

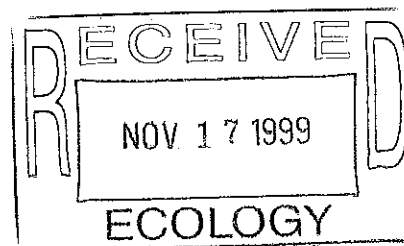


Jiffy Lube International, Inc.
700 Milam, P. O. Box 2967 • Houston, TX 77252-2967
713/546-8426 • Fax: 713/546-8505
JerryGarcia@associates.PZLQS.com

SW 6354
h 10033

Gerardo "Jerry" H. Garcia
Consulting Hydrogeologist
Environmental, Safety, Health & DOT Compliance

October 18, 1999



State of Washington
Department of Ecology
P.O. Box 47655
Olympia, WA 98504-7655

⁵²⁹
CERTIFIED MAIL P-261-955-375
RETURN RECEIPT REQUESTED

SUBJECT: Quarterly Groundwater Monitoring Report
Jiffy Lube International, Inc. (JLI) Store No. 793
1718 East 1st Street
Port Angeles, Washington 98362
Site ID Number 006354

Dear Sir or Madam:

Enclosed is one copy of the quarterly groundwater monitoring report. Based on the results of the latest sampling event, dissolved-phase concentrations of total petroleum hydrocarbons (TPH) as diesel, TPH as heavy oil, and total chromium were below the Model Toxics Control Act Method A Compliance (MTCAMAC) cleanup levels.

If you have any questions, please call me at (713) 546-8426 if you need any additional information.

Sincerely,

Gerardo H. Garcia

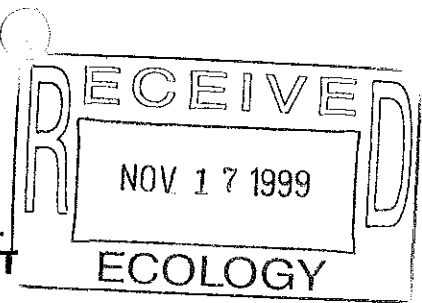
Enclosure

C w/o enclosure: Bill Hughes, IT Corporation, Renton, WA
Dan McQuillen, PQS
Frank Jeanson

GHG:mak

File: JLI#793 - General
docname: JLI/Washington/ 793/Q3 rpt trans ltr.doc

JIFFY LUBE INTERNATIONAL, INC.
QUARTERLY MONITORING REPORT
QUARTER 3, 1999



PROJECT NUMBER: 793
PROJECT NAME: Jiffy Lube – Port Angeles
PROJECT ADDRESS: 1718 East First Street
Port Angeles, WA

MONITORING DATE: August 3, 1999
LIST OF WELLS SAMPLED: MW-1, MW-2, and MW-3
ANALYTICAL METHODS/PARAMETERS: Washington Department of Ecology WTPH-as-diesel extended/TPH-d, TPH-o and chromium
LAB NAME/LOCATION: North Creek Analytical, Inc./Bothell, WA
CONSULTANT NAME/LOCATION: IT Corporation/Renton, WA

TYPE OF LAND USE: Commercial

RESULTS/DISCUSSION:

- TPH-o was not detected in samples collected from monitoring wells MW-1, MW-2 and MW-3 above the laboratory's method detection limit.
- TPH-d was not detected in sample collected from monitoring well MW-2 above the laboratory's method detection limit.
- The TPH-d concentrations in the samples collected from monitoring wells MW-1 and MW-3 were 664 micrograms per liter ($\mu\text{g/l}$) and 343 $\mu\text{g/l}$. This is less than the Washington Department of Ecology Model Toxic Control Act (MTCA) Method A Compliance Cleanup Levels [CCL(a)s] of 2,000 $\mu\text{g/l}$.
- Dissolved chromium was reported at 1.71 $\mu\text{g/l}$, 1.08 $\mu\text{g/l}$ and 1.01 $\mu\text{g/l}$ in samples collected from monitoring wells MW-1, MW-2 and MW-3, respectively. These concentrations are below the CCL(a) of 50.0 $\mu\text{g/l}$.
- The depth to groundwater ranged from 4.87 feet in monitoring well MW-2 to 8.02 feet in monitoring well MW-3.
- Groundwater elevations in the groundwater monitoring wells ranged from 89.07 to 94.65 feet relative to an arbitrary on site benchmark. The groundwater flow direction is northeast at a gradient of approximately 0.038 feet per foot.
- The groundwater flow direction was consistent with the three previous sampling events.

