Summary Letter
Soil Sampling and Site Remediation
Washington Central Railroad
Yakima, Washington

August 22, 1996

For
Washington Central Railroad Company, Inc.

GeoEngineers

Consulting Engineers and Geoscientists
Offices in Washington, Oregon, and Alaska

August 22, 1996

Washington Central Railroad Company, Inc.
6 East Arlington
Yakima, Washington 98901

Attention: Mr. Nick Temple

Summary Letter
Soil Sampling and Site Remediation
Washington Central Railroad
Yakima, Washington
File No: 4222-002-T14

INTRODUCTION

We are submitting this letter to provide a summary of activities completed at the Yakima Railroad site between February 16, 1995 and July 22, 1996, on behalf of the Washington Central Railroad (WRC). The location of the site relative to surrounding physical features is shown on Figure 1. The site is located within the boundaries of the Yakima Railroad Area (YRA). The Washington State Department of Ecology (Ecology) is currently evaluating the nature and extent of ground water contamination in the YRA by perchloroethylene (also referred to as tetrachloroethylene, tetrachloroethene, Perc and PCE).

Ecology collected three soil samples from locations near the diesel shop on June 17, 1993. The locations of the diesel shop and other site facilities are shown on Figure 2. The exact sampling locations are not known, but we understand based on conversations with Mr. Bob Burke of the WCR, that the samples were collected in the approximate locations of soil samples 2169501, -2 and -3, shown on Figure 2. The soil samples were submitted for analysis of diesel-range hydrocarbons by WTPH-D, volatile organic compounds (VOCs), polychlorinated biphenyls (PCBs), and cadmium, chromium, copper, lead, nickel and zinc (metals).

Diesel-range hydrocarbons were detected in the three samples collected by Ecology at concentrations exceeding the Model Toxics Control Act (MTCA) Method A Cleanup level. The three samples were qualified by the analytical laboratory as estimates of the actual concentrations. Metals were generally detected in the three samples at concentrations slightly greater than typical background metals concentrations in the Yakima area but much lower than applicable MTCA

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Method A Industrial Soil Cleanup Levels. Volatile organic compounds were detected at concentrations slightly greater than the analytical detection limits but well below MTCA Method A Cleanup levels. Several of the VOCs, including methylene chloride, acetone, toluene and carbon disulfide, are chemicals used in analytical laboratories and are often detected as a result of laboratory contamination introduced during the analytical process. Perchloroethylene (PCE) was detected in the three samples at concentrations ranging from 0.9 to 5.8 micrograms per kilogram (μg/kg). The analytical data are summarized in Table 1.

PHASE I SOIL SAMPLING

GeoEngineers collected three soil samples (21695-1, -2 and -3) from locations near the Ecology sample locations on February 16, 1995. The approximate sample locations are shown on Figure 2. The samples were collected from depths ranging from 0 to 6 inches below the ground surface using clean stainless steel trowels. The soil consisted of dark brown, very dense, silty fine to coarse gravel with sand. The soil samples were placed in laboratory supplied glass jars in chilled coolers and transported in accordance with standard protocol to Sound Analytical Services. Chain-of-custody procedures were followed during all sample transfers. The soil samples were submitted for analysis of total metals, WTPH-D (extended), and VOCs.

Petroleum-related hydrocarbons were detected in the three soil samples collected by GeoEngineers at concentrations (ranging from 840 to 5,800 milligrams per kilogram [mg/kg]) exceeding the MTCA Method A Cleanup level of 200 mg/kg. Cadmium was detected in sample 21695-2 at a concentration equal to the MTCA Method A Industrial Soil cleanup level (10 mg/kg). Other metals were detected in the soil samples at concentrations less than the cleanup levels. Methylene chloride, acetone and toluene were detected at concentrations less than the MTCA Method A Industrial Soil cleanup levels. Methylene chloride, acetone and toluene are commonly used laboratory solvents. The reported values for methylene chloride, acetone and toluene are likely related to laboratory contamination introduced during the analytical process. Other VOCs, specifically PCE, were not detected in any of the samples at the detection limits (detection limits for PCE were less than concentrations detected in Ecology's soil samples) listed in the laboratory reports. The analytical data are summarized in Table 1 and copies of the reports are attached to this letter.

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DIESEL WASH BUILDING SOIL SAMPLING

GeoEngineers collected three soil samples (SS-1, SS-2 and SS-3) from the base of the excavation of a new diesel wash building on May 28, 1995. The samples were collected from depths ranging from 4 to 6 inches below the base of the footing excavation at the approximate locations shown on Figure 2. The soil samples were collected from elevations ranging from about 2.2 to 5.2 feet below the surrounding ground surface. The sample depths are summarized in Table 2. The samples were collected using clean stainless steel spoons. The soil ranged from

a dark brown, very dense, silty fine to coarse sandy gravel to gravelly sand. The samples were placed in laboratory supplied glass jars in chilled coolers and transported in accordance with standard protocol to North Creek Analytical for analysis. Chain-of-custody procedures were followed during all sample transfers. The soil samples were submitted for analysis of diesel- and heavier oil-range hydrocarbons by WTPH-D (extended) and PCE by EPA Method 8240.

Heavier oil-range hydrocarbons were detected in sample SS-1 (25 mg/kg) and SS-3 (27 mg/kg) at concentrations less than the MTCA Method A Cleanup level of 200 mg/kg. Diesel and heavier oil were not detected in sample SS-2. PCE was not detected in any of the samples. The analytical data are summarized in Table 2 and copies of the reports are attached to this letter.

The analytical data indicate that total petroleum hydrocarbons and PCE are not present in soil beneath the footprint of the diesel wash building at concentrations exceeding the MTCA Method A Cleanup levels.

DROP TABLE FACILITY SOIL SAMPLING

GeoEngineers collected four soil samples (SS-4, through SS-7) from the base of the excavation of a new drop table facility (Figure 2) on July 22, 1996. The samples were collected from the walls of the footing excavations at depths ranging from about 4.8 to 5.5 feet below the surrounding ground surface. The sample depths are shown in Table 2. The samples were collected using clean stainless steel spoons. The soil ranged from a dark brown, very dense, silty fine to coarse sandy gravel to gravelly sand. The samples were placed in laboratory supplied glass jars in chilled coolers and transported in accordance with standard protocol to North Creek Analytical for analysis. Chain-of-custody procedures were followed during all sample transfers. The soil samples were submitted for analysis of diesel- and heavier oil-range hydrocarbons by WTPH-D (extended) and PCE by EPA Method 8240.

Heavier oil-range hydrocarbons were detected in sample SS-6 (26.8 mg/kg) at a concentration less than the MTCA Method A Cleanup level of 200 mg/kg. Diesel and heavier oil were not detected in samples SS-4, SS-5 and SS-7. PCE was not detected in any of the samples. The analytical data are summarized in Table 2 and copies of the reports are attached to this letter.

The analytical data indicate that total petroleum hydrocarbons and PCE are not present in soil beneath the footprint of the drop table facility at concentrations exceeding the MTCA Method A Cleanup levels.

SITE REMEDIATION

Remediation of the petroleum-contaminated soil located near the diesel shop was initiated by WCR in September 1995. Approximately 55 gallons of Bio Track liquid were applied to the three sampling areas shown on Figure 2 according to the manufacturer's recommendations on September 25 and October 20, 1995. One composite soil sample was collected from each of the

three area and submitted to Laucks Testing Laboratories, Inc. (Laucks), for analysis of WTPH-D on December 6, 1995. TPH was detected in the soil samples collected from Area 1 (680 mg/kg), Area 2 (360 mg/kg) and Area 3 (1,400 mg/kg) at concentrations exceeding the MTCA Method A cleanup level.

Approximately 55 gallons of Bio Track were applied to the three sampling areas on April 8, 1996. A composite soil sample was collected from each of the three areas and submitted to Laucks on May 24, 1996 for analysis of WTPH-D. TPH was detected in the soil samples collected from Area 1 (910 mg/kg) and Area 3 (1,500 mg/kg) at concentrations exceeding the MTCA Method A cleanup level. TPH was detected in Area 2 (34 mg/kg) at a concentration less than the MTCA Method A cleanup level.

Remedial activities will continue at the site until concentrations of TPH detected in soil samples collected from the three areas decrease to concentrations less than MTCA Method A cleanup levels. Copies of the remediation analytical reports are attached to this letter.

CONCLUSIONS AND RECOMMENDATIONS

The results of Ecology's 1993 and GeoEngineers' 1995 soil sampling in the vicinity of the diesel shop indicate that TPH is present in the surficial soil at concentrations exceeding the MTCA Method A Cleanup Level. Metals and VOCs were also detected in the soil samples collected from the three areas during both sampling events. Metals were detected at concentrations less than MTCA Method A Cleanup Levels with the exception of cadmium which was detected at a concentration equal to the MTCA Method A Cleanup Level for industrial sites in one soil sample. VOCs were detected at concentrations less than applicable MTCA Cleanup Levels. Acetone, methylene chloride and/or toluene were detected in soil samples collected during both sampling events. These VOCs are commonly used laboratory solvents. The reported values for acetone, methylene chloride and toluene are likely related to laboratory contamination introduced during the analytical process. PCE was detected in Ecology's soil samples at concentrations ranging from 0.9 to 5.8 μg/kg. All of Ecology's PCE results were reported with qualifiers indicating that the reported PCE concentration is estimated. PCE was not detected in soil samples collected by GeoEngineers in locations near Ecology's sample points.

The concentration that can be reliably measured during routine laboratory operating conditions is referred to as the practical quantification limit (PQL). The laboratory PQL range for PCE listed in Ecology's *Guidance on Sampling and Data Analysis Methods,* Publication No. 94-49 is 3 to 50 μg/kg. In our opinion, it is unlikely that PCE is present in the vicinity of the sample points collected near the diesel shop, based on the qualifiers (value is estimated) for each of the listed PCE concentration results and the fact that PCE was not detected in any of the soil samples collected and submitted for analysis by GeoEngineers on February 16, 1995.

TPH was detected in two samples collected from the excavations for the diesel wash building and the drop table facility at concentrations (27 and 26.8 mg/kg) less than the MTCA Cleanup level. TPH was not detected in the remainder of the soil samples. PCE was not detected in any of the soil samples collected from the two excavations.

Please contact us if you have questions concerning the recommendations or other element of the remedial action.

Yours very truly,

GeoEngineers, Inc.

