

T: 425 . 427.0061 F: 425 . 427.0067

January 11, 2000

Mr. Brian Sato
Department of Ecology
Northwest Regional Office
3190 160th Ave SE
Bellevue, Washington 98008-5452

RE: DECEMBER 1999 GROUNDWATER SAMPLING

ANALYTICAL RESULTS QUEEN ANN TEXACO SEATTLE, WASHINGTON FARALLON PN: 619-010

Dear Mr. Sato:

Farallon Consulting LLC (Farallon) has prepared this letter on behalf of Texaco to provide you with the analytical results from recent groundwater sampling at the above-referenced site completed on December 14th and 15th, 1999. The groundwater samples were collected to determine the distribution and concentrations of petroleum hydrocarbons in groundwater at the site.

Monitoring well MW-6 and vapor well VP-1 contained free product approximately 1-inch and 3.25-inches thick, respectively at the time of the field investigation. Samples of the free product were submitted to Friedman & Bruya, Inc. for hydrocarbon identification. Groundwater samples were not collected from these wells. A thin layer of free product was also observed in vapor well VP-4, but a groundwater sample was not collected. Vapor well VP-6 was inaccessible at the time of the sampling event, therefore, Farallon was unable to collect a groundwater sample.

Groundwater samples collected from monitoring wells MW-4, MW-9, and MW-10; vapor wells VP-2, VP-5, VP-7, VP-8, and VP-9 were submitted for the following analyses: gasoline-range hydrocarbons by NWTPH-Gx, benzene, toluene, ethylbenzene, and xylenes by EPA 8021B, diesel- and oil-range hydrocarbons by NWTPH-Dx, and total and dissolved lead by EPA6000/7000 Series Methods. Groundwater samples from wells VP-7, MW-10, and MW-4 were submitted for analysis of dissolved ferrous Iron by PSEP, nitrate-nitrogen and sulfate by EPA Method 300.0, and dissolved manganese by EPA 6000/7000 Series Methods.



A summary of the December 1999 analytical results is shown in Table 1 along with previous analytical results from October 1995 and quarterly sampling results from 1997 for comparison. The well locations and well labeling used for this, and all future sampling, is shown on the attached figure.

Farallon is currently evaluating the analytical results. In accordance with Texaco's request, product recovery will be initiated in MW-6, VP-1 and VP-4 immediately as an interim action. The product recovery will consist of absorbent pads placed in each of these wells with periodic removal and replacement.

A schedule and scope of work for the additional work which may be necessary at the site is in preparation at this time. Farallon will provide a scope of work and schedule once evaluation is completed.

Farallon trusts that this provides sufficient information. Feel free to contact either of the undersigned at (425) 427-0061 if you have any questions.

Sincerely,

Farallon Consulting LLC

Kim Saganski

Project Geologist

Peter Jewett

Principal

Attachments

-Table 1

-Figure 1

-Analytical Laboratory Reports

cc: Jeff Goold, Equiva Services LLC

Mike Nesteroff, Lane Powell Spears Lubersky

Mark Myers, William Kastner & Gibbs

Tom Vaughn; Equipose Corp

KS:gr

TABLE 1 QUEEN ANN TEXACO GROUNDWATER ANALYTICAL DATA

Oct. 1995 through Dec. 1999 FARALLON PN: 619-010

Sample Number	Date Sampled	Gasoline Range Hydrocarbons (ug/l)	Benzene (ug/l)	Toluene (ug/l)	Ethylbenzene (ug/l)	Xylenes (total) (ug/l)	m&p-xylene (ug/l)	o-xylene (ug/l)	Diesel Range Hydrocarbons (mg/l)
VP-2	Dec-99	5,980	935	345	43.8	305			29.9
VP-5	Dec-99	23,400	841	191	1,480	7,720			2.49
VP-7	Dec-99	73,400	16,800	9,670	1,890	10,500			3.31
VI-7	Nov-97	34,000	15,900	3,600	1,500	RA	4,800	1,800	NT
	Jul-97	37,000	11,000	3,700	1,500	RA	5,200	1,900	NT
	Apr-97	53,000	11,100	4,800	1,400	RA	5,400	2,200	NT
	Jan-97	51,000	124,000	5,200	990	RA	3,700	1,500	NT
	Oct-95	33,000	11,700	2,330	1,070	4,130			NT
VP-8	Dec-99	7,640	540	927	201	1,430			2.78
, 11 0	Nov-97	830J	5.6	7	11	RA	23	9.6	NT
	Jul-97	9,100J	96	246	52	RA	706	274	NT
	Apr-97	18,000	605	786	119	RA	1,260	514	NT
İ	Jan-97	8,000	816	824	26	RA	412	182	NT
	Oct-95	3,100	2.5	1.2	3	16			NT
VP-9	Dec-99	118	ND	ND	ND	ND			ND
MW-4	Dec-99	73,300	13,700	13,500	1,830	11,000			3.34
1444-4	Nov-97	89,000	17,500	16,000	1,900	RA	8,800	3,400	NT
	Jul-97	120,000	19,600	19,700	2,100	RA	9,300	3,800	NT
	Apr-97	100,000	14,300	14,500	1,700	RA	7,800	3,200	NT
	Jan-97	88,000	12,900	12,400	1,400	RA	7,500	3,100	NT
	Oct-95	95,000	19,600E	12,000	2,070	10,800			NT
MW-9	Dec-99	4,460	831	22.4	274	138			8.51
101 00 -9	Nov-97	5,000	2,010	80	334	RA	356	44	NT
	Jul-97	2,200J	2,680	127	460	RA	561	59J	NT
	Apr-97	9,100	2,980	173	413	RA	554	120	NT
	Jan-97	4,400	2,600	53	310	RA	270	15	NT
	Oct-95	3,400	3,520	70J	200U	312J			NT
MW-10	Dec-99	618	7.02	ND	ND	ND			0.353
1.1,1,1-10	Nov-97	1,000	4.2	2	4.8	RA	1.6	0.6Ј	NT
	Jul-97	1,100	10	2.1	2.4	RA	3.8	0.54J	NT
	Apr-97	420	5.1	1	1U	RA	2.0J	1.4U	NT
	Jan-97	180	1.5	1U	1U	RA	2U	1U	NT
	Oct-95	780	1.8	2.9	0.82J	5.6			NT

Dec-99 Sampled and reported by Farallon

Notes:

ND - Not detected at or above the method reporting limit

NT - Not tested

Oct-95 to Nov-97- Data from Department of Ecology report Monterey Apartments Groundwater Monitoring

- E The analyte was not detected at or above the reported value
- J The analyte was positively identified. The associated numerical result is an estimate
- P The analyte was detected above the instrument detection limit but below the establised minimum quantitation limit.
- U- The analyte was not detected at or above the reported value.
- RA- Reported as m&p xylene and o-xylene, total xylene not reported by Ecology.