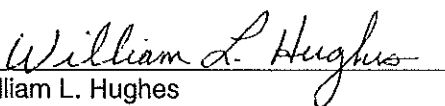
PLANNED ACTIVITIES:

Fourth Quarter 1999 sampling event – November 1999

ATTACHMENTS:

Attachment A: Table 1 Historical Groundwater Gauging Data
Table 2 Historical Groundwater Analytical Results
Attachment B: Figure 1 Site Location Map
Figure 2 Site Map
Figure 3 Groundwater Gradient Map (8/3/99)
Figure 4 Groundwater Analytical Results (8/3/99)
Attachment C: Laboratory Analytical Reports

Prepared by:
IT Corporation


William L. Hughes
Project Manager

ATTACHMENT A

Table 1
Summary of Groundwater Elevation Data
Jiffy Lube Store No. 793
1718 East First Street
Port Angeles, Washington

Monitoring Well	Date	Top Of Well Casing (ft)	Depth To Water (ft)	Groundwater Elevation (ft)
MW-1	09/22/98	99.36	6.76	92.60
	01/12/99	99.36	4.18	95.18
	04/20/99	99.36	4.86	94.50
	08/03/99	99.36	4.98	94.38
MW-2	09/22/98	99.52	7.20	92.32
	01/12/99	99.52	4.63	94.89
	04/20/99	99.52	4.72	94.80
	08/03/99	99.52	4.87	94.65
MW-3	09/22/98	97.09	7.63	89.46
	01/12/99	97.09	7.69	89.40
	04/20/99	97.09	7.73	89.36
	08/03/99	97.09	8.02	89.07

Note: Elevations based on a temporary datum (0,0) chosen at the southeastern corner of the Jiffy Lube building located on site. Assumed initial elevation is 100 feet.

Table 2
Summary of Groundwater Sample Analytical Results
Jiffy Lube Store No. 793
1718 East First Street
Port Angeles, Washington
(micrograms per liter)

Monitoring Well	Date Sampled	TPH-as-Diesel	TPH-as-Heavy Oil	Total Chromium
MW-1	09-22-98	1,750	<750	NA
	01-12-99	730	<750	565*
	04-20-99	487	<750	3.09
	08-03-99	664	<750	1.01
MW-2	09-22-98	<250	<750	NA
	01-12-99	<250	<750	580*
	04-20-99	<250	<750	4.34
	08-03-99	<250	<750	1.08
MW-3	09-22-98	<250	<750	NA
	01-12-99	<270	<750	269*
	04-20-99	257	<750	3.90
	08-03-99	343	<750	1.71
MTCA CCL(a)		1,000	1,000	50

Explanation

TPH

= Total Petroleum Hydrocarbons

<

= less than the method detection limits

MTCA CCL(a)