Terry E. Parks
Senior Geological Engineer

John H. Biggane
Principal

TEP:JHB:vc
Document ID: 4220002R.R

Attachments

Two copies submitted

cc: Burlington Northern Railroad
Attn: Mr. Bruce Sheppard

TABLE 1
SOIL CHEMICAL ANALYTICAL DATA
WASHINGTON CENTRAL RAILROAD COMPANY

Sample Identification	Date Sampled	WTPH-D Extended[1] (mg/kg)	Total Metals						VOCs[2]	
			Cadmium	Chromium	Copper	Lead	Nickel	Zinc	Analytes Detected	Concentration (µg/kg)
			(mg/kg)							
Ecology's 1993 Sample Results										
E171 A[3]	06/17/93	680 (J)	0.85 (P)	66.6	87.4 (N)	128	26.9	89.3	Methylene Chloride	2.2 (J)
									Acetone	15 (J)
									Tetrachoroethene	0.9 (NJ)
									Toluene	1.1 (J)
									Total Xylenes	4.6 (NJ)
E171 B[3]	06/17/93	330 (J)	0.39 (P)	52	315 (N)	447	22.1	86	Methylene Chloride	4.9 (J)
									Tetrachoroethene	4.0 (J)
E171 C[3]	06/17/93	650 (J)	1.8 (P)	205	110 (N)	175	32.4	337	Methylene Chloride	3.7 (J)
									Tetrachoroethene	2.0 (J)
GeoEngineers' 1995 Sample Results										
21695-1[4]	02/16/95	1,500	3.7	100	140	100	54	210	Methylene Chloride	85
21695-2[4]	02/16/95	5,800	10	75	110	95	36	130	Methylene Chloride	77
									Acetone	2.3
									Toluene	2.2
21695-3[4]	02/16/95	840	8.4	40	100	100	22	100	Methylene Chloride	63
MTCA Method A Cleanup Levels[5]		200	10	500	NA	1,000	NA	NA	Methylene Chloride	500
									Toluene	40
Natural Metals Background Concentrations[6]			1	38	27	11	46	79	Not Applicable	

Notes:

[1]Washington State Total Petroleum Hydrocarbons-Diesel Range Extended (Carbon Range c_{12} to c_{30}).

[2]Volatile organic compounds, analyzed by EPA Method 8240. Only VOCs detected are listed.

[3]Samples collected by Ecology on June 6, 1993. Sample analysis performed by Ecology's Manchester Analytical Laboratory and Analytical Resources, Inc. Polychlorinated biphenyls were also analyzed for but were not detected.

[4]Chemical analysis conducted by Sound Analytical Services, Inc.

[5]Model Toxics Control Act Method A Cleanup Levels presented for reference purposes only.

[6]*Natural Background Soil Metals Concentrations in Washington State*, October 1994, Publication No. 94-115.

J = Analyte was analyzed for and identified, but the listed numerical value is estimate. P = analyte detected above instrument detection limit but below minimum quantitation limit.

U = Analysis was performed for analyte but not detected at the given detection limit. N = spike sample recovery not within control limits

mg/kg = milligrams per kilogram; µg/kg = micrograms per kilogram NA = not available

TABLE 2
SOIL CHEMICAL ANALYTICAL DATA[1]
WASHINGTON CENTRAL RAILROAD COMPANY

Sample Identification	Date Sampled	Feet Below Grade	WTPH-D Extended[2]		PCE[3]
			Diesel-Range (mg/kg)	Heavier oil-range (mg/kg)	Concentration (µg/kg)
Diesel Wash Building					
SS-1	6/28/95	2.22	10 (U)	25	0.25 (U)
SS-2	6/28/95	5.17	10 (U)	25 (U)	0.25 (U)
SS-3	6/28/95	4.99	10 (U)	27	0.25 (U)
Drop Table Site					
SS-4	7/22/96	4.85	10 (U)	25 (U)	0.20 (U)
SS-5	7/22/96	5.42	10 (U)	25 (U)	0.20 (U)
SS-6	7/22/96	5.46	10 (U)	26.8	0.20 (U)
SS-7	7/22/96	5.28	10 (U)	25 (U)	0.20 (U)
MTCA Method A Cleanup Levels[4]			200	200	500

Notes:

[1]Chemical analysis conducted by Sound Analytical Services, Inc. Laboratory reports are attached.

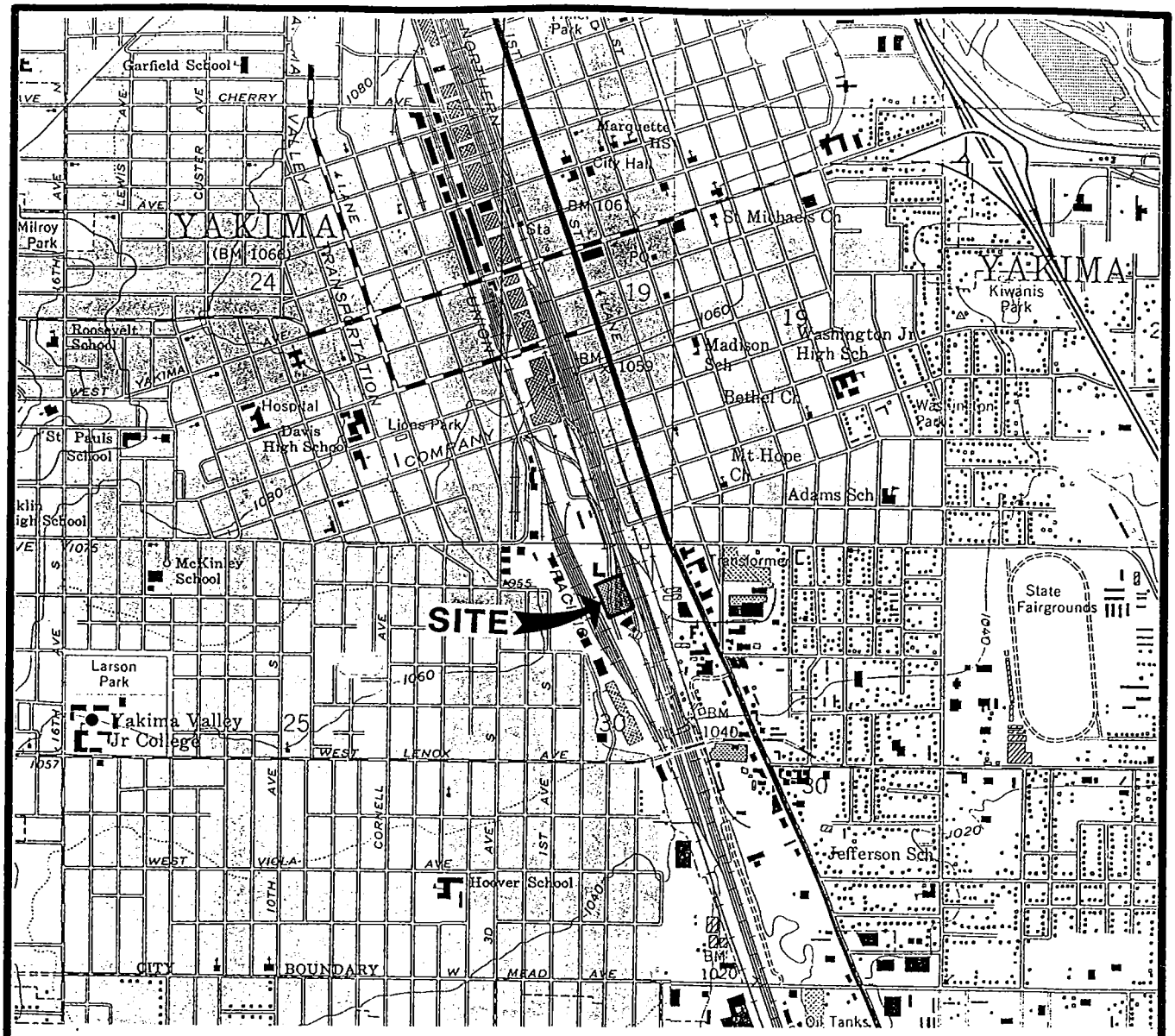
[2]Washington State Total Petroleum Hydrocarbons-Diesel Range Extended (Carbon Range c_{12} to c_{30}).

[3]Analyzed by EPA Method 8240.

[4]Model Toxics Control Act Method A Cleanup Levels presented for reference purposes only.

U = Analyte was analyzed for but not detected at the listed concentration.

