

**Roy Jensen and Associates  
Consulting Environmental Geologists and Hydrogeologists**

8805 NE 186th Place  
Bothell, Washington 98011  
(206) 485-9155

March 14, 1994

Cascade-Autovon  
DBA - PTI Communications  
12727 - 412th Ave. S.E.  
North Bend, Washington 98045

Attention: Mr. John Reeves

Ground Water Sampling  
and Analysis Results  
Cascade Autovon, Co.  
North Bend, Washington

**INTRODUCTION**

This letter presents the results of February 1994 ground water sampling and laboratory analysis at the Cascade Autovon Co. located at 12727 412th Ave. S.E. in North Bend, Washington.

**PURPOSE AND SCOPE**

The purpose of our services was to sample and analyze ground water samples from the site for petroleum hydrocarbons. The scope of services completed for this project included the following:

1. Measure the depth to ground water in the three monitoring wells (MW-1 through MW-3).
2. Purge a minimum of three well volumes from each well prior to sampling.
3. Collect a ground water sample from each of the three monitoring wells.
4. Submit the ground water samples for laboratory analysis of fuel hydrocarbons by modified EPA Method 8015, gasoline-range hydrocarbons (gasoline) by WTPH-G and benzene, toluene, ethylbenzene and xylenes (BTEX) by EPA Method 8020.
5. Prepare a letter for submittal to the Washington State Department of Ecology (Ecology) summarizing the results of ground water sampling and analysis.

DEPARTMENT OF ECOLOGY	
NWRO/TCP TANKS UNIT	
INTERIM CLEANUP REPORT	<input type="checkbox"/>
SITE CHARACTERIZATION	<input type="checkbox"/>
FINAL CLEANUP REPORT	<input type="checkbox"/>
OTHER <u>groundwater monitoring</u>	<input checked="" type="checkbox"/>
AFFECTED MEDIA: SOIL	<input type="checkbox"/>
OTHER _____ GW	<input type="checkbox"/>
INSPECTOR (INIT.) <u>JR</u>	DATE <u>3-30-94</u>

Site previously given "conducted" status JR

## GROUND WATER CLEANUP CRITERIA

Ecology has adopted ground water cleanup levels under the Model Toxics Control Act (MTCA). A summary of the MTCA Method A ground water cleanup levels for petroleum-related contaminants is:

Compound	MTCA Method A Ground Water Cleanup Levels
Benzene	0.005 mg/l
Toluene	0.04 mg/l
Ethylbenzene	0.03 mg/l
Xylenes	0.02 mg/l
Total Petroleum Hydrocarbons (TPH)	1 mg/l

## GROUND WATER ELEVATION

The depth to ground water table relative to the monitoring well casing rim was measured on February 10, 1994 using a weighted fiberglass measuring tape and water-sensitive paste. The depth to ground water at the time of our measurements ranged from 8.43 to 8.82 feet.

## GROUND WATER SAMPLING AND ANALYSIS

We obtained ground water samples from MW-1 through MW-3 on February 10, 1994. The ground water samples were obtained with a disposable polyethylene bailer after at least three well volumes were removed from each well casing. A new bailer and cord was used to sample each monitoring well to minimize the possibility of cross-contamination. The water samples were transferred to clean glass sampling bottles. The samples were kept cool during transport to the analytical laboratory. Chain-of-custody procedures were followed during transport of the samples to the analytical laboratory.

The ground water samples were sent to Sound Analytical Services, Inc. of Tacoma, Washington for chemical analysis. The samples were analyzed for fuel hydrocarbons, gasoline and BTEX. The results of laboratory testing of ground water samples are shown in Table 1. The laboratory report is attached.

Fuel hydrocarbons, gasoline and BTEX were not detected in any of the ground water samples.

### LIMITATIONS

This letter has been prepared for use by Cascade Autovon/PTI Communications in its evaluation of subsurface conditions at site. This letter may be made available to Ecology. Within the limitations of the scope, schedule and budget, our services have been executed in accordance with generally accepted practices in this area at the time this report was prepared. No other conditions, express or implied, should be understood.

We appreciate the opportunity to be of service to Cascade Autovon/PTI Communications. Please contact me if you have any questions regarding the results of our water sampling and testing.

