

**ENGINEERING REPORT**  
**on**  
**DRYWELL INTERMEDIATE CLEANUP**  
**for**  
**FIFTH WHEEL TRUCK REPAIR PREMISES**  
**307 East Arlington Street**  
**Yakima, Washington**



February 1991

Job No. 90113

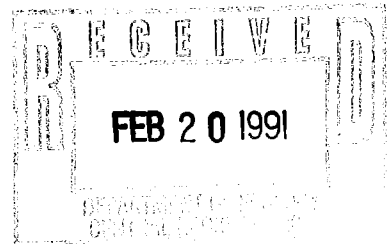
Prepared by

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

**FEB 20 1991**

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Washington State  
Department of Ecology.**

**ENGINEERING REPORT**  
**on**  
**INTERMEDIATE CLEANUP**  
**for**  
**FIFTH WHEEL TRUCK REPAIR PREMISES**  
**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 the northwest corner of the building. 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 petroleum contaminated soil (PCS) was found.

This report summarizes the results of the investigation of the extent of the contamination and offers the Hahn Motor Company's proposal for dealing with the situation short of demolishing the 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 done 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

#### **CLEANUP STATUS**

A drywell installed at the rear of the Fifth Wheel Truck repair building 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 cobbly soil under the concrete floor. PCS was found at this location.

Some of the contaminated soil was removed. Removal of all of the PCS would extend the limits of the excavation to beyond the building footings resulting in need to demolish the building. Similarly, the depth of the excavation coupled with the natural slope of the soil at the drywell at the northwest corner is expected to undermine the northwest corner of the building before

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all of the PCS can be removed. Wells drilled approximately 70 feet south and 20 feet northwest (monitoring well nos. 4 and 5) of this drywell were not positive for petroleum contamination in either the soil or the water. Therefore, it appears that the contamination would not extend a great distance under the northwest corner of the building.

#### **ANALYTICAL RESULTS**

Monitoring wells #'s 4 and 5 were drilled 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. Wells were developed by pumping 3 or more casing volumes.

Laboratory test results for presence of contamination in both soil and water from the January 1991 monitoring wells are found in Appendix I. Monitoring well and 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 which was 0.04 ppm.

Monitoring wells drilled for Consolidated Freightways 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 I, 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, also found in Appendix I, 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.

The estimated dimensions of the remaining contaminated soil at the drywell located in the northwest corner of the premises are 30 feet by 30 feet by 13 feet deep with a volume of approximately 430 cubic yards. A similar amount is estimated to remain at the catch basin removed from within the building.

#### **PROPOSED INTERMEDIATE CLEANUP ACTION**

Experience with petroleum contamination in Yakima Valley soils has shown that petroleum or petroleum breakdown products do not leach from soils below petroleum saturation at any great rate if at all. Non-contaminated 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 clean up by removing as much PCS as possible without damaging the building is proposed with final cleanup deferred until the building is removed.

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 bordering the premises on the north. See Figure 1. 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 later sampling results could be included with Fifth Wheel Truck Repair

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results for tracking of movement of petroleum into the ground water, if any.

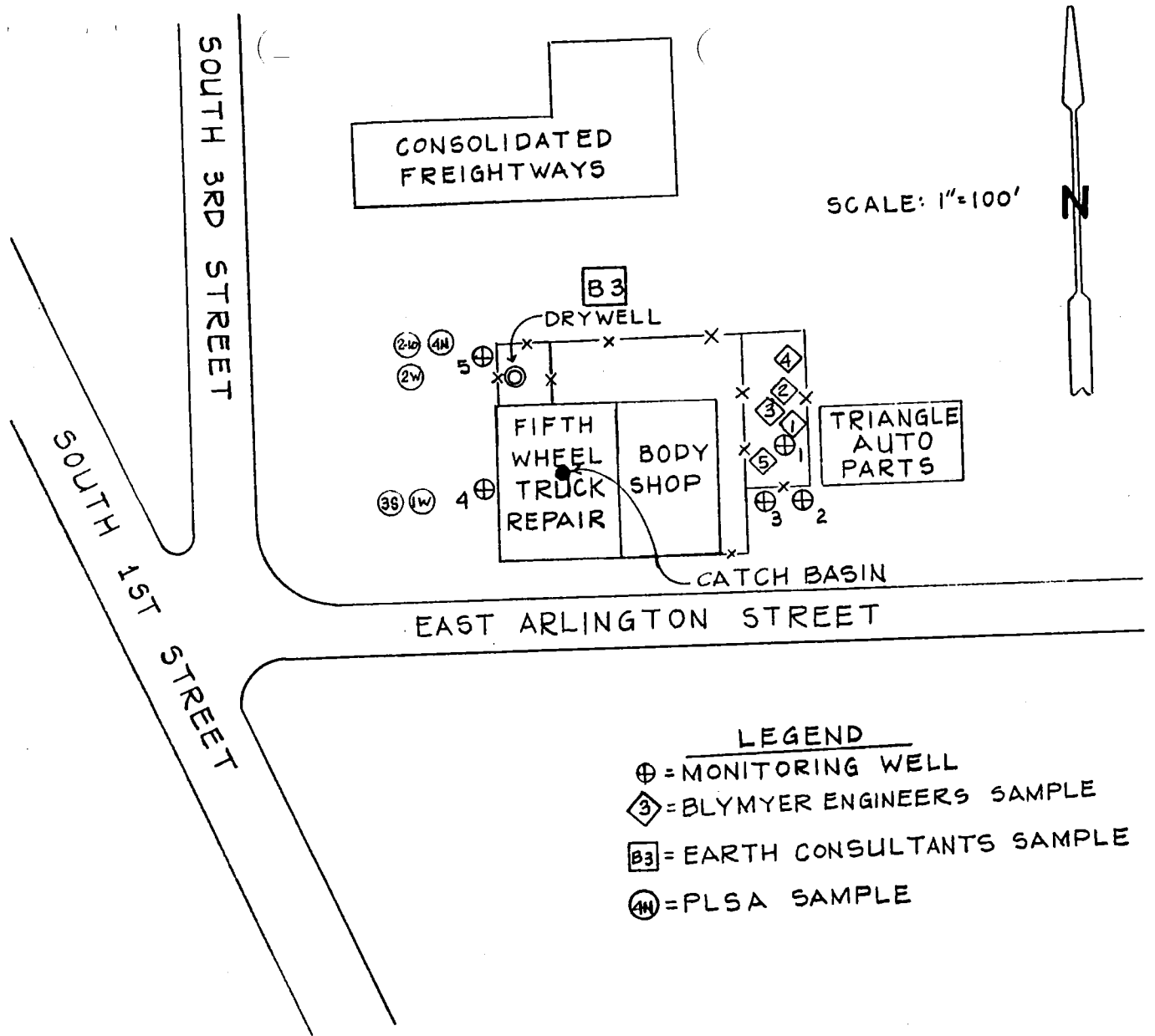
#### **RISK ANALYSIS**

Analysis of water samples for TPH shows that petroleum is not leaching into the ground water in significant amount. Heavy oil is recognized as having low toxicity. VOC's were not found in the west wells and are minimal in the east wells. There have been no reports of petroleum contamination of any nearby wells. Therefore, risk has been reduced by actions already taken and it appears that there has been no reported impact on ground water quality. Risk of any possible, subsequent, contamination of ground water in an environmentally significant amount is small to negligible.

