

ANALYTICAL RESULTS

Prepared by:

Lancaster Laboratories
2425 New Holland Pike
Lancaster, PA 17605-2425

Prepared for:

Chevron
6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

April 04, 2011

Project: Edmonds Terminal

Submittal Date: 03/23/2011
Group Number: 1238606
PO Number: 0015074659
Release Number: JOLITZ
State of Sample Origin: WA

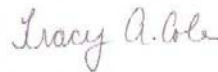
<u>Client Sample Description</u>	<u>Lancaster Labs (LLI) #</u>
MW-150 Grab Water Sample	6237131
MW-147 Grab Water Sample	6237132
MW-8R Grab Water Sample	6237133
DUP-1 Grab Water Sample	6237134
MW-149R Grab Water Sample	6237135
MW-524 Grab Water Sample	6237136
MW-523 Grab Water Sample	6237137
MW-522 Grab Water Sample	6237138
Trip_Blank Water Sample	6237139

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

ELECTRONIC COPY TO
ELECTRONIC COPY TO
ELECTRONIC COPY TOArcadis US, Inc.
Arcadis
ArcadisAttn: Rebecca Andresen
Attn: Scott Zorn
Attn: Dave Rasar

Questions? Contact your Client Services Representative
Jill M Parker at (717) 656-2300 Ext. 1241

Respectfully Submitted,



Tracy A. Cole
Senior Specialist



Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Sample Description: MW-150 Grab Water Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # WW 6237131
LLI Group # 1238606
Account # 11964

Project Name: Edmonds Terminal

Collected: 03/22/2011 09:30 by DR

Chevron

6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

Submitted: 03/23/2011 09:00

Reported: 04/04/2011 08:43

UE150

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC Volatiles					
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx n.a.	ug/l N.D.	ug/l 50	1
GC Extractable TPH w/Si Gel					
02211	DRO C12-C24 w/Si Gel	ECY 97-602 NWTPH-Dx modified n.a.	ug/l N.D.	ug/l 29	1
02211	HRO C24-C40 w/Si Gel	n.a.	N.D.	67	1

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	11083A20A	03/24/2011 14:36	Laura M Krieger	1
01146	GC VOA Water Prep	SW-846 5030B	1	11083A20A	03/24/2011 14:36	Laura M Krieger	1
02211	NWTPH-Dx water w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	110820033A	03/24/2011 22:37	Melissa McDermott	1
02135	Extraction - DRO Water Special	ECY 97-602 NWTPH-Dx 06/97	1	110820033A	03/24/2011 08:00	Catherine R Wiker	1



Analysis Report

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Sample Description: MW-147 Grab Water Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # WW 6237132
LLI Group # 1238606
Account # 11964

Project Name: Edmonds Terminal

Collected: 03/22/2011 10:45 by DR

Chevron

6001 Bollinger Canyon Rd L4310
 San Ramon CA 94583

Submitted: 03/23/2011 09:00

Reported: 04/04/2011 08:43

UE147

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC Volatiles					
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx n.a.	ug/l 740	ug/l 50	1
GC Extractable TPH w/Si Gel					
02211	DRO C12-C24 w/Si Gel	ECY 97-602 NWTPH-Dx modified n.a.	ug/l 750	ug/l 29	1
02211	HRO C24-C40 w/Si Gel	n.a.	N.D.	68	1

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	11083A20A	03/24/2011 14:58	Laura M Krieger	1
01146	GC VOA Water Prep	SW-846 5030B	1	11083A20A	03/24/2011 14:58	Laura M Krieger	1
02211	NWTPH-Dx water w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	110820033A	03/24/2011 23:39	Melissa McDermott	1
02135	Extraction - DRO Water Special	ECY 97-602 NWTPH-Dx 06/97	1	110820033A	03/24/2011 08:00	Catherine R Wiker	1



Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Sample Description: MW-8R Grab Water Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # WW 6237133
LLI Group # 1238606
Account # 11964

Project Name: Edmonds Terminal

Collected: 03/22/2011 11:50 by DR

Chevron

6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

Submitted: 03/23/2011 09:00

Reported: 04/04/2011 08:43

UE08R

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC Volatiles					
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx n.a.	ug/l N.D.	ug/l 50	1
GC Extractable TPH w/Si Gel					
02211	DRO C12-C24 w/Si Gel	ECY 97-602 NWTPH-Dx modified n.a.	ug/l N.D.	ug/l 28	1
02211	HRO C24-C40 w/Si Gel	n.a.	N.D.	66	1

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	11083A20A	03/24/2011 15:20	Laura M Krieger	1
01146	GC VOA Water Prep	SW-846 5030B	1	11083A20A	03/24/2011 15:20	Laura M Krieger	1
02211	NWTPH-Dx water w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	110820033A	03/24/2011 22:58	Melissa McDermott	1
02135	Extraction - DRO Water Special	ECY 97-602 NWTPH-Dx 06/97	1	110820033A	03/24/2011 08:00	Catherine R Wiker	1



Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Sample Description: DUP-1 Grab Water Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # WW 6237134
LLI Group # 1238606
Account # 11964

Project Name: Edmonds Terminal

Collected: 03/22/2011 by DR

Chevron

6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

Submitted: 03/23/2011 09:00

Reported: 04/04/2011 08:43

UEFD1

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC Volatiles					
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx n.a.	ug/l N.D.	ug/l 50	1
GC Extractable TPH w/Si Gel					
02211	DRO C12-C24 w/Si Gel	ECY 97-602 NWTPH-Dx modified n.a.	ug/l 32	ug/l 29	1
02211	HRO C24-C40 w/Si Gel	n.a.	N.D.	67	1

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	11083A20A	03/24/2011 15:42	Laura M Krieger	1
01146	GC VOA Water Prep	SW-846 5030B	1	11083A20A	03/24/2011 15:42	Laura M Krieger	1
02211	NWTPH-Dx water w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	110870006A	03/31/2011 07:13	Glorines Suarez-Rivera	1
02135	Extraction - DRO Water Special	ECY 97-602 NWTPH-Dx 06/97	1	110870006A	03/27/2011 16:15	Kathryn I DeHaven	1



Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Sample Description: MW-149R Grab Water Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # WW 6237135
LLI Group # 1238606
Account # 11964

Project Name: Edmonds Terminal

Collected: 03/22/2011 09:25 by DR

Chevron

6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

Submitted: 03/23/2011 09:00

Reported: 04/04/2011 08:43

UE149

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC Volatiles					
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx n.a.	ug/l N.D.	ug/l 50	1
GC Extractable TPH w/Si Gel					
02211	DRO C12-C24 w/Si Gel	ECY 97-602 NWTPH-Dx modified n.a.	ug/l 61	ug/l 28	1
02211	HRO C24-C40 w/Si Gel	n.a.	N.D.	66	1

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	11083A20A	03/24/2011 16:04	Laura M Krieger	1
01146	GC VOA Water Prep	SW-846 5030B	1	11083A20A	03/24/2011 16:04	Laura M Krieger	1
02211	NWTPH-Dx water w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	110870006A	03/31/2011 07:34	Glorines Suarez-Rivera	1
02135	Extraction - DRO Water Special	ECY 97-602 NWTPH-Dx 06/97	1	110870006A	03/27/2011 16:15	Kathryn I DeHaven	1



Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

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Sample Description: MW-524 Grab Water Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # WW 6237136
LLI Group # 1238606
Account # 11964

Project Name: Edmonds Terminal

Collected: 03/22/2011 10:20 by DR

Chevron

6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

Submitted: 03/23/2011 09:00

Reported: 04/04/2011 08:43

UE524

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC Volatiles					
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx n.a.	ug/l N.D.	ug/l 50	1
GC Extractable TPH w/Si Gel					
02211	DRO C12-C24 w/Si Gel	ECY 97-602 NWTPH-Dx modified n.a.	ug/l N.D.	ug/l 28	1
02211	HRO C24-C40 w/Si Gel	n.a.	N.D.	66	1

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	11083A20A	03/24/2011 16:25	Laura M Krieger	1
01146	GC VOA Water Prep	SW-846 5030B	1	11083A20A	03/24/2011 16:25	Laura M Krieger	1
02211	NWTPH-Dx water w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	110870006A	03/31/2011 07:55	Glorines Suarez-Rivera	1
02135	Extraction - DRO Water Special	ECY 97-602 NWTPH-Dx 06/97	1	110870006A	03/27/2011 16:15	Kathryn I DeHaven	1



Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Sample Description: MW-523 Grab Water Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # WW 6237137
LLI Group # 1238606
Account # 11964

Project Name: Edmonds Terminal

Collected: 03/22/2011 11:10 by DR

Chevron

6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

Submitted: 03/23/2011 09:00

Reported: 04/04/2011 08:43

UE523

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC Volatiles					
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx n.a.	ug/l N.D.	ug/l 50	1
GC Extractable TPH w/Si Gel					
02211	DRO C12-C24 w/Si Gel	ECY 97-602 NWTPH-Dx modified n.a.	ug/l N.D.	ug/l 28	1
02211	HRO C24-C40 w/Si Gel	n.a.	N.D.	66	1

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	11083A20A	03/24/2011 16:47	Laura M Krieger	1
01146	GC VOA Water Prep	SW-846 5030B	1	11083A20A	03/24/2011 16:47	Laura M Krieger	1
02211	NWTPH-Dx water w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	110870006A	03/31/2011 15:00	Glorines Suarez-Rivera	1
02135	Extraction - DRO Water Special	ECY 97-602 NWTPH-Dx 06/97	1	110870006A	03/27/2011 16:15	Kathryn I DeHaven	1



Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Sample Description: MW-522 Grab Water Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # WW 6237138
LLI Group # 1238606
Account # 11964

Project Name: Edmonds Terminal

Collected: 03/22/2011 12:30 by DR

Chevron

6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

Submitted: 03/23/2011 09:00

Reported: 04/04/2011 08:43

UE522

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC Volatiles					
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx n.a.	ug/l N.D.	ug/l 50	1
GC Extractable TPH w/Si Gel					
02211	DRO C12-C24 w/Si Gel	ECY 97-602 NWTPH-Dx modified n.a.	ug/l 150	ug/l 28	1
02211	HRO C24-C40 w/Si Gel	n.a.	N.D.	66	1

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	11083A20A	03/24/2011 17:09	Laura M Krieger	1
01146	GC VOA Water Prep	SW-846 5030B	1	11083A20A	03/24/2011 17:09	Laura M Krieger	1
02211	NWTPH-Dx water w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	110870006A	03/31/2011 16:44	Glorines Suarez-Rivera	1
02135	Extraction - DRO Water Special	ECY 97-602 NWTPH-Dx 06/97	1	110870006A	03/27/2011 16:15	Kathryn I DeHaven	1



Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Sample Description: Trip_Blank Water Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # WW 6237139
LLI Group # 1238606
Account # 11964

Project Name: Edmonds Terminal

Collected: 03/22/2011

Chevron

Submitted: 03/23/2011 09:00

6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

Reported: 04/04/2011 08:43

UETR

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC Volatiles	ECY 97-602 NWTPH-Gx		ug/l	ug/l	
08273	NWTPH-Gx water C7-C12	n.a.	N.D.	50	1

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	11088A20A	03/29/2011 23:12	Elizabeth J Marin	1
01146	GC VOA Water Prep	SW-846 5030B	1	11088A20A	03/29/2011 23:12	Elizabeth J Marin	1

Quality Control Summary

 Client Name: Chevron
 Reported: 04/04/11 at 08:43 AM

Group Number: 1238606

Matrix QC may not be reported if site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

Laboratory Compliance Quality Control

<u>Analysis Name</u>	<u>Blank Result</u>	<u>Blank MDL</u>	<u>Report Units</u>	<u>LCS %REC</u>	<u>LCSD %REC</u>	<u>LCS/LCSD Limits</u>	<u>RPD</u>	<u>RPD Max</u>
Batch number: 11083A20A NWTPH-Gx water C7-C12	Sample number(s): 6237131-6237138 N.D.	50.	ug/l	100	87	75-135	14	30
Batch number: 11088A20A NWTPH-Gx water C7-C12	Sample number(s): 6237139 N.D.	50.	ug/l	91		75-135		
Batch number: 110820033A DRO C12-C24 w/Si Gel HRO C24-C40 w/Si Gel	Sample number(s): 6237131-6237133 N.D. N.D.	30. 70.	ug/l ug/l	86	86	56-103	0	20
Batch number: 110870006A DRO C12-C24 w/Si Gel HRO C24-C40 w/Si Gel	Sample number(s): 6237134-6237138 N.D. N.D.	30. 70.	ug/l ug/l	80		56-103		

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
 Background (BKG) = the sample used in conjunction with the duplicate

<u>Analysis Name</u>	<u>MS %REC</u>	<u>MSD %REC</u>	<u>MS/MSD Limits</u>	<u>RPD</u>	<u>RPD MAX</u>	<u>BKG Conc</u>	<u>DUP Conc</u>	<u>DUP RPD</u>	<u>Dup RPD Max</u>
Batch number: 11088A20A NWTPH-Gx water C7-C12	Sample number(s): 6237139 97	106	57-157	7	30	UNSPK: P238298			
Batch number: 110870006A DRO C12-C24 w/Si Gel	Sample number(s): 6237134-6237138 92	92	60-120	0	20	UNSPK: P238298			

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: NWTPH-Gx water C7-C12
 Batch number: 11083A20A
 Trifluorotoluene-F

6237131	75
6237132	82
6237133	75
6237134	75

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Chevron
Reported: 04/04/11 at 08:43 AM

Group Number: 1238606

Surrogate Quality Control

6237135	75
6237136	76
6237137	74
6237138	75
Blank	77
LCS	127
LCSD	114

Limits: 63-135

Analysis Name: NWT PH-Gx water C7-C12
Batch number: 11088A20A
Trifluorotoluene-F

6237139	75
Blank	74
LCS	117
MS	110
MSD	119

Limits: 63-135

Analysis Name: NWT PH-Dx water w/Si Gel
Batch number: 110820033A
Orthoterphenyl

6237131	106
6237132	108
6237133	102
Blank	106
LCS	116
LCSD	115

Limits: 50-150

Analysis Name: NWT PH-Dx water w/Si Gel
Batch number: 110870006A
Orthoterphenyl

6237134	90
6237135	97
6237136	89
6237137	100
6237138	97
Blank	107
LCS	110
MS	106
MSD	105

Limits: 50-150

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Chevron Northwest Region Analysis Request/Chain of Custody



223421

Acct. #: 11964 For Lancaster Laboratories use only
 Sample #: 6237131-39 SCR#: _____

C# 1238606

Facility #: Edmonds Terminal
 Site Address: 11720 Union Rd, Edmonds WA
 Chevron PM: Kim Jolitz Lead Consultant: ARCADIS
 Consultant/Office: ARCADIS, Seattle
 Consultant Prj. Mgr.: Rebecca Andresen
 Consultant Phone #: 206-325-5254 Fax #: _____
 Sampler: DR, SM
 Service Order #: 800 45762 Non SAR: _____

Sample Identification				Matrix			Total Number of Containers	Analyses Requested										Preservative Codes		
				Soil	Water	Oil		Preservation Codes												
Date Collected	Time Collected	Grab	Composite	Soil	Water	Oil	BTEX + MTBE	8260	8260	Naphth	H H									
MW-150	3/22/11	930	X	X	X	5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
MW-147		1045																		
MW-8R		1150																		
Dup-1																				
MW-149R		925																		
MW-524		1020																		
MW-523		1110																		
MW-522		1230																		
Trip Blank						2														

Preservative Codes
 H = HCl T = Thiosulfate
 N = HNO₃ B = NaOH
 S = H₂SO₄ O = Other

J value reporting needed
 Must meet lowest detection limits possible for 8260 compounds

8021 MTBE Confirmation
 Confirm MTBE + Naphthalene
 Confirm highest hit by 8260
 Confirm all hits by 8260
 Run ___ oxy s on highest hit
 Run ___ oxy s on all hits

Comments / Remarks
 page 1 of 1

Turnaround Time Requested (TAT) (please circle) <input checked="" type="radio"/> STD TAT 72 hour 48 hour 24 hour 4 day 5 day	Relinquished by: <u>[Signature]</u> Date: <u>3/22/11</u> Time: <u>1500</u>	Received by: <u>FedEx</u> Date: <u>3/22/11</u> Time: <u>1500</u>
	Relinquished by: _____ Date: _____ Time: _____	Received by: _____ Date: _____ Time: _____
Data Package Options (please circle if required) QC Summary Type I - Full Type VI (Raw Data) Disk / EDD WIP (RWQCB) Standard Format Disk _____ Other.	Relinquished by: _____ Date: _____ Time: _____	Received by: _____ Date: _____ Time: _____
	Relinquished by Commercial Carrier: UPS FedEx Other _____	Received by: <u>[Signature]</u> Date: <u>3/23/11</u> Time: <u>900</u>
Temperature Upon Receipt _____ °C <u>1.2^{uc} - 1.7^{uc}</u>		Custody Seals Intact? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

RL	Reporting Limit	BMQL	Below Minimum Quantitation Level
N.D.	none detected	MPN	Most Probable Number
TNTC	Too Numerous To Count	CP Units	cobalt-chloroplatinate units
IU	International Units	NTU	nephelometric turbidity units
umhos/cm	micromhos/cm	ng	nanogram(s)
C	degrees Celsius	F	degrees Fahrenheit
meq	milliequivalents	lb.	pound(s)
g	gram(s)	kg	kilogram(s)
ug	microgram(s)	mg	milligram(s)
ml	milliliter(s)	l	liter(s)
m3	cubic meter(s)	ul	microliter(s)
<	less than - The number following the sign is the <u>limit of quantitation</u> , the smallest amount of analyte which can be reliably determined using this specific test.		
>	greater than		
J	estimated value – The result is \geq the Method Detection Limit (MDL) and $<$ the Limit of Quantitation (LOQ).		
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter of gas per liter of gas.		
ppb	parts per billion		
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.		

U.S. EPA CLP Data Qualifiers:

Organic Qualifiers	Inorganic Qualifiers
A TIC is a possible aldol-condensation product	B Value is $<$ CRDL, but \geq IDL
B Analyte was also detected in the blank	E Estimated due to interference
C Pesticide result confirmed by GC/MS	M Duplicate injection precision not met
D Compound quantitated on a diluted sample	N Spike sample not within control limits
E Concentration exceeds the calibration range of the instrument	S Method of standard additions (MSA) used for calculation
N Presumptive evidence of a compound (TICs only)	U Compound was not detected
P Concentration difference between primary and confirmation columns $>$ 25%	W Post digestion spike out of control limits
U Compound was not detected	* Duplicate analysis not within control limits
X,Y,Z Defined in case narrative	+ Correlation coefficient for MSA $<$ 0.995

Analytical test results meet all requirements of NELAC unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

WARRANTY AND LIMITS OF LIABILITY - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL LANCASTER LABORATORIES BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF LANCASTER LABORATORIES AND (B) WHETHER LANCASTER LABORATORIES HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Lancaster Laboratories which includes any conditions that vary from the Standard Terms and Conditions, and Lancaster hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

ANALYTICAL RESULTS

Prepared by:

Lancaster Laboratories
2425 New Holland Pike
Lancaster, PA 17605-2425

Prepared for:

Chevron
6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

April 05, 2011

Project: Edmonds Terminal

Submittal Date: 03/24/2011
Group Number: 1238796
PO Number: 0015074659
Release Number: JOLITZ
State of Sample Origin: WA

<u>Client Sample Description</u>	<u>Lancaster Labs (LLI) #</u>
MW-139R Grab Water Sample	6238297
MW-518 Grab Water Sample	6238298
MW-518MS Grab Water Sample	6238299
MW-518MSD Grab Water Sample	6238300
MW-101 Grab Water Sample	6238301
MW-104 Grab Water Sample	6238302
MW-20R Grab Water Sample	6238303
MW-109 Grab Water Sample	6238304
MW-108 Grab Water Sample	6238305
LM-2 Grab Water Sample	6238306
MW-129R Grab Water Sample	6238307
DUP-2 Grab Water Sample	6238308
Trip Blank Water Sample	6238309

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

ELECTRONIC COPY TO	Arcadis US, Inc.	Attn: Rebecca Andresen
ELECTRONIC COPY TO	Arcadis	Attn: Scott Zorn
ELECTRONIC COPY TO	Arcadis	Attn: Dave Rasar

Questions? Contact your Client Services Representative
Jill M Parker at (717) 656-2300 Ext. 1241

Respectfully Submitted,



Sarah M. Snyder
Senior Specialist



Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Sample Description: MW-139R Grab Water Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # WW 6238297
LLI Group # 1238796
Account # 11964

Project Name: Edmonds Terminal

Collected: 03/23/2011 09:25 by DR

Chevron

6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

Submitted: 03/24/2011 09:45

Reported: 04/05/2011 09:06

UE139

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC Volatiles					
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx n.a.	ug/l N.D.	ug/l 50	1
GC Extractable TPH w/Si Gel					
02211	DRO C12-C24 w/Si Gel	ECY 97-602 NWTPH-Dx modified n.a.	ug/l N.D.	ug/l 29	1
02211	HRO C24-C40 w/Si Gel	n.a.	N.D.	67	1

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	11088A20A	03/30/2011 00:40	Elizabeth J Marin	1
01146	GC VOA Water Prep	SW-846 5030B	1	11088A20A	03/30/2011 00:40	Elizabeth J Marin	1
02211	NWTPH-Dx water w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	110870006A	03/31/2011 17:05	Glorines Suarez-Rivera	1
02135	Extraction - DRO Water Special	ECY 97-602 NWTPH-Dx 06/97	1	110870006A	03/27/2011 16:15	Kathryn I DeHaven	1



Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Sample Description: MW-518 Grab Water Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # WW 6238298
LLI Group # 1238796
Account # 11964

Project Name: Edmonds Terminal

Collected: 03/23/2011 10:40 by DR

Chevron

6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

Submitted: 03/24/2011 09:45

Reported: 04/05/2011 09:06

UE518

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC Volatiles					
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx n.a.	ug/l 330	ug/l 50	1
GC Extractable TPH w/Si Gel					
02211	DRO C12-C24 w/Si Gel	ECY 97-602 NWTPH-Dx modified n.a.	ug/l 390	ug/l 29	1
02211	HRO C24-C40 w/Si Gel	n.a.	N.D.	68	1

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	11088A20A	03/30/2011 06:06	Elizabeth J Marin	1
01146	GC VOA Water Prep	SW-846 5030B	1	11088A20A	03/30/2011 06:06	Elizabeth J Marin	1
02211	NWTPH-Dx water w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	110870006A	03/31/2011 00:07	Melissa McDermott	1
02135	Extraction - DRO Water Special	ECY 97-602 NWTPH-Dx 06/97	1	110870006A	03/27/2011 16:15	Kathryn I DeHaven	1

Sample Description: MW-518MS Grab Water Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # WW 6238299
LLI Group # 1238796
Account # 11964

Project Name: Edmonds Terminal

Collected: 03/23/2011 10:40 by DR

Chevron

6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

Submitted: 03/24/2011 09:45

Reported: 04/05/2011 09:06

UE518

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC Volatiles					
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx n.a.	ug/l 1,400	ug/l 50	1
GC Extractable TPH w/Si Gel					
02211	DRO C12-C24 w/Si Gel	ECY 97-602 NWTPH-Dx modified n.a.	ug/l 1,100	ug/l 29	1
02211	HRO C24-C40 w/Si Gel	n.a.	82	67	1

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	11088A20A	03/30/2011 06:28	Elizabeth J Marin	1
01146	GC VOA Water Prep	SW-846 5030B	1	11088A20A	03/30/2011 06:28	Elizabeth J Marin	1
02211	NWTPH-Dx water w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	110870006A	03/31/2011 00:29	Melissa McDermott	1
02135	Extraction - DRO Water Special	ECY 97-602 NWTPH-Dx 06/97	1	110870006A	03/27/2011 16:15	Kathryn I DeHaven	1



Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Sample Description: MW-518MSD Grab Water Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # WW 6238300
LLI Group # 1238796
Account # 11964

Project Name: Edmonds Terminal

Collected: 03/23/2011 10:40 by DR

Chevron

6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

Submitted: 03/24/2011 09:45

Reported: 04/05/2011 09:06

UE518

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC Volatiles					
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx n.a.	ug/l 1,500	ug/l 50	1
GC Extractable TPH w/Si Gel					
02211	DRO C12-C24 w/Si Gel	ECY 97-602 NWTPH-Dx modified n.a.	ug/l 1,100	ug/l 29	1
02211	HRO C24-C40 w/Si Gel	n.a.	99	67	1

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	11088A20A	03/30/2011 06:50	Elizabeth J Marin	1
01146	GC VOA Water Prep	SW-846 5030B	1	11088A20A	03/30/2011 06:50	Elizabeth J Marin	1
02211	NWTPH-Dx water w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	110870006A	03/31/2011 00:50	Melissa McDermott	1
02135	Extraction - DRO Water Special	ECY 97-602 NWTPH-Dx 06/97	1	110870006A	03/27/2011 16:15	Kathryn I DeHaven	1



Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Sample Description: MW-101 Grab Water Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # WW 6238301
LLI Group # 1238796
Account # 11964

Project Name: Edmonds Terminal

Collected: 03/23/2011 12:15 by DR

Chevron

6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

Submitted: 03/24/2011 09:45

Reported: 04/05/2011 09:06

UE101

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC Volatiles					
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx n.a.	ug/l N.D.	ug/l 50	1
GC Extractable TPH w/Si Gel					
02211	DRO C12-C24 w/Si Gel	ECY 97-602 NWTPH-Dx modified n.a.	ug/l 34	ug/l 29	1
02211	HRO C24-C40 w/Si Gel	n.a.	N.D.	67	1

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	11088A20A	03/30/2011 01:01	Elizabeth J Marin	1
01146	GC VOA Water Prep	SW-846 5030B	1	11088A20A	03/30/2011 01:01	Elizabeth J Marin	1
02211	NWTPH-Dx water w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	110870006A	03/31/2011 17:26	Glorines Suarez-Rivera	1
02135	Extraction - DRO Water Special	ECY 97-602 NWTPH-Dx 06/97	1	110870006A	03/27/2011 16:15	Kathryn I DeHaven	1



Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Sample Description: MW-104 Grab Water Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # WW 6238302
LLI Group # 1238796
Account # 11964

Project Name: Edmonds Terminal

Collected: 03/23/2011 13:15 by DR

Chevron

6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

Submitted: 03/24/2011 09:45

Reported: 04/05/2011 09:06

UE104

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC Volatiles					
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx n.a.	ug/l 890	ug/l 50	1
GC Extractable TPH w/Si Gel					
02211	DRO C12-C24 w/Si Gel	ECY 97-602 NWTPH-Dx modified n.a.	ug/l 290	ug/l 29	1
02211	HRO C24-C40 w/Si Gel	n.a.	N.D.	68	1

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	11088A20A	03/30/2011 01:23	Elizabeth J Marin	1
01146	GC VOA Water Prep	SW-846 5030B	1	11088A20A	03/30/2011 01:23	Elizabeth J Marin	1
02211	NWTPH-Dx water w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	110870006A	03/31/2011 17:47	Glorines Suarez-Rivera	1
02135	Extraction - DRO Water Special	ECY 97-602 NWTPH-Dx 06/97	1	110870006A	03/27/2011 16:15	Kathryn I DeHaven	1



Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Sample Description: MW-20R Grab Water Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # WW 6238303
LLI Group # 1238796
Account # 11964

Project Name: Edmonds Terminal

Collected: 03/23/2011 13:45 by DR

Chevron

6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

Submitted: 03/24/2011 09:45

Reported: 04/05/2011 09:06

UE20R

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC Volatiles	ECY 97-602 NWTPH-Gx		ug/l	ug/l	
08274	NWTPH-Gx water C7-C12	n.a.	N.D.	50	1
GC Volatiles	SW-846 8021B		ug/l	ug/l	
02102	Benzene	71-43-2	5.3	0.2	1
GC Extractable TPH w/Si Gel	ECY 97-602 NWTPH-Dx modified		ug/l	ug/l	
02211	DRO C12-C24 w/Si Gel	n.a.	390	29	1
02211	HRO C24-C40 w/Si Gel	n.a.	190	67	1

