SITE CHARACTERIZATION REPORT

WHITLEY FUELS TANKER SPILL

STATE HIGHWAY 2

MONITOR, WASHINGTON

DRT PROJECT NO. WA-01

Prepared By:

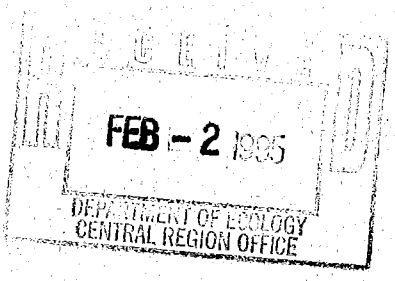
DRT Environmental Consultants, Inc.
736 Whalers Way, Suite 230
Fort Collins, Colorado 80527
(303) 226-0842

January 30, 1995

DRT
ENVIRONMENTAL CONSULTANTS, INC.

736 Whalers Way
Building F, Suite 250
Fort Collins, Colorado 80525

January 30, 1995



Washington Department of Ecology
106 South 6th Avenue
Yakima, Washington 98902-3387

Attention: Mr. Mark Peterschmidt

Subject: Site Characterization Report
Whitley Fuels Tanker Spill
Monitor, Washington
DRT Project No. WA-01

Dear Mr. Peterschmidt:

This letter follows our January 27, 1995, telephone conversation. I have enclosed the above-referenced report which provides you with information and data obtained during the installation of monitoring wells at the Whitley Fuels Tanker Spill located outside of Monitor, Washington.

Three monitoring wells were installed and sampled at the spill site on October 25 and 26, 1994. The purpose of installing the monitoring wells was to document the soil and ground water conditions after the spill site had been over-excavated in November 1992. Laboratory analyses of soil samples collected from the east, west and south sides of the excavation indicated that all of the contaminated soil (approximately 1,300 cubic yards) that could feasibly be removed from the spill area was excavated. Some hydrocarbon impacted soil remained along the roadway (US Highway 2), but further excavation would have undermined the highway.

Results of chemical analyses performed on soil and water samples collected in October 1994 indicate the presence of petroleum hydrocarbons in both soil and ground water. It has been determined through chemical analyses of the soil samples, that petroleum hydrocarbon concentrations quantified in soil samples collected from two of the soil borings drilled are in excess of State of Washington maximum contaminant levels (MCLs) for hydrocarbons in soil. Concentrations of dissolved petroleum hydrocarbons in ground water samples collected from monitoring wells installed in these two borings are also in excess of State of Washington MCLs for hydrocarbons in ground water.

I had hoped that the over excavation of the contaminated soil would have reduced the soil and ground water contaminant levels to at or below the State of Washington MCLs, but it appears that hydrocarbon

impacted soil which remained near the highway may have remained as a source of contamination. As discussed in our recent telephone conversation, a representative from DRT will be at the spill site in early March 1995 to measure ground water levels and collect ground water samples for laboratory analyses. I will notify you as to the exact date and time so we can arrange a meeting to discuss the project.

If you have any questions or comments, please contact Mr. Patrick Fischer or me at (303)226-0842.

DRT ENVIRONMENTAL CONSULTANTS, INC.

Sincerely,

Chester A. Hitchens
Hydrogeologist

Enclosure

cc: Mr. Ben Whitley - Whitley Fuel Company (w\enclosure)

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SITE CHARACTERIZATION REPORT
WHITLEY FUELS TANKER SPILL
STATE HIGHWAY 2
MONITOR, WASHINGTON
DRT PROJECT NO. WA-01

1.0 INTRODUCTION

This report and appendices will provide information and data obtained during the installation of three ground water monitoring wells at the above referenced tanker spill location. The report was prepared by DRT Environmental Consultants, Inc. (DRT) on behalf of Whitley Fuel Company of Okanogan, Washington. The monitoring wells were installed to document soil and ground water conditions after hydrocarbon impacted soil was excavated, landfarmed and returned to the excavation.

2.0 BACKGROUND INFORMATION

2.1 Site Location

The fuel spill occurred in the east bound lane of Highway 2, approximately 0.5 miles east of Monitor Washington (mile post 115.7) The legal location of the spill site is in the NW ¼, SE ¼, SW ¼, Section 19, Township 23 North, Range 19 East, Chelan County, Washington. A site location map is provided as Figure 1. The elevation at the site is approximately 700 feet above mean sea level.

The area surrounding the spill location is undeveloped highway right of way and forested river flood plain. A seasonal campground and RV Park is located approximately one quarter mile to the north of the spill location.

2.2 Background Information

The spill occurred as a result of an accident involving a tanker truck transporting approximately 10,000 gallons of unleaded gasoline on July 24, 1991. The tanker caught fire, which resulted in a large portion of the spilled fuel being burned.

Environmental assessments previously performed at the site, during 1991 and 1992, indicated that petroleum hydrocarbons had impacted soil and ground water at the spill location.

In November 1992, DRT was contracted to observed the excavation of approximately 1,300 cubic yards of soil from the accident location (Figure 2). This amount represented the maximum amount of soil that could be removed from the spill site without undermining the adjacent highway. The soil was stockpiled near the accident site, landfarmed to reduce hydrocarbon concentrations and eventually placed back into the excavation. Due to the space available, the landfarming was performed in three separate phases. One third of the total amount of soil excavated was thin-spread and treated (tilled) in separate phases and returned to the excavation when hydrocarbon concentrations were reduced to levels adequate for placement back into the excavation.

2.3 Regional Geology

The spill site is located on the flood plain of the Wenatchee River. The Wenatchee River flows to the south, and is located approximately 500 feet south of the spill site. Flood plain deposits in the area are composed of fine grained silt and sand, and medium size to very large cobbles and boulders. In many places the large cobbles and boulders are encountered at the surface. In the area of the spill however, the cobbles and boulders are encountered below the silt and sand cover at approximately four feet below the ground surface.

2.4 Location of Subgrade Utilities

There are no subgrade utilities in the vicinity of the site. Subgrade telephone lines are present on the opposite side of Highway 2, and represent the only utilities within a one quarter mile of

the site. The phone lines are located approximately 80 feet up-gradient and cross-gradient from the spill location.

3.0 INVESTIGATION ACTIVITIES

3.1 Soil Borings

On October 25 and 26, 1994, DRT Environmental Consultants, Inc. contracted with Environmental Drilling, Inc. of Snohomish, Washington to drill soil borings for the purpose of collecting representative soil samples and installing ground water monitoring wells. A total of eight soil borings were drilled at the location in an attempt to install three ground water monitoring wells. Five of the borings could be drilled to a total depth of only four to five feet due to the presence of large boulders, and were not used to obtain soil or ground water samples. Three soil borings, designated as B-1 through B-3 were eventually drilled to sufficient depth, and converted to ground water monitoring wells. Five initial attempts to install a monitoring well at the location of B-3 were made before the boring was advanced to a sufficient depth that a monitoring well could be installed. Soil boring locations are illustrated on Figure 2.

