SITE ASSESSMENT FOR UNDERGROUND STORAGE TANK REMOVAL AT:

THE GEARJAMMER
2310 RUDKIN ROAD
Union Gap, WA 98903

PREPARED BY:

Walkenhauer & Associates, Inc.
P.O. Box 1521
Yakima, WA 98907
(509)248-9070

SITE ASSESSMENT FOR UNDERGROUND STORAGE TANK REMOVAL AT:

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1526

THE GEARJAMMER
2310 RUDKIN ROAD
Union Gap, WA 98903

PREPARED BY:

Walkenhauer & Associates, Inc.
P.O. Box 1521
Yakima, WA 98907
(509)248-9070

SUMMARY

Walkenhauer & Associates, Inc. provided exploratory investigation services and a site assessment for The Gearjammer, Yakima, Washington for the removal of 1 - 1,100 gallon waste oil underground storage tank (U.S.T.), DOE #001526/70, and the removal of 1 - 8,000 gallon new oil underground storage tank, DOE #001526/60, and all associated connecting piping.

Joseph Walkenhauer, registered with the International Fire Codes Institute and the Washington State Department of Ecology Underground Storage Tank Program, performed the investigation and site assessment. The investigation began by inspecting the tanks for damage that may have caused leaks. The surrounding area was checked for possible soil contamination. We sampled according to Guidelines for Site Checks & Site Assessments for Underground Storage Tanks (Feb. 1991).

Tank #1, DOE #001526/70 was a 1,100 gallon waste oil U.S.T. This tank was in good condition and showed no signs of leaks. Soil sampling from around this tank was below the MTCA standards.

Tank #2, DOE #001526/60 was an 8,000 gallon new oil U.S.T. This tank was removed and appeared to be in good condition. During the cleaning of this tank, some oil was spilled into the excavation pit. This oil was cleaned up, and the soil was left on site for further remediation. The first set of soil samples from this area showed signs of heavy oils above the MTCA standards. The contaminated soil was removed to the extent that the excavation pit compromised the structural integrity of the building next to it. Two more samples were taken of the surrounding soil, and one sample came back above the MTCA standards (sample #GJ-110 at 2100 ppm for heavy oil.)

Due to the compromised structural integrity of the building next to the excavation area, and because of the waste water run-off into the excavation pit from the surrounding parking lot used by semi trucks, the area may have had petroleum hydrocarbons, compromising the validity of the soil samples. It was decided to fill this area with clean fill dirt.

It is my opinion that this area poses no threat to human health or the environment at this time, and no further remediation actions are necessary at this time.

If I can be of any further assistance, please contact me and I will be happy to assist any way that I can.

Sincerely,

Joe Walkenhauer
President,
Walkenhauer & Associates, Inc.

TABLE OF CONTENTS

DIVISION 1
INTRODUCTION

1.1 PURPOSE

This report describes findings, conditions, and actions taken from work performed during the investigation, inspection, and during removal of 2 underground storage tanks from The Gearjammer Truck Plaza, 2310 Rudkin Rd., Union Gap, WA. The purpose of our investigation and inspection was to assess the conditions of the soil near and around the underground storage tanks and the possibility of petroleum hydrocarbons contamination. The inspection and work responds to regulatory requirements set forth by the United States Environmental Protection Agency (EPA) and the State of Washington, Department of Ecology (DOE).

1.2 SCOPE

This report completes the investigation and work provided by Walkenhauer & Associates, Inc. for determining the presence or absence of significant contamination at The Gearjammer Truck Plaza, 2310 Rudkin Rd., Union Gap, WA.

DIVISION 2
BACKGROUND INFORMATION

2.1 SITE LOCATION & LEGAL DESCRIPTION

The property is located at 2310 Rudkin Rd., Union Gap, WA. The Underground Storage Tanks (UST's) were used for storage of new motor oil and waste motor oil for The Gearjammer Truck Plaza, Union Gap, WA.

2.2 SITE TOPOGRAPHY

The Gearjammer Truck Plaza is located between Ahtanum Ridge and the Rattlesnake Hills to the South, Yakima Ridge to the North, the Cascade Mountain Foothills to the West, and Black Rock & Hanford to the East (see Figure 1). The local topography West of the Yakima River dips very gently to the Southeast, following the Yakima River drainage. The East side of the River climbs Southeasterly and reaches elevation 30 miles from the Yakima River in the Black Rock area of 2,000 feet.

2.3 SITE HISTORY

This site is used as an oil changing facility for semi-trucks.

2.4 SITE GEOGRAPHY

The property is situated upon deposits consisting of gray hard rock layered with dark brown soil, with very little top soil. At approx. 6 feet, a 6 to 12 inch layer of hard pan was located. Rock size is 2 - 12 inches in diameter.

2.5 REGIONAL GEOGRAPHY

The ridges surrounding Yakima are composed of Columbia River basalt and interbedded sediments of the Ellensburg formations. The region reflects a history of North-South compressional forces. These forces produced the hills and valleys, which affect surface and ground water hydrology in areas adjacent to the river valley.

Yakima bedrock is basalt lava flows of the Columbia Plateau. An East-West ridge resulting from folding lies approximately 10 miles South of the site. This anticline is structurally continuous, but has been geographically divided by the Yakima River into Ahtanum Ridge and Rattlesnake Ridge. The foothill of the Cascade Range lays North-South and is about 30 miles West of the Property, with Yakima Ridge 4 miles to the North. The Columbia River lays approximately 40 miles to the East with a steady climb to the Black Rock area 20 miles East of Moxee, then leveling for approximately 10 miles at an elevation of approximately 2,000 feet, then dropping rapidly to the Columbia River.