#### **WELLS**

A listing of documented water wells located within 1/2 mile of the site may be found in Appendix II. From surface topography, ground water hydraulic gradient appears to be southeast toward the Yakima River.

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- LEGEND
- ⊕ = MONITORING WELL
  - ◇ = BLYMYER ENGINEERS SAMPLE
  - ⊠ = EARTH CONSULTANTS SAMPLE
  - Ⓜ = PLSA SAMPLE

FIGURE 1  
 MONITORING WELL LOCATION  
 HAHN MOTOR CO., YAKIMA, WA.

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APPENDIX I

Analytical Results

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# 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: February 8, 1991

Report On: Analysis of Water

Lab No.: 15832-2

IDENTIFICATION:

Samples Received on 02-05-91

Project: 90113

Client ID: RUSH 38

-----  
ANALYSIS:

PCB - Type  
PCB - mg/l

ND  
< 0.01

ND = Not Detectable

SOUND ANALYTICAL SERVICES

  
MARTY FRENCH

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# 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: 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	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
10061-01-5	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. 15832-1  
 Page 2 of 3  
 February 3, 1991

Client ID: RUSH 4N

EPA Method 8240 Continued . . . . .

CAS No.	Compounds	Concentration ug/l	PQL
71-43-2	Benzene	ND	5
10061-02-6	Trans-1,3-Dichloropropene	ND	5
75-25-2	Bromoform	ND	5
108-10-1	4-Methyl-2-Pentanone	ND	50
591-78-6	2-Hexanone	ND	5
127-18-4	Tetrachloroethene	ND	5
79-34-5	1,1,2,2-Tetrachloroethane	ND	5
108-88-3	Toluene	ND	5
108-90-7	Chlorobenzene	ND	5
100-41-4	Ethyl Benzene	ND	5
100-42-5	Styrene	ND	5
1330-20-7	Total Xylenes	ND	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	118	81 - 117
Bromofluorobenzene	112	74 - 121
1,2-Dichloroethane D4	116	70 - 121

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# SOUND ANALYTICAL SERVICES, INC.

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


Client ID: RUSH 4N

<u>Total Metals by ICP:</u>	<u>Concentration, ppm</u>
Antimony	< 0.06
Arsenic	< 0.05
Beryllium	< 0.005
Cadmium	< 0.005
Chromium	< 0.01
Copper	< 0.025
Lead	< 0.05
Mercury*	0.0022
Nickel	< 0.04
Selenium	< 0.05
Silver	< 0.01
Thallium	< 0.1
Zinc	< 0.02

\*by Cold Vapor

PCB - Type ND  
PCB - mg/l < 0.01

ND = Not Detectable

SOUND ANALYTICAL SERVICES  
  
STAN P. PALMQUIST

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# 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: February 1, 1991

Report On: Analysis of Water

Lab No.: 15718-1

Page 1 of 3

## IDENTIFICATION:

Samples Received on 01-29-91

Project: 90113

Client ID: 1W

## 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	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
10061-01-5	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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# SOUND ANALYTICAL SERVICES, INC.

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	Benzene	ND	5
10061-02-6	Trans-1,3-Dichloropropene	ND	5
75-25-2	Bromoform	ND	5
108-10-1	4-Methyl-2-Pentanone	ND	50
591-78-6	2-Hexanone	ND	5
✓127-18-4	Tetrachloroethene	ND	5
79-34-5	1,1,2,2-Tetrachloroethane	ND	5
108-88-3	Toluene	ND	5
108-90-7	Chlorobenzene	ND	5
100-41-4	Ethyl Benzene	ND	5
100-42-5	Styrene	ND	5
1330-20-7	Total Xylenes	ND	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	103	81 - 117
Bromofluorobenzene	116	74 - 121
1,2-Dichloroethane D4	94.6	70 - 121

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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


Antimony	< 0.06
Arsenic	< 0.05
Beryllium	< 0.005
Cadmium	< 0.005
Chromium	< 0.01
Copper	0.04
Lead	< 0.05
Mercury*	0.0013
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

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# 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

### DUPLICATES

Lab No: 15718-1  
Date: February 1, 1991  
Client: PLSA Engineering

Client ID: 1W  
Matrix: Water  
Units: mg/l

Compound	Sample(S)	Duplicate(D)	RPD*	
Antimony	< 0.06	< 0.06	---	
Arsenic	< 0.05	< 0.05	---	
Beryllium	< 0.005	< 0.005	---	
Cadmium	< 0.005	< 0.005	---	
Chromium	< 0.01	< 0.01	---	
Copper	0.04	0.05	22.2	
Lead	< 0.05	< 0.05	---	
Nickel	< 0.04	< 0.04	---	
Selenium	< 0.05	< 0.05	---	
Silver	< 0.01	< 0.01	---	
Thallium	< 0.1	< 0.1	---	
Zinc	< 0.02	< 0.02	---	
Mercury	0.0013	0.0012	8.0	

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

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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

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# 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

### DUPLICATES

Lab No: 15718-2  
Date: February 1, 1991  
Client: PLSA Engineering

Client ID: 2-10  
Matrix: Soil  
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  
=  $[(S - D) / ((S + D) / 2)] \times 100$

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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: 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

SOUND ANALYTICAL SERVICES

  
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# 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

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

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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

SOUND ANALYTICAL SERVICES

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

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**INTERNATIONAL  
ENVIRONMENTAL  
TESTING, INC.**

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

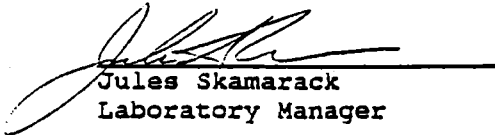


**Client Reference Information**

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)

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Railroad Area on October 31, 1990.  
Washington State  
Department of Ecology.