The soil borings were drilled using a Mobile Drill HD-B61 truck-mounted auger rig with continuous flight hollow-stem augers. Soil samples were collected at approximately the two and one half, four and seven and one half foot intervals and screened with a portable field photoionization detector (PID) to determine the presence or absence of petroleum hydrocarbon vapors. The field PID readings for the individual samples collected are presented on the soil boring logs provided in Appendix A. The soil borings were drilled to the maximum depth that could be obtained using the hollow stem auger rig. Due to the hard drilling conditions present at the

top of the steel casings are fitted with hinged lockable lids and locks. Monitoring well construction details are provided in Appendix C.

3.4 Ground Water Level Measurements

A vertical and horizontal survey of the monitoring wells with reference to the highway was performed on October 26, 1994. Ground water levels were recorded during the installation of the wells and once again before the wells were sampled on October 26. Water level measurements recorded during the installation of the wells are provided in Appendix D. Water levels measured in the monitoring wells on October 26, ranged from 6.80 feet at MW-1, 6.99 feet at MW-2 and 8.81 feet at MW-3. Inferred ground water contours from these measurements are illustrated on Figure 3.

3.5 Ground Water Monitoring

Ground water samples were collected from the newly constructed monitoring wells on October 26, 1994. The water samples were submitted to Cascade Analytical, Inc. for BTEX and total petroleum hydrocarbons as gasoline analyses. The results of the laboratory analyses are summarized in Table 3 and laboratory reports and chain of custody documentation are provided in Appendix E.

4.0 DISCUSSION

4.1 Site Geology

The vertical profile of the subsurface, encountered during the drilling of the soil borings, consisted of a thin veneer of silt and sand from zero to four feet in depth underlain by river deposited cobbles and boulders. The local ground water is encountered at an approximate depth of four feet across the study area.

4.2 Site Hydrogeology

A ground water contour map depicting the inferred ground water flow direction and gradient from measurements recorded on October 26, 1994, is illustrated as Figure 3. The ground water flow direction is to the south southwest, with an estimated hydraulic gradient across the area calculated to be approximately 0.005 ft/ft. The direction of ground water flow appears to follow the local topography and the flow direction of the Wenatchee River. Ground water was encountered during the drilling of the borings and stabilized at approximately three to four feet below grade. Depth to ground water on October 26, 1994, ranged from 6.80 feet below the ground surface in MW-1 to 8.81 in MW-3. Free product was not measured in any monitoring well during the installation or sampling of the wells. The ground water at the spill location is unconfined.

4.3 Distribution of Hydrocarbons in Soil

Results of the soil sampling from the recent installation of monitoring wells indicate that residual hydrocarbons are present in the soil encountered in the former excavation. Hydrocarbon concentrations were higher on the northern edge of the former excavation bordering Highway 2. It was at this location that the original excavation was terminated due to the possibility that the stability of the road may be jeopardized. The soil sample collected from soil boring B-3 also contained measurable concentrations of petroleum hydrocarbons, but at lesser quantities. The soil sample collected from soil boring B-1 and submitted for analyses did not contain detectable concentrations of hydrocarbons.

4.4 Distribution of Hydrocarbons in Ground Water

Water samples collected from monitoring wells MW-2 and MW-3 both contained detectable concentrations of petroleum hydrocarbons. Again, the highest concentrations were detected at the northern side of the excavation at monitoring well MW-2. Dissolved

approximately 4° C for transport to the laboratory. The samples were hand delivered to the laboratory.

5.2 Soil Classification

As the samples were obtained in the field, they were classified by the crew chief/geologist in accordance with ASTM:D 2488-84. Logs of the borings indicating the depth and identification of the various strata, the N value, water level information and pertinent information regarding the method of maintaining and drilling the borehole were made.

5.3 Soil Sample Screening/HNU Photoionization Detector Method

After the soil samples contained in the glass jars were brought to ambient temperature, the headspace vapors of the soil sample jars were screened with a HNU photoionization detector equipped with a 10.2 Ev lamp calibrated with to benzene for direct reading to ppm. The highest observed reading was recorded.

5.4 Ground Water Measurements

All ground water level measurements were obtained by using an electronic measuring device which indicates when a probe is in contact with the ground water in the well. Measurements were obtained by lowering the device into the well until it indicated that the water surface had been encountered, and by measuring the distance from the top of the inside riser pipe to the probe. All of the measurements were recorded to the nearest 0.01'; however, the manufacturer's reported accuracy for the instrument is 0.04'.

5.5 Ground Water Sampling

All monitoring wells were sampled from suspected cleanest to most contaminated according to the following protocol. All pertinent information was recorded on a sampling information form.

Field Protocol

Step 1 - Measure water level.

Step 2 - Develop each monitoring well with a PVC bailer or submersible pump. A minimum of three to five well bore water volumes were evacuated from each monitoring well prior to sampling.

Step 3 - Collect water samples.

Step 4 - Cool samples to approximately 4° C for transportation.

Step 5 - Store water samples and transport to specified laboratory following all documentation and chain-of-custody procedures.

Upon completion of ground water sampling, a chain-of-custody log was initiated. Chain-of-custody record includes the following information: project, project number and locations, shipped by, shipped to, suspected hazard, sampling point, location, field identification number, date and time taken, sample type, number of containers, analysis required, sampler signature, etc. A copy of the field chain-of-custody log is included with the laboratory reports. As few people as possible handle the samples.

The chain-of-custody record was shipped with the samples to the laboratory. Upon arrival at the laboratory, the samples were checked in and signed in by the appropriate laboratory personnel. Laboratory identification numbers were noted on the chain-of-custody record. Upon completion of the laboratory analysis, the completed chain-of-custody record was returned to the project manager.

6.0 REMARKS

The discussion and recommendations contained in this report represent our professional opinions. These opinions are based on currently available information and are arrived at in accordance with currently accepted hydrogeologic and engineering practices at this time and location. Other than this, no warranty is implied or intended.

