

March 23, 1999

Mr. John Lilly Washington Department of Ecology 3190 160th Avenue SE Bellevue, WA 98008-4542

[Corporation

555 South Renton Village Place, Suite 700 Renton, WA 98055-3295 Tel. 425.228.9645 Fax. 425.228.9793

A Member of The IT Group

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MAR 2 4 1999

DEPT. OF ECOLOGY

RE: Addendum to "Request for Review of Completed Cleanup at

The Barrett Property"

416 Rainier Avenue South Seattle, Washington

Dear Mr. Lilly:

IT Corporation (IT), on behalf of Harriet Barrett, is sending this Addendum to the letter "Request for Review of the Completed Cleanup at the Barrett Property", dated October 21, 1998. On March 1, 1999, IT collected a soil sample for Interim TPH analysis. The sample was collected from the petroleum impacted area located underneath the sidewalk bordering the western edge of the site (Figure 1). To ensure sample GB-1 was collected from the impacted soil interval identified in previous work it was taken at a depth of eight to nine feet below grade, from soil matching the lithology of the two previous soil samples impacted with TPH-G. Further, it was noted during collection that soil sample GB-1 had a petroleum odor.

Compounds analyzed by the Interim TPH method were not detected at or above the method reporting limit. A complete analytical breakdown can be found in the attached Laboratory report. This sample data limits the extent to which petroleum contaminated soil (PCS) could remain at the site to a very few cubic feet which we were unable to excavate due to the proximity of the sidewalk and a power pole.

Based on the GB-1 sample data and the information delineated in the previous letter we conclude that cleanup of petroleum hydrocarbons at the site has been achieved to the point that the Barrett Property warrants "No Further Action" status. Please call Stan Haskins at (425) 228-9645 if you have questions or comments.

Sincerely,

IT Corporation

Tun Harfron for:

Chris N. Storey Staff Engineer

cc: John Barrett attachments

IT Corporation

Stan Haskins, R.G. Project Manager



L corporation

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- / /		F	ax Transmission
Date: 3/23/97	Project:	parre T	
To: John 2.114			
Location: WDOE NW			
Fax #:	•		
	Total Pages (inc	cluding cover):	27
Originals to follow: Dby mail	☐ by courier	🛭 fax only	
Message: Letter an	n lobs	+ fig	ure we-T
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IT Corporation

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RE:

Addendum to "Request for Review of Completed Cleanup at

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416 Rainier Avenue South Seattle, Washington

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Sincerely,

IT Corporation

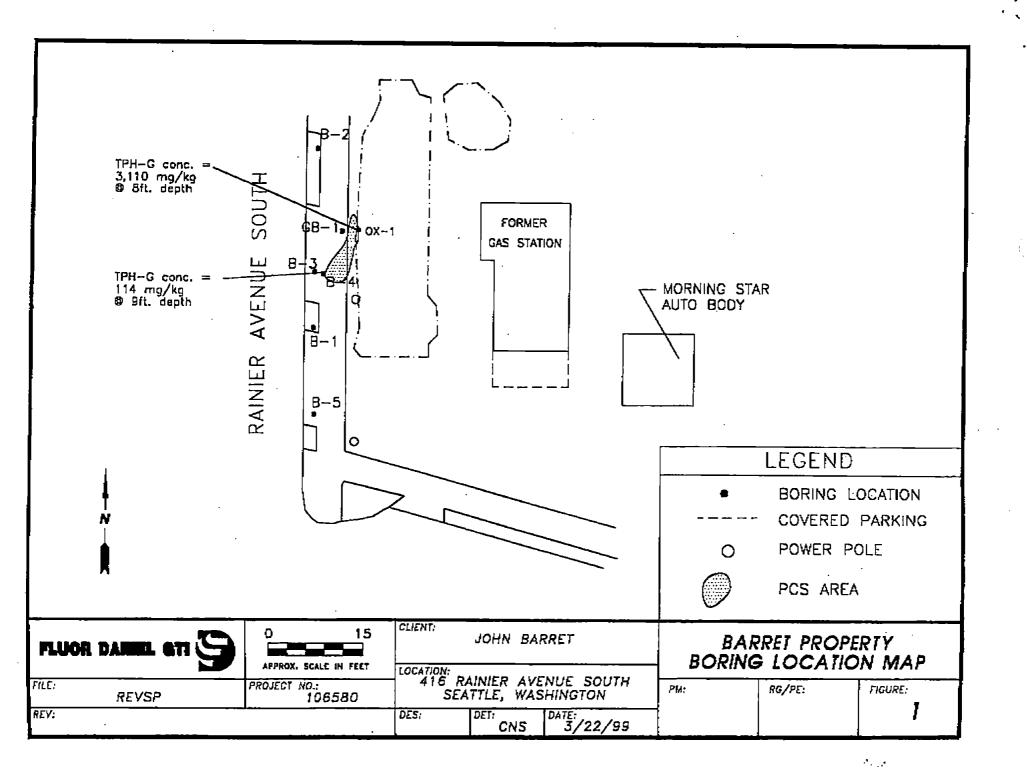
tun Hartom for:

Chris N. Storey Staff Engineer

cc: John Barrett attachments

IT Corporation

Stan Haskins, R.G. Project Manager





Seattle 18939 12007 Avenue NE, Suite 101, Bothell, WA 98011-9508 425,420,9200 fax 425,420,9710

Spokage East 11115 Montgomery, Suite B, Spokane, WA 99206-4776 509,924,9200 fax 509,924,9290

Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132 503,906,9200 fax 503,908,9210

20354 Empire Avenue, Suito E-9, Bond, OR 97708-1883 541,383,9310 fax 541,382,7588

IT Corporation - Renton

555 South Renton Village Place, Ste 700

Renton, WA 98055

Project: Barrett

Project Number:

108314-60200000

Project Manager: Stan Haskins Sampled: 3/1/99

Received: 3/2/99

Reported: 3/16/99 11:23

ANALYTICAL REPORT FOR SAMPLES:

Sample Description	Laboratory Sample Number	Sample Matrix Date Sampled				
GB-I	B903043-0I	Soil	3/1/99			

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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.

