## **ENGINEERING REPORT**

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DEPARTMENT OF ECOLOGY CENTRAL REGION OFFICE

on

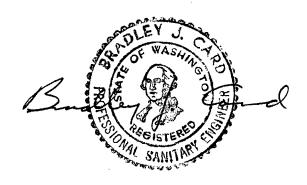
### INTERMEDIATE CLEANUP and SITE CLOSURE

for

### FIFTH WHEEL TRUCK REPAIR

307 East Arlington Street

Yakima, Washington



**April** 1991

Job No. 90113

Prepared by

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

#### ENGINEERING REPORT

on

#### INTERMEDIATE CLEANUP and SITE CLOSURE

for

FIFTH WHEEL TRUCK REPAIR

307 East Arlington Street

Yakima, Washington

#### INTRODUCTION

A site assessment of the Hahn Motor Co. building presently occupied by Fifth Wheel Truck Repair, 307 East Arlington St., Yakima, Washington, reported that petroleum contaminated soil (PCS) is present at a drywell located at the northwest corner of the premises. The site assessment report, dated October 25, 1989, was prepared by Earth Consultants, Inc. of Bellevue, Washington.

Following this site assessment, Ken Leingang Excavating, Inc., removed a catch basin from within the Fifth Wheel Truck Repair building. During removal it was discovered that the catch basin was actually a dry well, and that petroleum contaminated soil (PCS) was present.

This report summarizes the results of the investigation of the extent of the contamination, cleanup of the northwest corner drywell, and offers the Hahn Motor Company's proposal for dealing with the situation short of demolishing the Fifth Wheel Truck Repair building. Results of laboratory testing of a representative soil and water samples for presence of Total Petroleum Hydrocarbon (TPH) are included. Geotechnical engineers and geologists from PLSA Engineering & Surveying, experienced with local soil conditions and environmental sampling, collected samples and

evaluated the analytical results. Removal of contaminated soil was performed by Ken Leingang Excavating, a registered decommissioning contractor.

The owner's representatives and contact persons for this project are as follows:

Ms. Donna Pieti, General Manager, and Mr. Richard Hahn, Owner Hahn Motor Company P.O. Box 382 1202 South First Street Yakima, Washington 98901 phone (509) 453-9171

#### SAMPLING PLAN

Representative soil and water samples were collected from excavations. Sample containers were supplied by the analytical laboratory and were clean glass with teflon lined, screwed caps. Sampling equipment was cleaned with non-petroleum based detergent between samplings. Water samples from below the surface were collected using a clean, teflon bailer.

All samples were stored and shipped to the laboratory by overnight express in a refrigerated, insulated container.

#### CLEANUP STATUS

A drywell installed at the northwest corner of the Fifth Wheel Truck Repair premises collected stormwater and drainage from truck steam cleaning. The presence of Petroleum Contaminated Soil (PCS) was detected, characterized, and reported in the Earth Consultants October 25, 1989 report.

After the October 25, 1989 report, a catch basin located within the building was excavated and found to discharge directly to cobbley soil under the concrete floor. Soil samples for possible PCS were collected for characterization from this location by PLSA. Subsequent laboratory analysis confirmed the presence of PCS. See Appendix I, June, 1990 analytical report.

PCS was removed from the interior catch basin excavation until further removal would extend to beyond the building footings resulting in need to demolish the building. Approximately 250 cubic yards of PCS are estimated to remain below the building. Results of laboratory analysis of the soil remaining in the excavation may be found in the November, 1990 analytical report in Appendix I.

The drywell located at the northwest corner of the premises and identified as contaminated by Earth Consultants was recently excavated and approximately 120 cubic yards of petroleum contaminated soil (PCS) was removed. Petroleum contamination was found to be confined to the immediate vicinity of the drywell and did not extend to the building or outside the property lines.

#### ANALYTICAL RESULTS OF INVESTIGATIVE SAMPLING

Monitoring well No.'s 4 and 5 were drilled under PLSA supervision along the west side of the Fifth Wheel Truck Repair building in late January 1991. Static water level was at 25 feet below the surface. Laboratory test results for presence of contamination in both soil and water from these monitoring wells may be found in Appendix II. Sample locations are depicted in Figure 1.

A soil sample was collected from soil found approximately 10 feet below the surface in monitoring well #4. This sample contained <10 ppm TPH as determined by EPA 418.1. Water samples from monitoring well #'s 4 and 5 analyzed below detection limits for Volatile Organic Compounds (VOC's), TPH, PCB, and toxic metals with the exception of copper and mercury which was 0.04 ppm and 1.3 ppb, mercury, respectively. Monitoring well #5 contained 2.2 ppb mercury. Nothing on-site was identified as a possible mercury source.

Monitoring wells drilled for Consolidated Freightways under Blymer Engineers supervision on the east side of the Fifth Wheel Truck Repair/Body Shop complex were sampled by others. Results of analysis of water samples from these wells, found also in Appendix II, were originally included in a December 27, 1990 Phase I Subsurface Investigation dated October 27, 1990 and prepared by Blymer Engineers, Inc. These samples contained levels of TPH below 1 mg/l and low levels of tetrachlorethene and 1,1,1-trichlorethane.

Analytical laboratory reports on samples collected from a boring adjacent to the drywell (Earth Consultants Boring B-3) show groundwater to be <5.0 ppm TPH, EP-TOX metals below detection limits and TPH in three soils samples collected from -3.0', -9.0', and -15.0' to be 1780, 1130, 618 ppm, respectively.

#### PROPOSED INTERMEDIATE CLEANUP ACTION

Experience with petroleum contamination in Yakima Valley soils has found that petroleum or petroleum breakdown products do not leach from soils below petroleum saturation at any great rate if at all. Good water samples have been collected from many sites where contaminated soil extends to the water table where the water had to be in direct contact with contaminated soil. Therefore,

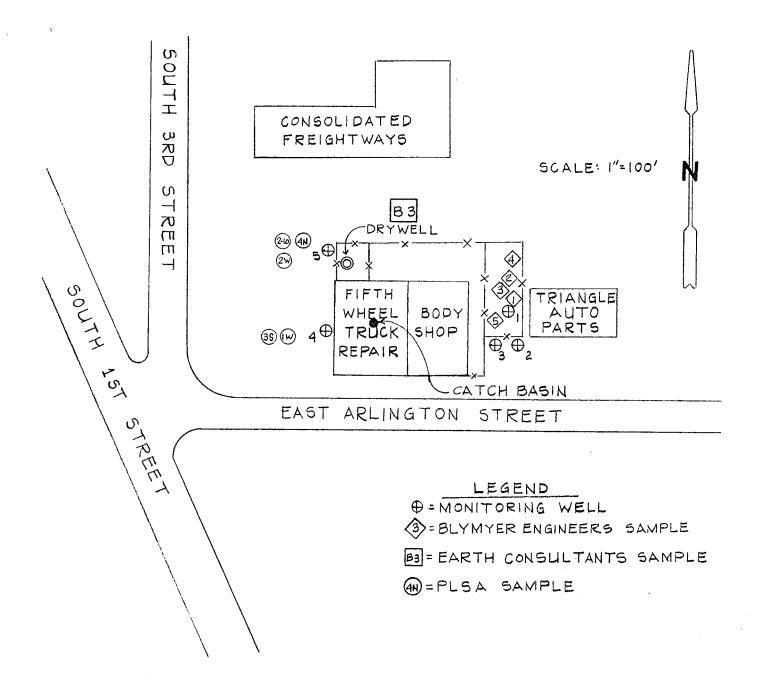
intermediate cleanup by removing as much PCS as possible without damaging the building is proposed with final cleanup deferred until the building is removed.

To eliminate any further contamination of soil, the drywell within the building has been removed and replaced with a catch basin discharging through a coalescing plate oil separator to the municipal sewer.

To insure ground water protection, it is further proposed to monitor resource protection wells located nearby both west and east of the contaminated soil location. The east resource protection wells are owned by Consolidated Freightways which borders the premises on the east and north. See Figure 2. PLSA recommends that quarterly sampling of monitoring well nos. 4 and 5 for one year. Blymer Engineers similarly recommends quarterly sampling in their report prepared for Consolidated Freightways. These Consolidated sampling results could be included with Fifth Wheel Truck Repair results for tracking of movement of petroleum into the ground water, if any.

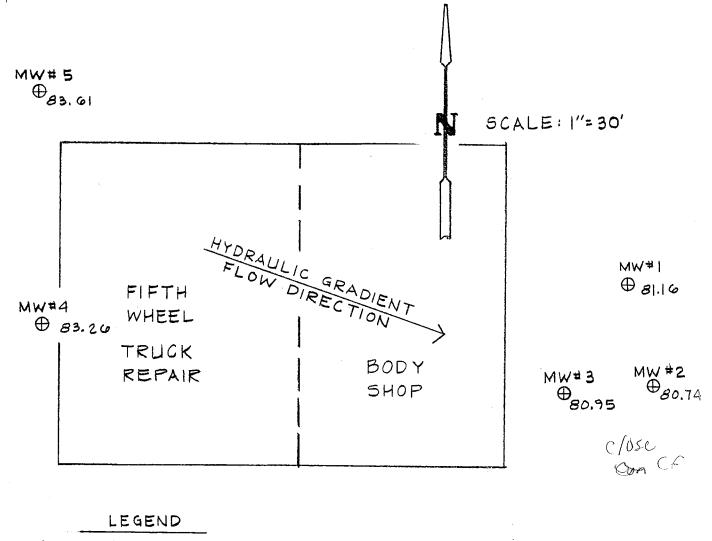
#### RISK ANALYSIS

Sampling shows that petroleum is not leaching into the ground water. Heavy oil is recognized as having low toxicity. There have been no reports of petroleum contamination of any nearby domestic wells. PCS is below the concrete slab floor of the building away from contact by humans or animals. Therefore, risk has been reduced by actions already taken and it appears that there has been no impact on ground water quality from Fifth Wheel Truck Repair. Risk of any possible, subsequent, contamination of ground water in an environmentally significant amount is small to negligible.



# FIGURE 1

MONITORING WELL LOCATION HAHN MOTOR CO., YAKIMA, WA.



⊕ = MONITORING WELL 86.00 = GROUND WATER ELEV.

EAST ARLINGTON STREET

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Washington State
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FIGURE 2

HYDRAULIC GRADIENT AT HAHN MOTOR CO. YAKIMA, WA

APRIL 11, 1991

#### NORTHWEST CORNER DRYWELL CLOSURE

PCS surrounding the northwest corner drywell (See Figure 1) was removed until significant readings were no longer obtained using the Photovac TIP 1 photoanalyzer. Ground water was not encountered in the excavation. Representative soil samples were collected and shipped overnight in a refrigerated container to be analyzed for presence of petroleum hydrocarbons, volatile organic compounds and priority pollutant metals.

Results of laboratory analysis of representative final soil samples collected from the northwest corner drywell excavation may be found in Appendix III. No contaminants were found in excess of WAC 173-340 cleanup guidelines.

The excavation was backfilled with clean, granular fill, the surface repaved, and a replacement drywell sump designed to receive stormwater only was installed.