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
08274	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	11088A53A	03/30/2011 23:05	Carrie E Miller	1
02102	Method 8021 Water Master	SW-846 8021B	1	11088A53A	03/30/2011 23:05	Carrie E Miller	1
01146	GC VOA Water Prep	SW-846 5030B	1	11088A53A	03/30/2011 23:05	Carrie E Miller	1
02211	NWTPH-Dx water w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	110880007A	04/01/2011 16:47	Glorines Suarez-Rivera	1
02135	Extraction - DRO Water Special	ECY 97-602 NWTPH-Dx 06/97	1	110880007A	03/28/2011 15:00	Kathryn I DeHaven	1



Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Page 1 of 1

Sample Description: MW-109 Grab Water Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # WW 6238304
LLI Group # 1238796
Account # 11964

Project Name: Edmonds Terminal

Collected: 03/23/2011 08:05 by DR

Chevron

6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

Submitted: 03/24/2011 09:45

Reported: 04/05/2011 09:06

UE109

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC Volatiles					
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx n.a.	ug/l N.D.	ug/l 50	1
GC Extractable TPH w/Si Gel					
02211	DRO C12-C24 w/Si Gel	ECY 97-602 NWTPH-Dx modified n.a.	ug/l N.D.	ug/l 29	1
02211	HRO C24-C40 w/Si Gel	n.a.	N.D.	67	1

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	11088A20A	03/30/2011 01:45	Elizabeth J Marin	1
01146	GC VOA Water Prep	SW-846 5030B	1	11088A20A	03/30/2011 01:45	Elizabeth J Marin	1
02211	NWTPH-Dx water w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	110880007A	04/01/2011 16:05	Glorines Suarez-Rivera	1
02135	Extraction - DRO Water Special	ECY 97-602 NWTPH-Dx 06/97	1	110880007A	03/28/2011 15:00	Kathryn I DeHaven	1



Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Sample Description: MW-108 Grab Water Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # WW 6238305
LLI Group # 1238796
Account # 11964

Project Name: Edmonds Terminal

Collected: 03/23/2011 09:40 by DR

Chevron

6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

Submitted: 03/24/2011 09:45

Reported: 04/05/2011 09:06

UE108

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC Volatiles					
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx n.a.	ug/l N.D.	ug/l 50	1
GC Extractable TPH w/Si Gel					
02211	DRO C12-C24 w/Si Gel	ECY 97-602 NWTPH-Dx modified n.a.	ug/l 33	ug/l 29	1
02211	HRO C24-C40 w/Si Gel	n.a.	N.D.	67	1

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	11088A20A	03/30/2011 02:07	Elizabeth J Marin	1
01146	GC VOA Water Prep	SW-846 5030B	1	11088A20A	03/30/2011 02:07	Elizabeth J Marin	1
02211	NWTPH-Dx water w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	110880007A	04/01/2011 16:26	Glorines Suarez-Rivera	1
02135	Extraction - DRO Water Special	ECY 97-602 NWTPH-Dx 06/97	1	110880007A	03/28/2011 15:00	Kathryn I DeHaven	1



Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Sample Description: LM-2 Grab Water Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # WW 6238306
LLI Group # 1238796
Account # 11964

Project Name: Edmonds Terminal

Collected: 03/23/2011 11:50 by DR

Chevron

6001 Bollinger Canyon Rd L4310
 San Ramon CA 94583

Submitted: 03/24/2011 09:45

Reported: 04/05/2011 09:06

UELM2

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC Volatiles					
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx n.a.	ug/l N.D.	ug/l 50	1
GC Extractable TPH w/Si Gel					
02211	DRO C12-C24 w/Si Gel	ECY 97-602 NWTPH-Dx modified n.a.	ug/l 1,600	ug/l 29	1
02211	HRO C24-C40 w/Si Gel	n.a.	1,000	67	1

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	11088A20A	03/30/2011 11:30	Elizabeth J Marin	1
01146	GC VOA Water Prep	SW-846 5030B	1	11088A20A	03/30/2011 11:30	Elizabeth J Marin	1
02211	NWTPH-Dx water w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	110880007A	04/01/2011 17:08	Glorines Suarez-Rivera	1
02135	Extraction - DRO Water Special	ECY 97-602 NWTPH-Dx 06/97	1	110880007A	03/28/2011 15:00	Kathryn I DeHaven	1



Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Sample Description: MW-129R Grab Water Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # WW 6238307
LLI Group # 1238796
Account # 11964

Project Name: Edmonds Terminal

Collected: 03/23/2011 14:55 by DR

Chevron

6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

Submitted: 03/24/2011 09:45

Reported: 04/05/2011 09:06

UE129

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC Volatiles					
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx n.a.	ug/l N.D.	ug/l 50	1
GC Extractable TPH w/Si Gel					
02211	DRO C12-C24 w/Si Gel	ECY 97-602 NWTPH-Dx modified n.a.	ug/l 1,700	ug/l 29	1
02211	HRO C24-C40 w/Si Gel	n.a.	550	67	1

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	11088A20A	03/30/2011 02:50	Elizabeth J Marin	1
01146	GC VOA Water Prep	SW-846 5030B	1	11088A20A	03/30/2011 02:50	Elizabeth J Marin	1
02211	NWTPH-Dx water w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	110880007A	04/01/2011 17:28	Glorines Suarez-Rivera	1
02135	Extraction - DRO Water Special	ECY 97-602 NWTPH-Dx 06/97	1	110880007A	03/28/2011 15:00	Kathryn I DeHaven	1



Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Sample Description: DUP-2 Grab Water Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # WW 6238308
LLI Group # 1238796
Account # 11964

Project Name: Edmonds Terminal

Collected: 03/23/2011 by DR

Chevron

6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

Submitted: 03/24/2011 09:45

Reported: 04/05/2011 09:06

UEFD2

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC Volatiles					
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx n.a.	ug/l N.D.	ug/l 50	1
GC Extractable TPH w/Si Gel					
02211	DRO C12-C24 w/Si Gel	ECY 97-602 NWTPH-Dx modified n.a.	ug/l 1,700	ug/l 29	1
02211	HRO C24-C40 w/Si Gel	n.a.	650	67	1

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	11088A20A	03/30/2011 03:12	Elizabeth J Marin	1
01146	GC VOA Water Prep	SW-846 5030B	1	11088A20A	03/30/2011 03:12	Elizabeth J Marin	1
02211	NWTPH-Dx water w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	110880007A	04/01/2011 17:49	Glorines Suarez-Rivera	1
02135	Extraction - DRO Water Special	ECY 97-602 NWTPH-Dx 06/97	1	110880007A	03/28/2011 15:00	Kathryn I DeHaven	1



Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Sample Description: Trip Blank Water Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # WW 6238309
LLI Group # 1238796
Account # 11964

Project Name: Edmonds Terminal

Collected: 03/23/2011

Chevron

Submitted: 03/24/2011 09:45

6001 Bollinger Canyon Rd L4310

Reported: 04/05/2011 09:06

San Ramon CA 94583

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC Volatiles	ECY 97-602 NWTPH-Gx		ug/l	ug/l	
08273	NWTPH-Gx water C7-C12	n.a.	N.D.	50	1

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	11088A20A	03/29/2011 23:34	Elizabeth J Marin	1
01146	GC VOA Water Prep	SW-846 5030B	1	11088A20A	03/29/2011 23:34	Elizabeth J Marin	1

Quality Control Summary

 Client Name: Chevron
 Reported: 04/05/11 at 09:06 AM

Group Number: 1238796

Matrix QC may not be reported if site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

Laboratory Compliance Quality Control

<u>Analysis Name</u>	<u>Blank Result</u>	<u>Blank MDL</u>	<u>Report Units</u>	<u>LCS %REC</u>	<u>LCSD %REC</u>	<u>LCS/LCSD Limits</u>	<u>RPD</u>	<u>RPD Max</u>
Batch number: 11088A20A NWTPH-Gx water C7-C12	N.D.	50.	ug/l	91		75-135		
Batch number: 11088A53A Benzene NWTPH-Gx water C7-C12	N.D.	0.2	ug/l	105	105	80-120	0	30
	N.D.	50.	ug/l	100	100	75-135	0	30
Batch number: 110870006A DRO C12-C24 w/Si Gel HRO C24-C40 w/Si Gel	N.D.	30.	ug/l	80		56-103		
	N.D.	70.	ug/l					
Batch number: 110880007A DRO C12-C24 w/Si Gel HRO C24-C40 w/Si Gel	N.D.	30.	ug/l	79	85	56-103	8	20
	N.D.	70.	ug/l					

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
 Background (BKG) = the sample used in conjunction with the duplicate

<u>Analysis Name</u>	<u>MS %REC</u>	<u>MSD %REC</u>	<u>MS/MSD Limits</u>	<u>RPD</u>	<u>RPD MAX</u>	<u>BKG Conc</u>	<u>DUP Conc</u>	<u>DUP RPD</u>	<u>Dup RPD Max</u>
Batch number: 11088A20A NWTPH-Gx water C7-C12	97	106	57-157	7	30				
Batch number: 110870006A DRO C12-C24 w/Si Gel	92	92	60-120	0	20				

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

 Analysis Name: NWTPH-Gx water C7-C12
 Batch number: 11088A20A
 Trifluorotoluene-F

6238297	73
6238298	75
6238299	110

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Chevron
Reported: 04/05/11 at 09:06 AM

Group Number: 1238796

Surrogate Quality Control

6238300	119
6238301	72
6238302	79
6238304	77
6238305	74
6238306	73
6238307	72
6238308	81
6238309	74
Blank	74
LCS	117
MS	110
MSD	119

Limits: 63-135

Analysis Name: Method 8021 Water Master
Batch number: 11088A53A

	Trifluorotoluene-P	Trifluorotoluene-F
6238303	79	70
Blank	77	72
LCS	78	73
LCSD	77	76

Limits: 58-146 63-135

Analysis Name: NWTPH-Dx water w/Si Gel
Batch number: 110870006A

Orthoterphenyl

6238297	95
6238298	93
6238299	106
6238300	105
6238301	84
6238302	96
Blank	107
LCS	110
MS	106
MSD	105

Limits: 50-150

Analysis Name: NWTPH-Dx water w/Si Gel
Batch number: 110880007A

Orthoterphenyl

6238303	76
6238304	95
6238305	66
6238306	105
6238307	112
6238308	112
Blank	97
LCS	107
LCSD	112

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Chevron
Reported: 04/05/11 at 09:06 AM

Group Number: 1238796

Surrogate Quality Control

Limits: 50-150

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Chevron Northwest Region Analysis Request/Chain of Custody

220893



For Lancaster Laboratories use only
 Acct. #: 11964 Sample #: 6238297-309 SCR#: _____

Grp # 1238796

Facility #: <u>Edmonds Terminal</u> Site Address: <u>11720 Union Rd, Edmonds</u> Chevron PM: <u>Kim Dolitz</u> Lead Consultant: <u>ARCADIS</u> Consultant/Office: <u>ARCADIS, Seattle</u> Consultant Prj. Mgr.: <u>Rebecca Andresen</u> Consultant Phone #: <u>206 325 5254</u> Fax #: _____ Sampler: <u>Dr. SW</u> Service Order #: <u>B6045362</u> <input type="checkbox"/> Non SAR: _____				Matrix <input type="checkbox"/> Potable <input type="checkbox"/> NPDES <input type="checkbox"/> Soil <input type="checkbox"/> Water <input type="checkbox"/> Oil <input type="checkbox"/> Air		Analyses Requested Preservation Codes BTEX + MTBE 8021 <input type="checkbox"/> 8260 <input type="checkbox"/> Naphth <input type="checkbox"/> 8260 full scan Oxygenates MW TPH G MW TPH D <input checked="" type="checkbox"/> Extended Ring, Silica Gel Cleanup Lead Total <input type="checkbox"/> Diss. <input type="checkbox"/> Method VP/IEPH NWT/PH HClID <input type="checkbox"/> quantification Benzene-80215										Preservative Codes H = HCl T = Thiosulfate N = HNO ₃ B = NaOH S = H ₂ SO ₄ O = Other <input type="checkbox"/> J value reporting needed <input type="checkbox"/> Must meet lowest detection limits possible for 8260 compounds 8021 MTBE Confirmation <input type="checkbox"/> Confirm MTBE + Naphthalene <input type="checkbox"/> Confirm highest hit by 8260 <input type="checkbox"/> Confirm all hits by 8260 <input type="checkbox"/> Run ___ oxy s on highest hit <input type="checkbox"/> Run ___ oxy s on all hits									
Sample Identification	Date Collected	Time Collected	Grab	Composite	Soil	Water	Oil	Air	Total Number of Containers	BTEX + MTBE 8021	8260	Naphth	8260 full scan	Oxygenates	MW TPH G	MW TPH D	Lead Total	Diss.	Method	VP/IEPH	NWT/PH HClID	quantification	Benzene-80215	Other	Other
MW-139R	3/23/11	925	X			X			5																
MW-518		1040																							
MW-518MS		1040																							
MW-518MSD		1040																							
MW-101		1215																							
MW-104		1315																							
MW-20R		1245																					X		
MW-109		805																							
MW-108		940																							
MW-129R		1150																							
Dup-2		1455																							
Trip Blank									2																

Comments / Remarks
page 1 of 1

Turnaround Time Requested (TAT) (please circle) STD. TAT 72 hour 48 hour 24 hour 4 day 5 day	Relinquished by: <u>[Signature]</u> Date: <u>3/23/11</u> Time: <u>1600</u> Relinquished by: _____ Date: _____ Time: _____	Received by: <u>[Signature]</u> Date: <u>3/23/11</u> Time: <u>1600</u> Received by: _____ Date: _____ Time: _____
Data Package Options (please circle if required) QC Summary Type I - Full Type VI (Raw Data) Disk / EDD WIP (RWQCB) Standard Format Disk _____ Other.	Relinquished by: _____ Date: _____ Time: _____ Relinquished by Commercial Carrier: UPS FedEx Other: _____	Received by: <u>[Signature]</u> Date: <u>3/24/11</u> Time: <u>0945</u> Received by: _____ Date: _____ Time: _____ Temperature Upon Receipt: <u>0.8 - 1.2C</u> Custody Seals Intact? Yes No

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

RL	Reporting Limit	BMQL	Below Minimum Quantitation Level
N.D.	none detected	MPN	Most Probable Number
TNTC	Too Numerous To Count	CP Units	cobalt-chloroplatinate units
IU	International Units	NTU	nephelometric turbidity units
umhos/cm	micromhos/cm	ng	nanogram(s)
C	degrees Celsius	F	degrees Fahrenheit
meq	milliequivalents	lb.	pound(s)
g	gram(s)	kg	kilogram(s)
ug	microgram(s)	mg	milligram(s)
ml	milliliter(s)	l	liter(s)
m3	cubic meter(s)	ul	microliter(s)
<	less than - The number following the sign is the <u>limit of quantitation</u> , the smallest amount of analyte which can be reliably determined using this specific test.		
>	greater than		
J	estimated value – The result is \geq the Method Detection Limit (MDL) and $<$ the Limit of Quantitation (LOQ).		
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter of gas per liter of gas.		
ppb	parts per billion		
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.		

U.S. EPA CLP Data Qualifiers:

Organic Qualifiers	Inorganic Qualifiers
A TIC is a possible aldol-condensation product	B Value is $<$ CRDL, but \geq IDL
B Analyte was also detected in the blank	E Estimated due to interference
C Pesticide result confirmed by GC/MS	M Duplicate injection precision not met
D Compound quantitated on a diluted sample	N Spike sample not within control limits
E Concentration exceeds the calibration range of the instrument	S Method of standard additions (MSA) used for calculation
N Presumptive evidence of a compound (TICs only)	U Compound was not detected
P Concentration difference between primary and confirmation columns $>$ 25%	W Post digestion spike out of control limits
U Compound was not detected	* Duplicate analysis not within control limits
X,Y,Z Defined in case narrative	+ Correlation coefficient for MSA $<$ 0.995

Analytical test results meet all requirements of NELAC unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

WARRANTY AND LIMITS OF LIABILITY - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL LANCASTER LABORATORIES BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF LANCASTER LABORATORIES AND (B) WHETHER LANCASTER LABORATORIES HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Lancaster Laboratories which includes any conditions that vary from the Standard Terms and Conditions, and Lancaster hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

ANALYTICAL RESULTS

Prepared by:

Lancaster Laboratories
2425 New Holland Pike
Lancaster, PA 17605-2425

Prepared for:

Chevron
6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

April 06, 2011

Project: Edmonds Terminal

Submittal Date: 03/25/2011
Group Number: 1238967
PO Number: 0015074659
Release Number: JOLITZ
State of Sample Origin: WAClient Sample DescriptionMW-501 Grab Water Sample
MW-500 Grab Water Sample
MW-135 Grab Water Sample
MW-136 Grab Water Sample
RB-1 Grab Water Sample
Trip_Blank Water SampleLancaster Labs (LLI) #6239338
6239339
6239340
6239341
6239342
6239343

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

ELECTRONIC COPY TO
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Arcadis
Arcadis

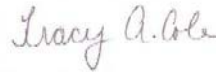
Attn: Rebecca Andresen

Attn: Scott Zorn

Attn: Dave Rasar

Questions? Contact your Client Services Representative
Jill M Parker at (717) 656-2300 Ext. 1241

Respectfully Submitted,



Tracy A. Cole
Senior Specialist



Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Sample Description: MW-501 Grab Water Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # WW 6239338
LLI Group # 1238967
Account # 11964

Project Name: Edmonds Terminal

Collected: 03/24/2011 09:25 by DR

Chevron

6001 Bollinger Canyon Rd L4310
 San Ramon CA 94583

Submitted: 03/25/2011 09:15

Reported: 04/06/2011 08:03

ED501

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC Volatiles					
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx n.a.	ug/l N.D.	ug/l 50	1
GC Extractable TPH w/Si Gel					
02211	DRO C12-C24 w/Si Gel	ECY 97-602 NWTPH-Dx modified n.a.	ug/l 89	ug/l 29	1
02211	HRO C24-C40 w/Si Gel	n.a.	N.D.	67	1

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	11088A20A	03/30/2011 03:34	Elizabeth J Marin	1
01146	GC VOA Water Prep	SW-846 5030B	1	11088A20A	03/30/2011 03:34	Elizabeth J Marin	1
02211	NWTPH-Dx water w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	110900044A	04/05/2011 08:20	Melissa McDermott	1
02135	Extraction - DRO Water Special	ECY 97-602 NWTPH-Dx 06/97	1	110900044A	04/01/2011 13:30	Olivia I Santiago	1



Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Sample Description: MW-500 Grab Water Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # WW 6239339
LLI Group # 1238967
Account # 11964

Project Name: Edmonds Terminal

Collected: 03/24/2011 10:55 by DR

Chevron

6001 Bollinger Canyon Rd L4310
 San Ramon CA 94583

Submitted: 03/25/2011 09:15

Reported: 04/06/2011 08:03

ED500

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC Volatiles					
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx n.a.	ug/l N.D.	ug/l 50	1
GC Extractable TPH w/Si Gel					
02211	DRO C12-C24 w/Si Gel	ECY 97-602 NWTPH-Dx modified n.a.	ug/l 32	ug/l 29	1
02211	HRO C24-C40 w/Si Gel	n.a.	N.D.	68	1

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	11088A20A	03/30/2011 03:56	Elizabeth J Marin	1
01146	GC VOA Water Prep	SW-846 5030B	1	11088A20A	03/30/2011 03:56	Elizabeth J Marin	1
02211	NWTPH-Dx water w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	110900044A	04/05/2011 08:41	Melissa McDermott	1
02135	Extraction - DRO Water Special	ECY 97-602 NWTPH-Dx 06/97	1	110900044A	04/01/2011 13:30	Olivia I Santiago	1



Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Sample Description: MW-135 Grab Water Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # WW 6239340
LLI Group # 1238967
Account # 11964

Project Name: Edmonds Terminal

Collected: 03/24/2011 09:45 by DR

Chevron

6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

Submitted: 03/25/2011 09:15

Reported: 04/06/2011 08:03

ED135

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC Volatiles					
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx n.a.	ug/l N.D.	ug/l 50	1
GC Extractable TPH w/Si Gel					
02211	DRO C12-C24 w/Si Gel	ECY 97-602 NWTPH-Dx modified n.a.	ug/l 500	ug/l 29	1
02211	HRO C24-C40 w/Si Gel	n.a.	170	67	1

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	11088A20A	03/30/2011 04:17	Elizabeth J Marin	1
01146	GC VOA Water Prep	SW-846 5030B	1	11088A20A	03/30/2011 04:17	Elizabeth J Marin	1
02211	NWTPH-Dx water w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	110900044A	04/05/2011 09:11	Melissa McDermott	1
02135	Extraction - DRO Water Special	ECY 97-602 NWTPH-Dx 06/97	1	110900044A	04/01/2011 13:30	Olivia I Santiago	1



Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Sample Description: MW-136 Grab Water Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # WW 6239341
LLI Group # 1238967
Account # 11964

Project Name: Edmonds Terminal

Collected: 03/24/2011 11:10 by DR

Chevron

6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

Submitted: 03/25/2011 09:15

Reported: 04/06/2011 08:03

ED136

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC Volatiles					
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx n.a.	ug/l N.D.	ug/l 50	1
GC Extractable TPH w/Si Gel					
02211	DRO C12-C24 w/Si Gel	ECY 97-602 NWTPH-Dx modified n.a.	ug/l 540	ug/l 29	1
02211	HRO C24-C40 w/Si Gel	n.a.	78	67	1

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	11088A20A	03/30/2011 04:39	Elizabeth J Marin	1
01146	GC VOA Water Prep	SW-846 5030B	1	11088A20A	03/30/2011 04:39	Elizabeth J Marin	1
02211	NWTPH-Dx water w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	110900044A	04/05/2011 09:33	Melissa McDermott	1
02135	Extraction - DRO Water Special	ECY 97-602 NWTPH-Dx 06/97	1	110900044A	04/01/2011 13:30	Olivia I Santiago	1



Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Sample Description: RB-1 Grab Water Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # WW 6239342
LLI Group # 1238967
Account # 11964

Project Name: Edmonds Terminal

Collected: 03/24/2011 11:30 by DR

Chevron

6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

Submitted: 03/25/2011 09:15

Reported: 04/06/2011 08:03

EDRB1

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC Volatiles					
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx n.a.	ug/l N.D.	ug/l 50	1
GC Extractable TPH w/Si Gel					
02211	DRO C12-C24 w/Si Gel	ECY 97-602 NWTPH-Dx modified n.a.	ug/l N.D.	ug/l 29	1
02211	HRO C24-C40 w/Si Gel	n.a.	N.D.	67	1

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	11088A20A	03/30/2011 05:01	Elizabeth J Marin	1
01146	GC VOA Water Prep	SW-846 5030B	1	11088A20A	03/30/2011 05:01	Elizabeth J Marin	1
02211	NWTPH-Dx water w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	110900044A	04/05/2011 09:54	Melissa McDermott	1
02135	Extraction - DRO Water Special	ECY 97-602 NWTPH-Dx 06/97	1	110900044A	04/01/2011 13:30	Olivia I Santiago	1



Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Sample Description: Trip_Blank Water Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # WW 6239343
LLI Group # 1238967
Account # 11964

Project Name: Edmonds Terminal

Collected: 03/24/2011

Chevron

Submitted: 03/25/2011 09:15

6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

Reported: 04/06/2011 08:03

EDMTB

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC Volatiles	ECY 97-602 NWTPH-Gx		ug/l	ug/l	
08273	NWTPH-Gx water C7-C12	n.a.	N.D.	50	1

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	11088A20A	03/29/2011 23:56	Elizabeth J Marin	1
01146	GC VOA Water Prep	SW-846 5030B	1	11088A20A	03/29/2011 23:56	Elizabeth J Marin	1

Quality Control Summary

Client Name: Chevron
Reported: 04/06/11 at 08:03 AM

Group Number: 1238967

Surrogate Quality Control

Batch number: 110900044A
Orthoterphenyl

6239338	84
6239339	81
6239340	92
6239341	90
6239342	91
Blank	91
LCS	98
LCSD	99

Limits: 50-150

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Chevron Northwest Region Analysis Request/Chain of Custody



223423

For Lancaster Laboratories use only
 Acct. #: 11964 Sample #: 6239338-43 SCR#: _____

1238967

Facility #: Edmonds Terminal
 Site Address: 11720 Unoco Rd, Edmonds WA
 Chevron PM: Km Jolitz Lead Consultant: ARCADIS
 Consultant/Office: ARCADIS, Seattle
 Consultant Prj. Mgr.: Rebecca Andresen
 Consultant Phone #: 2063255254 Fax #: _____
 Sampler: OR/SM
 Service Order #: 130015362 Non SAR: _____

Matrix		Analyses Requested										
		Preservation Codes										
Soil	Water	Oil	Air	Total Number of Containers	BTEX + MTBE	8021	8260	Naphth	H H			
					<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				
				5								
				2								

- Preservative Codes**
- H = HCl T = Thiosulfate
 N = HNO₃ B = NaOH
 S = H₂SO₄ O = Other
- J value reporting needed
 Must meet lowest detection limits possible for 8260 compounds
- 8021 MTBE Confirmation**
- Confirm MTBE + Naphthalene
 Confirm highest hit by 8260
 Confirm all hits by 8260
 Run ___ oxy s on highest hit
 Run ___ oxy s on all hits

Sample Identification	Date Collected	Time Collected	Grab	Composite	Soil	Water	Oil	Air	Total Number of Containers	BTEX + MTBE	8021	8260	Naphth	Oxygenates	TPH G	TPH D	Lead Total	Diss.	Method	VPH/EPH	NWTPH H	HClD	quantification	
MW-501	3/24/11	925	X		X				5						X									
MW-500	↓	1055							↓															
MW-135	↓	945							↓															
MW-136	↓	1110							↓															
RB-1	↓	1130							↓															
Trip Blank	-	-	-						2															

Comments / Remarks

page 1 of 1

Turnaround Time Requested (TAT) (please circle)

STD. TAT 72 hour 48 hour
 24 hour 4 day 5 day

Relinquished by: <u>[Signature]</u>	Date: <u>3/26/11</u>	Time: <u>1500</u>	Received by: <u>FedEx</u>	Date: <u>3/26/11</u>	Time: <u>1500</u>
Relinquished by: _____	Date: _____	Time: _____	Received by: _____	Date: _____	Time: _____

Data Package Options (please circle if required)

QC Summary Type I - Full
 Type VI (Raw Data) Disk / EDD
 WIP (RWQCB) Standard Format
 Disk _____ Other.

Relinquished by: _____	Date: _____	Time: _____	Received by: _____	Date: _____	Time: _____
Relinquished by Commercial Carrier:	UPS <input checked="" type="radio"/> FedEx <input checked="" type="radio"/> Other _____		Received by: <u>May M.L.</u>	Date: <u>3/25/11</u>	Time: <u>915</u>
Temperature Upon Receipt: <u>0.8-1.3</u> °C	Custody/Seals Intact? <input checked="" type="radio"/> Yes <input type="radio"/> No				

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

RL	Reporting Limit	BMQL	Below Minimum Quantitation Level
N.D.	none detected	MPN	Most Probable Number
TNTC	Too Numerous To Count	CP Units	cobalt-chloroplatinate units
IU	International Units	NTU	nephelometric turbidity units
umhos/cm	micromhos/cm	ng	nanogram(s)
C	degrees Celsius	F	degrees Fahrenheit
meq	milliequivalents	lb.	pound(s)
g	gram(s)	kg	kilogram(s)
ug	microgram(s)	mg	milligram(s)
ml	milliliter(s)	l	liter(s)
m3	cubic meter(s)	ul	microliter(s)
<	less than - The number following the sign is the <u>limit of quantitation</u> , the smallest amount of analyte which can be reliably determined using this specific test.		
>	greater than		
J	estimated value – The result is \geq the Method Detection Limit (MDL) and $<$ the Limit of Quantitation (LOQ).		
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter of gas per liter of gas.		
ppb	parts per billion		
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.		

