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SITE ASSESSMENT AND SITE CLOSURE ENGINEERING REPORT

#2511

on

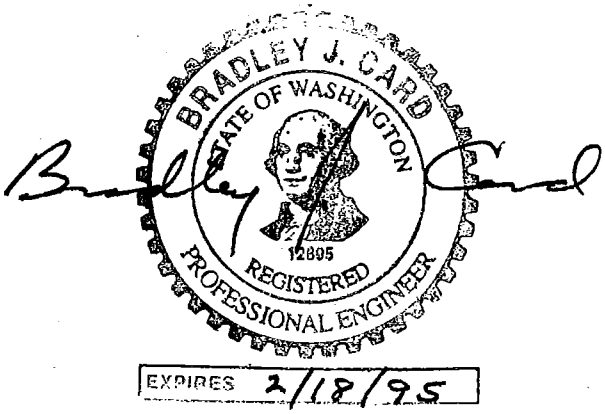
UNDERGROUND STORAGE TANK REMOVAL

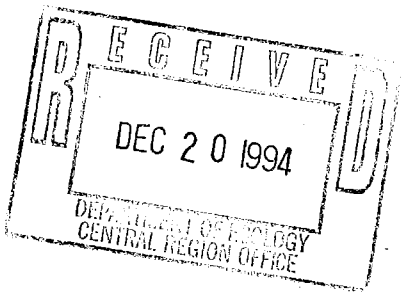
at

MEDIC I

111 South Third Avenue

Yakima, Washington





November 1994

Job No. 94360

Prepared by

PLSA ENGINEERING & SURVEYING
WDOE LIC. No. S000210
1120 West Lincoln Avenue
Yakima, WA 98902
(509) 575-6990

SUMMARY

Medic I, an ambulance company, decommissioned and removed steel, underground, tanks from their premises at 111 South Third Avenue, Yakima, Washington. The tanks were vestiges of a former auto dealership/repair facility which had not been used as such for several years. Originally two tanks consisting of a 1,000 gallon gasoline tank and a 500 gallon waste oil tank were thought to be present. During removal an additional 250 gallon waste oil tank was discovered. All tanks were steel, and did not appear to have been leaking. The gasoline tank and the smaller waste oil tank were in a common tank basin with the larger waste oil tank in a separate basin. All tanks were bedded in clean sand.

A total of nine soil samples from the two tank basins were collected and submitted to a laboratory for analysis. Those from the gasoline tank area were analyzed for WTPH-HCID (Washington Total Petroleum Hydrocarbons - Hydrocarbon Identification), benzene, toluene, ethylbenzene, and xylene (BTEX), and lead. Soil samples collected from the location of the waste oil tanks were analyzed for WTPH-HCID, volatile organic compounds, metals, PCB, priority pollutant metals, and PAH. Three samples were found to contain heavy oil above WAC 173-340-740 action levels.

There was no visual or olfactory evidence of heavy oil contamination in the clean sand bedding. Tank basins were covered with asphalt paving. The heavy oil source is believed to be from asphalt paving contamination as a result of breaking the paving for excavation. All other parameters analyzed were below cleanup levels specified in WAC 173-340-740 Method A. No further action is recommended.

SITE ASSESSMENT AND SITE CLOSURE

ENGINEERING REPORT

on

UNDERGROUND STORAGE TANK REMOVAL

at

MEDIC I

111 South Third Avenue

Yakima, Washington

INTRODUCTION

Medic I recently removed three unused, steel, underground storage tanks from their premises at 111 South Third Avenue, Yakima, Washington. An auto dealership formerly was located on the site now occupied by Medic I, an ambulance service. During the tank removal it was discovered that an additional waste oil tank was present in the gasoline tank basin rather than the two tanks in two basins originally believed to be there. Tanks were located in the NE 1/4, SE 1/4, SEC 24, TWP 13N, R18EWM. See Figure 1 and Figure 2.

This report summarizes site conditions and results of laboratory testing of representative soil samples for presence of Total Petroleum Hydrocarbons (WTPH-HCID), Benzene, Toluene, Ethylbenzene, and Xylene (BTEX), lead, volatile organic compounds (VOC's), metals, para-aromatic hydrocarbons (PAH), and PCB as appropriate and as determined by Washington State Department of Ecology (WDOE) test methods.

An engineer from PLSA Engineering and Surveying experienced with local soil conditions collected soil samples.

The owner's representative and contact person for this project is as follows:

Mr. Larry Pryor
Medic I
111 South Third Avenue
Yakima, Washington 98902
Phone (509) 248-3613

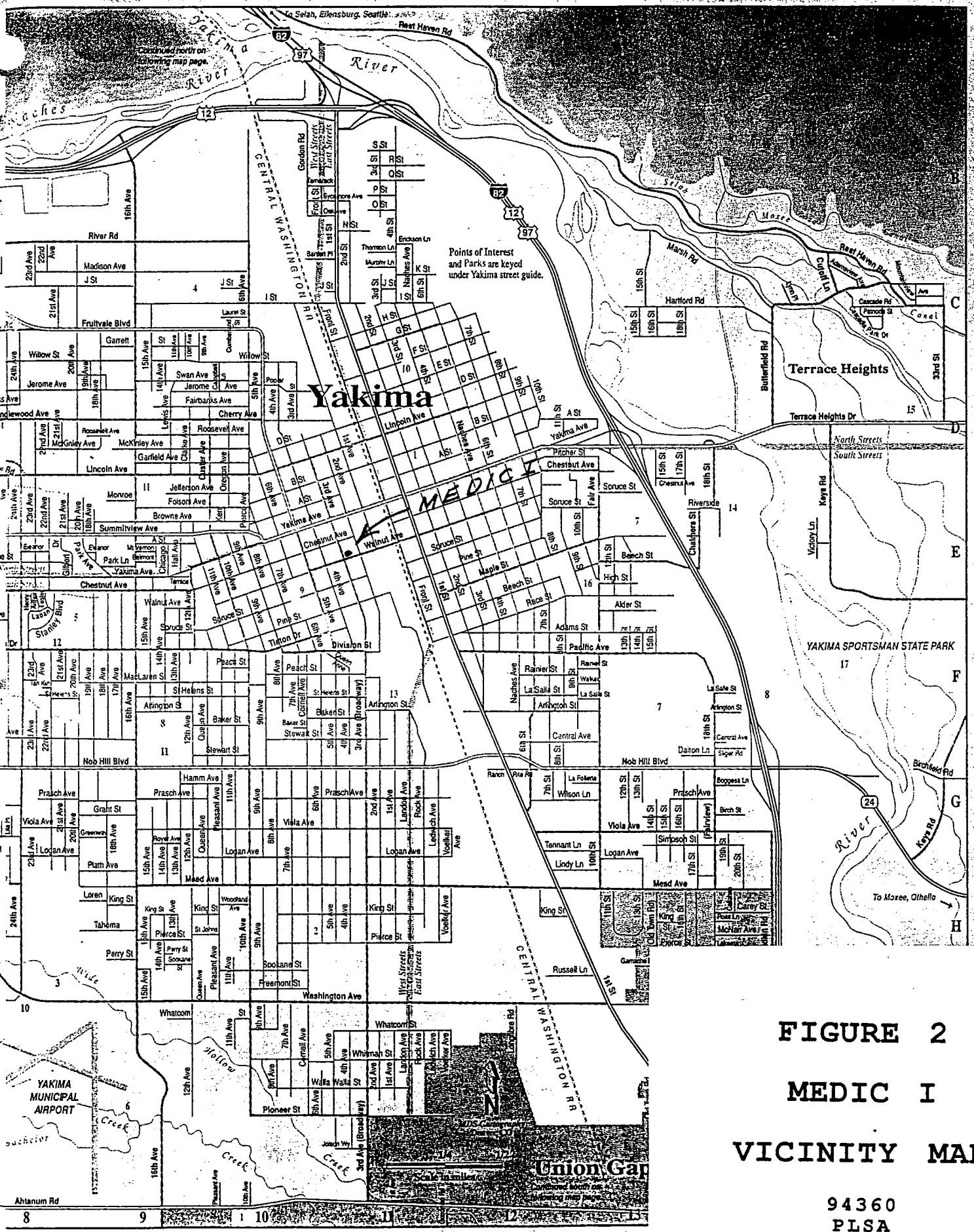


FIGURE 2

MEDIC I

VICINITY MAP

94360
PLSA

SITE BACKGROUND

An automobile dealership/repair facility was constructed on the nearly level lot at the corner of South Third Avenue and Walnut Street, Yakima, Washington approximately 40 years ago. A former service station borders across the alley on the east and Picatti Brothers electrical machinery shop on the north. The area is served by City of Yakima sewer and water, gas, solid waste collection, and telephone.

SURFACE CONDITIONS

Buildings and a paved parking lot cover the nearly level site.

SUB-SURFACE CONDITIONS

Approximately 12 inches of sandy silt topsoil (Uniform Soil Classification System ML) overlies a deep stratum of cobbles, gravel, and sand (USCS GP). Tanks were bedded in clean sand.

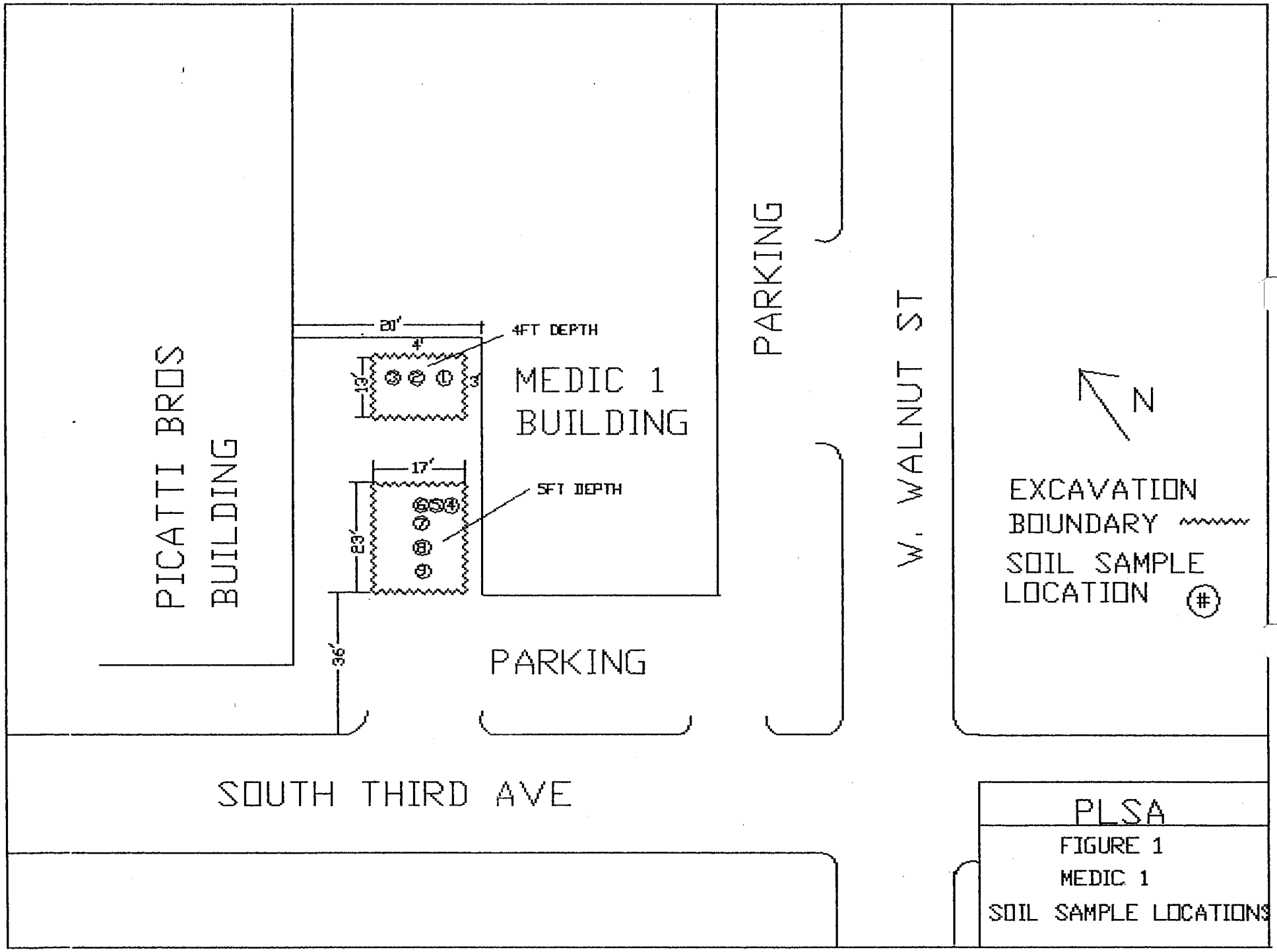
Free groundwater was not encountered. Groundwater has been encountered 22 feet below the surface in a nearby excavation. From general topography, it appears that the groundwater hydraulic gradient is to the southeast toward the Yakima River located approximately 2 miles east.