This report was prepared by **DRT ENVIRONMENTAL CONSULTANTS, INC.**

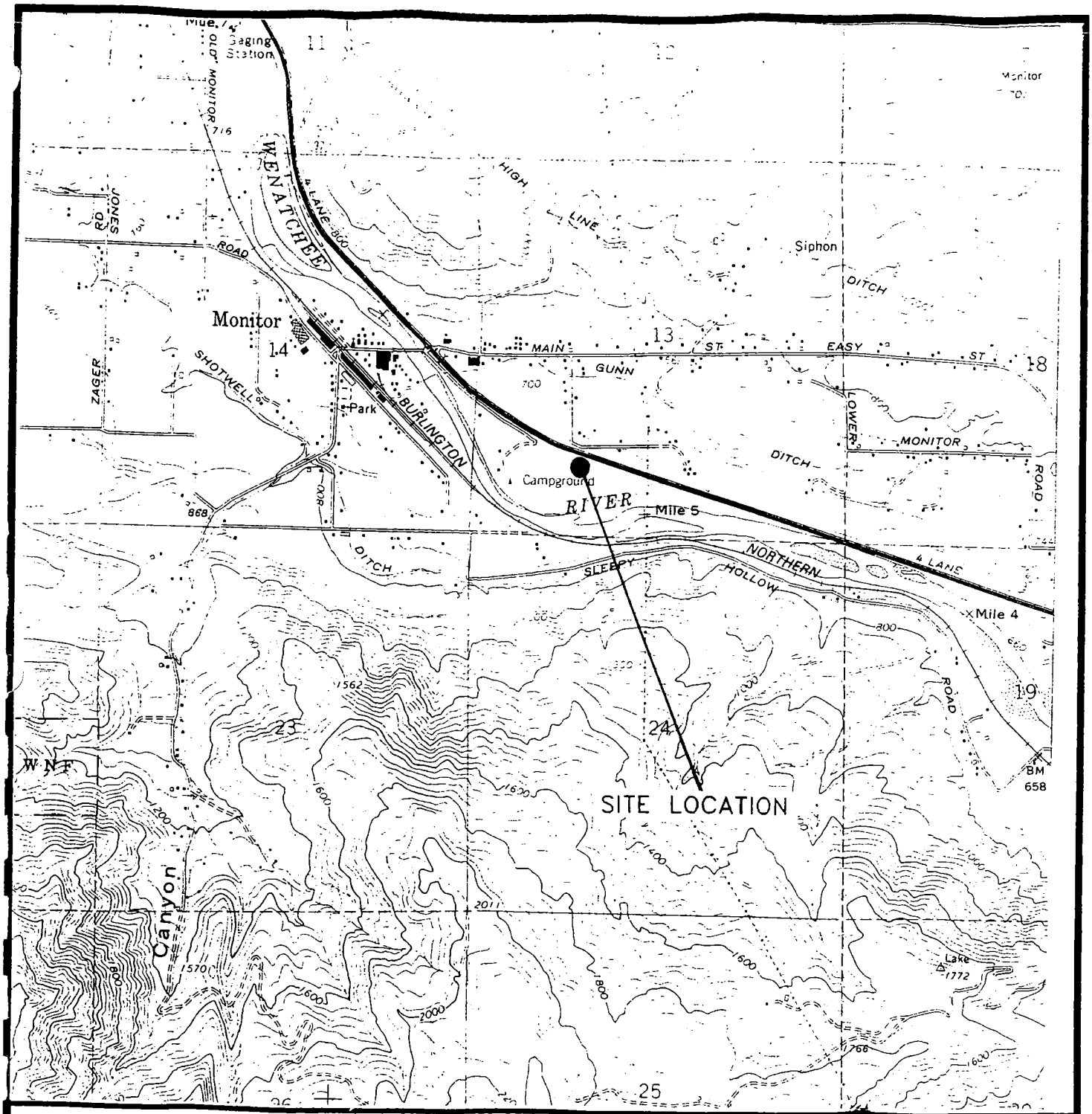
Date 1/31/95

Patrick R. Fischer
Geologist

Review by:

Date 1/31/95

Chester A. Hitchens
Hydrogeologist



WASHINGTON

QUADRANGLE LOCATION

SCALE 1:24000

1000 0 1000

FEET

FIGURE 1
SITE LOCATION MAP
WHITLEY FUELS TANKER SPILL
MONITOR QUADRANGLE
MONITOR, WASHINGTON

PROJECT NO.	PREPARED BY
WA-01	ARK
DATE	REVIEWED BY
1/1?/93	

DRT
Environmental
Consultants, Inc.