TABLE 1 QUEEN ANN TEXACO

GROUNDWATER ANALYTICAL DATA

Oct. 1995 through Dec. 1999 FARALLON PN: 619-010

Sample Number	Oil Range Hydrocarbons (mg/l)	Lead (total) (mg/l)	Lead (dissolved) (mg/l)	Manganese (mg/l)	Ferrous Iron (mg/l)	Nitrate-Nitrogen (mg/l as N)	Sulfate (mg/l)
VP-2	ND	0.262	0.0617	NT	NT	NT	NT
VP-5	ND	0.00676	0.00275	NT	NT	NT	NT
VP-7	ND	0.00591	0.00211	7.76	11.7	ND	13.4
, ,	NT	0.005	NT	NT	NT	NT	NT
	NT	0.0043J	NT	NT	NT	NT	NT
	NT	0.0034	NT	NT	NT	NT	NT
	NT	0.0093	NT	NT	NT	NT	NT
	ИТ	0.0056P	NT	NT	NT	NT	NT
VP-8	ND	0.0406	0.00502	NT	NT	NT	NT
	NT	0.0127	NT	NT	NT	NT	NT
	NT	0.023	NT	NT	NT	NT	NT
	NT	0.0246	NT	NT	NT	NT	NT
	NT	0.037	NT	NT	NT	NT	NT
	NT	0.0034P	NT	NT	NT	NT	NT
VP-9	ND	0.00572	ND	NT	NT	NT	NT
MW-4	ND	0.0198	0.00986	10.5	6.15	ND	ND
	NT	0.0162	NT	NT	NT	NT	NT
	NT	0.0195	NT	NT	NT	NT	NT
	NT	0.0207	NT	NT	NT	NT	NT
	NT	0.0365	NT	NT	NT	NT	NT
	NT	0.0306	NT	NT	NT	NT	NT
MW-9	ND	0.0150	0.00103	NT	NT	NT	NT
	NT	0.0033	NT	NT	NT	NT	NT
	NT	0.0086J	NT	NT	NT	NT	NT
	NT	0.0068	NT	NT	NT	NT	NT
	NT	NT	NT	NT	NT	NT	NT
	NT	0.0046P	NT	NT	NT	NT	NT
MW-10	ND	ND	ND	5.12	ND	0.720	70.6
	NT	0.0049	NT	NT	NT	NT	NT
	NT	0.0012J	NT	NT	NT	NT	NT
	NT	0.001U	NT	NT	NT	NT	NT
	NT	NT	NT	NT	NT	NT	NT
	NT	0.001U	NT	NT	NT	NT	NT

Dec-99 Sampled and reported by Farallon

Notes:

ND - Not detected at or above the method reporting limit

NT - Not tested

Oct-95 to Nov-97- Data from Department of Ecology report Monterey Apartments Groundwater Monitoring

- E The analyte was not detected at or above the reported value
- J The analyte was positively identified. The associated numerical result is an estimate
- P The analyte was detected above the instrument detection limit but below the establised minimum quantitation limit.
- U- The analyte was not detected at or above the reported value.
- RA- Reported as m&p xylene and o-xylene, total xylene not reported by Ecology.

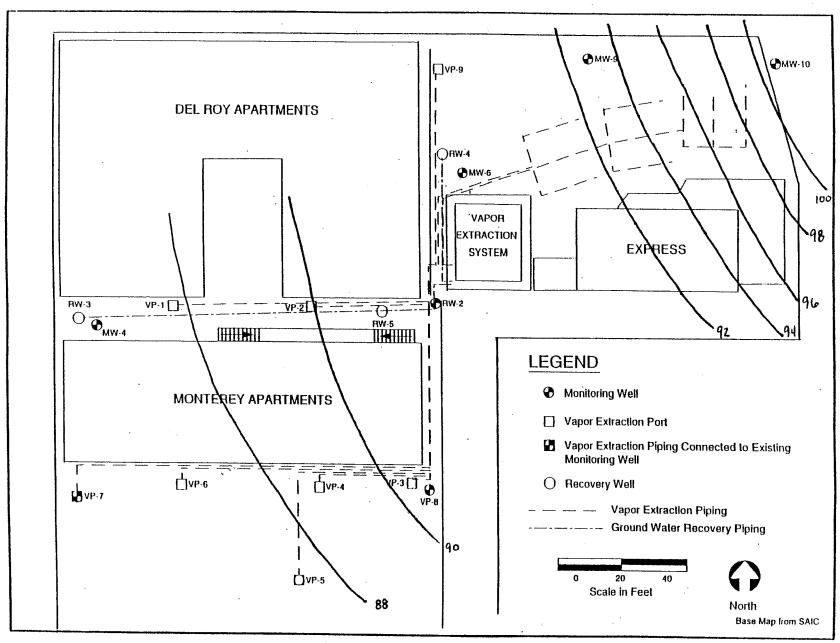


Figure 1: Queen Ann Texaco - Water Table Contour Measurements (11/3/86)



h Avenue NE, Suite 101, Bothell, WA 98011-9508 Seattle

,00 fax 425.420.9210

East 11115 Montgomery, Suite B, Spokane, WA 99206-4776 Spokane

509.924.9200 fax 509.924.9290

9405 SW Nimbus Avenue, Beaverton, OR 97008-7132 Portland 503.906.9200 fax 503.906.9210 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711

541.383.9310 fax 541.382.7588

28 December, 1999

Peter Jewett Farallon Consulting LLC 320 Third Avenue NE, Suite 200 Issaquah, WA 98027

RE: Queen Ann Texaco

Enclosed are the results of analyses for samples received by the laboratory on 12/16/99 14:15. If you have any questions concerning this report, please feel free to contact me.

Sincerely.

Kirk Gendron Project Manager

RECEIVED

DEPT. OF ECOLOGY



Seattle 1893? h Avenue NE, Suite 101, Bothell, WA 98011-9508

East 11115 Montgomery, Suite B, Spokane 509,924,9200 fax 509,924,9290

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

20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711 541.383,9310 fax 541.382.7588

Farallon Consulting LLC 320 Third Avenue NE, Suite 200

Issaquah WA, 98027

Project: Queen Ann Texaco

Spokane

Project Number: 619-010-003 Project Manager: Peter Jewett **Reported:** 12/28/99 14:40

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
VP-7	B9L0316-01	Water	12/14/99 15:15	12/16/99 14:15
VP-9	B9L0316-02	Water	12/15/99 09:30	12/16/99 14:15
MW-9	B9L0316-03	Water	12/15/99 10:20	12/16/99 14:15
MW-10	B9L0316-04	Water	12/15/99 11:30	12/16/99 14:15
MW-4	B9L0316-05	Water	12/15/99 13:35	12/16/99 14:15
VP-5	B9L0316-06	Water	12/15/99 15:10	12/16/99 14:15
VP-8	B9L0316-07	Water	12/15/99 15:50	12/16/99 14:15
VP-2	B9L0316-08	Water	12/15/99 16:00	12/16/99 14:15

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.