U.S. EPA CLP Data Qualifiers:

Organic Qualifiers	Inorganic Qualifiers
A TIC is a possible aldol-condensation product	B Value is $<$ CRDL, but \geq IDL
B Analyte was also detected in the blank	E Estimated due to interference
C Pesticide result confirmed by GC/MS	M Duplicate injection precision not met
D Compound quantitated on a diluted sample	N Spike sample not within control limits
E Concentration exceeds the calibration range of the instrument	S Method of standard additions (MSA) used for calculation
N Presumptive evidence of a compound (TICs only)	U Compound was not detected
P Concentration difference between primary and confirmation columns $>$ 25%	W Post digestion spike out of control limits
U Compound was not detected	* Duplicate analysis not within control limits
X,Y,Z Defined in case narrative	+ Correlation coefficient for MSA $<$ 0.995

Analytical test results meet all requirements of NELAC unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

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ANALYTICAL RESULTS

Prepared by:

Lancaster Laboratories
2425 New Holland Pike
Lancaster, PA 17605-2425

Prepared for:

Chevron
6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

June 28, 2011

Project: Edmonds Terminal

Submittal Date: 06/16/2011
Group Number: 1251791
PO Number: 0015074659
Release Number: JOLITZ
State of Sample Origin: WA

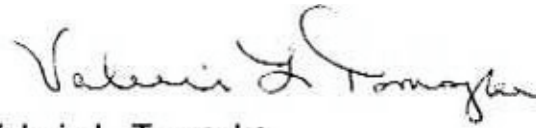
<u>Client Sample Description</u>	<u>Lancaster Labs (LLI) #</u>
MW-519 Grab Water Sample	6317460
MW-104 Grab Water Sample	6317461
DUP-1 Grab Water Sample	6317462
MW-147 Grab Water Sample	6317463
MW-8R Grab Water Sample	6317464
MW-521 Grab Water Sample	6317465
MW-143 Grab Water Sample	6317466
MW-101 Grab Water Sample	6317467
DUP-2 Grab Water Sample	6317468
MW-523 Grab Water Sample	6317469
MW-522 Grab Water Sample	6317470
MW-520 Grab Water Sample	6317471
MW-20R Grab Water Sample	6317472
Trip_Blank Water Sample	6317473

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

ELECTRONIC COPY TO	Arcadis	Attn: Rebecca Andresen
ELECTRONIC COPY TO	Arcadis	Attn: Scott Zorn
ELECTRONIC COPY TO	Arcadis	Attn: Dave Rasar

Questions? Contact your Client Services Representative
Elizabeth A Leonhardt at (510) 232-8894

Respectfully Submitted,



Valerie L. Tomayko
Group Leader



Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

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Sample Description: MW-519 Grab Water Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # WW 6317460
LLI Group # 1251791
Account # 11964

Project Name: Edmonds Terminal

Collected: 06/15/2011 12:55 by DR

Chevron

6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

Submitted: 06/16/2011 09:10

Reported: 06/28/2011 08:40

EM519

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC Volatiles					
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx n.a.	ug/l N.D.	ug/l 50	1
GC Extractable TPH w/Si Gel					
02211	DRO C12-C24 w/Si Gel	ECY 97-602 NWTPH-Dx modified n.a.	ug/l 260	ug/l 29	1
02211	HRO C24-C40 w/Si Gel	n.a.	N.D.	68	1

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	11173A53A	06/23/2011 23:02	Marie D John	1
01146	GC VOA Water Prep	SW-846 5030B	1	11173A53A	06/23/2011 23:02	Marie D John	1
02211	NWTPH-Dx water w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	111720026A	06/22/2011 18:23	Robert Brown	1
02135	Extraction - DRO Water Special	ECY 97-602 NWTPH-Dx 06/97	1	111720026A	06/22/2011 02:30	David V Hershey Jr	1



Analysis Report

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Page 1 of 1

Sample Description: MW-104 Grab Water Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # WW 6317461
LLI Group # 1251791
Account # 11964

Project Name: Edmonds Terminal

Collected: 06/15/2011 14:05 by DR

Chevron

6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

Submitted: 06/16/2011 09:10

Reported: 06/28/2011 08:40

EM104

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC Volatiles					
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx n.a.	ug/l 1,900	ug/l 50	1
GC Extractable TPH w/Si Gel					
02211	DRO C12-C24 w/Si Gel	ECY 97-602 NWTPH-Dx modified n.a.	ug/l 340	ug/l 29	1
02211	HRO C24-C40 w/Si Gel	n.a.	N.D.	67	1

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	11173A53A	06/23/2011 23:29	Marie D John	1
01146	GC VOA Water Prep	SW-846 5030B	1	11173A53A	06/23/2011 23:29	Marie D John	1
02211	NWTPH-Dx water w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	111720026A	06/22/2011 19:05	Robert Brown	1
02135	Extraction - DRO Water Special	ECY 97-602 NWTPH-Dx 06/97	1	111720026A	06/22/2011 02:30	David V Hershey Jr	1



Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Sample Description: DUP-1 Grab Water Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # WW 6317462
LLI Group # 1251791
Account # 11964

Project Name: Edmonds Terminal

Collected: 06/15/2011 by DR

Chevron

6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

Submitted: 06/16/2011 09:10

Reported: 06/28/2011 08:40

EMFD1

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC Volatiles					
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx n.a.	ug/l 1,900	ug/l 50	1
GC Extractable TPH w/Si Gel					
02211	DRO C12-C24 w/Si Gel	ECY 97-602 NWTPH-Dx modified n.a.	ug/l 350	ug/l 29	1
02211	HRO C24-C40 w/Si Gel	n.a.	N.D.	67	1

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	11173A53A	06/23/2011 23:56	Marie D John	1
01146	GC VOA Water Prep	SW-846 5030B	1	11173A53A	06/23/2011 23:56	Marie D John	1
02211	NWTPH-Dx water w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	111720026A	06/22/2011 19:26	Robert Brown	1
02135	Extraction - DRO Water Special	ECY 97-602 NWTPH-Dx 06/97	1	111720026A	06/22/2011 02:30	David V Hershey Jr	1



Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Sample Description: MW-147 Grab Water Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # WW 6317463
LLI Group # 1251791
Account # 11964

Project Name: Edmonds Terminal

Collected: 06/15/2011 10:10 by DR

Chevron

6001 Bollinger Canyon Rd L4310
 San Ramon CA 94583

Submitted: 06/16/2011 09:10

Reported: 06/28/2011 08:40

EM147

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC Volatiles					
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx n.a.	ug/l 250	ug/l 50	1
GC Extractable TPH w/Si Gel					
02211	DRO C12-C24 w/Si Gel	ECY 97-602 NWTPH-Dx modified n.a.	ug/l 370	ug/l 29	1
02211	HRO C24-C40 w/Si Gel	n.a.	N.D.	67	1

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	11173A53A	06/24/2011 00:22	Marie D John	1
01146	GC VOA Water Prep	SW-846 5030B	1	11173A53A	06/24/2011 00:22	Marie D John	1
02211	NWTPH-Dx water w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	111720026A	06/22/2011 19:46	Robert Brown	1
02135	Extraction - DRO Water Special	ECY 97-602 NWTPH-Dx 06/97	1	111720026A	06/22/2011 02:30	David V Hershey Jr	1



Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Sample Description: MW-8R Grab Water Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # WW 6317464
LLI Group # 1251791
Account # 11964

Project Name: Edmonds Terminal

Collected: 06/15/2011 11:20 by DR

Chevron

6001 Bollinger Canyon Rd L4310
 San Ramon CA 94583

Submitted: 06/16/2011 09:10

Reported: 06/28/2011 08:40

EM08R

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC Volatiles					
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx n.a.	ug/l N.D.	ug/l 50	1
GC Extractable TPH w/Si Gel					
02211	DRO C12-C24 w/Si Gel	ECY 97-602 NWTPH-Dx modified n.a.	ug/l 44	ug/l 29	1
02211	HRO C24-C40 w/Si Gel	n.a.	N.D.	67	1

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	11173A53A	06/24/2011 00:49	Marie D John	1
01146	GC VOA Water Prep	SW-846 5030B	1	11173A53A	06/24/2011 00:49	Marie D John	1
02211	NWTPH-Dx water w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	111720026A	06/22/2011 20:07	Robert Brown	1
02135	Extraction - DRO Water Special	ECY 97-602 NWTPH-Dx 06/97	1	111720026A	06/22/2011 02:30	David V Hershey Jr	1



Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Page 1 of 1

Sample Description: MW-521 Grab Water Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # WW 6317465
LLI Group # 1251791
Account # 11964

Project Name: Edmonds Terminal

Collected: 06/15/2011 12:25 by DR

Chevron

6001 Bollinger Canyon Rd L4310
 San Ramon CA 94583

Submitted: 06/16/2011 09:10

Reported: 06/28/2011 08:40

EM521

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC Volatiles					
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx n.a.	ug/l N.D.	ug/l 50	1
GC Extractable TPH w/Si Gel					
02211	DRO C12-C24 w/Si Gel	ECY 97-602 NWTPH-Dx modified n.a.	ug/l 47	ug/l 29	1
02211	HRO C24-C40 w/Si Gel	n.a.	N.D.	67	1

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	11173A53A	06/24/2011 01:16	Marie D John	1
01146	GC VOA Water Prep	SW-846 5030B	1	11173A53A	06/24/2011 01:16	Marie D John	1
02211	NWTPH-Dx water w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	111720026A	06/22/2011 20:28	Robert Brown	1
02135	Extraction - DRO Water Special	ECY 97-602 NWTPH-Dx 06/97	1	111720026A	06/22/2011 02:30	David V Hershey Jr	1



Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Sample Description: MW-143 Grab Water Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # WW 6317466
LLI Group # 1251791
Account # 11964

Project Name: Edmonds Terminal

Collected: 06/15/2011 14:00 by DR

Chevron

6001 Bollinger Canyon Rd L4310
 San Ramon CA 94583

Submitted: 06/16/2011 09:10

Reported: 06/28/2011 08:40

EM143

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC Volatiles					
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx n.a.	ug/l N.D.	ug/l 50	1
GC Extractable TPH w/Si Gel					
02211	DRO C12-C24 w/Si Gel	ECY 97-602 NWTPH-Dx modified n.a.	ug/l 1,500	ug/l 29	1
02211	HRO C24-C40 w/Si Gel	n.a.	220	67	1

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	11173A53A	06/24/2011 01:43	Marie D John	1
01146	GC VOA Water Prep	SW-846 5030B	1	11173A53A	06/24/2011 01:43	Marie D John	1
02211	NWTPH-Dx water w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	111720026A	06/22/2011 20:49	Robert Brown	1
02135	Extraction - DRO Water Special	ECY 97-602 NWTPH-Dx 06/97	1	111720026A	06/22/2011 02:30	David V Hershey Jr	1



Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Sample Description: MW-101 Grab Water Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # WW 6317467
LLI Group # 1251791
Account # 11964

Project Name: Edmonds Terminal

Collected: 06/15/2011 15:15 by DR

Chevron

6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

Submitted: 06/16/2011 09:10

Reported: 06/28/2011 08:40

EM101

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC Volatiles					
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx n.a.	ug/l N.D.	ug/l 50	1
GC Extractable TPH w/Si Gel					
02211	DRO C12-C24 w/Si Gel	ECY 97-602 NWTPH-Dx modified n.a.	ug/l 70	ug/l 29	1
02211	HRO C24-C40 w/Si Gel	n.a.	N.D.	67	1

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	11173A53A	06/24/2011 02:10	Marie D John	1
01146	GC VOA Water Prep	SW-846 5030B	1	11173A53A	06/24/2011 02:10	Marie D John	1
02211	NWTPH-Dx water w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	111720035A	06/24/2011 18:36	Glorines Suarez-Rivera	1
02135	Extraction - DRO Water Special	ECY 97-602 NWTPH-Dx 06/97	1	111720035A	06/22/2011 09:00	Catherine R Wiker	1



Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Sample Description: DUP-2 Grab Water Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # WW 6317468
LLI Group # 1251791
Account # 11964

Project Name: Edmonds Terminal

Collected: 06/15/2011 by DR

Chevron

6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

Submitted: 06/16/2011 09:10

Reported: 06/28/2011 08:40

EMFD2

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC Volatiles					
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx n.a.	ug/l N.D.	ug/l 50	1
GC Extractable TPH w/Si Gel					
02211	DRO C12-C24 w/Si Gel	ECY 97-602 NWTPH-Dx modified n.a.	ug/l 68	ug/l 29	1
02211	HRO C24-C40 w/Si Gel	n.a.	70	67	1

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	11173A53A	06/24/2011 02:37	Marie D John	1
01146	GC VOA Water Prep	SW-846 5030B	1	11173A53A	06/24/2011 02:37	Marie D John	1
02211	NWTPH-Dx water w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	111720035A	06/24/2011 18:58	Glorines Suarez-Rivera	1
02135	Extraction - DRO Water Special	ECY 97-602 NWTPH-Dx 06/97	1	111720035A	06/22/2011 09:00	Catherine R Wiker	1



Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Sample Description: MW-523 Grab Water Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # WW 6317469
LLI Group # 1251791
Account # 11964

Project Name: Edmonds Terminal

Collected: 06/15/2011 10:05 by DR

Chevron

6001 Bollinger Canyon Rd L4310
 San Ramon CA 94583

Submitted: 06/16/2011 09:10

Reported: 06/28/2011 08:40

EM523

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC Volatiles					
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx n.a.	ug/l N.D.	ug/l 50	1
GC Extractable TPH w/Si Gel					
02211	DRO C12-C24 w/Si Gel	ECY 97-602 NWTPH-Dx modified n.a.	ug/l 73	ug/l 29	1
02211	HRO C24-C40 w/Si Gel	n.a.	N.D.	67	1

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	11173A53A	06/24/2011 03:04	Marie D John	1
01146	GC VOA Water Prep	SW-846 5030B	1	11173A53A	06/24/2011 03:04	Marie D John	1
02211	NWTPH-Dx water w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	111720035A	06/24/2011 19:20	Glorines Suarez-Rivera	1
02135	Extraction - DRO Water Special	ECY 97-602 NWTPH-Dx 06/97	1	111720035A	06/22/2011 09:00	Catherine R Wiker	1



Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Page 1 of 1

Sample Description: MW-522 Grab Water Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # WW 6317470
LLI Group # 1251791
Account # 11964

Project Name: Edmonds Terminal

Collected: 06/15/2011 11:40 by DR

Chevron

6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

Submitted: 06/16/2011 09:10

Reported: 06/28/2011 08:40

EM522

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC Volatiles					
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx n.a.	ug/l N.D.	ug/l 50	1
GC Extractable TPH w/Si Gel					
02211	DRO C12-C24 w/Si Gel	ECY 97-602 NWTPH-Dx modified n.a.	ug/l 380	ug/l 29	1
02211	HRO C24-C40 w/Si Gel	n.a.	72	67	1

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	11173A53A	06/24/2011 03:31	Marie D John	1
01146	GC VOA Water Prep	SW-846 5030B	1	11173A53A	06/24/2011 03:31	Marie D John	1
02211	NWTPH-Dx water w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	111720035A	06/24/2011 19:41	Glorines Suarez-Rivera	1
02135	Extraction - DRO Water Special	ECY 97-602 NWTPH-Dx 06/97	1	111720035A	06/22/2011 09:00	Catherine R Wiker	1



Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Sample Description: MW-520 Grab Water Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # WW 6317471
LLI Group # 1251791
Account # 11964

Project Name: Edmonds Terminal

Collected: 06/15/2011 12:55 by DR

Chevron

6001 Bollinger Canyon Rd L4310
 San Ramon CA 94583

Submitted: 06/16/2011 09:10

Reported: 06/28/2011 08:40

EM520

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC Volatiles					
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx n.a.	ug/l N.D.	ug/l 50	1
GC Extractable TPH w/Si Gel					
02211	DRO C12-C24 w/Si Gel	ECY 97-602 NWTPH-Dx modified n.a.	ug/l 120	ug/l 29	1
02211	HRO C24-C40 w/Si Gel	n.a.	N.D.	67	1

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	11173A53A	06/24/2011 03:57	Marie D John	1
01146	GC VOA Water Prep	SW-846 5030B	1	11173A53A	06/24/2011 03:57	Marie D John	1
02211	NWTPH-Dx water w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	111720035A	06/24/2011 20:03	Glorines Suarez-Rivera	1
02135	Extraction - DRO Water Special	ECY 97-602 NWTPH-Dx 06/97	1	111720035A	06/22/2011 09:00	Catherine R Wiker	1



Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Sample Description: MW-20R Grab Water Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # WW 6317472
LLI Group # 1251791
Account # 11964

Project Name: Edmonds Terminal

Collected: 06/15/2011 15:02 by DR

Chevron

6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

Submitted: 06/16/2011 09:10

Reported: 06/28/2011 08:40

EM20R

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC Volatiles					
08274	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx n.a.	ug/l 71	ug/l 50	1
GC Volatiles					
02102	Benzene	SW-846 8021B 71-43-2	ug/l 3.9	ug/l 0.2	1
GC Extractable TPH w/Si Gel					
02211	DRO C12-C24 w/Si Gel	ECY 97-602 NWTPH-Dx modified n.a.	ug/l 320	ug/l 29	1
02211	HRO C24-C40 w/Si Gel	n.a.	72	67	1

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
08274	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	11171C53A	06/23/2011 00:35	Marie D John	1
02102	Method 8021 Water Master	SW-846 8021B	1	11171C53A	06/23/2011 00:35	Marie D John	1
01146	GC VOA Water Prep	SW-846 5030B	1	11171C53A	06/23/2011 00:35	Marie D John	1
02211	NWTPH-Dx water w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	111720035A	06/24/2011 20:24	Glorines Suarez-Rivera	1
02135	Extraction - DRO Water Special	ECY 97-602 NWTPH-Dx 06/97	1	111720035A	06/22/2011 09:00	Catherine R Wiker	1



Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Sample Description: Trip_Blank Water Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # WW 6317473
LLI Group # 1251791
Account # 11964

Project Name: Edmonds Terminal

Collected: 06/15/2011

Chevron

Submitted: 06/16/2011 09:10

6001 Bollinger Canyon Rd L4310

Reported: 06/28/2011 08:40

San Ramon CA 94583

EM-TB

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC Volatiles	ECY 97-602 NWTPH-Gx		ug/l	ug/l	
08273	NWTPH-Gx water C7-C12	n.a.	N.D.	50	1

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	11173A53A	06/23/2011 19:26	Marie D John	1
01146	GC VOA Water Prep	SW-846 5030B	1	11173A53A	06/23/2011 19:26	Marie D John	1

Quality Control Summary

 Client Name: Chevron
 Reported: 06/28/11 at 08:40 AM

Group Number: 1251791

Matrix QC may not be reported if site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

Laboratory Compliance Quality Control

<u>Analysis Name</u>	<u>Blank Result</u>	<u>Blank MDL</u>	<u>Report Units</u>	<u>LCS %REC</u>	<u>LCSD %REC</u>	<u>LCS/LCSD Limits</u>	<u>RPD</u>	<u>RPD Max</u>
Batch number: 11171C53A	Sample number(s): 6317472							
Benzene	N.D.	0.2	ug/l	105	105	80-120	0	30
NWTPH-Gx water C7-C12	N.D.	50.	ug/l	109	109	75-135	0	30
Batch number: 11173A53A	Sample number(s): 6317460-6317471, 6317473							
NWTPH-Gx water C7-C12	N.D.	50.	ug/l	109		75-135		
Batch number: 111720026A	Sample number(s): 6317460-6317466							
DRO C12-C24 w/Si Gel	N.D.	30.	ug/l	86	84	56-103	3	20
HRO C24-C40 w/Si Gel	N.D.	70.	ug/l					
Batch number: 111720035A	Sample number(s): 6317467-6317472							
DRO C12-C24 w/Si Gel	N.D.	30.	ug/l	61		56-103		
HRO C24-C40 w/Si Gel	N.D.	70.	ug/l					

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
 Background (BKG) = the sample used in conjunction with the duplicate

<u>Analysis Name</u>	<u>MS %REC</u>	<u>MSD %REC</u>	<u>MS/MSD Limits</u>	<u>RPD</u>	<u>RPD MAX</u>	<u>BKG Conc</u>	<u>DUP Conc</u>	<u>DUP RPD</u>	<u>Dup RPD Max</u>
Batch number: 11173A53A	Sample number(s): 6317460-6317471, 6317473 UNSPK: P319390								
NWTPH-Gx water C7-C12	100	100	57-157	0	30				
Batch number: 111720035A	Sample number(s): 6317467-6317472 UNSPK: P319390								
DRO C12-C24 w/Si Gel	77	72	60-120	6	20				

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

 Analysis Name: Method 8021 Water Master
 Batch number: 11171C53A
 Trifluorotoluene-P Trifluorotoluene-F

6317472	67	69
Blank	66	66
LCS	66	83

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Chevron
Reported: 06/28/11 at 08:40 AM

Group Number: 1251791

Surrogate Quality Control

LCSD	65	84
Limits:	58-146	63-135

Analysis Name: NWTPH-Gx water C7-C12
Batch number: 11173A53A
Trifluorotoluene-F

6317460	66
6317461	72
6317462	71
6317463	70
6317464	68
6317465	69
6317466	67
6317467	66
6317468	66
6317469	66
6317470	67
6317471	67
6317473	73
Blank	66
LCS	84
MS	83
MSD	83

Limits: 63-135

Analysis Name: NWTPH-Dx water w/Si Gel
Batch number: 111720026A
Orthoterphenyl

6317460	103
6317461	105
6317462	102
6317463	104
6317464	99
6317465	105
6317466	107
Blank	103
LCS	112
LCSD	109

Limits: 50-150

Analysis Name: NWTPH-Dx water w/Si Gel
Batch number: 111720035A
Orthoterphenyl

6317467	93
6317468	96
6317469	95
6317470	94
6317471	94
6317472	96
Blank	100
LCS	85

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Chevron
Reported: 06/28/11 at 08:40 AM

Group Number: 1251791

Surrogate Quality Control

MS	104
MSD	96

Limits: 50-150

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Chevron Northwest Region Analysis Request/Chain of Custody



Acct. #: 11964

For Lancaster Laboratories use only
Sample #: 6317460-73

SCR#: _____
223390

Analyses Requested

C# 1251791

Facility #: Edmonds Terminal
 Site Address: 11720 Unolo Rd, Edmonds WA
 Chevron PM: Kim Jolitz Lead Consultant: ARCADIS
 Consultant/Office: ARCADIS Seattle
 Consultant Prj. Mgr.: Rebecca Andresen
 Consultant Phone #: 206 325 5254 Fax #: _____
 Sampler: DR/SM/HW
 Service Order #: B0045362 Non SAR:

Matrix
 Potable
 NPDES
 Water
 Oil
 Air

Preservation Codes	
<input type="checkbox"/> BTEX + MTBE 8021	<input type="checkbox"/> 8260 Naphth
<input type="checkbox"/> 8260 full scan	
<input type="checkbox"/> Oxygenates	
<input type="checkbox"/> NWTPH G	
<input type="checkbox"/> NWTPH D	<input checked="" type="checkbox"/> Extended Rng.
	<input checked="" type="checkbox"/> Silica Gel Cleanup
<input type="checkbox"/> Lead Total	<input type="checkbox"/> Diss.
	<input type="checkbox"/> Method
<input type="checkbox"/> VP/IEPH	
<input type="checkbox"/> NWTPH HClID	<input type="checkbox"/> quantification
	<u>Benzene</u>

Preservative Codes
 H = HCl T = Thiosulfate
 N = HNO₃ B = NaOH
 S = H₂SO₄ O = Other

J value reporting needed
 Must meet lowest detection limits possible for 8260 compounds

8021 MTBE Confirmation
 Confirm MTBE + Naphthalene
 Confirm highest hit by 8260
 Confirm all hits by 8260
 Run ___ oxy s on highest hit
 Run ___ oxy s on all hits

Sample Identification	Date Collected	Time Collected	Grab	Composite	Soil	Water	Oil	Air	Total Number of Containers	BTEX + MTBE 8021	8260 full scan	Oxygenates	NWTPH G	NWTPH D	Lead Total	VP/IEPH	NWTPH HClID	quantification
MW-519	6/15/11	1255	X			X			5									
MW-104		1405																
Dyp-1																		
MW-147		1010																
MW-8R		1120																
MW-521		1225																
MW-143		1400																
MW-101		1515																
Dyp-2																		
MW-523		1005																
MW-522		1140																
MW-520		1255																
MW-20R		1502																

Comments / Remarks
 page 1 of 1

Turnaround Time Requested (TAT) (please circle)
 STD. TAT 72 hour 48 hour
 24 hour 4 day 5 day

Relinquished by: [Signature] Date: 6/15/11 Time: 1600 Received by: FedEx Date: 6/15/11 Time: 1800

Data Package Options (please circle if required)
 QC Summary Type I - Full
 Type VI (Raw Data) Disk / EDD
 WIP (RWQCB) Standard Format
 Disk _____ Other.

Relinquished by: _____ Date: _____ Time: _____ Received by: _____ Date: _____ Time: _____

Relinquished by Commercial Carrier: _____ Received by: _____ Date: 6/14/11 Time: 910

UPS FedEx Other _____ Temperature Upon Receipt: 1.8 - 4.7 °C Custody Seals Intact? Yes No

Chevron Northwest Region Analysis Request/Chain of Custody

220887



For Lancaster Laboratories use only
 Acct. #: 11964 Sample #: 6317460-73 SCR#: _____

Facility #: <u>Edmonds Terminal</u> Site Address: <u>11720 Unico Rd, Edmonds WA</u> Chevron PM: <u>Kim Jolitz</u> Lead Consultant: <u>ARCADIS</u> Consultant/Office: <u>ARCADIS, Seattle</u> Consultant Prj. Mgr.: <u>Rebecca Andersen</u> Consultant Phone #: <u>206 325 5254</u> Fax #: _____ Sampler: <u>DR / sm / HW</u> Service Order #: <u>80045362</u> <input type="checkbox"/> Non SAR: _____				Matrix <input type="checkbox"/> Potable <input type="checkbox"/> NPDES <input type="checkbox"/> Water <input type="checkbox"/> Oil <input type="checkbox"/> Air		Analyses Requested Preservation Codes <input type="checkbox"/> BTEX + MTBE 8021 <input type="checkbox"/> 8260 <input type="checkbox"/> Naphth <input type="checkbox"/> 8260 full scan <input type="checkbox"/> Oxygenates <input checked="" type="checkbox"/> <u>NWTPHG</u> <input type="checkbox"/> TPH D <input type="checkbox"/> Extended Rng. <input type="checkbox"/> Silica Gel Cleanup Lead Total <input type="checkbox"/> Diss. <input type="checkbox"/> Method VPI/EPH NWTPH/H/ClD <input type="checkbox"/> quantification										G# <u>1251791</u> Preservative Codes H = HCl T = Thiosulfate N = HNO ₃ B = NaOH S = H ₂ SO ₄ O = Other <input type="checkbox"/> J value reporting needed <input type="checkbox"/> Must meet lowest detection limits possible for 8260 compounds 8021 MTBE Confirmation <input type="checkbox"/> Confirm MTBE + Naphthalene <input type="checkbox"/> Confirm highest hit by 8260 <input type="checkbox"/> Confirm all hits by 8260 <input type="checkbox"/> Run ___ oxy s on highest hit <input type="checkbox"/> Run ___ oxy s on all hits						
Sample Identification	Date Collected	Time Collected	Grab	Composite	Soil	Water	Oil	Air	Total Number of Containers										Comments / Remarks			
<u>Trip Blank</u>	-	-				<input checked="" type="checkbox"/>			2											page 2 of 2		
Turnaround Time Requested (TAT) (please circle) <table style="width: 100%; border: none;"> <tr> <td style="border: 1px solid black; border-radius: 50%; padding: 2px;">STD. TAT</td> <td style="padding: 2px;">72 hour</td> <td style="padding: 2px;">48 hour</td> </tr> <tr> <td style="padding: 2px;">24 hour</td> <td style="padding: 2px;">4 day</td> <td style="padding: 2px;">5 day</td> </tr> </table>									STD. TAT	72 hour	48 hour	24 hour	4 day	5 day	Relinquished by: <u>[Signature]</u> Date: <u>6/15/11</u> Time: <u>1600</u>			Received by: <u>[Signature]</u> Date: <u>6/15/11</u> Time: <u>1600</u>				
STD. TAT	72 hour	48 hour																				
24 hour	4 day	5 day																				
Data Package Options (please circle if required) <table style="width: 100%; border: none;"> <tr> <td style="padding: 2px;">QC Summary</td> <td style="padding: 2px;">Type I - Full</td> </tr> <tr> <td style="padding: 2px;">Type VI (Raw Data)</td> <td style="padding: 2px;">Disk / EDD</td> </tr> <tr> <td style="padding: 2px;">WIP (RWQCB)</td> <td style="padding: 2px;">Standard Format</td> </tr> <tr> <td style="padding: 2px;">Disk</td> <td style="padding: 2px;">_____ Other.</td> </tr> </table>									QC Summary	Type I - Full	Type VI (Raw Data)	Disk / EDD	WIP (RWQCB)	Standard Format	Disk	_____ Other.	Relinquished by: _____ Date: _____ Time: _____			Received by: _____ Date: _____ Time: _____		
QC Summary	Type I - Full																					
Type VI (Raw Data)	Disk / EDD																					
WIP (RWQCB)	Standard Format																					
Disk	_____ Other.																					
Relinquished by Commercial Carrier: UPS FedEx Other _____									Received by: <u>[Signature]</u> Date: <u>6/16/11</u> Time: <u>910</u>													
Temperature Upon Receipt _____ °C									<u>8°-4.7°</u>			Custody Seals Intact? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No										

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

RL	Reporting Limit	BMQL	Below Minimum Quantitation Level
N.D.	none detected	MPN	Most Probable Number
TNTC	Too Numerous To Count	CP Units	cobalt-chloroplatinate units
IU	International Units	NTU	nephelometric turbidity units
umhos/cm	micromhos/cm	ng	nanogram(s)
C	degrees Celsius	F	degrees Fahrenheit
meq	milliequivalents	lb.	pound(s)
g	gram(s)	kg	kilogram(s)
ug	microgram(s)	mg	milligram(s)
ml	milliliter(s)	l	liter(s)
m3	cubic meter(s)	ul	microliter(s)
<	less than - The number following the sign is the <u>limit of quantitation</u> , the smallest amount of analyte which can be reliably determined using this specific test.		
>	greater than		
J	estimated value – The result is \geq the Method Detection Limit (MDL) and $<$ the Limit of Quantitation (LOQ).		
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter of gas per liter of gas.		
ppb	parts per billion		
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.		