#### PCS DISPOSAL

PCS removed from excavations within the Fifth Wheel Truck Repair building and the northwest corner drywell has been spread on Hahn premises for remediation by land farming. Representative soil samples will be collected from the remediated soil for laboratory testing. The soil will be used as fill when laboratory tests find that remediation has progressed to below WAC 173-340 cleanup guidelines.

#### GROUND WATER HYDRAULIC GRADIENT

Permission was granted by Blymer Engineering to measure the static water level in the Consolidated Freightways resource protection wells located east of Fifth Wheel Truck Repair. Static level was measured in these wells and the two wells constructed west of Fifth Wheel Truck Repair on the same day. The results of these measurements and the calculated hydraulic gradient may be found in Figure 2. Hydraulic gradient was found to be toward the southeast. Groundwater flow passing the Fifth Wheel Truck Repair wells would be intercepted by the Consolidated wells.

#### WELLS

A listing of documented water wells located within 1/2 mile of the site may be found in Appendix IV.

## APPENDIX I

Contaminant Characterization and Concentration

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# SOUND ANALYTICAL SERVICES, INC.

SPECIALIZING IN INDUSTRIAL & TOXIC WASTE ANALYSIS
4630 PACIFIC HIGHWAY EAST, SUITE B-14, TACOMA, WASHINGTON 98424 - TELEPHONE (206)922-2310 - FAX (206)922-5047

Report To: PLSA Engineering

Date: June 4, 1990

Revised: June 11, 1990

Report On: Analysis of Soil

Lab No.: 11576

IDENTIFICATION:

Samples Received on 06-01-90

Job No. 90104

Client ID: RUSH Sample #1

ANALYSIS:

Total Petroleum Hydrocarbons, ppm by EPA Method 413.1

13,259

Total Petroleum Fuel Hydrocarbons, ppm by EPA SW-846 Modified Method 8015

22

TPH as

Diesel & Heavy Oil

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SOUND ANALYTICAL SERVICES

STAN P. PALMQUIS

### SPECIALIZING IN INDUSTRIAL & TOXIC WASTE ANALYSIS

4630 PACIFIC HIGHWAY EAST, SUITE B-14, TACOMA, WASHINGTON 98424 - TELEPHONE (206)922-2310 - FAX (206)922-5047

Report To: PLSA Engineering

Date: November 19, 1990

Report On: Analysis of Soil

Lab No.: 14505

Page 1 of 3

IDENTIFICATION:

Samples Received on 11-13-90

Project: 90113 Client ID: RUSH 1

ANALYSIS:

Sample was analyzed in accordance with Test Methods for Evaluating Solid Waste, (SW-846), U.S.E.P.A., 1986 Method 8240 (Volatile Organics)

CAS No.	Compounds	Concentration ug/kg	PQL
74-87-3 74-83-9 75-01-4 75-00-3 75-09-2 67-64-1 75-15-0 75-35-4 75-34-3 540-59-0 67-66-3 107-06-2 78-93-3 71-55-6 56-23-5 108-05-4 75-27-4	Chloromethane Bromomethane Vinyl Chloride Chloroethane Methylene Chloride Acetone Carbon Disulfide 1,1-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethane 2-Butanone 1,1,1-Trichloroethane Carbon Tetrachloride Vinyl Acetate Bromodichloromethane	1	100 100 100 100 50 1000 50 50 50 50 50 50
78-87 <b>-</b> 5	1,2-Dichloropropane	ND	50
	1,2-Dichloropropane Cis-1,3-Dichloropropene	ND ND	50
79-01-6 124-48-1	Trichloroethene Dibromochloromethane	ND ND ND	50 50 50
79-00-5	1,1,2-Trichloroethane	MD	

Continued . . . .

PLSA Engineering Project: 90113 Lab No. 14505 Page 2 of 3 November 19, 1990

Client ID: RUSH 1

EPA Method 8240 Continued . . . .

CAS No.	Compounds	Concentration ug/kg	PQL
71-43-2 10061-02-6 75-25-2 108-10-1 591-78-6 127-18-4 79-34-5 108-88-3 108-90-7 100-41-4 100-42-5 1330-20-7	Benzene Trans-1,3-Dichloropropene Bromoform 4-Methyl-2-Pentanone 2-Hexanone Tetrachloroethene 1,1,2,2-Tetrachloroethane Toluene Chlorobenzene Ethyl Benzene Styrene Total Xylenes	75 ND ND ND 265 ND 1,105 ND 583 ND 7,982	50 50 50 50 50 50 50 50 50

PQL - Practical Quantitation Limit - These are the detection limits for this sample. This number is based on sample size, matrix and dilution required.

\* = Compound was detected but below PQL.

### Volatile Surrogates

Surrogate	Percent Recovery	Control Limits
Toluene - D8 Bromofluorobenzene 1,2-Dichloroethane	81.3 ***	81 - 117 74 - 121
D4	91.3	70 - 121

\*\*\* Due to high hydrocarbon level the surrogate recovery skewed.

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Continued . .

PLSA Engineering Project: 90113 Lab No. 14505 Page 3 of 3 November 19, 1990

Client ID: RUSH 1

### Concentration, ppm

Total Petroleum Hydrocarbons by EPA Method 418.1

1,938

Total Petroleum Fuel Hydrocarbons by EPA SW-846 Modified Method 8015 1,768

TPH as

Mineral Spirits/Diesel

SOUND ANALYTICAL SERVICES

LARRY ZURAW

## APPENDIX II

Investigative Analytical Results

SPECIALIZING IN INDUSTRIAL & TOXIC WASTE ANALYSIS
4813 PACIFIC HIGHWAY EAST, TACOMA, WASHINGTON 98424 - TELEPHONE (206)922-2310 - FAX (206)922-5047

Report To: PLSA Engineering

Date: February 8, 1991

Report On: Analysis of Water

Lab No.: 15832-2

**IDENTIFICATION:** 

Samples Received on 02-05-91

Project: 90113

Client ID: RUSH 3S

ANALYSIS:

PCB - Type PCB - mg/l ND < 0.01

ND = Not Detectable

SOUND ANALYTICAL SERVICES

MARTY FRENCH

SPECIALIZING IN INDUSTRIAL & TOXIC WASTE ANALYSIS
4813 PACIFIC HIGHWAY EAST, TACOMA, WASHINGTON 98424 - TELEPHONE (206)922-2310 - FAX (206)922-5047

Report To: PLSA Engineering

Date: February 8, 1991

Report On: Analysis of Water

Lab No.: 15832-1

Page 1 of 3

IDENTIFICATION:

Samples Received on 02-05-91

Project: 90113

Client ID: RUSH 4N

\_\_\_\_\_\_

#### ANALYSIS:

Sample was analyzed in accordance with Test Methods for Evaluating Solid Waste, (SW-846), U.S.E.P.A., 1986 Method 8240 (Volatile Organics)

CAS No.	Compounds	Concentration ug/l	PQL
74-87-3 74-83-9 75-01-4 75-00-3 75-09-2 67-64-1 75-15-0 75-35-4 75-34-3 540-59-0 67-66-3 107-06-2 78-93-3 71-55-6 56-23-5 108-05-4 75-27-4 78-87-5	Chloromethane Bromomethane Vinyl Chloride Chloroethane Methylene Chloride Acetone Carbon Disulfide 1,1-Dichloroethene 1,1-Dichloroethane 1,2-Dichloroethene (Total) Chloroform 1,2-Dichloroethane 2-Butanone 1,1,1-Trichloroethane Carbon Tetrachloride Vinyl Acetate Bromodichloromethane 1,2-Dichloropropane	ug/l  ND	10 10 10 10 5 100 5 5 5 5 100 5 5 5 5 5
10061-01-5 79-01-6 124-48-1 79-00-5	Cis-1,3-Dichloropropene Trichloroethene Dibromochloromethane 1,1,2-Trichloroethane	ND ND ND ND	5 5 5 5

ND = Not Detectable

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Washington State
Department of Ecology

This report is issued solely for the use of the person or company to whom it is addressed. This laboratory accepts responsibility only for the due performance of analysis in accordance with industry acceptable practice. In no event shall Sound Analytical Services, Inc. or its employees be responsible for consequential or special damages in any kind or in any amount.

PLSA Engineering Project: 90113 Lab No. 15832-1 Page 2 of 3 February 8, 1991

Client ID: RUSH 4N

EPA Method 8240 Continued . . .

CAS No.	Compounds	Concentration ug/l	PQL
71-43-2 10061-02-6 75-25-2 108-10-1 591-78-6 127-18-4 79-34-5 108-88-3 108-90-7 100-41-4 100-42-5 1330-20-7	Benzene Trans-1,3-Dichloropropene Bromoform 4-Methyl-2-Pentanone 2-Hexanone Tetrachloroethene 1,1,2,2-Tetrachloroethane Toluene Chlorobenzene Ethyl Benzene Styrene Total Xylenes	ND	5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5

ND = Not Detectable

PQL - Practical Quantitation Limit - These are the detection limits for this sample. This number is based on sample size, matrix and dilution required.

\* = Compound was detected but below PQL.

Volatile Surrogates

Surrogate	Percent Recovery	Control Limits
Toluene - D8 Bromofluorobenzene 1,2-Dichloroethane	118 112	81 - 117 74 - 121
D4	116	70 - 121

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PLSA Engineering Project: 90113 Page 3 of 3 Lab No. 15832-1 February 8, 1991

Client ID: RUSH 4N

Total Metals by ICP:	Concentration,ppm
Antimony Arsenic Beryllium Cadmium Chromium Copper Lead Mercury* Nickel Selenium Silver Thallium	< 0.06 < 0.05 < 0.005 < 0.005 < 0.01 < 0.025 < 0.05 0.0022 < 0.04 < 0.05 < 0.01 < 0.01 < 0.1

\*by Cold Vapor

PCB - Type ND PCB - mg/l < 0.01

ND = Not Detectable

SOUND ANALYTICAL SERVICES

STAN P. PALMQUIST

## SPECIALIZING IN INDUSTRIAL & TOXIC WASTE ANALYSIS

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

Report To: PLSA Engineering Date: February 1, 1991

Report On: Analysis of Water 15718-1 Lab No.:

Page 1 of 3

IDENTIFICATION:

Samples Received on 01-29-91

Project: 90113 Client ID:

#### ANALYSIS:

Sample was analyzed in accordance with Test Methods for Evaluating Solid Waste, (SW-846), U.S.E.P.A., 1986 Method 8240 (Volatile Organics)

	· · · · · · · · · · · · · · · · · · ·		<b></b>
CAS No.	Compounds	Concentration ug/l	PQL
74-87-3	Chloromethane	ND	10
74-83-9	Bromomethane	ND	10
75-01-4	Vinyl Chloride	ND	10
75-00-3	Chloroethane	ND	10
75-09-2	Methylene Chloride	ND	5
67-64-1	Acetone	ND	100
75-15-0	Carbon Disulfide	ND	5
75-35-4	1,1-Dichloroethene	ND	5
75-34-3	1,1-Dichloroethane	ND	5
540-59-0	1,2-Dichloroethene (Total)	ND	5
67-66-3	Chloroform	ND	5
107-06-2	1,2-Dichloroethane	ND	5
78-93-3	2-Butanone	ND	100
71-55-6	1,1,1-Trichloroethane	ND	5
56-23-5	Carbon Tetrachloride	ND	5
108-05-4	Vinyl Acetate	ND	50
75-27-4	Bromodichloromethane	ND	5
78-87-5	1,2-Dichloropropane	ND	5
	Cis-1,3-Dichloropropene	ND	5
79-01-6	Trichloroethene	ND	5
124-48-1	Dibromochloromethane	ND	5
79-00-5	1,1,2-Trichloroethane	ND	5

ND = Not Detectable

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PLSA Engineering Project: 90113 Lab No. 15718-1 Page 2 of 3 February 1, 1991

Client ID: 1W

#### EPA Method 8240 Continued . . . .

CAS No.	Compounds	Concentration ug/l	PQL
71-43-2 10061-02-6 75-25-2 108-10-1 591-78-6 127-18-4 79-34-5 108-88-3 108-90-7 100-41-4 100-42-5 1330-20-7	Benzene Trans-1,3-Dichloropropene Bromoform 4-Methyl-2-Pentanone 2-Hexanone Tetrachloroethene 1,1,2,2-Tetrachloroethane Toluene Chlorobenzene Ethyl Benzene Styrene Total Xylenes	ND N	5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5

ND = Not Detectable

PQL - Practical Quantitation Limit - These are the detection limits for this sample. This number is based on sample size, matrix and dilution required.