SAMPLING PLAN

Nine representative soil samples were collected from the bottom of the tank basins. Each sample was labeled with sampling and testing information and a job specific code. Sample containers were supplied by the analytical laboratory and were clean glass with Teflon lined, screwed caps. Sampling equipment was cleaned between samplings.

All samples were stored and shipped to Sound Analytical Services, WDOE Accreditation Number C027, by overnight express in a refrigerated, insulated container. Analysis for WTPH-HCID, BTEX, and lead was requested for each sample from the gasoline tank basin. Samples collected from below the waste oil tanks were requested to be analyzed for VOC's, PCB, PAH, and priority pollutant metals in addition to WTPH-HCID.

Laboratory analytical reports may be found in Appendix I and are summarized in Table 1. Sample locations are depicted on Figure 1.


PICATTI BROS
BUILDING
20'
4FT DEPTH
4'
19'
3'
MEDIC 1
BUILDING
17'
5FT DEPTH
23'
36'
PARKING
PARKING
W. WALNUT ST
N
EXCAVATION
BOUNDARY
SOIL SAMPLE
LOCATION
(#)
SOUTH THIRD AVE
PLSA
FIGURE 1
MEDIC 1
SOIL SAMPLE LOCATIONS

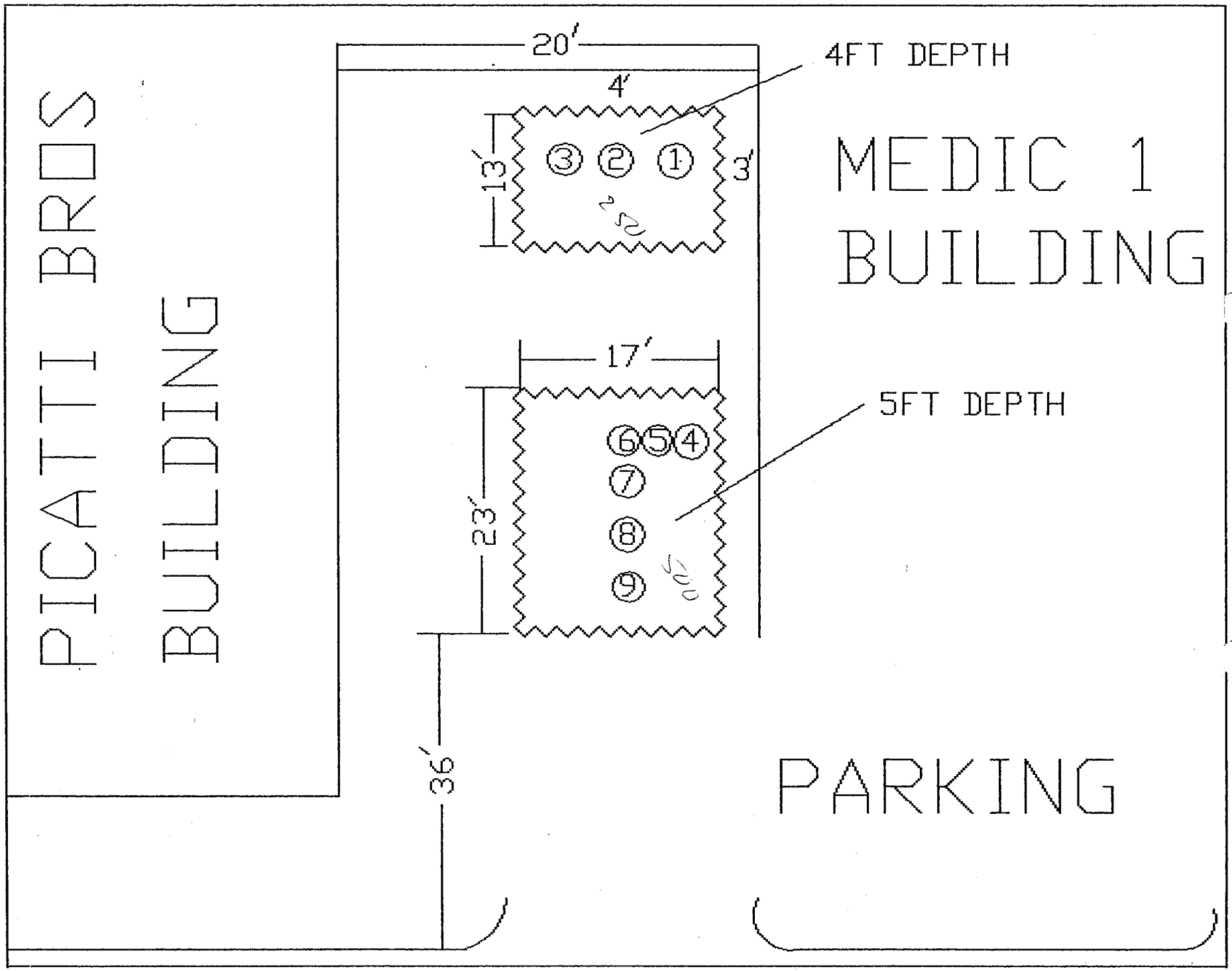

PICATTI BROS
BUILDING
20'
4'
13'
3'
4FT DEPTH
③ ② ①
MEDIC 1
BUILDING
17'
5FT DEPTH
⑥ ⑤ ④
⑦
⑧
⑨
23'
36'
PARKING

TABLE I
MEDIC 1
SUMMARY OF ANALYTICAL RESULTS

Sample Number	WTPH-HCID Gasoline	WTPH-HCID Diesel	WTPH-HCID Heavy Oil	WTPH-418.1 Heavy Oil mg/kg
M-1	<20	<50	>100	370
M-2	<20	<50	<100	
M-3	<20	<50	>100	2000
M-4	<20	<50	<100	
M-5	<20	<50	<100	
M-6	<20	<50	>100	860
M-7	<20	<50	>100	2700
M-8	<20	<50	>100	<100
M-9	<20	<50	>100	<100

Note: All other analates were below WAC 173-340-740 Method A cleanup levels.

FIELD INVESTIGATION

The tanks did not appear to have been leaking and were in good condition for their age. All of the tanks were encrusted with some rust, but did not appear to have leaked. There was no visual or olfactory evidence of petroleum contamination in the sand tank bedding in any location within the tank basins. Asphalt paving covering the tank basins was broken during the course of excavation and tank removal.

Free groundwater was not found in the excavation. Estimated depth from the surface to groundwater is 22 feet. From topography, the hydraulic gradient would be southeast toward the Yakima River.

SITE CLOSURE

Plans are to backfill the excavation and restore the area to former use as a paved driveway.

TANK AND PIPING DISPOSAL

Tanks were stored on-site for later reuse or disposal. That piping not located under the shop building has been removed and will be disposed of as scrap.

WATER WELLS

Free groundwater was not contacted. Therefore, nearby wells, if any, are not threatened. Domestic water supply for the entire area for more than a mile in any direction is from the City of Yakima.

CONCLUSIONS

Presence of heavy petroleum in some of the samples is attributed to contamination from asphalt paving fragments. Laboratory analysis found that all of the other analates in the final soil samples were below cleanup levels specified in the Model Toxics Control Act (WAC 173-340-740). No further action is recommended.

CHECKLISTS

A completed Site Assessment checklist may be found in Appendix I.

APPENDIX I

ANALYTICAL RESULTS

SOUND ANALYTICAL SERVICES, INC.

SPECIALIZING IN INDUSTRIAL & TOXIC WASTE ANALYSIS

4813 PACIFIC HIGHWAY EAST, TACOMA, WASHINGTON 98424 - TELEPHONE (206)922-2310 - FAX (206)922-5047

TRANSMITTAL MEMORANDUM

DATE: October 19, 1994

TO: Brad Card
PLSA Engineering

PROJECT: 94360

LABORATORY NUMBER: 43745

Enclosed are the original and one copy of the Tier II data deliverables package for Laboratory Work Order Number 43745. Nine samples were received for analysis at Sound Analytical Services, Inc., on October 11, 1994.

Should there be any questions regarding this data package, please do not hesitate to call me at (206) 922-2310.

Sincerely,

Andrew J. Riddell

Andrew J. Riddell
Project Manager

AJR:tm

SOUND ANALYTICAL SERVICES, INC.

SPECIALIZING IN INDUSTRIAL & TOXIC WASTE ANALYSIS

4813 PACIFIC HIGHWAY EAST, TACOMA, WASHINGTON 98424 - TELEPHONE (206)922-2310 - FAX (206)922-5047

Report To: PLSA Engineering Date: October 18, 1994

Report On: Analysis of Soil Lab No.: 43745

IDENTIFICATION:
Samples received on 10-11-94
Project: 94360

ANALYSIS:

Lab Sample No. 43745-1 Client ID: M-1

WTPH-HCID
Date Extracted: 10-12-94
Date Analyzed: 10-12-94
Units: mg/kg

Parameters	Result	Flag
Gasoline (C7 - C12)	< 20	
Diesel (> C12 - C24)	< 50	
Heavy Oil (C24+)	> 100	

SURROGATE RECOVERY, %

1-chlorooctane	77
o-terphenyl	96

WTPH-418.1 Modified
Date Extracted: 10-14-94
Date Analyzed: 10-14-94
Units: mg/kg

Parameter	Result
Heavy petroleum oils	370

SOUND ANALYTICAL SERVICES, INC.

PLSA Engineering
Project: 94360
Lab No. 43745
October 18, 1994

Lab Sample No. 43745-1 Client ID: M-1

ICP Metals Per EPA Method 6010
Date Analyzed: 10-12-94
Units: mg/kg

Parameter	Result	PQL
Antimony	ND	6.0
Arsenic	ND	10
Beryllium	ND	0.50
Cadmium	ND	0.50
Chromium	24	1.0
Copper	16	2.5
Lead	21	5.0
Nickel	41	4.0
Selenium	ND	15
Silver	ND	1.0
Thallium	ND	15
Zinc	90	2.0

Mercury By Cold Vapor AA Per EPA Method 7471
Date Analyzed: 10-11-94
Units: mg/kg

Parameter	Result	PQL
Mercury	ND	0.08

ND - Not Detected
PQL - Practical Quantitation Limit

SOUND ANALYTICAL SERVICES, INC.

PLSA Engineering
Project: 94360
Lab No. 43745
October 18, 1994

Lab Sample No. 43745-1 Client ID: M-1

PCBs Per EPA Method 8080
Date Extracted: 10-11-94
Date Analyzed: 10-11-94
Units: mg/kg

PCB	Result	PQL
Aroclor 1016	ND	0.1
Aroclor 1221	ND	0.1
Aroclor 1232	ND	0.1
Aroclor 1242	ND	0.1
Aroclor 1248	ND	0.1
Aroclor 1254	ND	0.1
Aroclor 1260	ND	0.1

SURROGATE RECOVERY, %	
2,4,5,6-Tetrachloro-m-xylene	98
Decachlorobiphenyl	98

ND - Not Detected
PQL - Practical Quantitation Limit

SOUND ANALYTICAL SERVICES, INC.

PLSA Engineering
Project: 94360
Lab No. 43745
October 18, 1994

Lab Sample No. 43745-2 Client ID: M-2

WTPH-HCID
Date Extracted: 10-12-94
Date Analyzed: 10-12-94
Units: mg/kg

Parameters	Result	Flag
Gasoline (C7 - C12)	< 20	
Diesel (> C12 - C24)	< 50	
Heavy Oil (C24+)	< 100	

SURROGATE RECOVERY, %

1-chlorooctane	68
o-terphenyl	90

SOUND ANALYTICAL SERVICES, INC.