North Creek Analytical, Inc. Environmental Laboratory Network



Spokane

503,908,9200 fax 503,906,9210 20354 Empire Avenue, Suite E-9, Bend, OR 97708-1883 541.383.9310 fax 541.382.7588

IT Corporation - Renton Project: Barrett Sampled: 3/1/99 555 South Renton Village Place, Ste 700 Received: 3/2/99 Project Number: 108314-60200000

Renton, WA 98055 Project Manager: Stan Haskins Reported: 3/16/99 11:23

Volatile Petroleum Hydrocarbons by modified WDOE Interim TPH Policy Method North Creek Analytical - Bothell

	Batch	Date	Date	Surrogate	Reporting			
Analyte	Number	Prepared	Analyzed	Limits	Limit	Result .	Units	Notes*
<u>GB-1</u>			B9030	13- 01			Soil	
C5-C6 Aliphatics	0390389	3/15/99	3/15/99		5.00	ND	mg/kg dry	
C6-C8 Aliphatics	•	q	H		5.00	ND	н	
C8-C10 Aliphatics	и	4	41		5.00	ND	н	
C10-C12 Aliphatics	"	41	и		5.00	ND	tı .	
C8-C10 Aromatics	19	t#	•		5.00	ND	ti	
C10-C12 Aromatics	n	n	67		5.00	ND	P1	
C12-C13 Aromatics	. "	и	u		5.00	ND	u	
Surrogate: 4-BFB (FID)	**	#	77	60.0-140		84.4	%	·
Surrogate: 4-BFB (PID)	**	**	•	60.0-140		87.6	<i>n</i>	



Seattle 18939 12mm Avenuc NE, Suite 101, Bothell, WA 98011-9508 425-420-9200 1ax 425-420-9210 Spokane East 11115 Montgomery, Suite 8, Spokane, WA 99206-4776 509-924-9200 fax 509-924-9290

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Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132 503.906.9200 fax 503.906.9210

20354 Empire Avenue, Suite E-9, Bond, DR 97708-1883 541.383.9310 fax 541.382.7588 Band

IT Corporation - Renton

Project: Barrett

Sampled: 3/1/99

555 South Renton Village Place, Ste 700

Project Number: 108314-60200000

Received: 3/2/99

Renton, WA 98055

Project Manager: Stan Haskins Reported: 3/16/99 11:23

BTEX, MTBE and Naphthalene by WDOE Interim TPH Policy Method using GC/MS North Creek Analytical - Bothell

Analytc	Batch Number	Date Prepared	Date Analyzed	Surrogate Limits	Reporting Limit	Result	Units	Notes*
GB-1		-	B9030	42.01			G-11	
Methyl tert-butyl ether	0390065	2 @ f00		•2 <u>~01</u>			<u>Soil</u>	
		3/3/99	3/3/ 9 9		1.00	ND	mg/kg dry	
Веплене	H	11	11		0.100	ND	17	
Toluene	m	n	es		0.100	ND	er	
Ethylbenzene	n		**		0.100	ND	H	
m.p-Xylene	н	u	u		0.200	ND	10	
o-Xylene	91	u	y .		0.100	ND	ρ	
Naphthalene	T		19		0.100	ND	**	
Surrogate: 2-Bromopropene	it	ii	н	70.0-130		91.6	%	
Surrogate: 1,2-DCA-d4	"	77	"	70.0-130		81.4	er e	
Surrogate: Toluene-d8	"	77	ų	70.0-130		89.0	n	
Surrogate: 4-BFB	rr .	"	"	70.0-130		80.6	4 .	



18939 1 _______ Jnuc NE, Suite 101, Bothell, WA 98011-9508 425.420.9200 fox 425.420.9210 Seettle 18939 1...

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9405 SW Nimbus Avenue, Beaverton, OR 97008-7132
503.905.9200 fax 503.906.9210
20354 Empire Avenue, Suite E-9, Bend, OR 97708-1883
541,363,9310 fax 541,382,7588 Portland

IT Corporation - Renton Project: Barrett

555 South Renton Village Place, Ste 700

Project Number:

108314-60200000

Sampled: 3/1/99 3/2/99 Received:

Renton, WA 98055

Project Manager: Stan Haskins

Reported: 3/16/99 11:23

Extractable Petroleum Hydrocarbons by modified WDOE Interim TPH Policy Method North Creek Analytical - Bothell

Analyte	Batch Number	Date	Date	Surrogate	Reporting			
·	Number	Prepared	Analyzed	Limits	Limit	Result	Units	Notes*
GB-1			B90304	43-01			<u>Soil</u>	
C8-C10 Aliphatics	0390147	3/9/99	3/8/99		5.00	ND	mg/kg dry	
C10-C12 Aliphatics	п	н	Ħ		5.00	ND	" and the first	
C12-C16 Aliphatics	IT .	ff .	н		5.00	ND	11	
C16-C21 Aliphatics	IF .	ĸ	п		5.00	ND		
C21-C34 Aliphatics	Ħ	rr	n		5.00	ND	п	
C10-C12 Aromatics	ш	н	3/13/99		5.00	ND	н	
C12-C16 Aromatics	39	n	11		5.00	ND	н	
C16-C21 Aromatics	\$7	n	11		5.00	ND	h	
C21-C34 Aromatics	te	н	41		5.00	ND	н	
Extractable Petroleum Hydrocarbons	н	n	3/8/99		3.00	ND	n	
Surrogate: 2-FBP	"	"	3/13/99	50.0-150		76.2	%	
Surrogate: Octocosone	"	н	3/8/99	50.0-150		64.5	"	
Surrogate: Undecane	•	4	"	30.0-150		69.4	"	