Client Acct: 560  
 Client Name: Consolidated Freightways  
 NET Log No: 4320

Date: 10-30-90  
 Page: 6

Ref: Consolidated Freightways, Job: 3097/89604

SAMPLE DESCRIPTION: MW-1 10-10-90 1515  
 LAB Job No: (-65053 )

Parameter	Method	Reporting Limit	Results	Units
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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	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	2.2	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

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 Washington State  
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Client Acct: 560  
Client Name: Consolidated Freightways  
NET Log No: 4320

Date: 10-30-90  
Page: 7

Ref: Consolidated Frieghtways, Job: 3097/89604

SAMPLE DESCRIPTION: MW-1 10-10-90 1515  
LAB Job No: (-65053 )

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	1.0	mg/L

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Department of Ecology.

Client Acct: 560  
 Client Name: Consolidated Freightways  
 NET Log No: 4320

Date: 10-30-90  
 Page: 4

Ref: Consolidated Freightways, Job: 3097/89604

SAMPLE DESCRIPTION: MW-2 10-10-90 1415  
 LAB Job No: (-65052 )

Parameter	Method	Reporting 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	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	0.5		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)

DILUTION FACTOR \*

DATE ANALYZED

METHOD GC FID/5030

as Gasoline

METHOD 602

DILUTION FACTOR \*

DATE ANALYZED

Benzene

Ethylbenzene

Toluene

Xylenes, total

		1	
		10-20-90	
		---	
0.05	ND		mg/L
		---	
		1	
		10-20-90	
0.5	ND		ug/L
0.5	ND		ug/L
0.5	ND		ug/L
0.5	ND		ug/L

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Client Acct: 560  
Client Name: Consolidated Freightways  
NET Log No: 4320

Date: 10-30-90  
Page: 5

Ref: Consolidated Freightways, Job: 3097/89604

SAMPLE DESCRIPTION: MW-2 10-10-90 1415  
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

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Washington State  
Department of Ecology.

Client Acct: 560  
 Client Name: Consolidated Freightways  
 NET Log No: 4320

Date: 10-30-90  
 Page: 2

Ref: Consolidated Freightways, Job: 3097/89604

SAMPLE DESCRIPTION: MW-3 10-10-90 1255  
 LAB Job No: (-65051 )

Parameter	Method	Reporting 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	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	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	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

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 Department of Ecology.

Client Acct: 560  
Client Name: Consolidated Freightways  
NET Log No: 4320

Date: 10-30-90  
Page: 3

Ref: Consolidated Freightways, Job: 3097/89604

SAMPLE DESCRIPTION: MW-3            10-10-90        1255  
LAB Job No: (-65051 )

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	0.11	mg/L

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Client Acct: 560  
Client Name: Consolidated Freightways  
NET Log No: 4320

Date: 10-30-90  
Page: 8

Ref: Consolidated Freightways, Job: 3097/89604

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

Parameter	Method	Reporting Limit	Results	Units
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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	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	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

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Washington State  
Department of Ecology.

Client Acct: 560  
Client Name: Consolidated Freightways  
NET Log No: 4320

Date: 10-30-90  
Page: 9

Ref: Consolidated Freightways, Job: 3097/89604

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

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

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Washington State  
Department of Ecology.

Client Acct: 560  
 Client Name: Consolidated Freightways  
 NET Log No: 4320

Date: 10-30-90  
 Page: 10

Ref: Consolidated Freightways, Job: 3097/89604

SAMPLE DESCRIPTION: MW-3 Bailer 10-10-90  
 LAB Job No: (-65055 )

Parameter	Method	Reporting Limit	Results	Units
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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	9.3	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	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

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Client Acct: 560  
Client Name: Consolidated Freightways  
NET Log No: 4320

Date: 10-30-90  
Page: 11

Ref: Consolidated Freightways, 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	0.4	ug/L	N/A	ND	127	123	2.8
Trichloroethene	0.4	ug/L	N/A	ND	97	98	< 1

COMMENT: Blank Results were ND on other analytes tested.

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NET Pacific, Inc.

## KEY TO ABBREVIATIONS and METHOD REFERENCES

- < : Less than; When appearing in results column indicates analyte not detected at the value following. This datum supercedes the listed Reporting Limit.
- \* : 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).
- ICVS : Initial Calibration Verification Standard (External Standard).
- mean : Average; sum of measurements divided by number of measurements.
- mg/Kg (ppm) : Concentration in units of milligrams of analyte per kilogram of sample, wet-weight basis (parts per million).
- mg/L : Concentration in units of milligrams of analyte per liter of sample.
- mL/L/hr : Milliliters per liter per hour.
- MPN/100 mL : Most probable number of bacteria per one hundred milliliters of sample.
- N/A : Not applicable.
- NA : Not analyzed.
- ND : Not detected; the analyte concentration is less than applicable listed reporting limit.
- NTU : Nephelometric turbidity units.
- RPD : Relative percent difference,  $100 \frac{|\text{Value 1} - \text{Value 2}|}{\text{mean value}}$ .
- SNA : Standard not available.
- ug/Kg (ppb) : Concentration in units of micrograms of analyte per kilogram of sample, wet-weight basis (parts per billion).
- ug/L : Concentration in units of micrograms of analyte per liter of sample.
- unhos/cm : Microns per centimeter.

### 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.

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Washington State  
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43201

# Sample Custody Record

JOB NUMBER 3097/8604 LAB NUMBER

PROJECT MANAGER Brian Dick's/Roman Dorebel

DATE 10/19/90 PAGE 1 OF 1 HART CROWSNER 1910 Fairview Avenue East Seattle, Washington 98102-3699

PROJECT NAME Consolidated Energyways

SAMPLED BY: George Lightner

LAB NO.	SAMPLE	TIME	STATION	MATRIX
M003	1255			
M002	1415			
M001	1515			
	Blind			
	LAST Items			

RELIQUISHED BY	DATE	RECEIVED BY	DATE	TESTING	NO. OF CONTAINERS	OBSERVATIONS / COMMENTS / COMPOSITING INSTRUCTIONS
George Lightner	10/16	Madou Colony	10/16			
HART CROWSEY	10/19	Federal Express	10/19			
		Kelly Temple	10/19			
		NET Pacific	10/20			

TOTAL NUMBER OF CONTAINERS 41 samples + 5 Trip blanks = 46

SPECIAL SHIPMENT/HANDLING OR STORAGE REQUIREMENTS: bottles - Fragile Heap cool - glass

METHOD OF SHIPMENT: Federal Express

- DISTRIBUTION:
1. PROVIDE WHITE AND YELLOW COPIES TO THE LABORATORY ADMINISTRATIVE RECORD FOR THE YAKIMA RAILROAD AREA ON OCTOBER 31, 1990.
  2. RETURN PINK COPY TO PROJECT MANAGER Roman Dorebel (415) 521-3773 BY MYER ENGINEERS FOR ANALYZE.
  3. LABORATORY TO FILL IN SAMPLE NUMBER AND SIGN RECEIPT FOR ECOLOGY.
  4. LABORATORY TO RETURN WHITE COPY TO HART CROWSEY.