U.S. EPA CLP Data Qualifiers:

Organic Qualifiers	Inorganic Qualifiers
A TIC is a possible aldol-condensation product	B Value is $<$ CRDL, but \geq IDL
B Analyte was also detected in the blank	E Estimated due to interference
C Pesticide result confirmed by GC/MS	M Duplicate injection precision not met
D Compound quantitated on a diluted sample	N Spike sample not within control limits
E Concentration exceeds the calibration range of the instrument	S Method of standard additions (MSA) used for calculation
N Presumptive evidence of a compound (TICs only)	U Compound was not detected
P Concentration difference between primary and confirmation columns $>$ 25%	W Post digestion spike out of control limits
U Compound was not detected	* Duplicate analysis not within control limits
X,Y,Z Defined in case narrative	+ Correlation coefficient for MSA $<$ 0.995

Analytical test results meet all requirements of NELAC unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

WARRANTY AND LIMITS OF LIABILITY - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL LANCASTER LABORATORIES BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF LANCASTER LABORATORIES AND (B) WHETHER LANCASTER LABORATORIES HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Lancaster Laboratories which includes any conditions that vary from the Standard Terms and Conditions, and Lancaster hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

ANALYTICAL RESULTS

Prepared by:

Lancaster Laboratories
2425 New Holland Pike
Lancaster, PA 17605-2425

Prepared for:

Chevron
6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

June 29, 2011

Project: Edmonds Terminal

Submittal Date: 06/17/2011
Group Number: 1252072
PO Number: 0015074659
Release Number: JOLITZ
State of Sample Origin: WA

<u>Client Sample Description</u>	<u>Lancaster Labs (LLI) #</u>
MW-518 Grab Water Sample	6319389
MW-139R Unspiked Grab Water Sample	6319390
MW-139RMS Matrix Spike Grab Water Sample	6319391
MW-139RMSD Matrix Spike Dup Grab Water Sample	6319392
MW-509 Grab Water Sample	6319393
MW-512 Grab Water Sample	6319394
DUP-3 Grab Water Sample	6319395
MW-506 Grab Water Sample	6319396
MW-109 Grab Water Sample	6319397
MW-108 Grab Water Sample	6319398
LM-2 Grab Water Sample	6319399
MW-508 Grab Water Sample	6319400
MW-515 Grab Water Sample	6319401
MW-516 Grab Water Sample	6319402
MW-517 Grab Water Sample	6319403
MW-514 Grab Water Sample	6319404
MW-513 Grab Water Sample	6319405
Trip_Blank Water Sample	6319406

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

ELECTRONIC Arcadis
COPY TO
ELECTRONIC Arcadis

Attn: Rebecca Andresen

Attn: Scott Zorn

COPY TO
ELECTRONIC Arcadis
COPY TO

Attn: Dave Rasar

Questions? Contact your Client Services Representative
Elizabeth A Leonhardt at (510) 232-8894

Respectfully Submitted,



Sarah M. Snyder
Senior Specialist



Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Sample Description: MW-518 Grab Water Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # WW 6319389
LLI Group # 1252072
Account # 11964

Project Name: Edmonds Terminal

Collected: 06/16/2011 10:05 by DR

Chevron

6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

Submitted: 06/17/2011 09:15

Reported: 06/29/2011 10:19

UE518

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC Volatiles					
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx n.a.	ug/l 140	ug/l 50	1
GC Extractable TPH w/Si Gel					
02211	DRO C12-C24 w/Si Gel	ECY 97-602 NWTPH-Dx modified n.a.	ug/l 200	ug/l 29	1
02211	HRO C24-C40 w/Si Gel	n.a.	N.D.	67	1

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	11175B20A	06/25/2011 14:09	Laura M Krieger	1
01146	GC VOA Water Prep	SW-846 5030B	1	11175B20A	06/25/2011 14:09	Laura M Krieger	1
02211	NWTPH-Dx water w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	111720035A	06/24/2011 20:46	Glorines Suarez-Rivera	1
02135	Extraction - DRO Water Special	ECY 97-602 NWTPH-Dx 06/97	1	111720035A	06/22/2011 09:00	Catherine R Wiker	1



Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Sample Description: MW-139R Unspiked Grab Water Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # WW 6319390
LLI Group # 1252072
Account # 11964

Project Name: Edmonds Terminal

Collected: 06/16/2011 11:00 by DR

Chevron

6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

Submitted: 06/17/2011 09:15

Reported: 06/29/2011 10:19

UE139

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC Volatiles					
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx n.a.	ug/l N.D.	ug/l 50	1
GC Extractable TPH w/Si Gel					
02211	DRO C12-C24 w/Si Gel	ECY 97-602 NWTPH-Dx modified n.a.	ug/l 56	ug/l 29	1
02211	HRO C24-C40 w/Si Gel	n.a.	870	67	1

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	11173A53A	06/23/2011 20:20	Marie D John	1
01146	GC VOA Water Prep	SW-846 5030B	1	11173A53A	06/23/2011 20:20	Marie D John	1
02211	NWTPH-Dx water w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	111720035A	06/24/2011 21:08	Glorines Suarez-Rivera	1
02135	Extraction - DRO Water Special	ECY 97-602 NWTPH-Dx 06/97	1	111720035A	06/22/2011 09:00	Catherine R Wiker	1



Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Sample Description: MW-139RMS Matrix Spike Grab Water Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # WW 6319391
LLI Group # 1252072
Account # 11964

Project Name: Edmonds Terminal

Collected: 06/16/2011 11:00 by DR

Chevron

6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

Submitted: 06/17/2011 09:15

Reported: 06/29/2011 10:19

UE139

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC Volatiles					
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx n.a.	ug/l 1,100	ug/l 50	1
GC Extractable TPH w/Si Gel					
02211	DRO C12-C24 w/Si Gel	ECY 97-602 NWTPH-Dx modified n.a.	ug/l 650	ug/l 29	1
02211	HRO C24-C40 w/Si Gel	n.a.	N.D.	68	1

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	11173A53A	06/23/2011 20:46	Marie D John	1
01146	GC VOA Water Prep	SW-846 5030B	1	11173A53A	06/23/2011 20:46	Marie D John	1
02211	NWTPH-Dx water w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	111720035A	06/24/2011 21:29	Glorines Suarez-Rivera	1
02135	Extraction - DRO Water Special	ECY 97-602 NWTPH-Dx 06/97	1	111720035A	06/22/2011 09:00	Catherine R Wiker	1



Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Sample Description: MW-139RMSD Matrix Spike Dup Grab Water Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # WW 6319392
LLI Group # 1252072
Account # 11964

Project Name: Edmonds Terminal

Collected: 06/16/2011 11:00 by DR

Chevron

6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

Submitted: 06/17/2011 09:15

Reported: 06/29/2011 10:19

UE139

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC Volatiles					
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx n.a.	ug/l 1,100	ug/l 50	1
GC Extractable TPH w/Si Gel					
02211	DRO C12-C24 w/Si Gel	ECY 97-602 NWTPH-Dx modified n.a.	ug/l 610	ug/l 29	1
02211	HRO C24-C40 w/Si Gel	n.a.	N.D.	67	1

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	11173A53A	06/23/2011 21:13	Marie D John	1
01146	GC VOA Water Prep	SW-846 5030B	1	11173A53A	06/23/2011 21:13	Marie D John	1
02211	NWTPH-Dx water w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	111720035A	06/24/2011 21:51	Glorines Suarez-Rivera	1
02135	Extraction - DRO Water Special	ECY 97-602 NWTPH-Dx 06/97	1	111720035A	06/22/2011 09:00	Catherine R Wiker	1



Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Page 1 of 1

Sample Description: MW-509 Grab Water Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # WW 6319393
LLI Group # 1252072
Account # 11964

Project Name: Edmonds Terminal

Collected: 06/16/2011 12:15 by DR

Chevron

6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

Submitted: 06/17/2011 09:15

Reported: 06/29/2011 10:19

UE509

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC Volatiles					
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx n.a.	ug/l N.D.	ug/l 50	1
GC Extractable TPH w/Si Gel					
02211	DRO C12-C24 w/Si Gel	ECY 97-602 NWTPH-Dx modified n.a.	ug/l N.D.	ug/l 29	1
02211	HRO C24-C40 w/Si Gel	n.a.	N.D.	67	1

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	11174B20A	06/24/2011 11:55	Laura M Krieger	1
01146	GC VOA Water Prep	SW-846 5030B	1	11174B20A	06/24/2011 11:55	Laura M Krieger	1
02211	NWTPH-Dx water w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	111730001A	06/25/2011 10:18	Glorines Suarez-Rivera	1
02135	Extraction - DRO Water Special	ECY 97-602 NWTPH-Dx 06/97	1	111730001A	06/22/2011 09:00	Catherine R Wiker	1



Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Sample Description: MW-512 Grab Water Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # WW 6319394
LLI Group # 1252072
Account # 11964

Project Name: Edmonds Terminal

Collected: 06/16/2011 13:15 by DR

Chevron

6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

Submitted: 06/17/2011 09:15

Reported: 06/29/2011 10:19

UE512

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC Volatiles					
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx n.a.	ug/l 74	ug/l 50	1
GC Extractable TPH w/Si Gel					
02211	DRO C12-C24 w/Si Gel	ECY 97-602 NWTPH-Dx modified n.a.	ug/l 200	ug/l 29	1
02211	HRO C24-C40 w/Si Gel	n.a.	N.D.	67	1

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	11174B20A	06/24/2011 12:17	Laura M Krieger	1
01146	GC VOA Water Prep	SW-846 5030B	1	11174B20A	06/24/2011 12:17	Laura M Krieger	1
02211	NWTPH-Dx water w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	111730001A	06/25/2011 10:38	Glorines Suarez-Rivera	1
02135	Extraction - DRO Water Special	ECY 97-602 NWTPH-Dx 06/97	1	111730001A	06/22/2011 09:00	Catherine R Wiker	1



Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Sample Description: DUP-3 Grab Water Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # WW 6319395
LLI Group # 1252072
Account # 11964

Project Name: Edmonds Terminal

Collected: 06/16/2011 by DR

Chevron

6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

Submitted: 06/17/2011 09:15

Reported: 06/29/2011 10:19

UEFD3

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC Volatiles					
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx n.a.	ug/l 79	ug/l 50	1
GC Extractable TPH w/Si Gel					
02211	DRO C12-C24 w/Si Gel	ECY 97-602 NWTPH-Dx modified n.a.	ug/l 190	ug/l 29	1
02211	HRO C24-C40 w/Si Gel	n.a.	N.D.	67	1

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	11174B20A	06/24/2011 12:39	Laura M Krieger	1
01146	GC VOA Water Prep	SW-846 5030B	1	11174B20A	06/24/2011 12:39	Laura M Krieger	1
02211	NWTPH-Dx water w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	111730001A	06/25/2011 10:59	Glorines Suarez-Rivera	1
02135	Extraction - DRO Water Special	ECY 97-602 NWTPH-Dx 06/97	1	111730001A	06/22/2011 09:00	Catherine R Wiker	1



Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Page 1 of 1

Sample Description: MW-506 Grab Water Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # WW 6319396
LLI Group # 1252072
Account # 11964

Project Name: Edmonds Terminal

Collected: 06/16/2011 14:20 by DR

Chevron

6001 Bollinger Canyon Rd L4310
 San Ramon CA 94583

Submitted: 06/17/2011 09:15

Reported: 06/29/2011 10:19

UE506

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC Volatiles					
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx n.a.	ug/l N.D.	ug/l 50	1
GC Extractable TPH w/Si Gel					
02211	DRO C12-C24 w/Si Gel	ECY 97-602 NWTPH-Dx modified n.a.	ug/l 50	ug/l 29	1
02211	HRO C24-C40 w/Si Gel	n.a.	N.D.	67	1

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	11174B20A	06/24/2011 13:01	Laura M Krieger	1
01146	GC VOA Water Prep	SW-846 5030B	1	11174B20A	06/24/2011 13:01	Laura M Krieger	1
02211	NWTPH-Dx water w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	111730001A	06/25/2011 11:20	Glorines Suarez-Rivera	1
02135	Extraction - DRO Water Special	ECY 97-602 NWTPH-Dx 06/97	1	111730001A	06/22/2011 09:00	Catherine R Wiker	1



Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Sample Description: MW-109 Grab Water Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # WW 6319397
LLI Group # 1252072
Account # 11964

Project Name: Edmonds Terminal

Collected: 06/16/2011 10:05 by DR

Chevron

6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

Submitted: 06/17/2011 09:15

Reported: 06/29/2011 10:19

UE109

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC Volatiles					
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx n.a.	ug/l N.D.	ug/l 50	1
GC Extractable TPH w/Si Gel					
02211	DRO C12-C24 w/Si Gel	ECY 97-602 NWTPH-Dx modified n.a.	ug/l 96	ug/l 29	1
02211	HRO C24-C40 w/Si Gel	n.a.	100	67	1

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	11174B20A	06/24/2011 13:22	Laura M Krieger	1
01146	GC VOA Water Prep	SW-846 5030B	1	11174B20A	06/24/2011 13:22	Laura M Krieger	1
02211	NWTPH-Dx water w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	111730001A	06/25/2011 11:40	Glorines Suarez-Rivera	1
02135	Extraction - DRO Water Special	ECY 97-602 NWTPH-Dx 06/97	1	111730001A	06/22/2011 09:00	Catherine R Wiker	1



Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Page 1 of 1

Sample Description: MW-108 Grab Water Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # WW 6319398
LLI Group # 1252072
Account # 11964

Project Name: Edmonds Terminal

Collected: 06/16/2011 11:10 by DR

Chevron

6001 Bollinger Canyon Rd L4310
 San Ramon CA 94583

Submitted: 06/17/2011 09:15

Reported: 06/29/2011 10:19

UE108

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC Volatiles					
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx n.a.	ug/l N.D.	ug/l 50	1
GC Extractable TPH w/Si Gel					
02211	DRO C12-C24 w/Si Gel	ECY 97-602 NWTPH-Dx modified n.a.	ug/l 140	ug/l 29	1
02211	HRO C24-C40 w/Si Gel	n.a.	N.D.	68	1

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	11174B20A	06/24/2011 13:44	Laura M Krieger	1
01146	GC VOA Water Prep	SW-846 5030B	1	11174B20A	06/24/2011 13:44	Laura M Krieger	1
02211	NWTPH-Dx water w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	111730001A	06/25/2011 12:01	Glorines Suarez-Rivera	1
02135	Extraction - DRO Water Special	ECY 97-602 NWTPH-Dx 06/97	1	111730001A	06/22/2011 09:00	Catherine R Wiker	1



Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Page 1 of 1

Sample Description: LM-2 Grab Water Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # WW 6319399
LLI Group # 1252072
Account # 11964

Project Name: Edmonds Terminal

Collected: 06/16/2011 12:30 by DR

Chevron

6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

Submitted: 06/17/2011 09:15

Reported: 06/29/2011 10:19

UELM2

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC Volatiles					
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx n.a.	ug/l N.D.	ug/l 50	1
GC Extractable TPH w/Si Gel					
02211	DRO C12-C24 w/Si Gel	ECY 97-602 NWTPH-Dx modified n.a.	ug/l 1,800	ug/l 29	1
02211	HRO C24-C40 w/Si Gel	n.a.	520	67	1

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	11174B20A	06/24/2011 14:06	Laura M Krieger	1
01146	GC VOA Water Prep	SW-846 5030B	1	11174B20A	06/24/2011 14:06	Laura M Krieger	1
02211	NWTPH-Dx water w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	111730001A	06/25/2011 12:22	Glorines Suarez-Rivera	1
02135	Extraction - DRO Water Special	ECY 97-602 NWTPH-Dx 06/97	1	111730001A	06/22/2011 09:00	Catherine R Wiker	1



Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Sample Description: MW-508 Grab Water Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # WW 6319400
LLI Group # 1252072
Account # 11964

Project Name: Edmonds Terminal

Collected: 06/16/2011 14:50 by DR

Chevron

6001 Bollinger Canyon Rd L4310
 San Ramon CA 94583

Submitted: 06/17/2011 09:15

Reported: 06/29/2011 10:19

UE508

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC Volatiles					
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx n.a.	ug/l N.D.	ug/l 50	1
GC Extractable TPH w/Si Gel					
02211	DRO C12-C24 w/Si Gel	ECY 97-602 NWTPH-Dx modified n.a.	ug/l 150	ug/l 29	1
02211	HRO C24-C40 w/Si Gel	n.a.	N.D.	67	1

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	11174B20A	06/24/2011 14:28	Laura M Krieger	1
01146	GC VOA Water Prep	SW-846 5030B	1	11174B20A	06/24/2011 14:28	Laura M Krieger	1
02211	NWTPH-Dx water w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	111730001A	06/25/2011 12:42	Glorines Suarez-Rivera	1
02135	Extraction - DRO Water Special	ECY 97-602 NWTPH-Dx 06/97	1	111730001A	06/22/2011 09:00	Catherine R Wiker	1



Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Sample Description: MW-515 Grab Water Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # WW 6319401
LLI Group # 1252072
Account # 11964

Project Name: Edmonds Terminal

Collected: 06/16/2011 10:26 by DR

Chevron

6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

Submitted: 06/17/2011 09:15

Reported: 06/29/2011 10:19

UE515

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC Volatiles					
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx n.a.	ug/l N.D.	ug/l 50	1
GC Extractable TPH w/Si Gel					
02211	DRO C12-C24 w/Si Gel	ECY 97-602 NWTPH-Dx modified n.a.	ug/l 200	ug/l 29	1
02211	HRO C24-C40 w/Si Gel	n.a.	N.D.	67	1

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	11174B20A	06/24/2011 14:50	Laura M Krieger	1
01146	GC VOA Water Prep	SW-846 5030B	1	11174B20A	06/24/2011 14:50	Laura M Krieger	1
02211	NWTPH-Dx water w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	111730001A	06/25/2011 13:03	Glorines Suarez-Rivera	1
02135	Extraction - DRO Water Special	ECY 97-602 NWTPH-Dx 06/97	1	111730001A	06/22/2011 09:00	Catherine R Wiker	1



Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Sample Description: MW-516 Grab Water Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # WW 6319402
LLI Group # 1252072
Account # 11964

Project Name: Edmonds Terminal

Collected: 06/16/2011 11:33 by DR

Chevron

6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

Submitted: 06/17/2011 09:15

Reported: 06/29/2011 10:19

UE516

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC Volatiles					
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx n.a.	ug/l N.D.	ug/l 50	1
GC Extractable TPH w/Si Gel					
02211	DRO C12-C24 w/Si Gel	ECY 97-602 NWTPH-Dx modified n.a.	ug/l 170	ug/l 29	1
02211	HRO C24-C40 w/Si Gel	n.a.	N.D.	67	1

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	11174B20A	06/24/2011 15:12	Laura M Krieger	1
01146	GC VOA Water Prep	SW-846 5030B	1	11174B20A	06/24/2011 15:12	Laura M Krieger	1
02211	NWTPH-Dx water w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	111730001A	06/25/2011 13:24	Glorines Suarez-Rivera	1
02135	Extraction - DRO Water Special	ECY 97-602 NWTPH-Dx 06/97	1	111730001A	06/22/2011 09:00	Catherine R Wiker	1



Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Sample Description: MW-517 Grab Water Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # WW 6319403
LLI Group # 1252072
Account # 11964

Project Name: Edmonds Terminal

Collected: 06/16/2011 12:41 by DR

Chevron

6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

Submitted: 06/17/2011 09:15

Reported: 06/29/2011 10:19

UE517

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC Volatiles					
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx n.a.	ug/l N.D.	ug/l 50	1
GC Extractable TPH w/Si Gel					
02211	DRO C12-C24 w/Si Gel	ECY 97-602 NWTPH-Dx modified n.a.	ug/l 89	ug/l 29	1
02211	HRO C24-C40 w/Si Gel	n.a.	N.D.	67	1

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	11174B20A	06/24/2011 15:33	Laura M Krieger	1
01146	GC VOA Water Prep	SW-846 5030B	1	11174B20A	06/24/2011 15:33	Laura M Krieger	1
02211	NWTPH-Dx water w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	111730028A	06/25/2011 00:24	Glorines Suarez-Rivera	1
02135	Extraction - DRO Water Special	ECY 97-602 NWTPH-Dx 06/97	1	111730028A	06/23/2011 09:00	Cynthia J Salvatori	1



Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Page 1 of 1

Sample Description: MW-514 Grab Water Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # WW 6319404
LLI Group # 1252072
Account # 11964

Project Name: Edmonds Terminal

Collected: 06/16/2011 13:45 by DR

Chevron

6001 Bollinger Canyon Rd L4310
 San Ramon CA 94583

Submitted: 06/17/2011 09:15

Reported: 06/29/2011 10:19

UE514

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC Volatiles					
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx n.a.	ug/l 170	ug/l 50	1
GC Extractable TPH w/Si Gel					
02211	DRO C12-C24 w/Si Gel	ECY 97-602 NWTPH-Dx modified n.a.	ug/l 230	ug/l 29	1
02211	HRO C24-C40 w/Si Gel	n.a.	N.D.	67	1

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	11174B20A	06/24/2011 15:55	Laura M Krieger	1
01146	GC VOA Water Prep	SW-846 5030B	1	11174B20A	06/24/2011 15:55	Laura M Krieger	1
02211	NWTPH-Dx water w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	111730028A	06/25/2011 00:46	Glorines Suarez-Rivera	1
02135	Extraction - DRO Water Special	ECY 97-602 NWTPH-Dx 06/97	1	111730028A	06/23/2011 09:00	Cynthia J Salvatori	1



Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Sample Description: MW-513 Grab Water Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # WW 6319405
LLI Group # 1252072
Account # 11964

Project Name: Edmonds Terminal

Collected: 06/16/2011 14:43 by DR

Chevron

6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

Submitted: 06/17/2011 09:15

Reported: 06/29/2011 10:19

UE513

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC Volatiles					
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx n.a.	ug/l 100	ug/l 50	1
GC Extractable TPH w/Si Gel					
02211	DRO C12-C24 w/Si Gel	ECY 97-602 NWTPH-Dx modified n.a.	ug/l 230	ug/l 29	1
02211	HRO C24-C40 w/Si Gel	n.a.	N.D.	67	1

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	11174B20A	06/24/2011 16:17	Laura M Krieger	1
01146	GC VOA Water Prep	SW-846 5030B	1	11174B20A	06/24/2011 16:17	Laura M Krieger	1
02211	NWTPH-Dx water w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	111730028A	06/25/2011 01:07	Glorines Suarez-Rivera	1
02135	Extraction - DRO Water Special	ECY 97-602 NWTPH-Dx 06/97	1	111730028A	06/23/2011 09:00	Cynthia J Salvatori	1



Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Sample Description: Trip_Blank Water Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # WW 6319406
LLI Group # 1252072
Account # 11964

Project Name: Edmonds Terminal

Collected: 06/16/2011

Chevron

Submitted: 06/17/2011 09:15

6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

Reported: 06/29/2011 10:19

UETR

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC Volatiles	ECY 97-602 NWTPH-Gx		ug/l	ug/l	
08273	NWTPH-Gx water C7-C12	n.a.	N.D.	50	1

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	11174B20A	06/24/2011 10:50	Laura M Krieger	1
01146	GC VOA Water Prep	SW-846 5030B	1	11174B20A	06/24/2011 10:50	Laura M Krieger	1

Quality Control Summary

 Client Name: Chevron
 Reported: 06/29/11 at 10:19 AM

Group Number: 1252072

Matrix QC may not be reported if site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

Laboratory Compliance Quality Control

<u>Analysis Name</u>	<u>Blank Result</u>	<u>Blank MDL</u>	<u>Report Units</u>	<u>LCS %REC</u>	<u>LCSD %REC</u>	<u>LCS/LCSD Limits</u>	<u>RPD</u>	<u>RPD Max</u>
Batch number: 11173A53A NWTPH-Gx water C7-C12	Sample number(s): 6319390-6319392 N.D.	50.	ug/l	109		75-135		
Batch number: 11174B20A NWTPH-Gx water C7-C12	Sample number(s): 6319393-6319406 N.D.	50.	ug/l	100	100	75-135	0	30
Batch number: 11175B20A NWTPH-Gx water C7-C12	Sample number(s): 6319389 N.D.	50.	ug/l	100		75-135		
Batch number: 111720035A DRO C12-C24 w/Si Gel HRO C24-C40 w/Si Gel	Sample number(s): 6319389-6319392 N.D. N.D.	30. 70.	ug/l ug/l	61		56-103		
Batch number: 111730001A DRO C12-C24 w/Si Gel HRO C24-C40 w/Si Gel	Sample number(s): 6319393-6319402 N.D. N.D.	30. 70.	ug/l ug/l	75	78	56-103	3	20
Batch number: 111730028A DRO C12-C24 w/Si Gel HRO C24-C40 w/Si Gel	Sample number(s): 6319403-6319405 N.D. N.D.	30. 70.	ug/l ug/l	75	79	56-103	5	20

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
 Background (BKG) = the sample used in conjunction with the duplicate

<u>Analysis Name</u>	<u>MS %REC</u>	<u>MSD %REC</u>	<u>MS/MSD Limits</u>	<u>RPD</u>	<u>RPD MAX</u>	<u>BKG Conc</u>	<u>DUP Conc</u>	<u>DUP RPD</u>	<u>Dup RPD Max</u>
Batch number: 11173A53A NWTPH-Gx water C7-C12	Sample number(s): 6319390-6319392 100	100	57-157	0	30	UNSPK: 6319390			
Batch number: 11175B20A NWTPH-Gx water C7-C12	Sample number(s): 6319389 109	109	57-157	0	30	UNSPK: P320826			
Batch number: 111720035A DRO C12-C24 w/Si Gel	Sample number(s): 6319389-6319392 77	72	60-120	6	20	UNSPK: 6319390			