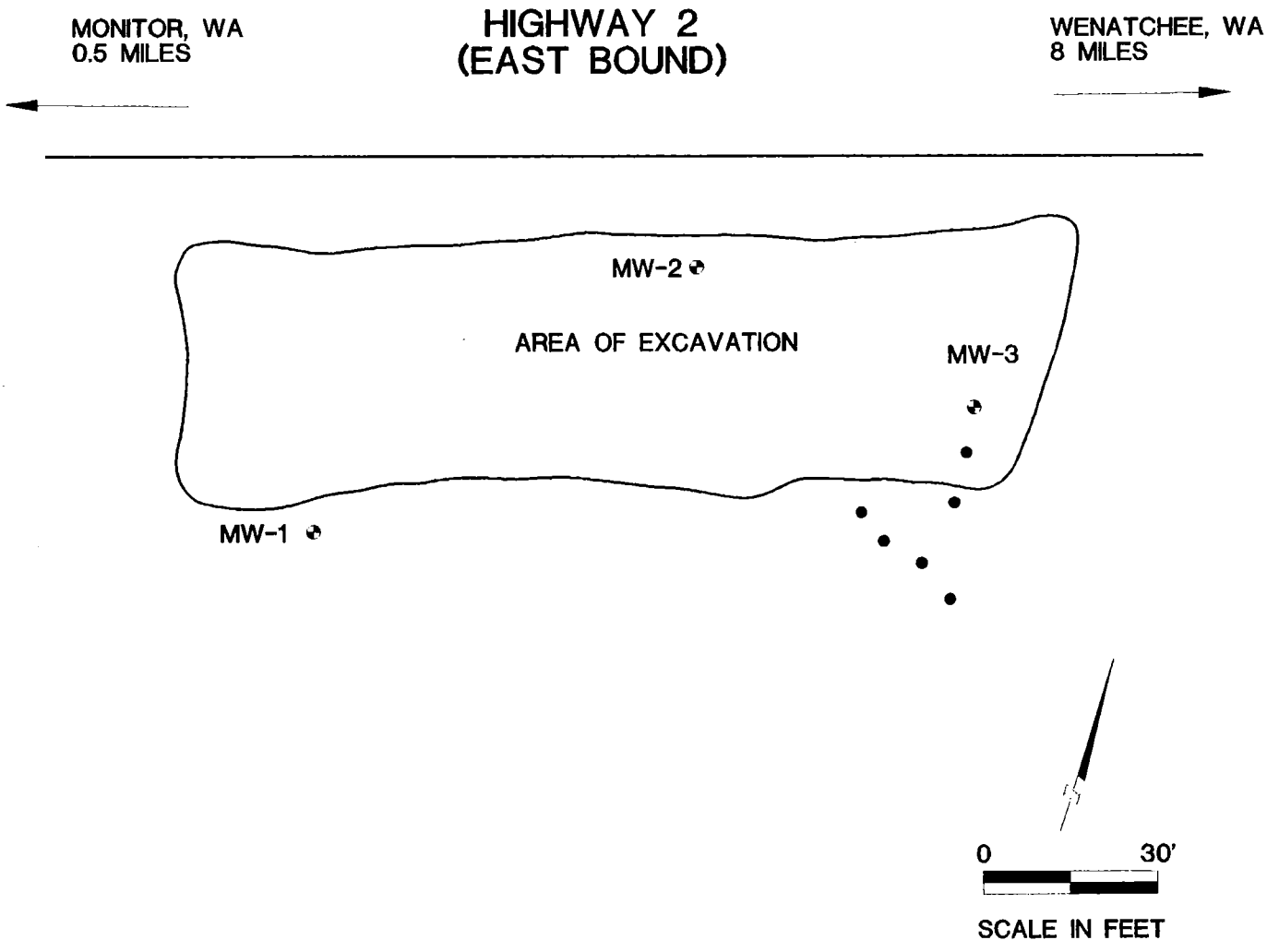


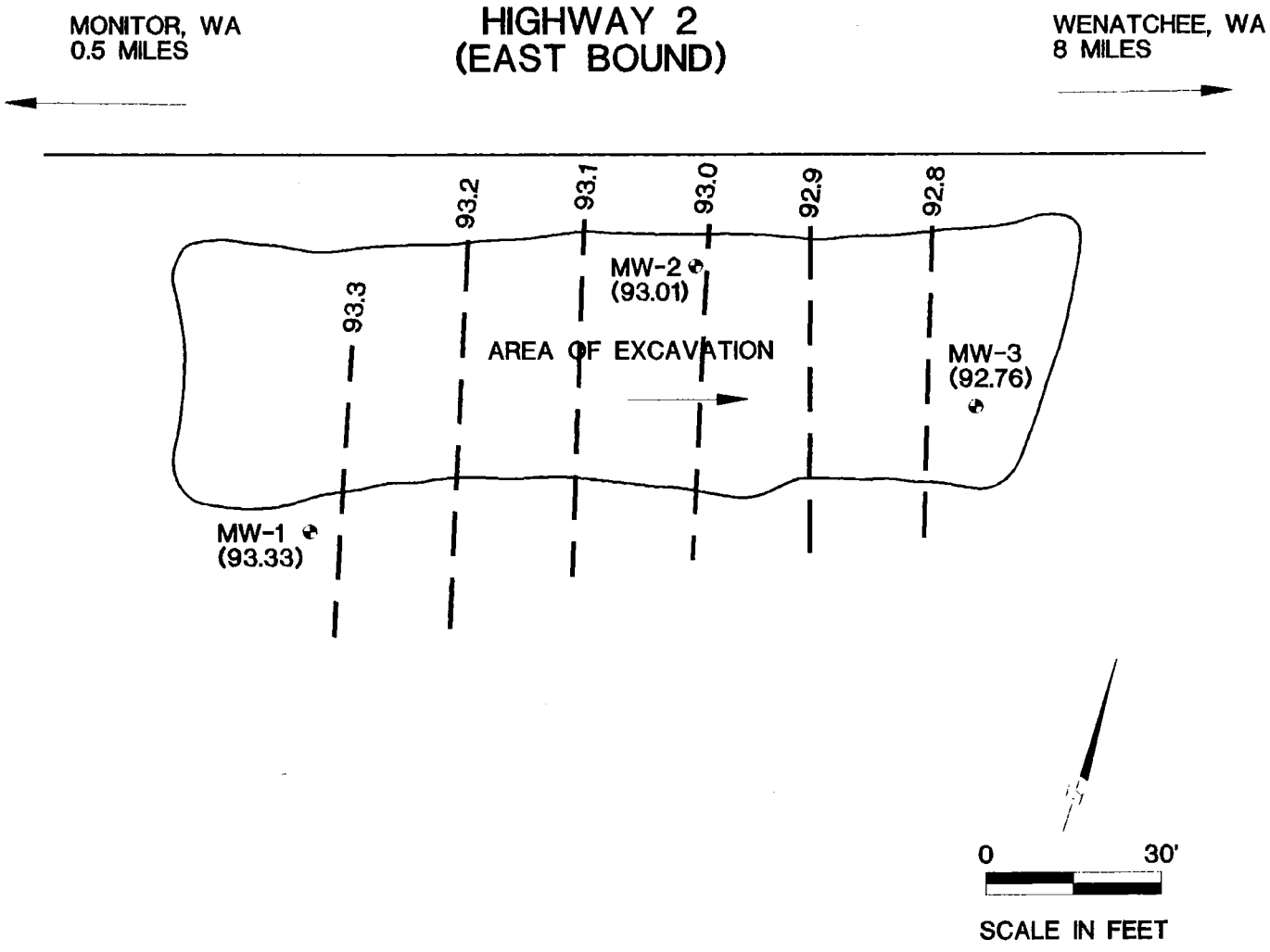
FIGURE 2

SITE MAP
WHITLEY FUELS TANKER SPILL
MONITOR, WASHINGTON

LEGEND

- MONITORING WELL
- SOIL BORING

PROJECT NO.	PREPARED BY	DRT
WA-01	D.L.W.	
DATE	REVIEWED BY	Environmental Consultants, inc.
10/31/94		



LEGEND

- MONITORING WELL
- (92.76) GROUND WATER ELEVATION
- INFERRED GROUND WATER FLOW DIRECTION
- INFERRED GROUND WATER CONTOUR (INTERVAL = .10')

FIGURE 3

INFERRED GROUND WATER CONTOURS
OCTOBER 26, 1994
WHITLEY FUELS TANKER SPILL
MONITOR, WASHINGTON

PROJECT NO.	PREPARED BY	DRT
WA-01	D.L.W.	
DATE	REVIEWED BY	Environmental Consultants, inc.
10/31/94		

TABLE 1
Soil Sample Analyses
Whitley Fuels Tanker Spill
Monitor, Washington
DRT Project No. WA-01

Boring No.	Sample Depth (ft)	Date	Benzene	Toluene	Ethyl-benzene	Xylenes	TPH
B-1	4.5′	10/25/94	<0.1	<2	<2	<2	30.8
B-2	7.5′	10/25/94	0.29	19.6	93.5	21.8	3,300
B-3	7.5′	10/25/94	0.70	20.3	127	<2	5,670
MDL			0.1	2	2	2	5

Concentrations are in mg/Kg (ppm)
TPH = Total petroleum hydrocarbons as gasoline
MDL = Method detection limit

TABLE 2
Water Sample Analyses
Whitley Fuels Tanker Spill
Monitor Washington
DRT Project No. WA-01

Well No.	Date	Benzene	Toluene	Ethyl-benzene	Xylenes	TPH
MW-1	10/26/94	<0.002	<0.002	<0.004	<0.002	<0.250
MW-2	10/26/94	5.010	.014	.008	4.59	91,400
MW-3	10/26/94	0.203	0.197	<0.004	1.05	23,700
MDL		0.002	0.002	0.004	0.002	0.250

Concentrations are in mg/L (ppm)
TPH = Total petroleum hydrocarbons as gasoline
MDL = Method detection limit

SOIL BORING LOG

Project Name\Location
Whitley Fuels Tanker Spill Monitor, Washington DRT Project No. WA-01
Logged By: PRF

Boring No. SB-1
Contractor: Environmental Drilling, Inc. Driller: Bruce Start Date: 10/26/94 Completion Date: 10/26/94 Method: Hollow Stem (Mobile Drill HD-B61)

Sample Number	Sample Type	Sample Interval	Sample Recovery	"N" Value	Depth (ft)	Description	hNu ppm
						0.0'-2.0' Fill, silty sand and gravel.	
						2.0'-4.0'	
1	SB	18"	12"	11	2.5	Sand, fine to medium grained, brown to gray, dry.	<1
2	SB	18"	4"	50+	4	4.0'-7.5' Silty sand and cobbles, brown, dry to wet. Cobbles up to three feet in diameter.	<1
3	SB	18"	4"	50+	7.5		<1
						End of Boring @ 7.5'	

Ground Water Information

Date	Time	Depth
10/25/94	11:35	* 5.10
10/25/94	16:58	6.79
10/26/94	8:20	6.80

Completed as Well? Yes

If Yes, Name of Well : MW-1

* Measured from ground surface

DRT ENVIRONMENTAL CONSULTANTS, INC.