Kirk Gendron, Project Manager



Seattle 1893' Avenue NE, Suite 101, Bothell, WA 98011-9508

425.4L 200 fax 425.420.9210

Spokane 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 503.906.9210

nd 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711

541.383.9310 fax 541.382.7588

Farallon Consulting LLC 320 Third Avenue NE, Suite 200 Issaquah WA, 98027 Project: Queen Ann Texaco

Project Number: 619-010-003 Project Manager: Peter Jewett Reported: 12/28/99 14:40

Volatile Petroleum Products and BTEX by NWTPH-Gx and EPA 8021B North Creek Analytical - Bothell

Analyte	Result	Leporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Not
VP-7 (B9L0316-01) Water Sampled:	12/14/99 15:15	Received	12/16/99 14:	15					
Gasoline Range Hydrocarbons	73400	10000	ug/l	200	9L17005	12/17/99	12/17/99	NWTPH-Gx/8021B	
Benzene	16800	100	Ħ	11	IF	tt.	11	11	
Toluene	9670	100	U	19	17	tt	11	11	
Ethylbenzene	1890	100	н	10	IP	lt .	n	11	
Xylenes (total)	10500	200	n	11	II	U	"	п	
Surrogate: 4-BFB (FID)		90.6 %	50-150		"	"	"	"	
Surrogate: 4-BFB (PID)		100 %	50-150		"	"	"	"	
VP-9 (B9L0316-02) Water Sampled:	12/15/99 09:30	Received	: 12/16/99 14:	15					
Gasoline Range Hydrocarbons	118	50.0	ug/l	1	9L17005	12/17/99	12/17/99	NWTPH-Gx/8021B	
Benzene	ND	0.500	u	н	IP	U	11	11	
Toluene	ND	0.500	11	U	It	O		19	
Ethylbenzene	ND	0.500	11	U	II	ft	11	19	
Xylenes (total)	ND	1.00	Ħ	н		11	**	II	
Surrogate: 4-BFB (FID)		89.2 %	50-150		"	"	"	n .	
Surrogate: 4-BFB (PID)		100 %	50-150		"	"	"	n	
MW-9 (B9L0316-03) Water Sampled	l: 12/15/99 10:20	Receive	d: 12/16/99 14	:15					
Gasoline Range Hydrocarbons	4460	1000	ug/l	20	9L17005	12/17/99	12/17/99	NWTPH-Gx/8021B	
Benzene	831	10.0	U	11	11	11	11	H	
Toluene	22.4	10.0	. U	11	11	"	**	11	
Ethylbenzene	274	10.0	U	11	11	"	11	11	
Xylenes (total)	138	20.0	H	11	11	"	11	11	
Surrogate: 4-BFB (FID)		89.6 %	50-150	, 200,000	"	"	"	"	
Surrogate: 4-BFB (PID)		103 %	50-150		"	"	"	"	

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.

Kirk Gendron, Project Manager



h Avenue NE, Suite 101, Bothell, WA 98011-9508

425.42 ,00 fax 425.420.9210

East 11115 Montgomery, Suite B, Spokane. WA 99206-4776 Spokane 509.924.9200 fax 509.924.9290

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

503.906.9200 fax 503.906.9210 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711 541.383.9310 fax 541.382.7588

Farallon Consulting LLC

320 Third Avenue NE, Suite 200 Issaquah WA, 98027

Project: Queen Ann Texaco

Project Number: 619-010-003 Project Manager: Peter Jewett

Reported: 12/28/99 14:40

Volatile Petroleum Products and BTEX by NWTPH-Gx and EPA 8021B North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-10 (B9L0316-04) Water Sampled	: 12/15/99 11:	30 Receive	ed: 12/16/99 1	14:15					
Gasoline Range Hydrocarbons	618	50.0	ug/l	1	9L17005	12/17/99	12/17/99	NWTPH-Gx/8021B	
Benzene	7.02	0.500	**	u	19	11	0	II .	
Toluene	ND	0.910	**	Ħ	n	11	tt	II.	R-03
Ethylbenzene	ND	0.850	**	tt	11	11	11	II .	R-03
Xylenes (total)	ND	4.22	11	**	ti	"	11	n	R-03
Surrogate: 4-BFB (FID)		102 %	50-150		"	"	"	"	
Surrogate: 4-BFB (PID)		98.5 %	50-150		"	"	"	"	
MW-4 (B9L0316-05) Water Sampled:	12/15/99 13:3	5 Received	d: 12/16/99 14	1:15					
Gasoline Range Hydrocarbons	73300	10000	ug/l	200	9L17005	12/17/99	12/17/99	NWTPH-Gx/8021B	
Benzene	13700	100	n	IF	11	ti .	"	Ħ	
Toluene	13500	100	н	Ir	19	17	11	Ħ	
Ethylbenzene	1830	100	9	Ħ	U	11	**	11	
Xylenes (total)	11000	200	Ħ	**	"	11	11	H	
Surrogate: 4-BFB (FID)		87.9 %	50-150		"	"	11	n	
Surrogate: 4-BFB (PID)		99.2 %	50-150		"	"	"	"	
VP-5 (B9L0316-06) Water Sampled: 1	2/15/99 15:10	Received:	12/16/99 14:	15					
Gasoline Range Hydrocarbons	23400	250	ug/l	5	9L17005	12/17/99	12/17/99	NWTPH-Gx/8021B	
Benzene	841	25.0	"	50	"	H	12/18/99	11	
Toluene	191	2.50	"	5	"	n	12/17/99	H	
Ethylbenzene	1480	25.0	"	50	**	11	12/18/99	p	
Xylenes (total)	7720	50.0	**	11	11	ti .	ŧI	lt .	
Surrogate: 4-BFB (FID)		119 %	50-150		"	"	12/17/99	"	
Surrogate: 4-BFB (PID)		99.6 %	50-150			"	"	"	

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.