PLSA Engineering
Project: 94360
Lab No. 43745
October 18, 1994

Lab Sample No. 43745-2 Client ID: M-2

ICP Metals Per EPA Method 6010
Date Analyzed: 10-12-94
Units: mg/kg

Parameter	Result	PQL
Antimony	ND	5.6
Arsenic	ND	9.4
Beryllium	ND	0.47
Cadmium	ND	0.47
Chromium	22	0.94
Copper	15	2.4
Lead	ND	4.7
Nickel	33	3.8
Selenium	ND	14
Silver	ND	0.94
Thallium	ND	14
Zinc	39	1.9

Mercury By Cold Vapor AA Per EPA Method 7471
Date Analyzed: 10-11-94
Units: mg/kg

Parameter	Result	PQL
Mercury	ND	0.08

ND - Not Detected
PQL - Practical Quantitation Limit

SOUND ANALYTICAL SERVICES, INC.

PLSA Engineering
Project: 94360
Lab No. 43745
October 18, 1994

Lab Sample No. 43745-2 Client ID: M-2

PCBs Per EPA Method 8080
Date Extracted: 10-11-94
Date Analyzed: 10-11-94
Units: mg/kg

PCB	Result	PQL
Aroclor 1016	ND	0.1
Aroclor 1221	ND	0.1
Aroclor 1232	ND	0.1
Aroclor 1242	ND	0.1
Aroclor 1248	ND	0.1
Aroclor 1254	ND	0.1
Aroclor 1260	ND	0.1

SURROGATE RECOVERY, %	
2,4,5,6-Tetrachloro-m-xylene	97
Decachlorobiphenyl	98

ND - Not Detected
PQL - Practical Quantitation Limit

SOUND ANALYTICAL SERVICES, INC.

PLSA Engineering
Project: 94360
Lab No. 43745
October 18, 1994

Lab Sample No. 43745-3 Client ID: M-3

WTPH-HCID
Date Extracted: 10-12-94
Date Analyzed: 10-12-94
Units: mg/kg

Parameters	Result	Flag
Gasoline (C7 - C12)	< 20	
Diesel (> C12 - C24)	> 50	
Heavy Oil (C24+)	> 100	

SURROGATE RECOVERY, %

1-chlorooctane	76
o-terphenyl	95

WTPH-418.1 Modified
Date Extracted: 10-14-94
Date Analyzed: 10-14-94
Units: mg/kg

Parameter	Result
Heavy petroleum oils	2,000

SOUND ANALYTICAL SERVICES, INC.

PLSA Engineering
Project: 94360
Lab No. 43745
October 18, 1994

Lab Sample No. 43745-3 Client ID: M-3

ICP Metals Per EPA Method 6010
Date Analyzed: 10-12-94
Units: mg/kg

Parameter	Result	PQL
Antimony	ND	6.2
Arsenic	ND	10
Beryllium	ND	0.51
Cadmium	ND	0.51
Chromium	21	1.0
Copper	17	2.6
Lead	26	5.1
Nickel	26	4.1
Selenium	ND	15
Silver	ND	1.0
Thallium	ND	15
Zinc	66	2.1

Mercury By Cold Vapor AA Per EPA Method 7471
Date Analyzed: 10-11-94
Units: mg/kg

Parameter	Result	PQL
Mercury	ND	0.08

ND - Not Detected
PQL - Practical Quantitation Limit

SOUND ANALYTICAL SERVICES, INC.

PLSA Engineering
Project: 94360
Lab No. 43745
October 18, 1994

Lab Sample No. 43745-3 Client ID: M-3

PCBs Per EPA Method 8080
Date Extracted: 10-11-94
Date Analyzed: 10-11-94
Units: mg/kg

PCB	Result	PQL
Aroclor 1016	ND	0.1
Aroclor 1221	ND	0.1
Aroclor 1232	ND	0.1
Aroclor 1242	ND	0.1
Aroclor 1248	ND	0.1
Aroclor 1254	ND	0.1
Aroclor 1260	ND	0.1

SURROGATE RECOVERY, %	
2,4,5,6-Tetrachloro-m-xylene	83
Decachlorobiphenyl	95

ND - Not Detected
PQL - Practical Quantitation Limit

SOUND ANALYTICAL SERVICES, INC.

PLSA Engineering
Project: 94360
Lab No. 43745
October 18, 1994

Lab Sample No. 43745-4 Client ID: M-4

WTPH-HCID
Date Extracted: 10-12-94
Date Analyzed: 10-12-94
Units: mg/kg

Parameters	Result	Flag
Gasoline (C7 - C12)	< 20	
Diesel (> C12 - C24)	< 50	
Heavy Oil (C24+)	< 100	

SURROGATE RECOVERY, %

1-chlorooctane	78
o-terphenyl	97

SOUND ANALYTICAL SERVICES, INC.

PLSA Engineering
Project: 94360
Lab No. 43745
October 18, 1994

Lab Sample No. 43745-4 Client ID: M-4

ICP Metals Per EPA Method 6010
Date Analyzed: 10-12-94
Units: mg/kg

Parameter	Result	PQL
Antimony	ND	5.5
Arsenic	ND	9.1
Beryllium	ND	0.45
Cadmium	ND	0.45
Chromium	19	0.91
Copper	19	2.3
Lead	8.4	4.6
Nickel	25	3.7
Selenium	ND	14
Silver	ND	0.91
Thallium	ND	14
Zinc	49	1.8

Mercury By Cold Vapor AA Per EPA Method 7471
Date Analyzed: 10-11-94
Units: mg/kg

Parameter	Result	PQL
Mercury	ND	0.09

ND - Not Detected
PQL - Practical Quantitation Limit

SOUND ANALYTICAL SERVICES, INC.

PLSA Engineering
Project: 94360
Lab No. 43745
October 18, 1994

Lab Sample No. 43745-4 Client ID: M-4

PCBs Per EPA Method 8080
Date Extracted: 10-11-94
Date Analyzed: 10-11-94
Units: mg/kg

PCB	Result	PQL
Aroclor 1016	ND	0.1
Aroclor 1221	ND	0.1
Aroclor 1232	ND	0.1
Aroclor 1242	ND	0.1
Aroclor 1248	ND	0.1
Aroclor 1254	ND	0.1
Aroclor 1260	ND	0.1

SURROGATE RECOVERY, %	
2,4,5,6-Tetrachloro-m-xylene	89
Decachlorobiphenyl	96

ND - Not Detected
PQL - Practical Quantitation Limit

SOUND ANALYTICAL SERVICES, INC.

PLSA Engineering
Project: 94360
Lab No. 43745
October 18, 1994

Lab Sample No. 43745-5 Client ID: M-5

WTPH-HCID
Date Extracted: 10-12-94
Date Analyzed: 10-12-94
Units: mg/kg

Parameters	Result	Flag
Gasoline (C7 - C12)	< 20	
Diesel (> C12 - C24)	< 50	
Heavy Oil (C24+)	< 100	

SURROGATE RECOVERY, %

1-chlorooctane	72
o-terphenyl	96

SOUND ANALYTICAL SERVICES, INC.

PLSA Engineering
Project: 94360
Lab No. 43745
October 18, 1994

Lab Sample No. 43745-5 Client ID: M-5

ICP Metals Per EPA Method 6010
Date Analyzed: 10-12-94
Units: mg/kg

Parameter	Result	PQL
Antimony	ND	6.1
Arsenic	ND	10
Beryllium	ND	0.51
Cadmium	ND	0.51
Chromium	20	1.0
Copper	20	2.5
Lead	9.8	5.1
Nickel	29	4.0
Selenium	ND	15
Silver	ND	1.0
Thallium	ND	15
Zinc	50	2.0

Mercury By Cold Vapor AA Per EPA Method 7471
Date Analyzed: 10-11-94
Units: mg/kg

Parameter	Result	PQL
Mercury	ND	0.10

ND - Not Detected
PQL - Practical Quantitation Limit

SOUND ANALYTICAL SERVICES, INC.

PLSA Engineering
Project: 94360
Lab No. 43745
October 18, 1994

Lab Sample No. 43745-5 Client ID: M-5

PCBs Per EPA Method 8080
Date Extracted: 10-11-94
Date Analyzed: 10-11-94
Units: mg/kg

PCB	Result	PQL
Aroclor 1016	ND	0.1
Aroclor 1221	ND	0.1
Aroclor 1232	ND	0.1
Aroclor 1242	ND	0.1
Aroclor 1248	ND	0.1
Aroclor 1254	ND	0.1
Aroclor 1260	ND	0.1

SURROGATE RECOVERY, %	
2,4,5,6-Tetrachloro-m-xylene	90
Decachlorobiphenyl	96

ND - Not Detected
PQL - Practical Quantitation Limit

SOUND ANALYTICAL SERVICES, INC.

PLSA Engineering
Project: 94360
Lab No. 43745
October 18, 1994

Lab Sample No. 43745-6 Client ID: M-6

WTPH-HCID
Date Extracted: 10-12-94
Date Analyzed: 10-12-94
Units: mg/kg

Parameters	Result	Flag
Gasoline (C7 - C12)	< 20	
Diesel (> C12 - C24)	> 50	
Heavy Oil (C24+)	> 100	

SURROGATE RECOVERY, %

1-chlorooctane	81
o-terphenyl	97

WTPH-418.1 Modified
Date Extracted: 10-14-94
Date Analyzed: 10-14-94
Units: mg/kg

Parameter	Result
Heavy petroleum oils	860

SOUND ANALYTICAL SERVICES, INC.

PLSA Engineering
Project: 94360
Lab No. 43745
October 18, 1994

Lab Sample No. 43745-6 Client ID: M-6

ICP Metals Per EPA Method 6010
Date Analyzed: 10-12-94
Units: mg/kg

Parameter	Result	PQL
Antimony	ND	5.6
Arsenic	ND	9.3
Beryllium	ND	0.46
Cadmium	ND	0.46
Chromium	19	0.93
Copper	18	2.3
Lead	90	4.6
Nickel	24	3.7
Selenium	ND	14
Silver	ND	0.93
Thallium	ND	14
Zinc	79	1.9

Mercury By Cold Vapor AA Per EPA Method 7471
Date Analyzed: 10-11-94
Units: mg/kg

Parameter	Result	PQL
Mercury	ND	0.08

ND - Not Detected
PQL - Practical Quantitation Limit

SOUND ANALYTICAL SERVICES, INC.

PLSA Engineering
Project: 94360
Lab No. 43745
October 18, 1994

Lab Sample No. 43745-6 Client ID: M-6

PCBs Per EPA Method 8080
Date Extracted: 10-11-94
Date Analyzed: 10-11-94
Units: mg/kg

PCB	Result	PQL
Aroclor 1016	ND	0.1
Aroclor 1221	ND	0.1
Aroclor 1232	ND	0.1
Aroclor 1242	ND	0.1
Aroclor 1248	ND	0.1
Aroclor 1254	ND	0.1
Aroclor 1260	ND	0.1

SURROGATE RECOVERY, %	
2,4,5,6-Tetrachloro-m-xylene	88
Decachlorobiphenyl	90

ND - Not Detected
PQL - Practical Quantitation Limit

SOUND ANALYTICAL SERVICES, INC.

PLSA Engineering
Project: 94360
Lab No. 43745
October 18, 1994

Lab Sample No. 43745-7 Client ID: M-7

WTPH-HCID
Date Extracted: 10-12-94
Date Analyzed: 10-12-94
Units: mg/kg

Parameters	Result	Flag
Gasoline (C7 - C12)	< 20	
Diesel (> C12 - C24)	> 50	
Heavy Oil (C24+)	> 100	

SURROGATE RECOVERY, %

1-chlorooctane	74
o-terphenyl	99

SOUND ANALYTICAL SERVICES, INC.

PLSA Engineering
Project: 94360
Lab No. 43745
October 18, 1994

Lab Sample No. 43745-7 Client ID: M-7

WTPH-418.1 Modified
Date Extracted: 10-14-94
Date Analyzed: 10-14-94
Units: mg/kg

Parameter	Result
Heavy petroleum oils	2,700

ICP Metals Per EPA Method 6010
Date Analyzed: 10-12-94
Units: mg/kg

Parameter	Result	PQL
Lead	32	5.0

ND - Not Detected
PQL - Practical Quantitation Limit

SOUND ANALYTICAL SERVICES, INC.