This document was part of the official Administrative Record for the Yakima Railroad Area on October 31, 1990.

**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)**

<u>Sample #</u>	<u>Total Petroleum Hydrocarbons (ppm)</u>
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).

WB = Wash Bay

BATT = Battery Storage Area

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

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**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)**

<u>Sample #</u>	<u>Total Petroleum Hydrocarbons (ppm)</u>
B-1, WS-1 Groundwater	<5.0
B-2, WS-2 Groundwater	5.0
B-3, WS-1 Groundwater	<5.0
<u>Quality Assurance</u>	
B-2, 15.0' (Duplicate, Soil)	133.
<b>WDOE GCGs</b>	<b>15.0</b>

---

WDOE GCGs =

Washington State Department of Ecology  
(WDOE) Groundwater Cleanup Goals  
(See text).

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

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**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)**

<u>Sample #</u>	<u>B-3, 9.0'</u>	<u>B-1, 15.0'</u>	<u>B-2, 15.0'</u>	<u>ALLOWABLE LIMITS***</u>
<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	*

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

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

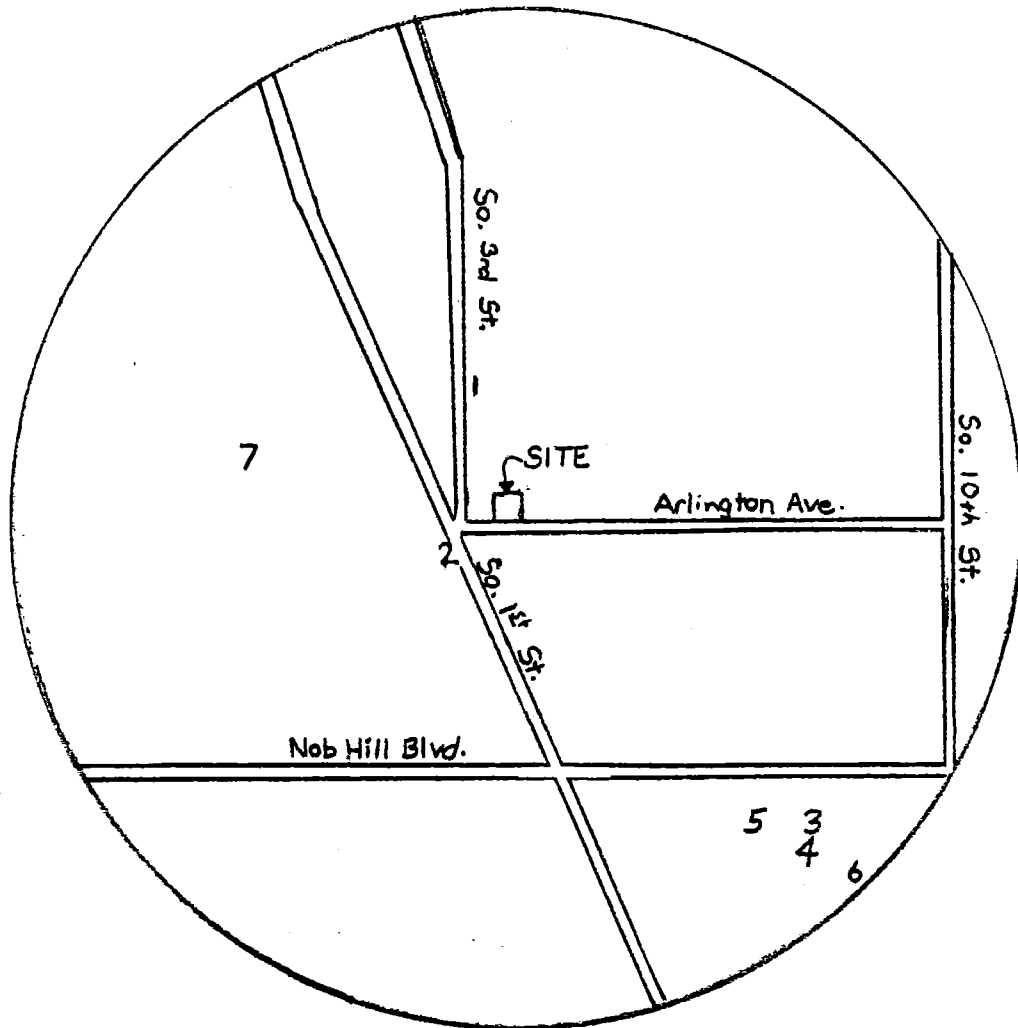
As reported by the project laboratory, August 3, 1989.

APPENDIX II

Documented Water Well Listing

**This document was part of the official  
Administrative Record for the Yakima  
Railroad Area on October 31, 1996.  
Washington State  
Department of Ecology.**

**FIGURE 1**  
**WATER WELL LOCATION**  
**MAP**  
**HAHN MOTORS,**  
**YAKIMA, WA.**



**KEY:**

6- Location And Number  
 Of Water Well  
 SCALE: 1"=1000'

This document was part of the official  
 Administrative Record for the Yakima  
 Railroad Area on October 31, 1996.  
 Washington State  
 Department of Ecology.



WATER WELL REPORT  
STATE OF WASHINGTON

Application No. 64-24200  
Permit No. ....

(1) OWNER: Name NOEL C. KING CORP. Address 1 SOUTH 3RD ST., YAKIMA, WASH. 989  
(2) LOCATION OF WELL: County Yakima NW 1/4 NE 1/4 Sec. 30 T. 13 N., R. 19E W.M.