\* = Compound was detected but below PQL.

Volatile Surrogates

Surrogate	Percent Recovery	Control Limits
Toluene - D8 Bromofluorobenzene 1,2-Dichloroethane	103 116	81 - 117 74 - 121
D4	94.6	70 - 121

PLSA Engineering Project: 90113 Page 3 of 3 Lab No. 15718-1 February 1, 1991

Client ID: 1W

#### Total Metals by ICP:

### Concentration,mg/l

	.05
Beryllium < 0.	005
Cadmium < 0.	005
Chromium < 0	.01
Copper 0	.04
Lead < 0	.05
Mercury* 0.0	013
Nickel < 0	.04
Selenium < 0	.05
Silver < 0	.01
Thallium <	0.1
Zinc < 0	.02

\*by Cold Vapor

Total Petroleum Hydrocarbons by EPA Method 418.1

< 1.0

sound analytical services

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# SPECIALIZING IN INDUSTRIAL & TOXIC WASTE ANALYSIS 4813 PACIFIC HIGHWAY EAST, TACOMA, WASHINGTON 98424 - TELEPHONE (206)922-2310 - FAX (206)922-5047

Report To: PLSA Engineering

Date: February 1, 1991

Report On: Analysis of Soil

Lab No.: 15718-2

IDENTIFICATION:

Samples Received on 01-29-91

Project: 90113 Client ID: 2-10

ANALYSIS:

Concentration, mg/kg

Total Petroleum Hydrocarbons by EPA Method 418.1

< 10.0

Total Petroleum Fuel Hydrocarbons by EPA SW-846 Modified Method 8015 < 10.0

SOUND ANALYTICAL SERVICES

STAN P. PALMOUTST

#### SPECIALIZING IN INDUSTRIAL & TOXIC WASTE ANALYSIS

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

### QUALITY CONTROL REPORT

#### DUPLICATES

Lab No: 15718-2

Client ID: 2-10

Date: February 1, 1991

Matrix: Soil

Client: PLSA Engineering

Units:

mg/kg

Compound	Sample(S)	Duplicate(D)	RPD*
Total Petroleum Hydrocarbons	< 10.0	< 10.0	
Total Petroleum Fuel Hydrocarbons	< 10.0	< 10.0	

\*RPD = relative percent difference

 $= [(S - D) / ((S + D) / 2)] \times 100$ 

# SPECIALIZING IN INDUSTRIAL & TOXIC WASTE ANALYSIS 4813 PACIFIC HIGHWAY EAST, TACOMA, WASHINGTON 98424 - TELEPHONE (206)922-2310 - FAX (206)922-5047

Report To: PLSA Engineering

Date: January 31, 1991

Report On: Analysis of Water

Lab No.: 15752

**IDENTIFICATION:** 

Samples Received on 01-31-91

Project: 90113

Client ID: RUSH 2W

ANALYSIS:

Total Petroleum Hydrocarbons, mg/l by EPA Method 418.1

< 1.0

SQUND ANALYTICAL SERVICES

STAN P. PALMOUIST

SPECIALIZING IN INDUSTRIAL & TOXIC WASTE ANALYSIS 4813 PACIFIC HIGHWAY EAST, TACOMA, WASHINGTON 98424 - TELEPHONE (206)922-2310 - FAX (206)922-5047

### QUALITY CONTROL REPORT

#### DUPLICATES

Lab No: 15752

Date: January 31, 1991

Client: PLSA Engineering

Client ID: 2W

Matrix: Water

Units:

mg/l

Compound	Sample(S)	Duplicate(D)	RPD*
Total Petroleum Hydrocarbons	< 1.0	< 1.0	

\*RPD = relative percent difference =  $[(S - D) / ((S + D) / 2)] \times 100$ 



4320)

Sample Custody Record

DATE 10/10/90 PAGE\_ OF **HART CROWSER** Hart Crowser, Inc. 1910 Fairview Avenue East Seattle, Washington 98102-3699

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NET Pacific. Inc. 435 Tesconi Circle Santa Rosa. CA 95401 Tel: (707) 526-7200 Fax: (707) 526-9623

Roman Worobel Consolidated Freightways c/o Blymyer Engineers Inc 1829 Clement Ave. Alameda, CA 94501 Date: 10-30-90 NET Client Acct. No: 560 NET Pacific Log No: 4320 Received: 10-11-90 1000

1971

Client Reference Information

Consolidated Frieghtways, Job: 3097/89604

Sample analysis in support of the project referenced above has been completed and results are presented on following pages. Please refer to the enclosed "Key to Abbreviations" for definition of terms. Should you have questions regarding procedures or results, please feel welcome to contact Client Services.

Approved by:

Jules Skamarack Laboratory Manager

Enclosure(s)

Date: 10-30-90 Client Acct: 560 Page: 2

Client Name: Consolidated Freightways

NET Log No: 4320

Ref: Consolidated Frieghtways, Job: 3097/89604

SAMPLE DESCRIPTION: E-WM 10-10-90 1255

LAB Job No: (-65051 )

	· ·	Reporting		
Parameter	Method	Limit	Results	Units
METHOD 601				
DATE ANALYZED			10-17-90	
DILUTION FACTOR*			1	
Bromodichloromethane		0.4	ND	ug/L
Bromoform		0.4	ND	ug/L
Bromomethane		0.4	ממ	ug/L
Carbon tetrachloride		0.4	ND	ug/L
Chlorobenzene		0.4	ND	ug/L
Chloroethane		0.4	ND	ug/L
2-Chloroethylvinyl ether		1.0	ND	ug/L
Chloroform		0.4	0.6	ug/L
Chloromethane		0.4	ND	ug/L
Dibromochloromethane		0.4	ממ	ug/L
1,2-Dichlorobenzene		0.4	ND	ug/L
1,3-Dichlorobenzene		0.4	ND	ug/L
1,4-Dichlorobenzene		0.4	ND	ug/L
Dichlorodifluoromethane		0.4	ND	ug/L
1,1-Dichloroethane		0.4	ND	ug/L
1,2-Dichloroethane		0.4	ИD	ug/L
1,1-Dichloroethene		0.4	ND	ug/L
trans-1,2-Dichloroethene		0.4	ND	ug/L
1,2-Dichloropropane		0.4	ND	ug/L
cis-1,3-Dichloropropene		0.4	ND	ug/L
trans-1,3-Dichloropropene		0.4	ND	ug/L
Methylene Chloride		10	ND	ug/L
1,1,2,2-Tetrachloroethane		0.4	ND	ug/L
Tetrachloroethene		0.4	10	ug/L
1,1,1-Trichloroethane		0.4	3.0	ug/L
1,1,2-Trichloroethane		0.4	ND	ug/L
Trichloroethene		0.4	ND	ug/L
Trichlorofluoromethane		0.4	ND	ug/L
Vinyl chloride		2.0	ND	ug/L
PETROLEUM HYDROCARBONS	•			
VOLATILE (WATER)	•			
DILUTION FACTOR *			1	
DATE ANALYZED			10-20-90	
METHOD GC FID/5030				
as Gasoline		0.05	ND	mg/L
METHOD 602	•			
DILUTION FACTOR *		•	1	
DATE ANALYZED			10-20-90	
Benzene		0.5	ND	ug/L
Ethylbenzene		0.5	ND	ug/L
Toluene	· ·	0.5	ND	ug/L
Xylenes, total		0.5	ND	ug/L

Client Name: Consolidated Freightways

NET Log No: 4320

Ref: Consolidated Frieghtways, Job: 3097/89604

SAMPLE DESCRIPTION:

PETROLEUM HYDROCARBONS EXTRACTABLE (WATER) DILUTION FACTOR \* DATE EXTRACTED DATE ANALYZED METHOD GC FID/3510

Parameter

as Diesel

E-WM

10-10-90

0.05

1255

LAB Job No: (-65051 )

Method

	Reporting Limit	Results	Units
•			
		1 .	
		10-17-90	
		10-17-90	

0.11

Date: 10-30-90

mg/L

Page: 3

Client Name: Consolidated Freightways

NET Log No: 4320

Ref: Consolidated Frieghtways, Job: 3097/89604

SAMPLE DESCRIPTION: MW-2

10-10-90

1415

Date: 10-30-90

Page: 4

LAB Job No: (-65052)

LAB Job No: (-650	J52 )	Reporting		
Parameter	Method	Limit	Results	Units
METHOD 601				
DATE ANALYZED			10-17-90	
DILUTION FACTOR*			1	
Bromodichloromethane		0.4	ND	ug/L
Bromoform		0.4	ND	ug/L
Bromomethane		0.4	ND	ug/L
Carbon tetrachloride		0.4	מא	ug/L
Chlorobenzene		0.4	ND	ug/L
Chloroethane		0.4	ND	ug/L
2-Chloroethylvinyl ether		1.0	ND	ug/L
Chloroform		0.4	0.5	ug/L
Chloromethane		0.4	ND	ug/L
Dibromochloromethane		0.4	ND	ug/L
1,2-Dichlorobenzene		0.4	ND	ug/L
1,3-Dichlorobenzene		0.4	ND	ug/L
1,4-Dichlorobenzene		0.4	ND	ug/L
Dichlorodifluoromethane		0.4	ND	ug/L
1,1-Dichloroethane		0.4	ND	ug/L
1,2-Dichloroethane		0.4	ND	ug/L
1,1-Dichloroethene		0.4	ND	ug/L
trans-1,2-Dichloroethene		0.4	ND	ug/L
1,2-Dichloropropane		0.4	ND	ug/L
cis-1,3-Dichloropropene		0.4	ND	ug/L
trans-1,3-Dichloropropene		0.4	ND	ug/L
Methylene Chloride		10	ND	ug/L
1,1,2,2-Tetrachloroethane		0.4	ND	ug/L
Tetrachloroethene	•	0.4	12	ug/L
1,1,1-Trichloroethane		0.4	3.5	ug/L
1,1,2-Trichloroethane		0.4	ND	ug/L
Trichloroethene		0.4	ND	ug/L
Trichlorofluoromethane		0.4	ND	ug/L
Vinyl chloride		2.0	ND	ug/L
PETROLEUM HYDROCARBONS				
VOLATILE (WATER)			<b></b>	
DILUTION FACTOR *			1	
DATE ANALYZED			10-20-90	
METHOD GC FID/5030				
as Gasoline		0.05	ND	mg/L
METHOD 602			,	•
DILUTION FACTOR *			1	
DATE ANALYZED			10-20-90	
Benzene		0.5	ND	ug/L
Ethylbenzene		0.5	ND	ug/L
Toluene		0.5	ND	ug/L
Xylenes, total		0.5	ND	ug/L
• · · · · · · · · · · · · · · · · · · ·				