PLSA Engineering
Project: 94360
Lab No. 43745
October 18, 1994

Lab Sample No. 43745-8 Client ID: M-8

WTPH-HCID
Date Extracted: 10-12-94
Date Analyzed: 10-12-94
Units: mg/kg

Parameters	Result	Flag
Gasoline (C7 - C12)	< 20	
Diesel (> C12 - C24)	< 50	
Heavy Oil (C24+)	> 100	

SURROGATE RECOVERY, %

1-chlorooctane	77
o-terphenyl	98

ICP Metals Per EPA Method 6010
Date Analyzed: 10-12-94
Units: mg/kg

Parameter	Result	PQL
Lead	6.9	4.8

ND - Not Detected
PQL - Practical Quantitation Limit

SOUND ANALYTICAL SERVICES, INC.

PLSA Engineering
Project: 94360
Lab No. 43745
October 18, 1994

Lab Sample No. 43745-8 Client ID: M-8

WTPH-418.1 Modified
Date Extracted: 10-14-94
Date Analyzed: 10-14-94
Units: mg/kg

Parameter	Result
Heavy petroleum oils	< 100

ND - Not Detected
PQL - Practical Quantitation Limit

SOUND ANALYTICAL SERVICES, INC.

PLSA Engineering
Project: 94360
Lab No. 43745
October 18, 1994

Lab Sample No. 43745-9 Client ID: M-9

WTPH-HCID
Date Extracted: 10-12-94
Date Analyzed: 10-12-94
Units: mg/kg

Parameters	Result	Flag
Gasoline (C7 - C12)	< 20	
Diesel (> C12 - C24)	< 50	
Heavy Oil (C24+)	> 100	

SURROGATE RECOVERY, %

1-chlorooctane	71
o-terphenyl	96

ICP Metals Per EPA Method 6010
Date Analyzed: 10-12-94
Units: mg/kg

Parameter	Result	PQL
Lead	12	4.8

ND - Not Detected
PQL - Practical Quantitation Limit

SOUND ANALYTICAL SERVICES, INC.

PLSA Engineering
Project: 94360
Lab No. 43745
October 18, 1994

Lab Sample No. 43745-9 Client ID: M-9

WTPH-418.1 Modified
Date Extracted: 10-14-94
Date Analyzed: 10-14-94
Units: mg/kg

Parameter	Result
Heavy petroleum oils	< 100

SOUND ANALYTICAL SERVICES, INC.

Client Name	PLSA Engineering
Client ID:	M-1
Lab ID:	43745-01
Date Received:	10/11/94
Date Prepared:	10/12/94
Date Analyzed:	10/12/94
% Solids	95.14

Volatile Organics by USEPA Method 8240

Surrogate	% Recovery	Flags	Recovery Limits Low	Recovery Limits High
1,2-Dichloroethane-d4	96		70	121
Toluene-d8	103		81	117
Bromofluorobenzene	96		74	121

Sample results are on a dry weight basis.

Analyte	Result (ug/kg)	PQL	Flags
Chloromethane	ND	10	
Bromomethane	ND	10	
Vinyl Chloride	ND	10	
Chloroethane	ND	10	
Methylene Chloride	ND	5.2	
Acetone	ND	5.2	
Carbon Disulfide	ND	5.2	
1,1-Dichloroethene	ND	5.2	
1,1-Dichloroethane	ND	5.2	
1,2-Dichloroethene (total)	ND	5.2	
Chloroform	ND	5.2	
1,2-Dichloroethane	ND	5.2	
2-Butanone (MEK)	ND	5.2	
1,1,1-Trichloroethane	ND	5.2	
Carbon Tetrachloride	ND	5.2	
Vinyl Acetate	ND	5.2	
Bromodichloromethane	ND	5.2	
1,2-Dichloropropane	ND	5.2	
cis-1,3-Dichloropropene	ND	5.2	
Trichloroethene	ND	5.2	
Dibromochloromethane	ND	5.2	
1,1,2-Trichloroethane	ND	5.2	
Benzene	ND	5.2	
trans-1,3-Dichloropropene	ND	5.2	
Bromoform	ND	5.2	
4-Methyl-2-pentanone (MIBK)	ND	5.2	

SOUND ANALYTICAL SERVICES, INC.

Volatile Organics by USEPA Method 8240 data for 43745-01 continued...

Analyte	Result (ug/kg)	PQL	Flags
2-Hexanone	ND	5.2	
Tetrachloroethene	ND	5.2	
1,1,2,2-Tetrachloroethane	ND	5.2	
Toluene	ND	5.2	
Chlorobenzene	ND	5.2	
Ethylbenzene	1.8	5.2	J
Styrene	ND	5.2	
Xylenes (total)	2.8	5.2	J

SOUND ANALYTICAL SERVICES, INC.

Client Name	PLSA Engineering
Client ID:	M-2
Lab ID:	43745-02
Date Received:	10/11/94
Date Prepared:	10/12/94
Date Analyzed:	10/12/94
% Solids	93.84

Volatile Organics by USEPA Method 8240

Surrogate	% Recovery	Flags	Recovery Limits Low	High
1,2-Dichloroethane-d4	100		70	121
Toluene-d8	98		81	117
Bromofluorobenzene	103		74	121

Sample results are on a dry weight basis.

Analyte	Result (ug/kg)	PQL	Flags
Chloromethane	ND	11	
Bromomethane	ND	11	
Vinyl Chloride	ND	11	
Chloroethane	ND	11	
Methylene Chloride	ND	5.3	
Acetone	4.2	5.3	J
Carbon Disulfide	ND	5.3	
1,1-Dichloroethene	ND	5.3	
1,1-Dichloroethane	ND	5.3	
1,2-Dichloroethene (total)	ND	5.3	
Chloroform	ND	5.3	
1,2-Dichloroethane	ND	5.3	
2-Butanone (MEK)	ND	5.3	
1,1,1-Trichloroethane	ND	5.3	
Carbon Tetrachloride	ND	5.3	
Vinyl Acetate	ND	5.3	
Bromodichloromethane	ND	5.3	
1,2-Dichloropropane	ND	5.3	
cis-1,3-Dichloropropene	ND	5.3	
Trichloroethene	ND	5.3	
Dibromochloromethane	ND	5.3	
1,1,2-Trichloroethane	ND	5.3	
Benzene	ND	5.3	
trans-1,3-Dichloropropene	ND	5.3	
Bromoform	ND	5.3	
4-Methyl-2-pentanone (MIBK)	ND	5.3	

SOUND ANALYTICAL SERVICES, INC.

Volatile Organics by USEPA Method 8240 data for 43745-02 continued...

Analyte	Result (ug/kg)	PQL	Flags
2-Hexanone	ND	5.3	
Tetrachloroethene	ND	5.3	
1,1,2,2-Tetrachloroethane	ND	5.3	
Toluene	ND	5.3	
Chlorobenzene	ND	5.3	
Ethylbenzene	ND	5.3	
Styrene	ND	5.3	
Xylenes (total)	ND	5.3	

SOUND ANALYTICAL SERVICES, INC.

Client Name	PLSA Engineering
Client ID:	M-3
Lab ID:	43745-03
Date Received:	10/11/94
Date Prepared:	10/12/94
Date Analyzed:	10/12/94
% Solids	92.75

Volatile Organics by USEPA Method 8240

Surrogate	% Recovery	Flags	Recovery Limits Low	High
1,2-Dichloroethane-d4	98		70	121
Toluene-d8	114		81	117
Bromofluorobenzene	83		74	121

Sample results are on a dry weight basis.

Analyte	Result (ug/kg)	PQL	Flags
Chloromethane	ND	11	
Bromomethane	ND	11	
Vinyl Chloride	ND	11	
Chloroethane	ND	11	
Methylene Chloride	ND	5.4	
Acetone	ND	5.4	
Carbon Disulfide	ND	5.4	
1,1-Dichloroethene	ND	5.4	
1,1-Dichloroethane	ND	5.4	
1,2-Dichloroethene (total)	ND	5.4	
Chloroform	ND	5.4	
1,2-Dichloroethane	ND	5.4	
2-Butanone (MEK)	ND	5.4	
1,1,1-Trichloroethane	ND	5.4	
Carbon Tetrachloride	ND	5.4	
Vinyl Acetate	ND	5.4	
Bromodichloromethane	ND	5.4	
1,2-Dichloropropane	ND	5.4	
cis-1,3-Dichloropropene	ND	5.4	
Trichloroethene	ND	5.4	
Dibromochloromethane	ND	5.4	
1,1,2-Trichloroethane	ND	5.4	
Benzene	ND	5.4	
trans-1,3-Dichloropropene	ND	5.4	
Bromoform	ND	5.4	
4-Methyl-2-pentanone (MIBK)	ND	5.4	

SOUND ANALYTICAL SERVICES, INC.

Volatile Organics by USEPA Method 8240 data for 43745-03 continued...

Analyte	Result (ug/kg)	PQL	Flags
2-Hexanone	ND	5.4	
Tetrachloroethene	22	5.4	
1,1,2,2-Tetrachloroethane	ND	5.4	
Toluene	1.6	5.4	J
Chlorobenzene	ND	5.4	
Ethylbenzene	ND	5.4	
Styrene	ND	5.4	
Xylenes (total)	5.2	5.4	J

SOUND ANALYTICAL SERVICES, INC.

Client Name	PLSA Engineering
Client ID:	M-4
Lab ID:	43745-04
Date Received:	10/11/94
Date Prepared:	10/12/94
Date Analyzed:	10/12/94
% Solids	93.3

Volatile Organics by USEPA Method 8240

Surrogate	% Recovery	Flags	Recovery Limits Low	High
1,2-Dichloroethane-d4	98		70	121
Toluene-d8	99		81	117
Bromofluorobenzene	104		74	121

Sample results are on a dry weight basis.

Analyte	Result (ug/kg)	PQL	Flags
Chloromethane	ND	11	
Bromomethane	ND	11	
Vinyl Chloride	ND	11	
Chloroethane	ND	11	
Methylene Chloride	ND	5.4	
Acetone	25	5.4	
Carbon Disulfide	ND	5.4	
1,1-Dichloroethene	ND	5.4	
1,1-Dichloroethane	ND	5.4	
1,2-Dichloroethene (total)	ND	5.4	
Chloroform	ND	5.4	
1,2-Dichloroethane	ND	5.4	
2-Butanone (MEK)	ND	5.4	
1,1,1-Trichloroethane	ND	5.4	
Carbon Tetrachloride	ND	5.4	
Vinyl Acetate	ND	5.4	
Bromodichloromethane	ND	5.4	
1,2-Dichloropropane	ND	5.4	
cis-1,3-Dichloropropene	ND	5.4	
Trichloroethene	ND	5.4	
Dibromochloromethane	ND	5.4	
1,1,2-Trichloroethane	ND	5.4	
Benzene	ND	5.4	
trans-1,3-Dichloropropene	ND	5.4	
Bromoform	ND	5.4	
4-Methyl-2-pentanone (MIBK)	ND	5.4	

SOUND ANALYTICAL SERVICES, INC.

Volatile Organics by USEPA Method 8240 data for 43745-04 continued...

Analyte	Result (ug/kg)	PQL	Flags
2-Hexanone	ND	5.4	
Tetrachloroethene	ND	5.4	
1,1,2,2-Tetrachloroethane	ND	5.4	
Toluene	ND	5.4	
Chlorobenzene	ND	5.4	
Ethylbenzene	ND	5.4	
Styrene	ND	5.4	
Xylenes (total)	ND	5.4	

SOUND ANALYTICAL SERVICES, INC.

Client Name	PLSA Engineering
Client ID:	M-5
Lab ID:	43745-05
Date Received:	10/11/94
Date Prepared:	10/12/94
Date Analyzed:	10/12/94
% Solids	91.09

Volatile Organics by USEPA Method 8240

Surrogate	% Recovery	Flags	Recovery Limits Low	High
1,2-Dichloroethane-d4	99		70	121
Toluene-d8	98		81	117
Bromofluorobenzene	106		74	121

Sample results are on a dry weight basis.