Kirk Gendron, Project Manager

North Creek Analytical, Inc. Environmental Laboratory Network



93(h Avenue NE, Suite 101, Bothelf, WA 98011-9508

425.42 ±00 fax 425.420.9210

Spokane 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 503.906.9210

20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711 541.383.9310 fax 541.382.7588

Farallon Consulting LLC

320 Third Avenue NE, Suite 200

Issaquah WA, 98027

Project: Queen Ann Texaco

Project Number: 619-010-003
Project Manager: Peter Jewett

Reported: 12/28/99 14:40

Volatile Petroleum Products and BTEX by NWTPH-Gx and EPA 8021B

North Creek Analytical - Bothell

Analyte	Result F	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
VP-8 (B9L0316-07) Water Sampled	: 12/15/99 15:50	Received	: 12/16/99 14	:15					
Gasoline Range Hydrocarbons	7640	2500	ug/l	50	9L17005	12/17/99	12/18/99	NWTPH-Gx/8021B	
Benzene	540	25.0	n	11	tř.	n	11	n	
Toluene	927	25.0	11	tt	fit	IJ	11	**	
Ethylbenzene	201	25.0	11	11	łł	17	11	11	
Xylenes (total)	1430	50.0	u	n	11	11	"	Ħ	
Surrogate: 4-BFB (FID)		87.5 %	50-15	0	"	"	"	"	
Surrogate: 4-BFB (PID)		98.5 %	50-15	0	"	"	"	"	
VP-2 (B9L0316-08) Water Sampled	: 12/15/99 16:00	Received	: 12/16/99 14	:15					
Gasoline Range Hydrocarbons	5980	1000	ug/l	20	9L17005	12/17/99	12/17/99	NWTPH-Gx/8021B	
Benzene	935	10.0	1)	U	11	#	11	n	
Toluene	345	10.0	11	11	u	**	19	π	
Ethylbenzene	43.8	10.0	11	U	U	**	11	H	
Xylenes (total)	305	20.0	ti .	u u	u	"	"	11	
Surrogate: 4-BFB (FID)		85.4 %	50-15	0	"	"	"	"	
Surrogate: 4-BFB (PID)		100 %	50-15	0	n	"	"	n	

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.



th Avenue NE, Suite 101, Bothell, WA 98011-9508 _00 fax 425.420.9210

425.4. Spokane

East 11115 Montgomery, Suite B, Spokane, WA 99206-4776 509.924.9200 fax 509.924.9290 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132 Portland

503.906.9200 fax 503.906.9210

20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711 Bend

541.383.9310 fax 541.382.7588

Farallon Consulting LLC

Issaquah WA, 98027

Project: Queen Ann Texaco

320 Third Avenue NE, Suite 200

Project Number: 619-010-003 Project Manager: Peter Jewett

Reported: 12/28/99 14:40

Semivolatile Petroleum Products by NWTPH-Dx (w/o Acid/Silica Gel Clean-up) North Creek Analytical - Bothell

	R	Reporting							
Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
VP-7 (B9L0316-01) Water Sampled	d: 12/14/99 15:15	Received	: 12/16/99 14	:15					
Diesel Range Hydrocarbons	3.31	0.250	mg/l	1	9L18001	12/18/99	12/20/99	NWTPH-Dx	D-08
Lube Oil Range Hydrocarbons	ND	0.500	II.	11	19	11	ii .	11	
Surrogate: 2-FBP		95.0 %	50-150	9	"	"	"	"	
VP-9 (B9L0316-02) Water Sample	d: 12/15/99 09:30	Received	: 12/16/99 14	:15					
Diesel Range Hydrocarbons	ND	0.250	mg/l	1	9L18001	12/18/99	12/20/99	NWTPH-Dx	
Lube Oil Range Hydrocarbons	ND	0.500	IF.	"	II	**	Ħ	н	
Surrogate: 2-FBP		85.8 %	50-150	9	"	"	"	"	
MW-9 (B9L0316-03) Water Sampl	ed: 12/15/99 10:20	0 Receive	d: 12/16/99 1	4:15					
Diesel Range Hydrocarbons	8.51	0.250	mg/l	1	9L18001	12/18/99	12/20/99	NWTPH-Dx	
Lube Oil Range Hydrocarbons	ND	0.500	H	"	H	H	n	tt	
Surrogate: 2-FBP		74.0 %	50-150	9	"	"	"	"	
MW-10 (B9L0316-04) Water Samp	oled: 12/15/99 11:.	30 Receiv	ed: 12/16/99	14:15					
Diesel Range Hydrocarbons	0.353	0.250	mg/l	1	9L20014	12/20/99	12/22/99	NWTPH-Dx	
Lube Oil Range Hydrocarbons	ND	0.500	U	If	17	U	11	11	
Surrogate: 2-FBP		74.2 %	50-150	9	"	"	"	"	
MW-4 (B9L0316-05) Water Sampl	ed: 12/15/99 13:3	5 Receive	d: 12/16/99 1	4:15					
Diesel Range Hydrocarbons	3.34	0.250	mg/l	1	9L20014	12/20/99	12/21/99	NWTPH-Dx	
Lube Oil Range Hydrocarbons	ND	0.500	"	"	19	11	11	11	
Surrogate: 2-FBP		79.5 %	50-150	9	"	"	"	n	
VP-5 (B9L0316-06) Water Sample	d: 12/15/99 15:10	Received	: 12/16/99 14	:15					
Diesel Range Hydrocarbons	2.49	0.250	mg/l	1	9L20014	12/20/99	12/22/99	NWTPH-Dx	
Lube Oil Range Hydrocarbons	ND	0.500	H	It	H	H	u	11	
Surrogate: 2-FBP		94.0 %	50-150	9	"	"	"	"	

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.

Kirk Gendron, Project Manager

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



h Avenue NE, Suite 101, Bothell, WA 98011-9508

425.42 _00 fax 425.420.9210

East 11115 Montgomery, Suite B, Spokane, WA 99206-4776 Spokane

509.924.9200 fax 509.924.9290 Portland

9405 SW Nimhus Avenue, Beaverton, OR 97008-7132 503.906.9200 fax 503.906.9210 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711 541,383,9310 fax 541,382,7588 Bend

Farallon Consulting LLC

320 Third Avenue NE, Suite 200

Issaquah WA, 98027

Project: Queen Ann Texaco

Project Number: 619-010-003

Project Manager: Peter Jewett

Reported:

12/28/99 14:40

Semivolatile Petroleum Products by NWTPH-Dx (w/o Acid/Silica Gel Clean-up) North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
VP-8 (B9L0316-07) Water Sampled	l: 12/15/99 15:50	Received	: 12/16/99 14	:15					
Diesel Range Hydrocarbons	2.78	0.250	mg/l	1	9L20014	12/20/99	12/21/99	NWTPH-Dx	
Lube Oil Range Hydrocarbons	, ND	0.500	n	11	11	11	II .	U	
Surrogate: 2-FBP		65.6 %	50-150	9	"	"	"	11	
VP-2 (B9L0316-08) Water Sampled	l: 12/15/99 16:00	Received	: 12/16/99 14	:15					
Diesel Range Hydrocarbons	29.9	1.25	mg/l	5	9L20014	12/20/99	12/22/99	NWTPH-Dx	
Lube Oil Range Hydrocarbons	ND	2.50	11	"	"	п	#	11	
Surrogate: 2-FBP		67.2 %	50-150	9	"	"	"	n n	

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.