IT Corporation - Renton

555 South Renton Village Place, Ste 700

Renton, WA 98055

Project: Barrett

Project Number: 108314-60200000

Project Manager: Stan Haskins

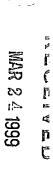
Sampled: 3/1/99

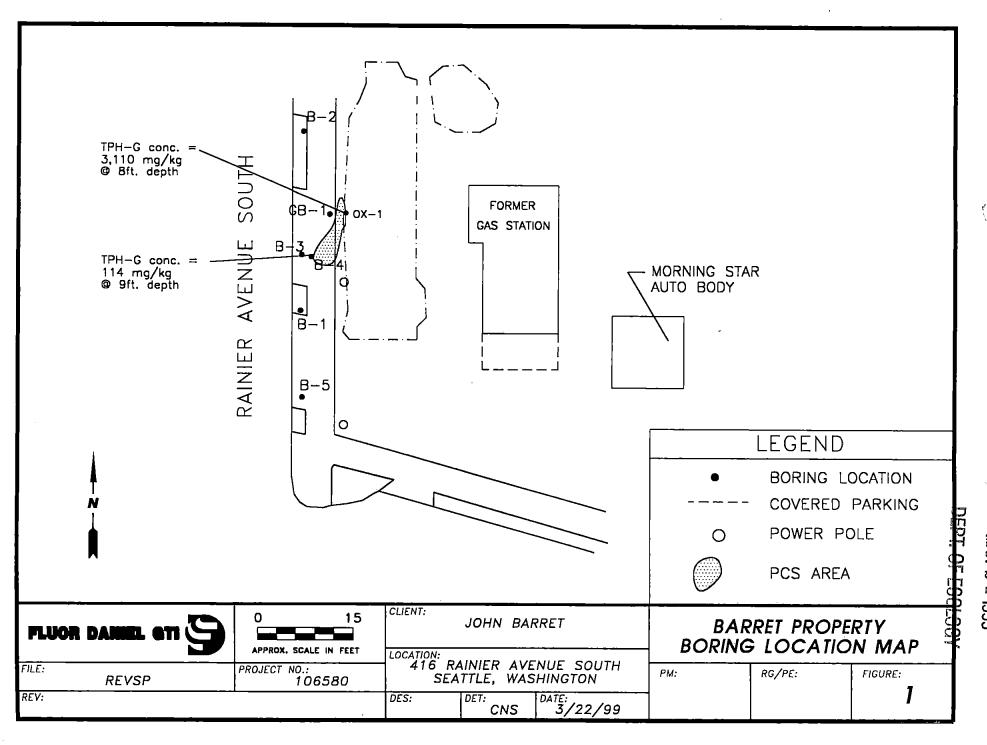
Received: 3/2/99

Reported: 3/16/99 11:23

Polynuclear Aromatic Hydrocarbons by GC/MS-SIM North Creek Analytical - Bothell

	Batch	Date	Date	Surrogate	Reporting	,	•••	-
Analyte	Number	Prepared	Analyzed	Limits	Limit	Result	Units	Notes*
<u>GB-1</u>			B90304	43-01	•		Soil	
Acenaphthene	0390147	3/9/99	3/12/99	<u></u>	0.0100	ND	mg/kg dry	
Acenaphthylene	17	H	n		0.0100	אס	"	
Anthracene	п	н	v		0.0100	ND	я	
Benzo (a) anthracene	н	Н	U		0010.0	ND	п	
Benzo (a) pyrene	**	tr					ę:	
Benzo (b) fluoranthene	п				0.0100	ND		
Benzo (ghi) perylene	u		4	•	0.0100	ND	4	
Benzo (k) fluoranthene	4	m	н		0.0100	ND	16	
Chrysene	Ħ	н			0.0100	ND		
Dibenz (a,h) anthracene	11		. 10	•	0.0100	ND		
Fluoranthene	44	9			0.0100	ND	73	
Fluorene		11	.,		0.0100	ND	u	
	•		•		0.0100	ND	u	
Indeno (1,2,3-cd) pyrene		t 9	17		0.0100	ND	U	
2-Methylnaphthalene		19	и		0.0100	ND	17	
Naphthalene		19	Ħ		0.0100	מא	at .	
Phenanthrene	tt .	п	n		0.0100	ND	п	
Pyrene		ti	11		0.0100	מא	и	
Surrogate: p-Terphenyl-d14	11	H	n	30.0-150		66.1	%	







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9405 SW Nimbus Avenue, Beaverton, OR 97008-7132 503.906.9200 fax 503.906.9210

20354 Empire Avenue, Suite E-9, Bend, OR 97708-1883

541.383.9310 fax 541.382.7588

DEPT. OF ECOLOGY

IT Corporation - Renton

555 South Renton Village Place, Ste 700

Renton, WA 98055

Project: Barrett

Project Number: 108314-60200000

Project Manager: Stan Haskins

Sampled: 3/1/99

Received: 3/2/99

Reported: 3/16/99 11:23

ANALYTICAL REPORT FOR SAMPLES:

Sample Description	Laboratory Sample Number	Sample Matrix	Date Sampled
GB-I	B903043-01	Soil	3/1/99

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North Creek Analytical - Bothell