SOIL BORING LOG

Project Name\Location
Whitley Fuels Tanker Spill Monitor, Washington DRT Project No. WA-01
Logged By: PRF

Boring No. SB-2
Contractor: Environmental Drilling, Inc. Driller: Bruce Start Date: 10/25/94 Completion Date: 10/25/94 Method: Hollow Stem (Mobile Drill HD-B61)

Sample Number	Sample Type	Sample Interval	Sample Recovery	"N" Value	Depth (ft)	Description	hNu ppm
						0.0'-9.0' Silty sand and gravel, brown to black , dry to wet. Cobbles up to three feet in diameter at 8'-9' interval.	
1	SB	18"	6"	5	2.5		<1
2	SB	18"	4"	16	4		<1
3	SB	18"	10"	48	7.5		128
						End of boring @ 9.0'	

Ground Water Information		
Date	Time	Depth
10/25/94	14:10	* 6.80
10/25/94	17:05	7.07
10/26/94	8:25	6.99

Completed as Well? Yes

If Yes, Name of Well : MW-2

* Measured from ground surface

SOIL BORING LOG

Project Name\Location
Whitley Fuels Tanker Spill Monitor, Washington DRT Project No. WA-01
Logged By: PRF

Boring No. SB-3
Contractor: Environmental Drilling, Inc. Driller: Bruce Start Date: 10/25/94 Completion Date: 10/25/94 Method: Hollow Stem (Mobile Drill HD-B61)

Sample Number	Sample Type	Sample Interval	Sample Recovery	"N" Value	Depth (ft)	Description	hNu ppm
						0.0'-7.5' Silty sand with gravel, brown , dry to wet, large cobbles from five feet to termination of boring.	
1	SB	18"	6"	11	2.5		<1
2	SB	18"	6"	65	7.5		32
						End of boring @ 7.5'	

Ground Water Information		
Date	Time	Depth
10/25/94	17:30	*7.27
10/26/94	8:25	8.81

Completed as Well? Yes
If Yes, Name of Well : MW-3

* Measured from ground surface

CASCADE ANALYTICAL, INC.
ENVIRONMENTAL & AGRICULTURAL ANALYSIS

3019 G.S. Center Rd.
Wenatchee, WA 98801
(509) 662-1888

RESIDUE ANALYSIS REPORT

BATCH #: 7168
GROWER:
ACCOUNT: DRT Environmental Consultants
SAMPLER: Pat Fischer
DATE RECEIVED: 10/26/94
DATE OF REPORT: 11/ 8/94
PO Number:
Date Sampled: 10/25/94

REPORT TO:
DRT Environmental Consultants
Chester A. Hitchens
P.O. Box 270834
Fort Collins, Co 80527

--- TOTAL PETROLEUM HYDROCARBON ---

LAB # 94-E009211
CLIENT'S SAMPLE IDENTIFICATION: B-1/4.5'
Sample Comment: Btex,tph gas

Test Requested	Results	Units	Method
Total Percent Solids	91.2	%	SM 2540 B.
Trifluorotoluene Recovery	102.	%	
Benzene	< 0.1	mg/Kg	8020
Xylene	< 2	mg/Kg	8020
Toluene	< 2	mg/Kg	8020
WTPH-G	30.8	mg/Kg	WTPH-G
Ethyl Benzene	< 2	mg/Kg	8020
BTEX	SW846 - 8020		

A $1.00 fee for Waste Disposal was added for each sample.

Approved By:

CASCADE ANALYTICAL, INC.

ENVIRONMENTAL & AGRICULTURAL ANALYSIS

3019 G.S. Center Rd.
Wenatchee, WA 98801
(509) 662-1888

RESIDUE ANALYSIS REPORT

BATCH #: 7168
GROWER:
ACCOUNT: DRT Environmental Consultants
SAMPLER: Pat Fischer
DATE RECEIVED: 10/26/94
DATE OF REPORT: 11/ 8/94
PO Number:
Date Sampled: 10/25/94

REPORT TO:

DRT Environmental Consultants
Chester A. Hitchens
P.O. Box 270834
Fort Collins, Co 80527

--- TOTAL PETROLEUM HYDROCARBON ---

LAB # 94-E009212 — CLIENT'S SAMPLE IDENTIFICATION: B-2/7.5'

Sample Comment: Btex,tph gas

Test Requested	Results	Units	Method
Total Percent Solids	87.7	%	SM 2540 B.
Trifluorotoluene Recovery	107.	%	
Benzene	0.29	mg/Kg	8020
Xylene	21.8	mg/Kg	8020
Toluene	19.6	mg/Kg	8020
WTPH-G	3300	mg/Kg	WTPH-G
Ethyl Benzene	93.5	mg/Kg	8020
BTEX	SW846 - 8020		

A $1.00 fee for Waste Disposal was added for each sample.

Approved By:

CASCADE ANALYTICAL, INC.

ENVIRONMENTAL & AGRICULTURAL ANALYSIS

3019 G.S. Center Rd.
Wenatchee, WA 98801
(509) 662-1888

RESIDUE ANALYSIS REPORT

BATCH #: 7168
GROWER:
ACCOUNT: DRT Environmental Consultants
SAMPLER: Pat Fischer
DATE RECEIVED: 10/26/94
DATE OF REPORT: 11/ 8/94
PO Number:
Date Sampled: 10/25/94

REPORT TO:
DRT Environmental Consultants
Chester A. Hitchens
P.O. Box 270834
Fort Collins, Co 80527

--- TOTAL PETROLEUM HYDROCARBON ---

LAB # 94-E009213 CLIENT'S SAMPLE IDENTIFICATION: B-3/7.5'

Sample Comment: Btex,tph gas

Test Requested	Results	Units	Method
Total Percent Solids	90.4	%	SM 2540 B.
Trifluorotoluene Recovery	115.	%	
Benzene	0.70	mg/Kg	8020
Xylene	< 2	mg/Kg	8020
Toluene	20.3	mg/Kg	8020
WTPH-G	5670	mg/Kg	WTPH-G
Ethyl Benzene	127.	mg/Kg	8020
BTEX	SW846 - 8020		

A $1.00 fee for Waste Disposal was added for each sample.

Approved By:

SPECIAL SERVICE ORDER FORM

CASCADE ANALYTICAL, INC.

AGRICULTURAL & ENVIRONMENTAL ANALYSIS

3019 G.S. Center Rd.
Wenatchee, WA 98801
(509) 662-1888
Fax : (509) 662-8183
In Eastern Washigton
1-800-545-4206

SAMPLE #	1	2	3	4
SEND RESULTS TO 1) Client 2) Billing 3) Both		X		
SAMPLE REPRESENTS 1) Food! 2) Water! 3) Soil 4) Plant Tissue 5) Other		X	X	
SAMPLE BY 1) Client 2) Field Rep. 3) Quality Control 4) Cascade 5) Other	X			

CLIENT NAME/ADDRESS
Whitby Fuels c/o DRT Environmental
736 Whalers Way
Fort Collins, CO 80526

BILLING NAME/ADDRESS
DRT Environmental
PO Box 270834
Fort Collins CO. 80527

SAMPLER'S NAME: P.R. Fischer

ORM MUST BE COMPLETED BEFORE ANALYSIS WILL BE PERFORMED.