Kirk Gendron, Project Manager

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



th Avenue NE, Suite 101, Bothell, WA 98011-9508 Seattle

425.4. 200 fax 425.420.9210
East 11115 Montgomery, Suite B, Spokane, WA 99206-4776
509.924.9200 fax 509.924.9290 Spokane

Portland

9405 SW Nimbus Avenue, Beaverton, OR 97008-7132 503.906.9200 fax 503.906.9210 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711 Bend

541.383.9310 fax 541.382.7588

Farallon Consulting LLC 320 Third Avenue NE, Suite 200

Issaquah WA, 98027

Project: Queen Ann Texaco

Project Number: 619-010-003 Project Manager: Peter Jewett

Reported: 12/28/99 14:40

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

	I	Reporting							
Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
VP-7 (B9L0316-01) Water	Sampled: 12/14/99 15:15	Received	l: 12/16/99 14	1:15					
Lead	0.00591	0.00100	mg/l	I	9L17012	12/17/99	12/22/99	EPA 6020	
VP-9 (B9L0316-02) Water	Sampled: 12/15/99 09:30	Received	: 12/16/99 14	l:15					
Lead	0.00572	0.00100	mg/l	1	9L17012	12/17/99	12/21/99	EPA 6020	
MW-9 (B9L0316-03) Water	Sampled: 12/15/99 10:2	0 Receive	ed: 12/16/99 1	14:15					
Lead	0.0150	0.00100	mg/l	1	9L17012	12/17/99	12/21/99	EPA 6020	
MW-10 (B9L0316-04) Wate	r Sampled: 12/15/99 11:	30 Receiv	ed: 12/16/99	14:15					
Lead	ND	0.00100	mg/l	1	9L17012	12/17/99	12/21/99	EPA 6020	
MW-4 (B9L0316-05) Water	Sampled: 12/15/99 13:3	5 Receive	ed: 12/16/99 1	14:15					
Lead	0.0198	0.00100	mg/l	1	9L17012	12/17/99	12/21/99	EPA 6020	
VP-5 (B9L0316-06) Water	Sampled: 12/15/99 15:10	Received	: 12/16/99 14	:15					
Lead	0.00676	0.00100	mg/l	1	9L17012	12/17/99	12/21/99	EPA 6020	
VP-8 (B9L0316-07) Water	Sampled: 12/15/99 15:50	Received	: 12/16/99 14	:15					
Lead	0.0406	0.00100	mg/l	1	9L17012	12/17/99	12/22/99	EPA 6020	
VP-2 (B9L0316-08) Water	Sampled: 12/15/99 16:00	Received	: 12/16/99 14	:15					
Lead	0.262	0.00100	mg/l	1	9L17012	12/17/99	12/22/99	EPA 6020	

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.

Kirk Gendron Project Manager



Bend

th Avenue NE, Suite 101, Bothell, WA 98011-9508 .00 fax 425.420.9210

425.4.

East 11115 Montgomery, Suite B, Spokane, WA 99206-4776 Spokane 509.924.9200 fax 509.924.9290

Portland

9405 SW Nimbus Avenue, Beaverton, OR 97008-7132

503.906.9200 fax 503.906.9210 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711 541.383.9310 fax 541.382.7588

Farallon Consulting LLC

320 Third Avenue NE, Suite 200

Issaquah WA, 98027

Project: Queen Ann Texaco

Project Number: 619-010-003

Project Manager: Peter Jewett

Reported: 12/28/99 14:40

Dissolved Metals by EPA 6000/7000 Series Methods

North Creek Analytical - Bothell

	. I	Reporting							
Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
VP-7 (B9L0316-01) Water	Sampled: 12/14/99 15:15	Received	: 12/16/99	14:15					
Manganese	7.76	0.0200	mg/l	20	9L17011	12/17/99	12/22/99	EPA 6020	
Lead	0.00211	0.00100	11	1	11	"	12/19/99	n	
VP-9 (B9L0316-02) Water	Sampled: 12/15/99 09:30	Received	: 12/16/99	14:15					
Lead	ND	0.00100	mg/l	1	9L17011	12/17/99	12/19/99	EPA 6020	
MW-9 (B9L0316-03) Water	Sampled: 12/15/99 10:2	0 Receive	d: 12/16/99	14:15					
Lead	0.00103	0.00100	mg/l	1	9L17011	12/17/99	12/19/99	EPA 6020	
MW-10 (B9L0316-04) Wate	er Sampled: 12/15/99 11:	30 Receiv	ed: 12/16/9	9 14:15					
Manganese	5.12	0.0200	mg/l	20	9L17011	12/17/99	12/22/99	EPA 6020	
Lead	ND	0.00100	н	l	U	"	12/19/99	11	
MW-4 (B9L0316-05) Water	Sampled: 12/15/99 13:3	5 Receive	d: 12/16/99	14:15					
Manganese	10.5	0.0500	mg/l	50	9L17011	12/17/99	12/22/99	EPA 6020	
Lead	0.00986	0.00100	H	1	11	**	12/19/99	11	
VP-5 (B9L0316-06) Water	Sampled: 12/15/99 15:10	Received	: 12/16/99	14:15					
Lead	0.00275	0.00100	mg/l	1	9L17011	12/17/99	12/19/99	EPA 6020	
VP-8 (B9L0316-07) Water	Sampled: 12/15/99 15:50	Received	: 12/16/99	14:15					
Lead	0.00502	0.00100	mg/l	1	9L17011	12/17/99	12/19/99	EPA 6020	
VP-2 (B9L0316-08) Water	Sampled: 12/15/99 16:00	Received	: 12/16/99	14:15					
Lead	0.0617	0.00100	mg/l	1	9L17011	12/17/99	12/19/99	EPA 6020	

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.

Kirk Gendron, Project Manager



eattle 1893 h Avenue NE, Suite 101, Bothell, WA 98011-9508

425.4 200 fax 425.420.9210

Spokane 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 503.906.9210

Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711

541.383.9310 fax 541.382.7588

Farallon Consulting LLC

320 Third Avenue NE, Suite 200

Issaquah WA, 98027

Project: Queen Ann Texaco

Project Number: 619-010-003

Project Manager: Peter Jewett

Reported:

12/28/99 14:40

Conventional Chemistry Parameters by PSEP Recommended Guidelines North Creek Analytical - Bothell

Analyte	Result	porting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
VP-7 (B9L0316-01) Water Sa	mpled: 12/14/99 15:15	Received	12/16/99	14:15					
Ferrous Iron	11.7	5.00	mg/l	10	9L17027	12/16/99	12/17/99	SM 3500-Fe D	B-08
MW-10 (B9L0316-04) Water	Sampled: 12/15/99 11:30	Receive	ed: 12/16/9	99 14:15					
Ferrous Iron	ND	2.00	mg/l	4	9L17027	12/16/99	12/17/99	SM 3500-Fe D	
MW-4 (B9L0316-05) Water S	Sampled: 12/15/99 13:35	Receive	d: 12/16/99	14:15					
Ferrous Iron	6.15	5.00	mg/l	10	9L17027	12/16/99	12/17/99	SM 3500-Fe D	

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.