mg/kg = milligrams per kilogram

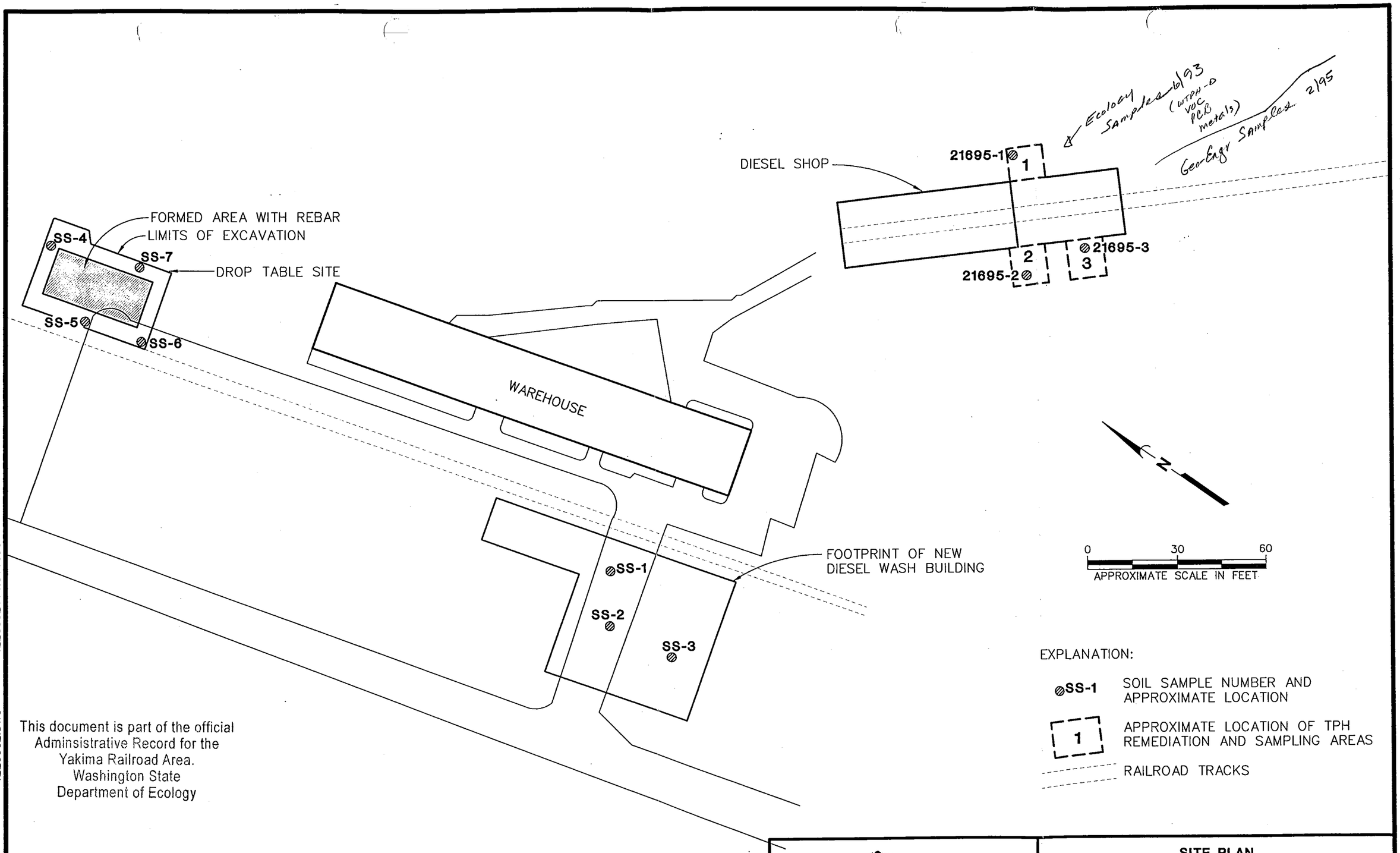


This document is part of the official Adminsistrative Record for the Yakima Railroad Area, Washington State Department of Ecology

Reference: USGS 7.5' topographic quadrangle maps, "Yakima East, WA." dated 1953, and "Yakima West, WA", dated 1958 photorevised in 1985.

Geo Engineers	VICINITY MAP
	FIGURE 1

TEP:SPS 8X11USGS.DWG 42220214:081496



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Reference: Base drawing information from Burlington_Northern Site Plan, date and title unknown.

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4220002.DWG

TEP:SPS

GeoEngineers

SITE PLAN

FIGURE 2

ATTACHMENT A

SAMPLING ANALYTICAL REPORTS

NORTH CREEK ANALYTICAL
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Correspondence to: 18939 - 120th Ave. NE, #101, Bothell, WA 98011

Geo Engineers - Tacoma	Project:	WA Center RR/Yakima	Sampled: 7/22/96
1101 Fawcett Ave., Ste 200	Project Number:	4220-002-T14	Received: 7/22/96
Tacoma, WA 98402	Project Manager:	Terry Parks	Reported: 8/5/96

Project Summary

Sample Description	Laboratory Sample Number	Sample Matrix	Date Sampled
SS-4	B607358-01	Soil	7/22/96
SS-5	B607358-02	Soil	7/22/96
SS-6	B607358-03	Soil	7/22/96
SS-7	B607358-04	Soil	7/22/96

North Creek Analytical, Inc.

Laura Dutton

Laura L Dutton, Project Manager

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Tacoma, WA 98402	Project Manager:	Terry Parks	Reported: 8/9/96

Diesel Hydrocarbons (C12-C24) and Heavy Oil (C24-C40) by WTPH-D (extended)

Analyte	Batch Number	Date Prepared	Date Analyzed	Surrogate Limits	Reporting Limit	Result	Units	Notes*
SS-4			**B607358-01**				**Soil, dry wt.**	
Diesel Range Hydrocarbons	6070634	7/24/96	7/25/96		10.0	ND	mg/kg (ppm)	
Heavy Oil Range Hydrocarbons	"	"	"		25.0	ND	"	
Surrogate: 2-FBP	"	"	"	*50.0-150*		*83.2*	*%*	
SS-5			**B607358-02**				**Soil, dry wt.**	
Diesel Range Hydrocarbons	6070634	7/24/96	7/25/96		10.0	ND	mg/kg (ppm)	
Heavy Oil Range Hydrocarbons	"	"	"		25.0	ND	"	
Surrogate: 2-FBP	"	"	"	*50.0-150*		*82.8*	*%*	
SS-6			**B607358-03**				**Soil, dry wt.**	
Diesel Range Hydrocarbons	6070634	7/24/96	7/25/96		10.0	ND	mg/kg (ppm)	
Heavy Oil Range Hydrocarbons	"	"	"		25.0	**26.8**	"	
Surrogate: 2-FBP	"	"	"	*50.0-150*		*82.4*	*%*	
SS-7			**B607358-04**				**Soil, dry wt.**	
Diesel Range Hydrocarbons	6070634	7/24/96	7/25/96		10.0	ND	mg/kg (ppm)	
Heavy Oil Range Hydrocarbons	"	"	"		25.0	ND	"	
Surrogate: 2-FBP	"	"	"	*50.0-150*		*84.2*	*%*	

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Volatile Organic Compounds by EPA Method 8240B

Analyte	Batch Number	Date Prepared	Date Analyzed	Surrogate Limits	Reporting Limit	Result	Units	Notes*
SS-4			B607358-01				Soil, dry wt.	
Acetone	6070710	7/26/96	8/3/96		2.00	ND	mg/kg (ppm)	
Benzene	"	"	"		0.200	ND	"	
Bromodichloromethane	"	"	"		0.200	ND	"	
Bromoform	"	"	"		0.200	ND	"	
Bromomethane	"	"	"		0.200	ND	"	
2-Butanone	"	"	"		2.00	ND	"	
Carbon disulfide	"	"	"		0.200	ND	"	
Carbon tetrachloride	"	"	"		0.200	ND	"	
Chlorobenzene	"	"	"		0.200	ND	"	
Chloroethane	"	"	"		0.200	ND	"	
Chloroform	"	"	"		0.200	ND	"	
Chloromethane	"	"	"		0.200	ND	"	
ibromochloromethane	"	"	"		0.200	ND	"	
,1-Dichloroethane	"	"	"		0.200	ND	"	
1,2-Dichloroethane	"	"	"		0.200	ND	"	
1,1-Dichloroethene	"	"	"		0.200	ND	"	
cis-1,2-Dichloroethene	"	"	"		0.200	ND	"	
trans-1,2-Dichloroethene	"	"	"		0.200	ND	"	
1,2-Dichloropropane	"	"	"		0.200	ND	"	
cis-1,3-Dichloropropene	"	"	"		0.200	ND	"	
trans-1,3-Dichloropropene	"	"	"		0.200	ND	"	
Ethylbenzene	"	"	"		0.200	ND	"	
2-Hexanone	"	"	"		2.00	ND	"	
Methylene chloride	"	"	"		1.00	ND	"	
4-Methyl-2-pentanone	"	"	"		2.00	ND	"	
Styrene	"	"	"		0.200	ND	"	
1,1,2,2-Tetrachloroethane	"	"	"		0.200	ND	"	
Tetrachloroethene	"	"	"		0.200	ND	"	
Toluene	"	"	"		0.200	ND	"	
1,1,1-Trichloroethane	"	"	"		0.200	ND	"	
1,1,2-Trichloroethane	"	"	"		0.200	ND	"	
Trichloroethene	"	"	"		0.200	ND	"	
Vinyl chloride	"	"	"		0.200	ND	"	
Xylenes (total)	"	"	"		0.400	ND	"	
Surrogate: 1,2-DCA-d4	"	"	"	*70.0-121*		*89.7*	%	
Surrogate: Toluene-d8	"	"	"	*81.0-117*		*104*	"	
Surrogate: 4-BFB	"	"	"	*74.0-121*		*105*	"	

North Creek Analytical, Inc.

Laura Dutton

Laura L Dutton, Project Manager

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Volatile Organic Compounds by EPA Method 8240B

Analyte	Batch Number	Date Prepared	Date Analyzed	Surrogate Limits	Reporting Limit	Result	Units	Notes*
SS-5			B607358-02				Soil, dry wt.	
Acetone	6070710	7/26/96	8/4/96		2.00	ND	mg/kg (ppm)	
Benzene	"	"	"		0.200	ND	"	
Bromodichloromethane	"	"	"		0.200	ND	"	
Bromoform	"	"	"		0.200	ND	"	
Bromomethane	"	"	"		0.200	ND	"	
2-Butanone	"	"	"		2.00	ND	"	
Carbon disulfide	"	"	"		0.200	ND	"	
Carbon tetrachloride	"	"	"		0.200	ND	"	
Chlorobenzene	"	"	"		0.200	ND	"	
Chloroethane	"	"	"		0.200	ND	"	
Chloroform	"	"	"		0.200	ND	"	
Chloromethane	"	"	"		0.200	ND	"	
Dibromochloromethane	"	"	"		0.200	ND	"	
1,1-Dichloroethane	"	"	"		0.200	ND	"	
1,2-Dichloroethane	"	"	"		0.200	ND	"	
1,1-Dichloroethene	"	"	"		0.200	ND	"	
cis-1,2-Dichloroethene	"	"	"		0.200	ND	"	
trans-1,2-Dichloroethene	"	"	"		0.200	ND	"	
1,2-Dichloropropane	"	"	"		0.200	ND	"	
cis-1,3-Dichloropropene	"	"	"		0.200	ND	"	
trans-1,3-Dichloropropene	"	"	"		0.200	ND	"	
Ethylbenzene	"	"	"		0.200	ND	"	
2-Hexanone	"	"	"		2.00	ND	"	
Methylene chloride	"	"	"		1.00	ND	"	
4-Methyl-2-pentanone	"	"	"		2.00	ND	"	
Styrene	"	"	"		0.200	ND	"	
1,1,2,2-Tetrachloroethane	"	"	"		0.200	ND	"	
Tetrachloroethene	"	"	"		0.200	ND	"	
Toluene	"	"	"		0.200	ND	"	
1,1,1-Trichloroethane	"	"	"		0.200	ND	"	
1,1,2-Trichloroethane	"	"	"		0.200	ND	"	
Trichloroethene	"	"	"		0.200	ND	"	
Vinyl chloride	"	"	"		0.200	ND	"	
Xylenes (total)	"	"	"		0.400	ND	"	
Surrogate: 1,2-DCA-d4	"	"	"	*70.0-121*		*82.5*	*%*	
Surrogate: Toluene-d8	"	"	"	*81.0-117*		*98.2*	"	
Surrogate: 4-BFB	"	"	"	*74.0-121*		*99.3*	"	

North Creek Analytical, Inc.