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Chevron
Reported: 06/29/11 at 10:19 AM

Group Number: 1252072

Surrogate Quality Control

Analysis Name: NWTPH-Gx water C7-C12
Batch number: 11173A53A
Trifluorotoluene-F

6319390	69
6319391	83
6319392	83
Blank	66
LCS	84
MS	83
MSD	83

Limits: 63-135

Analysis Name: NWTPH-Gx water C7-C12
Batch number: 11174B20A
Trifluorotoluene-F

6319393	87
6319394	85
6319395	85
6319396	86
6319397	86
6319398	85
6319399	85
6319400	85
6319401	85
6319402	84
6319403	84
6319404	83
6319405	83
6319406	85
Blank	83
LCS	112
LCSD	113

Limits: 63-135

Analysis Name: NWTPH-Gx water C7-C12
Batch number: 11175B20A
Trifluorotoluene-F

6319389	83
Blank	81
LCS	113
MS	114
MSD	117

Limits: 63-135

Analysis Name: NWTPH-Dx water w/Si Gel
Batch number: 111720035A
Orthoterphenyl

6319389	96
6319390	86

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Chevron
Reported: 06/29/11 at 10:19 AM

Group Number: 1252072

Surrogate Quality Control

6319391	104
6319392	96
Blank	100
LCS	85
MS	104
MSD	96

Limits: 50-150

Analysis Name: NWTPH-Dx water w/Si Gel
Batch number: 111730001A
Orthoterphenyl

6319393	88
6319394	92
6319395	92
6319396	89
6319397	95
6319398	88
6319399	102
6319400	91
6319401	90
6319402	93
Blank	89
LCS	97
LCSD	99

Limits: 50-150

Analysis Name: NWTPH-Dx water w/Si Gel
Batch number: 111730028A
Orthoterphenyl

6319403	100
6319404	95
6319405	102
Blank	100
LCS	102
LCSD	107

Limits: 50-150

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Chevron Northwest Region Analysis Request/Chain of Custody

223961



For Lancaster Laboratories use only
 Acct. #: 11964 Sample #: 6319389-406 SCR#: _____

Facility #: <u>Edmonds Terminal</u> Site Address: <u>11720 Undo Rd, Edmonds WA</u> Chevron PM: <u>Kim Jolitz</u> Lead Consultant: <u>ARCADIS</u> Consultant/Office: <u>ARCADIS, Seattle</u> Consultant Prj. Mgr.: <u>Rebecca Andresen</u> Consultant Phone #: <u>206 325 5254</u> Fax #: _____ Sampler: <u>DR/SM/HW</u> Service Order #: <u>B0045362</u> <input type="checkbox"/> Non SAR: _____			Matrix Soil <input type="checkbox"/> Potable <input type="checkbox"/> Water <input type="checkbox"/> NPDES <input type="checkbox"/> Oil <input type="checkbox"/> Air <input type="checkbox"/>		Analyses Requested Preservation Codes BTEX + MTBE 8021 <input type="checkbox"/> 8260 <input type="checkbox"/> Naphth <input type="checkbox"/> 8260 full scan <input type="checkbox"/> Oxygenates <input type="checkbox"/> TPH G <input checked="" type="checkbox"/> TPH D <input checked="" type="checkbox"/> Extended Rng. <input type="checkbox"/> Lead Total <input type="checkbox"/> Diss. <input type="checkbox"/> Method <input type="checkbox"/> VPHEPH <input type="checkbox"/> NWTPH H-ACID <input type="checkbox"/> quantification <input type="checkbox"/>										C# <u>1252012</u> Preservative Codes H = HCl T = Thiosulfate N = HNO ₃ B = NaOH S = H ₂ SO ₄ O = Other <input type="checkbox"/> J value reporting needed <input type="checkbox"/> Must meet lowest detection limits possible for 8260 compounds 8021 MTBE Confirmation <input type="checkbox"/> Confirm MTBE + Naphthalene <input type="checkbox"/> Confirm highest hit by 8260 <input type="checkbox"/> Confirm all hits by 8260 <input type="checkbox"/> Run ___ oxy s on highest hit <input type="checkbox"/> Run ___ oxy s on all hits								
Sample Identification	Date Collected	Time Collected	Grab	Composite	Soil	Water	Oil	Air	Total Number of Containers	BTEX + MTBE 8021	8260 full scan	Oxygenates	TPH G	TPH D	Lead Total	Diss.	Method	VPHEPH	NWTPH H-ACID	quantification	Comments / Remarks		
MW-518	6/16/11	1005	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			5				<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>								page 1 of 2	
MW-139R		1100																					
MW-139RMS		1100																					
MW-139RMSD		1100																					
MW-509		1215																					
MW-512		1315																					
Dup-3																							
MW-506		1420																					
MW-109		1005																					
MW-108		1110																					
LM-2		1230																					
MW-508		1450																					
MW-515		1026																					
Turnaround Time Requested (TAT) (please circle) (STD. TAT) 24 hour 72 hour 48 hour 4 day 5 day									Relinquished by: <u>[Signature]</u> Date: <u>6/16/11</u> Time: <u>1630</u>			Received by: <u>[Signature]</u> Date: <u>6/16/11</u> Time: <u>1630</u>											
Data Package Options (please circle if required) QC Summary Type I - Full Type VI (Raw Data) Disk / EDD WIP (RWQCB) Standard Format Disk _____ Other.									Relinquished by: _____ Date: _____ Time: _____			Received by: _____ Date: _____ Time: _____											
Relinquished by Commercial Carrier: UPS FedEx Other _____									Received by: <u>[Signature]</u> Date: <u>6/16/11</u> Time: <u>0915</u>			Temperature Upon Receipt: <u>25-3.6</u> C° Custody Seals Intact? <input checked="" type="checkbox"/> Yes No											

Chevron Northwest Region Analysis Request/Chain of Custody



223962

For Lancaster Laboratories use only
 Acct. #: 11964 Sample #: 6319389-406 SCR#: _____

Analyses Requested

G# 1252072

Facility #: Edmonds Terminal
 Site Address: 11700 Union Rd, Edmonds, WA
 Chevron PM: Kim Jolitz Lead Consultant: ARCADIS
 Consultant/Office: ARCADIS, Seattle
 Consultant Prj. Mgr.: Rebecca Andresen
 Consultant Phone #: 2063255254 Fax #: _____
 Sampler: DR/SM/HN
 Service Order #: 80045362 Non SAR: _____

Matrix		Preservation Codes																	
Soil	Water	Oil	Air																
<input type="checkbox"/> Potable <input type="checkbox"/> NPDES				Total Number of Containers	<input type="checkbox"/> BTEX + MTBE 8021 <input type="checkbox"/> 8260	<input type="checkbox"/> Naphth	<input type="checkbox"/> 8260 full scan	Oxygenates	VPH/EPH	NWT/PH/H/COID	<input type="checkbox"/> quantification	<input type="checkbox"/> Method	<input type="checkbox"/> Diss.	<input type="checkbox"/> Extended Rtg. <input type="checkbox"/> Silica Gel Cleanup	<input type="checkbox"/> TPH G	<input type="checkbox"/> TPH D	<input type="checkbox"/> Lead Total	<input type="checkbox"/> H	<input type="checkbox"/> H

- Preservative Codes**
- H = HCl T = Thiosulfate
 N = HNO₃ B = NaOH
 S = H₂SO₄ O = Other
- J value reporting needed
 Must meet lowest detection limits possible for 8260 compounds
- 8021 MTBE Confirmation
- Confirm MTBE + Naphthalene
 Confirm highest hit by 8260
 Confirm all hits by 8260
 Run ___ oxy s on highest hit
 Run ___ oxy s on all hits

Sample Identification	Date Collected	Time Collected	Grab	Composite	Soil	Water	Oil	Air	Total Number of Containers	BTEX + MTBE 8021 8260	Naphth	8260 full scan	Oxygenates	VPH/EPH	NWT/PH/H/COID	quantification	Method	Diss.	Extended Rtg. Silica Gel Cleanup	TPH G	TPH D	Lead Total	H	H	
MW-516	6/16/11	1133	X			X			5												X	X			
MW-517	↓	1241							↓																
MW-514	↓	1345							↓																
MW-513	↓	1443							↓																
Trip Blank	-	-							2																

Comments / Remarks

page
2 of 2

Turnaround Time Requested (TAT) (please circle)

STD. TAT 72 hour 48 hour
 24 hour 4 day 5 day

Relinquished by: [Signature] Date: 6/16/11 Time: 1630 Received by: FedEx Date: 6/16/11 Time: 1650

Data Package Options (please circle if required)

QC Summary Type I - Full
 Type VI (Raw Data) Disk / EDD
 WIP (RWQCB) Standard Format
 Disk _____ Other.

Relinquished by: _____ Date: _____ Time: _____ Received by: _____ Date: _____ Time: _____

Relinquished by Commercial Carrier: _____ Received by: _____ Date: 6/16/11 Time: 0916

UPS FedEx Other: _____

Temperature Upon Receipt: 26-30 C° Custody Seals Intact? Yes No

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

RL	Reporting Limit	BMQL	Below Minimum Quantitation Level
N.D.	none detected	MPN	Most Probable Number
TNTC	Too Numerous To Count	CP Units	cobalt-chloroplatinate units
IU	International Units	NTU	nephelometric turbidity units
umhos/cm	micromhos/cm	ng	nanogram(s)
C	degrees Celsius	F	degrees Fahrenheit
meq	milliequivalents	lb.	pound(s)
g	gram(s)	kg	kilogram(s)
ug	microgram(s)	mg	milligram(s)
ml	milliliter(s)	l	liter(s)
m3	cubic meter(s)	ul	microliter(s)
<	less than - The number following the sign is the <u>limit of quantitation</u> , the smallest amount of analyte which can be reliably determined using this specific test.		
>	greater than		
J	estimated value – The result is \geq the Method Detection Limit (MDL) and $<$ the Limit of Quantitation (LOQ).		
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter of gas per liter of gas.		
ppb	parts per billion		
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.		

U.S. EPA CLP Data Qualifiers:

Organic Qualifiers	Inorganic Qualifiers
A TIC is a possible aldol-condensation product	B Value is $<$ CRDL, but \geq IDL
B Analyte was also detected in the blank	E Estimated due to interference
C Pesticide result confirmed by GC/MS	M Duplicate injection precision not met
D Compound quantitated on a diluted sample	N Spike sample not within control limits
E Concentration exceeds the calibration range of the instrument	S Method of standard additions (MSA) used for calculation
N Presumptive evidence of a compound (TICs only)	U Compound was not detected
P Concentration difference between primary and confirmation columns $>$ 25%	W Post digestion spike out of control limits
U Compound was not detected	* Duplicate analysis not within control limits
X,Y,Z Defined in case narrative	+ Correlation coefficient for MSA $<$ 0.995

Analytical test results meet all requirements of NELAC unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

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ANALYTICAL RESULTS

Prepared by:

Lancaster Laboratories
2425 New Holland Pike
Lancaster, PA 17605-2425

Prepared for:

Chevron
6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

June 29, 2011

Project: Edmonds Terminal

Submittal Date: 06/18/2011
Group Number: 1252272
PO Number: 0015074659
Release Number: JOLITZ
State of Sample Origin: WA

<u>Client Sample Description</u>	<u>Lancaster Labs (LLI) #</u>
MW-136 Grab Water Sample	6320812
MW-503 Grab Water Sample	6320813
DUP-4 Grab Water Sample	6320814
MW-502 Grab Water Sample	6320815
MW-511 Grab Water Sample	6320816
MW-150 Grab Water Sample	6320817
MW-500 Grab Water Sample	6320818
MW-501 Grab Water Sample	6320819
MW-504 Grab Water Sample	6320820
MW-524 Grab Water Sample	6320821
MW-135 Grab Water Sample	6320822
MW-129R Grab Water Sample	6320823
MW-507 Grab Water Sample	6320824
MW-505 Grab Water Sample	6320825
MW-149R Unspiked Grab Water Sample	6320826
MW-149RMS Matrix Spike Grab Water Sample	6320827
MW-149RMSD Matrix Spike Dup Grab Water Sample	6320828
Trip_Blank Water Sample	6320829

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

ELECTRONIC Arcadis
COPY TO
ELECTRONIC Arcadis

Attn: Rebecca Andresen

Attn: Scott Zorn

COPY TO
ELECTRONIC Arcadis
COPY TO

Attn: Dave Rasar

Questions? Contact your Client Services Representative
Elizabeth A Leonhardt at (510) 232-8894

Respectfully Submitted,



Sarah M. Snyder
Senior Specialist



Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

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Sample Description: MW-136 Grab Water Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # WW 6320812
LLI Group # 1252272
Account # 11964

Project Name: Edmonds Terminal

Collected: 06/17/2011 09:50 by DR

Chevron

6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

Submitted: 06/18/2011 10:15

Reported: 06/29/2011 10:22

ET136

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC Volatiles					
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx n.a.	ug/l N.D.	ug/l 50	1
GC Extractable TPH w/Si Gel					
02211	DRO C12-C24 w/Si Gel	ECY 97-602 NWTPH-Dx modified n.a.	ug/l 510	ug/l 29	1
02211	HRO C24-C40 w/Si Gel	n.a.	110	67	1

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	11174B20A	06/24/2011 17:22	Laura M Krieger	1
01146	GC VOA Water Prep	SW-846 5030B	1	11174B20A	06/24/2011 17:22	Laura M Krieger	1
02211	NWTPH-Dx water w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	111740014A	06/25/2011 06:51	Glorines Suarez-Rivera	1
02135	Extraction - DRO Water Special	ECY 97-602 NWTPH-Dx 06/97	1	111740014A	06/24/2011 08:00	Cynthia J Salvatori	1



Analysis Report

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Sample Description: MW-503 Grab Water Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # WW 6320813
LLI Group # 1252272
Account # 11964

Project Name: Edmonds Terminal

Collected: 06/17/2011 10:50 by DR

Chevron

6001 Bollinger Canyon Rd L4310
 San Ramon CA 94583

Submitted: 06/18/2011 10:15

Reported: 06/29/2011 10:22

ET503

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC Volatiles					
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx n.a.	ug/l N.D.	ug/l 50	1
GC Extractable TPH w/Si Gel					
02211	DRO C12-C24 w/Si Gel	ECY 97-602 NWTPH-Dx modified n.a.	ug/l 140	ug/l 29	1
02211	HRO C24-C40 w/Si Gel	n.a.	N.D.	67	1

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	11174B20A	06/24/2011 17:44	Laura M Krieger	1
01146	GC VOA Water Prep	SW-846 5030B	1	11174B20A	06/24/2011 17:44	Laura M Krieger	1
02211	NWTPH-Dx water w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	111740014A	06/25/2011 06:09	Glorines Suarez-Rivera	1
02135	Extraction - DRO Water Special	ECY 97-602 NWTPH-Dx 06/97	1	111740014A	06/24/2011 08:00	Cynthia J Salvatori	1



Analysis Report

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Sample Description: DUP-4 Grab Water Sample
 Unocal Edmonds Terminal
 11720 Unoco Road - Edmonds, WA

LLI Sample # WW 6320814
LLI Group # 1252272
Account # 11964

Project Name: Edmonds Terminal

Collected: 06/17/2011 by DR

Chevron

6001 Bollinger Canyon Rd L4310
 San Ramon CA 94583

Submitted: 06/18/2011 10:15

Reported: 06/29/2011 10:22

ETFD4

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC Volatiles					
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx n.a.	ug/l N.D.	ug/l 50	1
GC Extractable TPH w/Si Gel					
02211	DRO C12-C24 w/Si Gel	ECY 97-602 NWTPH-Dx modified n.a.	ug/l 160	ug/l 29	1
02211	HRO C24-C40 w/Si Gel	n.a.	N.D.	67	1

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	11175B20A	06/25/2011 14:31	Laura M Krieger	1
01146	GC VOA Water Prep	SW-846 5030B	1	11175B20A	06/25/2011 14:31	Laura M Krieger	1
02211	NWTPH-Dx water w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	111740014A	06/25/2011 06:30	Glorines Suarez-Rivera	1
02135	Extraction - DRO Water Special	ECY 97-602 NWTPH-Dx 06/97	1	111740014A	06/24/2011 08:00	Cynthia J Salvatori	1



Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Sample Description: MW-502 Grab Water Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # WW 6320815
LLI Group # 1252272
Account # 11964

Project Name: Edmonds Terminal

Collected: 06/17/2011 11:45 by DR

Chevron

6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

Submitted: 06/18/2011 10:15

Reported: 06/29/2011 10:22

ET502

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC Volatiles					
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx n.a.	ug/l N.D.	ug/l 50	1
GC Extractable TPH w/Si Gel					
02211	DRO C12-C24 w/Si Gel	ECY 97-602 NWTPH-Dx modified n.a.	ug/l 150	ug/l 29	1
02211	HRO C24-C40 w/Si Gel	n.a.	N.D.	67	1

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	11175B20A	06/25/2011 14:53	Laura M Krieger	1
01146	GC VOA Water Prep	SW-846 5030B	1	11175B20A	06/25/2011 14:53	Laura M Krieger	1
02211	NWTPH-Dx water w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	111740015A	06/25/2011 15:15	Glorines Suarez-Rivera	1
02135	Extraction - DRO Water Special	ECY 97-602 NWTPH-Dx 06/97	1	111740015A	06/24/2011 08:00	Cynthia J Salvatori	1



Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Sample Description: MW-511 Grab Water Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # WW 6320816
LLI Group # 1252272
Account # 11964

Project Name: Edmonds Terminal

Collected: 06/17/2011 13:05 by DR

Chevron

6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

Submitted: 06/18/2011 10:15

Reported: 06/29/2011 10:22

ET511

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC Volatiles					
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx n.a.	ug/l N.D.	ug/l 50	1
GC Extractable TPH w/Si Gel					
02211	DRO C12-C24 w/Si Gel	ECY 97-602 NWTPH-Dx modified n.a.	ug/l 100	ug/l 30	1
02211	HRO C24-C40 w/Si Gel	n.a.	N.D.	70	1

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	11175B20A	06/25/2011 15:14	Laura M Krieger	1
01146	GC VOA Water Prep	SW-846 5030B	1	11175B20A	06/25/2011 15:14	Laura M Krieger	1
02211	NWTPH-Dx water w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	111740015A	06/25/2011 15:37	Glorines Suarez-Rivera	1
02135	Extraction - DRO Water Special	ECY 97-602 NWTPH-Dx 06/97	1	111740015A	06/24/2011 08:00	Cynthia J Salvatori	1



Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Sample Description: MW-150 Grab Water Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # WW 6320817
LLI Group # 1252272
Account # 11964

Project Name: Edmonds Terminal

Collected: 06/17/2011 14:30 by DR

Chevron

6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

Submitted: 06/18/2011 10:15

Reported: 06/29/2011 10:22

ET150

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC Volatiles					
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx n.a.	ug/l N.D.	ug/l 50	1
GC Extractable TPH w/Si Gel					
02211	DRO C12-C24 w/Si Gel	ECY 97-602 NWTPH-Dx modified n.a.	ug/l 190	ug/l 29	1
02211	HRO C24-C40 w/Si Gel	n.a.	N.D.	68	1

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	11175B20A	06/25/2011 15:36	Laura M Krieger	1
01146	GC VOA Water Prep	SW-846 5030B	1	11175B20A	06/25/2011 15:36	Laura M Krieger	1
02211	NWTPH-Dx water w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	111740015A	06/25/2011 15:59	Glorines Suarez-Rivera	1
02135	Extraction - DRO Water Special	ECY 97-602 NWTPH-Dx 06/97	1	111740015A	06/24/2011 08:00	Cynthia J Salvatori	1



Analysis Report

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Sample Description: MW-500 Grab Water Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # WW 6320818
LLI Group # 1252272
Account # 11964

Project Name: Edmonds Terminal

Collected: 06/17/2011 09:57 by DR

Chevron

6001 Bollinger Canyon Rd L4310
 San Ramon CA 94583

Submitted: 06/18/2011 10:15

Reported: 06/29/2011 10:22

ET500

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC Volatiles					
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx n.a.	ug/l N.D.	ug/l 50	1
GC Extractable TPH w/Si Gel					
02211	DRO C12-C24 w/Si Gel	ECY 97-602 NWTPH-Dx modified n.a.	ug/l 130	ug/l 29	1
02211	HRO C24-C40 w/Si Gel	n.a.	N.D.	67	1

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	11175B20A	06/25/2011 15:58	Laura M Krieger	1
01146	GC VOA Water Prep	SW-846 5030B	1	11175B20A	06/25/2011 15:58	Laura M Krieger	1
02211	NWTPH-Dx water w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	111740015A	06/25/2011 16:20	Glorines Suarez-Rivera	1
02135	Extraction - DRO Water Special	ECY 97-602 NWTPH-Dx 06/97	1	111740015A	06/24/2011 08:00	Cynthia J Salvatori	1



Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Sample Description: MW-501 Grab Water Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # WW 6320819
LLI Group # 1252272
Account # 11964

Project Name: Edmonds Terminal

Collected: 06/17/2011 11:25 by DR

Chevron

6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

Submitted: 06/18/2011 10:15

Reported: 06/29/2011 10:22

ET501

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC Volatiles					
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx n.a.	ug/l N.D.	ug/l 50	1
GC Extractable TPH w/Si Gel					
02211	DRO C12-C24 w/Si Gel	ECY 97-602 NWTPH-Dx modified n.a.	ug/l 340	ug/l 29	1
02211	HRO C24-C40 w/Si Gel	n.a.	82	68	1

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	11175B20A	06/25/2011 16:20	Laura M Krieger	1
01146	GC VOA Water Prep	SW-846 5030B	1	11175B20A	06/25/2011 16:20	Laura M Krieger	1
02211	NWTPH-Dx water w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	111740015A	06/25/2011 16:42	Glorines Suarez-Rivera	1
02135	Extraction - DRO Water Special	ECY 97-602 NWTPH-Dx 06/97	1	111740015A	06/24/2011 08:00	Cynthia J Salvatori	1



Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Page 1 of 1

Sample Description: MW-504 Grab Water Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # WW 6320820
LLI Group # 1252272
Account # 11964

Project Name: Edmonds Terminal

Collected: 06/17/2011 13:16 by DR

Chevron

6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

Submitted: 06/18/2011 10:15

Reported: 06/29/2011 10:22

ET504

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC Volatiles					
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx n.a.	ug/l N.D.	ug/l 50	1
GC Extractable TPH w/Si Gel					
02211	DRO C12-C24 w/Si Gel	ECY 97-602 NWTPH-Dx modified n.a.	ug/l 60	ug/l 29	1
02211	HRO C24-C40 w/Si Gel	n.a.	N.D.	68	1

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	11175B20A	06/25/2011 16:41	Laura M Krieger	1
01146	GC VOA Water Prep	SW-846 5030B	1	11175B20A	06/25/2011 16:41	Laura M Krieger	1
02211	NWTPH-Dx water w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	111740015A	06/25/2011 17:03	Glorines Suarez-Rivera	1
02135	Extraction - DRO Water Special	ECY 97-602 NWTPH-Dx 06/97	1	111740015A	06/24/2011 08:00	Cynthia J Salvatori	1



Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

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Sample Description: MW-524 Grab Water Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # WW 6320821
LLI Group # 1252272
Account # 11964

Project Name: Edmonds Terminal

Collected: 06/17/2011 14:44 by DR

Chevron

6001 Bollinger Canyon Rd L4310
 San Ramon CA 94583

Submitted: 06/18/2011 10:15

Reported: 06/29/2011 10:22

ET524

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC Volatiles					
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx n.a.	ug/l N.D.	ug/l 50	1
GC Extractable TPH w/Si Gel					
02211	DRO C12-C24 w/Si Gel	ECY 97-602 NWTPH-Dx modified n.a.	ug/l 36	ug/l 29	1
02211	HRO C24-C40 w/Si Gel	n.a.	N.D.	67	1

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	11175B20A	06/25/2011 17:03	Laura M Krieger	1
01146	GC VOA Water Prep	SW-846 5030B	1	11175B20A	06/25/2011 17:03	Laura M Krieger	1
02211	NWTPH-Dx water w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	111740015A	06/25/2011 17:25	Glorines Suarez-Rivera	1
02135	Extraction - DRO Water Special	ECY 97-602 NWTPH-Dx 06/97	1	111740015A	06/24/2011 08:00	Cynthia J Salvatori	1



Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Sample Description: MW-135 Grab Water Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # WW 6320822
LLI Group # 1252272
Account # 11964

Project Name: Edmonds Terminal

Collected: 06/17/2011 09:50 by DR

Chevron

6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

Submitted: 06/18/2011 10:15

Reported: 06/29/2011 10:22

ET135

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC Volatiles					
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx n.a.	ug/l N.D.	ug/l 50	1
GC Extractable TPH w/Si Gel					
02211	DRO C12-C24 w/Si Gel	ECY 97-602 NWTPH-Dx modified n.a.	ug/l 550	ug/l 29	1
02211	HRO C24-C40 w/Si Gel	n.a.	210	67	1

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	11175B20A	06/25/2011 17:25	Laura M Krieger	1
01146	GC VOA Water Prep	SW-846 5030B	1	11175B20A	06/25/2011 17:25	Laura M Krieger	1
02211	NWTPH-Dx water w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	111740015A	06/25/2011 17:46	Glorines Suarez-Rivera	1
02135	Extraction - DRO Water Special	ECY 97-602 NWTPH-Dx 06/97	1	111740015A	06/24/2011 08:00	Cynthia J Salvatori	1



Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

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Sample Description: MW-129R Grab Water Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # WW 6320823
LLI Group # 1252272
Account # 11964

Project Name: Edmonds Terminal

Collected: 06/17/2011 10:55 by DR

Chevron

6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

Submitted: 06/18/2011 10:15

Reported: 06/29/2011 10:22

ET129

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC Volatiles					
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx n.a.	ug/l N.D.	ug/l 50	1
GC Extractable TPH w/Si Gel					
02211	DRO C12-C24 w/Si Gel	ECY 97-602 NWTPH-Dx modified n.a.	ug/l 1,600	ug/l 29	1
02211	HRO C24-C40 w/Si Gel	n.a.	310	67	1

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	11175B20A	06/25/2011 17:47	Laura M Krieger	1
01146	GC VOA Water Prep	SW-846 5030B	1	11175B20A	06/25/2011 17:47	Laura M Krieger	1
02211	NWTPH-Dx water w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	111740015A	06/25/2011 18:08	Glorines Suarez-Rivera	1
02135	Extraction - DRO Water Special	ECY 97-602 NWTPH-Dx 06/97	1	111740015A	06/24/2011 08:00	Cynthia J Salvatori	1



Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Sample Description: MW-507 Grab Water Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # WW 6320824
LLI Group # 1252272
Account # 11964

Project Name: Edmonds Terminal

Collected: 06/17/2011 12:00 by DR

Chevron

6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

Submitted: 06/18/2011 10:15

Reported: 06/29/2011 10:22

ET507

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC Volatiles					
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx n.a.	ug/l N.D.	ug/l 50	1
GC Extractable TPH w/Si Gel					
02211	DRO C12-C24 w/Si Gel	ECY 97-602 NWTPH-Dx modified n.a.	ug/l 200	ug/l 29	1
02211	HRO C24-C40 w/Si Gel	n.a.	88	68	1

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	11175B20A	06/25/2011 18:09	Laura M Krieger	1
01146	GC VOA Water Prep	SW-846 5030B	1	11175B20A	06/25/2011 18:09	Laura M Krieger	1
02211	NWTPH-Dx water w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	111740015A	06/25/2011 18:29	Glorines Suarez-Rivera	1
02135	Extraction - DRO Water Special	ECY 97-602 NWTPH-Dx 06/97	1	111740015A	06/24/2011 08:00	Cynthia J Salvatori	1



Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Sample Description: MW-505 Grab Water Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # WW 6320825
LLI Group # 1252272
Account # 11964