Seattle 425.4.

Bend

h Avenue NE, Suite 101, Bothell, WA 98011-9508 .00 fax 425.420.9210

East 11115 Montgomery, Suite B, Spokane, WA 99206-4776 509.924.9200 fax 509.924.9290 Spokane

Portland

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

20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711 541.383.9310 fax 541.382.7588

Farallon Consulting LLC

320 Third Avenue NE, Suite 200 Issaquah WA, 98027

Project: Queen Ann Texaco

Project Number: 619-010-003 Project Manager: Peter Jewett

Reported: 12/28/99 14:40

Anions by EPA Method 300.0 North Creek Analytical - Bothell

	R	eporting							
Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
VP-7 (B9L0316-01) Water	Sampled: 12/14/99 15:15	Received	l: 12/16/99 1	4:15					
Nitrate-Nitrogen	ND	0.100	mg/L as N	1	9L17037	12/17/99	12/17/99	EPA 300.0	B-08
Sulfate	13.4	0.200	mg/l	IJ	H .	N	n	"	
MW-10 (B9L0316-04) Water	r Sampled: 12/15/99 11:3	0 Receiv	/ed: 12/16/9	9 14:15					
Nitrate-Nitrogen	0.720	0.100	mg/L as N	1	9L17037	12/17/99	12/17/99	EPA 300.0	
Sulfate	70.6	2.00	mg/l	10	11	11	tt	ii.	
MW-4 (B9L0316-05) Water	Sampled: 12/15/99 13:35	Receive	ed: 12/16/99	14:15					
Nitrate-Nitrogen	ND	0.100	mg/L as N	1	9L17037	12/17/99	12/17/99	EPA 300.0	
Sulfate	ND	0.200	mg/l	11	11	17	U	II .	

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.



Bend

† Avenue NE, Suite 101, Bothell, WA 98011-9508

Spokane

509.924.9200 fax 509.924.9290 Portland

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

20332 Empire Avenue, Sulte F-1, Bend, OR 97701-5711 541.383.9310 fax 541.382.7588

Farallon Consulting LLC

320 Third Avenue NE, Suite 200 Issaquah WA, 98027

Project: Queen Ann Texaco

Project Number: 619-010-003 Project Manager: Peter Jewett

Reported: 12/28/99 14:40

Volatile Petroleum Products and BTEX by NWTPH-Gx and EPA 8021B - Quality Control North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 9L17005: Prepared 12/2	17/99 Using	EPA 5030B	(P/T)							
Blank (9L17005-BLK1)	2									
Gasoline Range Hydrocarbons	ND	50.0	ug/l							
Benzene	ND	0.500	"							
Toluene	ND	0.500	**							
Ethylbenzene	ND	0.500	11							
Xylenes (total)	ND	1.00	"							
Surrogate: 4-BFB (FID)	40.9		"	48.0		85.2	50-150			
Surrogate: 4-BFB (PID)	46.9		"	48.0		97.7	50-150			
LCS (9L17005-BS1)										
Gasoline Range Hydrocarbons	455	50.0	ug/l	500		91.0	70-130			
Surrogate: 4-BFB (FID)	43.5		"	48.0		90.6	50-150			
Duplicate (9L17005-DUP1)					Source: H	39L0316-0)6			
Gasoline Range Hydrocarbons	25900	2500	ug/l		23400			10.1	25	
Surrogate: 4-BFB (FID)	44.6		"	48.0		92.9	50-150			
Duplicate (9L17005-DUP2)					Source: B9L0300-03					
Gasoline Range Hydrocarbons	ND	50.0	ug/l		14.0			8.18	25	
Surrogate: 4-BFB (FID)	38.6		"	48.0		80.4	50-150			
Matrix Spike (9L17005-MS1)					Source: E	39L0300-()2			
Benzene	10.0	0.500	ug/l	10.0	ND	100	70-130			
Toluene	9.83	0.500	**	10.0	ND	98.3	70-130			
Ethylbenzene	10.2	0.500	11	10.0	ND	102	70-130			
Xylenes (total)	30.5	1.00	11	30.0	ND	102	70-130			
Surrogate: 4-BFB (PID)	47.7		"	48.0		99.4	50-150	*		
Matrix Spike Dup (9L17005-MSD1))				Source: E	B9L0300-()2			
Benzene	10.1	0.500	ug/l	10.0	ND	101	70-130	0.995	15	
Toluene	9.89	0.500	"	10.0	ND	98.9	70-130	0.609	15	
Ethylbenzene	10.3	0.500	n	10.0	ND	103	70-130	0.976	15	
Xylenes (total)	30.6	1.00	tt	30.0	ND	102	70-130	0.327	15	
Surrogate: 4-BFB (PID)	48.0		"	48.0		100	50-150			

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.

Kirk Gendron, Project Manager

North Creek Analytical, Inc. **Environmental Laboratory Network** Page 11 of 17



Spokane

† Avenue NE, Suite 101, Bothell, WA 98011-9508

425.4.00 fax 425.420.9210 East 11115 Montgomery, Suite B, Spokane, WA 99206-4776 509.924.9200 fax 509.924.9290 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132 Portland

503.906.9200 fax 503.906.9210 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711 Bend

541.383.9310 fax 541.382.7588

Farallon Consulting LLC

320 Third Avenue NE, Suite 200

Issaquah WA, 98027

Project: Queen Ann Texaco

Project Number: 619-010-003 Project Manager: Peter Jewett

Reported: 12/28/99 14:40

Semivolatile Petroleum Products by NWTPH-Dx (w/o Acid/Silica Gel Clean-up) - Quality Control North Creek Analytical - Bothell