Analyte	Result (ug/kg)	PQL	Flags
Chloromethane	ND	11	
Bromomethane	ND	11	
Vinyl Chloride	ND	11	
Chloroethane	ND	11	
Methylene Chloride	ND	5.5	
Acetone	9.1	5.5	
Carbon Disulfide	ND	5.5	
1,1-Dichloroethene	ND	5.5	
1,1-Dichloroethane	ND	5.5	
1,2-Dichloroethene (total)	ND	5.5	
Chloroform	ND	5.5	
1,2-Dichloroethane	ND	5.5	
2-Butanone (MEK)	ND	5.5	
1,1,1-Trichloroethane	ND	5.5	
Carbon Tetrachloride	ND	5.5	
Vinyl Acetate	ND	5.5	
Bromodichloromethane	ND	5.5	
1,2-Dichloropropane	ND	5.5	
cis-1,3-Dichloropropene	ND	5.5	
Trichloroethene	ND	5.5	
Dibromochloromethane	ND	5.5	
1,1,2-Trichloroethane	ND	5.5	
Benzene	ND	5.5	
trans-1,3-Dichloropropene	ND	5.5	
Bromoform	ND	5.5	
4-Methyl-2-pentanone (MIBK)	ND	5.5	

SOUND ANALYTICAL SERVICES, INC.

Volatile Organics by USEPA Method 8240 data for 43745-05 continued...

Analyte	Result (ug/kg)	PQL	Flags
2-Hexanone	ND	5.5	
Tetrachloroethene	ND	5.5	
1,1,2,2-Tetrachloroethane	ND	5.5	
Toluene	ND	5.5	
Chlorobenzene	ND	5.5	
Ethylbenzene	ND	5.5	
Styrene	ND	5.5	
Xylenes (total)	ND	5.5	

SOUND ANALYTICAL SERVICES, INC.

Client Name	PLSA Engineering
Client ID:	M-6
Lab ID:	43745-06
Date Received:	10/11/94
Date Prepared:	10/12/94
Date Analyzed:	10/12/94
% Solids	92.36

Volatile Organics by USEPA Method 8240

Surrogate	% Recovery	Flags	Recovery Limits Low	High
1,2-Dichloroethane-d4	94		70	121
Toluene-d8	107		81	117
Bromofluorobenzene	86		74	121

Sample results are on a dry weight basis.

Analyte	Result (ug/kg)	PQL	Flags
Chloromethane	ND	11	
Bromomethane	ND	11	
Vinyl Chloride	ND	11	
Chloroethane	ND	11	
Methylene Chloride	ND	5.4	
Acetone	ND	5.4	
Carbon Disulfide	ND	5.4	
1,1-Dichloroethene	ND	5.4	
1,1-Dichloroethane	ND	5.4	
1,2-Dichloroethene (total)	ND	5.4	
Chloroform	ND	5.4	
1,2-Dichloroethane	ND	5.4	
2-Butanone (MEK)	ND	5.4	
1,1,1-Trichloroethane	ND	5.4	
Carbon Tetrachloride	ND	5.4	
Vinyl Acetate	ND	5.4	
Bromodichloromethane	ND	5.4	
1,2-Dichloropropane	ND	5.4	
cis-1,3-Dichloropropene	ND	5.4	
Trichloroethene	ND	5.4	
Dibromochloromethane	ND	5.4	
1,1,2-Trichloroethane	ND	5.4	
Benzene	ND	5.4	
trans-1,3-Dichloropropene	ND	5.4	
Bromoform	ND	5.4	
4-Methyl-2-pentanone (MIBK)	ND	5.4	

SOUND ANALYTICAL SERVICES, INC.

Volatile Organics by USEPA Method 8240 data for 43745-06 continued...

Analyte	Result (ug/kg)	PQL	Flags
2-Hexanone	ND	5.4	
Tetrachloroethene	13	5.4	
1,1,2,2-Tetrachloroethane	ND	5.4	
Toluene	ND	5.4	
Chlorobenzene	ND	5.4	
Ethylbenzene	ND	5.4	
Styrene	ND	5.4	
Xylenes (total)	ND	5.4	

SOUND ANALYTICAL SERVICES, INC.

Client Name	PLSA Engineering
Client ID:	M-1
Lab ID:	43745-01
Date Received:	10/11/94
Date Prepared:	10/14/94
Date Analyzed:	10/16/94
% Solids	95.14

Semivolatile Organics by USEPA Method 8270

Surrogate	% Recovery	Flags	Recovery Limits Low	High
Nitrobenzene - d5	87		23	120
2 - Fluorobiphenyl	100		30	115
p - Terphenyl - d14	97		18	137
Phenol - d5	83		24	113
2 - Fluorophenol	91		25	121
2,4,6 - Tribromophenol	97		19	122

Sample results are on a dry weight basis.

Analyte	Result (ug/kg)	PQL	Flags
Phenol	ND	35	
bis(2-Chloroethyl)ether	ND	35	
2-Chlorophenol	ND	35	
1,3-Dichlorobenzene	ND	35	
1,4-Dichlorobenzene	ND	35	
Benzyl Alcohol	ND	70	
1,2-Dichlorobenzene	ND	35	
2-Methylphenol	ND	35	
bis(2-Chloroisopropyl)ether	ND	35	
4-Methylphenol	ND	35	
N-nitroso-di-n-propylamine	ND	35	
Hexachloroethane	ND	35	
Nitrobenzene	ND	35	
Isophorone	ND	35	
2-Nitrophenol	ND	35	
2,4-Dimethylphenol	ND	35	
Benzoic Acid	ND	170	
bis(2-Chloroethoxy)methane	ND	35	
2,4-Dichlorophenol	ND	35	
1,2,4-Trichlorobenzene	ND	35	
Naphthalene	ND	35	
4-Chloroaniline	ND	70	
Hexachlorobutadiene	ND	35	
4-Chloro-3-methylphenol	ND	70	
2-Methylnaphthalene	ND	35	
Hexachlorocyclopentadiene	ND	35	

SOUND ANALYTICAL SERVICES, INC.

Semivolatile Organics by USEPA Method 8270 data for 43745-01 continued...

Analyte	Result (ug/kg)	PQL	Flags
2,4,6-Trichlorophenol	ND	35	
2,4,5-Trichlorophenol	ND	35	
2-Chloronaphthalene	ND	35	
2-Nitroaniline	ND	170	
Dimethylphthalate	ND	35	
Acenaphthylene	ND	35	
2,6-Dinitrotoluene	ND	35	
3-Nitroaniline	ND	170	
Acenaphthene	ND	35	
2,4-Dinitrophenol	ND	170	
4-Nitrophenol	ND	170	
Dibenzofuran	ND	35	
2,4-Dinitrotoluene	ND	35	
Diethylphthalate	ND	35	
4-Chlorophenyl phenyl ether	ND	35	
Fluorene	ND	35	
4-Nitroaniline	ND	170	
4,6-Dinitro-2-methylphenol	ND	170	
N-Nitrosodiphenylamine	ND	35	
4-Bromophenyl phenyl ether	ND	35	
Hexachlorobenzene	ND	35	
Pentachlorophenol	ND	170	
Phenanthrene	ND	35	
Anthracene	ND	35	
Di-n-butylphthalate	130	35	
Fluoranthene	ND	35	
Pyrene	ND	35	
Butylbenzylphthalate	ND	35	
3,3'-Dichlorobenzidine	ND	35	
Benzo(a)anthracene	ND	35	
Chrysene	ND	35	
bis(2-Ethylhexyl)phthalate	220	35	
Di-n-octylphthalate	ND	35	
Benzo(b)fluoranthene	ND	35	
Benzo(k)fluoranthene	ND	35	
Benzo(a)pyrene	ND	35	
Indeno(1,2,3-cd)pyrene	ND	35	
Dibenz(a,h)anthracene	ND	35	
Benzo(g,h,i)perylene	ND	35	

SOUND ANALYTICAL SERVICES, INC.

Client Name	PLSA Engineering
Client ID:	M-2
Lab ID:	43745-02
Date Received:	10/11/94
Date Prepared:	10/14/94
Date Analyzed:	10/16/94
% Solids	93.84

Semivolatile Organics by USEPA Method 8270

Surrogate	% Recovery	Flags	Recovery Limits Low	High
Nitrobenzene - d5	82		23	120
2 - Fluorobiphenyl	94		30	115
p - Terphenyl - d14	89		18	137
Phenol - d5	93		24	113
2 - Fluorophenol	100		25	121
2,4,6 - Tribromophenol	94		19	122

Sample results are on a dry weight basis.

Analyte	Result (ug/kg)	PQL	Flags
Phenol	ND	35	
bis(2-Chloroethyl)ether	ND	35	
2-Chlorophenol	ND	35	
1,3-Dichlorobenzene	ND	35	
1,4-Dichlorobenzene	ND	35	
Benzyl Alcohol	ND	70	
1,2-Dichlorobenzene	ND	35	
2-Methylphenol	ND	35	
bis(2-Chloroisopropyl)ether	ND	35	
4-Methylphenol	ND	35	
N-nitroso-di-n-propylamine	ND	35	
Hexachloroethane	ND	35	
Nitrobenzene	ND	35	
Isophorone	ND	35	
2-Nitrophenol	ND	35	
2,4-Dimethylphenol	ND	35	
Benzoic Acid	ND	180	
bis(2-Chloroethoxy)methane	ND	35	
2,4-Dichlorophenol	ND	35	
1,2,4-Trichlorobenzene	ND	35	
Naphthalene	ND	35	
4-Chloroaniline	ND	70	
Hexachlorobutadiene	ND	35	
4-Chloro-3-methylphenol	ND	70	
2-Methylnaphthalene	ND	35	
Hexachlorocyclopentadiene	ND	35	

SOUND ANALYTICAL SERVICES, INC.

Semivolatile Organics by USEPA Method 8270 data for 43745-02 continued...

Analyte	Result (ug/kg)	PQL	Flags
2,4,6-Trichlorophenol	ND	35	
2,4,5-Trichlorophenol	ND	35	
2-Chloronaphthalene	ND	35	
2-Nitroaniline	ND	180	
Dimethylphthalate	ND	35	
Acenaphthylene	ND	35	
2,6-Dinitrotoluene	ND	35	
3-Nitroaniline	ND	180	
Acenaphthene	ND	35	
2,4-Dinitrophenol	ND	180	
4-Nitrophenol	ND	180	
Dibenzofuran	ND	35	
2,4-Dinitrotoluene	ND	35	
Diethylphthalate	ND	35	
4-Chlorophenyl phenyl ether	ND	35	
Fluorene	ND	35	
4-Nitroaniline	ND	180	
4,6-Dinitro-2-methylphenol	ND	180	
N-Nitrosodiphenylamine	ND	35	
4-Bromophenyl phenyl ether	ND	35	
Hexachlorobenzene	ND	35	
Pentachlorophenol	ND	180	
Phenanthrene	ND	35	
Anthracene	ND	35	
Di-n-butylphthalate	130	35	
Fluoranthene	ND	35	
Pyrene	ND	35	
Butylbenzylphthalate	ND	35	
3,3'-Dichlorobenzidine	ND	35	
Benzo(a)anthracene	ND	35	
Chrysene	ND	35	
bis(2-Ethylhexyl)phthalate	37	35	
Di-n-octylphthalate	ND	35	
Benzo(b)fluoranthene	ND	35	
Benzo(k)fluoranthene	ND	35	
Benzo(a)pyrene	ND	35	
Indeno(1,2,3-cd)pyrene	ND	35	
Dibenz(a,h)anthracene	ND	35	
Benzo(g,h,i)perylene	ND	35	

SOUND ANALYTICAL SERVICES, INC.

Client Name	PLSA Engineering
Client ID:	M-3
Lab ID:	43745-03
Date Received:	10/11/94
Date Prepared:	10/14/94
Date Analyzed:	10/16/94
% Solids	92.75

Semivolatile Organics by USEPA Method 8270

Surrogate	% Recovery	Flags	Recovery Limits Low	High
Nitrobenzene - d5	78		23	120
2 - Fluorobiphenyl	78		30	115
p - Terphenyl - d14	78		18	137
Phenol - d5	10	X9	24	113
2 - Fluorophenol	62		25	121
2,4,6 - Tribromophenol	81		19	122

Sample results are on a dry weight basis.

Analyte	Result (ug/kg)	PQL	Flags
Phenol	ND	360	
bis(2-Chloroethyl)ether	ND	360	
2-Chlorophenol	ND	360	
1,3-Dichlorobenzene	ND	360	
1,4-Dichlorobenzene	ND	360	
Benzyl Alcohol	ND	720	
1,2-Dichlorobenzene	ND	360	
2-Methylphenol	ND	360	
bis(2-Chloroisopropyl)ether	ND	360	
4-Methylphenol	ND	360	
N-nitroso-di-n-propylamine	ND	360	
Hexachloroethane	ND	360	
Nitrobenzene	ND	360	
Isophorone	ND	360	
2-Nitrophenol	ND	360	
2,4-Dimethylphenol	ND	360	
Benzoic Acid	ND	1800	
bis(2-Chloroethoxy)methane	ND	360	
2,4-Dichlorophenol	ND	360	
1,2,4-Trichlorobenzene	ND	360	
Naphthalene	ND	360	
4-Chloroaniline	ND	720	
Hexachlorobutadiene	ND	360	
4-Chloro-3-methylphenol	ND	720	
2-Methylnaphthalene	ND	360	
Hexachlorocyclopentadiene	ND	360	

SOUND ANALYTICAL SERVICES, INC.