Bearing and distance from section or subdivision corner  
(3) PROPOSED USE: Domestic  Industrial  Municipal   
Irrigation  Test Well  Other

(4) TYPE OF WORK: Owner's number of well 2  
(if more than one).....  
New well  Method: Dug  Bored   
Deepened  Cable  Driven   
Reconditioned  Rotary  Jetted

(5) DIMENSIONS: Diameter of well 12.10.8 inches.  
Drilled 752 ft. Depth of completed well 752 ft.

(6) CONSTRUCTION DETAILS: 0 67°  
Casing installed: # 10 " Diam. from # 2 ft. to 400 ft.  
Threaded  # 8 " Diam. from 360 ft. to 680 ft.  
Welded  " Diam. from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.

Perforations: Yes  No   
Type of perforator used TORCH (8" LINER)  
SIZE OF perforations 1/8 in. by 8 in.  
720 perforations from 560 ft. to 680 ft.  
\_\_\_\_\_ perforations from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.  
\_\_\_\_\_ perforations from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.

Screens: Yes  No   
Manufacturer's Name \_\_\_\_\_  
Type \_\_\_\_\_ Model No. \_\_\_\_\_  
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.

Surface seal: Yes  No  To what depth? 30 ft.  
Material used in seal CEMENT  
Did any strata contain unusable water? Yes  No   
Type of water? SURFACE Depth of strata 45  
Method of sealing strata off CASED & CEMENTED

(7) PUMP: Manufacturer's Name \_\_\_\_\_  
Type: \_\_\_\_\_ H.P.

(8) WATER LEVELS: Land-surface elevation 1025 ft.  
Static level 14 ft. below top of well Date 3/18/77  
Artesian pressure \_\_\_\_\_ lbs. 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  
Was a pump test made? Yes  No  If yes, by whom? \_\_\_\_\_  
Yield: gal./min. with \_\_\_\_\_ ft. drawdown after \_\_\_\_\_ hrs.  
" " " " " " " " "  
" " " " " " " " "

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  
\_\_\_\_\_ \_\_\_\_\_ \_\_\_\_\_ \_\_\_\_\_ \_\_\_\_\_ \_\_\_\_\_  
\_\_\_\_\_ \_\_\_\_\_ \_\_\_\_\_ \_\_\_\_\_ \_\_\_\_\_ \_\_\_\_\_  
Date of test \_\_\_\_\_  
Artesian flow \_\_\_\_\_ gal./min. with \_\_\_\_\_ ft. drawdown after \_\_\_\_\_ hrs.  
Temperature of water 67 °F. Was a chemical analysis made? Yes  No

(10) WELL LOG:  
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 stratum penetrated, with at least one entry for each change of formation.

MATERIAL	FROM	TO
BLACKTOP, REBAR CEMENT & FILL	0	4
SOIL & GRAVEL	4	10
GRAVEL, BLDRS & SOIL V. HD.	10	30
SAND, GRAVEL, BLDRS, WATER, CAVING	30	47
CEMENT GRAVEL & BLDRS	47	50
HARD PAN & BLDRS	50	63
LOOSELY CEMENTED GRAVEL & BLDRS	63	77
BOULDERS, SAND, GRAVEL, WATER.	77	92
V. HD. BASALT BLDRS, GRAVEL, WATER	92	107
CEMENT GRAVEL, DEC. ROCK & BLDRS.	107	117
BROKEN BASALT BLDRS V. HD.	117	135
SAME W. DEC. ROCK	135	145
HD PAN & BLDRS	145	152
BROKEN BASALT BLDRS & HD PAN	152	190
DEC. ROCK, CLAY & BLDRS	190	236
WHITE CLAY	236	238
DEC. ROCK, CLAY & BLDRS	238	242
WHITE CLAY	242	247
DEC., ROCK, CLAY & BLDRS	247	299
SANDSTONE, CLAY, CEM. GRAY, BLDRS	299	308
DEC., ROCK, CLAY & BLDRS	308	332
BASALT BLDRS & CLAY	332	347
HR. CLAY, SAND, GRAVEL, SOME WATER	347	351
SAND, GRAVEL, CLAY	351	358
DEC. ROCK & BLDRS.	358	365
BROKEN BASALT & SED. ROCK	365	380
GRAY CLAY	380	388
GRAVEL, GREY CLAY & BLDRS	388	391
BROKEN BASALT ROCK	391	400
CEMENT GRAVEL, CLAY & BLDRS	400	412
TAN SANDY CLAY	412	416
GRAVEL, BLDRS & CLAY	416	423
TAN SANDY CLAY	423	438
GRAVEL, CLAY & BLDRS	438	468
SED. ROCK, SAND, GRAVEL, CLAY, CONGLOM.	468	510
HR. SANDY CLAY	510	519

Work started 1/5/77 19\_\_\_\_ Completed 3/12/77 19\_\_\_\_

WELL DRILLER'S STATEMENT: RECEIVED  
This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.  
**MAY 16 1977**  
NAME RIEHE WELL DRILLING (Person, firm, or corporation)  
Address YAKIMA, WASH.: **CENTRAL REGIONAL OFFICE**  
[Signed] John Riehe (Well Driller)  
This document was part of the official Administrative Record for the Yakima Railroad Area on October 31, 1996.  
Washington State  
Department of Ecology.



# WATER WELL REPORT

## STATE OF WASHINGTON

64-28585  
Application No. \_\_\_\_\_  
Permit No. 7

**(1) OWNER:** Name YAKIMA PRECAST Address 1202 S 1st STREET YAKIMA, WA 98901  
**LOCATION OF WELL:** County YAKIMA — SW 1/4 NE 1/4 Sec. 30 T. 13.N. R. 19.W.M.  
 ...ing and distance from section or subdivision corner LOTS 54-62 also N51.5' of lot 53

**(3) PROPOSED USE:** Domestic  Industrial  Municipal   
 Irrigation  Test Well  Other

**(4) TYPE OF WORK:** Owner's number of well (if more than one) \_\_\_\_\_  
 New well  Method: Dug  Bored   
 Deepened  Cable  Driven   
 Reconditioned  Rotary  Jetted

**(5) DIMENSIONS:** Diameter of well 6 inches.  
 Drilled 57 ft. Depth of completed well 57 ft.

**(6) CONSTRUCTION DETAILS:**  
 Casing installed: 6" Diam. from 1 ft. to 57 ft.  
 Threaded  " Diam. from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.  
 Welded  " Diam. from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.

**Perforations:** Yes  No   
 Type of perforator used Mills  
 SIZE of perforations 1/2 in. by 2 in.  
8 perforations from 29 ft. to 34 ft.  
1 perforations from 38 ft. to 41 ft.  
1 perforations from 44 ft. to 55 ft.