Laura Dutton

Laura L Dutton, Project Manager

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Correspondence to: 18939 - 120th Ave. NE, #101, Bothell, WA 98011

Geo Engineers - Tacoma	Project:	WA Center RR/Yakima	Sampled: 7/22/96
1101 Fawcett Ave., Ste 200	Project Number:	4220-002-T14	Received: 7/22/96
Tacoma, WA 98402	Project Manager:	Terry Parks	Reported: 8/5/96

Volatile Organic Compounds by EPA Method 8240B

Analyte	Batch Number	Date Prepared	Date Analyzed	Surrogate Limits	Reporting Limit	Result	Units	Notes*
SS-6			B607358-03				Soil, dry wt.	
Acetone	6070710	7/26/96	8/4/96		2.00	ND	mg/kg (ppm)	
Benzene	"	"	"		0.200	ND	"	
Bromodichloromethane	"	"	"		0.200	ND	"	
Bromoform	"	"	"		0.200	ND	"	
Bromomethane	"	"	"		0.200	ND	"	
2-Butanone	"	"	"		2.00	ND	"	
Carbon disulfide	"	"	"		0.200	ND	"	
Carbon tetrachloride	"	"	"		0.200	ND	"	
Chlorobenzene	"	"	"		0.200	ND	"	
Chloroethane	"	"	"		0.200	ND	"	
Chloroform	"	"	"		0.200	ND	"	
Chloromethane	"	"	"		0.200	ND	"	
Dibromochloromethane	"	"	"		0.200	ND	"	
1,1-Dichloroethane	"	"	"		0.200	ND	"	
1,2-Dichloroethane	"	"	"		0.200	ND	"	
1,1-Dichloroethene	"	"	"		0.200	ND	"	
cis-1,2-Dichloroethene	"	"	"		0.200	ND	"	
trans-1,2-Dichloroethene	"	"	"		0.200	ND	"	
1,2-Dichloropropane	"	"	"		0.200	ND	"	
cis-1,3-Dichloropropene	"	"	"		0.200	ND	"	
trans-1,3-Dichloropropene	"	"	"		0.200	ND	"	
Ethylbenzene	"	"	"		0.200	ND	"	
2-Hexanone	"	"	"		2.00	ND	"	
Methylene chloride	"	"	"		1.00	ND	"	
4-Methyl-2-pentanone	"	"	"		2.00	ND	"	
Styrene	"	"	"		0.200	ND	"	
1,1,2,2-Tetrachloroethane	"	"	"		0.200	ND	"	
Tetrachloroethene	"	"	"		0.200	ND	"	
Toluene	"	"	"		0.200	ND	"	
1,1,1-Trichloroethane	"	"	"		0.200	ND	"	
1,1,2-Trichloroethane	"	"	"		0.200	ND	"	
Trichloroethene	"	"	"		0.200	ND	"	
Vinyl chloride	"	"	"		0.200	ND	"	
Xylenes (total)	"	"	"		0.400	ND	"	
Surrogate: 1,2-DCA-d4	"	"	"	*70.0-121*		*87.2*	*%*	
Surrogate: Toluene-d8	"	"	"	*81.0-117*		*100*	"	
Surrogate: 4-BFB	"	"	"	*74.0-121*		*102*	"	

North Creek Analytical, Inc.

Laura Dutton

Laura L Dutton, Project Manager

NORTH CREEK ANALYTICAL
Environmental Laboratory Services

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Geo Engineers - Tacoma	Project:	WA Center RR/Yakima	Sampled: 7/22/96
1101 Fawcett Ave., Ste 200	Project Number:	4220-002-T14	Received: 7/22/96
Tacoma, WA 98402	Project Manager:	Terry Parks	Reported: 8/5/96

Volatile Organic Compounds by EPA Method 8240B

Analyte	Batch Number	Date Prepared	Date Analyzed	Surrogate Limits	Reporting Limit	Result	Units	Notes*
SS-7			B607358-04				Soil, dry wt.	
Acetone	6070710	7/26/96	8/4/96		2.00	ND	mg/kg (ppm)	
Benzene	"	"	"		0.200	ND	"	
Bromodichloromethane	"	"	"		0.200	ND	"	
Bromoform	"	"	"		0.200	ND	"	
Bromomethane	"	"	"		0.200	ND	"	
2-Butanone	"	"	"		2.00	ND	"	
Carbon disulfide	"	"	"		0.200	ND	"	
Carbon tetrachloride	"	"	"		0.200	ND	"	
Chlorobenzene	"	"	"		0.200	ND	"	
Chloroethane	"	"	"		0.200	ND	"	
Chloroform	"	"	"		0.200	ND	"	
Chloromethane	"	"	"		0.200	ND	"	
ibromochloromethane	"	"	"		0.200	ND	"	
1,1-Dichloroethane	"	"	"		0.200	ND	"	
1,2-Dichloroethane	"	"	"		0.200	ND	"	
1,1-Dichloroethene	"	"	"		0.200	ND	"	
cis-1,2-Dichloroethene	"	"	"		0.200	ND	"	
trans-1,2-Dichloroethene	"	"	"		0.200	ND	"	
1,2-Dichloropropane	"	"	"		0.200	ND	"	
cis-1,3-Dichloropropene	"	"	"		0.200	ND	"	
trans-1,3-Dichloropropene	"	"	"		0.200	ND	"	
Ethylbenzene	"	"	"		0.200	ND	"	
2-Hexanone	"	"	"		2.00	ND	"	
Methylene chloride	"	"	"		1.00	ND	"	
4-Methyl-2-pentanone	"	"	"		2.00	ND	"	
Styrene	"	"	"		0.200	ND	"	
1,1,2,2-Tetrachloroethane	"	"	"		0.200	ND	"	
Tetrachloroethene	"	"	"		0.200	ND	"	
Toluene	"	"	"		0.200	ND	"	
1,1,1-Trichloroethane	"	"	"		0.200	ND	"	
1,1,2-Trichloroethane	"	"	"		0.200	ND	"	
Trichloroethene	"	"	"		0.200	ND	"	
Vinyl chloride	"	"	"		0.200	ND	"	
Xylenes (total)	"	"	"		0.400	ND	"	
Surrogate: 1,2-DCA-d4	"	"	"	*70.0-121*		*92.2*	*%*	
Surrogate: Toluene-d8	"	"	"	*81.0-117*		*104*	"	
Surrogate: 4-BFB	"	"	"	*74.0-121*		*104*	"	

North Creek Analytical, Inc.

Laura Dutton

Laura L Dutton, Project Manager

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Geo Engineers - Tacoma	Project:	WA Center RR/Yakima	Sampled:	7/22/96
1101 Fawcett Ave., Ste 200	Project Number:	4220-002-T14	Received:	7/22/96
Tacoma, WA 98402	Project Manager:	Terry Parks	Reported:	8/5/96

Dry Weight Determination

Sample Name	Lab ID	Matrix	Result	Units
SS-4	B607358-01	Soil	95.8	%
SS-5	B607358-02	Soil	89.2	%
SS-6	B607358-03	Soil	91.6	%
SS-7	B607358-04	Soil	97.2	%

North Creek Analytical, Inc.

**Refer to end of report for text of notes.*

Laura L Dutton, Project Manager

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Geo Engineers - Tacoma	Project:	WA Center RR/Yakima	Sampled: 7/22/96
1101 Fawcett Ave., Ste 200	Project Number:	4220-002-T14	Received: 7/22/96
Tacoma, WA 98402	Project Manager:	Terry Parks	Reported: 8/5/96

Diesel Hydrocarbons (C12-C24) by WTPH-D
Quality Control

Analyte	Date Analyzed	Spike Level	Sample Result	QC Result	Units	Reporting Limit / Recov. Limits	Recov. %	RPD Limit	RPD %	Notes*
Batch: 6070634	**Date Prepared: 7/24/96**									
Blank	6070634-BLK1				Soil, dry wt.					
Diesel Range Hydrocarbons	7/25/96			ND	mg/kg (ppm)	10.0				
Surrogate: 2-FBP	"	*11.5*		*9.85*	"	*50.0-150*	*85.7*			
Blank Spike	6070634-BS1				Soil, dry wt.					
Diesel Range Hydrocarbons	7/25/96	68.1		71.1	mg/kg (ppm)	66.0-131	104			
Surrogate: 2-FBP	"	*11.5*		*10.1*	"	*50.0-150*	*87.8*			
Duplicate	6070634-DUP1		B607358-03		Soil, dry wt.					
Diesel Range Hydrocarbons	7/26/96		ND	ND	mg/kg (ppm)			48.0		2
Surrogate: 2-FBP	"	*12.5*		*10.1*	"	*50.0-150*	*80.8*			

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Geo Engineers - Tacoma	Project:	WA Center RR/Yakima	Sampled: 7/22/96
1101 Fawcett Ave., Ste 200	Project Number:	4220-002-T14	Received: 7/22/96
Tacoma, WA 98402	Project Manager:	Terry Parks	Reported: 8/5/96