Respectfully submitted,



Roy E. Jensen  
Consulting Hydrogeologist

Attachments

**TABLE 1**  
**SUMMARY OF GROUND WATER ANALYTICAL DATA**  
**CASCADE AUTOVON, NORTH BEND, WASHINGTON**

Monitoring Well Number	Date Sampled	BETX (EPA Method 8020) (mg/l)			Fuel Hydrocarbons (Mod EPA Method 8015) (mg/kg)	Gasoline (1) (mg/kg)
		B	T	E		
MW-1	11/19/93	<0.001	<0.001	<0.001	<1.0	<0.1
MW-2	11/19/93	<0.001	<0.001	<0.001	<1.0	<0.1
MW-3	11/19/93	<0.001	<0.001	<0.001	<1.0	<0.1
MTCA Method A Cleanup Levels		0.005	0.04	0.03	1	1

**Notes:**

(1) Gasoline - gasoline-range hydrocarbons by Ecology Method WTPH-G

mg/l = milligrams per liter

< = less than

# 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

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## TRANSMITTAL MEMORANDUM

DATE: March 3, 1994

TO: Roy Jensen

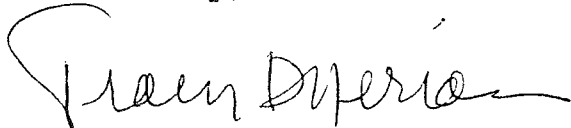
PROJECT NAME: PTI-North Bend

LABORATORY NUMBER: 38026

Enclosed are one original and one copy of the Tier I data deliverables package for Laboratory Work Order Number 38026. Three samples were received for analysis at Sound Analytical Services, Inc., on February 10, 1994.

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

Sincerely,



Tracy D. Yerian  
Project Manager

# 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: Roy Jensen

Date: March 3, 1994

Report On: Analysis of Water

Lab No.: 38026

IDENTIFICATION:

Samples received on 02-10-94

Project: PTI-North Bend

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ANALYSIS:

Lab Sample No. 38026-1

Client ID: MW-1

WTPH-G with BTEX by EPA Method 8020

Date Analyzed: 2-15-94

<u>Parameter</u>	<u>Result, mg/L</u>	<u>PQL</u>	<u>Flag</u>
Gasoline (C7 - C12)	ND	0.1	
Benzene	ND	0.001	
Toluene	ND	0.001	
Ethyl Benzene	ND	0.001	
Xylenes	ND	0.001	

SURROGATE RECOVERY, %

Trifluorotoluene 109

ND - Not Detected

PQL - Practical Quantitation Limit

# SOUND ANALYTICAL SERVICES, INC.

Roy Jensen  
Project: PTI-North Bend  
Lab No. 38026  
March 3, 1994

Lab Sample No. 38026-1

Client ID: MW-1

TPH Per EPA SW-846 Modified Method 8015  
Date Extracted: 2-25-94  
Date Analyzed: 3-2-94

<u>Parameter</u>	<u>Result</u>	<u>PQL</u>	<u>Flag</u>
Total Petroleum Fuel Hydrocarbons, mg/L	ND	1.0	
<u>SURROGATE RECOVERY, %</u>			
1-Chlorooctane	112		
o-terphenyl	112		

ND - Not Detected

PQL - Practical Quantitation Limit

# SOUND ANALYTICAL SERVICES, INC.

Roy Jensen  
Project: PTI-North Bend  
Lab No. 38026  
March 3, 1994

Lab Sample No. 38026-2

Client ID: MW-2

WTPH-G with BTEX by EPA Method 8020  
Date Analyzed: 2-15-94

<u>Parameter</u>	<u>Result, mg/L</u>	<u>PQL</u>	<u>Flag</u>
Gasoline (C7 - C12)	ND	0.1	
Benzene	ND	0.001	
Toluene	ND	0.001	
Ethyl Benzene	ND	0.001	
Xylenes	ND	0.001	
<u>SURROGATE RECOVERY, %</u>			
Trifluorotoluene	120		

ND - Not Detected

PQL - Practical Quantitation Limit



# SOUND ANALYTICAL SERVICES, INC.

Roy Jensen  
Project: PTI-North Bend  
Lab No. 38026  
March 3, 1994

Lab Sample No. 38026-2

Client ID: MW-2

TPH Per EPA SW-846 Modified Method 8015  
Date Extracted: 2-25-94  
Date Analyzed: 3-2-94

<u>Parameter</u>	<u>Result</u>	<u>PQL</u>	<u>Flag</u>
Total Petroleum Fuel Hydrocarbons, mg/L	ND	1.0	
<u>SURROGATE RECOVERY, %</u>			
1-Chlorooctane	112		
o-terphenyl	114		