2.6 HYDROLOGY

The major drainage features for this portion of the Yakima River Basin include Cascade foothills, Ahtanum Ridge, Yakima Ridge, and the Yakima River. The land slopes very gently Southeast, paralleling the Yakima River. The nearest surface water is the Yakima River, located approx. 3/4 mile east of property. Groundwater flow patterns in Yakima typically follow a Southeasterly direction, but could be altered due to local influences.

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& ASSOCIATES Inc.
'IRONMENTAL MANAGEMENT

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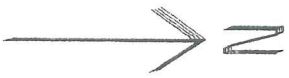
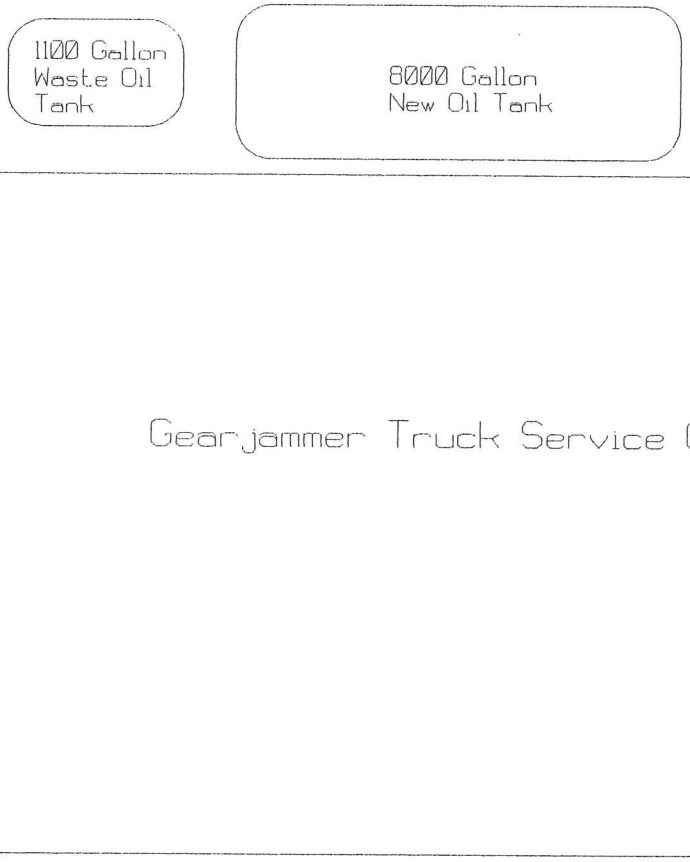
Yakima, WA. 98907
1-800-473-5630

Gearjammer Truck Stop
2310 Rudkin Road
Union Gap, WA. 98903

Site Layout Map





Description:
Date:
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1-800-473-5630

Gearjammer Truck Stop
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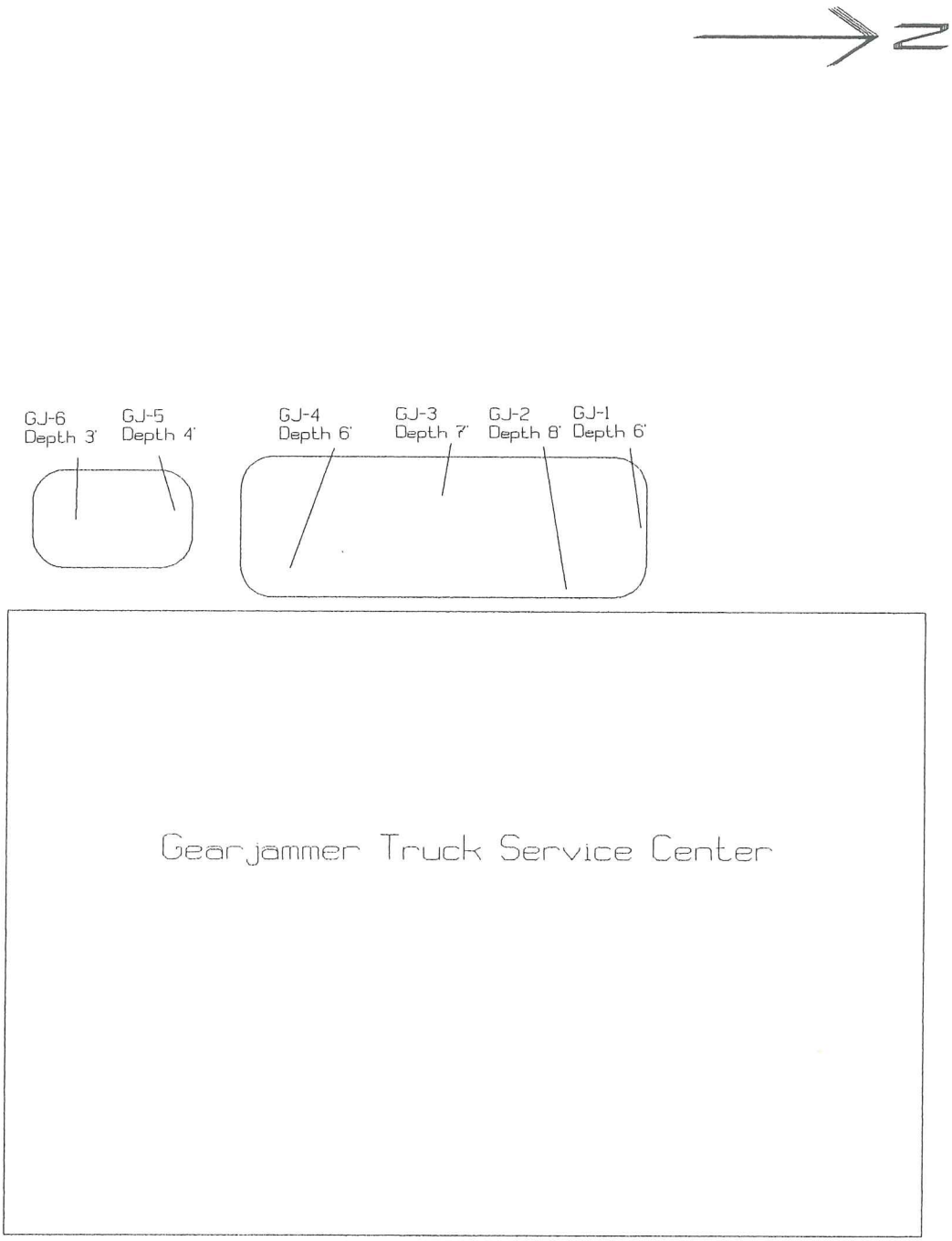
Union Gap, WA. 98903