Project Name: Edmonds Terminal

Collected: 06/17/2011 13:00 by DR

Chevron

6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

Submitted: 06/18/2011 10:15

Reported: 06/29/2011 10:22

ET505

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC Volatiles					
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx n.a.	ug/l N.D.	ug/l 50	1
GC Extractable TPH w/Si Gel					
02211	DRO C12-C24 w/Si Gel	ECY 97-602 NWTPH-Dx modified n.a.	ug/l 100	ug/l 29	1
02211	HRO C24-C40 w/Si Gel	n.a.	N.D.	67	1

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	11175B20A	06/25/2011 18:30	Laura M Krieger	1
01146	GC VOA Water Prep	SW-846 5030B	1	11175B20A	06/25/2011 18:30	Laura M Krieger	1
02211	NWTPH-Dx water w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	111740016A	06/25/2011 19:52	Glorines Suarez-Rivera	1
02135	Extraction - DRO Water Special	ECY 97-602 NWTPH-Dx 06/97	1	111740016A	06/24/2011 08:00	Cynthia J Salvatori	1



Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Sample Description: MW-149R Unspiked Grab Water Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # WW 6320826
LLI Group # 1252272
Account # 11964

Project Name: Edmonds Terminal

Collected: 06/17/2011 14:25 by DR

Chevron

6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

Submitted: 06/18/2011 10:15

Reported: 06/29/2011 10:22

ET149

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC Volatiles					
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx n.a.	ug/l N.D.	ug/l 50	1
GC Extractable TPH w/Si Gel					
02211	DRO C12-C24 w/Si Gel	ECY 97-602 NWTPH-Dx modified n.a.	ug/l 82	ug/l 28	1
02211	HRO C24-C40 w/Si Gel	n.a.	N.D.	66	1

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	11175B20A	06/25/2011 13:03	Laura M Krieger	1
01146	GC VOA Water Prep	SW-846 5030B	1	11175B20A	06/25/2011 13:03	Laura M Krieger	1
02211	NWTPH-Dx water w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	111740016A	06/25/2011 20:12	Glorines Suarez-Rivera	1
02135	Extraction - DRO Water Special	ECY 97-602 NWTPH-Dx 06/97	1	111740016A	06/24/2011 08:00	Cynthia J Salvatori	1



Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

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Sample Description: MW-149RMS Matrix Spike Grab Water Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # WW 6320827
LLI Group # 1252272
Account # 11964

Project Name: Edmonds Terminal

Collected: 06/17/2011 14:25 by DR

Chevron

6001 Bollinger Canyon Rd L4310
 San Ramon CA 94583

Submitted: 06/18/2011 10:15

Reported: 06/29/2011 10:22

ET149

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC Volatiles					
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx n.a.	ug/l 1,200	ug/l 50	1
GC Extractable TPH w/Si Gel					
02211	DRO C12-C24 w/Si Gel	ECY 97-602 NWTPH-Dx modified n.a.	ug/l 670	ug/l 29	1
02211	HRO C24-C40 w/Si Gel	n.a.	84	67	1

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	11175B20A	06/25/2011 13:25	Laura M Krieger	1
01146	GC VOA Water Prep	SW-846 5030B	1	11175B20A	06/25/2011 13:25	Laura M Krieger	1
02211	NWTPH-Dx water w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	111740016A	06/25/2011 20:33	Glorines Suarez-Rivera	1
02135	Extraction - DRO Water Special	ECY 97-602 NWTPH-Dx 06/97	1	111740016A	06/24/2011 08:00	Cynthia J Salvatori	1



Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Page 1 of 1

Sample Description: MW-149RMSD Matrix Spike Dup Grab Water Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # WW 6320828
LLI Group # 1252272
Account # 11964

Project Name: Edmonds Terminal

Collected: 06/17/2011 14:25 by DR

Chevron

6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

Submitted: 06/18/2011 10:15

Reported: 06/29/2011 10:22

ET149

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC Volatiles					
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx n.a.	ug/l 1,200	ug/l 50	1
GC Extractable TPH w/Si Gel					
02211	DRO C12-C24 w/Si Gel	ECY 97-602 NWTPH-Dx modified n.a.	ug/l 650	ug/l 29	1
02211	HRO C24-C40 w/Si Gel	n.a.	70	67	1

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	11175B20A	06/25/2011 13:47	Laura M Krieger	1
01146	GC VOA Water Prep	SW-846 5030B	1	11175B20A	06/25/2011 13:47	Laura M Krieger	1
02211	NWTPH-Dx water w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	111740016A	06/25/2011 20:54	Glorines Suarez-Rivera	1
02135	Extraction - DRO Water Special	ECY 97-602 NWTPH-Dx 06/97	1	111740016A	06/24/2011 08:00	Cynthia J Salvatori	1



Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Sample Description: Trip_Blank Water Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # WW 6320829
LLI Group # 1252272
Account # 11964

Project Name: Edmonds Terminal

Collected: 06/17/2011

Chevron

Submitted: 06/18/2011 10:15

6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

Reported: 06/29/2011 10:22

ETTRB

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC Volatiles	ECY 97-602 NWTPH-Gx		ug/l	ug/l	
08273	NWTPH-Gx water C7-C12	n.a.	N.D.	50	1

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	11175B20A	06/25/2011 11:36	Laura M Krieger	1
01146	GC VOA Water Prep	SW-846 5030B	1	11175B20A	06/25/2011 11:36	Laura M Krieger	1

Quality Control Summary

Client Name: Chevron

Group Number: 1252272

Reported: 06/29/11 at 10:22 AM

Matrix QC may not be reported if site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

Laboratory Compliance Quality Control

<u>Analysis Name</u>	<u>Blank Result</u>	<u>Blank MDL</u>	<u>Report Units</u>	<u>LCS %REC</u>	<u>LCSD %REC</u>	<u>LCS/LCSD Limits</u>	<u>RPD</u>	<u>RPD Max</u>
Batch number: 11174B20A NWTPH-Gx water C7-C12	Sample number(s): 6320812-6320813 N.D.	50.	ug/l	100	100	75-135	0	30
Batch number: 11175B20A NWTPH-Gx water C7-C12	Sample number(s): 6320814-6320829 N.D.	50.	ug/l	100		75-135		
Batch number: 111740014A DRO C12-C24 w/Si Gel	Sample number(s): 6320812-6320814 N.D.	30.	ug/l	71	76	56-103	7	20
HRO C24-C40 w/Si Gel	N.D.	70.	ug/l					
Batch number: 111740015A DRO C12-C24 w/Si Gel	Sample number(s): 6320815-6320824 N.D.	30.	ug/l	78	78	56-103	0	20
HRO C24-C40 w/Si Gel	N.D.	70.	ug/l					
Batch number: 111740016A DRO C12-C24 w/Si Gel	Sample number(s): 6320825-6320828 N.D.	30.	ug/l	70		56-103		
HRO C24-C40 w/Si Gel	N.D.	70.	ug/l					

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

<u>Analysis Name</u>	<u>MS %REC</u>	<u>MSD %REC</u>	<u>MS/MSD Limits</u>	<u>RPD</u>	<u>RPD MAX</u>	<u>BKG Conc</u>	<u>DUP Conc</u>	<u>DUP RPD</u>	<u>Dup RPD Max</u>
Batch number: 11175B20A NWTPH-Gx water C7-C12	Sample number(s): 6320814-6320829 109	109	57-157	0	30	UNSPK: 6320826			
Batch number: 111740016A DRO C12-C24 w/Si Gel	Sample number(s): 6320825-6320828 77	75	60-120	3	20	UNSPK: 6320826			

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: NWTPH-Gx water C7-C12
Batch number: 11174B20A
Trifluorotoluene-F

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Chevron
Reported: 06/29/11 at 10:22 AM

Group Number: 1252272

Surrogate Quality Control

6320812 84
6320813 84
Blank 83
LCS 112
LCSD 113

Limits: 63-135

Analysis Name: NWT PH-Gx water C7-C12
Batch number: 11175B20A
Trifluorotoluene-F

6320814 84
6320815 84
6320816 84
6320817 84
6320818 85
6320819 85
6320820 85
6320821 84
6320822 83
6320823 86
6320824 85
6320825 84
6320826 82
6320827 114
6320828 117
6320829 82
Blank 81
LCS 113
MS 114
MSD 117

Limits: 63-135

Analysis Name: NWT PH-Dx water w/Si Gel
Batch number: 111740014A
Orthoterphenyl

6320812 99
6320813 94
6320814 100
Blank 96
LCS 96
LCSD 103

Limits: 50-150

Analysis Name: NWT PH-Dx water w/Si Gel
Batch number: 111740015A
Orthoterphenyl

6320815 96
6320816 97
6320817 101
6320818 88
6320819 100

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Chevron
Reported: 06/29/11 at 10:22 AM

Group Number: 1252272

Surrogate Quality Control

6320820	99
6320821	95
6320822	106
6320823	112
6320824	91
Blank	84
LCS	106
LCSD	104

Limits: 50-150

Analysis Name: NWTPH-Dx water w/Si Gel
Batch number: 111740016A
Orthoterphenyl

6320825	98
6320826	95
6320827	105
6320828	98
Blank	85
LCS	99
MS	105
MSD	98

Limits: 50-150

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

RL	Reporting Limit	BMQL	Below Minimum Quantitation Level
N.D.	none detected	MPN	Most Probable Number
TNTC	Too Numerous To Count	CP Units	cobalt-chloroplatinate units
IU	International Units	NTU	nephelometric turbidity units
umhos/cm	micromhos/cm	ng	nanogram(s)
C	degrees Celsius	F	degrees Fahrenheit
meq	milliequivalents	lb.	pound(s)
g	gram(s)	kg	kilogram(s)
ug	microgram(s)	mg	milligram(s)
ml	milliliter(s)	l	liter(s)
m3	cubic meter(s)	ul	microliter(s)
<	less than - The number following the sign is the <u>limit of quantitation</u> , the smallest amount of analyte which can be reliably determined using this specific test.		
>	greater than		
J	estimated value – The result is \geq the Method Detection Limit (MDL) and $<$ the Limit of Quantitation (LOQ).		
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter of gas per liter of gas.		
ppb	parts per billion		
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.		

U.S. EPA CLP Data Qualifiers:

Organic Qualifiers	Inorganic Qualifiers
A TIC is a possible aldol-condensation product	B Value is $<$ CRDL, but \geq IDL
B Analyte was also detected in the blank	E Estimated due to interference
C Pesticide result confirmed by GC/MS	M Duplicate injection precision not met
D Compound quantitated on a diluted sample	N Spike sample not within control limits
E Concentration exceeds the calibration range of the instrument	S Method of standard additions (MSA) used for calculation
N Presumptive evidence of a compound (TICs only)	U Compound was not detected
P Concentration difference between primary and confirmation columns $>$ 25%	W Post digestion spike out of control limits
U Compound was not detected	* Duplicate analysis not within control limits
X,Y,Z Defined in case narrative	+ Correlation coefficient for MSA $<$ 0.995

Analytical test results meet all requirements of NELAC unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

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ANALYTICAL RESULTS

Prepared by:

Lancaster Laboratories
2425 New Holland Pike
Lancaster, PA 17605-2425

Prepared for:

Chevron
6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

June 29, 2011

Project: Edmonds Terminal

Submittal Date: 06/21/2011
Group Number: 1252553
PO Number: 0015074659
Release Number: JOLITZ
State of Sample Origin: WAClient Sample DescriptionMW-510 Grab Water Sample
RB-1 Composite Water Sample
Trip_Blank Water SampleLancaster Labs (LLI) #6322423
6322424
6322425

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

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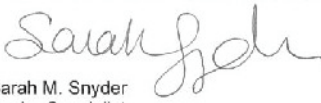
Attn: Rebecca Andresen

Attn: Scott Zorn

Attn: Dave Rasar

Questions? Contact your Client Services Representative
Elizabeth A Leonhardt at (510) 232-8894

Respectfully Submitted,



Sarah M. Snyder
Senior Specialist



Analysis Report

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Sample Description: MW-510 Grab Water Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # WW 6322423
LLI Group # 1252553
Account # 11964

Project Name: Edmonds Terminal

Collected: 06/20/2011 09:40 by SM

Chevron

6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

Submitted: 06/21/2011 09:30

Reported: 06/29/2011 10:22

UE510

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC Volatiles					
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx n.a.	ug/l 200	ug/l 50	1
GC Extractable TPH w/Si Gel					
02211	DRO C12-C24 w/Si Gel	ECY 97-602 NWTPH-Dx modified n.a.	ug/l 12,000	ug/l 140	5
02211	HRO C24-C40 w/Si Gel	n.a.	3,100	330	5

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	11175B20A	06/25/2011 18:52	Laura M Krieger	1
01146	GC VOA Water Prep	SW-846 5030B	1	11175B20A	06/25/2011 18:52	Laura M Krieger	1
02211	NWTPH-Dx water w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	111740016A	06/25/2011 23:39	Glorines Suarez-Rivera	5
02135	Extraction - DRO Water Special	ECY 97-602 NWTPH-Dx 06/97	1	111740016A	06/24/2011 08:00	Cynthia J Salvatori	1



Analysis Report

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Sample Description: RB-1 Composite Water Sample
 Unocal Edmonds Terminal
 11720 Unoco Road - Edmonds, WA

LLI Sample # WW 6322424
LLI Group # 1252553
Account # 11964

Project Name: Edmonds Terminal

Collected: 06/20/2011 10:30 by SM

Chevron

6001 Bollinger Canyon Rd L4310
 San Ramon CA 94583

Submitted: 06/21/2011 09:30

Reported: 06/29/2011 10:22

UERB1

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC Volatiles					
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx n.a.	ug/l N.D.	ug/l 50	1
GC Extractable TPH w/Si Gel					
02211	DRO C12-C24 w/Si Gel	ECY 97-602 NWTPH-Dx modified n.a.	ug/l 29	ug/l 29	1
02211	HRO C24-C40 w/Si Gel	n.a.	N.D.	68	1

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	11175B20A	06/25/2011 11:58	Laura M Krieger	1
01146	GC VOA Water Prep	SW-846 5030B	1	11175B20A	06/25/2011 11:58	Laura M Krieger	1
02211	NWTPH-Dx water w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	111740016A	06/25/2011 21:14	Glorines Suarez-Rivera	1
02135	Extraction - DRO Water Special	ECY 97-602 NWTPH-Dx 06/97	1	111740016A	06/24/2011 08:00	Cynthia J Salvatori	1



Analysis Report

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Sample Description: Trip_Blank Water Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # WW 6322425
LLI Group # 1252553
Account # 11964

Project Name: Edmonds Terminal

Collected: 06/20/2011

Chevron

Submitted: 06/21/2011 09:30

6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

Reported: 06/29/2011 10:22

UETB1

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC Volatiles	ECY 97-602 NWTPH-Gx		ug/l	ug/l	
08273	NWTPH-Gx water C7-C12	n.a.	N.D.	50	1

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	11175B20A	06/25/2011 12:20	Laura M Krieger	1
01146	GC VOA Water Prep	SW-846 5030B	1	11175B20A	06/25/2011 12:20	Laura M Krieger	1

Quality Control Summary

Client Name: Chevron
Reported: 06/29/11 at 10:22 AM

Group Number: 1252553

Surrogate Quality Control

Batch number: 111740016A
Orthoterphenyl

6322423	169*
6322424	95
Blank	85
LCS	99
MS	105
MSD	98

Limits: 50-150

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

RL	Reporting Limit	BMQL	Below Minimum Quantitation Level
N.D.	none detected	MPN	Most Probable Number
TNTC	Too Numerous To Count	CP Units	cobalt-chloroplatinate units
IU	International Units	NTU	nephelometric turbidity units
umhos/cm	micromhos/cm	ng	nanogram(s)
C	degrees Celsius	F	degrees Fahrenheit
meq	milliequivalents	lb.	pound(s)
g	gram(s)	kg	kilogram(s)
ug	microgram(s)	mg	milligram(s)
ml	milliliter(s)	l	liter(s)
m3	cubic meter(s)	ul	microliter(s)
<	less than - The number following the sign is the <u>limit of quantitation</u> , the smallest amount of analyte which can be reliably determined using this specific test.		
>	greater than		
J	estimated value – The result is \geq the Method Detection Limit (MDL) and $<$ the Limit of Quantitation (LOQ).		
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter of gas per liter of gas.		
ppb	parts per billion		
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.		

U.S. EPA CLP Data Qualifiers:

Organic Qualifiers	Inorganic Qualifiers
A TIC is a possible aldol-condensation product	B Value is $<$ CRDL, but \geq IDL
B Analyte was also detected in the blank	E Estimated due to interference
C Pesticide result confirmed by GC/MS	M Duplicate injection precision not met
D Compound quantitated on a diluted sample	N Spike sample not within control limits
E Concentration exceeds the calibration range of the instrument	S Method of standard additions (MSA) used for calculation
N Presumptive evidence of a compound (TICs only)	U Compound was not detected
P Concentration difference between primary and confirmation columns $>$ 25%	W Post digestion spike out of control limits
U Compound was not detected	* Duplicate analysis not within control limits
X,Y,Z Defined in case narrative	+ Correlation coefficient for MSA $<$ 0.995

Analytical test results meet all requirements of NELAC unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

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ANALYTICAL RESULTS

Prepared by:

Lancaster Laboratories
2425 New Holland Pike
Lancaster, PA 17605-2425

Prepared for:

Chevron
6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

August 05, 2011

Project: Edmonds Terminal

Submittal Date: 06/17/2011
Group Number: 1252072
PO Number: 0015074659
Release Number: JOLITZ
State of Sample Origin: WA

<u>Client Sample Description</u>	<u>Lancaster Labs (LLI) #</u>
MW-518 Grab Water Sample	6319389
MW-139R Unspiked Grab Water Sample	6319390
MW-139RMS Matrix Spike Grab Water Sample	6319391
MW-139RMSD Matrix Spike Dup Grab Water Sample	6319392
MW-509 Grab Water Sample	6319393
MW-512 Grab Water Sample	6319394
DUP-3 Grab Water Sample	6319395
MW-506 Grab Water Sample	6319396
MW-109 Grab Water Sample	6319397
MW-108 Grab Water Sample	6319398
LM-2 Grab Water Sample	6319399
MW-508 Grab Water Sample	6319400
MW-515 Grab Water Sample	6319401
MW-516 Grab Water Sample	6319402
MW-517 Grab Water Sample	6319403
MW-514 Grab Water Sample	6319404
MW-513 Grab Water Sample	6319405
Trip_Blank Water Sample	6319406

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

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Attn: Rebecca Andresen

Attn: Scott Zorn

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Attn: Dave Rasar

Questions? Contact your Client Services Representative
Elizabeth A Leonhardt at (510) 232-8894

Respectfully Submitted,



Sarah M. Snyder
Senior Specialist



Analysis Report

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Sample Description: MW-518 Grab Water Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # WW 6319389
LLI Group # 1252072
Account # 11964

Project Name: Edmonds Terminal

Collected: 06/16/2011 10:05 by DR

Chevron

6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

Submitted: 06/17/2011 09:15

Reported: 08/05/2011 16:54

UE518

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC Volatiles					
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx n.a.	ug/l 140	ug/l 50	1
GC Petroleum Hydrocarbons					
02211	DRO C12-C24 w/Si Gel	ECY 97-602 NWTPH-Dx modified n.a.	ug/l 200	ug/l 29	1
02211	HRO C24-C40 w/Si Gel	n.a.	N.D.	67	1

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	11175B20A	06/25/2011 14:09	Laura M Krieger	1
01146	GC VOA Water Prep	SW-846 5030B	1	11175B20A	06/25/2011 14:09	Laura M Krieger	1
02211	NWTPH-Dx water w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	111720035A	06/24/2011 20:46	Glorines Suarez-Rivera	1
02135	Extraction - DRO Water Special	ECY 97-602 NWTPH-Dx 06/97	1	111720035A	06/22/2011 09:00	Catherine R Wiker	1



Analysis Report

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Sample Description: MW-139R Unspiked Grab Water Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # WW 6319390
LLI Group # 1252072
Account # 11964

Project Name: Edmonds Terminal

Collected: 06/16/2011 11:00 by DR

Chevron

6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

Submitted: 06/17/2011 09:15

Reported: 08/05/2011 16:54

UE139

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC Volatiles					
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx n.a.	ug/l N.D.	ug/l 50	1
GC Petroleum Hydrocarbons					
02211	DRO C12-C24 w/Si Gel	ECY 97-602 NWTPH-Dx modified n.a.	ug/l 56	ug/l 29	1
02211	HRO C24-C40 w/Si Gel	n.a.	870	67	1

The sample extract was re-injected and confirmed the reported results. The sample was re-extracted past the method hold time. Results from the re-extraction are N.D. (<MDL) for both DRO and HRO. Since the hold time had expired prior to the re-extraction, all reported data is taken from the original extraction.

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	11173A53A	06/23/2011 20:20	Marie D John	1
01146	GC VOA Water Prep	SW-846 5030B	1	11173A53A	06/23/2011 20:20	Marie D John	1
02211	NWTPH-Dx water w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	111720035A	06/24/2011 21:08	Glorines Suarez-Rivera	1
02135	Extraction - DRO Water Special	ECY 97-602 NWTPH-Dx 06/97	1	111720035A	06/22/2011 09:00	Catherine R Wiker	1



Analysis Report

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REVISED

Sample Description: MW-139RMS Matrix Spike Grab Water Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # WW 6319391
LLI Group # 1252072
Account # 11964

Project Name: Edmonds Terminal

Collected: 06/16/2011 11:00 by DR

Chevron

6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

Submitted: 06/17/2011 09:15

Reported: 08/05/2011 16:54

UE139

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC Volatiles					
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx n.a.	ug/l 1,100	ug/l 50	1
GC Petroleum Hydrocarbons					
02211	DRO C12-C24 w/Si Gel	ECY 97-602 NWTPH-Dx modified n.a.	ug/l 650	ug/l 29	1
02211	HRO C24-C40 w/Si Gel	n.a.	N.D.	68	1

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	11173A53A	06/23/2011 20:46	Marie D John	1
01146	GC VOA Water Prep	SW-846 5030B	1	11173A53A	06/23/2011 20:46	Marie D John	1
02211	NWTPH-Dx water w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	111720035A	06/24/2011 21:29	Glorines Suarez-Rivera	1
02135	Extraction - DRO Water Special	ECY 97-602 NWTPH-Dx 06/97	1	111720035A	06/22/2011 09:00	Catherine R Wiker	1



Analysis Report

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Sample Description: MW-139RMSD Matrix Spike Dup Grab Water Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # WW 6319392
LLI Group # 1252072
Account # 11964

Project Name: Edmonds Terminal

Collected: 06/16/2011 11:00 by DR

Chevron

6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

Submitted: 06/17/2011 09:15

Reported: 08/05/2011 16:54

UE139

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC Volatiles					
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx n.a.	ug/l 1,100	ug/l 50	1
GC Petroleum Hydrocarbons					
02211	DRO C12-C24 w/Si Gel	ECY 97-602 NWTPH-Dx modified n.a.	ug/l 610	ug/l 29	1
02211	HRO C24-C40 w/Si Gel	n.a.	N.D.	67	1

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	11173A53A	06/23/2011 21:13	Marie D John	1
01146	GC VOA Water Prep	SW-846 5030B	1	11173A53A	06/23/2011 21:13	Marie D John	1
02211	NWTPH-Dx water w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	111720035A	06/24/2011 21:51	Glorines Suarez-Rivera	1
02135	Extraction - DRO Water Special	ECY 97-602 NWTPH-Dx 06/97	1	111720035A	06/22/2011 09:00	Catherine R Wiker	1



Analysis Report

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Sample Description: MW-509 Grab Water Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # WW 6319393
LLI Group # 1252072
Account # 11964

Project Name: Edmonds Terminal

Collected: 06/16/2011 12:15 by DR

Chevron

6001 Bollinger Canyon Rd L4310
 San Ramon CA 94583

Submitted: 06/17/2011 09:15

Reported: 08/05/2011 16:54

UE509

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC Volatiles					
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx n.a.	ug/l N.D.	ug/l 50	1
GC Petroleum Hydrocarbons					
02211	DRO C12-C24 w/Si Gel	ECY 97-602 NWTPH-Dx modified n.a.	ug/l N.D.	ug/l 29	1
02211	HRO C24-C40 w/Si Gel	n.a.	N.D.	67	1

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	11174B20A	06/24/2011 11:55	Laura M Krieger	1
01146	GC VOA Water Prep	SW-846 5030B	1	11174B20A	06/24/2011 11:55	Laura M Krieger	1
02211	NWTPH-Dx water w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	111730001A	06/25/2011 10:18	Glorines Suarez-Rivera	1
02135	Extraction - DRO Water Special	ECY 97-602 NWTPH-Dx 06/97	1	111730001A	06/22/2011 09:00	Catherine R Wiker	1



Analysis Report

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Sample Description: MW-512 Grab Water Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # WW 6319394
LLI Group # 1252072
Account # 11964

Project Name: Edmonds Terminal

Collected: 06/16/2011 13:15 by DR

Chevron

6001 Bollinger Canyon Rd L4310
 San Ramon CA 94583

Submitted: 06/17/2011 09:15

Reported: 08/05/2011 16:54

UE512

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC Volatiles					
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx n.a.	ug/l 74	ug/l 50	1
GC Petroleum Hydrocarbons					
02211	DRO C12-C24 w/Si Gel	ECY 97-602 NWTPH-Dx modified n.a.	ug/l 200	ug/l 29	1
02211	HRO C24-C40 w/Si Gel	n.a.	N.D.	67	1

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	11174B20A	06/24/2011 12:17	Laura M Krieger	1
01146	GC VOA Water Prep	SW-846 5030B	1	11174B20A	06/24/2011 12:17	Laura M Krieger	1
02211	NWTPH-Dx water w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	111730001A	06/25/2011 10:38	Glorines Suarez-Rivera	1
02135	Extraction - DRO Water Special	ECY 97-602 NWTPH-Dx 06/97	1	111730001A	06/22/2011 09:00	Catherine R Wiker	1



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REVISED

Sample Description: DUP-3 Grab Water Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # WW 6319395
LLI Group # 1252072
Account # 11964

Project Name: Edmonds Terminal

Collected: 06/16/2011 by DR

Chevron

6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

Submitted: 06/17/2011 09:15

Reported: 08/05/2011 16:54

UEFD3

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC Volatiles					
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx n.a.	ug/l 79	ug/l 50	1
GC Petroleum Hydrocarbons					
02211	DRO C12-C24 w/Si Gel	ECY 97-602 NWTPH-Dx modified n.a.	ug/l 190	ug/l 29	1
02211	HRO C24-C40 w/Si Gel	n.a.	N.D.	67	1

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	11174B20A	06/24/2011 12:39	Laura M Krieger	1
01146	GC VOA Water Prep	SW-846 5030B	1	11174B20A	06/24/2011 12:39	Laura M Krieger	1
02211	NWTPH-Dx water w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	111730001A	06/25/2011 10:59	Glorines Suarez-Rivera	1
02135	Extraction - DRO Water Special	ECY 97-602 NWTPH-Dx 06/97	1	111730001A	06/22/2011 09:00	Catherine R Wiker	1



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REVISED

Sample Description: MW-506 Grab Water Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # WW 6319396
LLI Group # 1252072
Account # 11964

Project Name: Edmonds Terminal

Collected: 06/16/2011 14:20 by DR

Chevron

6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

Submitted: 06/17/2011 09:15

Reported: 08/05/2011 16:54

UE506

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC Volatiles					
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx n.a.	ug/l N.D.	ug/l 50	1
GC Petroleum Hydrocarbons					
02211	DRO C12-C24 w/Si Gel	ECY 97-602 NWTPH-Dx modified n.a.	ug/l 50	ug/l 29	1
02211	HRO C24-C40 w/Si Gel	n.a.	N.D.	67	1