Volatile Organic Compounds by EPA Method 8240B
Quality Control

Analyte	Date Analyzed	Spike Level	Sample Result	QC Result	Units	Reporting Limit / Recov. Limits	Recov. %	RPD Limit	RPD %	Notes*
Batch: 6070710	**Date Prepared: 7/26/96**									
Blank	**6070710-BLK1**				**Soil, dry wt.**					
Acetone	7/26/96			**ND**	mg/kg (ppm)	**2.00**				
Benzene	"			**ND**	"	**0.200**				
Bromodichloromethane	"			**ND**	"	**0.200**				
Bromoform	"			**ND**	"	**0.200**				
Bromomethane	"			**ND**	"	**0.200**				
2-Butanone	"			**ND**	"	**2.00**				
Carbon disulfide	"			**ND**	"	**0.200**				
Carbon tetrachloride	"			**ND**	"	**0.200**				
Chlorobenzene	"			**ND**	"	**0.200**				
Chloroethane	"			**ND**	"	**0.200**				
hloroform	"			**ND**	"	**0.200**				
Chloromethane	"			**ND**	"	**0.200**				
Dibromochloromethane	"			**ND**	"	**0.200**				
1,1-Dichloroethane	"			**ND**	"	**0.200**				
1,2-Dichloroethane	"			**ND**	"	**0.200**				
1,1-Dichloroethene	"			**ND**	"	**0.200**				
cis-1,2-Dichloroethene	"			**ND**	"	**0.200**				
trans-1,2-Dichloroethene	"			**ND**	"	**0.200**				
1,2-Dichloropropane	"			**ND**	"	**0.200**				
cis-1,3-Dichloropropene	"			**ND**	"	**0.200**				
trans-1,3-Dichloropropene	"			**ND**	"	**0.200**				
Ethylbenzene	"			**ND**	"	**0.200**				
2-Hexanone	"			**ND**	"	**2.00**				
Methylene chloride	"			**ND**	"	**1.00**				
4-Methyl-2-pentanone	"			**ND**	"	**2.00**				
Styrene	"			**ND**	"	**0.200**				
1,1,2,2-Tetrachloroethane	"			**ND**	"	**0.200**				
Tetrachloroethene	"			**ND**	"	**0.200**				
Toluene	"			**ND**	"	**0.200**				
1,1,1-Trichloroethane	"			**ND**	"	**0.200**				
1,1,2-Trichloroethane	"			**ND**	"	**0.200**				
Trichloroethene	"			**ND**	"	**0.200**				
Vinyl chloride	"			**ND**	"	**0.200**				
Xylenes (total)	"			**ND**	"	**0.400**				
Surrogate: 1,2-DCA-d4	"	*2.50*		*2.00*	"	*70.0-121*	*80.0*			
Surrogate: Toluene-d8	"	*2.50*		*2.29*	"	*81.0-117*	*91.6*			
Surrogate: 4-BFB	"	*2.50*		*1.97*	"	*74.0-121*	*78.8*			

North Creek Analytical, Inc.

Laura Dutton

Laura L Dutton, Project Manager

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1101 Fawcett Ave., Ste 200	Project Number:	4220-002-T14	Received: 7/22/96
Tacoma, WA 98402	Project Manager:	Terry Parks	Reported: 8/5/96

Volatile Organic Compounds by EPA Method 8240B
Quality Control

Analyte	Date Analyzed	Spike Level	Sample Result	QC Result	Units	Reporting Limit Recov. Limits	Recov. %	RPD Limit	RPD %	Notes*
Matrix Spike	6070710-MS1		B607317-01		Soil, dry wt.					
Benzene	7/26/96	0.522	ND	0.427	mg/kg (ppm)	47.0-117	**81.8**			
Chlorobenzene	"	0.522	ND	0.497	"	44.0-121	**95.2**			
1,1-Dichloroethene	"	0.522	ND	0.345	"	21.0-126	**66.1**			
Toluene	"	0.522	ND	0.469	"	48.0-115	**89.8**			
Trichloroethene	"	0.522	ND	0.447	"	35.0-125	**85.6**			
Surrogate: 1,2-DCA-d4	"	*2.61*		*2.13*	"	*70.0-121*	*81.6*			
Surrogate: Toluene-d8	"	*2.61*		*2.36*	"	*81.0-117*	*90.4*			
Surrogate: 4-BFB	"	*2.61*		*1.89*	"	*74.0-121*	*72.4*			*1*
Matrix Spike Dup	6070710-MSD1		B607317-01		Soil, dry wt.					
Benzene	7/26/96	0.522	ND	0.424	mg/kg (ppm)	47.0-117	**81.2**	11.0	**0.736**	
Chlorobenzene	"	0.522	ND	0.492	"	44.0-121	**94.3**	13.0	**0.950**	
1,1-Dichloroethene	"	0.522	ND	0.340	"	21.0-126	**65.1**	13.0	**1.52**	
Toluene	"	0.522	ND	0.473	"	48.0-115	**90.6**	15.0	**0.887**	
Trichloroethene	"	0.522	ND	0.445	"	35.0-125	**85.2**	11.0	**0.468**	
Surrogate: 1,2-DCA-d4	"	*2.61*		*2.10*	"	*70.0-121*	*80.5*			
Surrogate: Toluene-d8	"	*2.61*		*2.30*	"	*81.0-117*	*88.1*			
Surrogate: 4-BFB	"	*2.61*		*1.90*	"	*74.0-121*	*72.8*			*1*

North Creek Analytical, Inc.

Laura Dutton

Laura L Dutton, Project Manager

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Geo Engineers - Tacoma	Project:	WA Center RR/Yakima	Sampled: 7/22/96
1101 Fawcett Ave., Ste 200	Project Number:	4220-002-T14	Received: 7/22/96
Tacoma, WA 98402	Project Manager:	Terry Parks	Reported: 8/5/96

Notes

#	Note
1	The surrogate recovery for sample is outside of method established control limits.
2	RPD values are not reported at sample concentrations less than ten times the reporting limit.

North Creek Analytical, Inc.

*Refer to end of report for text of notes.

Laura Dutton

Laura L Dutton, Project Manager

CHAIN OF CUSTODY RECORD

GEOENGINEERS, INC.
6240 TACOMA MALL BLVD. SUITE 318
TACOMA, WASHINGTON 98409
(206) 471-0379

GeoEngineers

DATE 7/22/96
PAGE 1 OF 1
LAB NCA
LAB NO.

PROJECT NAME/LOCATION WA Center RR/ YAKIMA
PROJECT NUMBER 4220-002-T14
PROJECT MANAGER Terry PARKS
SAMPLED BY Steve Helvey

SAMPLE IDENTIFICATION		SAMPLE COLLECTION			# OF	ANALYSIS REQUIRED		NOTES/COMMENTS
LAB	GEOENGINEERS	DATE	TIME	MATRIX	JARS	WTPH-D	8240 *	(Preserved, filtered, etc.)
	SS-4	7/22/96	8:40	Soil	1	X	X	B607358-01
	SS-5	7/	8:42		1	X	X	-02
	SS-6		8:50		1	X	X	-03
	SS-7	↓	8:58	↓	1	X	X	-04

RELINQUISHED BY	FIRM	RELINQUISHED BY	FIRM	RELINQUISHED BY	FIRM
SIGNATURE Stephen W Helvey	GEI	SIGNATURE		SIGNATURE	
PRINTED NAME Stephen W Helvey		PRINTED NAME		PRINTED NAME	
DATE 7/22/96 TIME 1:30 PM		DATE TIME		DATE TIME	
RECEIVED BY	**FIRM**	**RECEIVED BY**	**FIRM**	**RECEIVED BY**	**FIRM**
SIGNATURE RG Kelley	NCA	SIGNATURE		SIGNATURE	
PRINTED NAME RG Kelley		PRINTED NAME		PRINTED NAME	
DATE 7/22/96 TIME 1700		DATE TIME		DATE TIME	

ADDITIONAL COMMENTS: * 8240 ANALYSis Modified For PCE. CALL Terry PARKS At 383-4940 With ANY QUESTIONS.

Misc/s

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GeoEngineers, Inc.
6240 Tacoma Mall Blvd., #318
Tacoma, WA 98409
Attention: Terry Parks

Project Name: WACRR/Yakima
Client Project : #4220-001-T14

NCA Project #: B506560

Received: Jun 29, 1995
Reported: Jul 6, 1995

PROJECT SUMMARY PAGE

Laboratory Sample Number	Sample Description	Sample Matrix	Date Sampled
B506560-01	SS-1	Soil	6/28/95
B506560-02	SS-2	Soil	6/28/95
B506560-03	SS-3	Soil	6/28/95

The results in this report apply to the samples analyzed in accordance with the chain of custody document.
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NORTH CREEK ANALYTICAL Inc.

Sally J. Hanley
Project Manager

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GeoEngineers, Inc.
6240 Tacoma Mall Blvd., #318
Tacoma, WA 98409
Attention: Terry Parks

Client Project ID: WACRR/Yakima
Sample Matrix: Soil

First Sample #: B506560-01

Received: Jun 29, 1995
Reported: Jul 5, 1995

TOTAL SOLIDS & MOISTURE CONTENT REPORT

Sample Number	Sample Description	Total Solids %	Moisture Content %
B506560-01	SS-1	90	10
B506560-02	SS-2	89	11
B506560-03	SS-3	87	13

The enclosed analytical results for soils, sediments and sludges have been converted to a DRY WEIGHT reporting basis.
To attain the wet weight "as received" equivalent, multiply the dry weight result by the decimal fraction of percent Total Solids.

NORTH CREEK ANALYTICAL Inc.

Sally J. Hanley
Project Manager

NORTH CREEK ANALYTICAL

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GeoEngineers, Inc.	Client Project ID:	WACRR/Yakima	Sampled: Jun 28, 1995
6240 Tacoma Mall Blvd., #318	Sample Matrix:	Soil	Received: Jun 29, 1995
Tacoma, WA 98409	Analysis Method:	WTPH-D Extended	Extracted: Jun 29, 1995
Attention: Terry Parks	First Sample #:	B506560-01	Analyzed: Jul 3, 1995
			Reported: Jul 6, 1995

TOTAL PETROLEUM HYDROCARBONS - DIESEL RANGE EXTENDED

Sample Number	Sample Description	Diesel Result mg/kg (ppm)	Heavy Oil Result mg/kg (ppm)	Surrogate Recovery %
B506560-01	SS-1	N.D.	25	85
B506560-02	SS-2	N.D.	N.D.	74
B506560-03	SS-3	N.D.	27	82
BLK062995	Method Blank	N.D.	N.D.	68
Reporting Limit:		10	25	

2-Fluorobiphenyl Surrogate Recovery Control Limits are 50 - 150%.
Extractable Hydrocarbons are quantitated as Diesel Range Organics (C12 - C24) and Heavy Oil Range Organics (>C24).
Analytes reported as N.D. were not detected above the stated Reporting Limit. The results reported above are on a dry weight basis.

NORTH CREEK ANALYTICAL Inc.