Sampling Map 1-A

Removal of 1, 1100 gal. UST
and 1, 8000 gal UST



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& ASSOCIATES Inc.
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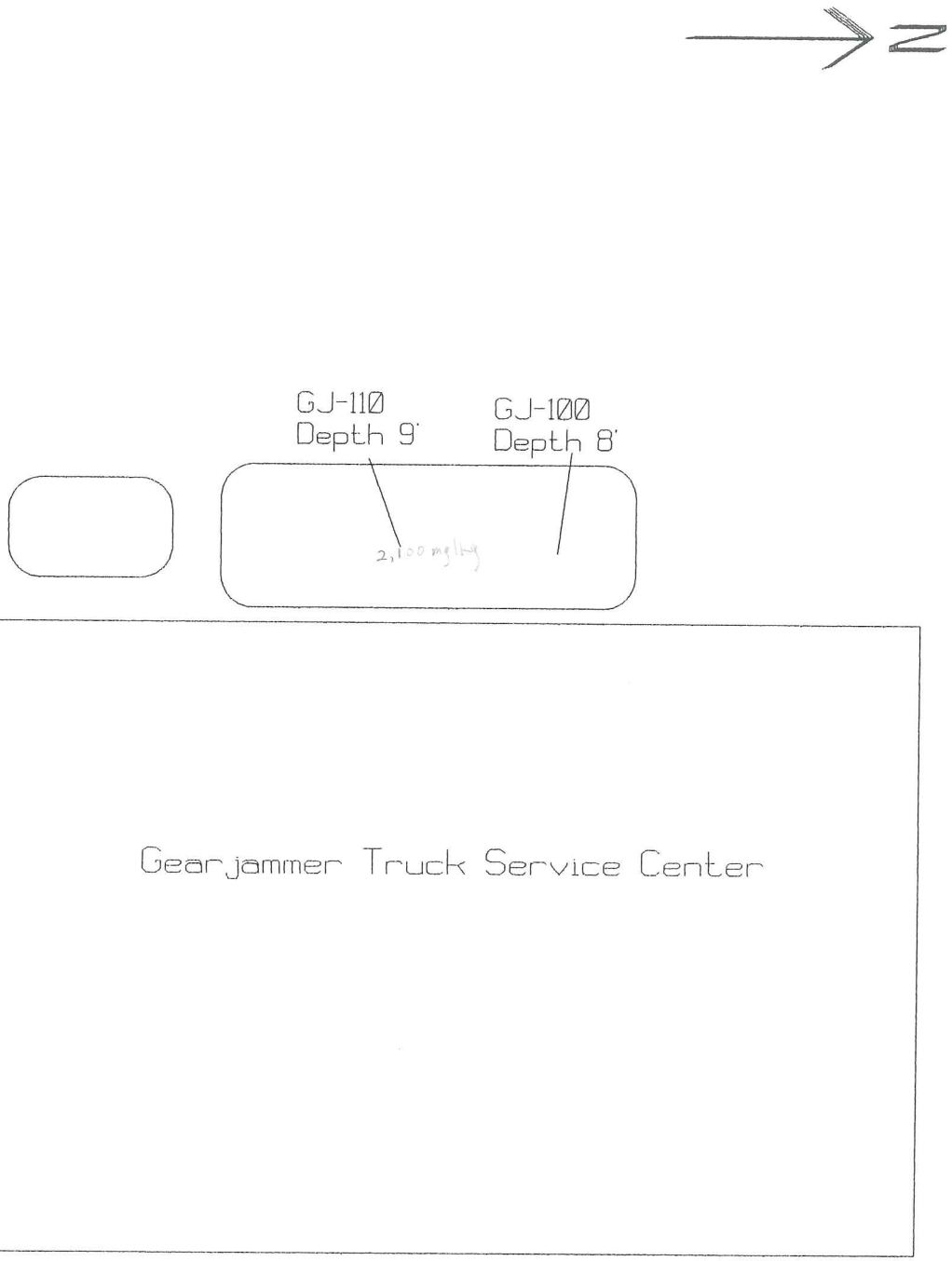
Yakima, WA. 98907
1-800-473-5630