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	11174B20A	06/24/2011 13:01	Laura M Krieger	1
01146	GC VOA Water Prep	SW-846 5030B	1	11174B20A	06/24/2011 13:01	Laura M Krieger	1
02211	NWTPH-Dx water w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	111730001A	06/25/2011 11:20	Glorines Suarez-Rivera	1
02135	Extraction - DRO Water Special	ECY 97-602 NWTPH-Dx 06/97	1	111730001A	06/22/2011 09:00	Catherine R Wiker	1



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REVISED

Sample Description: MW-109 Grab Water Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # WW 6319397
LLI Group # 1252072
Account # 11964

Project Name: Edmonds Terminal

Collected: 06/16/2011 10:05 by DR

Chevron

6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

Submitted: 06/17/2011 09:15

Reported: 08/05/2011 16:54

UE109

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC Volatiles					
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx n.a.	ug/l N.D.	ug/l 50	1
GC Petroleum Hydrocarbons					
02211	DRO C12-C24 w/Si Gel	ECY 97-602 NWTPH-Dx modified n.a.	ug/l 96	ug/l 29	1
02211	HRO C24-C40 w/Si Gel	n.a.	100	67	1

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	11174B20A	06/24/2011 13:22	Laura M Krieger	1
01146	GC VOA Water Prep	SW-846 5030B	1	11174B20A	06/24/2011 13:22	Laura M Krieger	1
02211	NWTPH-Dx water w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	111730001A	06/25/2011 11:40	Glorines Suarez-Rivera	1
02135	Extraction - DRO Water Special	ECY 97-602 NWTPH-Dx 06/97	1	111730001A	06/22/2011 09:00	Catherine R Wiker	1



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REVISED

Sample Description: MW-108 Grab Water Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # WW 6319398
LLI Group # 1252072
Account # 11964

Project Name: Edmonds Terminal

Collected: 06/16/2011 11:10 by DR

Chevron

6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

Submitted: 06/17/2011 09:15

Reported: 08/05/2011 16:54

UE108

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC Volatiles					
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx n.a.	ug/l N.D.	ug/l 50	1
GC Petroleum Hydrocarbons					
02211	DRO C12-C24 w/Si Gel	ECY 97-602 NWTPH-Dx modified n.a.	ug/l 140	ug/l 29	1
02211	HRO C24-C40 w/Si Gel	n.a.	N.D.	68	1

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	11174B20A	06/24/2011 13:44	Laura M Krieger	1
01146	GC VOA Water Prep	SW-846 5030B	1	11174B20A	06/24/2011 13:44	Laura M Krieger	1
02211	NWTPH-Dx water w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	111730001A	06/25/2011 12:01	Glorines Suarez-Rivera	1
02135	Extraction - DRO Water Special	ECY 97-602 NWTPH-Dx 06/97	1	111730001A	06/22/2011 09:00	Catherine R Wiker	1



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Sample Description: LM-2 Grab Water Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # WW 6319399
LLI Group # 1252072
Account # 11964

Project Name: Edmonds Terminal

Collected: 06/16/2011 12:30 by DR

Chevron

6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

Submitted: 06/17/2011 09:15

Reported: 08/05/2011 16:54

UELM2

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC Volatiles					
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx n.a.	ug/l N.D.	ug/l 50	1
GC Petroleum Hydrocarbons					
02211	DRO C12-C24 w/Si Gel	ECY 97-602 NWTPH-Dx modified n.a.	ug/l 1,800	ug/l 29	1
02211	HRO C24-C40 w/Si Gel	n.a.	520	67	1

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	11174B20A	06/24/2011 14:06	Laura M Krieger	1
01146	GC VOA Water Prep	SW-846 5030B	1	11174B20A	06/24/2011 14:06	Laura M Krieger	1
02211	NWTPH-Dx water w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	111730001A	06/25/2011 12:22	Glorines Suarez-Rivera	1
02135	Extraction - DRO Water Special	ECY 97-602 NWTPH-Dx 06/97	1	111730001A	06/22/2011 09:00	Catherine R Wiker	1



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Sample Description: MW-508 Grab Water Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # WW 6319400
LLI Group # 1252072
Account # 11964

Project Name: Edmonds Terminal

Collected: 06/16/2011 14:50 by DR

Chevron

6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

Submitted: 06/17/2011 09:15

Reported: 08/05/2011 16:54

UE508

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC Volatiles					
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx n.a.	ug/l N.D.	ug/l 50	1
GC Petroleum Hydrocarbons					
02211	DRO C12-C24 w/Si Gel	ECY 97-602 NWTPH-Dx modified n.a.	ug/l 150	ug/l 29	1
02211	HRO C24-C40 w/Si Gel	n.a.	N.D.	67	1

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	11174B20A	06/24/2011 14:28	Laura M Krieger	1
01146	GC VOA Water Prep	SW-846 5030B	1	11174B20A	06/24/2011 14:28	Laura M Krieger	1
02211	NWTPH-Dx water w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	111730001A	06/25/2011 12:42	Glorines Suarez-Rivera	1
02135	Extraction - DRO Water Special	ECY 97-602 NWTPH-Dx 06/97	1	111730001A	06/22/2011 09:00	Catherine R Wiker	1



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Sample Description: MW-515 Grab Water Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # WW 6319401
LLI Group # 1252072
Account # 11964

Project Name: Edmonds Terminal

Collected: 06/16/2011 10:26 by DR

Chevron

6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

Submitted: 06/17/2011 09:15

Reported: 08/05/2011 16:54

UE515

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC Volatiles					
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx n.a.	ug/l N.D.	ug/l 50	1
GC Petroleum Hydrocarbons					
02211	DRO C12-C24 w/Si Gel	ECY 97-602 NWTPH-Dx modified n.a.	ug/l 200	ug/l 29	1
02211	HRO C24-C40 w/Si Gel	n.a.	N.D.	67	1

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	11174B20A	06/24/2011 14:50	Laura M Krieger	1
01146	GC VOA Water Prep	SW-846 5030B	1	11174B20A	06/24/2011 14:50	Laura M Krieger	1
02211	NWTPH-Dx water w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	111730001A	06/25/2011 13:03	Glorines Suarez-Rivera	1
02135	Extraction - DRO Water Special	ECY 97-602 NWTPH-Dx 06/97	1	111730001A	06/22/2011 09:00	Catherine R Wiker	1



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REVISED

Sample Description: MW-516 Grab Water Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # WW 6319402
LLI Group # 1252072
Account # 11964

Project Name: Edmonds Terminal

Collected: 06/16/2011 11:33 by DR

Chevron

6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

Submitted: 06/17/2011 09:15

Reported: 08/05/2011 16:54

UE516

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC Volatiles					
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx n.a.	ug/l N.D.	ug/l 50	1
GC Petroleum Hydrocarbons					
02211	DRO C12-C24 w/Si Gel	ECY 97-602 NWTPH-Dx modified n.a.	ug/l 170	ug/l 29	1
02211	HRO C24-C40 w/Si Gel	n.a.	N.D.	67	1

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	11174B20A	06/24/2011 15:12	Laura M Krieger	1
01146	GC VOA Water Prep	SW-846 5030B	1	11174B20A	06/24/2011 15:12	Laura M Krieger	1
02211	NWTPH-Dx water w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	111730001A	06/25/2011 13:24	Glorines Suarez-Rivera	1
02135	Extraction - DRO Water Special	ECY 97-602 NWTPH-Dx 06/97	1	111730001A	06/22/2011 09:00	Catherine R Wiker	1



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Sample Description: MW-517 Grab Water Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # WW 6319403
LLI Group # 1252072
Account # 11964

Project Name: Edmonds Terminal

Collected: 06/16/2011 12:41 by DR

Chevron

6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

Submitted: 06/17/2011 09:15

Reported: 08/05/2011 16:54

UE517

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC Volatiles					
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx n.a.	ug/l N.D.	ug/l 50	1
GC Petroleum Hydrocarbons					
02211	DRO C12-C24 w/Si Gel	ECY 97-602 NWTPH-Dx modified n.a.	ug/l 89	ug/l 29	1
02211	HRO C24-C40 w/Si Gel	n.a.	N.D.	67	1

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	11174B20A	06/24/2011 15:33	Laura M Krieger	1
01146	GC VOA Water Prep	SW-846 5030B	1	11174B20A	06/24/2011 15:33	Laura M Krieger	1
02211	NWTPH-Dx water w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	111730028A	06/25/2011 00:24	Glorines Suarez-Rivera	1
02135	Extraction - DRO Water Special	ECY 97-602 NWTPH-Dx 06/97	1	111730028A	06/23/2011 09:00	Cynthia J Salvatori	1



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Sample Description: MW-514 Grab Water Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # WW 6319404
LLI Group # 1252072
Account # 11964

Project Name: Edmonds Terminal

Collected: 06/16/2011 13:45 by DR

Chevron

6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

Submitted: 06/17/2011 09:15

Reported: 08/05/2011 16:54

UE514

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC Volatiles					
	ECY 97-602 NWTPH-Gx		ug/l	ug/l	
08273	NWTPH-Gx water C7-C12	n.a.	170	50	1
GC Petroleum Hydrocarbons					
	ECY 97-602 NWTPH-Dx modified		ug/l	ug/l	
02211	DRO C12-C24 w/Si Gel	n.a.	230	29	1
02211	HRO C24-C40 w/Si Gel	n.a.	N.D.	67	1

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	11174B20A	06/24/2011 15:55	Laura M Krieger	1
01146	GC VOA Water Prep	SW-846 5030B	1	11174B20A	06/24/2011 15:55	Laura M Krieger	1
02211	NWTPH-Dx water w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	111730028A	06/25/2011 00:46	Glorines Suarez-Rivera	1
02135	Extraction - DRO Water Special	ECY 97-602 NWTPH-Dx 06/97	1	111730028A	06/23/2011 09:00	Cynthia J Salvatori	1



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Sample Description: MW-513 Grab Water Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # WW 6319405
LLI Group # 1252072
Account # 11964

Project Name: Edmonds Terminal

Collected: 06/16/2011 14:43 by DR

Chevron

6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

Submitted: 06/17/2011 09:15

Reported: 08/05/2011 16:54

UE513

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC Volatiles					
	ECY 97-602 NWTPH-Gx		ug/l	ug/l	
08273	NWTPH-Gx water C7-C12	n.a.	100	50	1
GC Petroleum Hydrocarbons					
	ECY 97-602 NWTPH-Dx modified		ug/l	ug/l	
02211	DRO C12-C24 w/Si Gel	n.a.	230	29	1
02211	HRO C24-C40 w/Si Gel	n.a.	N.D.	67	1

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	11174B20A	06/24/2011 16:17	Laura M Krieger	1
01146	GC VOA Water Prep	SW-846 5030B	1	11174B20A	06/24/2011 16:17	Laura M Krieger	1
02211	NWTPH-Dx water w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	111730028A	06/25/2011 01:07	Glorines Suarez-Rivera	1
02135	Extraction - DRO Water Special	ECY 97-602 NWTPH-Dx 06/97	1	111730028A	06/23/2011 09:00	Cynthia J Salvatori	1



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REVISED

Sample Description: Trip_Blank Water Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # WW 6319406
LLI Group # 1252072
Account # 11964

Project Name: Edmonds Terminal

Collected: 06/16/2011

Chevron

Submitted: 06/17/2011 09:15

6001 Bollinger Canyon Rd L4310

Reported: 08/05/2011 16:54

San Ramon CA 94583

UETR

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC Volatiles	ECY 97-602 NWTPH-Gx		ug/l	ug/l	
08273	NWTPH-Gx water C7-C12	n.a.	N.D.	50	1

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	11174B20A	06/24/2011 10:50	Laura M Krieger	1
01146	GC VOA Water Prep	SW-846 5030B	1	11174B20A	06/24/2011 10:50	Laura M Krieger	1

Quality Control Summary

 Client Name: Chevron
 Reported: 08/05/11 at 04:54 PM

Group Number: 1252072

Matrix QC may not be reported if site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

Laboratory Compliance Quality Control

<u>Analysis Name</u>	<u>Blank Result</u>	<u>Blank MDL</u>	<u>Report Units</u>	<u>LCS %REC</u>	<u>LCSD %REC</u>	<u>LCS/LCSD Limits</u>	<u>RPD</u>	<u>RPD Max</u>
Batch number: 11173A53A NWTPH-Gx water C7-C12	Sample number(s): 6319390-6319392 N.D.	50.	ug/l	109		75-135		
Batch number: 11174B20A NWTPH-Gx water C7-C12	Sample number(s): 6319393-6319406 N.D.	50.	ug/l	100	100	75-135	0	30
Batch number: 11175B20A NWTPH-Gx water C7-C12	Sample number(s): 6319389 N.D.	50.	ug/l	100		75-135		
Batch number: 111720035A DRO C12-C24 w/Si Gel HRO C24-C40 w/Si Gel	Sample number(s): 6319389-6319392 N.D. N.D.	30. 70.	ug/l ug/l	61		56-103		
Batch number: 111730001A DRO C12-C24 w/Si Gel HRO C24-C40 w/Si Gel	Sample number(s): 6319393-6319402 N.D. N.D.	30. 70.	ug/l ug/l	75	78	56-103	3	20
Batch number: 111730028A DRO C12-C24 w/Si Gel HRO C24-C40 w/Si Gel	Sample number(s): 6319403-6319405 N.D. N.D.	30. 70.	ug/l ug/l	75	79	56-103	5	20

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
 Background (BKG) = the sample used in conjunction with the duplicate

<u>Analysis Name</u>	<u>MS %REC</u>	<u>MSD %REC</u>	<u>MS/MSD Limits</u>	<u>RPD</u>	<u>RPD MAX</u>	<u>BKG Conc</u>	<u>DUP Conc</u>	<u>DUP RPD</u>	<u>Dup RPD Max</u>
Batch number: 11173A53A NWTPH-Gx water C7-C12	Sample number(s): 6319390-6319392 100	100	57-157	0	30	UNSPK: 6319390			
Batch number: 11175B20A NWTPH-Gx water C7-C12	Sample number(s): 6319389 109	109	57-157	0	30	UNSPK: P320826			
Batch number: 111720035A DRO C12-C24 w/Si Gel	Sample number(s): 6319389-6319392 77	72	60-120	6	20	UNSPK: 6319390			

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Chevron
Reported: 08/05/11 at 04:54 PM

Group Number: 1252072

Surrogate Quality Control

Analysis Name: NWTPH-Gx water C7-C12
Batch number: 11173A53A
Trifluorotoluene-F

6319390	69
6319391	83
6319392	83
Blank	66
LCS	84
MS	83
MSD	83

Limits: 63-135

Analysis Name: NWTPH-Gx water C7-C12
Batch number: 11174B20A
Trifluorotoluene-F

6319393	87
6319394	85
6319395	85
6319396	86
6319397	86
6319398	85
6319399	85
6319400	85
6319401	85
6319402	84
6319403	84
6319404	83
6319405	83
6319406	85
Blank	83
LCS	112
LCSD	113

Limits: 63-135

Analysis Name: NWTPH-Gx water C7-C12
Batch number: 11175B20A
Trifluorotoluene-F

6319389	83
Blank	81
LCS	113
MS	114
MSD	117

Limits: 63-135

Analysis Name: NWTPH-Dx water w/Si Gel
Batch number: 111720035A
Orthoterphenyl

6319389	96
6319390	86

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Chevron
Reported: 08/05/11 at 04:54 PM

Group Number: 1252072

Surrogate Quality Control

6319391	104
6319392	96
Blank	100
LCS	85
MS	104
MSD	96

Limits: 50-150

Analysis Name: NWTPH-Dx water w/Si Gel
Batch number: 111730001A
Orthoterphenyl

6319393	88
6319394	92
6319395	92
6319396	89
6319397	95
6319398	88
6319399	102
6319400	91
6319401	90
6319402	93
Blank	89
LCS	97
LCSD	99

Limits: 50-150

Analysis Name: NWTPH-Dx water w/Si Gel
Batch number: 111730028A
Orthoterphenyl

6319403	100
6319404	95
6319405	102
Blank	100
LCS	102
LCSD	107

Limits: 50-150

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Chevron Northwest Region Analysis Request/Chain of Custody



223962

For Lancaster Laboratories use only
 Acct. #: 11964 Sample #: 6319389-406 SCR#: _____

G# 1252072

Facility #: Edmonds Terminal
 Site Address: 11720 Union Rd, Edmonds, WA
 Chevron PM: Kim Jolitz Lead Consultant: ARCADIS
 Consultant/Office: ARCADIS, Seattle
 Consultant Prj. Mgr.: Rebecca Andresen
 Consultant Phone #: 2063255254 Fax #: _____
 Sampler: DR/SM/HN
 Service Order #: 80045362 Non SAR: _____

Matrix		Analyses Requested															
		Preservation Codes															
Soil	Water	Oil	Air	Total Number of Containers	BTEX + MTBE	8021	8260	Naphth	8260 full scan	Oxygenates	TPH G	TPH D	Lead Total	VPH/EPH	NWTPH H	HClD	quantification
					<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
				5							X	X					
				2							X	X					

Preservative Codes
 H = HCl T = Thiosulfate
 N = HNO₃ B = NaOH
 S = H₂SO₄ O = Other

J value reporting needed
 Must meet lowest detection limits possible for 8260 compounds

8021 MTBE Confirmation
 Confirm MTBE + Naphthalene
 Confirm highest hit by 8260
 Confirm all hits by 8260
 Run ___ oxy s on highest hit
 Run ___ oxy s on all hits

Sample Identification	Date Collected	Time Collected	Grab	Composite	Soil	Water	Oil	Air
MW-516	6/16/11	1133	X			X		
MW-517	↓	1241						
MW-514	↓	1345						
MW-513	↓	1443						
Trip Blank	—	—						

Comments / Remarks

page
2 of 2

Turnaround Time Requested (TAT) (please circle)

STD. TAT 72 hour 48 hour
 24 hour 4 day 5 day

Data Package Options (please circle if required)

QC Summary Type I - Full
 Type VI (Raw Data) Disk / EDD
 WIP (RWQCB) Standard Format
 Disk _____ Other.

Relinquished by: [Signature] Date: 6/16/11 Time: 1630 Received by: FedEx Date: 6/16/11 Time: 1650

Relinquished by: _____ Date: _____ Time: _____ Received by: _____ Date: _____ Time: _____

Relinquished by Commercial Carrier: _____ Received by: _____ Date: 6/16/11 Time: 0916

UPS FedEx Other _____

Temperature Upon Receipt: 26-30 C° Custody Seals Intact? Yes No

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

RL	Reporting Limit	BMQL	Below Minimum Quantitation Level
N.D.	none detected	MPN	Most Probable Number
TNTC	Too Numerous To Count	CP Units	cobalt-chloroplatinate units
IU	International Units	NTU	nephelometric turbidity units
umhos/cm	micromhos/cm	ng	nanogram(s)
C	degrees Celsius	F	degrees Fahrenheit
meq	milliequivalents	lb.	pound(s)
g	gram(s)	kg	kilogram(s)
ug	microgram(s)	mg	milligram(s)
ml	milliliter(s)	l	liter(s)
m3	cubic meter(s)	ul	microliter(s)
<	less than - The number following the sign is the <u>limit of quantitation</u> , the smallest amount of analyte which can be reliably determined using this specific test.		
>	greater than		
J	estimated value – The result is \geq the Method Detection Limit (MDL) and $<$ the Limit of Quantitation (LOQ).		
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter of gas per liter of gas.		
ppb	parts per billion		
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.		

U.S. EPA CLP Data Qualifiers:

Organic Qualifiers	Inorganic Qualifiers
A TIC is a possible aldol-condensation product	B Value is $<$ CRDL, but \geq IDL
B Analyte was also detected in the blank	E Estimated due to interference
C Pesticide result confirmed by GC/MS	M Duplicate injection precision not met
D Compound quantitated on a diluted sample	N Spike sample not within control limits
E Concentration exceeds the calibration range of the instrument	S Method of standard additions (MSA) used for calculation
N Presumptive evidence of a compound (TICs only)	U Compound was not detected
P Concentration difference between primary and confirmation columns $>$ 25%	W Post digestion spike out of control limits
U Compound was not detected	* Duplicate analysis not within control limits
X,Y,Z Defined in case narrative	+ Correlation coefficient for MSA $<$ 0.995

Analytical test results meet all requirements of NELAC unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

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ANALYTICAL RESULTS

Prepared by:

Lancaster Laboratories
2425 New Holland Pike
Lancaster, PA 17605-2425

Prepared for:

Chevron
6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

October 26, 2011

Project: Edmonds Terminal

Submittal Date: 09/28/2011
Group Number: 1268726
PO Number: 0015074659
Release Number: JOLITZ
State of Sample Origin: WA

<u>Client Sample Description</u>	<u>Lancaster Labs (LLI) #</u>
MW-524 Grab Water Sample	6421604
MW-8R Grab Water Sample	6421605
MW-20R Grab Water Sample	6421606
MW-101 Grab Water Sample	6421607
MW-518 Grab Water Sample	6421608
MW-522 Grab Water Sample	6421609
MW-150 Grab Water Sample	6421610
MW-147 Grab Water Sample	6421611
Dup-1 Grab Water Sample	6421612
MW-149R Grab Water Sample	6421613
MW-523 Grab Water Sample	6421614
MW-104 Grab Water Sample	6421615
MW-139R Grab Water Sample	6421616
Trip_Blank Water Sample	6421617

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

ELECTRONIC COPY TO	Arcadis	Attn: Rebecca Andresen
ELECTRONIC COPY TO	Arcadis	Attn: Scott Zorn
ELECTRONIC COPY TO	Arcadis	Attn: Dave Rasar

Questions? Contact your Client Services Representative
Elizabeth A Leonhardt at (510) 232-8894

Respectfully Submitted,



Valerie L. Tomayko
Principal Specialist



Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Sample Description: MW-524 Grab Water Sample
Former Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # WW 6421604
LLI Group # 1268726
Account # 11964

Project Name: Edmonds Terminal

Collected: 09/27/2011 10:39 by DR

Chevron

6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

Submitted: 09/28/2011 09:00

Reported: 10/26/2011 17:55

UE524

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC Volatiles					
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx n.a.	ug/l N.D.	ug/l 50	1
GC Petroleum Hydrocarbons					
02211	DRO C12-C24 w/Si Gel	ECY 97-602 NWTPH-Dx modified n.a.	ug/l N.D.	ug/l 29	1
02211	HRO C24-C40 w/Si Gel	n.a.	N.D.	67	1
The reverse surrogate, capric acid, was present at 0%.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	11276B20A	10/04/2011 13:35	Marie D John	1
01146	GC VOA Water Prep	SW-846 5030B	1	11276B20A	10/04/2011 13:35	Marie D John	1
02211	NWTPH-Dx water w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	112770031A	10/15/2011 04:57	Glorines Suarez-Rivera	1
02135	Extraction - DRO Water Special	ECY 97-602 NWTPH-Dx 06/97	1	112770031A	10/05/2011 09:25	Cynthia J Salvatori	1



Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Page 1 of 1

Sample Description: MW-8R Grab Water Sample
Former Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # WW 6421605
LLI Group # 1268726
Account # 11964

Project Name: Edmonds Terminal

Collected: 09/27/2011 11:51 by DR

Chevron

6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

Submitted: 09/28/2011 09:00

Reported: 10/26/2011 17:55

UE08R

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC Volatiles					
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx n.a.	ug/l N.D.	ug/l 50	1
GC Petroleum Hydrocarbons					
02211	DRO C12-C24 w/Si Gel	ECY 97-602 NWTPH-Dx modified n.a.	ug/l N.D.	ug/l 30	1
02211	HRO C24-C40 w/Si Gel	n.a.	N.D.	70	1
The reverse surrogate, capric acid, was present at 0%.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	11276B20A	10/04/2011 13:57	Marie D John	1
01146	GC VOA Water Prep	SW-846 5030B	1	11276B20A	10/04/2011 13:57	Marie D John	1
02211	NWTPH-Dx water w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	112770031A	10/15/2011 05:19	Glorines Suarez-Rivera	1
02135	Extraction - DRO Water Special	ECY 97-602 NWTPH-Dx 06/97	1	112770031A	10/05/2011 09:25	Cynthia J Salvatori	1



Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Sample Description: MW-20R Grab Water Sample
Former Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # WW 6421606
LLI Group # 1268726
Account # 11964

Project Name: Edmonds Terminal

Collected: 09/27/2011 12:41 by DR

Chevron

6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

Submitted: 09/28/2011 09:00

Reported: 10/26/2011 17:55

UE20R

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC Volatiles	ECY 97-602 NWTPH-Gx		ug/l	ug/l	
08274	NWTPH-Gx water C7-C12	n.a.	N.D.	50	1
GC Volatiles	SW-846 8021B		ug/l	ug/l	
02102	Benzene	71-43-2	0.9	0.2	1
GC Petroleum Hydrocarbons	ECY 97-602 NWTPH-Dx modified		ug/l	ug/l	
02211	DRO C12-C24 w/Si Gel	n.a.	N.D.	29	1
02211	HRO C24-C40 w/Si Gel	n.a.	N.D.	68	1
The reverse surrogate, capric acid, was present at 0%.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
08274	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	11277B53A	10/05/2011 16:29	Marie D John	1
02102	Method 8021 Water Master	SW-846 8021B	1	11277B53A	10/05/2011 16:29	Marie D John	1
01146	GC VOA Water Prep	SW-846 5030B	1	11277B53A	10/05/2011 16:29	Marie D John	1
02211	NWTPH-Dx water w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	112770031A	10/15/2011 05:41	Glorines Suarez-Rivera	1
02135	Extraction - DRO Water Special	ECY 97-602 NWTPH-Dx 06/97	1	112770031A	10/05/2011 09:25	Cynthia J Salvatori	1



Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Sample Description: MW-101 Grab Water Sample
Former Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # WW 6421607
LLI Group # 1268726
Account # 11964

Project Name: Edmonds Terminal

Collected: 09/27/2011 13:57 by DR

Chevron

6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

Submitted: 09/28/2011 09:00

Reported: 10/26/2011 17:55

UE101

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC Volatiles					
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx n.a.	ug/l N.D.	ug/l 50	1
GC Petroleum Hydrocarbons					
02211	DRO C12-C24 w/Si Gel	ECY 97-602 NWTPH-Dx modified n.a.	ug/l N.D.	ug/l 29	1
02211	HRO C24-C40 w/Si Gel	n.a.	N.D.	67	1
The reverse surrogate, capric acid, was present at 0%.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	11276B20A	10/04/2011 14:44	Marie D John	1
01146	GC VOA Water Prep	SW-846 5030B	1	11276B20A	10/04/2011 14:44	Marie D John	1
02211	NWTPH-Dx water w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	112770031A	10/15/2011 06:02	Glorines Suarez-Rivera	1
02135	Extraction - DRO Water Special	ECY 97-602 NWTPH-Dx 06/97	1	112770031A	10/05/2011 09:25	Cynthia J Salvatori	1



Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Sample Description: MW-518 Grab Water Sample
Former Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # WW 6421608
LLI Group # 1268726
Account # 11964

Project Name: Edmonds Terminal

Collected: 09/27/2011 14:05 by DR

Chevron

6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

Submitted: 09/28/2011 09:00

Reported: 10/26/2011 17:55

UE518

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC Volatiles					
	ECY 97-602 NWTPH-Gx		ug/l	ug/l	
08273	NWTPH-Gx water C7-C12	n.a.	230	50	1
GC Petroleum Hydrocarbons					
	ECY 97-602 NWTPH-Dx modified		ug/l	ug/l	
02211	DRO C12-C24 w/Si Gel	n.a.	66	29	1
02211	HRO C24-C40 w/Si Gel	n.a.	N.D.	68	1
The reverse surrogate, capric acid, was present at 0%.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	11276B20A	10/04/2011 15:06	Marie D John	1
01146	GC VOA Water Prep	SW-846 5030B	1	11276B20A	10/04/2011 15:06	Marie D John	1
02211	NWTPH-Dx water w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	112770031A	10/15/2011 06:24	Glorines Suarez-Rivera	1
02135	Extraction - DRO Water Special	ECY 97-602 NWTPH-Dx 06/97	1	112770031A	10/05/2011 09:25	Cynthia J Salvatori	1



Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Page 1 of 1

Sample Description: MW-522 Grab Water Sample
Former Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # WW 6421609
LLI Group # 1268726
Account # 11964