Client Name: Consolidated Freightways

NET Log No: 4320

Ref: Consolidated Frieghtways, Job: 3097/89604

SAMPLE DESCRIPTION: MW-2

10-10-90 1415

Date: 10-30-90

Page: 5

LAB Job No: (-65052 )

Parameter	Method	Reporting Limit	Results	Units
PETROLEUM HYDROCARBONS				
EXTRACTABLE (WATER)		•		
DILUTION FACTOR *			1 .	
DATE EXTRACTED			10-17-90	
DATE ANALYZED			10-17-90	
METHOD GC FID/3510				
as Diesel		0.05	ND	mg/L

Client Acct: 560 Date: 10-30-90

Page: 6

Client Name: Consolidated Freightways

NET Log No: 4320

Ref: Consolidated Frieghtways, Job: 3097/89604

SAMPLE DESCRIPTION: MW-1 10-10-90 1515

LAB Job No: (-65053) Reporting Limit Results Units Method Parameter METHOD 601 10-17-90 DATE ANALYZED DILUTION FACTOR\* 1 0.4 ND ug/L Bromodichloromethane 0.4 ND ug/L Bromoform 0.4 ND ug/L Bromomethane 0.4 ND ug/L Carbon tetrachloride 0.4 ND uq/L Chlorobenzene 0.4 ND ug/L Chloroethane 2-Chloroethylvinyl ether 1.0 ND ug/L Chloroform 0.4 0.5 ug/L 0.4 ND ug/L Chloromethane 0.4 ug/L ND Dibromochloromethane 0.4 ug/L ND 1,2-Dichlorobenzene 0.4 ND 1,3-Dichlorobenzene ug/L 0.4 ND ug/L 1,4-Dichlorobenzene 0.4 ND Dichlorodifluoromethane ug/L 0.4 ND ug/L 1,1-Dichloroethane 1,2-Dichloroethane 0.4 ND ug/L 0.4 ND ug/L 1,1-Dichloroethene 0.4 ND ug/L trans-1,2-Dichloroethene 0.4 ND ug/L 1,2-Dichloropropane 0.4 ug/L ND cis-1,3-Dichloropropene 0.4 ug/L ND trans-1,3-Dichloropropene 10 ug/L ND Methylene Chloride 0.4 ND ug/L 1,1,2,2-Tetrachloroethane Tetrachloroethene 0.4 12 ug/L 1,1,1-Trichloroethane 0.4 2.2 ug/L 0.4 ND ug/L 1,1,2-Trichloroethane 0.4 ND ug/L Trichloroethene 0.4 ND ug/L Trichlorofluoromethane ND 2.0 ug/L Vinyl chloride PETROLEUM HYDROCARBONS ----VOLATILE (WATER) DILUTION FACTOR \* 10-20-90 DATE ANALYZED METHOD GC FID/5030 0.05 ND mg/L as Gasoline METHOD 602 1 DILUTION FACTOR \* 10-20-90 DATE ANALYZED 0.5 ND ug/L Benzene 0.5 ND ug/L Ethylbenzene 0.5 ND ug/L Toluene 0.5 .ND ug/L Xylenes, total

Client Name: Consolidated Freightways

Date: 10-30-90

mg/L

Page: 7

NET Log No: 4320

Ref: Consolidated Frieghtways, Job: 3097/89604

SAMPLE DESCRIPTION: MW-1

PETROLEUM HYDROCARBONS EXTRACTABLE (WATER) DILUTION FACTOR \* DATE EXTRACTED DATE ANALYZED METHOD GC FID/3510

Parameter

as Diesel

10-10-90

0.05

1515

LAB Job No: (-65053 )

Method	Reporting Limit	Results	Units	
		1 .		
		10-17-90		
		10-17-90		

1.0

Date: 10-30-90 Client Acct: 560 Page: 8

Client Name: Consolidated Freightways

NET Log No: 4320

Ref: Consolidated Freightways, Job: 3097/89604

SAMPLE DESCRIPTION: Trip Blank LAB Job No: (-65054 )

EAR 30D NO: (-03034 )		Reporting		
Parameter	Method	Limit	Results	Units
		<del></del>	<del></del>	
METHOD 601				
DATE ANALYZED			10-17-90	
DILUTION FACTOR*			1	
Bromodichloromethane		0.4	ND	ug/L
Bromoform		0.4	ND	ug/L
Bromomethane		0.4	ND	ug/L
Carbon tetrachloride		0.4	ND	ug/L
Chlorobenzene		0.4	ND	ug/L
Chloroethane		0.4	ND	ug/L
2-Chloroethylvinyl ether		1.0	ND	ug/L
Chloroform		0.4	ND	ug/L
Chloromethane		0.4	ND	ug/L
Dibromochloromethane		0.4	ND	ug/L
1,2-Dichlorobenzene		0.4	ND	ug/L
1,3-Dichlorobenzene		0.4	ND	ug/L
1,4-Dichlorobenzene		0.4	ND	ug/L
Dichlorodifluoromethane		0.4	ИD	ug/L
1,1-Dichloroethane		0.4	ND	ug/L
1,2-Dichloroethane		0.4	ND .	ug/L
1,1-Dichloroethene		0.4	ND	ug/L
trans-1,2-Dichloroethene		0.4	ND	ug/L
1,2-Dichloropropane		0.4	ND	ug/L
cis-1,3-Dichloropropene		0.4	ND	ug/L
trans-1,3-Dichloropropene		0.4	ND	ug/L
Methylene Chloride		10	ND	ug/L
1,1,2,2-Tetrachloroethane		0.4	ND	ug/L
Tetrachloroethene		0.4	ND	ug/L
1,1,1-Trichloroethane		0.4	ND	ug/L
1,1,2-Trichloroethane		0.4	ND	ug/L
Trichloroethene		0.4	ND	ug/L
Trichlorofluoromethane		0.4	ND	ug/L
Vinyl chloride		2.0	ND	ug/L
PETROLEUM HYDROCARBONS				
VOLATILE (WATER)				
DILUTION FACTOR *			1	
DATE ANALYZED			10-22-90	
METHOD GC FID/5030				
as Gasoline		0.05	ND	mg/L
METHOD 602				
DILUTION FACTOR *		•	1	
DATE ANALYZED			10-22-90	
Benzene	**	0.5	ND	ug/L
Ethylbenzene		0.5	ND	ug/L
Toluene		0.5	ND	ug/L
Xylenes, total		0.5	ND	ug/L
				<del>- •</del>

Client Acct: 560

Client Name: Consolidated Freightways

Date: 10-30-90 Page: 9

NET Log No: 4320

Ref: Consolidated Freightways, Job: 3097/89604

SAMPLE DESCRIPTION: Trip Blank

LAB Job No: (-65054)

THE COD NO: (-0	Bonowkina			
Parameter	Method	Reporting Limit	Results	Units
PETROLEUM HYDROCARBONS				
EXTRACTABLE (WATER)			<b>→→</b>	
DILUTION FACTOR *			1 .	
DATE EXTRACTED			10-17-90	
DATE ANALYZED			10-17-90	
METHOD GC FID/3510				
as Diesel		0.05	ND	mg/L

Client Acct: 560 Date: 10-30-90

Client Name: Consolidated Freightways Page: 10

NET Log No: 4320

Ref: Consolidated Freightways, Job: 3097/89604

SAMPLE DESCRIPTION: MW-3 Bailer 10-10-90

LAB Job No: (-65055)

Parameter	Method	Reporting Limit	Results	Units
METHOD 601	· <del></del>	<u> </u>	<del></del>	<u> </u>
DATE ANALYZED			10-17-90	
DILUTION FACTOR*			1	
Bromodichloromethane		0.4	ND	ug/L
Bromoform	•	0.4	ND	ug/L
Bromomethane		0.4	ND	ug/L
Carbon tetrachloride		0.4	ND	ug/L
Chlorobenzene		0.4	ND	ug/L
Chloroethane		0.4	ND	ug/L
2-Chloroethylvinyl ether		1.0	ND	ug/L
Chloroform		0.4	9.3	ug/L
Chloromethane		0.4	ND	ug/L
Dibromochloromethane		0.4	ND .	ug/L
1,2-Dichlorobenzene		0.4	ИD	ug/L
1,3-Dichlorobenzene		0.4	ND	ug/L
1,4-Dichlorobenzene		0.4	ND	ug/L
Dichlorodifluoromethane		0.4	מא	ug/L
1,1-Dichloroethane		0.4	ND	ug/L
1,2-Dichloroethane		0.4	ND	ug/L
1,1-Dichloroethene		0.4	ND	ug/L
trans-1,2-Dichloroethene		0.4	ND	ug/L
1,2-Dichloropropane		0.4	ND	ug/L
cis-1,3-Dichloropropene		0.4	ND	ug/L
trans-1,3-Dichloropropene		0.4	ND	ug/L
Methylene Chloride		10	ND	ug/L
1,1,2,2-Tetrachloroethane		0.4	ND	ug/L
Tetrachloroethene		0.4	ND	ug/L
1,1,1-Trichloroethane		0.4	ND	ug/L
1,1,2-Trichloroethane		0.4	ND	ug/L
Trichloroethene		0.4	ND	ug/L
Trichlorofluoromethane		0.4	ND	ug/L
Vinyl chloride		2.0	ND	ug/L
PETROLEUM HYDROCARBONS				
VOLATILE (WATER)				
DILUTION FACTOR *			1	
DATE ANALYZED			10-20-90	
METHOD GC FID/5030				
as Gasoline		0.05	ND.	mg/L
METHOD 602			··	•
DILUTION FACTOR *			1	
DATE ANALYZED			10-20-90	
Benzene		0.5	ND	ug/L
Ethylbenzene		0.5	ND	ug/L
Toluene		0.5	ND	ug/L
Xylenes, total		0.5	ND	ug/L

Client Acct: 560

Client Name: Consolidated Freightways

Date: 10-30-90

Page: 11

NET Log No: 4320

Ref: Consolidated Frieghtways, Job: 3097/89604

#### QUALITY CONTROL DATA

Parameter	Reporting Limits	Units	Cal Verf Stand % Recovery	Blank Data	Spike % Recovery	Duplicate Spike % Recovery	RPD
Diesel	0.05	mg/L	99	ND	94	90	4.3

#### QUALITY CONTROL DATA

Parameter	Reporting Limits	Units	Cal Verf Stand % Recovery	Blank Data	Spike % Recovery	Duplicate Spike % Recovery	RPD
Gasoline	0.05	mg/L	86	ND	82	96	16
Benzene	0.5	ug/L	90	ND	94	112	18
Toluene	0.5	ug/L	100	ND	97	108	11

COMMENT: Blank Results were ND on other analytes tested.