Gearjammer Truck Stop
2310 Rudkin Road
Union Gap, WA. 98903

Sampling Map 1-B



Description:
Date:
Job No.:
Drawing No.:

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Walkenhauer & Associates
P.O. Box 1521
Yakima, WA 98907
Attention: Joe Walkenhauer

Project Name: GGAR Jammer/Wildcat
Client Project : Not Provided
NCA Project #: B512457

Received: Dec 27, 1995
Reported: Dec 28, 1995

PROJECT SUMMARY PAGE

Laboratory Sample Number	Sample Description	Sample Matrix	Date Sampled
B512457-01	GJ-1	Soil	12/22/95
B512457-02	GJ-2	Soil	12/22/95
B512457-03	GJ-3	Soil	12/22/95
B512457-04	GJ-4	Soil	12/22/95
B512457-05	GJ-5	Soil	12/22/95
B512457-06	GJ-6	Soil	12/22/95
B512457-07	WC-01	Soil	12/26/95
B512457-08	WC-02	Soil	12/26/95
B512457-09	WC-03	Soil	12/26/95

The results in this report apply to the samples analyzed in accordance with the chain of custody document.
This analytical report must be reproduced in its entirety.

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Jack Cooper
Project Manager

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Walkenhauer & Associates
P.O. Box 1521
Yakima, WA 98907
Attention: Joe Walkenhauer

Client Project ID: GGAR Jammer/Wildcat
Sample Matrix: Soil
First Sample #: B512457-01

Received: Dec 27, 1995
Reported: Dec 28, 1995

TOTAL SOLIDS & MOISTURE CONTENT REPORT

Sample Number	Sample Description	Total Solids %	Moisture Content %
B512457-01	GJ-1	89	11
B512457-02	GJ-2	82	18
B512457-03	GJ-3	86	14
B512457-04	GJ-4	79	21
B512457-05	GJ-5	77	23
B512457-06	GJ-6	81	19
B512457-07	WC-01	91	9.0
B512457-08	WC-02	91	9.0
B512457-09	WC-03	84	16

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.

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alkenhauer & Associates	Client Project ID:	GGAR Jammer/Wildcat	Sampled:	Dec 22, 1995
P.O. Box 1521	Sample Matrix:	Soil	Received:	Dec 27, 1995
Yakima, WA 98907	Analysis Method:	WTPH-HCID	Extracted:	Dec 27, 1995
ttention: Joe Walkenhauer	First Sample #:	B512457-01	Analyzed:	Dec 28, 1995
			Reported:	Dec 28, 1995

HYDROCARBON IDENTIFICATION

Sample Number	Sample Description	HCID as Gasoline C7 - C12 mg/kg (ppm)	GRO Surrogate Recovery %	HCID as Diesel C12 - C24 mg/kg (ppm)	DRO Surrogate Recovery %	HCID Heavy Oil >C24 mg/kg (ppm)
B512457-01	GJ-1	<20	93	<50	107	<100
B512457-02	GJ-2	<20	81	Present	58	Present
B512457-03	GJ-3	<20	90	Present	94	Present
B512457-04	GJ-4	<20	94	<50	82	<100
B512457-05	GJ-5	<20	94	Present	80	Present
B512457-06	GJ-6	<20	96	<50	82	<100
BLK122795	Method Blank	<20	94	<50	96	<100

VTPH-HCID is a qualitative procedure which is used identify petroleum products containing components from C7 to >C24 by Gas Chromatography using a capillary column and a Flame Ionization Detector (FID). While this method is intended to be qualitative, it can be used to eliminate the need for further analysis for those samples which demonstrate TPH levels significantly below the egulatory threshold. Surrogate Recovery control limits are 50 - 150%.

NORTH CREEK ANALYTICAL Inc.

Laura Dutton

for Jack Cooper
Project Manager

512457.WLK <3>

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Walkenhauer & Associates	Client Project ID:	GGAR Jammer/Wildcat	Sampled:	Dec 26, 1995
P.O. Box 1521	Sample Matrix:	Soil	Received:	Dec 27, 1995
Yakima, WA 98907	Analysis Method:	WTPH-G	Analyzed:	Dec 28, 1995
Attention: Joe Walkenhauer	First Sample #:	B512457-07	Reported:	Dec 28, 1995

TOTAL PETROLEUM HYDROCARBONS-GASOLINE RANGE

Sample Number	Sample Description	Sample Result mg/kg (ppm)	Surrogate Recovery %
B512457-07	WC-01	N.D.	103
B512457-08	WC-02	1.7	103
B512457-09	WC-03	2.3	99
BLK122895	Method Blank	N.D.	110

Reporting Limits	1.0

4-Bromofluorobenzene surrogate recovery control limits are 50 - 150 %.
Volatile Total Petroleum Hydrocarbons are quantitated as Gasoline Range Organics (toluene - dodecane).
Analytes reported as N.D. were not detected above the stated Reporting Limit. The results reported above are on a dry weight basis.