= Model Toxics Control Act method A Compliance Cleanup Level

BOLD

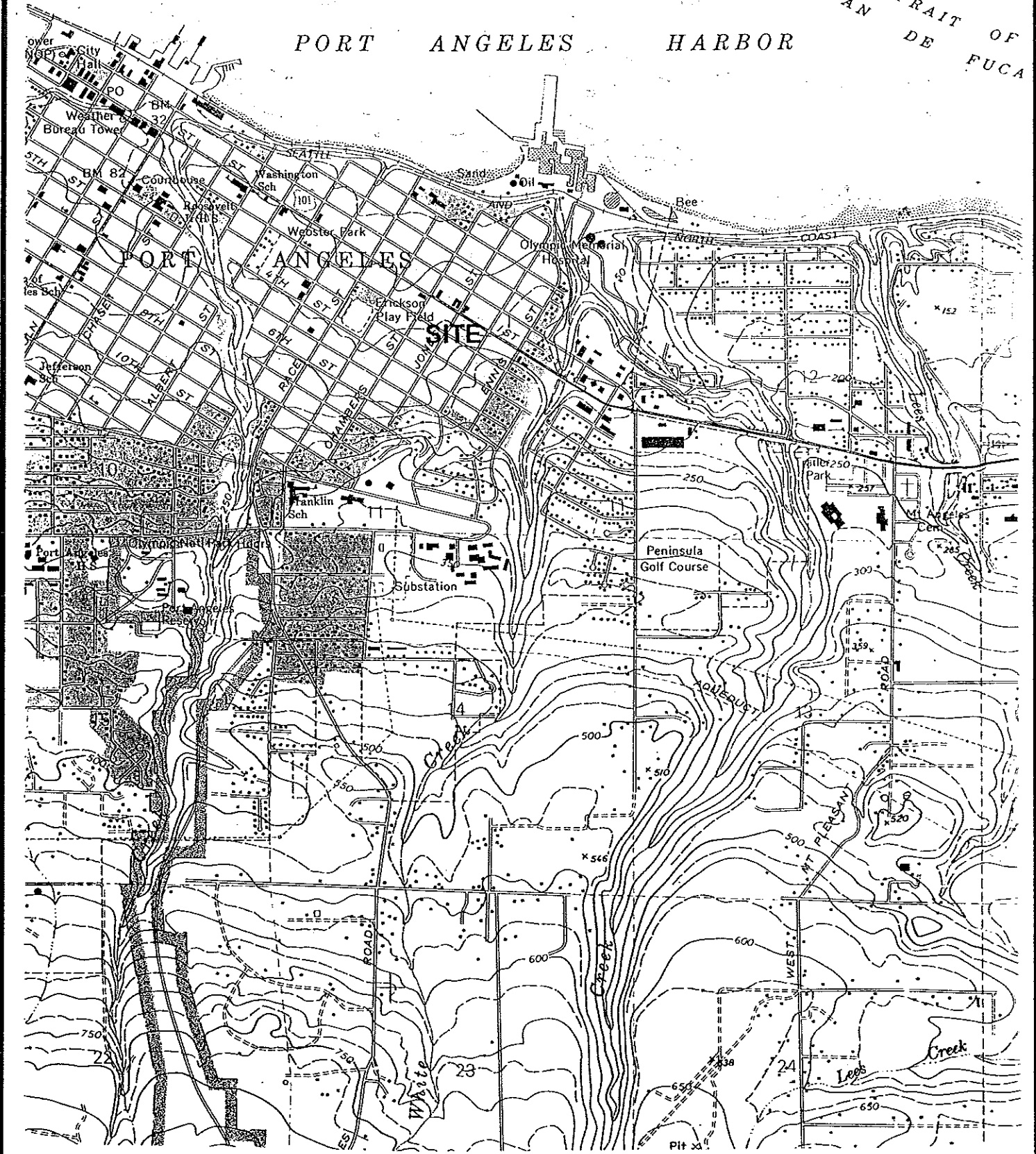
= Concentration exceeds the MTCA-CCL(A)

* Sample acidified prior to filtering.

ATTACHMENT B

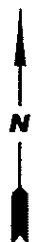
JUAN STRAIT OF
DE FUCA

PORT ANGELES HARBOR



IT CORPORATION

SOURCE: U.S.G.S. 7.5' QUAD SHEET
PORT ANGELES, WASHINGTON
PHOTOREVISED 1985



SCALE:

0 FEET 2000

SITE LOCATION MAP

CLIENT:

JIFFY LUBE INTERNATIONAL, INC.
STORE NO. 793

DATE:

02/23/99

LOCATION:

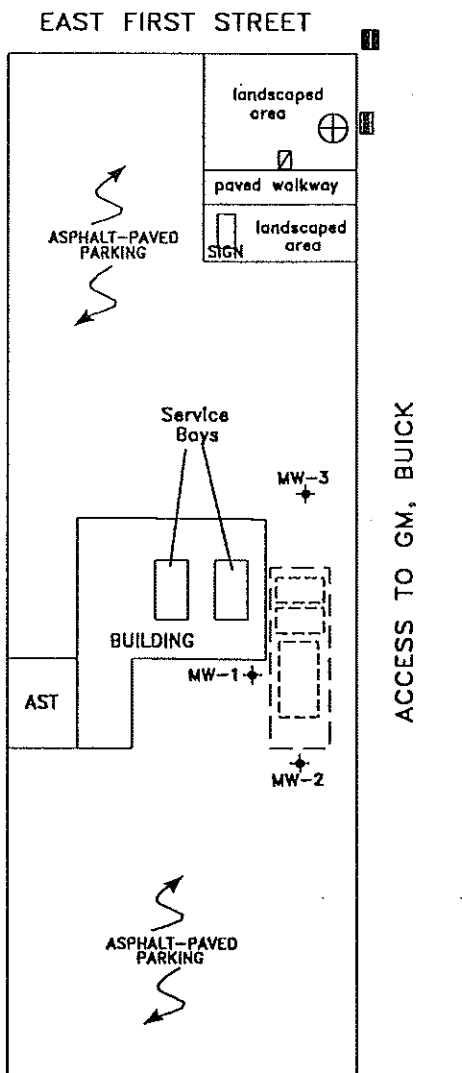
1718 EAST FIRST STREET
PORT ANGELES, WASHINGTON

FIGURE:

1

EXPLANATION

- MW-1 + GROUNDWATER MONITORING WELL
- UST EXCAVATION
- UST
- II STORM DRAIN
- ⊕ SEWER MANHOLE
- ⊠ WATER METER



IT CORPORATION

SITE MAP

CLIENT:

JIFFY LUBE
STORE NO. 793

FILE:

FIG2-V12.DWG

PROJECT NO:

106849

PM

RG/PE

LOCATION:

1718 EAST FIRST STREET
PORT ANGELES, WASHINGTON

REV:

2

DES:

WH

DET:

MLR

DATE:

2/23/99

FIGURE:

2

EXPLANATION

MW-1  GROUNDWATER MONITORING WELL

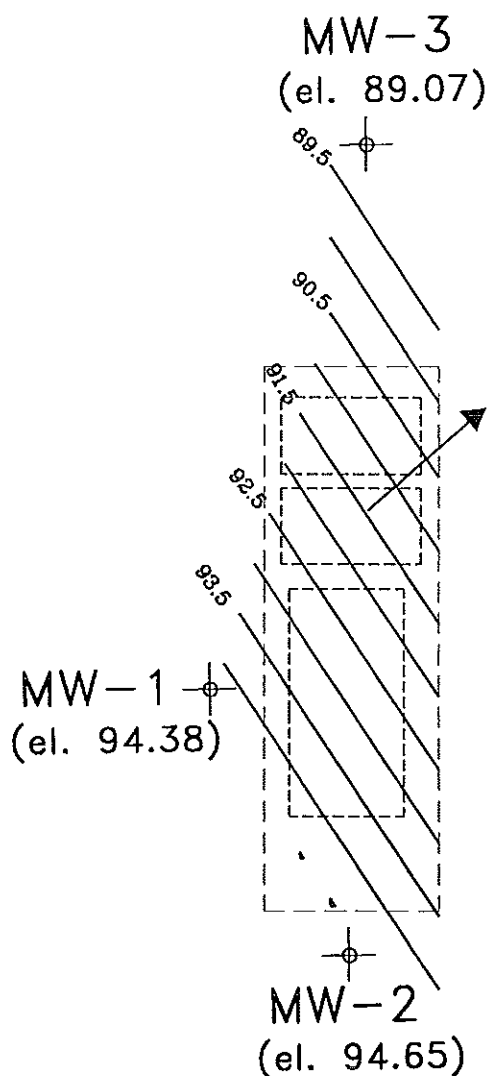
--- UST EXCAVATION

----- FORMER USTs

 GROUNDWATER FLOW DIRECTION

 90.0 GROUNDWATER CONTOURS

(el. 89.40) WELL ELEVATIONS



0 70 140
SCALE FEET



IT CORPORATION

GROUNDWATER GRADIENT MAP (8/3/99)

CLIENT: JIFFY LUBE STORE NO. 793	FILE: 793-f3-q3.DWG	PROJECT NO: 106849	PM AMC	RG/PE
LOCATION: 1718 EAST FIRST STREET PORT ANGELES, WASHINGTON	REV: 2	DATE: 2/23/99	FIGURE: 3	
DES: WH	DET: MLR			

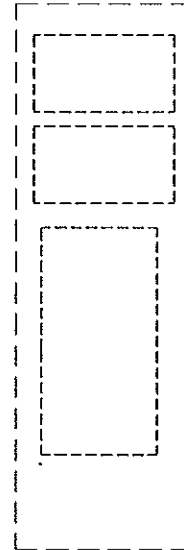
MW-3: TPH-d- 343 $\mu\text{g/L}$
TPH-o- Not Detected

MW-3



MW-1: TPH-d- 664 $\mu\text{g/L}$
TPH-o- Not Detected

MW-1



MW-2

MW-2: TPH-d- Not Detected
TPH-o- Not Detected



0 70 140
SCALE FEET

EXPLANATION

MW-1 GROUNDWATER MONITORING WELL

----- UST EXCAVATION

----- FORMER USTs

$\mu\text{g/L}$ MICROGRAMS PER LITER



IT CORPORATION

GROUNDWATER ANALYTICAL RESULTS (8/3/99)

CLIENT:	JIFFY LUBE STORE NO. 793		FILE:	793F4-Q3.DWG	PROJECT NO:	106849	PM	RG/PE
			REV:	0			AMC	
LOCATION:	1718 EAST FIRST STREET PORT ANGELES, WASHINGTON		DES:	WH	DET:	MLR	FIGURE:	
					DATE:	2/23/99	4	

ATTACHMENT C



Seattle 18939 1st Avenue NE, Suite 101, Bothell, WA 98011-9508
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509.924.9200 fax 509.924.9290
Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132
503.906.9200 fax 503.906.9210
Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711
541.383.9310 fax 541.382.7588

IT Corporation - Renton 555 South Renton Village Place, Ste 700 Renton, WA 98055	Project: Jiffy Lube #793 Project Number: 105317 6502 Project Manager: Bill Hughes	Sampled: 8/3/99 Received: 8/4/99 Reported: 8/9/99 13:12
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ANALYTICAL REPORT FOR SAMPLES:

Sample Description	Laboratory Sample Number	Sample Matrix	Date Sampled
MW-3	B908043-01	Water	8/3/99
MW-2	B908043-02	Water	8/3/99
MW-1	B908043-03	Water	8/3/99

RECEIVED AUG 11 1999

North Creek Analytical - Bothell

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

Joy B Chang, Project Manager

North Creek Analytical, Inc.
Environmental Laboratory Network



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IT Corporation - Renton	Project: Jiffy Lube #793	Sampled: 8/3/99
555 South Renton Village Place, Ste 700	Project Number: 105317 6502	Received: 8/4/99
Renton, WA 98055	Project Manager: Bill Hughes	Reported: 8/9/99 13:12

Diesel Hydrocarbons (C12-C24) and Heavy Oil (C24-C40) by WTPH-D (extended)
North Creek Analytical - Bothell

Analyte	Batch Number	Date Prepared	Date Analyzed	Surrogate Limits	Reporting Limit	Result	Units	Notes*
<u>MW-3</u>				<u>B908043-01</u>			<u>Water</u>	
Diesel Range Hydrocarbons	0890160	8/6/99	8/6/99		0.250	0.343	mg/l	
Heavy Oil Range Hydrocarbons	"	"	"		0.750	ND	"	
Surrogate: 2-FBP	"	"	"	50.0-150		93.8	%	
<u>MW-2</u>				<u>B908043-02</u>			<u>Water</u>	
Diesel Range Hydrocarbons	0890160	8/6/99	8/6/99		0.250	ND	mg/l	
Heavy Oil Range Hydrocarbons	"	"	"		0.750	ND	"	
Surrogate: 2-FBP	"	"	"	50.0-150		93.1	%	
<u>MW-1</u>				<u>B908043-03</u>			<u>Water</u>	
Diesel Range Hydrocarbons	0890160	8/6/99	8/6/99		0.250	0.664	mg/l	
Heavy Oil Range Hydrocarbons	"	"	"		0.750	ND	"	
Surrogate: 2-FBP	"	"	"	50.0-150		96.9	%	



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555 South Renton Village Place, Ste 700	Project Number: 105317 6502	Received: 8/4/99
Renton, WA 98055	Project Manager: Bill Hughes	Reported: 8/9/99 13:12

Dissolved Metals by EPA 6000/7000 Series Methods
North Creek Analytical - Bothell

Analyte	Batch Number	Date Prepared	Date Analyzed	Specific Method	Reporting Limit	Result	Units	Notes*
<u>MW-3</u>				<u>B908043-01</u>			<u>Water</u>	
Chromium	0890113	8/4/99	8/4/99	EPA 6020	0.00100	0.00101	mg/l	
<u>MW-2</u>				<u>B908043-02</u>			<u>Water</u>	
Chromium	0890113	8/4/99	8/4/99	EPA 6020	0.00100	0.00108	mg/l	
<u>MW-1</u>				<u>B908043-03</u>			<u>Water</u>	
Chromium	0890113	8/4/99	8/4/99	EPA 6020	0.00100	0.00171	mg/l	



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555 South Renton Village Place, Ste 700	Project Number: 105317 6502	Received: 8/4/99
Renton, WA 98055	Project Manager: Bill Hughes	Reported: 8/9/99 13:12

Diesel Hydrocarbons (C12-C24) and Heavy Oil (C24-C40) by WTPH-D (extended)/Quality Control
North Creek Analytical - Bothell

Analyte	Date Analyzed	Spike Level	Sample Result	QC Result	Units	Reporting Limit Recov. Limits	Recov. %	RPD Limit	RPD %	Notes*
Batch: 0890160										
Blank										
0890160-BLK1										
Diesel Range Hydrocarbons	8/6/99			ND	mg/l	0.250				
Heavy Oil Range Hydrocarbons	"			ND	"	0.750				
Surrogate: 2-FBP	"	0.321		0.269	"	50.0-150	83.8			
LCS										
0890160-BS1										
Diesel Range Hydrocarbons	8/6/99	2.00		1.72	mg/l	60.0-140	86.0			
Surrogate: 2-FBP	"	0.321		0.301	"	50.0-150	93.8			
LCS Dup										
0890160-BSD1										
Diesel Range Hydrocarbons	8/6/99	2.00		1.75	mg/l	60.0-140	87.5	40.0	1.73	
Surrogate: 2-FBP	"	0.321		0.296	"	50.0-150	92.2			



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Renton, WA 98055	Project Manager: Bill Hughes	Reported: 8/9/99 13:12

Dissolved Metals by EPA 6000/7000 Series Methods/Quality Control
North Creek Analytical - Bothell

Analyte	Date Analyzed	Spike Level	Sample Result	QC Result	Reporting Limit Units	Recov. %	RPD Limit	RPD %	Notes*
Batch: 0890113 Blank Chromium LCS Chromium Matrix Spike Chromium Matrix Spike Dup Chromium									
Date Prepared: 8/4/99		Extraction Method: EPA 3020A							
0890113-BLK1									
	8/4/99			ND	mg/l	0.00100			
0890113-BS1									
	8/4/99	0.200		0.191	mg/l	80.0-120	95.5		
0890113-MS1		B908006-01							
	8/4/99	0.200	0.00207	0.165	mg/l	75.0-125	81.5		
0890113-MSD1		B908006-01							
	8/4/99	0.200	0.00207	0.171	mg/l	75.0-125	84.5	20.0	3.61



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Notes and Definitions

#	Note
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DET Analyte DETECTED

ND Analyte NOT DETECTED at or above the reporting limit

NR Not Reported

dry Sample results reported on a dry weight basis

Recov. Recovery

RPD Relative Percent Difference

North Creek Analytical - Bothell

Joy B Chang, Project Manager

North Creek Analytical, Inc.
Environmental Laboratory Network