Semivolatile Organics by USEPA Method 8270 data for 43745-03 continued...

Analyte	Result (ug/kg)	PQL	Flags
2,4,6-Trichlorophenol	ND	360	
2,4,5-Trichlorophenol	ND	360	
2-Chloronaphthalene	ND	360	
2-Nitroaniline	ND	1800	
Dimethylphthalate	ND	360	
Acenaphthylene	ND	360	
2,6-Dinitrotoluene	ND	360	
3-Nitroaniline	ND	1800	
Acenaphthene	ND	360	
2,4-Dinitrophenol	ND	1800	
4-Nitrophenol	ND	1800	
Dibenzofuran	ND	360	
2,4-Dinitrotoluene	ND	360	
Diethylphthalate	ND	360	
4-Chlorophenyl phenyl ether	ND	360	
Fluorene	ND	360	
4-Nitroaniline	ND	1800	
4,6-Dinitro-2-methylphenol	ND	1800	
N-Nitrosodiphenylamine	ND	360	
4-Bromophenyl phenyl ether	ND	360	
Hexachlorobenzene	ND	360	
Pentachlorophenol	ND	1800	
Phenanthrene	ND	360	
Anthracene	ND	360	
Di-n-butylphthalate	ND	360	
Fluoranthene	ND	360	
Pyrene	ND	360	
Butylbenzylphthalate	ND	360	
3,3'-Dichlorobenzidine	ND	360	
Benzo(a)anthracene	ND	360	
Chrysene	ND	360	
bis(2-Ethylhexyl)phthalate	ND	360	
Di-n-octylphthalate	ND	360	
Benzo(b)fluoranthene	ND	360	
Benzo(k)fluoranthene	ND	360	
Benzo(a)pyrene	ND	360	
Indeno(1,2,3-cd)pyrene	ND	360	
Dibenz(a,h)anthracene	ND	360	
Benzo(g,h,i)perylene	ND	360	

SOUND ANALYTICAL SERVICES, INC.

Client Name	PLSA Engineering
Client ID:	M-4
Lab ID:	43745-04
Date Received:	10/11/94
Date Prepared:	10/14/94
Date Analyzed:	10/16/94
% Solids	93.3

Semivolatile Organics by USEPA Method 8270

			Recovery Limits	
Surrogate	**% Recovery**	**Flags**	**Low**	**High**
Nitrobenzene - d5	86		23	120
2 - Fluorobiphenyl	105		30	115
p - Terphenyl - d14	97		18	137
Phenol - d5	97		24	113
2 - Fluorophenol	109		25	121
2,4,6 - Tribromophenol	98		19	122

Sample results are on a dry weight basis.

	Result		
Analyte	**(ug/kg)**	**PQL**	**Flags**
Phenol	ND	35	
bis(2-Chloroethyl)ether	ND	35	
2-Chlorophenol	ND	35	
1,3-Dichlorobenzene	ND	35	
1,4-Dichlorobenzene	ND	35	
Benzyl Alcohol	ND	70	
1,2-Dichlorobenzene	ND	35	
2-Methylphenol	ND	35	
bis(2-Chloroisopropyl)ether	ND	35	
4-Methylphenol	ND	35	
N-nitroso-di-n-propylamine	ND	35	
Hexachloroethane	ND	35	
Nitrobenzene	ND	35	
Isophorone	ND	35	
2-Nitrophenol	ND	35	
2,4-Dimethylphenol	ND	35	
Benzoic Acid	ND	180	
bis(2-Chloroethoxy)methane	ND	35	
2,4-Dichlorophenol	ND	35	
1,2,4-Trichlorobenzene	ND	35	
Naphthalene	ND	35	
4-Chloroaniline	ND	70	
Hexachlorobutadiene	ND	35	
4-Chloro-3-methylphenol	ND	70	
2-Methylnaphthalene	ND	35	
Hexachlorocyclopentadiene	ND	35	

SOUND ANALYTICAL SERVICES, INC.

Semivolatile Organics by USEPA Method 8270 data for 43745-04 continued...

Analyte	Result (ug/kg)	PQL	Flags
2,4,6-Trichlorophenol	ND	35	
2,4,5-Trichlorophenol	ND	35	
2-Chloronaphthalene	ND	35	
2-Nitroaniline	ND	180	
Dimethylphthalate	ND	35	
Acenaphthylene	ND	35	
2,6-Dinitrotoluene	ND	35	
3-Nitroaniline	ND	180	
Acenaphthene	ND	35	
2,4-Dinitrophenol	ND	180	
4-Nitrophenol	ND	180	
Dibenzofuran	ND	35	
2,4-Dinitrotoluene	ND	35	
Diethylphthalate	ND	35	
4-Chlorophenyl phenyl ether	ND	35	
Fluorene	ND	35	
4-Nitroaniline	ND	180	
4,6-Dinitro-2-methylphenol	ND	180	
N-Nitrosodiphenylamine	ND	35	
4-Bromophenyl phenyl ether	ND	35	
Hexachlorobenzene	ND	35	
Pentachlorophenol	ND	180	
Phenanthrene	ND	35	
Anthracene	ND	35	
Di-n-butylphthalate	210	35	
Fluoranthene	ND	35	
Pyrene	ND	35	
Butylbenzylphthalate	ND	35	
3,3'-Dichlorobenzidine	ND	35	
Benzo(a)anthracene	ND	35	
Chrysene	ND	35	
bis(2-Ethylhexyl)phthalate	30	35	J
Di-n-octylphthalate	ND	35	
Benzo(b)fluoranthene	ND	35	
Benzo(k)fluoranthene	ND	35	
Benzo(a)pyrene	ND	35	
Indeno(1,2,3-cd)pyrene	ND	35	
Dibenz(a,h)anthracene	ND	35	
Benzo(g,h,i)perylene	ND	35	

SOUND ANALYTICAL SERVICES, INC.

Client Name	PLSA Engineering
Client ID:	M-5
Lab ID:	43745-05
Date Received:	10/11/94
Date Prepared:	10/14/94
Date Analyzed:	10/16/94
% Solids	91.09

Semivolatile Organics by USEPA Method 8270

Surrogate	% Recovery	Flags	Recovery Limits Low	High
Nitrobenzene - d5	83		23	120
2 - Fluorobiphenyl	100		30	115
p - Terphenyl - d14	99		18	137
Phenol - d5	98		24	113
2 - Fluorophenol	107		25	121
2,4,6 - Tribromophenol	102		19	122

Sample results are on a dry weight basis.

Analyte	Result (ug/kg)	PQL	Flags
Phenol	ND	36	
bis(2-Chloroethyl)ether	ND	36	
2-Chlorophenol	ND	36	
1,3-Dichlorobenzene	ND	36	
1,4-Dichlorobenzene	ND	36	
Benzyl Alcohol	ND	73	
1,2-Dichlorobenzene	ND	36	
2-Methylphenol	ND	36	
bis(2-Chloroisopropyl)ether	ND	36	
4-Methylphenol	ND	36	
N-nitroso-di-n-propylamine	ND	36	
Hexachloroethane	ND	36	
Nitrobenzene	ND	36	
Isophorone	ND	36	
2-Nitrophenol	ND	36	
2,4-Dimethylphenol	ND	36	
Benzoic Acid	ND	180	
bis(2-Chloroethoxy)methane	ND	36	
2,4-Dichlorophenol	ND	36	
1,2,4-Trichlorobenzene	ND	36	
Naphthalene	ND	36	
4-Chloroaniline	ND	73	
Hexachlorobutadiene	ND	36	
4-Chloro-3-methylphenol	ND	73	
2-Methylnaphthalene	ND	36	
Hexachlorocyclopentadiene	ND	36	

SOUND ANALYTICAL SERVICES, INC.

Semivolatile Organics by USEPA Method 8270 data for 43745-05 continued...

Analyte	Result (ug/kg)	PQL	Flags
2,4,6-Trichlorophenol	ND	36	
2,4,5-Trichlorophenol	ND	36	
2-Chloronaphthalene	ND	36	
2-Nitroaniline	ND	180	
Dimethylphthalate	ND	36	
Acenaphthylene	ND	36	
2,6-Dinitrotoluene	ND	36	
3-Nitroaniline	ND	180	
Acenaphthene	ND	36	
2,4-Dinitrophenol	ND	180	
4-Nitrophenol	ND	180	
Dibenzofuran	ND	36	
2,4-Dinitrotoluene	ND	36	
Diethylphthalate	ND	36	
4-Chlorophenyl phenyl ether	ND	36	
Fluorene	ND	36	
4-Nitroaniline	ND	180	
4,6-Dinitro-2-methylphenol	ND	180	
N-Nitrosodiphenylamine	ND	36	
4-Bromophenyl phenyl ether	ND	36	
Hexachlorobenzene	ND	36	
Pentachlorophenol	ND	180	
Phenanthrene	ND	36	
Anthracene	ND	36	
Di-n-butylphthalate	170	36	
Fluoranthene	ND	36	
Pyrene	ND	36	
Butylbenzylphthalate	ND	36	
3,3'-Dichlorobenzidine	ND	36	
Benzo(a)anthracene	ND	36	
Chrysene	ND	36	
bis(2-Ethylhexyl)phthalate	31	36	J
Di-n-octylphthalate	ND	36	
Benzo(b)fluoranthene	ND	36	
Benzo(k)fluoranthene	ND	36	
Benzo(a)pyrene	ND	36	
Indeno(1,2,3-cd)pyrene	ND	36	
Dibenz(a,h)anthracene	ND	36	
Benzo(g,h,i)perylene	ND	36	

SOUND ANALYTICAL SERVICES, INC.

Client Name	PLSA Engineering
Client ID:	M-6
Lab ID:	43745-06
Date Received:	10/11/94
Date Prepared:	10/14/94
Date Analyzed:	10/16/94
% Solids	92.36

Semivolatile Organics by USEPA Method 8270

Surrogate	% Recovery	Flags	Recovery Limits Low	High
Nitrobenzene - d5	81		23	120
2 - Fluorobiphenyl	92		30	115
p - Terphenyl - d14	84		18	137
Phenol - d5	75		24	113
2 - Fluorophenol	83		25	121
2,4,6 - Tribromophenol	91		19	122

Sample results are on a dry weight basis.

Analyte	Result (ug/kg)	PQL	Flags
Phenol	ND	36	
bis(2-Chloroethyl)ether	ND	36	
2-Chlorophenol	ND	36	
1,3-Dichlorobenzene	ND	36	
1,4-Dichlorobenzene	ND	36	
Benzyl Alcohol	ND	71	
1,2-Dichlorobenzene	ND	36	
2-Methylphenol	ND	36	
bis(2-Chloroisopropyl)ether	ND	36	
4-Methylphenol	ND	36	
N-nitroso-di-n-propylamine	ND	36	
Hexachloroethane	ND	36	
Nitrobenzene	ND	36	
Isophorone	ND	36	
2-Nitrophenol	ND	36	
2,4-Dimethylphenol	ND	36	
Benzoic Acid	ND	180	
bis(2-Chloroethoxy)methane	ND	36	
2,4-Dichlorophenol	ND	36	
1,2,4-Trichlorobenzene	ND	36	
Naphthalene	ND	36	
4-Chloroaniline	ND	71	
Hexachlorobutadiene	ND	36	
4-Chloro-3-methylphenol	ND	71	
2-Methylnaphthalene	ND	36	
Hexachlorocyclopentadiene	ND	36	

SOUND ANALYTICAL SERVICES, INC.

Semivolatile Organics by USEPA Method 8270 data for 43745-06 continued...

Analyte	Result (ug/kg)	PQL	Flags
2,4,6-Trichlorophenol	ND	36	
2,4,5-Trichlorophenol	ND	36	
2-Chloronaphthalene	ND	36	
2-Nitroaniline	ND	180	
Dimethylphthalate	ND	36	
Acenaphthylene	ND	36	
2,6-Dinitrotoluene	ND	36	
3-Nitroaniline	ND	180	
Acenaphthene	ND	36	
2,4-Dinitrophenol	ND	180	
4-Nitrophenol	ND	180	
Dibenzofuran	ND	36	
2,4-Dinitrotoluene	ND	36	
Diethylphthalate	ND	36	
4-Chlorophenyl phenyl ether	ND	36	
Fluorene	ND	36	
4-Nitroaniline	ND	180	
4,6-Dinitro-2-methylphenol	ND	180	
N-Nitrosodiphenylamine	ND	36	
4-Bromophenyl phenyl ether	ND	36	
Hexachlorobenzene	ND	36	
Pentachlorophenol	ND	180	
Phenanthrene	ND	36	
Anthracene	ND	36	
Di-n-butylphthalate	190	36	
Fluoranthene	ND	36	
Pyrene	ND	36	
Butylbenzylphthalate	ND	36	
3,3'-Dichlorobenzidine	ND	36	
Benzo(a)anthracene	ND	36	
Chrysene	ND	36	
bis(2-Ethylhexyl)phthalate	30	36	J
Di-n-octylphthalate	ND	36	
Benzo(b)fluoranthene	ND	36	
Benzo(k)fluoranthene	ND	36	
Benzo(a)pyrene	ND	36	
Indeno(1,2,3-cd)pyrene	ND	36	
Dibenz(a,h)anthracene	ND	36	
Benzo(g,h,i)perylene	100	36	

SOUND ANALYTICAL SERVICES, INC.

SPECIALIZING IN INDUSTRIAL & TOXIC WASTE ANALYSIS

4813 PACIFIC HIGHWAY EAST, TACOMA, WASHINGTON 98424 - TELEPHONE (206)922-2310 - FAX (206)922-5047

QUALITY CONTROL REPORT

WTPH-HCID

Client: PLSA Engineering
Lab No: 43745qc1
Units: mg/kg

METHOD BLANK

Blank No. 005F0701.D
Date Extracted: 10-12-94
Date Analyzed: 10-12-94

Parameter	Result	Flags
Gasoline (C_7 - C_{12})	< 20	
Diesel (>C_{12} - C_{24})	< 50	
Heavy Petroleum Oil (C_{24}+)	< 100	
SURROGATE RECOVERY, %		
1-chlorooctane	72	
o-terphenyl	97	

SOUND ANALYTICAL SERVICES, INC.

QUALITY CONTROL REPORT

WTPH-HCID

Client: PLSA Engineering
Lab No: 43745qc1
Units: mg/kg

DUPLICATE

Dup No. 43745-9
Date Extracted: 10-13-94
Date Analyzed: 10-13-94

Parameter	Sample	Duplicate	RPD	Flags
Gasoline (C_7-C_{12})	< 20	< 20	NC	
Diesel (>C_{12}-C_{24})	< 50	< 50	NC	
Heavy Petroleum Oil (C_{24}+)	> 100	> 100	NC	
SURROGATE RECOVERY,%				
1-chlorooctane	71	68		
o-terphenyl	96	93		

NC = Not Calculated
RPD = Relative Percent Difference

SOUND ANALYTICAL SERVICES, INC.

SPECIALIZING IN INDUSTRIAL & TOXIC WASTE ANALYSIS

4813 PACIFIC HIGHWAY EAST, TACOMA, WASHINGTON 98424 - TELEPHONE (206)922-2310 - FAX (206)922-5047

QUALITY CONTROL REPORT

WTPH-418.1 Modified

Client: PLSA Engineering
Lab No: 43745qc2
Units: mg/kg

Date Extracted: 10-14-94
Date Analyzed: 10-14-94

METHOD BLANK

Parameter	Result
Heavy Petroleum Oils	< 100

DUPLICATE

Dup No. 43745-7

Parameter	Sample Result	Duplicate Result	RPD
Heavy Petroleum Oils	2,700	2,800	3.6

RPD = Relative Percent Difference

MATRIX SPIKE / MATRIX SPIKE DUPLICATE

MS / MSD No. 43745-7

Parameter	Sample Result	MS Result	MS Amount	MS %R	MSD Result	MSD Amount	MSD %R	RPD	Flag
Heavy Petroleum Oils	2,700	3,780	560	193	3,720	551	185	4.2	X7a

MS = Matrix Spike
MSD = Matrix Spike Duplicate
RPD = Relative Percent Difference
%R = Percent Recovery

SOUND ANALYTICAL SERVICES, INC.

QUALITY CONTROL REPORT

WTPH 418.1 Modified

Client: PLSA Engineering
Lab No: 43745qc2
Units: mg/kg

Date Extracted: 10-14-94
Date Analyzed: 10-14-94

BLANK SPIKE

Parameter	BS Result	BS Amount	BS %R
Heavy Petroleum Oils	94	103	92

%R = Percent Recovery
BS = Blank Spike

SOUND ANALYTICAL SERVICES, INC.

SPECIALIZING IN INDUSTRIAL & TOXIC WASTE ANALYSIS

4813 PACIFIC HIGHWAY EAST, TACOMA, WASHINGTON 98424 - TELEPHONE (206)922-2310 - FAX (206)922-5047

QUALITY CONTROL REPORT

Metals

Client: PLSA Engineering
Lab No: 43745qc3
Units: mg/kg

Date Analyzed: 10-12-94

METHOD BLANK

Parameter	Result	PQL
Antimony	ND	6.0
Arsenic	ND	10
Beryllium	ND	0.5
Cadmium	ND	0.5
Chromium	ND	1.0
Copper	ND	2.5
Lead	ND	5.0
Nickel	ND	4.0
Selenium	ND	15
Silver	ND	1.0
Thallium	ND	15
Zinc	ND	2.0

ND - Not Detected
PQL - Practical Quantitation Limit

SOUND ANALYTICAL SERVICES, INC.

QUALITY CONTROL REPORT

Metals

Client: PLSA Engineering
Lab No: 43745qc3
Units: mg/kg

Date Analyzed: 10-12-94

DUPLICATE

Dup No. 43745-9

Parameter	Sample Result	Duplicate Result	RPD
Antimony	ND	ND	NC
Arsenic	ND	ND	NC
Beryllium	ND	ND	NC
Cadmium	ND	ND	NC
Chromium	16	18	12
Copper	16	18	12
Lead	12	12	0.0
Nickel	21	25	13
Selenium	ND	ND	NC
Silver	ND	ND	NC
Thallium	ND	ND	NC
Zinc	150	132	13

RPD = Relative Percent Difference

SOUND ANALYTICAL SERVICES, INC.

QUALITY CONTROL REPORT

Metals

Client: PLSA Engineering
Lab No: 43745qc3
Units: mg/kg

Date Analyzed: 10-12-94

MATRIX SPIKE

MS No. 43745-9

Parameter	Sample Result	MS Result	MS Amount	%R
Antimony	ND	82	98	84
Arsenic	ND	348	345	88
Beryllium	ND	9.1	9.8	92
Cadmium	ND	9.7	7.8	99
Chromium	16	53	39	95
Copper	16	64	48	100
Lead	12	108	98	97
Nickel	21	115	98	95
Selenium	ND	376	395	45
Silver	ND	9.6	9.8	97
Thallium	ND	361	395	91
Zinc	150	250	98	102

MS = Matrix Spike %R = Percent Recovery

SOUND ANALYTICAL SERVICES, INC.

SPECIALIZING IN INDUSTRIAL & TOXIC WASTE ANALYSIS

4813 PACIFIC HIGHWAY EAST, TACOMA, WASHINGTON 98424 - TELEPHONE (206)922-2310 - FAX (206)922-5047

QUALITY CONTROL REPORT

Mercury

Client: PLSA Engineering
Lab No: 43745qc4
Units: mg/kg

Date Analyzed: 10-11-94

METHOD BLANK

Parameter	Result	PQL
Mercury	ND	0.10

ND - Not Detected
PQL - Practical Quantitation Limit

MATRIX SPIKE

MS No. 43745-6

Parameter	Sample Result	MS Result	MS Amount	%R
Mercury	ND	0.77	0.96	80

MS = Matrix Spike %R = Percent Recovery

MATRIX SPIKE DUPLICATE

Parameter	MS Result	MSD Result	MSD Amount	%R	RPD
Mercury	0.77	0.73	0.89	82	2.5

MSD = Matrix Spike Duplicate RPD = Relative Percent Difference

BLANK SPIKE

Parameter	BS Result	BS Amount	%R
Mercury	1.0	1.0	100

%R = Percent Recovery
BS = Blank Spike

SOUND ANALYTICAL SERVICES, INC.

SPECIALIZING IN INDUSTRIAL & TOXIC WASTE ANALYSIS

4813 PACIFIC HIGHWAY EAST, TACOMA, WASHINGTON 98424 - TELEPHONE (206)922-2310 - FAX (206)922-5047

QUALITY CONTROL REPORT

PCBs Per EPA Method 8080

Client: PLSA Engineering
Lab No: 43745qc5
Units: mg/kg

Date Extracted: 10-11-94
Date Analyzed: 10-11-94

METHOD BLANK

PCB	Result	PQL
Aroclor 1016	ND	0.1
Aroclor 1221	ND	0.1
Aroclor 1232	ND	0.1
Aroclor 1242	ND	0.1
Aroclor 1248	ND	0.1
Aroclor 1254	ND	0.1
Aroclor 1260	ND	0.1
SURROGATE RECOVERY%		
2,4,5,6-TCMX	98	
Decachlorobiphenyl	99	

ND - Not Detected
PQL - Practical Quantitation Limit

MATRIX SPIKE / MATRIX SPIKE DUPLICATE

MS / MSD No. 43463-1 Batch QC

PCB	Sample Result	MS Amount	MS Result	MS %R	MSD Amount	MSD Result	MSD %R	RPD
Aroclor 1260	ND	1.08	1.12	103	1.07	1.81	169	49
Flags							X7a	X7a

MS = Matrix Spike
MSD = Matrix Spike Duplicate
RPD = Relative Percent Difference
%R = Percent Recovery

SOUND ANALYTICAL SERVICES, INC.

Lab ID:	Method Blank - A0094
Date Received:	-
Date Prepared:	10/12/94
Date Analyzed:	10/12/94
% Solids	100

Volatile Organics by USEPA Method 8240

Surrogate	% Recovery	Flags	Recovery Limits Low	High
1,2-Dichloroethane-d4	98		70	121
Toluene-d8	97		81	117
Bromofluorobenzene	107		74	121

Sample results are on a dry weight basis.

Analyte	Result (ug/kg)	PQL	Flags
Chloromethane	ND	10	
Bromomethane	ND	10	
Vinyl Chloride	ND	10	
Chloroethane	ND	10	
Methylene Chloride	ND	5	
Acetone	ND	5	
Carbon Disulfide	ND	5	
1,1-Dichloroethene	ND	5	
1,1-Dichloroethane	ND	5	
1,2-Dichloroethene (total)	ND	5	
Chloroform	ND	5	
1,2-Dichloroethane	ND	5	
2-Butanone (MEK)	ND	5	
1,1,1-Trichloroethane	ND	5	
Carbon Tetrachloride	ND	5	
Vinyl Acetate	ND	5	
Bromodichloromethane	ND	5	
1,2-Dichloropropane	ND	5	
cis-1,3-Dichloropropene	ND	5	
Trichloroethene	ND	5	
Dibromochloromethane	ND	5	
1,1,2-Trichloroethane	ND	5	
Benzene	ND	5	
trans-1,3-Dichloropropene	ND	5	
Bromoform	ND	5	
4-Methyl-2-pentanone (MIBK)	ND	5	

SOUND ANALYTICAL SERVICES, INC.

Volatile Organics by USEPA Method 8240 data for A0094 continued...