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Laura Dutton

Jack Cooper
Project Manager

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Walkenhauer & Associates	Client Project ID: GGAR Jammer/Wildcat	Analyst: B. Christlieb, F. Shino
P.O. Box 1521	Sample Matrix: Soil	
Yakima, WA 98907	Analysis Method: WTPH-G	
Attention: Joe Walkenhauer	Units: mg/kg (ppm)	Analyzed: Dec 28, 1995
		Reported: Dec 28, 1995

HYDROCARBON QUALITY CONTROL DATA REPORT

ACCURACY ASSESSMENT
Laboratory Control Sample

Gasoline	
Spike Conc. Added:	5.0
Spike Result:	3.8
% Recovery:	76
Upper Control Limit %:	115
Lower Control Limit %:	33

PRECISION ASSESSMENT
Sample Duplicate

Gasoline Range Hydrocarbons	
Sample Number:	B512457-09
Original Result:	N.D.
Duplicate Result:	N.D.
Relative % Difference:	Relative Percent Difference values are not reported at sample concentration levels less than 10 times the Detection Limit.
Maximum RPD:	67

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Project Manager

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

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

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Walkenhauer & Associates
P. O. Box 1521
Yakima, WA 98907
Attention: Joe Walkenhauer

Client Project ID: GGAR Jammer/Wildcat
Sample Matrix: Soil
Analysis Method: EPA 8020
First Sample #: B512457-07

Sampled: Dec 26, 1995
Received: Dec 27, 1995
Analyzed: Dec 28, 1995
Reported: Dec 28, 1995

BTEX DISTINCTION

Sample Number	Sample Description	Benzene mg/kg (ppm)	Toluene mg/kg (ppm)	Ethyl Benzene mg/kg (ppm)	Xylenes mg/kg (ppm)	Surrogate Recovery %
B512457-07	WC-01	N.D.	N.D.	N.D.	N.D.	99
B512457-08	WC-02	N.D.	N.D.	N.D.	N.D.	102
B512457-09	WC-03	N.D.	N.D.	N.D.	N.D.	95
BLK122895	Method Blank	N.D.	N.D.	N.D.	N.D.	104
Reporting Limits:		**0.050**	**0.050**	**0.050**	**0.10**	

4-Bromofluorobenzene surrogate recovery control limits are 34 - 166 %.
Analytes reported as N.D. were not detected above the stated Reporting Limit.
The results reported above are on a dry weight basis.

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Laura Dutton

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Project Manager

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Yakima, WA 98907
Attention: Joe Walkenhauer

Client Project ID: GGAR Jammer/Wildcat
Sample Matrix: Soil
Analysis Method: EPA 8020
Units: mg/kg (ppm)
QC Sample #: B512471-02

Analyst: B. Christlieb, F. Shino
Analyzed: Dec 28, 1995
Reported: Dec 28, 1995

MATRIX SPIKE QUALITY CONTROL DATA REPORT

ANALYTE	Benzene	Toluene	Ethyl Benzene	Xylenes
Sample Result:	N.D.	N.D.	N.D.	N.D.
Spike Conc. Added:	0.61	0.61	0.61	1.84
Spike Result:	0.52	0.50	0.50	1.53
Spike % Recovery:	85%	82%	82%	83%
Spike Dup. Result:	0.48	0.47	0.48	1.45
Spike Duplicate % Recovery:	79%	77%	79%	79%
Upper Control Limit %:	111	118	120	128
Lower Control Limit %:	59	55	61	55
Relative % Difference:	8.0%	6.4%	4.2%	5.4%
Maximum RPD:	17	16	17	17

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Jack Cooper
Project Manager

$$\%\ \text{Recovery:} = \frac{\text{Spike Result - Sample Result}}{\text{Spike Conc. Added}} \times 100$$

$$\text{Relative \% Difference:} = \frac{\text{Spike Result - Spike Dup. Result}}{(\text{Spike Result + Spike Dup. Result}) / 2} \times 100$$

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15055 S.W. Sequoia Parkway, Suite 110, Portland, OR 97224-7155 (503) 624-98[illegible] FAX 684-3782

CHAIN OF CUSTODY REPORT

CLIENT: Walkenhauer & assoc.
ADDRESS: Po Box 1521
Yakima - wa. 98907
PHONE: (509) 248-9070 FAX: (509) 248-9251

REPORT TO:
BILLING TO:
P.O. NUMBER:
NCA QUOTE #:

SAME DAY RUSH (+150%)
NEXT BUSINESS DAY RUSH (+100%) ✓
2 BUSINESS DAY RUSH (+80%)
3 BUSINESS DAY RUSH (+60%)
5 BUSINESS DAY RUSH (+40%)
10 BUSINESS DAY STANDARD (LIST PRICE)
5 BUS. DAY HYDROCARBONS (LIST PR

PROJECT NAME: Gear Jammer / wildcat
PROJECT NUMBER:
SAMPLED BY: J H Walkenhauer

SAMPLE IDENTIFICATION: (NUMBER OR DESCRIPTION)	SAMPLING DATE / TIME	MATRIX (W,S,O)	# OF CONT.	Analysis Request: WTPH-HCID	WTPH-G	COMMENTS & PRESERVATIVES USED	NORTH CREEK SAMPLE NUMBER
1. GJ-1	12-22-95 14:30			X			B512457-0
2. GJ-2	" "			X			-0
3. GJ-3	" "			X			-0
4. GJ-4	" "			X			-0
5. GJ-5	" "			X			-05
6. GJ-6	" "			X			-06
7.							
8. WC-01	12-26-95 12:30				X		-07
9. WC-02	" "				X		-08
10. WC-03	" "				X		-09

RELINQUISHED BY: W Walkenhauer DATE: 12-26-95
FIRM: Walkenhauer & assoc. TIME: 14:00

RECEIVED BY: Richelle M Rose DATE: 12/27/95
FIRM: NCA TIME: 1125

RELINQUISHED BY: DATE:
FIRM: TIME:

RECEIVED BY: DATE:
FIRM: TIME:

ADDITIONAL REMARKS:

PAGE OF

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Walkenhauer & Associates	Client Project ID:	GGAR Jammer/Wildcat	Sampled:	Dec 22, 1995
P.O. Box 1521	Sample Matrix:	Soil	Relogged:	Dec 29, 1995
Yakima, WA 98907	Analysis Method:	WTPH-D	Extracted:	Jan 2, 1996
Attention: Joe Walkenhauer	First Sample #:	B512457-02	Analyzed:	Jan 2, 1996
			Reported:	Jan 2, 1996

TOTAL PETROLEUM HYDROCARBONS-DIESEL RANGE

Sample Number	Sample Description	Sample Result mg/kg (ppm)	Surrogate Recovery %
B512457-02	GJ-2	380	100
B512457-03	GJ-3	410	100
B512457-05	GJ-5	60	102
BLK010296	Method Blank	N.D.	93

Reporting Limit:	**10**

2-Fluorobiphenyl surrogate recovery control limits are 50 - 150 %.
Extractable Total Petroleum Hydrocarbons are quantitated as Diesel Range Organics (C12 - 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.

Jack Cooper
Project Manager

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alkenhauer & Associates
P.O. Box 1521
Yakima, WA 98907
tention: Joe Walkenhauer

Client Project ID: GGAR Jammer/Wildcat
Sample Matrix: Soil
Analysis Method: WTPH-D
Units: mg/kg (ppm)

Extracted: Jan 2, 1996
Analyzed: Jan 2, 1996
Reported: Jan 2, 1996

HYDROCARBON QUALITY CONTROL DATA REPORT

ACCURACY ASSESSMENT
Laboratory Control Sample

	Diesel
Spike Conc. Added:	68
Spike Result:	73
% Recovery:	107
Upper Control Limit %:	110
Lower Control Limit %:	72

PRECISION ASSESSMENT
Sample Duplicate

	Diesel Range Hydrocarbons
Sample Number:	B512457-02
Original Result:	380
Duplicate Result:	440
Relative % Difference:	15
Maximum RPD:	49

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Jack Cooper
Project Manager

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

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

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ıalkenhauer & Associates	Client Project ID:	GGAR Jammer/Wildcat	Sampled:	Dec 22, 1995
P.O. Box 1521	Sample Matrix:	Soil	Relogged:	Dec 29, 1995
Yakima, WA 98907	Analysis Method:	WTPH-418.1	Extracted:	Jan 2, 1996
ttention: Joe Walkenhauer	First Sample #:	B512457-02	Analyzed:	Jan 2, 1996
			Reported:	Jan 2, 1996

TOTAL PETROLEUM HYDROCARBONS-OIL RANGE

Sample Number	Sample Description	Sample Result mg/kg (ppm)
B512457-02	GJ-2	3,600
B512457-03	GJ-3	2,600
B512457-05	GJ-5	990
BLK010296	Method Blank	N.D.

Reporting Limit:	**100**

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

NORTH CREEK ANALYTICAL Inc.

ack Cooper

Jack Cooper
roject Manager

512457.WLK <10>

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alkenhauer & Associates	Client Project ID: GGAR Jammer/Wildcat	
P.O. Box 1521	Sample Matrix: Soil	
Yakima, WA 98907	Analysis Method: WTPH-418.1	Extracted: Jan 2, 1996
ttention: Joe Walkenhauer	Units: mg/kg (ppm)	Analyzed: Jan 2, 1996
		Reported: Jan 2, 1996

HYDROCARBON QUALITY CONTROL DATA REPORT

ACCURACY ASSESSMENT
Laboratory Control Sample

	Petroleum Oil
Spike Conc. Added:	200
Spike Result:	197
% Recovery:	99
Upper Control Limit %:	140
Lower Control Limit %:	68

PRECISION ASSESSMENT
Sample Duplicate

	Petroleum Oil
Sample Number:	B512457-02
Original Result:	3,600
Duplicate Result:	4,900
Relative % Difference:	31
Maximum RPD:	60

NORTH CREEK ANALYTICAL Inc.

Jack Cooper
Project Manager

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

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

Fax Transmittal Memo 7672

To: Laura Dutton
Company: North Creek Analytical
Location:
Fax #: 485-8992
Telephone #:
Comments: Please check samples for present contaminates.

No of Pages: 1
Today's Date:
Time:
From: Skip Walkenhauer
Company: W&A Inc.
Location:
Dept. Charge:
Fax #:
Telephone #: 248-9070
Original Disposition: ☐ Destroy ☐ Return ☐ Call for pickup

NORTH CREEK ANALYTICAL

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15055 S.W. Sequoia Parkway, Suite 110, Portland, OR 97224-7155 (503) 624-9800 FAX 684-3782

CHAIN OF CUSTODY REPORT

CLIENT: Walkenhauer & assoc.
ADDRESS: Po Box 1521, Yakima - Wa. 98907
PHONE: (509) 248-9070 FAX: (509) 248-9251
PROJECT NAME: Gear Jammer / Wildcat
PROJECT NUMBER:
SAMPLED BY: J H Walkenhauer

REPORT TO:
BILLING TO:
P.O. NUMBER:
NCA QUOTE #:

Turnaround	
SAME DAY RUSH (+150%)	
NEXT BUSINESS DAY RUSH (+100%)	✓
2 BUSINESS DAY RUSH (+80%)	
3 BUSINESS DAY RUSH (+60%)	
5 BUSINESS DAY RUSH (+40%)	
10 BUSINESS DAY STANDARD (LIST PRICE)	
5 BUS. DAY HYDROCARBONS (LIST PRICE)	

Analysis Request:

SAMPLE IDENTIFICATION: (NUMBER OR DESCRIPTION)	SAMPLING DATE / TIME	MATRIX (W,S,O)	# OF CONT.	WTPH-HCID	WTPH-G	HCID-D (WTPH-D)	HCID/Heavy Oil (EPA 418.1)	COMMENTS & PRESERVATIVES USED	NORTH CREEK SAMPLE NUMBER
1. ~~GJ-1~~	12-22-95 14:30			X					B512457-01
2. GJ-2				X		(X)	(X)		-02
3. GJ-3				X		(X)	(X)		-03
4. ~~GJ-4~~				X					-04
5. GJ-5				X		(X)	(X)	relog on 12/29 as per (W)	-05
6. ~~GJ-6~~				X					-06
7.									
8. ~~WC-01~~	12-26-95 12:30				X				-07
9. ~~WC-02~~					X				-08
10. ~~WC-03~~					X				-

RELINQUISHED BY: WE Walker[?] DATE: 12-26-95
FIRM: Walkenhauer & assoc. TIME: 14:00
RECEIVED BY: Richelle M Rose[?] DATE: 12/27/95
FIRM: NCA TIME: 1125

RELINQUISHED BY: DATE:
FIRM: TIME:
RECEIVED BY: DATE:
FIRM: TIME:

ADDITIONAL REMARKS:

PAGE OF

NORTH CREEK ANALYTICAL

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Walkenhauer & Associates
2 06 Fruitvale Boulevard
Yakima, WA 98907
Attention: Joe Walkenhauer

Project Name: Gearjammer
Client Project : Not Provided
NCA Project #: B601066

Received: Jan 5, 1996
Reported: Jan 8, 1996

PROJECT SUMMARY PAGE

Laboratory Sample Number	Sample Description	Sample Matrix	Date Sampled
B601066-01	GJ-100	Soil	1/4/96
B601066-02	GJ-110	Soil	1/4/96

NORTH CREEK ANALYTICAL Inc.

Jack Cooper
Project Manager

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Walkenhauer & Associates
2506 Fruitvale Boulevard
Yakima, WA 98907
Attention: Joe Walkenhauer

Client Project ID: Gearjammer
Sample Matrix: Soil
First Sample #: B601066-01

Received: Jan 5, 1996
Reported: Jan 8, 1996

TOTAL SOLIDS & MOISTURE CONTENT REPORT

Sample Number	Sample Description	Total Solids %	Moisture Content %
B601066-01	GJ-100	97	3.0
B601066-02	GJ-110	90	10

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.

Jack Cooper
Project Manager

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alkenhauer & Associates	Client Project ID:	Gearjammer	Sampled:	Jan 4, 1996
2506 Fruitvale Boulevard	Sample Matrix:	Soil	Received:	Jan 5, 1996
Yakima, WA 98907	Analysis Method:	WTPH-418.1	Extracted:	Jan 8, 1996
tention: Joe Walkenhauer	First Sample #:	B601066-01	Analyzed:	Jan 8, 1996
			Reported:	Jan 8, 1996

TOTAL PETROLEUM HYDROCARBONS-OIL RANGE

Sample Number	Sample Description	Sample Result mg/kg (ppm)
B601066-01	GJ-100	240
B601066-02	GJ-110	2,100
BLK010896	Method Blank	N.D.

Reporting Limit:	**100**

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

NORTH CREEK ANALYTICAL Inc.

Jack Cooper
roject Manager

NORTH CREEK ANALYTICAL

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alkenhauer & Associates	Client Project ID:	Gearjammer	
2506 Fruitvale Boulevard	Sample Matrix:	Soil	
Yakima, WA 98907	Analysis Method:	WTPH-418.1	Extracted: Jan 8, 1996
tention: Joe Walkenhauer	Units:	mg/kg (ppm)	Analyzed: Jan 8, 1996
			Reported: Jan 8, 1996

HYDROCARBON QUALITY CONTROL DATA REPORT

ACCURACY ASSESSMENT
Laboratory Control Sample

Petroleum Oil

Spike Conc. Added:	200
Spike Result:	172
% Recovery:	86
Upper Control Limit %:	140
Lower Control Limit %:	68

PRECISION ASSESSMENT
Sample Duplicate

Petroleum Oil

Sample Number:	B601066-01
Original Result:	240
Duplicate Result:	220
Relative % Difference:	Relative Percent Difference values are not reported at sample concentration levels less than 10 times the Detection Limit.
Maximum RPD:	60

NORTH CREEK ANALYTICAL Inc.

Jack Cooper
Project Manager

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

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

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

CHAIN OF CUSTODY REPORT

Work Order #:

CLIENT:

ADDRESS: WALKENHAUER & ASSOCIATES, INC.
P. O. BOX 1521
YAKIMA, WA 98907

PHONE: FAX:

PROJECT NAME: Gearjammer

PROJECT NUMBER:

SAMPLED BY:

REPORT TO:

ATTENTION:

BILLING TO:

P.O. NUMBER:

NCA QUOTE #:

TURNAROUND REQUEST in Business Days *

Organic & Inorganic Analyses: 10 | 5 | 3 | 2 | 1

Fuels & Hydrocarbon Analyses: 5 | 3 | 2 | 1

OTHER Specify:

* Turnaround Requests less than standard may incur Rush Charges.

NCA SAMPLE NUMBER	CLIENT SAMPLE IDENTIFICATION	SAMPLING DATE / TIME	Analysis Request: WTPH/Heavy Oil	MATRIX (W, S, O)	# OF CONTAINERS	COMMENTS & PRESERVATIVES USED
B601066-01	1. GJ-100	1/4/96	X	S	1	
-02	2. GJ-110	1/4/96	X	S	1	
	3.					
	4.					
	5.					
	6.					
	7.					
	8.					
	9.					
	10.					

RELINQUISHED BY: Joe Walkenhauer DATE: 1-4-96
PRINT NAME: Joe Walkenhauer FIRM: W&A Inc TIME:

RECEIVED BY: Richelle M Rose DATE: 1/5/96
PRINT NAME: Richelle M Rose FIRM: NCA TIME: 1045

RELINQUISHED BY: DATE:
PRINT NAME: FIRM: TIME:

RECEIVED BY: DATE:
PRINT NAME: FIRM: TIME:

ADDITIONAL REMARKS: Please send me Ice Chests. 2508 Fruitvale Blvd. Yakima, WA 98902

PAGE ___ OF ___

DIVISION 3
FIELD ACTIVITIES

3.1 NORMAL EXPLORATORY METHODS

We visually inspected the soil during excavation; we used a Gas Tech hydrocarbon sniffer and smell. Samples were taken of any soil that was suspect and was placed in bottles for laboratory analysis. The methods and conclusions are discussed in 3.2.

3.2 EXPLORATORY INVESTIGATION

Joseph Walkenhauer, registered with the Washington State Department of Ecology Underground Storage Tank Program, performed the investigation. The investigation began by inspecting the tanks for damage that may have caused leaks. Next I preceded to check the surrounding areas for possible soil contamination.

Tank #1, DOE #001526/#70 was a 1,100 gallon waste oil tank. This tank was removed and seemed to be in good condition. Soil testing from around this tank was below the MTCA standards; this area was filled with clean fill dirt.

Tank #2, DOE#001526/#60 was a 8,000 gallon new oil tank. This tank was removed, and was in good condition. During the cleaning of this tank, some oil was spilled into the excavation site and was cleaned up to the extent of where the existing buildings' structural integrity was compromised. Sample #GJ-110 showed contamination above the MTCA standards; I feel that this contamination is minimal and for safety reasons to the building, this site was filled with clean fill dirt.

It is my opinion that these premises are in good condition and need to remediation at this time.

DIVISION 4
INVESTIGATIVE METHODS AND RESULTS

4.1 FIELD SCREENING/SOIL SAMPLING/QUALITY ASSURANCE

Soil samples are taken in accordance with DOE Rules & Regulations, and in general follow the following techniques and protocol:

A. The soil being removed, along with the soil intact in the ground, is visually inspected and checked for petroleum odors. We also use a Gas Tech vapor analyzer ("gas sniffer") and follow the manufacturer recommended method for the use of this equipment. Areas that appear to be above the clean-up level are sampled and soil is removed in these locations until sampling analysis confirms that the area is below clean-up levels. If there is no detection of petroleum or other suspicious vapors, random sampling of the soil is done in compliance with Department regulations and in locations where contamination is most likely to occur.

B. Sampling jars used are SCI/SPEC Laboratory Supply 8 oz. clear glass standard wide mouth jars w/.010 teflon lined caps, certified clean.

C. Sampling utensils are cleaned using a certified chemical cleaner, tri-sodium phosphate chlorine solution, tap water rinsed, and distilled water rinsed.

D. Jars are labeled with the soil sample number, the type of laboratory test required, the date, name of site and sampler. The sample number, location, depth, and conditions are written on a sample map and entered on a chain of custody form.

E. Using latex gloves and clean sampling utensils and equipment, the soil is tightly packed into an 8 oz. sample jar to prevent any air space. The sample is cooled immediately on ice to approximately 40o Celsius.

F. Samples are packed in blue ice in a cooler for shipment to laboratory.

G. Samples are relinquished to shipper for shipment to laboratory.

4.2 SOIL CHEMISTRY

To determine if soil clean-up is required, laboratory analysis results are compared with DOE Action Levels for petroleum or other found contaminates that are at or above the Action Levels. Your soil sample results are in Appendix C, in accordance with Guidelines for Site Checks and Site Assessments for Underground Storage Tanks.

DIVISION 5
LIMITATIONS

In performing our professional services, we used a degree of care ordinarily exercised under similar circumstances by members of our profession. No warranty, expressed or implied, is made or intended. Our conclusions and recommendations, developed from our field and laboratory investigation reported herein, are based upon this firm's understanding of this particular project and are in concurrence with generally accepted practice.

Site dimensions, if any, were obtained by referral to Yakima County records and on site inspections and are not represented to be exact. All information supplied by others is assumed to be correct.