ND - Not Detected

PQL - Practical Quantitation Limit

# SOUND ANALYTICAL SERVICES, INC.

Roy Jensen  
Project: PTI-North Bend  
Lab No. 38026  
March 3, 1994

Lab Sample No. 38026-3

Client ID: MW-3

WTPH-G with BTEX by EPA Method 8020  
Date Analyzed: 2-15-94

<u>Parameter</u>	<u>Result, mg/L</u>	<u>PQL</u>	<u>Flag</u>
Gasoline (C7-C12)	ND	0.1	
Benzene	ND	0.001	
Toluene	ND	0.001	
Ethyl Benzene	ND	0.001	
Xylenes	ND	0.001	

SURROGATE RECOVERY, %

Trifluorotoluene 108

ND - Not Detected

PQL - Practical Quantitation Limit

# SOUND ANALYTICAL SERVICES, INC.

Roy Jensen  
Project: PTI-North Bend  
Lab No. 38026  
March 3, 1994

Lab Sample No. 38026-3

Client ID: MW-3

TPH Per EPA SW-846 Modified Method 8015  
Date Extracted: 2-25-94  
Date Analyzed: 3-2-94

<u>Parameter</u>	<u>Result</u>	<u>PQL</u>	<u>Flag</u>
Total Petroleum Fuel Hydrocarbons, mg/L	ND	1.0	
<u>SURROGATE RECOVERY, %</u>			
1-Chlorooctane	118		
o-terphenyl	121		

ND - Not Detected

PQL - Practical Quantitation Limit

# 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-G with BTEX by EPA SW-846 Method 8020

Client: Roy Jensen  
Lab No: 38026qc1  
Units: mg/L

Date Analyzed: 2-14-94

### METHOD BLANK

Blank No. 94021413

Parameter	Result	PQL
Gasoline (C <sub>7</sub> -C <sub>12</sub> )	ND	0.1
Benzene	ND	0.001
Toluene	ND	0.001
Ethyl Benzene	ND	0.001
Xylenes	ND	0.001
<u>SURROGATE RECOVERY, %</u> Trifluorotoluene	111	

ND - Not Detected

PQL - Practical Quantitation Limit

# 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

### Total Petroleum Fuel Hydrocarbons by Method 8015

Client: Roy Jensen  
Lab No: 38026qc2  
Units: mg/L

Date Extracted: 2-25-94  
Date Analyzed: 3-2-94

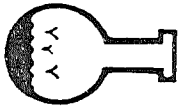
#### METHOD BLANK

Blank No. 004R0101.D

Parameter	Result	PQL
Total Petroleum Fuel Hydrocarbons	ND	1.0
<u>SURROGATE RECOVERY%</u>		
1-chlorooctane	99	
o-terphenyl	98	

ND - Not Detected

PQL - Practical Quantitation Limit



# SOUND ANALYTICAL SERVICES, INC.

ANALYTICAL & ENVIRONMENTAL CHEMISTS

## UST PARAMETERS

### CHAIN OF CUSTODY / REQUEST FOR LABORATORY ANALYSIS

4813 Pacific Hwy. East  
Tacoma, Washington 98424  
(206) 922-2310 • FAX (206) 922-5047

CLIENT: **CASCADE AUTOYON**

PROJECT NAME: **PTI - NORTH BEND**

CONTACT: **ROY JENSEN**

PHONE NO: **(206) 485-9155**

LAB #	SAMPLE I.D.	DATE	TIME	MATRIX	# of Containers	HCID	TPH-G	TPH-D	TPH 418.1	BTEX	TPH-G / BTEX	TPH 8015M	Total Lead	TCLP Lead	PCB's	PAH's	Phenols	Halogenated Volatiles EPA 601/8010	Aromatic Volatiles EPA 602/8020	Volatile Organics EPA 624/8240 GC/MS	Semi-volatiles EPA 625/8270 GC/MS	Metals	Total Halogens	CLOSURE DELIVERABLES	
	MW-1	2/10/94	1010	WATER							X	X													
	MW-2		1120								X	X													
	MW-3		1230								X	X													

ANALYSIS REQUESTED: Specify State \_\_\_\_\_

SPECIAL INSTRUCTIONS/COMMENTS:

BILLING: Use GLACIER ENVIRONMENTAL RATES, AND BILL TO:

ROY JENSEN  
N.E. 8805 N.E. 186TH  
BOTHEL, WA 98011

ROUTINE TURNAROUND

Signature	Printed Name	Firm	Time / Date
<i>Mary Curtis</i>	MARY R. LINDSEY	JENSEN ASSOC.	1455 2/10/94
<i>Mary Curtis</i>	Mary Curtis	SKS	3pm 2/10/94
Received By			
Relinquished By			
Received By			
Relinquished By			
Received By			