Analyte	Result (ug/kg)	PQL	Flags
2-Hexanone	ND	5	
Tetrachloroethene	ND	5	
1,1,2,2-Tetrachloroethane	ND	5	
Toluene	ND	5	
Chlorobenzene	ND	5	
Ethylbenzene	ND	5	
Styrene	ND	5	
Xylenes (total)	ND	5	

SOUND ANALYTICAL SERVICES

Matrix Spike/Matrix Spike Duplicate Report

Client Sample ID:	M-1
Lab ID:	43745S01
Date Prepared:	10/12/94
Date Analyzed:	10/12/94

Volatile Organics by USEPA Method 8240

Compound Name	Sample Result (ug/kg)	Spike Amount (ug/kg)	MS Result (ug/kg)	MS % Rec.	MSD Result (ug/kg)	MSD % Rec.	RPD	Flag
1,1-Dichloroethene	0	52	66	126	61	116	8.3	
Trichloroethene	0	52	62	118	61	116	1.7	
Benzene	0	52	64	122	64	122	0.0	
Toluene	0	52	62	118	61	116	1.7	
Chlorobenzene	0	52	63	120	61	116	3.4	

SOUND ANALYTICAL SERVICES, INC.

Lab ID:	Method Blank - SV099IT
Date Received:	-
Date Prepared:	10/14/94
Date Analyzed:	10/16/94
% Solids	

Semivolatile Organics by USEPA Method 8270

Surrogate	% Recovery	Flags	Recovery Limits Low	High
Nitrobenzene - d5	86		23	120
2 - Fluorobiphenyl	96		30	115
p - Terphenyl - d14	87		18	137
Phenol - d5	87		24	113
2 - Fluorophenol	110		25	121
2,4,6 - Tribromophenol	80		19	122

Sample results are on an as received basis.

Analyte	Result (ug/kg)	PQL	Flags
Phenol	ND	33	
bis(2-Chloroethyl)ether	ND	33	
2-Chlorophenol	ND	33	
1,3-Dichlorobenzene	ND	33	
1,4-Dichlorobenzene	ND	33	
Benzyl Alcohol	ND	67	
1,2-Dichlorobenzene	ND	33	
2-Methylphenol	ND	33	
bis(2-Chloroisopropyl)ether	ND	33	
4-Methylphenol	ND	33	
N-nitroso-di-n-propylamine	ND	33	
Hexachloroethane	ND	33	
Nitrobenzene	ND	33	
Isophorone	ND	33	
2-Nitrophenol	ND	33	
2,4-Dimethylphenol	ND	33	
Benzoic Acid	ND	170	
bis(2-Chloroethoxy)methane	ND	33	
2,4-Dichlorophenol	ND	33	
1,2,4-Trichlorobenzene	ND	33	
Naphthalene	ND	33	
4-Chloroaniline	ND	67	
Hexachlorobutadiene	ND	33	
4-Chloro-3-methylphenol	ND	67	
2-Methylnaphthalene	ND	33	
Hexachlorocyclopentadiene	ND	33	

SOUND ANALYTICAL SERVICES, INC.

Semivolatile Organics by USEPA Method 8270 data for SV099IT continued...

Analyte	Result (ug/kg)	PQL	Flags
2,4,6-Trichlorophenol	ND	33	
2,4,5-Trichlorophenol	ND	33	
2-Chloronaphthalene	ND	33	
2-Nitroaniline	ND	170	
Dimethylphthalate	ND	33	
Acenaphthylene	ND	33	
2,6-Dinitrotoluene	ND	33	
3-Nitroaniline	ND	170	
Acenaphthene	ND	33	
2,4-Dinitrophenol	ND	170	
4-Nitrophenol	ND	170	
Dibenzofuran	ND	33	
2,4-Dinitrotoluene	ND	33	
Diethylphthalate	ND	33	
4-Chlorophenyl phenyl ether	ND	33	
Fluorene	ND	33	
4-Nitroaniline	ND	170	
4,6-Dinitro-2-methylphenol	ND	170	
N-Nitrosodiphenylamine	ND	33	
4-Bromophenyl phenyl ether	ND	33	
Hexachlorobenzene	ND	33	
Pentachlorophenol	ND	170	
Phenanthrene	ND	33	
Anthracene	ND	33	
Di-n-butylphthalate	ND	33	
Fluoranthene	ND	33	
Pyrene	ND	33	
Butylbenzylphthalate	ND	33	
3,3'-Dichlorobenzidine	ND	33	
Benzo(a)anthracene	ND	33	
Chrysene	ND	33	
bis(2-Ethylhexyl)phthalate	ND	33	
Di-n-octylphthalate	ND	33	
Benzo(b)fluoranthene	ND	33	
Benzo(k)fluoranthene	ND	33	
Benzo(a)pyrene	ND	33	
Indeno(1,2,3-cd)pyrene	ND	33	
Dibenz(a,h)anthracene	ND	33	
Benzo(g,h,i)perylene	ND	33	

SOUND ANALYTICAL SERVICES, INC.

Matrix Spike/Matrix Spike Duplicate Report

Client Sample ID:	94TAN322SL
Lab ID:	43756S19
Date Prepared:	10/14/94
Date Analyzed:	10/16/94

Semivolatile Organics by USEPA Method 8270

Compound Name	Sample Result (ug/kg)	Spike Amount (ug/kg)	MS Result (ug/kg)	MS % Rec.	MSD Result (ug/kg)	MSD % Rec.	RPD	Flag
Phenol	0	4000	3800	97	4300	110	13.0	
2-Chlorophenol	0	4000	3200	81	3200	83	2.7	
1,4-Dichlorobenzene	0	4000	3300	84	3400	89	5.3	
N-nitroso-di-n-propylamine	0	4000	3000	75	3200	82	8.3	
1,2,4-Trichlorobenzene	0	4000	3100	79	3300	86	9.4	
4-Chloro-3-methylphenol	0	4000	3300	84	3500	92	8.4	
Acenaphthene	0	4000	3800	96	3600	94	1.8	
4-Nitrophenol	0	4000	3100	79	3300	86	7.9	
2,4-Dinitrotoluene	0	4000	3300	84	3600	92	9.1	
Pentachlorophenol	0	4000	3600	90	3900	100	9.8	
Pyrene	0	4000	3500	88	3500	89	1.1	

APPENDIX II

SITE ASSESSMENT CHECKLIST

UNDERGROUND STORAGE TANK
Site Check/Site Assessment Checklist

WASHINGTON STATE DEPARTMENT OF ECOLOGY

For Office Use Only
Owner #
Site #

INSTRUCTIONS:

When a release has **not** been confirmed and reported, this Site Check/Site Assessment Checklist must be completed and signed by a person registered with the Department of Ecology. **The results of the site check or site assessment must be included with this checklist.** This form must be submitted to Ecology at the address shown below within 30 days after completion of the site check/site assessment.

SITE INFORMATION: Include the Ecology site ID number if the tanks are registered with Ecology. This number may be found on the tank owner's invoice or tank permit.

TANK INFORMATION: Please list all the tanks for which the site check and site assessment is being conducted. Use the tank ID number if available, and indicate tank capacity and substance stored.

REASON FOR CONDUCTING SITE CHECK/SITE ASSESSMENT: Please check the appropriate item.

CHECKLIST: Please initial each item in the appropriate box.

SITE ASSESSOR INFORMATION: This form must be signed by the registered site assessor who is responsible for conducting the site check/ site assessment.

Underground Storage Tank Section
Department of Ecology
P. O. Box 47655
Olympia, WA 98504-7655

SITE INFORMATION

Site ID Number (on invoice or available from Ecology if the tanks are registered): _____

Site/Business Name: Medic I

Site Address: 111 South Third Ave (Street) Telephone: (509) 248 3613

Yakima (City) WA (State) 98902 (ZIP-Code)

TANK INFORMATION

Tank ID No.	Tank Capacity	Substance Stored

REASON FOR CONDUCTING SITE CHECK/SITE ASSESSMENT

Check one:

- ____ Investigate suspected release due to on-site environmental contamination.
- ____ Investigate suspected release due to off-site environmental contamination.
- ____ Extend temporary closure of UST system for more than 12 months.
- ____ UST system undergoing change-in-service.
- ____ UST system permanently closed-in-place.
- ✓ UST system permanently closed with tank removed.
- ____ Abandoned tank containing product.
- ____ Required by Ecology or delegated agency for UST system closed before 12/22/88.
- ____ Other (describe): _____

APPENDIX III

PERMANENT CLOSURE FORM

WASHINGTON STATE DEPARTMENT OF ECOLOGY

UNDERGROUND STORAGE TANK TEMPORARY/PERMANENT CLOSURE and SITE ASSESSMENT NOTICE

See back of form for instructions
Please ☑ the appropriate box(es)
Please type or print information

For Office Use Only
Owner #
Site #

☐ Temporary Tank Closure ☒ Permanent Tank Closure ☐ Change-In-Service ☐ Site Assessment/ Site Check

SITE INFORMATION:

Site ID Number (on invoice or available from Ecology if the tanks are registered):

Site/Business Name: Yakima ~~Ambulance~~ Emergency Services

Site Address: 111 South 3rd Ave (Street) Telephone: (509) 248-3613

Yakima (City) Wa (State) 98902 (ZIP-Code)

TANK INFORMATION:

Tank ID	Closure Date	Tank Capacity	Substance Stored
002511	10-7-94	1000 gal	gasoline
unknown	10-7-94	500 gal	heating oil
unknown	10-7-94	250 gal	heating oil

CONTAMINATION PRESENT AT THE TIME OF CLOSURE

☐ Yes ☒ No

☐ Unknown

Check unknown if no obvious contamination was observed and sample results have not yet been received from analytical lab.

UST SYSTEM OWNER/OPERATOR:

UST Owner/Operator: Yakima ~~Ambulance~~ Emergency Services

Owners Signature: X [signature] Telephone: (509) 248-3613

Address: 111 South 3rd Ave (Street) P.O. Box

Yakima (City) Wa (State) 98902 (ZIP-Code)

TANK CLOSURE/CHANGE-IN-SERVICE PERFORMED BY:

Service Provider: Ken Weingang Excavating Inc. License Number: KENLEE*2010D

Licensed Supervisor: Don Unruh Decommissioning License Number: W000177

Supervisors Signature: Don Unruh

Address: 1117 No. 27th Ave (Street) P.O. Box

Yakima (City) Wa (State) 98902 (ZIP-Code)

Telephone: (509) 575-5507

SITE CHECK/SITE ASSESSMENT CONDUCTED BY:

Name of Registered Site Assessor: PLSA Engineering

Telephone: (509) 575-6990

Address: 1120 West Lincoln Ave (Street) P.O. Box

Yakima (City) Wa (State) 98902 (ZIP-Code)

PLEASE READ CAREFULLY

INSTRUCTIONS

Return this completed form to:

Underground Storage Tank Section
Department of Ecology
P. O. Box 47655
Olympia, WA 98504-7655

This form is to be completed by the Tank Owner and submitted to Ecology within 30 days of tank closure.

Mark the appropriate box(es) for temporary tank closure, permanent tank closure, change-in-service, or site assessment.

Permanent Closure and Change-in-Service require a site assessment be performed.

SITE INFORMATION:

Fill in the site information. Be sure to include the Ecology site ID number. This number may be found on the invoice or permit. Include a contact telephone number so any problems may be resolved quickly.

TANK INFORMATION:

List the tanks that were closed. Please use tank ID numbers and indicate the date of permanent closure. Be sure to attach your Underground Storage Tank Permits for any tanks that are now closed.

UST SYSTEM OWNER/OPERATOR:

Please fill in the owner's/operator's name, address, and telephone number. **Be sure to sign this form.**

TANK CLOSURE/CHANGE-IN-SERVICE PERFORMED BY:

List the closure company. Companies that provide UST services **MUST** be licensed by Ecology. Ask to see their supervisor's license. Make sure the licensed supervisor signs this form.

SITE CHECK/SITE ASSESSMENT CONDUCTED BY:

Fill in the site assessor information for permanent closure or change-in-service. Mark the appropriate box showing whether contamination from the underground tank(s) was or is present at the site. A site check/site assessment **MUST** be conducted by a site assessor who is registered with Ecology.

If contamination at the site is found or suspected, the appropriate Ecology Regional Office must be notified within 24 hours. If the contamination is confirmed, a site characterization report must be submitted to the regional office within 90 days. If contamination is not confirmed, a site assessment report must be submitted to the above address within 30 days.

Tanks exempt from notification requirements are:

Farm or residential tanks, 1100 gallons or less, used to store motor fuel for personal or farm use only. The fuel must not be for resale or used for business purposes.

Tanks used for storing heating oil that is used on the premises where the tank is located.

Tanks with a capacity of 110 gallons or less.

Equipment or machinery tanks such as hydraulic lifts or electrical equipment tanks.

Emergency overflow tanks, catch basins, or sumps.

For more information call toll free in the state of Washington
1-800-826-7716 or (206) 438-7137