Sally J. Hanley
Project Manager

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GeoEngineers, Inc.
6240 Tacoma Mall Blvd., #318
Tacoma, WA 98409
Attention: Terry Parks

Client Project ID: WACRR/Yakima
Sample Matrix: Soil
Analysis Method: WTPH-D
Units: mg/kg (ppm)

Analyst: T. Fitzgibbon

Extracted: Jun 29, 1995
Analyzed: 6/30-7/3/1995
Reported: Jul 6, 1995

HYDROCARBON QUALITY CONTROL DATA REPORT

ACCURACY ASSESSMENT
Laboratory Control Sample

Diesel

Spike Conc. Added:	68
Spike Result:	70
% Recovery:	103
Upper Control Limit %:	125
Lower Control Limit %:	72

PRECISION ASSESSMENT
Sample Duplicate

Diesel Range Hydrocarbons

Sample Number:	B506548-06
Original Result:	12
Duplicate Result:	19
Relative % Difference:	Relative Percent Difference values are not reported at sample concentration levels less than 10 times the Reporting Limit.
Maximum RPD:	42

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Yakima Railroad Area.
Washington State
Department of Ecology

NORTH CREEK ANALYTICAL Inc

Sally J. Hanley
Project Manager

$$\% \text{ Recovery:} \quad \frac{\text{Spike Result}}{\text{Spike Concentration Added}} \times 100$$

$$\text{Relative \% Difference:} \quad \frac{\text{Original Result - Duplicate Result}}{(\text{Original Result + Duplicate Result}) / 2} \times 100$$

NORTH CREEK ANALYTICAL

18939 120th Avenue N.E., Suite 101 • Bothell, WA 98011-9508 (206) 481-9200 • FAX 485-2992
East 11115 Montgomery, Suite B • Spokane, WA 99206-4776 (509) 924-9200 • FAX 924-9290
9405 S.W. Nimbus Avenue • Beaverton, OR 97008-7132 (503) 643-9200 • FAX 644-2202

GeoEngineers, Inc.	Client Project ID:	WACRR/Yakima	Sampled: Jun 28, 1995
6240 Tacoma Mall Blvd., #318	Sample Descript:	Soil, SS-1	Received: Jun 29, 1995
Tacoma, WA 98409	Analysis Method:	EPA 8240	Analyzed: Jun 30, 1995
Attention: Terry Parks	Sample Number:	B506560-01	Reported: Jul 5, 1995

VOLATILE ORGANICS by GC/MS

Analyte	Reporting Limit mg/kg (ppm)	Sample Results mg/kg (ppm)
Tetrachloroethene	0.25	N.D.

The results reported above are on a dry weight basis.
Analytes reported as N.D. were not detected above the stated Reporting Limit.

ORTH CREEK ANALYTICAL Inc.

Sally J. Hanley
Project Manager

Surrogate Standards Percent Recovery:		Control Limits
1,2-Dichloroethane-d4	90	70-121
Toluene-d8	98	81-117
4-Bromofluorobenzene	93	74-121

NORTH CREEK ANALYTICAL

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GeoEngineers, Inc.	Client Project ID:	WACRR/Yakima	Sampled:	Jun 28, 1995
6240 Tacoma Mall Blvd., #318	Sample Descript:	Soil, SS-2	Received:	Jun 29, 1995
Tacoma, WA 98409	Analysis Method:	EPA 8240	Analyzed:	Jun 30, 1995
Attention: Terry Parks	Sample Number:	B506560-02	Reported:	Jul 5, 1995

VOLATILE ORGANICS by GC/MS

Analyte	Reporting Limit mg/kg (ppm)	Sample Results mg/kg (ppm)
Tetrachloroethene	0.25	N.D.

This document is part of the official
Adminsistrative Record for the
Yakima Railroad Area.
Washington State
Department of Ecology

The results reported above are on a dry weight basis.
Analytes reported as N.D. were not detected above the stated Reporting Limit.

NORTH CREEK ANALYTICAL Inc.

Sally J. Hanley
Project Manager

Surrogate Standards Percent Recovery:		Control Limits
1,2-Dichloroethane-d4	94	70-121
Toluene-d8	99	81-117
4-Bromofluorobenzene	94	74-121

506560.GGG <6>

NORTH CREEK ANALYTICAL

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GeoEngineers, Inc.	Client Project ID:	WACRR/Yakima	Sampled:	Jun 28, 1995
6240 Tacoma Mall Blvd., #318	Sample Descript:	Soil, SS-3	Received:	Jun 29, 1995
Tacoma, WA 98409	Analysis Method:	EPA 8240	Analyzed:	Jun 30, 1995
Attention: Terry Parks	Sample Number:	B506560-03	Reported:	Jul 5, 1995

VOLATILE ORGANICS by GC/MS

Analyte	Reporting Limit mg/kg (ppm)	Sample Results mg/kg (ppm)
Tetrachloroethene	0.25	N.D.

The results reported above are on a dry weight basis.
Analytes reported as N.D. were not detected above the stated Reporting Limit.

Surrogate Standards Percent Recovery:		Control Limits
1,2-Dichloroethane-d4	92	70-121
Toluene-d8	98	81-117
4-Bromofluorobenzene	94	74-121

NORTH CREEK ANALYTICAL Inc.

Sally J. Hanley
Project Manager

506560.GGG <7>

NORTH CREEK ANALYTICAL

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9405 S.W. Nimbus Avenue • Beaverton, OR 97008-7132 (503) 643-9200 • FAX 644-2202

GeoEngineers, Inc.
6240 Tacoma Mall Blvd., #318
Tacoma, WA 98409
Attention: Terry Parks

Client Project ID: WACRR/Yakima
Sample Descript: Method Blank
Analysis Method: EPA 8240
Sample Number: BLK063095

Analyzed: Jun 30, 1995
Reported: Jul 5, 1995

VOLATILE ORGANICS by GC/MS

Analyte	Reporting Limit mg/kg (ppm)	Sample Results mg/kg (ppm)
Tetrachloroethene	0.25	N.D.

The results reported above are on a dry weight basis.
Analytes reported as N.D. were not detected above the stated Reporting Limit.

NORTH CREEK ANALYTICAL Inc.

Sally J. Hanley
Project Manager

Surrogate Standards Percent Recovery:		Control Limits
1,2-Dichloroethane-d4	87	70-121
Toluene-d8	98	81-117
4-Bromofluorobenzene	89	74-121

NORTH CREEK ANALYTICAL

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GeoEngineers, Inc.
6240 Tacoma Mall Blvd., #318
Tacoma, WA 98409
Attention: Terry Parks

Client Project ID: WACRR/Yakima
Sample Matrix: Soil
Analysis Method: EPA 8240
Units: mg/kg (ppm)
QC Sample #: B506560-03

Analyst: R. Lister

Analyzed: Jun 30, 1995
Reported: Jul 5, 1995

MATRIX SPIKE QUALITY CONTROL DATA REPORT

ANALYTE	1,1-DCE	Benzene	TCE	Toluene	Chloro-benzene
Sample Result:	N.D.	N.D.	N.D.	N.D.	N.D.
Spike Conc. Added:	2.30	2.30	2.30	2.30	2.30
Spike Result:	2.23	1.97	2.10	2.04	2.08
Spike % Recovery:	97%, Q-1	86%	91%	89%	90%
Spike Dup. Result:	2.18	1.96	2.02	2.01	2.03
Spike Duplicate % Recovery:	95%, Q-1	85%	88%	87%	88%
Upper Control Limit %:	87	105	97	118	101
Lower Control Limit %:	45	61	62	52	63
Relative % Difference:	2.3%	<1.0%	4.0%	1.5%	2.4%
Maximum RPD:	10	10	10	20	10

NORTH CREEK ANALYTICAL Inc.

Sally J. Hanley
Project Manager

Please Note:
Q-1 = The Spike Recovery for this QC sample is outside of NCA established control limits.

CHAIN OF CUSTODY RECORD

GEOENGINEERS, INC.
6240 TACOMA MALL BLVD. SUITE 318
TACOMA, WASHINGTON 98409
(206) 471-0379

GeoEngineers

This document is part of the official Adminsistrative Record for the Tacoma Railroad Area, Washington State Department of Ecology

DATE 6/28/95
PAGE 1 OF 1
LAB North Creek
LAB NO.

PROJECT NAME/LOCATION UA Cont RR/Tacoma
PROJECT NUMBER 4220-001-T 14
PROJECT MANAGER Terri Parks
SAMPLED BY Steve Helvey

SAMPLE IDENTIFICATION		SAMPLE COLLECTION			# OF	ANALYSIS REQUIRED			NOTES/COMMENTS
LAB	GEOENGINEERS	DATE	TIME	MATRIX	JARS	WTPH D Extended	EPA 8240*		(Preserved, filtered, etc.)
960-01	SS-1	6/28	8.50	Soil	2	X	X		NORMAL TAT
-02	SS-2	"	9.10	"	2	X	X		"
-03	SS-3	"	9.20	"	2	X	X		"

RELINQUISHED BY	FIRM	RELINQUISHED BY	FIRM	RELINQUISHED BY	FIRM
SIGNATURE Stephen W Helvey	CET	SIGNATURE	CET	SIGNATURE	
PRINTED NAME Stephen W Helvey		PRINTED NAME		PRINTED NAME	
DATE 6/28/95	TIME 2:00 PM	DATE	TIME	DATE	TIME

RECEIVED BY	FIRM	RECEIVED BY	FIRM	RECEIVED BY	FIRM
SIGNATURE		SIGNATURE Dana Lee	NCA	SIGNATURE	
PRINTED NAME		PRINTED NAME Dana Heiner		PRINTED NAME	
DATE	TIME	DATE 6/29/95	TIME 2:00 pm	DATE	TIME

ADDITIONAL COMMENTS: 8240 ANALYSIS Modified FOR PCE AS Discussed WITH SALLY H OF NORTH Creek.

SOUND ANALYTICAL SERVICES, INC.

ANALYTICAL & ENVIRONMENTAL CHEMISTS

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

TRANSMITTAL MEMORANDUM

DATE: March 1, 1995

TO: Terry Parks
GeoEngineers, Inc. - Tacoma

PROJECT: 4222-001-T14 WCRR-Roho

LABORATORY NUMBER: 46463

Enclosed are the original and one copy of the Tier II data deliverables package for Laboratory Work Order Number 46463. Three samples were received for analysis at Sound Analytical Services, Inc., on February 17, 1995.

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

Sincerely,

Thomas Boyden
Project Manager

TB:tm

SOUND ANALYTICAL SERVICES, INC.