		I Inita	Spike	Source	0/DEC	%REC	מממ	RPD Limit	Notes
Kesuit	Limit	Omis	Level	Nesuit	/ortic	Pililio	NI D	Lillit	140103
Using El	PA 3520C/	600 Series							
2									
ND	0.250	mg/l	•						
ND	0.500	tt .							
0.266		"	0.320		83. I	50-150			
1.94	0.250	mg/l	2.00		97.0	60-140			
0.266		"	0.320		83.1	50-150			
1.82	0.250	mg/l	2.00		91.0	60-140	6.38	40	
0.252		"	0.320		78.8	50-150			
Using El	PA 3510C/	600 Series							
0									
•									
ND	0.250	mg/l							
		mg/l							
ND	0.250	_	0.320		70.6	50-150			
ND ND	0.250	11	0.320		70.6	50-150			
ND ND	0.250	11	0.320		70.6	50-150			
ND ND 0.226	0.250 0.500	"							
ND ND 0.226	0.250 0.500	mg/l	2.00		88.0	60-140			
ND ND 0.226	0.250 0.500	mg/l	2.00		88.0	60-140	8.28	40	
	ND ND 0.266 1.94 0.266 1.82 0.252	ND 0.250 ND 0.500 0.266 1.94 0.250 0.266	Result Limit Units Using EPA 3520C/600 Series ND 0.250 mg/l ND 0.500 " 0.266 " " 1.94 0.250 mg/l 0.266 " " 1.82 0.250 mg/l 0.252 "	Result Limit Units Level Using EPA 3520C/600 Series ND 0.250 mg/l ND 0.500 " 0.266 " 0.320 1.94 0.250 mg/l 2.00 0.266 " 0.320 1.82 0.250 mg/l 2.00	Result Limit Units Level Result Using EPA 3520C/600 Series ND 0.250 mg/l nmg/l nmg/l nmg/l nmg/l 0.320 nmg/l 0.320 nmg/l 2.00 nmg/l 0.320 nmg/l 2.00 nmg/l 0.320 nmg/l 0	Result Limit Units Level Result %REC Using EPA 3520C/600 Series ND 0.250 mg/l	Result Limit Units Level Result %REC Limits Using EPA 3520C/600 Series ND 0.250 mg/l <	Result Limit Units Level Result %REC Limits RPD Using EPA 3520C/600 Series ND 0.250 mg/l	Result Limit Units Level Result %REC Limits RPD Limit Using EPA 3520C/600 Series ND 0.250 mg/l ND 0.500 " ND 0.500 " 0.320 83.1 50-150 50-150 50-150 1.94 0.250 mg/l 2.00 97.0 60-140 6.38 40 0.266 " 0.320 91.0 60-140 6.38 40 0.252 " 0.320 78.8 50-150

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.

Kirk Gendron, Project Manager

North Creek Analytical, Inc. **Environmental Laboratory Network** Page 12 of 17



th Avenue NE, Suite 101, Bothell, WA 98011-9508

.00 fax 425.420.9210 425.4

East 11115 Montgomery, Suite B. Spokane, WA 99206-4776 Spokane 509.924.9200 fax 509.924.9290

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

503.906.9200 fax 503.906.9210

20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711 541.383.9310 fax 541.382.7588

Farallon Consulting LLC

320 Third Avenue NE, Suite 200

Issaquah WA, 98027

Project: Queen Ann Texaco

Project Number: 619-010-003

Reported: 12/28/99 14:40 Project Manager: Peter Jewett

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

Analyte		Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 9L17012:	Prepared 12/17/99	Using 1	EPA 3020A								
Blank (9L17012-BL	K1)	4									
Lead	2002	ND	0.00100	mg/l							
LCS (9L17012-BS1)										
Lead		0.227	0.00100	mg/l	0.200		113	80-120			
Matrix Spike (9L17	012-MS1)					Source: B	9L0276-0	01			
Lead		0.216	0.00100	mg/l	0.200	0.000822	108	75-125			
Matrix Spike Dup (9L17012-MSD1)					Source: B	9L0276-0	01			
Lead		0.216	0.00100	mg/l	0.200	0.000822	108	75-125	0	20	

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.



Bend

h Avenue NE, Suite 101, Bothell, WA 98011-9508

425.42 ,00 fax 425.420.9210 East 11115 Montgomery, Suite B, Spokane, WA 99206-4776 Spokane

509.924.9200 fax 509.924.9290

9405 SW Nimbus Avenue, Beaverton, OR 97008-7132 Portland 503.906.9200 fax 503.906.9210 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711

541.383.9310 fax 541.382.7588

Farallon Consulting LLC

320 Third Avenue NE, Suite 200

Issaquah WA, 98027

Project: Queen Ann Texaco

Project Number: 619-010-003

Project Manager: Peter Jewett

Reported:

12/28/99 14:40

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 9L17011: Prepared 12/17/99	Using EPA 3005A									
Blank (9L17011-BLK1)	4									
Lead	ND	0.00100	mg/l							***************************************
Manganese	ND	0.00100	11							
LCS (9L17011-BS1)										
Lead	0.203	0.00100	mg/l	0.200		101	80-120		····	
Manganese	0.169	0.00100	11	0.200		84.5	80-120			
Matrix Spike (9L17011-MS1)					Source: B	9L0299-	01			
Lead	0.216	0.00100	mg/i	0.200	0.00130	107	75-125			**************
Manganese	7.35	0.0200	H .	0.200	7.42	-35.0	75-125			Q-15
Matrix Spike Dup (9L17011-MSD1)					Source: B	39L0299-	01			
Lead	0.221	0.00100	mg/l	0.200	0.00130	110	75-125	2.29	20	
Manganese	7.54	0.0200	"	0.200	7.42	60.0	75-125	2.55	20	Q-1:

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.

Kirk Gendron, Project Manager

North Creek Analytical, Inc. **Environmental Laboratory Network** Page 14 of 17



th Avenue NE, Suite 101, Bothell, WA 98011-9508

:00 fax 425.420.9210 425.4

East 11115 Montgomery, Suite B, Spokane, WA 99206-4776 Spokane 509.924.9200 fax 509.924.9290

9405 SW Nimbus Avenue. Beaverton, OR 97008-7132

503.906.9200 fax 503.906.9210

20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711 541.383.9310 fax 541.382.7588

Farallon Consulting LLC Project: Queen Ann Texaco 320 Third Avenue NE, Suite 200 Project Number: 619-010-003

Issaquah WA, 98027 Project Manager: Peter Jewett

Reported: 12/28/99 14:40

Conventional Chemistry Parameters by PSEP Recommended Guidelines - Quality Control North Creek Analytical - Bothell

Analyte	Re	esult	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 9L17027: Pre	pared 12/16/99 Us	sing G	eneral Prep	paration							<u></u>
Blank (9L17027-BLK1)	£										
Ferrous Iron		ND	0.500	mg/l							
LCS (9L17027-BS1)											
Ferrous Iron		1.08	0.500	mg/l	1.25		86.4	80-120			
Duplicate (9L17027-DUP	P1)					Source: B	9L0316-0)5			
Ferrous Iron		6.02	5.00	mg/l		6.15			2.14	20	
Matrix Spike (9L17027-N	MS1)					Source: B	9L0316-0)4			
Ferrous Iron		14.9	5.00	mg/l	12.5	1.48	107	80-120			

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.



h Avenue NE, Suite 101, Bothell, WA 98011-9508

425.42 _00 fax 425.420.9210

East 11115 Montgomery, Suite B, Spokane, WA 99206-4776 509.924.9200 fax 509.924.9290 Spokane

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

20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711 541.383.9310 fax 541.382.7588 Bend

Farallon Consulting LLC

320 Third Avenue NE, Suite 200

Issaquah WA, 98027

Project: Queen Ann Texaco

Project Number: 619-010-003

Project Manager: Peter Jewett

Reported:

12/28/99 14:40

Anions by EPA Method 300.0 - Quality Control North Creek Analytical - Bothell

		I	Reporting		Spike	Source		%REC		RPD		
Analyte		Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes	
Batch 9L17037:	Prepared 12/17/99	Using Ge	neral Pro	eparation								
Blank (9L17037-BL	LK1)	4										
Nitrate-Nitrogen		ND	0.100	mg/L as N								
Sulfate		ND	0.200	mg/l								
LCS (9L17037-BS1)											
Nitrate-Nitrogen		1.00	0.100	mg/L as N	1.00		100	90-110				
Sulfate		6.08	0.200	mg/l	6.00		101	90-110				
Duplicate (9L17037	-DUP1)					Source: B9L0323-03						
Nitrate-Nitrogen		0.615	0.100	mg/L as N		0.620			0.810	25		
Sulfate		2.60	0.200	mg/l		2.57			1.16	8		
Duplicate (9L17037	-DUP2)					Source: E	39L0344-0	7				
Nitrate-Nitrogen		0.847	0.100	mg/L as N		0.844	***		0.355	25		
Matrix Spike (9L17	(037-MS1)					Source: E	39L0323-0)3				
Nitrate-Nitrogen		1.51	0.100	mg/L as N	1.00	0.620	89.0	77-117				
Sulfate		8.46	0.200	mg/l	6.00	2.57	98.2	57-134				
Matrix Spike (9L17	(037-MS2)					Source: E	39L0344-(07				
Nitrate-Nitrogen		1.78	0.100	mg/L as N	1.00	0.844	93.6	77-117				

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.



h Avenue NE, Suite 101, Bothell, WA 98011-9508

JO fax 425.420.9210 425.42

East 11115 Montgomery, Suite B, Spokane, WA 99206-4776 Spokane 509.924.9200 fax 509.924.9290

Portland

9405 SW Nimbus Avenue, Beaverton, OR 97008-7132

503.906.9200 fax 503.906.9210

20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711 Bend

541.383.9310 fax 541.382.7588

Farallon Consulting LLC 320 Third Avenue NE, Suite 200

Issaquah WA, 98027

Project: Queen Ann Texaco

Project Number: 619-010-003 Project Manager: Peter Jewett

Reported: 12/28/99 14:40

Notes and Definitions

B-08 These samples were out of hold time at the time of receipt. Therefore, results are inconclusive and may represent false negatives or positives.

D-08 Results in the diesel organics range are primarily due to overlap from a gasoline range product.

Q-15 Analyses are not controlled on matrix spike RPD and/or percent recoveries when the sample concentration is significantly higher than the spike level.

R-03 The reporting limit for this analyte has been raised to account for interference from coeluting organic compounds present in the sample.

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

RPD Relative Percent Difference

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.

Kirk Gendron, Project Manager



18939 120th Avenue N.E., Suite 101, Bothell, WA 98011-9508 (206) 481-9200 FAX 485-2992

East 11115 Montgomery, Suite B, Spokane, WA 99206-4779 (509) 924-9200 FAX 924-9290

9405 S.W. Nimbus Avenue, Beaverton, OR 97008-7132 (503) 643-9200 FAX 644-2202

CHAIN OF CUSTODY REPORT

REPORT TO:		INVOICE TO:										1				
Peter Jer	witt .			ICE IO		- ロン	cac	x					TURN	IAROUND REQ	UEST in Business Days *	
ATTENTION:			ATTEN	ITION:	- 1	₹ ∧	.u C	0						Organic & Ia	organic Analyses	
ADDRESS: Favorlon Consu			ADDRI	ESS:	Ju.	eev	1 Ar	111	Te	Kac	D		7 5 4 3 2 1 Same Day			
320 3rd Ave NE, S	te 200, Iss	aguah WA	,										Standard '	Fuels & H	ydrocarbon Analyses	
PHONE 425) 427-0061	FAX:(1)25)4	137-0007	P.O. NUMBER: (49-010 - 003 NCA QUOTE #:										3-4 2 1 Same Duy			
				Analysis + A										Standark,		
PROJECT NUMBER: 617-010-003			Request	OTHER Specify: * Turnaround Requests less than standard may incur Rus MATRIX # OF (W. S. A. O) CONTAINERS COMME												
SAMPLED BY: K Saganst	S/T Bro	WY	100	$\langle \gamma \rangle \langle$	RY		N'		(Sp)		10/10/10/10/10/10/10/10/10/10/10/10/10/1	$\langle \circ / \rangle$	* Turnaround	l Requests less than	standard may incur Rush Charges.	
CLIENT SAMPLE	SAMPLING	NCA SAMPLE ID	1/2/	<i>9</i> %	3		157 X	9/2	<i>څ</i> ن/ نژن	\$	R/(-	<i>کا</i>	MATRIX	# OF		
IDENTIFICATION	DATE/TIME/	(Laboratory Use Only)		$\overline{}$		<u> </u>	1	2 2				$\overline{}$	(W, S, A, O)	CONTAINERS	COMMENTS	
. VP-7	12/14/99/515	B960316-01	X	K	X	X	X	X	X	X	X		W	6		
2 VP-9	12/15/71/0930	az	Χ	Χ	X	X								5		
3 MW-9	14547/1020	03	X	X	X	×								5		
4. MW-10	1215/99/1121	01	K	X	X	X	X	X	X	X	\times			6		
s. MW-4	121549/1335	05	X	X	X	X	X	X	X	X	X			6		
6 VP-5	141497/1510	Ol	χ	X	X	X							/	5		
VP-8	12/15/19/1550	()/	Χ	X	X	X							1/	5		
8. VP-Z	12/15/97/1600	CS.	X	X	Χ	X							1	5		
Apt 102	12/15/99 11:00	00														
10.	,															
RELINQUISHED BY (Signature) TO DOM!	ski			DATE:	12/16	139	RECEIV	ED BY (s	ignature t:	Ju	548	Bin			DATE: 12/15	19
PRINT NAME: KSOGANST	人 リ	FIRM: Favallo	M	TIME:	16:	15	PRINT N	IAME:	7	noth	.,5	Biory		FIRM: Fara		
- / /. N	ار المراجع الم			DATE:	1 .		RECEIV			11	3 C Y	nith			DATE 2/16	7.1
PRINT NAME: T, mothy S. Braw		FIRM: Farally			11=3		PRINT N],	Š'n	nit	h		FIRM: DITT	Ulm TIME: 11:3	`]
ADDITIONAL REMARKS: DC 1111-	<u></u> На		10.1.				(3	ul	Ve	<u> </u>	711				000	2411
TP Single	1.		12/1	4	99_		REL	- 欠	ill	te	· \	NCI	A 12.16	9 14:	S PAGE -OF	
COCRETA ING	VU						K.	. 10				•			PAGE - OF	