#### QUALITY CONTROL DATA

Parameter	Reporting Limits	Units	Cal Verf Stand % Recovery	Blank Data	Spike % Recovery	Duplicate Spike % Recovery	RPD
Chlorobenzene	0.4	ug/L	N/A	ND	104	103	< 1
1,1-Dce Trichloroethene	0.4 0.4	ug/L ug/L	N/A N/A	ND ND	127 97	123 98	2.8 < 1

COMMENT: Blank Results were ND on other analytes tested.



NET Pacific, Inc.

#### KEY TO ABBREVIATIONS and METHOD REFERENCES

: Less than; When appearing in results column indicates analyte not detected at the value < This datum supercedes the listed Reporting Limit. following.

: Reporting Limits are a function of the dilution factor for any given sample. To obtain the actual reporting limits for this sample, multiply the stated Reporting Limits by the dilution factor (but do not multiply reported values).

: Initial Calibration Verification Standard (External Standard). **ICVS** 

: Average; sum of measurements divided by number of measurements. mean

mg/Kg (ppm): Concentration in units of milligrams of analyte per kilogram of sample, wet-weight basis

(parts per million).

: Concentration in units of milligrams of analyte per liter of sample. mg/L

: Milliliters per liter per hour. mL/L/hr

MPN/100 mL : Most probable number of bacteria per one hundred milliliters of sample.

: Not applicable. N/A

: Not analyzed. NA

: Not detected; the analyte concentration is less than applicable listed reporting limit. ND

: Nephelametric turbidity units. MTU

: Relative percent difference, 100 [Value 1 - Value 2]/mean value. RP0

SNA ug/Kg (ppb) : Concentration in units of micrograms of analyte per kilogram of sample, wet-weight basis

(parts per billion).

: Standard not available.

: Concentration in units of micrograms of analyte per liter of sample. ug/L

: Micranhos per centimeter. umbos/an

#### Method References

Methods 100 through 493: see "Methods for Chemical Analysis of Water & Wastes", U.S. EPA, 600/4-79-020, rev. 1983.

Methods 601 through 625: see "Guidelines Establishing Test Procedures for the Analysis of Pollutants" U.S. EPA, 40 CFR, Part 136, rev. 1988.

Methods 1000 through 9999: see "Test Methods for Evaluating Solid Waste", U.S. EPA SW-846, 3rd edition, 1986.

SM: see "Standard Methods for the Examination of Water & Wastewater, 16th Edition, APHA, 1985.

#### TABLE 1 RESULTS OF ANALYSES OF ENVIRONMENTAL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS, SOIL BY IR (EPA METHOD 418.1)

Results Reported as ug/g (ppm)

C	Total Petroleum <u>Hydrocarbons (ppm)</u>
Sample #	
Sump #1, WB soil	236
Sump #2, BATT soil	36.2
B-1, 8.0' soil	16.9
B-1, 15.0' soil	17.2
B-2, 10.0' soil	16.7
B-2, 15.0' soil	162
—B-3, 3.0' soil	1780
B-3, 9.0', soil	1130
-B-3, 15.0', soil	618
WDOE SCGs	200
Quality Assurance	
B-2, 15.0' (Duplicate, Soil)	133

WDOE SCGs = Washington State Department of Ecology (WDOE) Soil Cleanup Goals (See text).

Wash Bay WB =

Battery Storage Area BATT =

As reported by the project laboratory, August 3, 1989.

## TABLE 2 RESULTS OF ANALYSES OF ENVIRONMENTAL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS, GROUNDWATER BY IR (EPA METHOD 418.1)

Results Reported as ug/g (ppm)

Sample #	Total Petroleum <u>Hydrocarbons (ppm)</u>				
B-1, WS-1 Groundwater	<5.0				
B-2, WS-2 Groundwater	5.0				
B-3, WS-1 Groundwater	<5.0				
Ouality Assurance					
B-2, 15.0' (Duplicate, Soil)	133.				
WDOE GCGs	15.0				
WDOE GCGs =	Washington State Department of Ecology (WDOE) Groundwater Cleanup Goals (See text).				
As reported by the project laboratory, August 3, 1989.					

# TABLE 3 RESULTS OF ANALYSIS OF ENVIRONMENTAL SAMPLES FOR EP-TOX METALS IN ACCORDANCE WITH "TEST METHODS FOR EVALUATING SOLID WASTE" EPA SW-846, 3RD EDITION Results Reported as ppm (mg/L)

Sample #	B-3, 9.0'	<u>B-1, 15.0°</u>	B-2, 15.0'	ALLOWABLE LIMITS***
<u>Analyte</u>				
Arsenic	< 0.1	< 0.1	< 0.1	5.0
Barium	0.3	< 0.1	0.5	100.0
Cadmium	< 0.1	< 0.1	< 0.1	1.0
Chromium	< 0.1	< 0.1	< 0.1	5.0
Lead	< 0.1	< 0.1	< 0.1	5.0
Mercury	< 0.05	< 0.05	< 0.05	0.2
Selenium	< 0.1	< 0.1	< 0.1	1.0
Silver	< 0.1	< 0.1	< 0.1	5.0
Copper	< 0.1	< 0.1	< 0.1	*
Nickel	< 0.1	< 0.1	< 0.1	*
Zinc	< 0.1	<0.1	< 0.1	*

<sup>\*\*\* =</sup> Dangerous Waste Maximum Concentrations in Extract, WAC 173-303-090, Dangerous waste characteristics, WDOE, Dangerous Waste Regulations, Chapter 173-303, Amended January 1989.

As reported by the project laboratory, August 3, 1989.

<sup>\* =</sup> No reported value as per Chapter 173-303-090, WAC.

#### APPENDIX III

Northwest Corner Drywell Final Sample Results

## SOUND ANALYTICAL SERVICES, INC.

#### SPECIALIZING IN INDUSTRIAL & TOXIC WASTE ANALYSIS

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

Report To: PLSA Engineering

Date: April 17, 1991

Report On: Analysis of Soil

Lab No.: 17076

IDENTIFICATION:

Samples Received on 04-16-91

Project: 90113

#### ANALYSIS:

		L	· · · · · · · · · · · · · · · · · · ·	
Lab Sample No.	RUSH 1	RUSH 2	RUSH 3	RUSH 4
Client Identification	1	2	3	4
Units	mqq	ppm	mqq	mqq
Benzene Toluene Ethyl Benzene Xylenes BTEX by EPA SW-846 Method 8020	< 0.05 < 0.05 < 0.05 < 0.05	< 0.05 < 0.05 < 0.05 < 0.05	•	
Total Petreoluem Hydrocarbons by EPA Method 418.1	150	160	15	32
Total Metals:				
Arsenic Cadmium Chromium Lead Mercury	< 5.1 < 0.13 15.1 13.1 < 0.10	< 5.1 0.43 14.0 14.1 < 0.10	< 5.1 < 0.13 13.1 < 1.5 < 0.10	< 5.1 < 0.13 8.2 5.1 < 0.10

Note - BTEX and TPH results reported on an as received basis.

sound analytical services

This document is part of the official Adminsistrative Record for the

Yakima Railroad Area.

Washington State

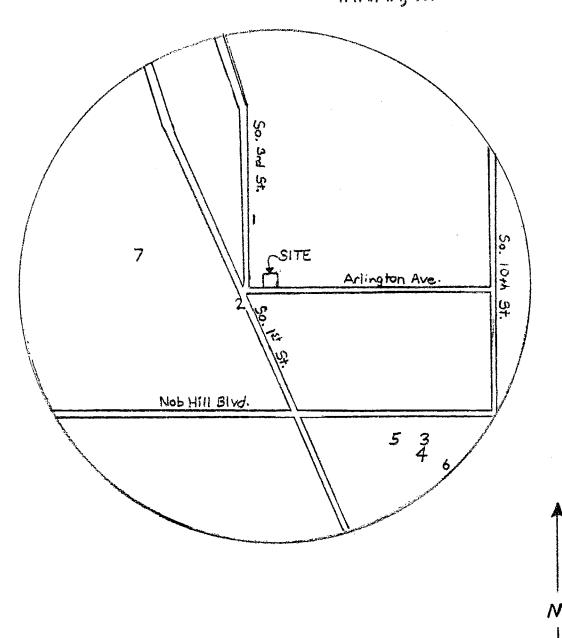
Washington State
Department of Ecology

#### APPENDIX IV

Nearby Wells

## FIGURE

WATER WELL LOCATION MAP HAHN MOTORS, YAKIMA, WA.



KEY:

SCALE: 1"=1000'

of Water Well Administrative Record for the Yakima Railroad Area. Washington State Department of Ecology

File Original and First Copy with

		10.398	
Start Card	No	<u> </u>	

(USE ADDITIONAL SHEETS IF NECESSARY)

Seco	artment of Ecology  and Copy—Owner's Copy I Copy—Driller's Copy STATE OF	LL REPORT WASHINGTON	3	
.41	OWNER: Name JAMES HENNESS	Water Right Pormit No.	501	
-				
(2)	LOCATION OF WELL: County VAKIMA		<u>:3</u> <sub>N., R</sub>	<u>/9</u> w.m
(2a)	STREET ADDDRESS OF WELL (or nearest address)			
(3)	PROPOSED USE: Domestic Industrial Municipal DeWater Test Well Other	(10) WELL LOG or ABANDONMENT PROCEDU  Formation: Describe by color, character, size of material ar		
4)	TYPE OF WORK: Owner's number of well (if more than one)	thickness of aquifers and the kind and nature of the material in e with at least one entry for each change of information.		
.,	Abandoned New well Method: Dug Bored	MATERIAL	FROM	то
	Deepened ☐ Cable ☐ Driven ☐	TOP SOIL & GRAVEL	Ç	1/2
	Reconditioned □ Rotary ☑ Jetted □	SANN GUL COBBLES MH	1/2	33
(5)	DIMENSIONS: Diameter of wellinches.	HARD PAIN -TRACE JOCPM H	33 38	38
	Drilled 68 feet. Depth of completed well ft.	GRACEI BOULIKES VH	45	50
(6)	CONSTRUCTION DETAILS:	CONGLOMERAK GRAVELS HARDPAN Y !	50	55
	Casing installed: 6 · Diem. from + 2 ft. to 77 ft.	HARD PAN	55	65
	Welded Liner installed Liner i	SAND GRAVEL	65	69
	Threaded Diam. from ft. to ft.	CARSE GRAVELA CIBBLES	1-9	79
	Perforations: Yes No No	CHARSE GRAVEL ECOBBLES	79	88
	Type of perforator used			
	SIZE of perforations in. by in.			
	perforations fromft. toft.	30 6Pm	ļ	
	perforations from tt. to tt.			
	Screens: Yes No No			
	Manufacturer's Name			
	Type Model No			
	Diamft. toft.			
	Diam. Slot size from ft. to tt.			
	Gravel packed: Yes No Size of gravel			
	Gravel placed fromft. toft.			
	Surface soal: Yes No To what depth? 18 ft.  Material used in seal PENTOYNIE		-	
	Did any strata contain unusable water? Yes No			
	Type of water?Depth of strata	This document is part of the office	ial	
	Method of sealing strata off	Adminsistrative Record for the		
7)	PUMP: Manufacturer's Name	Yakima Railroad Area.	,	
	Туре: Н.Р	Washington State		
8)	WATER LEVELS: Land-surface elevation above mean sea level ft.	Department of Ecology		
	Static level 30'8/1 ft. below top of well Date 11-30-88	3)		
	Artesian pressure lbs. per square inch Date			·
	Artesian water is controlled by(Cap, valve, etc.))	11-70 66	72 00	9
9)	WELL TESTS: Drawdown is amount water level is lowered below static level	Work started 11-30-88, 19. Completed 11-	<u> 30-88</u>	, 19
	Was a pump test made? Yes No Place, by whom?	WELL CONSTRUCTOR CERTIFICATION:		
	Yield:gal./min. withft. drawdown afterhrs.	I constructed and/or accept responsibility for const		
	n n n	and its compliance with all Washington well cons Materials used and the information reported above		
	Recovery data (time taken as zero when pump turned off) (water level measured	knowledge and belief.		, , , , , ,
	from well top to water level) Time Water Level Time Water Level Time Water Level	NAME RIEBE WELL DRULL (PERSON, FIRM, OR CORPORATION)	176 11	
_		Address POBOX 10866	- 31	•
-	Data of toot	nuuloss		
	Date of test	(Signed) Sh Krieke License N	10.04	スス
	Bailer test gal./min. with ft. drawdown after hrs.	(WELL DRILLER) Contractor's		
	Airtestgal./min. with stem set at ft. for hrs.	Registration 133 Kl Date 12-1-8	38	10

Temperature of water \_\_\_\_ Was a chemical analysis made? Yes \_\_\_ No X

## WATER WELL REPORT STATE OF WASHINGTON

Application No. G4-24200

GTON Permit No.

(1) OWNER: Name NOEL CANNING CORP.	Address 1011 COURT 2DD CT VAVE	4A 17A4	211 000
(2) LOCATION OF WELL: County Yakima	Address IUII SOUTH 3RD 51. YAKK	IA, WAS	SH . 989
Bearing and distance from section or subdivision corner	000/y NE 1/4 Sec 30 T	., N., R.	19E <sub>W.M</sub>
) BRODOGER	(10) 111111 1 2 0 0		
• • • • • • • • • • • • • • • • • • • •			
Irrigation   Test Well   Other	Formation: Describe by color, character, size of materia show thickness of aquifers and the kind and nature of stratum penetrated, with at least one entry for each c	il and stri	icture, and
(4) TYPE OF WORK: Owner's number of well (if more than one) 2		hange of	formation
New well 🗶 Method: Dug 📋 Bored 🗍	BLACKTOP, REBAR CEMENT & FILL	FROM	1 TO
Deepened Cable Driven D	SOIL & GRAVEL	1 0	-10
Reconditioned Rotary 🙀 Jetted 🗆	GRAVEL, BLDRS & SOIL V. HD.	10	
(5) DIMENSIONS: Diameter of well 12,10,8 inches.	SAND, GRAVEL, BLDRS, WATER, CAVING	30	_
Drilled 7.52 ft. Depth of completed well 7.52 ft.	CEMENT GRAVEL & BLDRS	47	1
(6) CONSTRUCTION DETAILS: 0 67.	HARD PAN & BLDRS	50	
Cosing install 4 40	LOOSELY CEMENTED GRAVEL & BLDRS	69	<del>7</del> 7-
Casing installed: #10 "Diam. from #2 ft. to 400 ft.	BOULDERS, SAND, GRAVEL, WATER.	77	92 92
Threaded   8 "Diam. from 360 ft. to 680 ft.  Welded   The state of the	V.HD. BASALT BLDRS, GRAVEL, WATER	92	107
	CEMENT GRAVEL, DEC.ROCK&BLDRS.	107	117
Perforations: Yes To No []  Type of perforator used TORCH (8th LINER)	BROKEN BASALT BLDRS V. HD.	117	
SIZE of perforations 1/8 in. by 8 in.	SAME W. DEC. ROCK	135	_
720 perforations from 560 ft. to 680 ft.	HD PAN & BLDRS	145	1 -
perforations from ft. to ft.	BROKEN BASALT BLDRS& HD PAN	152	190
perforations from ft. to ft.	DEC,ROCK,CLAY & BLDRS WHITE CLAY	190	_
Screens: Yes No A	DEC.ROCK, CLAY & BLDRS	236 238	<del>238</del> <del>242</del>
Manufacturer's Name	WHITE CLAY	242	247
Type Model No	DEC.,ROCK,CLAY & BLDRS	- 247	299
Diam Slot size from ft. to ft.	SANDSTONE, CLAY, CEM. GRAV, BLDRS	299	308
Diam. Slot size from ft. to ft.	DEC., ROCK, CLAY & BLDRS	308	_
Gravel packed: Yes D No To Size of gravel:	BASALT BLDRS & CLAY	332	
Gravel placed fromft. toft.	BR.CLAY, SAND, GRAVEL, SOME WATER	<del>347</del>	<del>- 551</del> -
	SAND, GRAVEL, CLAY " "	351	358
Surface seal: Yes X No To what depth? 30 ft.  Material used in seal CEMENT	DEC. ROCK & BLDRS.	<del>35</del> 8	
	EROKEN BASALT & SED. ROCK	365	380
Type of water? SURFACE Depth of strata 45	GRAY CLAY	380	388
Method of sealing strata of CASED & CEMENTED	GRAVEL, GREY CLAY & BLDRS	388	391
(7) PUMP: Manufacturer's Name	EROKEN BASALT ROCK	391	400
Type: HP	CEMENT GRAVEL, CLAY & BLDRS	400	412
	TAN SANDY CLAY .	412	<del>-416-</del>
(8) WATER LEVELS: Land-surface elevation above mean sea level 1025	GRAVEL, BLDRS & CLAY	416	<del>-423</del>
Static level 14 ft. below top of well Date 3/18/77  Artesian pressure lbs. per square inch Date	TAN SANDY CLAY	423	438
Artesian water is controlled by	GRAVEL, CLAY & ELDRS	438	468
(Cap, valve, etc.)	SED.ROCK, SAND, GRAVEL, CLAY, CONGLOM		510
(9) WELL TESTS: Drawdown is amount water level is	BR. SANDY CLAY	510	519
Was a pump test made? Yes No If yes, by whom?	Work started 1/5/77 19 Completed.	.2///	, 19
Yield: gal./min. with ft. drawdown after hrs.	WELL DRILLER'S STATEMENT:	IVE	$n^-$
1) 1) 1) 1) 1) 1) 1) 1) 1) 1) 1) 1) 1) 1	This well was drilled under my jurisdiction a	1 V L	
n n	Wile to the best of my knowledge and heliaf		report is
Recovery data (time taken as izera when opting turned on)) (water level measured from well top to water level)		6 1977	
Time Water Level Time a Minatel Level Fime Of Water Level	NAMERIEBE WELL DRILLING	<b>^</b>	
Yakima Railroad Area.	(Person, firm, or completely MEN KT		
	Address YAKIMA WASH CENTRAL REGIS	UF	TIUE
	(10 D)		
Date of test	[Signed] Shu Lee.		
fler testgal/min, withft. drawdown afterhrs.	(Well Driller)		•••
rtesian flow	License No. 3601 Date 3/20/7	'7	10
		***************************************	., 17

#### WATER WELL REPORT

STATE OF WASHINGTON

Application .	Nο
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	Fernit No	**	
(1) OWNÉR: Name #2 OF NOEL LOG	Address		
(2) LOCATION OF WELL: County			
Bearing and distance from section or subdivision corner	— 14 See T	N., R.	W.M
	(40) 77777 7 0 0		
PROPOSED USE: Domestic   Industrial   Municipal	(10) WELL LOG:		
Irrigation □ Test Well □ Other □	Formation: Describe by color, character, size of materia show thickness of aquifers and the kind and nature of the control of	l and stru	icture, and
(4) TYPE OF WORK: Owner's number of well	strutum penetratea, with at least one entry for each c	hange of	formation.
New well   Method: Dug   Bored	MATERIAL CONTINUED NORL CANNING CORP. LCG	FROM	TO
Deepened	, contained home on the out of the		<u> </u>
Reconditioned Rotary Jetted	CEMENT GRAVEL, SAND, CLAY & BLDRS	519	579
(5) DIMENSIONS: Diameter of well inches.	GRAY CLAY	579	582
Drilled ft. Depth of completed well ft.	CLAY, GRAVEL, SAND, SOME WATER	582	588
(6) CONSTRUCTION DETAILS:	EST 150 GPM. THIS POINT.		<del></del>
	. CEMENT GRAVEL	588	<del>  615</del>
Casing installed: "Diam. from tt. to tt.	GREY CLAY	615	620
Threaded " Diam. from ft. to ft. Welded " Diam. from ft. to ft.	PINK CLAY SHALE, SAND STONE, GRAVE		
	. INVERTING CONGLOMERATE AS WE GO	620	680
Perforations: Yes No Type of perforator used	CEMENT GRAVEL	680	700
SIZE of perforations in. by in.	ALLUVIAL OUT WASH & WATER	700	712
perforations from ft. to ft.	APROX. 350 GPM.		1 1 2 2
perforations fromft. toft	CEMENT GRAVEL & BLDRS	712	722
	GRAY SANDSTONE & BASALT OUT WASH	722	737
Screens: Yes   No	. SANDSTONE & CLAY	737	752
Manufacturer's Name	EST 1200 GPM IN LAST 50		
Diam. Slot size from ft. to ft.	•		
Diam. Slot size from ft. to ft.	<u> </u>		
Gravel packed: Yes   No   Size of gravel:	•		
Gravel placed from ft. to ft.	<del>:</del>	·	ļ
	•		<del> </del>
Surface seal: Yes No To what depth? ft.  Material used in seal.	•		
Did any strata contain unusable water? Yes No	This document is part of the official		
Type of water? Depth of strata	Administrative Record for the		
Method of sealing strata off	Yakima Railroad Arag		
(7) PUMP: Manufacturer's Name	· Washington State		
There is a second of the secon	1 harring man a color		
(8) WATER LEVELS: Land-surface elevation above mean soa level ft.	• Advantage of the partition of the bookings		Elling .
Static level the below top of well Date	A STATE OF THE STA		李宪 ( 1938
Artesian pressure lbs. per square inch Date			
Artesian water is controlled by (Cap, valve, etc.)			
	4		
(9) WELL TESTS: Drawdown is amount water level is lowered below static level	Work started		10
Was a pump test made? Yes No If yes, by whom?		***************************************	<u>, 10</u>
" " " " " " "	WELL DRILLER'S STATEMENT	IVE	D
	This well was drilled under my jurisdiction at true to the best of my knowledge and belief.	nd/this	report is
Recovery data (time taken as zero when pump turned off) (water level	· · · · · · · · · · · · · · · · · · ·	4	
measured from well top to water level)  Time Water Level   Time Water Level   Time Water Level	NAME MAY 16	1977	
Time Water Level	(Person, firm, or corporation) (T	ype or pr	
	Address DEFARTMENT C		
***************************************	United Hazard	*****	TUE
Date of test	[Signed]		
test gal/min. with ft. drawdown after hrs.	( (Well Dillier)		*************
emperature of water Was a chemical analysis made? Yes \( \text{No} \)	License No. 3601 Date 3/3	دع	1922
			.,
	•		

File Original and First Copy with Department of Ecology Second Copy — Owner's Copy Third Copy — Driller's Copy

## WATER WELL REPORT STATE OF WASHINGTON

CA-28583

**→** 3

WELL REPORT	Application

Application No.

(1) OWNER: Name YAKIMA PRECAST	Address 1202 S 1st STREET YAKIMA,	WA 98	3901
LOCATION OF WELL: County YAKIMA	<del></del>	.3N. R.	.9w.м.
	also N51.5' of lot 53		
(3) PROPOSED USE: Domestic [] Industrial [ Municipal [	(10) WELL LOG:	<u> </u>	
Irrigation   Test Well   Other	Formation: Describe by color, character, size of materia show thickness of aquifers and the kind and nature of t	i and stru he mater	cture, and al in each
(4) TYPE OF WORK: Owner's number of well (if more than one)	stratum penetrated, with at least one entry for each cl	FROM	TO
New well 📈 Method: Dug 🗌 Bored 🗋	Sand grave 1 + colles	P	14
Deepened Cable Driven	hard pan	24	29
Reconditioned   Rotary   Jetted	sand +grave(	29	34
(5) DIMENSIONS: Diameter of well inches.	hard pan	34	38
Drilled $57$ ft. Depth of completed well $57$ ft.	sand + grave	38	41
(6) CONSTRUCTION DETAILS:	hard pan	41	44
• •	sand+fine grarel	44	54
Casing installed:	grarel	54	-57
Welded No	/		
		ļ	
Perforations: Yes No   Mills		<u> </u>	
SIZE of perforations			
perforations from 39 ft. to 34 ft.			
perforations fromft. toft.			
perforations from 44 ft. to 55 ft.			<del> </del>
Screens: Yes No 2			
Manufacturer's Name		<del></del>	<del> </del>
Type Model No Model No	This document is part of the offi	ingl -	
Diam. Slot size from ft. to ft.	Adminsistrative Record to the		<del> </del>
Diam. Slot size from ft. to ft.	Yakima Railroad Area	<del></del>	
Gravel packed: Yes No. No. Size of gravel:	Washingdam Shake		
Gravel placed from ft. to ft.	Department of Ecology		
Surface seal: Yes No   To what depth? 20 tt.			
Surface Seal: Yes No D To what depth?			
Did any strata contain unusable water? Yes 🗌 No 🗵	The same of the sa	•	
Type of water? Depth of strata	DEGE IV		
Method of sealing strata off			
(7) PUMP: Manufacturer's Name			
Type:	1 UEC   4 1984		
(2) WATER LEVELS. Land-surface elevation		<u></u>	
above mean sea levelft.	- PA 1: 15		
Static level	Rain		
Artesian pressure			
Artesian water is controlled by(Cap, valve, etc.)			
(9) WELL TESTS: Drawdown is amount water level is lowered below static level			<u> </u>
Was a pump test made? Yes \( \text{No } \) No \( \text{X} \) If yes, by whom?	Work started 19 Completed		, 19
Yield: gal./min. with ft. drawdown after hrs.	WELL DRILLER'S STATEMENT:		
n n n n - n	This well was drilled under my jurisdiction a	and this	report is
<u>n n n n n n n n n n n n n n n n n n n </u>	true to the best of my knowledge and belief.		
Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)	Harry R- 1 Wash		. —1
Time Water Level Time Water Level Time Water Level	NAME Henry Back Well D.  (Person, firm, or corporation) (7	<i>Y//////</i> Cyne or r	ent)
	1		
	Address X43 Fox 734B Yakıma	Wn.	7840/
	1 4/ R n		
Date of test	[Signed] derry Jack	,	
Baller test 30 gal/min, with 3 ft. drawdown after hrs.	(Well Driller)		
Artesian flowg.p.m. Date	License No. 0053 Date 1/-/	0	., 1984
	1 12214		

#### WATER WELL REPORT

Application No.

Third Copy — Driller's Copy	STATE OF W	ASHINGTON	Per	mit No		<u> </u>
(1) OWNER: Name JIM HENNE	. 2 2	Address 1415	So. 8th	Sta	<u>ــــــــــــــــــــــــــــــــــــ</u>	
(2) LOCATION OF WELL: County. JA.K.						
ing and distance from section or subdivision corner						
(3) PROPOSED USE: Domestic Industrial Irrigation Test Well		(10) WELL LOG: Formation: Describe by conshow thickness of aquifer.	olor, character, size o s and the kind and n	of material (	and struc e materia	ture, and
(4) TYPE OF WORK: Owner's number of well (if more than one)		stratum penetratea, with	at least one entry fo	or each cha	inge of fo	ormation.
New well Method: Dug	☐ Bored ☐		TERIAL		FROM	TO
Deepened ☐ Cable  Reconditioned ☐ Rota	"	Comalome	PALO		72	.3.0.
(5) DIMENSIONS: Diameter of wellft. Depth of completed well	inches.					
		<del></del>				
(6) CONSTRUCTION DETAILS:  Casing installed:	ft. to ft.					
Perforations: Yes 🗆 No						
Type of perforator used						
SIZE of perforations in. by  perforations from ft.						
perforations from ft.						<del></del>
perforations from ft.	to ft.					
Screens: Yes   No				- 8 1	IFT	•
Manufacturer's Name			- a [	CFI	4 -	
Diam Slot size from		· · · · · · · · · · · · · · · · · · ·	<u> </u>	N m	2077	
Diam Slot size from	ft. to ft.			EB 2 5	131 1	
Gravel packed: Yes 🗆 No Size of grave	el:			ARTMENT TRAL REC	OF ECC	FOGA
Gravel placed from ft. to			201	ARTMEN	LANON	Offin-
Surface seal: Yes No   To what depth	, /0 #			ARTMENT TRAL REC	31011	<del></del>
Material used in seal Beaton te	Yes   No	sert	CEN			
(7) PUMP: Manufacturer's Name		This documen	nt is part of the	official		
Type:		Adminsistr	ative Record for	the		
(8) WATER LEVELS: Land-surface elevation above mean sea level.	APP 1035ft	Yakima	a Railroad Area.	<del></del>	-	
Static level	te 2 - 17 - 7	Was	hington State			<del></del>
Artesian pressurelbs. per square inch Da	te	Depart	ment of Ecology	,		
Artesian water is controlled by(Cap, v.	alve, etc.)					
(9) WELL TESTS: Drawdown is amount was	ter level is					
Was a pump test made? Yes \( \bar{\pi} \) No \( \bar{\pi} \) ff yes, by whom?		Work started	19	eted	-17	<u>, 197</u> )
Yield: 10 gal./min. with ft. drawdown aft		WELL DRILLER'S	STATEMENT:			•
29 29 19	**	This well was drille	ed under my juris	diction an	d this r	eport is
n n	<u>"</u>	true to the best of my	knowledge and l	oelief.		
Recovery data (time taken as zero when pump turned measured from well top to water level)  Time Water Level   Time Water Level   Time	off) (water level	NAME JEN SCN. (Person,	firm, or corporation	DRI (Ty	pe or pri	9
		Address /603	00 1C	j <del>ti</del> (	714	<b>a</b> ,
		$\sim \tilde{\Lambda}$	$\Gamma$			
Date of test		[Signed]	rence 4	ense		
ailer testft. drawdown a Artesian flowgal./min. withg.p.m. Dateg.		221	(Well Dril	ler)	<b>~</b> ~	<b>N N</b>
Temperature of water 58 Was a chemical analysis made	de? Yes 🗆 No 💢	License No. O	Dates	<b>)</b> - (	<b>NO</b>	, 19

File Original and First Copy with Department of Ecology

#### WATER WELL REPORT

3/68 Start Card No. 007281

Sec	ond Copy—Owner's Copy d Copy—Driller's Copy	WASHINGTON		
.)	OWNER: Name Mr. Lemus	Water Right Pormit NoAddress 1407 S. 7TH Street	Yakim	a
(2) (2a		PARCEL #191330-41422	3 <sub>N., R</sub>	19 <sub>w.m</sub>
(3)	PROPOSED USE: X Domestic Industrial  Municipal Dewater Test Well Other	(10) WELL LOG or ABANDONMENT PROCEDU		
(4)	TYPE OF WORK: Owner's number of well	thickness of aquifers and the kind and nature of the material in earlith at with at least one entry for each change of information.	ach stratum	penetrated
` '	Abandoned New well M Method: Dug D Bored	MATERIAL	FROM	то
	Deepened	Sandy loam & cobbles	0	2
_	Reconditioned 🗆 Rotary 🛛 Jetted 🗆	Sandy loam, cobbles & gravel	2	15
(5)	DIMENSIONS: Diameter of well 6 inches.	Coarse gravel & sand	15	27
	Drilled 60 feet. Depth of completed well 60 ft.	Gravel & sand w/brown sandy		
(6)	CONSTRUCTION DETAILS:	clay	27	31
	Casing installed: 6 Diam. from 0 ft. to 60 ft.	Coarse gravel & sand	31	48
	Welded ☒ * Diam. fromft, toft.	Coarse gravel & sand w/brown sandy clay	48	. 54
	Threaded Diam. fromft. toft.	Coarse gravel & sand	54	60
	Perforations: Yes No X	Obarse graver & Sano	74	00
	Type of perforator used			
	SIZE of perforations in. by in.	This document is part of the of	ficial 🚃	<del></del> -
	perforations fromft. toft.	Adminsistrative Record for the	16	
	perforations fromft. toft.	Yakima Railroad Area.		
	perforations fromft. toft.	Washington State		
	Screens: Yes No X	Department of Ecology		
	Manufacturer's Name			
	Type Model No			
	Diam.         Slot size         from         ft. to         ft.           Diam.         Slot size         from         ft. to         ft.	A death of the properties of the second seco		
	Slot size from ft. to ft.			
	Gravel packed: Yes No Size of gravel	The state of the s		
	Gravel placed fromft. toft.	JUN   1 1990 -		
	Surface seal: Yes No To what depth? 26 ft.	00(4 ) 1330		
	Material used in seal Bentonite	Commercial formation of a supplier of a supp		
	Did any strata contain unusable water? Yes No 🔀	ann anns		
	Type of water?Depth of strata			
	Method of sealing strata off			
(7)	PUMP: Manufacturer's Name		i	
	Туре:			
(8)	WATER LEVELS: Land-surface elevation above mean sea levelft.	2.36		
	Static level 12 ft. below top of well Date 4-18-89	ANN HE TO SECULO TERM	37 Tab	
	Artesian pressureIbs. per square inch Date			
	Artesian water is controlled by(Cap, valve, etc.))			
(9)	WELL TESTS: Drawdown is amount water level is lowered below static level	Work started 4-18 , 19.89 mpleted	4- <u>18</u>	_, <sub>19_</sub> 89
	Was a pump test made? Yes ▲ No  fyes, by whom? <u>Bach</u>	WELL CONSTRUCTOR CERTIFICATION:		
	Yield: gal./min. with ft. drawdown after hrs.	I constructed and/or accept responsibility for constr	ruction of t	hie wall
	n n n n	and its compliance with all Washington well consi	truction sta	andards
	Recovery data (time taken as zero when pump turned off) (water level measured	Materials used and the information reported above a knowledge and belief.	re true to	my best
	from well top to water level) Time Water Level Time Water Level Time Water Level			
		NAME Bach Well Drilling Co. (PERSON, FIRM, OR CORPORATION)		
	100 GPM @ 50', 60 GPM @ 40'		(TYPE OR	•
-		Address 2111 Birchfield Rd. Yal	<u>kima.W</u>	va
	Date of test	Scala D. M.	بعدايم	,
ı	Bailer test gal./min. with ft. drawdown after hrs.	(Signed) License No.	o1436	D
,	Airtest gal./min. with stem set at ft. for hrs.	Contractor's Registration No.BACHWDC1.37NU Date 4-		_
	Artesian flow	No.BACHWDC1 37NU Date 4-1	20	10 89