ANALYTICAL & ENVIRONMENTAL CHEMISTS

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

Report To: GeoEngineers, Inc. - Tacoma Date: March 1, 1995

Report On: Analysis of Soil Lab No.: 46463

IDENTIFICATION:
Samples received on 02-17-95
Project: 4222-001-T14 WCRR-Roho

ANALYSIS:

Lab Sample No. 46463-1 Client ID: 21695-1

ICP Metals Per EPA Method 6010
Date Analyzed: 2-22-95
Units: mg/kg

Parameter	Result	PQL
Cadmium	3.7	0.51
Chromium	100	1.0
Copper	140	2.6
Lead	100	5.1
Nickel	54	4.1
Zinc	210	2.0

ND - Not Detected
PQL - Practical Quantitation Limit

SOUND ANALYTICAL SERVICES, INC.

GeoEngineers, Inc. - Tacoma
Project: 4222-001-T14 WCRR-Roho
Lab No. 46463
March 1, 1995

Lab Sample No. 46463-2 Client ID: 21695-2

ICP Metals Per EPA Method 6010
Date Analyzed: 2-22-95
Units: mg/kg

Parameter	Result	PQL
Cadmium	10	0.57
Chromium	75	1.0
Copper	110	2.8
Lead	95	5.7
Nickel	36	4.5
Zinc	130	2.3

Lab Sample No. 46463-3 Client ID: 21695-3

ICP Metals Per EPA Method 6010
Date Analyzed: 2-22-95
Units: mg/kg

Parameter	Result	PQL
Cadmium	8.4	0.54
Chromium	40	1.1
Copper	100	2.7
Lead	100	5.1
Nickel	22	4.3
Zinc	100	2.1

ND - Not Detected
PQL - Practical Quantitation Limit

SOUND ANALYTICAL SERVICES, INC.

Client Name	GeoEngineers, Inc. - Tacoma
Client ID:	21695-1
Lab ID:	46463-01
Date Received:	2/17/95
Date Prepared:	2/22/95
Date Analyzed:	2/24/95
% Solids	85.52

Diesel by WTPH-D

Surrogate	% Recovery	Flags	Recovery Limits Low	High
o-Terphenyl	-	X8	50	150

Sample results are on a dry weight basis.

Analyte	Result (mg/kg)	PQL	Flags
Diesel (>nC12-nC24)	1500	290	X2

SOUND ANALYTICAL SERVICES, INC.

Client Name	GeoEngineers, Inc. - Tacoma
Client ID:	21695-2
Lab ID:	46463-02
Date Received:	2/17/95
Date Prepared:	2/22/95
Date Analyzed:	2/24/95
% Solids	84.9

Diesel by WTPH-D

			Recovery Limits	
Surrogate	**% Recovery**	**Flags**	**Low**	**High**
o-Terphenyl	-	X8	50	150

Sample results are on a dry weight basis.

Analyte	**Result (mg/kg)**	**PQL**	**Flags**
Diesel (>nC12-nC24)	5800	570	X2

SOUND ANALYTICAL SERVICES, INC.

Client Name	GeoEngineers, Inc. - Tacoma
Client ID:	21695-3
Lab ID:	46463-03
Date Received:	2/17/95
Date Prepared:	2/22/95
Date Analyzed:	2/24/95
% Solids	86.25

Diesel by WTPH-D

			Recovery Limits	
Surrogate	**% Recovery**	**Flags**	**Low**	**High**
o-Terphenyl	-	X8	50	150

Sample results are on a dry weight basis.

Analyte	**Result (mg/kg)**	**PQL**	**Flags**
Diesel (>nC12-nC24)	840	290	X2

SOUND ANALYTICAL SERVICES, INC.

Client Name	GeoEngineers, Inc. - Tacoma
Client ID:	21695-1
Lab ID:	46463-01
Date Received:	2/17/95
Date Prepared:	2/24/95
Date Analyzed:	2/24/95
% Solids	85.52

Volatile Organics by USEPA Method 8240

Surrogate	% Recovery	Flags	Recovery Limits Low	High
1,2-Dichloroethane-d4	89		70	121
Toluene-d8	116		81	117
Bromofluorobenzene	82		74	121

Sample results are on a dry weight basis.

Analyte	Result (ug/kg)	PQL	Flags
Chloromethane	ND	0.4	
Bromomethane	ND	0.33	
Vinyl Chloride	ND	0.35	
Chloroethane	ND	0.35	
Methylene Chloride	85	0.43	
Acetone	ND	1.8	
Carbon Disulfide	ND	0.68	
1,1-Dichloroethene	ND	0.3	
1,1-Dichloroethane	ND	0.35	
1,2-Dichloroethene (total)	ND	0.31	
Chloroform	ND	0.31	
1,2-Dichloroethane	ND	0.35	
2-Butanone (MEK)	ND	0.22	
1,1,1-Trichloroethane	ND	0.3	
Carbon Tetrachloride	ND	0.42	
Vinyl Acetate	ND	0.95	
Bromodichloromethane	ND	0.26	
1,2-Dichloropropane	ND	0.41	
cis-1,3-Dichloropropene	ND	0.35	
Trichloroethene	ND	0.28	
Dibromochloromethane	ND	0.21	
1,1,2-Trichloroethane	ND	0.25	
Benzene	ND	0.25	
trans-1,3-Dichloropropene	ND	0.26	
Bromoform	ND	0.22	
4-Methyl-2-pentanone (MIBK)	ND	0.26	

SOUND ANALYTICAL SERVICES, INC.

Volatile Organics by USEPA Method 8240 data for 46463-01 continued...

Analyte	Result (ug/kg)	PQL	Flags
2-Hexanone	ND	1.9	
Tetrachloroethene	ND	0.2	
1,1,2,2-Tetrachloroethane	ND	0.25	
Toluene	ND	0.23	
Chlorobenzene	ND	0.37	
Ethylbenzene	ND	0.18	
Styrene	ND	0.32	
Xylenes (total)	ND	0.52	

SOUND ANALYTICAL SERVICES, INC.

Client Name	GeoEngineers, Inc. - Tacoma
Client ID:	21695-2
Lab ID:	46463-02
Date Received:	2/17/95
Date Prepared:	2/24/95
Date Analyzed:	2/24/95
% Solids	84.9

Volatile Organics by USEPA Method 8240

Surrogate	% Recovery	Flags	Recovery Limits Low	Recovery Limits High
1,2-Dichloroethane-d4	88		70	121
Toluene-d8	121	X9	81	117
Bromofluorobenzene	74		74	121

Sample results are on a dry weight basis.

Analyte	Result (ug/kg)	PQL	Flags
Chloromethane	ND	0.4	
Bromomethane	ND	0.34	
Vinyl Chloride	ND	0.35	
Chloroethane	ND	0.36	
Methylene Chloride	77	0.44	
Acetone	2.3	1.9	
Carbon Disulfide	ND	0.68	
1,1-Dichloroethene	ND	0.31	
1,1-Dichloroethane	ND	0.36	
1,2-Dichloroethene (total)	ND	0.31	
Chloroform	ND	0.31	
1,2-Dichloroethane	ND	0.35	
2-Butanone (MEK)	ND	0.22	
1,1,1-Trichloroethane	ND	0.31	
Carbon Tetrachloride	ND	0.42	
Vinyl Acetate	ND	0.96	
Bromodichloromethane	ND	0.26	
1,2-Dichloropropane	ND	0.41	
cis-1,3-Dichloropropene	ND	0.35	
Trichloroethene	ND	0.29	
Dibromochloromethane	ND	0.21	
1,1,2-Trichloroethane	ND	0.26	
Benzene	ND	0.26	
trans-1,3-Dichloropropene	ND	0.27	
Bromoform	ND	0.22	
4-Methyl-2-pentanone (MIBK)	ND	0.27	

SOUND ANALYTICAL SERVICES, INC.

Volatile Organics by USEPA Method 8240 data for 46463-02 continued...

Analyte	Result (ug/kg)	PQL	Flags
2-Hexanone	ND	1.9	
Tetrachloroethene	ND	0.2	
1,1,2,2-Tetrachloroethane	ND	0.26	
Toluene	2.2	0.24	
Chlorobenzene	ND	0.37	
Ethylbenzene	ND	0.19	
Styrene	ND	0.33	
Xylenes (total)	ND	0.53	

SOUND ANALYTICAL SERVICES, INC.

Client Name	GeoEngineers, Inc. - Tacoma
Client ID:	21695-3
Lab ID:	46463-03
Date Received:	2/17/95
Date Prepared:	2/24/95
Date Analyzed:	2/24/95
% Solids	86.25

Volatile Organics by USEPA Method 8240

Surrogate	% Recovery	Flags	Recovery Limits Low	High
1,2-Dichloroethane-d4	88		70	121
Toluene-d8	107		81	117
Bromofluorobenzene	88		74	121

Sample results are on a dry weight basis.

Analyte	Result (ug/kg)	PQL	Flags
Chloromethane	ND	0.4	
Bromomethane	ND	0.34	
Vinyl Chloride	ND	0.35	
Chloroethane	ND	0.36	
Methylene Chloride	63	0.44	
Acetone	ND	1.9	
Carbon Disulfide	ND	0.68	
1,1-Dichloroethene	ND	0.31	
1,1-Dichloroethane	ND	0.36	
1,2-Dichloroethene (total)	ND	0.31	
Chloroform	ND	0.31	
1,2-Dichloroethane	ND	0.35	
2-Butanone (MEK)	ND	0.22	
1,1,1-Trichloroethane	ND	0.31	
Carbon Tetrachloride	ND	0.42	
Vinyl Acetate	ND	0.96	
Bromodichloromethane	ND	0.26	
1,2-Dichloropropane	ND	0.41	
cis-1,3-Dichloropropene	ND	0.35	
Trichloroethene	ND	0.29	
Dibromochloromethane	ND	0.21	
1,1,2-Trichloroethane	ND	0.26	
Benzene	ND	0.26	
trans-1,3-Dichloropropene	ND	0.27	
Bromoform	ND	0.22	
4-Methyl-2-pentanone (MIBK)	ND	0.27	

SOUND ANALYTICAL SERVICES, INC.

Volatile Organics by USEPA Method 8240 data for 46463-03 continued...

Analyte	Result (ug/kg)	PQL	Flags
2-Hexanone	ND	1.9	
Tetrachloroethene	ND	0.2	
1,1,2,2-Tetrachloroethane	ND	0.26	
Toluene	ND	0.24	
Chlorobenzene	ND	0.37	
Ethylbenzene	ND	0.19	
Styrene	ND	0.33	
Xylenes (total)	ND	0.53	

SOUND ANALYTICAL SERVICES, INC.