**Screens:** Yes  No   
 Manufacturer's Name \_\_\_\_\_  
 Type \_\_\_\_\_ Model No. \_\_\_\_\_  
 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.

**Surface seal:** Yes  No  To what depth? 10 ft.  
 Material used in seal Bentonite  
 Did any strata contain unusable water? Yes  No   
 Type of water? \_\_\_\_\_ Depth of strata \_\_\_\_\_  
 Method of sealing strata off \_\_\_\_\_

**(7) PUMP:** Manufacturer's Name \_\_\_\_\_  
 Type: \_\_\_\_\_ H.P. \_\_\_\_\_

**(8) WATER LEVELS:** Land-surface elevation above mean sea level \_\_\_\_\_ ft.  
 Static level 17 ft. below top of well Date 10-26-84  
 Artesian pressure \_\_\_\_\_ lbs. 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  
 Was a pump test made? Yes  No  If yes, by whom? \_\_\_\_\_  
 Yield: \_\_\_\_\_ gal./min. with \_\_\_\_\_ ft. drawdown after \_\_\_\_\_ hrs.  
 " " " " " "  
 " " " " " "

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

Date of test \_\_\_\_\_  
 Bailer test 30 gal./min. with 3 ft. drawdown after 1 hrs.  
 Artesian flow \_\_\_\_\_ g.p.m. Date \_\_\_\_\_  
 Temperature of water \_\_\_\_\_ Was a chemical analysis made? Yes  No

**(10) WELL LOG:**  
 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 stratum penetrated, with at least one entry for each change of formation.

MATERIAL	FROM	TO
sand gravel + cobbles	0	14
hard pan	14	29
sand + gravel	29	34
hard pan	34	38
sand + gravel	38	41
hard pan	41	44
sand + fine gravel	44	54
gravel	54	57

**RECEIVED**  
 DEC 14 1984

This document was part of the official  
 Administrative Record for the Yakima  
 Railroad Area on October 31, 1996.  
 Washington State  
 Department of Ecology.

Work started \_\_\_\_\_ completed \_\_\_\_\_, 19\_\_\_\_  
**WELL DRILLER'S STATEMENT:**  
 This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.  
 NAME Henry Barb Well Drilling  
 (Person, firm, or corporation) (Type or print)  
 Address 243 Box 734B Yakima, Wn. 98901  
 [Signed] Henry Barb  
 (Well Driller)  
 License No. 0053 Date 11-10, 1984  
1/22/85

WATER WELL REPORT

Start Card No. 10398

STATE OF WASHINGTON

Water Right Permit No.

1) OWNER: Name JAMES HENNESS Address 1419 So 8th Street 98901

(2) LOCATION OF WELL: County YAKIMA SE 1/4 NE 1/4 Sec 30 T. 13 N., R. 19 W.M.

(2a) STREET ADDRESS OF WELL (or nearest address):

(3) PROPOSED USE: [X] Domestic [ ] Irrigation [ ] DeWater [ ] Industrial [ ] Test Well [ ] Municipal [ ] Other [ ]

(10) WELL LOG or ABANDONMENT PROCEDURE DESCRIPTION

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 stratum penetrated, with at least one entry for each change of information.

(4) TYPE OF WORK: Owner's number of well (if more than one)
Abandoned [ ] New well [X] Deepened [ ] Reconditioned [ ] Method: Dug [ ] Bored [ ] Cable [ ] Rotary [X] Driven [ ] Jetted [ ]

Table with columns: MATERIAL, FROM, TO. Includes entries for Top Soil & Gravel, Sand Gravel Cobbles, Hard Pan, Gravel Boulders, Concrete Gravel, and Coarse Gravel/Cobbles.

(5) DIMENSIONS: Diameter of well 6 inches. Drilled 88 feet. Depth of completed well ft.

(6) CONSTRUCTION DETAILS: Casing installed: 6" Diam. from 3' ft. to 77' ft. Perforations: Yes [ ] No [X] Type of perforator used: SIZE of perforations in. by in. Screens: Yes [ ] No [X] Manufacturer's Name: Type: Diam. Slot size from ft. to ft.

Gravel packed: Yes [ ] No [X] Size of gravel: Gravel placed from ft. to ft. Surface seal: Yes [X] No [ ] To what depth? 18 ft. Material used in seal: Bentonite

Did any strata contain unusable water? Yes [ ] No [ ] Type of water? Depth of strata: Method of sealing strata off:

(7) PUMP: Manufacturer's Name: Type: H.P.

(8) WATER LEVELS: Land-surface elevation above mean sea level ft. Static level 20' 8" ft. below top of well Date 11-30-88 Artesian pressure lbs. 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 Was a pump test made? Yes [ ] No [X] If yes, by whom? Yield: gal./min. with ft. drawdown after hrs.

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level) Table with columns: Time, Water Level, Time, Water Level, Time, Water Level.

This document was part of the official Administrative Record for the Yakima Railroad Area on October 31, 1996.

Washington State Department of Ecology Bailer test gal./min. with ft. drawdown after hrs. Airtest gal./min. with stem set at ft. for hrs. Artesian flow g.p.m. Date Temperature of water Was a chemical analysis made? Yes [ ] No [X]

Work started 11-30-88, 19. Completed 11-30-88, 19.

WELL CONSTRUCTOR CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

NAME RIEBE WELL DRILLING Inc (PERSON, FIRM, OR CORPORATION) (TYPE OR PRINT) Address PO BOX 10866

(Signed) John A Riebe License No. 6422 Contractor's Registration No. 132 K1 Date 12-1-88, 19

(USE ADDITIONAL SHEETS IF NECESSARY)

## WATER WELL REPORT

### STATE OF WASHINGTON

Application No. ....

Permit No. 77

(1) **OWNER:** Name JIM HENNESS Address 1415 So. 8th Street  
 (2) **LOCATION OF WELL:** County Yakima — NE ¼ SE ¼ Sec 30 T. 13 N., R. 19 W.M.  
 ...ing and distance from section or subdivision corner

(3) **PROPOSED USE:** Domestic  Industrial  Municipal   
 Irrigation  Test Well  Other

(4) **TYPE OF WORK:** Owner's number of well (if more than one) ...  
 New well  Method: Dug  Bored   
 Deepened  Cable  Driven   
 Reconditioned  Rotary  Jetted

(5) **DIMENSIONS:** Diameter of well 2 inches.  
 Drilled .....ft. Depth of completed well 32 ft.

(6) **CONSTRUCTION DETAILS:**

Casing installed: 2" Diam. from 0 ft. to 32 ft.  
 Threaded  ..... " Diam. from ..... ft. to ..... ft.  
 Welded  ..... " Diam. from ..... ft. to ..... ft.

**Perforations:** Yes  No   
 Type of perforator used.....  
 SIZE of perforations ..... in. by ..... in.  
 ..... perforations from ..... ft. to ..... ft.  
 ..... perforations from ..... ft. to ..... ft.  
 ..... perforations from ..... ft. to ..... ft.

**Screens:** Yes  No   
 Manufacturer's Name.....  
 Type..... Model No.....  
 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.

**Surface seal:** Yes  No  To what depth? Lo ft.  
 Material used in seal Bentoni + cement grout  
 Did any strata contain unusable water? Yes  No   
 Type of water?..... Depth of strata.....  
 Method of sealing strata off.....

(7) **PUMP:** Manufacturer's Name.....  
 Type: ..... H.P.

(8) **WATER LEVELS:** Land-surface elevation APP 1035 ft. above mean sea level.  
 Static level 20 ft. below top of well Date 2-17-77  
 Artesian pressure ..... lbs. 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  
 Was a pump test made? Yes  No  If yes, by whom?.....  
 Yield: 10 gal./min. with ..... ft. drawdown after ..... hrs.  
 " " " "

(10) **WELL LOG:**

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 stratum penetrated, with at least one entry for each change of formation.

MATERIAL	FROM	TO
Top Soil	0	1/2
Compactionate	1/2	32

RECEIVED  
 FEB 25 1977  
 DEPARTMENT OF ECOLOGY  
 CENTRAL REGIONAL OFFICE

Work started 2-17-77 1977 Completed 2-17-77 1977

**WELL DRILLER'S STATEMENT:**  
 This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME Jensen Well Drilling  
 (Person, firm, or corporation) (Type or print)

Address 1603 So 10th Ave.

[Signed] Lawrence Jensen  
 (Well Driller)

License No. 0218 Date 2-20-77

# WATER WELL REPORT

STATE OF WASHINGTON

3168  
Start Card No. 007281

Water Right Permit No. 5

(1) OWNER: Name Mr. Lemus Address 1407 S. 7TH Street Yakima

(2) LOCATION OF WELL: County Yakima NE 1/4 SE 1/4 Sec 30 T. 13 N. R. 19 W.M.

(2a) STREET ADDRESS OF WELL (or nearest address): PARCEL #191330-41422

(3) PROPOSED USE:  Domestic  Industrial  Municipal   
 Irrigation  Test Well  Other   
 DeWater

(4) TYPE OF WORK: Owner's number of well (if more than one) \_\_\_\_\_  
 Abandoned  New well  Method: Dug  Bored   
 Deepened  Cable  Driven   
 Reconditioned  Rotary  Jetted

(5) DIMENSIONS: Diameter of well 6 inches.  
 Drilled 60 feet. Depth of completed well 60 ft.

(6) CONSTRUCTION DETAILS:  
 Casing installed: 6 Diam. from 0 ft. to 60 ft.  
 Welded  Liner installed  Threaded   
 Perforations: Yes  No

Type of perforator used \_\_\_\_\_  
 SIZE of perforations \_\_\_\_\_ in. by \_\_\_\_\_ in.  
 \_\_\_\_\_ perforations from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.  
 \_\_\_\_\_ perforations from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.  
 \_\_\_\_\_ perforations from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.

Screens: Yes  No   
 Manufacturer's Name \_\_\_\_\_  
 Type \_\_\_\_\_ Model No. \_\_\_\_\_  
 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.

Surface seal: Yes  No  To what depth? 28 ft.  
 Material used in seal Bentonite  
 Did any strata contain unusable water? Yes  No   
 Type of water? \_\_\_\_\_ Depth of strata \_\_\_\_\_  
 Method of sealing strata off \_\_\_\_\_

(7) PUMP: Manufacturer's Name \_\_\_\_\_  
 Type: \_\_\_\_\_ H.P. \_\_\_\_\_

(8) WATER LEVELS: Land-surface elevation above mean sea level \_\_\_\_\_ ft.  
 Static level 12 ft. below top of well Date 4-18-89  
 Artesian pressure \_\_\_\_\_ lbs. 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  
 Was a pump test made? Yes  No  If yes, by whom? Bach  
 Yield: \_\_\_\_\_ gal./min. with \_\_\_\_\_ ft. drawdown after \_\_\_\_\_ hrs.  
 " " " " " "  
 " " " " " "

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

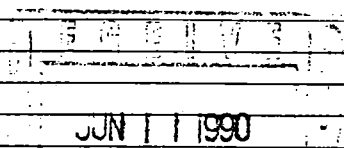
100 GPM @ 50' , 60 GPM @ 40'

Date of test \_\_\_\_\_  
 Bailer test \_\_\_\_\_ gal./min. with \_\_\_\_\_ ft. drawdown after \_\_\_\_\_ hrs.  
 Airstest \_\_\_\_\_ gal./min. with stem set at \_\_\_\_\_ ft. for \_\_\_\_\_ hrs.  
 Artesian flow \_\_\_\_\_ g.p.m. Date \_\_\_\_\_  
 Temperature of water \_\_\_\_\_ Was a chemical analysis made? Yes  No

(10) WELL LOG or ABANDONMENT PROCEDURE DESCRIPTION

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 stratum penetrated, with at least one entry for each change of information.

MATERIAL	FROM	TO
Sandy loam & cobbles	0	2
Sandy loam, cobbles & gravel	2	15
Coarse gravel & sand	15	27
Gravel & sand w/brown sandy clay	27	31
Coarse gravel & sand	31	48
Coarse gravel & sand w/brown sandy clay	48	54
Coarse gravel & sand	54	60



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 Administrative Record for the Yakima  
 Railroad Area on October 31, 1996.

Washington State  
 Department of Ecology

Work started 4-18, 1989 Completed 4-18, 1989

WELL CONSTRUCTOR CERTIFICATION:

I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

NAME Bach Well Drilling Co.  
 (PERSON, FIRM, OR CORPORATION) (TYPE OR PRINT)

Address 2111 Birchfield Rd. Yakima, Wa.

(Signed) Seab Duff License No. 1436  
 (WELL DRILLER)

Contractor's Registration No. BACHWDC137NU Date 4-20, 1989

(USE ADDITIONAL SHEETS IF NECESSARY)



# WATER WELL REPORT

## STATE OF WASHINGTON

Application No. ....  
 Permit No. ....