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503.324.3203 Nimbus Avenue, Beaverton, OR 97008-7132 503.906.9200 fax 503.906.9210 20354 Empire Avenue, Suite E-9, Bend, OR 97708-1883 541.383.9310 fax 541.382.7588 Portland

IT Corporation - Renton

555 South Renton Village Place, Ste 700

Project Number: 108314-60200000

Project: Barrett

Sampled: 3/1/99

Received: 3/2/99

Renton, WA 98055

Project Manager: Stan Haskins

Reported: 3/16/99 11:23

Volatile Petroleum Hydrocarbons by modified WDOE Interim TPH Policy Method North Creek Analytical - Bothell

Analyte	Batch Number	Date Prepared	Date Analyzed	Surrogate Limits	Reporting Limit	Result	Units	Notes*
<u>GB-1</u>			B9030-	4 3-01			<u>Soil</u>	
C5-C6 Aliphatics	0390389	3/15/99	3/15/99		5.00	ND	mg/kg dry	
C6-C8 Aliphatics	•	н			5.00	ND	"	
C8-C10 Aliphatics	n	#	•1		5.00	ND	H	
C10-C12 Aliphatics	#	**	**		5.00	ND	w	
C8-C10 Aromatics	H	**	tr		5.00	ND	н	
C10-C12 Aromatics	*	n	**		5.00	ND	44	
C12-C13 Aromatics	п	*	**		5.00	ND	**	
Surrogate: 4-BFB (FID)	т,		"	60.0-140		84.4	%	_
Surrogate: 4-BFB (PID)	"	**	"	60.0-140		87.6	"	

North Creek Analytical - Bothell

*Refer to end of report for text of notes and definitions.

Joy B Chang,



Spokane

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IT Corporation - Renton

Project: Barrett

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555 South Renton Village Place, Ste 700

Renton, WA 98055

Project Number: 108314-60200000

Received: 3/2/99

Project Manager: Stan Haskins

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BTEX, MTBE and Naphthalene by WDOE Interim TPH Policy Method using GC/MS North Creek Analytical - Bothell

	Batch	Date	Date	Surrogate	Reporting			
Analyte	Number	Prepared	Analyzed	Limits	Limit	Result	Units	Notes*
<u>GB-1</u>			B90304	43-01			<u>Soil</u>	
Methyl tert-butyl ether	0390065	3/3/99	3/3/99		1.00	ND	mg/kg dry	
Benzene	tt	**	н		0.100	ND	н	
Toluene	et .	tr .	**		0.100	ND	п	
Ethylbenzene	н	н	**		0.100	ND	н	
m,p-Xylene	Ħ	Ħ	**		0.200	ND	11	
o-Xylene	tt	**			0.100	ND	Ħ	
Naphthalene	н	**	*		0.100	ND	Ħ	
Surrogate: 2-Bromopropene	n	н	"	70.0-130		91.6	%	
Surrogate: 1,2-DCA-d4	rr	*	"	70.0-130		81.4	"	
Surrogate: Toluene-d8	**	"	"	70.0-130		89.0	"	
Surrogate: 4-BFB	"	n	"	70.0-130		80.6	"	

North Creek Analytical - Bothell

*Refer to end of report for text of notes and definitions.

Joy B Chang, A



Spokane

Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132

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Bend 20354 Empire Avenue, Suite E-9, Bend, OR 97708-1883
541.383.9310 fax 541.382.7588

IT Corporation - Renton

Project: Barrett

555 South Renton Village Place, Ste 700

Project Number: 108314-60200000

Sampled: 3/1/99 Received: 3/2/99

Renton, WA 98055

Project Manager: Stan Haskins

Reported: 3/16/99 11:23

Extractable Petroleum Hydrocarbons by modified WDOE Interim TPH Policy Method North Creek Analytical - Bothell

	Batch	Date	Date	Surrogate	Reporting			
Analyte	Number	Prepared	Analyzed	Limits	Limit	Result	Units	Notes*
							•	
<u>GB-1</u>			<u>B90304</u>	<u>43-01</u>			<u>Soil</u>	
C8-C10 Aliphatics	0390147	3/9/99	3/8/99		5.00	ND	mg/kg dry	
C10-C12 Aliphatics	n	11	tr .		5.00	ND	н	
C12-C16 Aliphatics	tt	11	**		5.00	· ND	**	
C16-C21 Aliphatics	#	Ħ	**		5.00	ND	•	
C21-C34 Aliphatics	u .	11	н	•	5.00	ND	tr .	
C10-C12 Aromatics	н	**	3/13/99		5.00	ND		
C12-C16 Aromatics	Ħ	**	47		5.00	ND	H	
C16-C21 Aromatics	#	**	**		5.00	ND	H	
C21-C34 Aromatics	п	н	**		5.00	ND	н	
Extractable Petroleum Hydrocarbons		H	3/8/99			ND	н	
Surrogate: 2-FBP	"	· ii	3/13/99	50.0-150		76.2	%	
Surrogate: Octacosane	**	"	3/8/99	50.0-150		64.5	"	
Surrogate: Undecane	"	"	"	30.0-150		69.4	"	•

North Creek Analytical - Bothell



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IT Corporation - Renton

Project: Barrett

Sampled: 3/1/99

555 South Renton Village Place, Ste 700

Project Number: 108314-60200000 Received: 3/2/99

1

Renton, WA 98055

Project Manager: Stan Haskins

Reported: 3/16/99 11:23

Polynuclear Aromatic Hydrocarbons by GC/MS-SIM North Creek Analytical - Bothell

	Batch	Date	Date	Surrogate	Reporting			
Analyte	Number	Prepared	Analyzed	Limits	Limit	Result	Units	Notes*
							-	•
<u>GB-1</u>			<u>B9030</u> 4	<u>43-01</u>			<u>Soil</u>	
Acenaphthene	0390147	3/9/99	3/12/99		0.0100	ND	mg/kg dry	
Acenaphthylene	н	#	.,		0.0100	ND	**	
Anthracene	#	**	**		0.0100	ND	**	
Benzo (a) anthracene	ŧr	**	91		0.0100	ND	rt .	
Benzo (a) pyrene	**		н		0.0100	ND	а	
Benzo (b) fluoranthene	n	н	H		0.0100	ND	н	
Benzo (ghi) perylene	**	**	11		0.0100	ND	**	
Benzo (k) fluoranthene	. "	Ħ	**		0.0100	ND	**	
Chrysene	tt .	**	**		0.0100	ND	**	
Dibenz (a,h) anthracene	n	•	**		0.0100	ND	11	
Fluoranthene	n	н	tr		0.0100	ND	н	
Fluorene	11 ·	•	*		0.0100	ND	**	
Indeno (1,2,3-cd) pyrene	**	**	•		0.0100	ND	**	
2-Methylnaphthalene	11	46	н		0.0100	ND	tt	
Naphthalene	**	n	**		0.0100	ND	n	
Phenanthrene	м		н		0.0100	ND	н	
Pyrene .	**	11	n		0.0100	ND	11	
Surrogate: p-Terphenyl-d14	п	"	"	30.0-150		66.1	%	



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Bend 20354 Empire Avenue, Suite E-9, Bend, OR 97708-1883 541.383.9310 fax 541.382.7588

IT Corporation - Renton

555 South Renton Village Place, Ste 700

Renton, WA 98055

Project:

Вагтеtt

Project Number: 108314-60200000 Project Manager: Stan Haskins

Sampled: 3/1/99

Received: 3/2/99

Reported: 3/16/99 11:23

Dry Weight Determination North Creek Analytical - Bothell

					<u> </u>
Sample Name	Lab ID	Matrix		Result	Units
GB-1	B903043-01	Soil		84.3	%

North Creek Analytical - Bothell

Joy B Chang, Project Manager

North Creek Analytical, Inc. **Environmental Laboratory Network**



Spokane

Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132 503.906.9200 fax 503.906.9210 20354 Empire Avenue, Suite E-9, Bend, OR 97708-1883 541.383.9310 fax 541.382.7588

IT Corporation - Renton

Project: Barrett

Sampled: 3/1/99

555 South Renton Village Place, Ste 700

Project Number: 108314-60200000

Renton, WA 98055

Project Manager: Stan Haskins Received: 3/2/99 Reported: 3/16/99 11:23

Volatile Petroleum Hydrocarbons by modified WDOF. Interim TPH Policy Method Quality. Control North Creek Analytical - Bothell



C12-C13 Aromatics " ND " 5.00 Surrogate: 4-BFB (FID) " 4.00 3.89 " 60.0-140 97.3 Surrogate: 4-BFB (PID) " 4.00 3.90 " 60.0-140 97.5 LCS 0390389-BS1 C5-C6 Aliphatics 3/15/99 2.00 1.83 mg/kg dry 70.0-130 91.5 C6-C8 Aliphatics " 1.00 0.721 " 70.0-130 72.1 C8-C10 Aliphatics " 1.00 0.870 " 70.0-130 87.0 C10-C12 Aliphatics " 1.00 1.01 " 70.0-130 101 C8-C10 Aromatics " 4.00 3.96 " 70.0-130 99.0 C10-C12 Aromatics " 1.00 1.03 " 70.0-130 103 C12-C13 Aromatics " 2.00 2.64 " 70.0-130 132 1 Surrogate: 4-BFB (FID) " 4.00 4.06 " 60.0-140 101 Surrogate: 4-BFB (FID) " 4.00 4.06 " 60.0-140 102 Duplicate 0390389-DUP1 8903043-01 C5-C6 Aliphatics " ND ND " 25.0 C6-C8 Aliphatics " ND ND " 25.0 C8-C10 Aromatics " ND ND " 25.0 C10-C12 Aromatics " ND ND " 25.0 C12-C13 Aromatics " ND ND " 25.0		Date	Spike	Sample	QC	R	eporting Limit	Recov.	RPD	RPD				
Blank 0390389-BLK C5-C6 Aliphatics 3/15/99 ND mg/kg dry 5.00 C6-C8 Aliphatics ND mg/kg dry 5.00 C6-C6 Aliphatics MD mg/kg dry MD MD MD MD MD MD MD M	Analyte	Analyzed	Level	Result	Result	Units	Recov. Limits	%	Limit	% No	tes*			
Blank 0390389-BLK C5-C6 Aliphatics 3/15/99 ND mg/kg dry 5.00 C6-C8 Aliphatics ND mg/kg dry 5.00 C6-C6 Aliphatics MD mg/kg dry MD MD MD MD MD MD MD M	Batch: 0390389	Date Prena	red: 3/15/9	99		Fytraction Method: FPA 5030R (P/T)								
CS-C6 Aliphatics " ND mg/kg dry 5.00 C6-C8 Aliphatics " ND " 5.00 C10-C12 Aliphatics " ND " 5.00 C10-C12 Aliphatics " ND " 5.00 C8-C10 Aromatics " ND " 5.00 C12-C13 Aromatics " ND " 6.00 C12-C13 Aromatics " ND " 6.00 C12-C13 Aromatics " ND " 6.00 C12-C13 Aromatics " ND " 70.010 C12-C13 Aromatics " ND " 70.010 C12-C13 Aromatics " ND " 70.010 C12-C13 Aromatics " 1.00 0.721 " 70.0130 72.1 C8-C10 Aliphatics " 1.00 0.721 " 70.0130 87.0 C10-C12 Aliphatics " 1.00 1.01 " 70.0130 101 C8-C10 Aromatics " 1.00 1.01 " 70.0130 101 C8-C10 Aromatics " 1.00 1.01 " 70.0130 101 C8-C10 Aromatics " 1.00 1.01 " 70.0130 101 C12-C13 Aromatics " 1.00 1.01 " 70.0130 101 C12-C13 Aromatics " 1.00 1.01 " 70.0130 103 C12-C13 Aromatics " 1.00 1.03 " 70.0130 132 1 C12-C13 Aromatics " 2.00 2.64 " 70.0130 132 1 C12-C13 Aromatics " 4.00 4.06 " 60.0-140 102 Duplicate O390389-DUP1 890304-01 C5-C6 Aliphatics " ND ND mg/kg dry 25.0 C8-C10 Aliphatics " ND ND " 25.0 C8-C10 Aromatics " ND ND ND " 25.0 C8-C10 Aromatics " ND ND " 25.0 C8-C10 Aromatics " ND ND ND " 25.0 C8-C10 Aromatics " ND ND ND " 25.0 C8-C10 Aromatics " ND ND ND " 25.0 C8-C10 Aromat						ASKITACIO	MINGEN VALUE OF THE PROPERTY O	· · · · · · · ·	XELET.					
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Autorogate: 4-BFB (PID)	Surrogate: 4-BFB (FID)		4.00		3.89	"		97.3						
C5-C6 Aliphatics 3/15/99 2.00 1.83 mg/kg dry 70.0-130 91.5 C6-C8 Aliphatics " 1.00 0.721 " 70.0-130 72.1 C8-C10 Aliphatics " 1.00 0.870 " 70.0-130 87.0 C10-C12 Aliphatics " 1.00 1.01 " 70.0-130 101 C8-C10 Aromatics " 4.00 3.96 " 70.0-130 99.0 C10-C12 Aromatics " 1.00 1.03 " 70.0-130 103 C12-C13 Aromatics " 2.00 2.64 " 70.0-130 132 1 Surrogate: 4-BFB (FID) " 4.00 4.06 " 60.0-140 101 Surrogate: 4-BFB (PID) " 4.00 4.07 " 60.0-140 102 Duplicate 0390389-DUP1 B903043-01 C5-C6 Aliphatics " ND ND mg/kg dry 25.0 C8-C10 Aliphatics " ND ND " 25.0 C8-C10 Aliphatics " ND ND " 25.0 C8-C10 Aromatics " ND ND " 25.0 C8-C10 Aromatics " ND ND " 25.0 C8-C10 Aromatics " ND ND " 25.0 C10-C12 Aromatics " ND ND " 25.0	Surrogate: 4-BFB (PID)	"	4.00			n								
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Surrogate: 4-BFB (FID) " 4.75 4.42 " 60.0-140 93.1	C12-C13 Aromatics	H				Ħ								
	Surrogate: 4-BFB (FID)	"	4.75			"	60.0-140	93.1						
	Surrogate: 4-BFB (PID)	"	4.75		4.57	"	60.0-140	96.2						

North Creek Analytical - Bothell





Spokane

Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132

503.906.9200 fax 503.906.9210

20354 Empire Avenue, Suite E-9, Bend, OR 97708-1883 541.383.9310 fax 541.382.7588

IT Corporation - Renton

Project: Barrett

555 South Renton Village Place, Ste 700

Project Number: 108314-60200000 Sampled: 3/1/99

Renton, WA 98055

Received: 3/2/99

Project Manager: Stan Haskins

Reported: 3/16/99 11:23

BTEX, MTBE and Naphthalene by WDOE Interim TRH Policy Method using GC/MS/Quality Control North Creek Analytical Bothell

	Date	Spike	Sample	QC	Re	porting Limit	Recov.	RPD	RPD	
Analyte	Analyzed	Level	Result	Result	Units	Recov. Limits	%	Limit	%	Notes*
	,	<u> </u>						-		
Batch: 0390065	<u>Date Prepa</u>		9		Extraction	n Method: EP	A 5030B	[MeOH]		
<u>Blank</u>	<u>0390065-B1</u>	<u>LK1</u>								
Methyl tert-butyl ether	3/3/99			ND	mg/kg dry					
Benzene	**			ND	61	0.100				
Toluene	*1			ND	11	0.100				
Ethylbenzene	Ħ			ND	н	0.100				
m,p-Xylene	**			ND	**	0.200				
o-Xylene	н			ND	п	0.100				
Naphthalene	lr .			ND	н	0.100				
Surrogate: 2-Bromopropene		2.00		1.95	"	70.0-130	97.5			
Surrogate: 1,2-DCA-d4	ď	2.00		1.96	"	70. 0-13 0	98.0			
Surrogate: Toluene-d8	"	2.00		2.14	"	70.0-130	107			
Surrogate: 4-BFB	"	2.00		1.77	**	70.0-130	88.5			
LCS	0200065 70	•								
Benzene	0390065-BS	-		0.055	a ,	500 120	05.5			
Toluene	3/3/99	1.00	,	0.875	mg/kg dry					
	 "	1.00		0.840	<u>"</u>	70.0-130	84.0			
Surrogate: 2-Bromopropene	"	2.00		1.89	"	70.0-130	94.5			
Surrogate: 1,2-DCA-d4	"	2.00		1.84	"	70.0-130	92.0			
Surrogate: Toluene-d8		2.00		1.91		70.0-130	95.5			
Surrogate: 4-BFB	"	2.00		1.66	"	70.0-130	83.0			
Matrix Spike	0390065-M	<u>S1 B</u> 9	902473-04							
Benzene	3/3/99	1.12	ND	1.03	mg/kg dry	70.0-130	92.0			
Toluene	II .	1.12	ND	0.915	Ħ	70.0-130	81.7			
Surrogate: 2-Bromopropene	"	2.23	-	2.12	"	70.0-130	95.1			
Surrogate: 1,2-DCA-d4	"	2.23		2.08	"	70.0-130	93.3			
Surrogate: Toluene-d8	"	2.23		2.03	"	70.0-130	91.0			
Surrogate: 4-BFB	"	2.23		1.91	n	70.0-130	<i>85.7</i>			
Matrix Spike Dup	0390065-M	SD1 PG	902473-04							
Benzene	3/3/99	1.12	ND	1.03	mg/kg dry	70.0-130	92.0	20.0	0	
Toluene	"	1.12	ND	1.05	mg/kg dry	70.0-130		20.0	14.6	
Surrogate: 2-Bromopropene	- н	2.23		1.94	"	70.0-130	87.0	20.0	14.0	
Surrogate: 1,2-DCA-d4	"	2.23 2.23		1.94 1.85	"		83.0			
Surrogate: Toluene-d8	"	2.23 2.23			"	70.0-130				
•	"			2.19	" "	70.0-130	98.2			
Surrogate: 4-BFB		2.23		1.82	•	70.0-130	81.6			

North Creek Analytical - Bothell





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IT Corporation - Renton

555 South Renton Village Place, Ste 700

Renton, WA 98055

Project: Barrett

Sampled: 3/1/99

Project Number: Project Manager:

108314-60200000 Stan Haskins

Received: 3/2/99

Reported: 3/16/99 11:23

Extractable Retroleum Hydrocarbons by modified WDOE/Interim TRH-Policy/Method/Quality Control North Creek Analytical = Bothell 4

	Date	Spike	Sample	QC	R	eporting Limit	Recov.	RPD	RPD	
Analyte	Analyzed	Level	Result	Result	Units	Recov. Limits	%	Limit	%	Notes*
Batch: 0390147	Date Prepa	red: 3/4/99)		Extractio	n Method: EPA	4 3550B			
Blank	0390147-BI	-		<u> </u>						
C8-C10 Aliphatics	3/13/99			ND	mg/kg dry	5.00				
C10-C12 Aliphatics	**			ND	"	5.00				
C12-C16 Aliphatics	••			ND	Ħ	5.00				
C16-C21 Aliphatics	n			ND	n	5.00				
C21-C34 Aliphatics	**			ND	**	5.00				
C10-C12 Aromatics	3/8/99			ND	H	5.00				
C12-C16 Aromatics	**			ND	ıt	5.00				
C16-C21 Aromatics	**			ND	II .	5.00				
C21-C34 Aromatics	н			ND	Ħ	5.00				
Extractable Petroleum Hydrocarbons	tt			ND	##					
Surrogate: 2-FBP	"	12.0		9.90	tt .	50.0-150	82.5			
Surrogate: Octacosane	3/13/99	12.3		10.7	"	50.0-150	87.0			
Surrogate: Undecane	"	13.3		9.72	tt .	30.0-150	73.1			
LCS	0390147-BS	51 .								
Extractable Petroleum Hydrocarbons	3/8/99	167		138	mg/kg dry	30.0-120	82.6			
Surrogate: 2-FBP	"	12.0		7.79	"	50.0-150	64.9			
Surrogate: Octacosane	3/12/99	12.3		14.2	"	50.0-150	115			
Surrogate: Undecane	"	13.3		10.9	"	30.0-150	82.0			
LCS Dup	0390147-BS	SD1								
Extractable Petroleum Hydrocarbons	3/8/99	167		123	mg/kg dry	30.0-120	73.7	40.0	11.4	
Surrogate: 2-FBP	"	12.0		8.49	"	50.0-150	70.7			
Surrogate: Octacosane	rr .	12.3		6.23	n	50.0-150	50.7			
Surrogate: Undecane	n .	13.3		10.5	tt	30.0-150	78.9			
Matrix Spike	0390147-M	<u>S1</u> B9	002408-16							
Extractable Petroleum Hydrocarbons	3/8/99	194	3760	3640	mg/kg dry	30.0-120	NR			2
Surrogate: 2-FBP	,,	14.0	-	10.4	"	50.0-150	74.3	-		
Surrogate: Octacosane	"	14.3		ND	"	50.0-150	NR			3
Surrogate: Undecane	"	15.4		11.1	"	30.0-150	72. <i>1</i>			

North Creek Analytical - Bothell

*Refer to end of report for text of notes and definitions.

Joy B Chang, Project Manager



Bend 20354 Empire Avenue, Suite E-9, Bend, OR 97708-1883 541.383.9310 fax 541.382.7588

IT Corporation - Renton Sampled: 3/1/99 Project: Barrett 555 South Renton Village Place, Ste 700 Project Number: 108314-60200000 Received: 3/2/99

Renton, WA 98055 Project Manager: Stan Haskins Reported: 3/16/99 11:23

Polynuclear Aromatic Hydrocarbons by GC/MS-SIM/Quality Control North Creek Analytical - Bothell

	Date	Spike	Sample	QC]	Reporting Limit	Recov.	RPD	RPD	
Analyte	Analyzed	Level	Result	Result	Units	Recov. Limits	%	Limit	<u>%</u> 1	Notes*
								_	-	
Batch: 0390147	Date Prepar		<u> </u>		Extract	ion Method: EP	A 3550B			
<u>Blank</u>	<u>0390147-BI</u>	<u>.K1</u>								
Acenaphthene	3/9/99			ND	mg/kg d					
Acenaphthylene	Ħ			ND	п	0.0100				
Anthracene	11			ND	**	0.0 100				
Benzo (a) anthracene	tt			ND	H	0.0100				
Benzo (a) pyrene	н			ND	n	0.0100				
Benzo (b) fluoranthene	н			ND	н	0.0100				
Benzo (ghi) perylene	н			ND	н	0.0100				
Benzo (k) fluoranthene	н			ND		0.0100				
Chrysene	*			ND	H	0.0100				
Dibenz (a,h) anthracene	**			ND	H	0.0100				
Fluoranthene	10			ND	61	0.0100				
Fluorene	**			ND	11	0.0100				
Indeno (1,2,3-cd) pyrene	Ħ			ND	**	0.0100				
2-Methylnaphthalene	tt			ND	**	0.0100				
Naphthalene	Ħ			ND	**	0.0100				
Phenanthrene	#			ND	11	0.0100				
Pyrene	**			ND	11	0.0100				
Surrogate: p-Terphenyl-d14	"	0.267	·	0.224	"	30.0-150	83.9			
					,					
<u>Blank</u>	<u>0390147-BI</u>	<u>.K2</u>								
Acenaphthene	3/12/99			ND	mg/kg d					
Acenaphthylene	н			ND	**	0.0100				
Anthracene	H			ND	**	0.0100				
Benzo (a) anthracene	н			ND	**	0.0100				
Benzo (a) pyrene	н			ND		0.0100				
Benzo (b) fluoranthene	н			ND	н	0.0100				
Benzo (ghi) perylene	**			ND	u	0.0100			•	
Benzo (k) fluoranthene	#			ND	н	0.0100				
Chrysene	**			ND	п	0.0100				
Dibenz (a,h) anthracene	Ħ			ND	n	0.0100				
Fluoranthene	11			ND	н	0.0100				
Fluorene	tr			ND	п	0.0100				
Indeno (1,2,3-cd) pyrene	**			ND	н	0.0100				
2-Methylnaphthalene	Ħ			ND	11	0.0100				
Naphthalene	er			ND	11	0.0100				
Phenanthrene	**			ND	**	0.0100				
Pyrene	**			ND	**	0.0100				

North Creek Analytical - Bothell





Spokane

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IT Corporation - Renton

555 South Renton Village Place, Ste 700

Project: Barrett

Sampled: 3/1/99

Project Number: 108314-60200000

Received: 3/2/99

Renton, WA 98055

Project Manager: Stan Haskins

Reported: 3/16/99 11:23

Polynuclear: Aromatic Hydrocarbons by GC/MS-SIM/Quality Control North-Creek Analytical - Bothell

	Date	Spike	Sample	QC	Re	porting Limit	Recov.	RPD	RPD
Analyte	Analyzed	Level	Result	Result	Units	Recov. Limits	%	Limit	% Notes
Blank (continued)	0390147-BI	LK2							
Surrogate: p-Terphenyl-d14	3/12/99	0.267		0.214	mg/kg dry	30.0-150	80.1		
LCS	0390147-BS	<u>52</u>							
Chrysene	3/12/99	0.333		0.290	mg/kg dry	10.0-125	87.1		
Fluorene	н	0.333		0.291	н	11.0-116	87.4		
Indeno (1,2,3-cd) pyrene	11	0.333		0.316	ti	10.0-147	94.9		
Surrogate: p-Terphenyl-d14	tr .	0.267		0.197	и	30.0-150	73.8		
LCS Dup	0390147-BS	SD2							
Chrysene	3/12/99	0.333		0.311	mg/kg dry	10.0-125	93.4	28.0	6.98
Fluorene	11	0.333		0.292	Ħ	11.0-116	87.7	32.0	0.343
Indeno (1,2,3-cd) pyrene	er	0.333		0.345	**	10.0-147	104	34.0	9.15
Surrogate: p-Terphenyl-d14	"	0.267		0.213	"	30.0-150	79.8		
Matrix Spike	0390147-M	<u>S2</u> B	903043-01	•					
Chrysene	3/12/99	0.396	ND	0.382	mg/kg dry	10.0-125	96.5		
Fluorene	н	0.396	ND	0.320	н СС,	10.0-154	80.8		
Indeno (1,2,3-cd) pyrene	tt .	0.396	ND	0.419	Ħ	10.0-144	106		
Surrogate: p-Terphenyl-d14	"	0.316		0.259	ıı .	30.0-150	82.0	-	

North Creek Analytical - Bothell



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IT Corporation - Renton

Barrett

Sampled: 3/1/99

555 South Renton Village Place, Ste 700

Project:

Project Number: 108314-60200000

Received: 3/2/99

Renton, WA 98055

Project Manager: Stan Haskins

Reported: 3/16/99 11:23

Notes and Definitions

Note 1 The spike recovery for this QC sample is outside of established control limits. Review of associated batch QC indicates the recovery for this analyte does not represent an out-of-control condition for the batch. 2 Analyses are not controlled on matrix spike RPD and/or percent recoveries when the sample concentration is significantly higher than the spike level. 3 Due to interference from coeluting organic compounds with the primary surrogate, results of the secondary surrogate have been used to control the analysis. DET Analyte DETECTED ND Analyte NOT DETECTED at or above the reporting limit NR Not Reported dгу Sample results reported on a dry weight basis Recov. Recovery RPD Relative Percent Difference

North Creek Analytical - Bothell



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(503) 906-9200

FAX 924-9290 FAX 906-9210

CHAIN OF CUSTODY REPORT

B903043 Work Order #

REPORT TO: THE IT CORP	,		INVO	ICE TO	: //			~						_					
				ATTENTION: COLDIE STOFF MAIN										TURNAROUND REQUEST In Business Days *					
ATTENTION: STAN DYASTINS				MON:		Λie	•	1767	Mary	in_				Organic & Inorganic Analyses					
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