ANALYTICAL & ENVIRONMENTAL CHEMISTS

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

QUALITY CONTROL REPORT

Metals

Client: GeoEngineers, Inc. - Tacoma
Lab No: 46463qc
Units: mg/kg

Date Analyzed: 2-22-95

METHOD BLANK

Parameter	Result	PQL
Cadmium	ND	0.50
Chromium	ND	1.0
Copper	ND	2.5
Lead	ND	5.0
Nickel	ND	4.0
Zinc	ND	2.0

ND - Not Detected
PQL - Practical Quantitation Limit

SOUND ANALYTICAL SERVICES, INC.

QUALITY CONTROL REPORT

Metals

Client: GeoEngineers, Inc. - Tacoma
Lab No: 46463qc
Units: mg/kg

Date Analyzed: 2-22-95

DUPLICATE

Dup No. 46509-3 Batch QC

Parameter	Sample Result	Duplicate Result	RPD
Cadmium	2.6	3.6	32
Chromium	11	14	24
Copper	8.3	11	28
Lead	ND	ND	NC
Nickel	29	32	9.8
Zinc	36	44	20

RPD = Relative Percent Difference
NC = Not Calculated

SOUND ANALYTICAL SERVICES, INC.

QUALITY CONTROL REPORT

Metals

Client: GeoEngineers, Inc. - Tacoma
Lab No: 46463qc
Units: mg/kg

Date Analyzed: 2-22-95

MATRIX SPIKE

MS No. 46509-3 Batch QC

Parameter	Sample Result	MS Result	MS Amount	%R
Cadmium	2.6	11	11	76
Chromium	11	48	43	86
Copper	8.3	53	54	83
Lead	ND	92	110	84
Nickel	29	120	110	83
Zinc	36	140	110	94

MS = Matrix Spike %R = Percent Recovery

SOUND ANALYTICAL SERVICES, INC.

Lab ID:	Method Blank - DI208
Date Received:	-
Date Prepared:	2/22/95
Date Analyzed:	2/24/95
% Solids	

Diesel by WTPH-D

Surrogate	% Recovery	Flags	Recovery Limits Low	High
o-Terphenyl	108		50	150

Sample results are on an as received basis.

Analyte	Result (mg/kg)	PQL	Flags
Diesel (>nC12-nC24)	ND	25	

SOUND ANALYTICAL SERVICES, INC.

Blank Spike Report

Lab ID:	DI208
Date Prepared:	2/22/95
Date Analyzed:	2/24/95
QC Batch ID:	DI208

Diesel by WTPH-D

Parameter Name	Blank Result (mg/kg)	Spike Amount (mg/kg)	BS Result (mg/kg)	BS % Rec.	Flag
Diesel (>nC12-nC24)	0	500	580	116	

SOUND ANALYTICAL SERVICES, INC.

Duplicate Report

Client Sample ID:	PS-5
Lab ID:	46443-05
Date Prepared:	2/22/95
Date Analyzed:	2/25/95
QC Batch ID:	DI208

Diesel by WTPH-D

Parameter Name	Sample Result (mg/kg)	Duplicate Result (mg/kg)	RPD %	Flag
Diesel (>nC12-nC24)	1000	1100	9.5	

SOUND ANALYTICAL SERVICES, INC.

Matrix Spike/Matrix Spike Duplicate Report

Client Sample ID:	PS-5
Lab ID:	46443-05
Date Prepared:	2/22/95
Date Analyzed:	2/25/95
QC Batch ID:	DI208

Diesel by WTPH-D

Compound Name	Sample Result (mg/kg)	Spike Amount (mg/kg)	MS Result (mg/kg)	MS % Rec.	MSD Result (mg/kg)	MSD % Rec.	RPD	Flag
Diesel (>nC12-nC24)	1000	280	1400	114	1700	254	76.0	X7a

SOUND ANALYTICAL SERVICES, INC.

Lab ID:	Method Blank - A2382
Date Received:	-
Date Prepared:	2/24/95
Date Analyzed:	2/24/95
% Solids	

Volatile Organics by USEPA Method 8240

Surrogate	% Recovery	Flags	Recovery Limits Low	High
1,2-Dichloroethane-d4	86		70	121
Toluene-d8	97		81	117
Bromofluorobenzene	102		74	121

Sample results are on an as received basis.

Analyte	Result (ug/kg)	PQL	Flags
Chloromethane	ND	0.34	
Bromomethane	ND	0.29	
Vinyl Chloride	ND	0.3	
Chloroethane	ND	0.31	
Methylene Chloride	ND	0.37	
Acetone	ND	1.6	
Carbon Disulfide	ND	0.58	
1,1-Dichloroethene	ND	0.26	
1,1-Dichloroethane	ND	0.3	
1,2-Dichloroethene (total)	ND	0.27	
Chloroform	ND	0.26	
1,2-Dichloroethane	ND	0.3	
2-Butanone (MEK)	ND	0.19	
1,1,1-Trichloroethane	ND	0.26	
Carbon Tetrachloride	ND	0.36	
Vinyl Acetate	ND	0.82	
Bromodichloromethane	ND	0.22	
1,2-Dichloropropane	ND	0.35	
cis-1,3-Dichloropropene	ND	0.3	
Trichloroethene	ND	0.24	
Dibromochloromethane	ND	0.18	
1,1,2-Trichloroethane	ND	0.22	
Benzene	ND	0.22	
trans-1,3-Dichloropropene	ND	0.23	
Bromoform	ND	0.19	
4-Methyl-2-pentanone (MIBK)	ND	0.23	

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Volatile Organics by USEPA Method 8240 data for A2382 continued...

Analyte	Result (ug/kg)	PQL	Flags
2-Hexanone	ND	1.6	
Tetrachloroethene	ND	0.17	
1,1,2,2-Tetrachloroethane	ND	0.22	
Toluene	ND	0.2	
Chlorobenzene	ND	0.32	
Ethylbenzene	ND	0.16	
Styrene	ND	0.28	
Xylenes (total)	ND	0.45	

SOUND ANALYTICAL SERVICES, INC.

Matrix Spike/Matrix Spike Duplicate Report

Client Sample ID:	21695-1
Lab ID:	46463-01
Date Prepared:	2/24/95
Date Analyzed:	2/24/95
QC Batch ID:	A2382

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	58	39	66	49	84	24.0	
Trichloroethene	0	58	34	58	41	70	19.0	
Benzene	0	58	42	72	47	80	11.0	
Toluene	0	58	42	72	46	78	8.0	
Chlorobenzene	0	58	33	56	40	68	19.0	

SOUND ANALYTICAL SERVICES, INC.

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

DATA QUALIFIER FLAGS

J: The analyte was analyzed for and positively identified, but the associated numerical value is an estimated quantity.

B1: This analyte was also detected in the associated method blank. The reported sample results have been adjusted for moisture, final exract volume, and/or dilutions performed during extract preparation. The analyte concentration was evaluated prior to sample preparation adjustments, and was determined not to be significantly higher than the associated method blank (less than ten times the concentration reported in the blank).

B2: This analyte was also detected in the associated method blank. However, the analyte concentration in the sample was determined to be significantly higher than the method blank (greater than ten times the concentration reported in the blank).

E: The concentration of this analyte exceeded the instrument calibration range.

D: The reported result for this analyte is calculated based on a secondary dilution factor.

X1: Contaminant does not appear to be "typical" product. Elution pattern suggests it may be _____.

X2: Contaminant does not appear to be "typical" product. Further testing is suggested for identification.

X3: Identification and quantification of peaks was complicated by matrix interference; GC/MS confirmation is recommended.

X4: RPD for duplicates outside advisory QC limits. Sample was re-analyzed with similar results.

X4a: RPD for duplicates outside advisory QC limits due to analyte concentration near the method practical quantitation limit/detection limit.

X5: Matrix spike was diluted out during analysis.

X6: Recovery of matrix spike outside advisory QC limits. Sample was re-analyzed with similar results.

X7: Recovery of matrix spike outside advisory QC limits. Matrix interference is indicated by blank spike recovery data.

X7a: Recovery and/or RPD values for MS/MSD outside advisory QC limits due to high contaminant levels.

X8: Surrogate was diluted out during analysis.

X9: Surrogate recovery outside advisory QC limits due to matrix composition.

N: See analytical narrative.

CHAIN OF CUSTODY RECORD

GEOENGINEERS, INC.
6240 TACOMA MALL BLVD. SUITE 318
TACOMA, WASHINGTON 98409
(206) 471-0379

This document is part of the official Adminsistrative Record for the Yakima Railroad Area. Washington State Department of Ecology

DATE 2/16/95
PAGE 1 OF 1
LAB Sound
LAB NO.

PROJECT NAME/LOCATION WCRR - Roho
PROJECT NUMBER 4222-001-T14
PROJECT MANAGER Terry Parks
SAMPLED BY Terry Parks

SAMPLE IDENTIFICATION		SAMPLE COLLECTION			# OF	ANALYSIS REQUIRED			NOTES/COMMENTS
LAB	GEOENGINEERS	DATE	TIME	MATRIX	JARS	WTPH-D	Volatiles 8240	Metals (TCLP) (Cd, Cr, Cu, Pb, Ni, Zn)	(Preserved, filtered, etc.)
	21695-1	2/16	1430	Soil	2	✓	✓	✓	
	21695-2	2/16	1435	"	2	✓	✓	✓	
	21695-3	2/16	1440	"	2	✓	✓	✓	

RELINQUISHED BY	FIRM	RELINQUISHED BY	FIRM	RELINQUISHED BY	FIRM
SIGNATURE Terry Parks	Geo Engineers	SIGNATURE		SIGNATURE	
PRINTED NAME Terry Parks		PRINTED NAME		PRINTED NAME	
DATE 2/17/95	TIME 1435	DATE	TIME	DATE	TIME
RECEIVED BY	**FIRM**	**RECEIVED BY**	**FIRM**	**RECEIVED BY**	**FIRM**
SIGNATURE Tom Boyden		SIGNATURE		SIGNATURE	
PRINTED NAME Tom Boyden SAS		PRINTED NAME		PRINTED NAME	
DATE 2-17-95	TIME 1445	DATE	TIME	DATE	TIME

ADDITIONAL COMMENTS: