

Drill Hole Diameter	___	in.	Maximum		
Casing Diameter	___	in.	Depth	___	ft.
Surface Seal Depth	___	ft.	Number	___	

GEOTECHNICAL PROJECTS

Number of Borings	1		Maximum		
Hole Diameter	8	in.	Depth	15	ft.

ESTIMATED STARTING DATE May 8, 1995
ESTIMATED COMPLETION DATE May 15, 1995

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

APPLICANT'S SIGNATURE [signature] Date 9 May 95 B-3
CH # 4114 Exp 12/31/95

FOR OFFICE USE

PERMIT NUMBER 95292
LOCATION NUMBER ___

PERMIT CONDITIONS

Circled Permit Requirements Apply

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

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

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

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

E. WELL DESTRUCTION. See attached.

Approved Wyman Hong Date 10 May 95
Wyman Hong

91992

APPENDIX C-SIGNED MANIFESTS AND CORRESPONDENCES

ALL PETROLEUM RECOVERY SERVICE

Tom Alexander
1433 Grand Avenue
Pacifica, CA 94044 Applied Remediation

E.P.A. #
CAD981377633

☐ Lubricating Oil **(415) 359-0469** ☐ Industrial Oil

Customer Name: City of Oakland
Address: 7101 Edgewood Dr
City Oakland State Ca Zip
Phone: Day 408-453-0188 Night
Contact: Dave Date: 5 26 95
Customer E.P.A. I.D. #: CAD981424609
Manifest Number: 95367208

ITEM:	QTY	☐ Per Gal. Charge	Sub Total
Waste Petroleum Oils	Gal.	$	$
NOS, Combustable Liquid,		☒ Service Charge	$
NA1270, State Waste No. 221	170 Gal	$ 75	$ 75.00
Antifreeze	Gal.	$	$
Chlorinated Oil	Gal.	$	$
Chlor-D-Tect Testing	Ppm		$
Contaminated Water	35 Gal.	$ 1.50	$ 52.53
Rice Hull	Bags	$ /Bag	$
Others		Total	$ 127.53

P.O. # _____ Cash ☐ Check ☐ # _____

All accounts are due & payable within seven (7) days from date above
No statement will be issued.

X _____ X _____
Signature of generator Signature of driver

Inv: 6301 **THANK YOU!**

Designated Facility: ☒ Evergreen Oil Inc. - 6880 Smith Ave. - Newark, CA 94560
☐ PRC 13331 North Highway - Patterson, CA 95363
☐ DeMenno/Kerdoon - 2100 N. Alameda St. - Compton, CA 90222

State of California—Environmental Protection Agency
Form Approved OMB No. 2050-0039 (Expires 9-30-94)
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

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. CAD981461696 | Manifest Document No. 93367 | 2. Page 1 of 1 | Information in the shaded areas is not required by Federal law.

GENERATOR

3. Generator's Name and Mailing Address
City of Oakland
7101 Edgewater Dr
Oakland Ca 94620

4. Generator's Phone (510) 615-5514

5. Transporter 1 Company Name: ALL PETROLEUM RECOVERY SERVICE | 6. US EPA ID Number: CAD 983773633

7. Transporter 2 Company Name | 8. US EPA ID Number

9. Designated Facility Name and Site Address
EVERGREEN OIL, INC.
6880 Smith Ave., Newark, CA 94560

10. US EPA ID Number: CAD 099537418

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
a. USED OIL AND WATER, Non RCRA Hazardous Waste Liquid	001	TF	135	G
b.				
c.				
d.				

15. Special Handling Instructions and Additional Information

Wear Rubber Gloves
DOT ERG #31

24 Hour Emergency Response Telephone-(415)359-0469
Emergency Contact- Tom Alexander

16. **GENERATOR'S CERTIFICATION:** I hereby declare that the contents of the 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 federal, state and international laws.

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
Mark A. Hostressat		05	26	95

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year
Tom Alexander		05	26	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	Signature	Month	Day	Year
Mario Juarez		05	26	95

DO NOT WRITE BELOW THIS LINE.

DTSC 8022A (7/92)
EPA 8700—22

C-3

Yellow: TSDF SENDS THIS COPY TO GENERATOR WITHIN 30 DAYS. (Generators who submit hazardous waste for transport out-of-state, produce completed copy of this copy and send to DTSC within 30 days.)

Applied Remediation Co.
1430 Koll Cir. #109
San Jose CA. 95112
(408) 453-0188

NON-HAZARDOUS SPECIAL WASTE MANIFEST

GENERATOR

Generator Name: City of Oakland
Address: 7101 Edgewater Dr., Oakland CA.
Phone No.:

Generating Location: 7101 Edgewater Dr. Bldg. #5
Address: Same
Phone No.: 510 - 614 5514

Description of Waste: Non-Hazardous Waste, Soil Contaminated with Oil & Grease (Ref. Profile #368850)

Quantity	Units	No. Containers	Type Containers
00005	yd	01	T
1	@	55	O

Type Containers: D - Drum; C - Carton; B - Bag; T - Truck; P - Pounds; Y - Yards; O - Other (rails)

I hereby certify that the above named material does not contain free liquid as defined by 40 CFR Part 260.10 or any applicable state law, 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.

Mark A. Mostressat — Generator Authorized Agent Name
Signature
06/29/95 — Shipment Date

TRANSPORTER

Truck No.: 5
Transporter Name: D.C. Hauling
Address: 2021 Carleton St. Berkeley CA.
Phone No.: (510) 849-4228
Driver Name (Print): David H. Craig Jr.
Vehicle License No./State: 3006580 Ca
Vehicle Certification:

I hereby certify that the above named materials was picked up at the generator site listed above.
Driver Signature
06/29/95 — Shipment Date

I hereby certify that the above named materials was delivered without incident to the destination listed below.
Driver Signature
06/29/95 — Delivery Date

DESTINATION

Site Name: Altamont Landfill
Phone No.: 510 - 449 6349
Address: 10840 Altamont Pass Rd, Livermore CA. 94550

I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is true and accurate.

Gonzalo S. Mazzo — Name of Authorized Agent
Signature
C-4
06/29/95 — Receipt Date

WEIGHMASTER CERTIFICATE

I CERTIFY that the following described commodity was weighed, measured or counted by a weighmaster whose signature is on this certificate, who is a recognized authority of accuracy, as prescribed by (commencing with Section 12700) of Division 5 of the California Business and Professions Code, administered by the Division of Measurement Standards of the California Department of Food and Agriculture

A WASTE MANAGEMENT COMPANY

103434

DATE: JUN 16,20[illegible] 12:10:28
Commodity:CLASS II [illegible] SOIL
Price/Unit: $60.00

/CASH

	$60.00
Total Charges:	$63.40
Tendered:	$70.40
Change:	$6.00

Source:ALAMEDA COUNTY UNINCORP

[illegible]50

27150	LBS	Gross Weight Lbs..
15540		Tare Weight Lbs..
11610		Net Weight Lbs..

C.O.D.
HALL, LIBBY [illegible]434

DEPUTY WEIGHMASTER

Weighed on a "SCALE DATA SYSTEM" for accuracy

[illegible]150 Lbs.

Truck No.5

Route:

C-5

CITY OF OAKLAND

MUNICIPAL SERVICE CENTER • 7101 EDGEWATER DRIVE • OAKLAND, CALIFORNIA 94621

Office of General Services
Electrical Division Municipal Buildings Division
Equipment Division Purchasing Division

FAX (510) 238-2220
TTY/TDD (510) 238-2182

January 24, 1995

Alameda County
Dept. of Environmental Health
Environmental Protection Division
1131 Harbor Bay Pkwy. #250
Alameda CA 94502-6577.

RE: CITY OF OAKLAND EQUIPMENT SHOP OIL SPILL.

Dear Madula Logan,

The purpose of this letter is to notify Alameda County of an on site oil spill at the City of Oakland Equipment / Auto Garage shop. Preliminary site assessment has been completed; and at this time there is no immediate danger to health and poses no safety problems.

Proposal to determine weather ground water has or will be impacted as a result of the leak is in progress. The extent of the soil contamination is yet to be determined.

Enclosed is the copy of the emergency incident Report form to be submitted for hazardous waste spill.

If you need further assistant or have any questions please call me at (510)-615-5514.

Sincerely,

OKEY OZOH
Architectural Assistant

PART 3: EMERGENCY INCIDENT REPORT [Form HWM-4(3)]

The following report is hereby submitted to the California Department of Toxic Substances Control within 15 days after an emergency involving hazardous waste pursuant to 22 CCR §66264.5.

1. Name of Facility: CITY OF OAKLAND MUNICIPAL SERVICE CENTER
   Address of Facility: 7101 EDGEWATER DRIVE OAKLAND CA 94621
   Telephone Number: 510 615-5520
2. Name of Owner/Operator: CITY OF OAKLAND - OGS
   Address: 7101 EDGEWATER DRIVE OAKLAD CA 94621
   Telephone Number: 510 615-5486
3. Name of Person Calling: OKEY OZOH
   Title: ARCHITECTURAL ASSISTANT
   Return Telephone Number: 510 - 615-5514
4. Description of Hazardous Waste Released: HYDROLIC LIFT OIL (FLUID)
5. Quantity of Material Released: ONE 55 GALLON DRUM pounds/gallons
6. Description of Emergency (attach additional sheets as necessary): ONE 55 GALLON DRUM OF HYDROLIC OIL PUMPED INTO THE OIL CHAMBER THAT SUPPLIES 3 HYDROLIC LIFTS LEAKED/ DISSAPEARED FROM THE CLOSED LOOP SYSTEM OF THE JACKS.
7. Date and Time of Incident: JANUARY 20 , 19 95 , at ____ AM / PM
8. Extent of Injuries: NONE
9. Assessment of Actual or Potential Hazards to Human Health or the Environment (attach additional sheets as necessary): THERE IS NO HEALTH HAZARDS AT THIS TIME TO THE HUMAN HEALTH. ASSESMENT OF SOIL CONTAMINATION AND THE IMPACT ON GROUND WATER WILL BE COMPLETED AS SOON AS POSSIBLE.

10. Disposition of Material Recovered from the Incident (attach additional sheets as necessary): CONTAMINATED SOIL AND OIL WILL BE DISPOSED AT THE APPROPRIATE FACILITY OR LANDFILL.

11. Quantity of Material Recovered from the Incident: N/A. TO BE DETERMINED AT A LETTER TIME

12. Emergency Actions Taken During the Incident: STOPPED EQUIPMENT OPERATION AND CAPPED OFF FLUID PIPE.

13. Agencies Notified:

Agency	Notification Time	Person Contacted
ALAMEDA COUNTY	N/A	BY PHONE-DON WANG
ALAMEDA COUNTY	BY MAIL	MADULA LOGAN.

14. Agencies Responding:

Agency	Notification Time	Response Time

Respectfully submitted.

By: OKEY OZOH Title: ARCHITECTURAL ASSISTANT

Signature: Okey Ozoh. Date: 1-30-95