Temperature of water \_\_\_\_\_ Was a chemical analysis made? Yes \_\_\_\_ No X

(USE ADDITIONAL SHEETS IF NECESSARY)

File Original and First Copy with Department of Ecology Second Copy — Owner's Copy Third Copy — Driller's Copy

### WATER WELL REPORT

Application	No.	
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SIAIE OF	WASHINGTON Permit No	····
(1) OWNER: Name JOSE C. NUNEZ	Address 907 WILSON LN	
(2) LOCATION OF WELL: County YAKIMA		
g and distance from section or subdivision corner		
(3) PROPOSED USE: Domestic of Industrial   Municipal	(10) WELL LOG:	
Irrigation □ Test Well □ Other □	Formation: Describe by color, character, size of material and strushow thickness of aquifers and the kind and nature of the materistratum penetrated, with at least one entry for each change of j	al in aaah
(4) TYPE OF WORK: Owner's number of well (if more than one)	MATERIAL FROM	TO
New well   Method: Dug   Bored   Deepened   Cable   Driven XX	TOP SOIL D	75
Deepened ☐ Cable ☐ Driven ■  Reconditioned ■ Rotary ☐ Jetted ☐	COMBLOMERATE 5	33
(5) DIMENSIONS: Diameter of well 2 inches.		
(5) DIMENSIONS: Diameter of well inches.  Drilled		
(6) CONSTRUCTION DETAILS:		
Casing installed: $2_{\text{moder}}$ Diam. from $0_{\text{ft. to}}$ 33 ft.		
Threadedft. toft.		
Welded W Diam. from ft. to ft.		
Perforations: Yes   No to		
Type of perforator used		
SIZE of perforations in. by in.  perforations from ft. to ft.		
perforations from		
perforations from ft. to ft.		
Screens: Yes No Y		
Manufacturer's Name		
Type Model No		<del></del>
Diam, Slot size from ft. to ft.	SECELVED	
Diam. Slot size from ft. to ft. to ft.	I KEUEIVED	
Gravel packed: Yes 🗆 No 😿 Size of gravel:		
Gravel placed from ft. to ft.	MAY 3 1977	
Surface seal: Yes of No   To what depth?		
Material used in seal DEN TONITE 4 CEMENT GROUT	DEPARTMENT OF ECOLOGY	<u> </u>
Did any strata contain unusable water? Yes \( \) No \( \)	CENTRAL REGIONAL OFFICE	
Type of water? Depth of strata	<u> </u>	
· · · · · · · · · · · · · · · · · · ·		
(7) PUMP: Manufacturer's Name	fres document is part of the official	
Type:	Administrative Record for the	
(8) WATER LEVELS: Land-surface elevation above mean sea level Aff. 1020 st.	Yakima Railroad Area.	
Static level 20' ft. below top of well Date 4-15-77	Washington State	
Artesian pressurelbs. per square inch Date	Department of Ecology	
Artesian water is controlled by(Cap, valve, etc.)		
(9) WELL TESTS: Drawdown is amount water level is lowered below static level		
Was a pump test made? Yes \( \text{No } \text{M} \) If yes, by whom?	Work started 4-15 , 19.77. Completed 4-15	, 19.7.7
Yield:   0 gal./min. with ft. drawdown after hrs.	WELL DRILLER'S STATEMENT:	
n n	This well was drilled under my jurisdiction and this r	enort is
1) 1) 1)	true to the best of my knowledge and belief.	eborr 18
Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)	1	
Time Water Level Time Water Level Time Water Level	NAME JENSENS WELL ORILLING & O (Person, firm, or corporation) (Type or pri	
	Address 1603 So. 10 T* AUE.	٠
,ate of test	[Signed Therence Leusen	
Baller testgal./min. withft. drawdown afterhrs.	(Well Driller)	************
Artesian flow	License No. 0218 Date 4-18	10 77
No 12	Dave	, 18

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#### WATER WELL REPORT

STATE OF WASHINGTON

Application	No.	
		· . La Profiles

STATE OF W	ASHINGTON Permit No	• • • • • • • • • • • • • • • • • • • •	
(1) OWNER: Name RAINIET PLANTICES	Address 1101 Leiwich Jak	1110-19	ارد
(2) LOCATION OF WELL: County Yakima			
t and distance from section or subdivision corner			
(3) PROPOSED USE: Domestic   Industrial   Municipal	(10) WELL LOG:		1
Irrigation   Test Well   Other	Formation: Describe by color, character, size of material	l and strue	ture, and
(A VPF OF WORK. Owner's number of well ,	show thickness of aquifers and the kind and nature of t stratum penetrated, with at least one entry for each ch	he materio range of f	al in each ormation.
(4. YPE OF WORK: Owner's number of well , , , , , , , , , , , , , , , , , ,	MATERIAL	FROM	то
Deepened	Orave/a Bolders	0	
Reconditioned [ Rotary [ Jetted [	<del></del>		<del></del> .
(5) DIMENSIONS: Diameter of well inches.	Clay Brewa	3	6
Drilled ft. Depth of completed well ft.	Chy Brown Gravel Bolden	i -	/ 3
(6) CONSTRUCTION DETAILS:			
	Grave/ & Sund	12	<u> </u>
Casing installed: "Diam from ft. to 1/ ft. Threaded   Diam from ft. to ft.			
Welded Diam. from ft. to ft.	Sand	337	701
Perforations: Yes No II	Topareel a Sward & Buildens	3:7	
Type of perforator used	Charlet Thing & Whiteens	1 7	
SIZE of perforations in, by in.			
perforations from			
perforations from			
Screens: Yes   No			
Manufacturer's Name			<del></del>
Diam, Slot size from ft. to ft.			
Diam Slot size from ft. to ft.			
Gravel packed: Yes No & Size of gravel:		-	
Gravel placed from ft. to ft.	MAD 2 1002		
Surface seal: Yes No To what depth?			
Material used in seal 2257017€  Did any strata contain unusable water? Yes □ No ⊡	DEPARTMENT OF FU		
Type of water? Depth of strata	Company Control Contro		
Method of sealing strata off			
(7) PUMP: Manufacturer's Name	This document is part of the offic	al	
Туре: Н.Р	Adminsistrative Record for the		<del></del>
(8) WATER LEVELS. Land-surface elevation	Yakima Railroad Area.		
above mean sea level ft.		<del></del>	
Static levelft. below top of well Date Artesian pressurelbs. per square inch Date	Bepartment of Ecology		
Artesian water is controlled by(Cap, valve, etc.)			<del></del>
(9) WELL TESTS:  Drawdown is amount water level is lowered below static level and the static	Work started 2/10/ 1952, Completed 2/	13	<u></u>
was a pump test made? Yes \( \) No \( \) If yes, by whom?	WELL DRILLER'S STATEMENT:		· · · · · · · · · · · · · · · · · · ·
Yield: 3 gal./min. with ft. drawdown after hrs.			
n n n n	This well was drilled under my jurisdiction a true to the best of my knowledge and belief.	ind this i	report is
Recovery data (time taken as zero when pump turned off) (water level			
measured from well top to water level)  Time Water Level   Time Water Level   Time Water Level	NAME YOULIN DRILLING		
Time Hater Moor Limb Hater Moor Moor Moor Moor Moor	(Person, firm, or corporation) (T	Cype or pr	int)
	Address Kt 3, BOX 33560	$\rightarrow e$	an
	4 mo		
ate of test	[Signed]. Com	***************************************	
Bailer testgal./min. withft. drawdown afterhrs.  Artesian flowg.p.m. Dateg.p.m.	(Well Driller)	_	
Temperature of water	License No. 0. 3. 4. 7. Date 2/15.	_ 	., 19.8

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#### WATER WELL REPORT

STATE OF WASHINGTON

Application	No.	
		1222 <sub>1</sub>
Downit No		,#

3

(1) OWNER: Name BILL SHIELDS	Permit No.
(1) UWNER: Name D/LL >W/ELU	Address 1101 Leavier Garma 9890
"OCATION OF WELL: County	
and distance from section or subdivision corner	
(3) PROPOSED USE: Domestic   Industrial   Municipal	(10) WELL LOG:
Irrigation [] Test Well [] Other [	Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each
(4) TYPE OF WORK: Owner's number of well	stratum penetrated, with at least one entry for each change of formation.
New well  Method: Dug  Bored	MATERIAL FROM TO
Deepened 🖭 Cable 🗌 Driven 🖸	SANA & G-VAUCL 60 ICC
Reconditioned   Rotary   Jetted	
(5) DIMENSIONS: Diameter of well binches.  Drilled ft. Depth of completed well ft.	
(6) CONSTRUCTION DETAILS:	
Casing installed: "Diam. from T ft. to 99 ft.	
Threaded	
Welded Diam. from ft. to ft.	
Parforations	
Perforations: Yes No D  Type of perforator used.  Type of perforator used.	
SIZE of perforations B in, by 6 in.	
SIZE of perforations	
perforations from ft. to ft	
Screens: Yes 🗆 No 🗗	- tip part of the official
Manufacturer's Name	This document is part of the official  Administrative Record for the
Diam, Slot size from ft. to ft.	Yakima Raihozd Alea.
Diam! Slot size from ft. to ft.	Washington State
Gravel packed: Yes No P Size of gravel:	Department of Ecology
Gravel placed from ft. to ft.	TOCHARITHOTIC SERVICE
Surface seal: Yes No   To what depth? 18 ft.	
Material used in seal. Scillin IC.	
Did any strata contain unusable water? Yes [ No [	
Type of water? Depth of strata	Control Contro
Method of sealing strata off	
(7) PUMP: Manufacturer's Name	i i series
Туре: Н.Р	
(8) WATER LEVELS: Land-surface elevation	
Static levelft. below top of well Dateft.	
Artesian pressurelbs. per square inch Date	DEPARTMENT OF THE PROPERTY OF THE PARTMENT OF
Artesian water is controlled by(Cap, valve, etc.)	STATISTICS OF THE STATE OF THE
<del></del>	
lowered below static level	Work started 10/22, 1891. Completed 10/22, 1954
Was a pump test made? Yes \( \) No \( \) If yes, by whom?	WELL DRILLER'S STATEMENT:
" " " " "	
n n n	This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.
Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)	Paul in IME Course Dulling
Time Water Level Time Water Level Time Water Level	NAME (Person, firm, or corporation) (Type or print)
	Address 11 3 51 335 6
	$M \cdot I \cdot V I$ .
Date of test	[Signed] Lifty Park
Bailer testgal./min. withft. drawdown afterhrs.	(Well Driller)
Artesian flowg.p.m. Dateg.p.m. Temperature of water	License No. 124 Date 10/23 19.89
The contract of the contract o	, Date