RELINQUISHED BY: (Signature) 1	DATE	RELINQUISHED BY: (Signature) 2	DATE	RELINQUISHED BY: (Signature) 3	DATE
	10/24/94				
(Printed) PAT FISCHER	TIME 1025	(Printed)	TIME	(Printed)	TIME
RECEIVED BY: (Signature) K.P. Aika	DATE 10/26	RECEIVED BY: (Signature)	DATE OCT 26 1994	RECEIVED BY: (Signature)	DATE
(Printed) KEVIN AIKEN	TIME 10:45	(Printed)	TIME	(Printed)	TIME

1	SAMPLE I.D. B-1@ 4.5'	Sample Date 10/25/94	Sample Time 930
	ANALYSIS REQUESTED BTEX, TPH (as gasoline)		
	COMMENT		
2	SAMPLE I.D. B-2@ 7.5'	Sample Date 10/25/94	Sample Time 1330
	ANALYSIS REQUESTED BTEX, TPH (gasoline)		
	COMMENT		
3	SAMPLE I.D. B-3@ 7.5'	Sample Date 11/25/94	Sample Time 1645
	ANALYSIS REQUESTED BTEX, TPH (gasoline)		
	COMMENT		
4	SAMPLE I.D.	Sample Date	Sample Time
	ANALYSIS REQUESTED		
	COMMENT		

Sample container received by client was sealed Yes X No ____

Sample container received by laboratory was sealed Yes ____ No ____

Disclaimer:
Cascade Analytical, Inc., makes no warranty of any kind, expressed or implied, and customer assumes all risk and liability from the use of Cascades test results. Cascade neither assumes not authorizes any person to assume for Cascade any other liability in connection with the testing done by Cascade Analytical, Inc., and there are not other oral agreements or warranties collateral to or affecting this agreement.

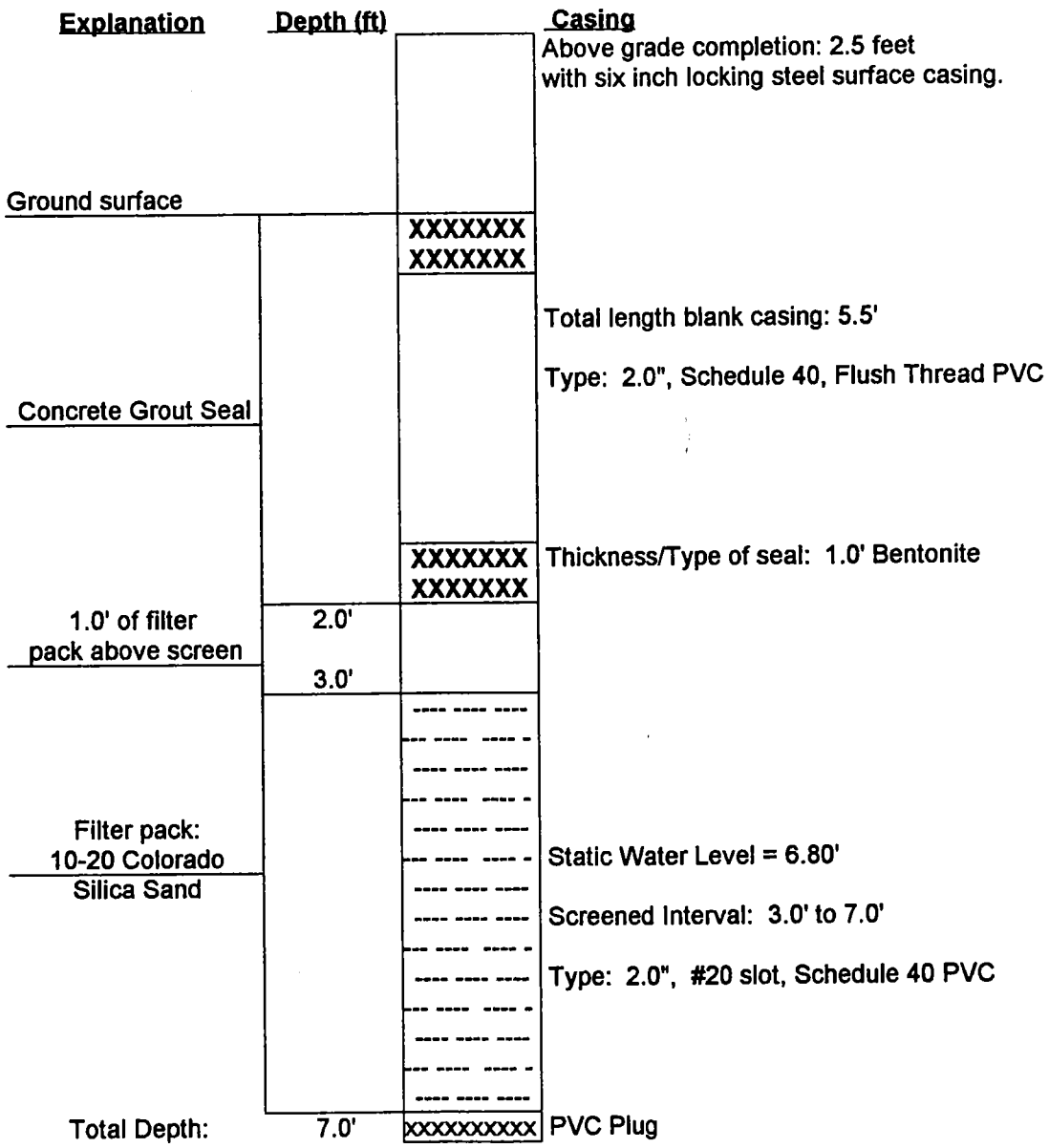
Cascade Analytical, Inc.'s liability to customer as a result of customers use of Cascades's tests results shall be limited to a sum equal to the fees paid by customer to Cascade Analytical, Inc. for the testing work.