(1) **OWNER:** Name Rainier Plastics Address 1101 Leitch Yakima WA  
 (2) **LOCATION OF WELL:** County Yakima - NE 1/4 SW 1/4 Sec. 30 T. 13 N. R. 19 E W.M.  
 and distance from section or subdivision corner

(3) **PROPOSED USE:** Domestic  Industrial  Municipal   
 Irrigation  Test Well  Other

(4) **TYPE OF WORK:** Owner's number of well (if more than one) 1  
 New well  Method: Dug  Bored   
 Deepened  Cable  Driven   
 Reconditioned  Rotary  Jetted

(5) **DIMENSIONS:** Diameter of well 6 inches.  
 Drilled 6 ft. Depth of completed well 55 ft.

**(6) CONSTRUCTION DETAILS:**

Casing installed: 6" Diam. from 1 ft. to 54 ft.  
 Threaded  " Diam. from " ft. to " ft.  
 Welded  " Diam. from " ft. to " ft.

Perforations: Yes  No   
 Type of perforator used.....  
 SIZE of perforations ..... in. by ..... in.  
 ..... perforations from ..... ft. to ..... ft.  
 ..... perforations from ..... ft. to ..... ft.  
 ..... perforations from ..... ft. to ..... ft.

Screens: Yes  No   
 Manufacturer's Name.....  
 Type..... Model No.....  
 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.

Surface seal: Yes  No  To what depth? 18 ft.  
 Material used in seal Asphalt  
 Did any strata contain unusable water? Yes  No   
 Type of water?..... Depth of strata.....  
 Method of sealing strata off.....

(7) **PUMP:** Manufacturer's Name.....  
 Type:..... H.P.....

(8) **WATER LEVELS:** Land-surface elevation above mean sea level....ft.  
 Static level .....ft. below top of well Date.....  
 Artesian pressure .....lbs. 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  
 Was a pump test made? Yes  No  If yes, by whom? air lift  
 Yield: 30 gal./min. with ..... ft. drawdown after ..... hrs.  
 " " " " " " " " " " " "

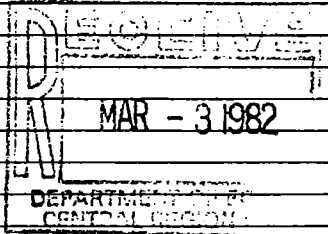
Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)					
Time	Water Level	Time	Water Level	Time	Water Level

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)  
 Date of test .....  
 Bailor test.....gal./min. with.....ft. drawdown after.....hrs.  
 Artesian flow.....g.p.m. Date.....  
 Temperature of water..... Was a chemical analysis made? Yes  No

**(10) WELL LOG:**

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 stratum penetrated, with at least one entry for each change of formation.

MATERIAL	FROM	TO
Gravel & Boulders	0	3
Clay Brown	3	6
Clay Brown Gravel Boulders	6	12
Gravel & Sand	12	35
Sand	35	70
Gravel & Sand & Boulders	70	75



This document was part of the official  
 Administrative Record for the Yakima  
 Railroad Area on October 31, 1996,  
 Washington State  
 Department of Ecology

Work started 2/10/82, 1982 Completed 2/13, 1982

**WELL DRILLER'S STATEMENT:**

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME Paulin Drilling (Person, firm, or corporation) (Type or print)  
 Address Rt 3, Box 3350 Selah  
 [Signed] John M. Hill (Well Driller)  
 License No. 0357 Date 2/15, 1982



**WATER WELL REPORT**  
**STATE OF WASHINGTON**

Application No. ....

Permit No. .... 7

(1) OWNER: Name Bill Shields Address 1101 Leavenworth Yainna 98902

LOCATION OF WELL: County Yakima - 2.6 1/4 NW 1/4 Sec 30 T.13 N., R.19 W.M.  
 ...ing and distance from section or subdivision corner

(3) PROPOSED USE: Domestic  Industrial  Municipal   
 Irrigation  Test Well  Other

(4) TYPE OF WORK: Owner's number of well (if more than one) ...  
 New well  Method: Dug  Bored   
 Deepened  Cable  Driven   
 Reconditioned  Rotary  Jetted

(5) DIMENSIONS: Diameter of well 6 inches  
 Drilled 100 ft. Depth of completed well 98 ft.

(6) CONSTRUCTION DETAILS:  
 Casing installed: 6" Diam. from 11 ft. to 99 ft.  
 Threaded  " Diam. from ... ft. to ... ft.  
 Welded  " Diam. from ... ft. to ... ft.

Perforations: Yes  No   
 Type of perforator used Mills knife  
 SIZE of perforations 1/2 in. by 6 in.  
40 perforations from 25 ft. to 90 ft.  
 ... perforations from ... ft. to ... ft.  
 ... perforations from ... ft. to ... ft.

Screens: Yes  No   
 Manufacturer's Name.....  
 Type..... Model No.....  
 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.

Surface seal: Yes  No  To what depth? 10 ft.  
 Material used in seal Bentonite  
 Did any strata contain unusable water? Yes  No   
 Type of water?..... Depth of strata.....  
 Method of sealing strata off.....

(7) PUMP: Manufacturer's Name.....  
 Type: ..... H.P.....

(8) WATER LEVELS: Land-surface elevation above mean sea level.....ft.  
 Static level 4 ft. below top of well Date.....  
 Artesian pressure ..... lbs. 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  
 Was a pump test made? Yes  No  If yes, by whom?.....  
 Yield: gal./min. with ft. drawdown after hrs.  
 " " " "  
 " " " "

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  
 ..  
 Date of test ..  
 Baller test.....gal./min. with.....ft. drawdown after.....hrs.  
 Artesian flow.....g.p.m. Date.....  
 Temperature of water..... Was a chemical analysis made? Yes  No

(10) WELL LOG:

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 stratum penetrated, with at least one entry for each change of formation.

MATERIAL	FROM	TO
Sand & Gravel	60	100

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 Railroad Area on October 31, 1996.  
 DEPARTMENT of Ecology  
 CENTRAL

Work started 10/22 84 Completed 10/22 84

**WELL DRILLER'S STATEMENT:**

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.  
 NAME Paulin Mc Guire Drilling Co  
 (Person, firm, or corporation) (Type or print)  
 Address PA 3 Box 3356  
 [Signed] Rich Paul  
 (Well Driller)  
 License No. 724 Date 10/23 84