Customer Signature P.R. Fischer Date 10/26/94

MONITORING WELL COMPLETION SPECIFICATIONS

Monitoring Well No.: MW-1
Completion Date: 10/25/94

DRT Project No.: WA-01
Completed from Boring No.: SB-1

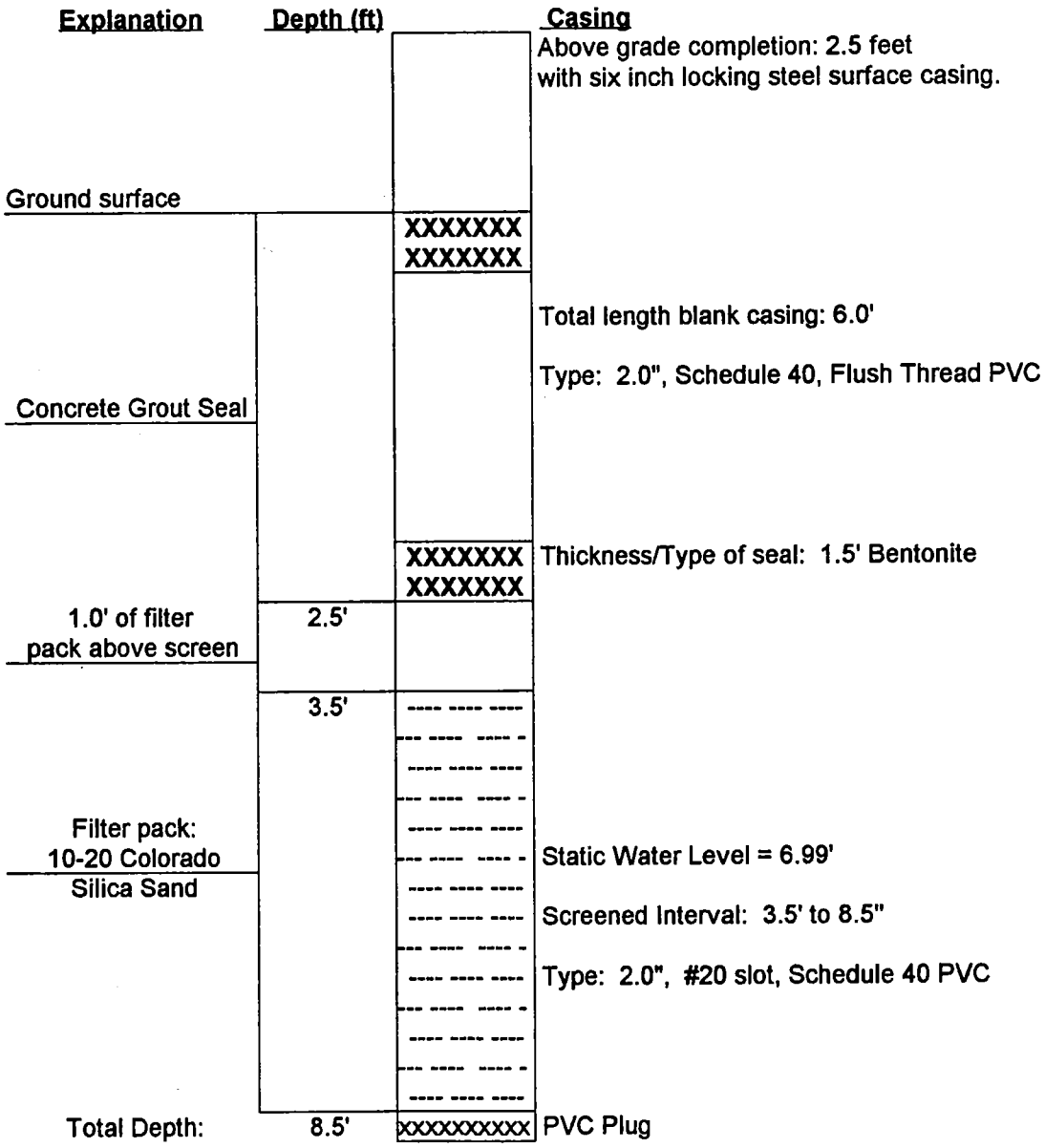


Note: Not to scale

MONITORING WELL COMPLETION SPECIFICATIONS

Monitoring Well No.: MW-2
Completion Date: 10/25/94

DRT Project No.: WA-01
Completed from Boring No.: SB-2

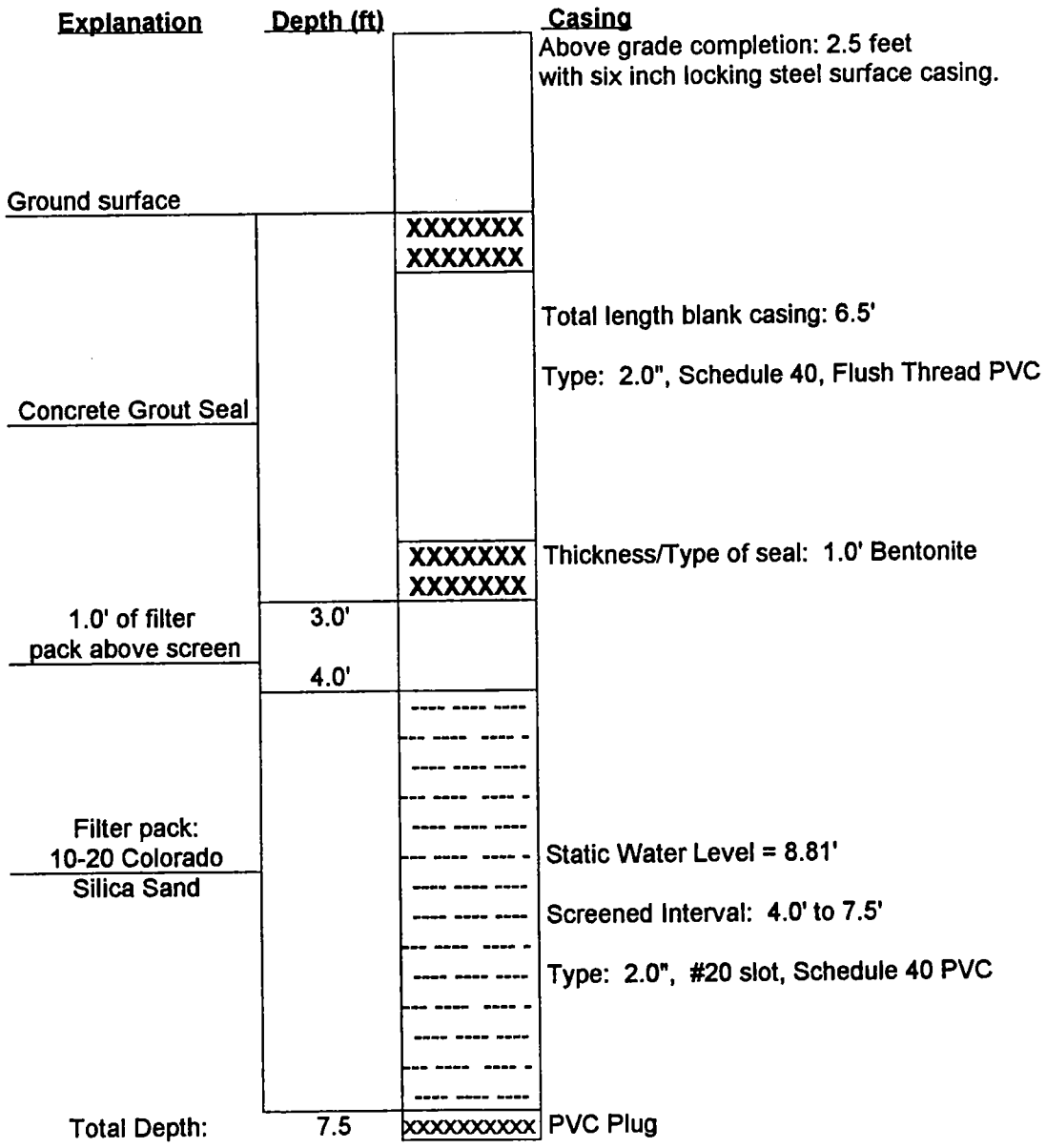


Note: Not to scale

MONITORING WELL COMPLETION SPECIFICATIONS

Monitoring Well No.: MW-3
Completion Date: 10/25/94

DRT Project No.: WA-01
Completed from Boring No.: SB-3



Note: Not to scale

CASCADE ANALYTICAL, INC.

ENVIRONMENTAL & AGRICULTURAL ANALYSIS

3019 G.S. Center Rd.
Wenatchee, WA 98801
(509) 662-1888

RESIDUE ANALYSIS REPORT

BATCH #: 7168
GROWER:
ACCOUNT: DRT Environmental Consultants
SAMPLER: Pat Fischer
DATE RECEIVED: 10/26/94
DATE OF REPORT: 11/ 8/94
PO Number:
Date Sampled: 10/26/94

REPORT TO:

DRT Environmental Consultants
Chester A. Hitchens
P.O. Box 270834
Fort Collins, Co 80527

--- TOTAL PETROLEUM HYDROCARBON ---

LAB # 94-E009208
CLIENT'S SAMPLE IDENTIFICATION: MW #1

Sample Comment: Btex,tph gas

Test Requested	Results	Units	Method
Trifluorotoluene Recovery	120.	%	
Benzene Water	< 2	ug/l	8020
Xylene Water	< 2	ug/L	8020
Toluene Water	< 2	ug/L	8020
WTPH-G Water	< 250	ug/L	WTPH-G
Ethyl Benzene Water	< 4	ug/L	8020
BTEX Water	SW846 - 8020		

A $1.00 fee for Waste Disposal was added for each sample.

Approved By:

CASCADE ANALYTICAL, INC.

ENVIRONMENTAL & AGRICULTURAL ANALYSIS

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Wenatchee, WA 98801
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REPORT TO:
DRT Environmental Consultants
Chester A. Hitchens
P.O. Box 270834
Fort Collins, Co 80527

--- TOTAL PETROLEUM HYDROCARBON ---

LAB # 94-E009209 — CLIENT'S SAMPLE IDENTIFICATION: MW #2

Sample Comment: Btex,tph gas

Test Requested	Results	Units	Method
Trifluorotoluene Recovery	108.	%	
Benzene Water	5010	ug/l	8020
Xylene Water	4590	ug/L	8020
Toluene Water	14.1	ug/L	8020
WTPH-G Water	91400	ug/L	WTPH-G
Ethyl Benzene Water	8.02	ug/L	8020
BTEX Water	SW846 - 8020		

A $1.00 fee for Waste Disposal was added for each sample.

Approved By:

CASCADE ANALYTICAL, INC.

ENVIRONMENTAL & AGRICULTURAL ANALYSIS

3019 G.S. Center Rd.
Wenatchee, WA 98801
(509) 662-1888

RESIDUE ANALYSIS REPORT

BATCH #: 7168
GROWER:
ACCOUNT: DRT Environmental Consultants
SAMPLER: Pat Fischer
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DATE OF REPORT: 11/ 8/94
PO Number:
Date Sampled: 10/26/94

REPORT TO:

DRT Environmental Consultants
Chester A. Hitchens
P.O. Box 270834
Fort Collins, Co 80527

--- TOTAL PETROLEUM HYDROCARBON ---

LAB # 94-E009210 — CLIENT'S SAMPLE IDENTIFICATION: MW #3

Sample Comment: Btex,tph gas

Test Requested	Results	Units	Method
Trifluorotoluene Recovery	90.4	%	
Benzene Water	203.	ug/l	8020
Xylene Water	1050	ug/L	8020
Toluene Water	197.	ug/L	8020
WTPH-G Water	23700	ug/L	WTPH-G
Ethyl Benzene Water	< 4	ug/L	8020
BTEX Water	SW846 - 8020		

A $1.00 fee for Waste Disposal was added for each sample.

Approved By:

SPECIAL SERVICE ORDER FORM

CASCADE ANALYTICAL, INC.

AGRICULTURAL & ENVIRONMENTAL ANALYSIS
3019 G.S. Center Rd.
Wenatchee, WA 98801
(509) 662-1888
Fax : (509) 662-8183
In Eastern Washigton
1-800-545-4206

SAMPLE #	1	2	3	4
SEND RESULTS TO 1) Client 2) Billing 3) Both	X			
SAMPLE REPRESENTS 1) Food! 2) Water! 3) Soil 4) Plant Tissue 5) Other		X		
SAMPLE BY 1) Client 2) Field Rep. 3) Quality Control 4) Cascade 5) Other	X			

CLIENT NAME/ADDRESS
DRT Environmental
PO Box 270834
Fort Collins CO 80527

BILLING NAME/ADDRESS
DRT
PO Box 270834
Ft Collins CO 80526

SAMPLER'S NAME: PR

FORM MUST BE COMPLETED BEFORE ANALYSIS WILL BE PERFORMED.

RELINQUISHED BY: (Signature) 1	DATE	RELINQUISHED BY: (Signature) 2	DATE	RELINQUISHED BY: (Signature) 3	DATE
PR	10/26/94				
(Printed)	TIME	(Printed)	TIME	(Printed)	TIME
PAT FISCHER	1025				
RECEIVED BY: (Signature)	DATE	RECEIVED BY: (Signature)	DATE	RECEIVED BY: (Signature)	DATE
K.P. Aika	10/26				
(Printed)	TIME	(Printed)	TIME	(Printed)	TIME
KEVIN AIKEN	10:25				

OCT 26 1994

1	SAMPLE I.D. MW-1	Sample Date 10/26/94	Sample Time 850
	ANALYSIS REQUESTED BTEX, TPH (gas)		
	COMMENT		
2	SAMPLE I.D. MW-2	Sample Date 10/26/94	Sample Time 920
	ANALYSIS REQUESTED BTEX, TPH (gas)		
	COMMENT		
3	SAMPLE I.D. MW-3	Sample Date 10/26/94	Sample Time 950
	ANALYSIS REQUESTED BTEX, TPH (gas)		
	COMMENT		
4	SAMPLE I.D.	Sample Date	Sample Time
	ANALYSIS REQUESTED		
	COMMENT		

Sample container received by client was sealed Yes X No ____

Sample container received by laboratory was sealed Yes ____ No ____

Disclaimer:

Cascade Analytical, Inc., makes no warranty of any kind, expressed or implied, and customer assumes all risk and liability from the use of Cascades test results. Cascade neither assumes not authorizes any person to assume for Cascade any other liability in connection with the testing done by Cascade Analytical, Inc., and there are not other oral agreements or warranties collateral to or affecting this agreement.

Cascade Analytical, Inc.'s liability to customer as a result of customers use of Cascades's tests results shall be limited to a sum equal to the fees paid by customer to Cascade Analytical, Inc. for the testing work.

Customer Signature PR Date 10/26/94

DRT ENVIRONMENTAL CONSULTANTS, INC.

PROJECT NUMBER: WA-01 PROJECT LOCATION: Monitor, Washington

DATE: 10/25/94 RECORDED BY: PRF MEASURING DEVICE: slope indicator

WELL NO.	TIME	REFERENCE ELEVATION	DEPTH TO GROUNDWATER	GROUNDWATER ELEVATION	DEPTH TO PRODUCT	FREE PRODUCT THICKNESS	COMMENTS
MW-1	13:55	100.13	6.79	93.34			
MW-2	17:05	100.00	7.07	92.93			
MW-3	17:30	101.57	7.27	94.30			

Elevations measured at well head, unless otherwise noted.

DRT ENVIRONMENTAL CONSULTANTS, INC.

PROJECT NUMBER: WA-01 PROJECT LOCATION: Monitor, Washington

DATE: 10/26/94 RECORDED BY: PRF MEASURING DEVICE: slope indicator

WELL NO.	TIME	REFERENCE ELEVATION	DEPTH TO GROUNDWATER	GROUNDWATER ELEVATION	DEPTH TO PRODUCT	FREE PRODUCT THICKNESS	COMMENTS
MW-1	8:20	100.13	6.80	93.33			
MW-2	8:25	100.00	6.99	93.01			
MW-3	8:25	101.57	8.81	92.76			

Elevations measured at well head, unless otherwise noted.