Project Name: Edmonds Terminal

Collected: 09/27/2011 12:15 by DR

Chevron

6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

Submitted: 09/28/2011 09:00

Reported: 10/26/2011 17:55

UE522

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC Volatiles					
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx n.a.	ug/l N.D.	ug/l 50	1
GC Petroleum Hydrocarbons					
02211	DRO C12-C24 w/Si Gel	ECY 97-602 NWTPH-Dx modified n.a.	ug/l 29	ug/l 29	1
02211	HRO C24-C40 w/Si Gel	n.a.	N.D.	67	1
The reverse surrogate, capric acid, was present at 0%.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	11276B20A	10/04/2011 15:28	Marie D John	1
01146	GC VOA Water Prep	SW-846 5030B	1	11276B20A	10/04/2011 15:28	Marie D John	1
02211	NWTPH-Dx water w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	112770031A	10/15/2011 07:29	Glorines Suarez-Rivera	1
02135	Extraction - DRO Water Special	ECY 97-602 NWTPH-Dx 06/97	1	112770031A	10/05/2011 09:25	Cynthia J Salvatori	1



Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Page 1 of 1

Sample Description: MW-150 Grab Water Sample
Former Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # WW 6421610
LLI Group # 1268726
Account # 11964

Project Name: Edmonds Terminal

Collected: 09/27/2011 10:15 by DR

Chevron

6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

Submitted: 09/28/2011 09:00

Reported: 10/26/2011 17:55

UE150

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC Volatiles					
	ECY 97-602 NWTPH-Gx		ug/l	ug/l	
08273	NWTPH-Gx water C7-C12	n.a.	N.D.	50	1
GC Petroleum Hydrocarbons					
	ECY 97-602 NWTPH-Dx modified		ug/l	ug/l	
02211	DRO C12-C24 w/Si Gel	n.a.	N.D.	29	1
02211	HRO C24-C40 w/Si Gel	n.a.	N.D.	68	1
The reverse surrogate, capric acid, was present at 0%.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	11276B20A	10/04/2011 15:50	Marie D John	1
01146	GC VOA Water Prep	SW-846 5030B	1	11276B20A	10/04/2011 15:50	Marie D John	1
02211	NWTPH-Dx water w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	112770031A	10/15/2011 06:46	Glorines Suarez-Rivera	1
02135	Extraction - DRO Water Special	ECY 97-602 NWTPH-Dx 06/97	1	112770031A	10/05/2011 09:25	Cynthia J Salvatori	1



Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

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Sample Description: MW-147 Grab Water Sample
Former Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # WW 6421611
LLI Group # 1268726
Account # 11964

Project Name: Edmonds Terminal

Collected: 09/27/2011 11:15 by DR

Chevron

6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

Submitted: 09/28/2011 09:00

Reported: 10/26/2011 17:55

UE147

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC Volatiles					
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx n.a.	ug/l N.D.	ug/l 50	1
GC Petroleum Hydrocarbons					
02211	DRO C12-C24 w/Si Gel	ECY 97-602 NWTPH-Dx modified n.a.	ug/l N.D.	ug/l 29	1
02211	HRO C24-C40 w/Si Gel	n.a.	N.D.	67	1
The reverse surrogate, capric acid, was present at 0%.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	11276B20A	10/04/2011 16:12	Marie D John	1
01146	GC VOA Water Prep	SW-846 5030B	1	11276B20A	10/04/2011 16:12	Marie D John	1
02211	NWTPH-Dx water w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	112780010A	10/17/2011 03:42	Glorines Suarez-Rivera	1
02135	Extraction - DRO Water Special	ECY 97-602 NWTPH-Dx 06/97	1	112780010A	10/05/2011 19:40	Kathryn I DeHaven	1

Sample Description: Dup-1 Grab Water Sample
Former Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # WW 6421612
LLI Group # 1268726
Account # 11964

Project Name: Edmonds Terminal

Collected: 09/27/2011 by DR

Chevron

6001 Bollinger Canyon Rd L4310
 San Ramon CA 94583

Submitted: 09/28/2011 09:00

Reported: 10/26/2011 17:55

UEFD1

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC Volatiles					
	ECY 97-602 NWTPH-Gx		ug/l	ug/l	
08273	NWTPH-Gx water C7-C12	n.a.	N.D.	50	1
GC Petroleum Hydrocarbons					
	ECY 97-602 NWTPH-Dx modified		ug/l	ug/l	
02211	DRO C12-C24 w/Si Gel	n.a.	42	28	1
02211	HRO C24-C40 w/Si Gel	n.a.	N.D.	66	1
The reverse surrogate, capric acid, was present at 1%.					

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	11276B20A	10/04/2011 16:34	Marie D John	1
01146	GC VOA Water Prep	SW-846 5030B	1	11276B20A	10/04/2011 16:34	Marie D John	1
02211	NWTPH-Dx water w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	112780010A	10/17/2011 04:03	Glorines Suarez-Rivera	1
02135	Extraction - DRO Water Special	ECY 97-602 NWTPH-Dx 06/97	1	112780010A	10/05/2011 19:40	Kathryn I DeHaven	1



Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Page 1 of 1

Sample Description: MW-149R Grab Water Sample
Former Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # WW 6421613
LLI Group # 1268726
Account # 11964

Project Name: Edmonds Terminal

Collected: 09/27/2011 10:10 by DR

Chevron

6001 Bollinger Canyon Rd L4310
 San Ramon CA 94583

Submitted: 09/28/2011 09:00

Reported: 10/26/2011 17:55

UE149

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC Volatiles					
	ECY 97-602 NWTPH-Gx		ug/l	ug/l	
08273	NWTPH-Gx water C7-C12	n.a.	N.D.	50	1
GC Petroleum Hydrocarbons					
	ECY 97-602 NWTPH-Dx modified		ug/l	ug/l	
02211	DRO C12-C24 w/Si Gel	n.a.	N.D.	30	1
02211	HRO C24-C40 w/Si Gel	n.a.	N.D.	69	1
The reverse surrogate, capric acid, was present at 0%.					

The recovery for a target analyte in the Laboratory Control Spikes is outside the QC acceptance limits as noted on the QC Summary. The following corrective action was taken:
 The sample was re-extracted outside of the method required holding time, and LCS/LCSD recoveries are within the QC acceptance limits. The hold time had expired prior to the second extraction so all results are reported from the original extract. Similar results were obtained in both extracts.

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	11278A20A	10/06/2011 01:00	Marie D John	1
01146	GC VOA Water Prep	SW-846 5030B	1	11278A20A	10/06/2011 01:00	Marie D John	1
02211	NWTPH-Dx water w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	112780019A	10/16/2011 18:57	Glorines Suarez-Rivera	1
02135	Extraction - DRO Water Special	ECY 97-602 NWTPH-Dx 06/97	1	112780019A	10/06/2011 04:30	Roman Kuropatkin	1



Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Sample Description: MW-523 Grab Water Sample
Former Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # WW 6421614
LLI Group # 1268726
Account # 11964

Project Name: Edmonds Terminal

Collected: 09/27/2011 11:30 by DR

Chevron

6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

Submitted: 09/28/2011 09:00

Reported: 10/26/2011 17:55

UE523

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC Volatiles					
	ECY 97-602 NWTPH-Gx		ug/l	ug/l	
08273	NWTPH-Gx water C7-C12	n.a.	N.D.	50	1
GC Petroleum Hydrocarbons					
	ECY 97-602 NWTPH-Dx modified		ug/l	ug/l	
02211	DRO C12-C24 w/Si Gel	n.a.	N.D.	29	1
02211	HRO C24-C40 w/Si Gel	n.a.	N.D.	67	1
The reverse surrogate, capric acid, was present at 0%.					

The recovery for a target analyte in the Laboratory Control Spikes is outside the QC acceptance limits as noted on the QC Summary. The following corrective action was taken:

The sample was re-extracted outside of the method required holding time, and LCS/LCSD recoveries are within the QC acceptance limits. The hold time had expired prior to the second extraction so all results are reported from the original extract. Similar results were obtained in both extracts.

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	11278A20A	10/06/2011 01:22	Marie D John	1
01146	GC VOA Water Prep	SW-846 5030B	1	11278A20A	10/06/2011 01:22	Marie D John	1
02211	NWTPH-Dx water w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	112780019A	10/16/2011 19:19	Glorines Suarez-Rivera	1
02135	Extraction - DRO Water Special	ECY 97-602 NWTPH-Dx 06/97	1	112780019A	10/06/2011 04:30	Roman Kuropatkin	1



Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Sample Description: MW-104 Grab Water Sample
Former Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # WW 6421615
LLI Group # 1268726
Account # 11964

Project Name: Edmonds Terminal

Collected: 09/27/2011 13:20 by DR

Chevron

6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

Submitted: 09/28/2011 09:00

Reported: 10/26/2011 17:55

UE104

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC Volatiles					
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx n.a.	ug/l 380	ug/l 50	1
GC Petroleum Hydrocarbons					
02211	DRO C12-C24 w/Si Gel	ECY 97-602 NWTPH-Dx modified n.a.	ug/l 37	ug/l 29	1
02211	HRO C24-C40 w/Si Gel	n.a.	N.D.	67	1
The reverse surrogate, capric acid, was present at 0%.					

The recovery for a target analyte in the Laboratory Control Spikes is outside the QC acceptance limits as noted on the QC Summary. The following corrective action was taken:
The sample was re-extracted outside of the method required holding time, and LCS/LCSD recoveries are within the QC acceptance limits. The hold time had expired prior to the second extraction so all results are reported from the original extract. Similar results were obtained in both extracts.

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	11278A20A	10/06/2011 01:44	Marie D John	1
01146	GC VOA Water Prep	SW-846 5030B	1	11278A20A	10/06/2011 01:44	Marie D John	1
02211	NWTPH-Dx water w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	112780019A	10/16/2011 19:40	Glorines Suarez-Rivera	1
02135	Extraction - DRO Water Special	ECY 97-602 NWTPH-Dx 06/97	1	112780019A	10/06/2011 04:30	Roman Kuropatkin	1



Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Sample Description: MW-139R Grab Water Sample
Former Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # WW 6421616
LLI Group # 1268726
Account # 11964

Project Name: Edmonds Terminal

Collected: 09/27/2011 14:40 by DR

Chevron

6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

Submitted: 09/28/2011 09:00

Reported: 10/26/2011 17:55

UE139

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC Volatiles					
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx n.a.	ug/l N.D.	ug/l 50	1
GC Petroleum Hydrocarbons					
02211	DRO C12-C24 w/Si Gel	ECY 97-602 NWTPH-Dx modified n.a.	ug/l N.D.	ug/l 29	1
02211	HRO C24-C40 w/Si Gel	n.a.	N.D.	67	1
The reverse surrogate, capric acid, was present at 0%.					

The recovery for a target analyte in the Laboratory Control Spikes is outside the QC acceptance limits as noted on the QC Summary. The following corrective action was taken:
The sample was re-extracted outside of the method required holding time, and LCS/LCSD recoveries are within the QC acceptance limits. The hold time had expired prior to the second extraction so all results are reported from the original extract. Similar results were obtained in both extracts.

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	11278A20A	10/06/2011 02:28	Marie D John	1
01146	GC VOA Water Prep	SW-846 5030B	1	11278A20A	10/06/2011 02:28	Marie D John	1
02211	NWTPH-Dx water w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	112780019A	10/16/2011 20:02	Glorines Suarez-Rivera	1
02135	Extraction - DRO Water Special	ECY 97-602 NWTPH-Dx 06/97	1	112780019A	10/06/2011 04:30	Roman Kuropatkin	1



Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Sample Description: Trip_Blank Water Sample
Former Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # WW 6421617
LLI Group # 1268726
Account # 11964

Project Name: Edmonds Terminal

Collected: 09/27/2011

Chevron

Submitted: 09/28/2011 09:00

6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

Reported: 10/26/2011 17:55

UETR

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC Volatiles	ECY 97-602 NWT	PH-Gx	ug/l	ug/l	
08274	NWTPH-Gx water C7-C12	n.a.	N.D.	50	1
GC Volatiles	SW-846 8021B		ug/l	ug/l	
02102	Benzene	71-43-2	N.D.	0.2	1

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
08274	NWTPH-Gx water C7-C12	ECY 97-602 NWT PH-Gx	1	11277B53A	10/05/2011 15:35	Marie D John	1
02102	Method 8021 Water Master	SW-846 8021B	1	11277B53A	10/05/2011 15:35	Marie D John	1
01146	GC VOA Water Prep	SW-846 5030B	1	11277B53A	10/05/2011 15:35	Marie D John	1

Quality Control Summary

 Client Name: Chevron
 Reported: 10/26/11 at 05:55 PM

Group Number: 1268726

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Laboratory Compliance Quality Control

<u>Analysis Name</u>	<u>Blank Result</u>	<u>Blank MDL</u>	<u>Report Units</u>	<u>LCS %REC</u>	<u>LCSD %REC</u>	<u>LCS/LCSD Limits</u>	<u>RPD</u>	<u>RPD Max</u>
Batch number: 11276B20A NWTPH-Gx water C7-C12	Sample number(s): 6421604-6421605, 6421607-6421612 N.D.	50.	ug/l	100	100	75-135	0	30
Batch number: 11277B53A Benzene NWTPH-Gx water C7-C12	Sample number(s): 6421606, 6421617 N.D.	0.2	ug/l	105	105	80-120	0	30
	N.D.	50.	ug/l	100	109	75-135	9	30
Batch number: 11278A20A NWTPH-Gx water C7-C12	Sample number(s): 6421613-6421616 N.D.	50.	ug/l	91	90	75-135	1	30
Batch number: 112770031A DRO C12-C24 w/Si Gel HRO C24-C40 w/Si Gel	Sample number(s): 6421604-6421610 N.D.	30.	ug/l	74	74	56-103	0	20
	N.D.	70.	ug/l					
Batch number: 112780010A DRO C12-C24 w/Si Gel HRO C24-C40 w/Si Gel	Sample number(s): 6421611-6421612 N.D.	30.	ug/l	73	70	56-103	4	20
	N.D.	70.	ug/l					
Batch number: 112780019A DRO C12-C24 w/Si Gel HRO C24-C40 w/Si Gel	Sample number(s): 6421613-6421616 N.D.	30.	ug/l	49*	54*	56-103	10	20
	N.D.	70.	ug/l					

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
 Background (BKG) = the sample used in conjunction with the duplicate

<u>Analysis Name</u>	<u>MS %REC</u>	<u>MSD %REC</u>	<u>MS/MSD Limits</u>	<u>RPD</u>	<u>RPD MAX</u>	<u>BKG Conc</u>	<u>DUP Conc</u>	<u>DUP RPD</u>	<u>Dup RPD Max</u>
Batch number: 11278A20A NWTPH-Gx water C7-C12	Sample number(s): 6421613-6421616 UNSPK: P422768 100	100	75-135	0	30				

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: NWTPH-Gx water C7-C12
 Batch number: 11276B20A

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Chevron
Reported: 10/26/11 at 05:55 PM

Group Number: 1268726

Surrogate Quality Control

Trifluorotoluene-F

6421604	88
6421605	84
6421607	86
6421608	85
6421609	87
6421610	87
6421611	88
6421612	86
Blank	85
LCS	110
LCSD	108

Limits: 63-135

Analysis Name: Method 8021 Water Master
Batch number: 11277B53A

	Trifluorotoluene-P	Trifluorotoluene-F
--	--------------------	--------------------

6421606	81	80
6421617	79	72
Blank	79	72
LCS	80	80
LCSD	80	81

Limits: 58-146 63-135

Analysis Name: NWTPH-Gx water C7-C12
Batch number: 11278A20A

Trifluorotoluene-F

6421613	91
6421614	93
6421615	104
6421616	90
Blank	90
LCS	111
LCSD	108
MS	112
MSD	113

Limits: 63-135

Analysis Name: NWTPH-Dx water w/Si Gel
Batch number: 112770031A

Orthoterphenyl

6421604	75
6421605	83
6421606	75
6421607	81
6421608	84
6421609	52
6421610	82
Blank	82
LCS	96

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Chevron
Reported: 10/26/11 at 05:55 PM

Group Number: 1268726

Surrogate Quality Control

LCSD 96

Limits: 50-150

Analysis Name: NWTPH-Dx water w/Si Gel
Batch number: 112780010A
Orthoterphenyl

6421611	100
6421612	91
Blank	80
LCS	100
LCSD	96

Limits: 50-150

Analysis Name: NWTPH-Dx water w/Si Gel
Batch number: 112780019A
Orthoterphenyl

6421613	85
6421614	76
6421615	69
6421616	81
Blank	82
LCS	79
LCSD	78

Limits: 50-150

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Chevron Northwest Region Analysis Request/Chain of Custody



223835

For Lancaster Laboratories use only

Acct. #: 11964 Sample #: 6421604-17 SCR#: _____

Facility #: <u>Edmonds Terminal</u> Site Address: <u>1720 Uuoco Rd, Edmonds WA</u> Chevron PM: <u>Kim Jolitz</u> Lead Consultant: <u>ARCADIS</u> Consultant/Office: <u>ARCADIS, Seattle</u> Consultant Prj. Mgr.: <u>Rebecca Andresen</u> Consultant Phone #: <u>2063255259</u> Fax #: _____ Sampler: <u>DR, SLM, SWM</u> Service Order #: <u>38045362</u> <input type="checkbox"/> Non SAR: _____				Matrix Potable <input type="checkbox"/> NPDES <input type="checkbox"/> Water <input type="checkbox"/> Oil <input type="checkbox"/> Air <input type="checkbox"/>		Analyses Requested Preservation Codes BTEX + MTBE 8021 <input type="checkbox"/> 8260 <input type="checkbox"/> Naphth <input type="checkbox"/> 8260 full scan <input type="checkbox"/> Oxygenates <input type="checkbox"/> NWTPH G <input checked="" type="checkbox"/> NWTPH D <input checked="" type="checkbox"/> Extended Ring <input checked="" type="checkbox"/> Silica Gel Cleanup <input type="checkbox"/> Lead Total <input type="checkbox"/> Diss. <input type="checkbox"/> Method _____ VP/IEPH <input type="checkbox"/> NWTPH HClID <input type="checkbox"/> quantification <input type="checkbox"/> <u>Benzene - 8021B</u>										C# <u>1268726</u> Preservative Codes H = HCl T = Thiosulfate N = HNO ₃ B = NaOH S = H ₂ SO ₄ O = Other <input type="checkbox"/> J value reporting needed <input type="checkbox"/> Must meet lowest detection limits possible for 8260 compounds 8021 MTBE Confirmation <input type="checkbox"/> Confirm MTBE + Naphthalene <input type="checkbox"/> Confirm highest hit by 8260 <input type="checkbox"/> Confirm all hits by 8260 <input type="checkbox"/> Run ___ oxy s on highest hit <input type="checkbox"/> Run ___ oxy s on all hits											
Sample Identification	Date Collected	Time Collected	Grab	Composite	Soil	Water	Oil	Air	Total Number of Containers	BTEX + MTBE 8021	8260	Naphth	8260 full scan	Oxygenates	NWTPH G	NWTPH D	Extended Ring	Silica Gel Cleanup	Lead Total	Diss.	Method	VP/IEPH	NWTPH HClID	quantification	Benzene - 8021B	Comments / Remarks	
MW-524	9/27/11	1039	X			X			5						X	X											
MW-8R		1151																									
MW-20R		1241																							X		
MW-101		1357																									
MW-518		1405																									
MW-522		1215																									
MW-150		1015																									
MW-147		1115																									
Dup-1																											
MW-149R		1010																									
MW-523		1130																									
MW-104		1320																									
MW-139R		1440																									

Turnaround Time Requested (TAT) (please circle) STD. TAT <input checked="" type="radio"/> 72 hour 48 hour 24 hour 4 day 5 day		Relinquished by: <u>[Signature]</u> Date: <u>9/27/11</u> Time: <u>1600</u>		Received by: <u>FedEx</u> Date: <u>9/27/11</u> Time: <u>1600</u>	
Data Package Options (please circle if required) QC Summary Type I - Full Type VI (Raw Data) Disk / EDD WIP (RWQCB) Standard Format Disk _____ Other.		Relinquished by: _____ Date: _____ Time: _____		Received by: _____ Date: _____ Time: _____	
		Relinquished by Commercial Carrier: UPS <input type="checkbox"/> FedEx <input checked="" type="checkbox"/> Other <input type="checkbox"/>		Received by: <u>Bramley Bandy</u> Date: <u>9-28-11</u> Time: <u>900</u>	
		Temperature Upon Receipt: <u>2.1</u> C°		Custody Seals Intact? <input checked="" type="radio"/> Yes <input type="radio"/> No	

Chevron Northwest Region Analysis Request/Chain of Custody



Acct. #: 11964

For Lancaster Laboratories use only
Sample #: 6421604-17

SCR#: 221607

G# 1268726

Facility #: Edmonds Terminal
 Site Address: 11720 Unoco Rd, Edmonds WA
 Chevron PM: Kim Jolitz Lead Consultant: ARCADIS
 Consultant/Office: ARCADIS, Seattle
 Consultant Prj. Mgr.: Rebecca Andresen
 Consultant Phone #: 2063255254 Fax #: _____
 Sampler: DR, SWM, SLM
 Service Order #: 30045362 Non SAR: _____

Matrix		Total Number of Containers	Analyses Requested																	
Soil	Water		Preservation Codes																	
<input type="checkbox"/>	<input type="checkbox"/>	2	<input type="checkbox"/> BTEX + MTBE	<input type="checkbox"/> 8021	<input type="checkbox"/> 8260	<input type="checkbox"/> Naphth	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<input type="checkbox"/> Potable	<input type="checkbox"/> 8260 full scan	<input type="checkbox"/> NPDES	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Preservative Codes
 H = HCl T = Thiosulfate
 N = HNO₃ B = NaOH
 S = H₂SO₄ O = Other

J value reporting needed
 Must meet lowest detection limits possible for 8260 compounds

8021 MTBE Confirmation
 Confirm MTBE + Naphthalene
 Confirm highest hit by 8260
 Confirm all hits by 8260
 Run ___ oxy s on highest hit
 Run ___ oxy s on all hits

Sample Identification	Date Collected	Time Collected	Grab	Composite	Soil	Water	Oil	Air	Total Number of Containers	BTEX + MTBE	8021	8260	Naphth	Oxygenates	TPH G	TPH D	Extended Rng.	Silica Gel Cleanup	Lead Total	Diss.	Method	VPH/EPH	NWTPH HCl	quantification
<u>Trip Blank</u>	<u>-</u>	<u>-</u>			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			<u>2</u>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Comments / Remarks

page 2 of 2

Turnaround Time Requested (TAT) (please circle)
 STD. TAT 24 hour 72 hour 48 hour
 4 day 5 day

Data Package Options (please circle if required)
 QC Summary Type I - Full
 Type VI (Raw Data) Disk / EDD
 WIP (RWQCB) Standard Format
 Disk _____ Other.

Relinquished by: <u>[Signature]</u>	Date: <u>9/27/11</u>	Time: <u>1600</u>	Received by: <u>FedEx</u>	Date: <u>9/27/11</u>	Time: <u>1600</u>
Relinquished by: _____	Date: _____	Time: _____	Received by: _____	Date: _____	Time: _____
Relinquished by: _____	Date: _____	Time: _____	Received by: _____	Date: _____	Time: _____
Relinquished by Commercial Carrier: UPS <u>FedEx</u> Other _____	Temperature Upon Receipt <u>13-21 C</u>		Received by: <u>Branly B...</u>	Date: <u>9-28-11</u>	Time: <u>9:00</u>
Custody Seals Intact? <u>Yes</u> No					

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

RL	Reporting Limit	BMQL	Below Minimum Quantitation Level
N.D.	none detected	MPN	Most Probable Number
TNTC	Too Numerous To Count	CP Units	cobalt-chloroplatinate units
IU	International Units	NTU	nephelometric turbidity units
umhos/cm	micromhos/cm	ng	nanogram(s)
C	degrees Celsius	F	degrees Fahrenheit
meq	milliequivalents	lb.	pound(s)
g	gram(s)	kg	kilogram(s)
ug	microgram(s)	mg	milligram(s)
ml	milliliter(s)	l	liter(s)
m3	cubic meter(s)	ul	microliter(s)
<	less than - The number following the sign is the <u>limit of quantitation</u> , the smallest amount of analyte which can be reliably determined using this specific test.		
>	greater than		
J	estimated value – The result is \geq the Method Detection Limit (MDL) and $<$ the Limit of Quantitation (LOQ).		
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter of gas per liter of gas.		
ppb	parts per billion		
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.		

U.S. EPA CLP Data Qualifiers:

Organic Qualifiers	Inorganic Qualifiers
A TIC is a possible aldol-condensation product	B Value is $<$ CRDL, but \geq IDL
B Analyte was also detected in the blank	E Estimated due to interference
C Pesticide result confirmed by GC/MS	M Duplicate injection precision not met
D Compound quantitated on a diluted sample	N Spike sample not within control limits
E Concentration exceeds the calibration range of the instrument	S Method of standard additions (MSA) used for calculation
N Presumptive evidence of a compound (TICs only)	U Compound was not detected
P Concentration difference between primary and confirmation columns $>$ 25%	W Post digestion spike out of control limits
U Compound was not detected	* Duplicate analysis not within control limits
X,Y,Z Defined in case narrative	+ Correlation coefficient for MSA $<$ 0.995

Analytical test results meet all requirements of NELAC unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

WARRANTY AND LIMITS OF LIABILITY - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL LANCASTER LABORATORIES BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF LANCASTER LABORATORIES AND (B) WHETHER LANCASTER LABORATORIES HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Lancaster Laboratories which includes any conditions that vary from the Standard Terms and Conditions, and Lancaster hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

ANALYTICAL RESULTS

Prepared by:

Lancaster Laboratories
2425 New Holland Pike
Lancaster, PA 17605-2425

Prepared for:

Chevron
6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

October 27, 2011

Project: Edmonds Terminal

Submittal Date: 09/29/2011
Group Number: 1268940
PO Number: 0015074659
Release Number: JOLITZ
State of Sample Origin: WA

<u>Client Sample Description</u>	<u>Lancaster Labs (LLI) #</u>
MW-500 Grab Water Sample	6422766
DUP-2 Grab Water Sample	6422767
MW-501 Grab Water Sample	6422768
MW-501MS Grab Water Sample	6422769
MW-501MSD Grab Water Sample	6422770
MW-136 Grab Water Sample	6422771
MW-129R Grab Water Sample	6422772
MW-108 Grab Water Sample	6422773
MW-109 Grab Water Sample	6422774
LM-2 Grab Water Sample	6422775
MW-135 Grab Water Sample	6422776
RB-1 Grab Water Sample	6422777
Trip Blank Water Sample	6422778

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

ELECTRONIC Arcadis
COPY TO
ELECTRONIC Arcadis
COPY TO
ELECTRONIC Arcadis
COPY TO

Attn: Rebecca Andresen

Attn: Scott Zorn

Attn: Dave Rasar

Questions? Contact your Client Services Representative
Elizabeth A Leonhardt at (510) 232-8894

Respectfully Submitted,



Valerie L. Tomayko
Principal Specialist



Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Sample Description: MW-500 Grab Water Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # WW 6422766
LLI Group # 1268940
Account # 11964

Project Name: Edmonds Terminal

Collected: 09/28/2011 09:27 by SLM

Chevron

6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

Submitted: 09/29/2011 09:05

Reported: 10/27/2011 22:45

M500-

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC Volatiles					
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx n.a.	ug/l 60	ug/l 50	1
GC Petroleum Hydrocarbons					
02211	DRO C12-C24 w/Si Gel	ECY 97-602 NWTPH-Dx modified n.a.	ug/l 61	ug/l 30	1
02211	HRO C24-C40 w/Si Gel	n.a.	N.D.	69	1
The reverse surrogate, capric acid, was present at 0%.					

The recovery for a target analyte and surrogate in the Laboratory Control Spike is outside the QC acceptance limits as noted on the QC Summary. The following corrective action was taken:
The sample was re-extracted outside of the method required holding time, and LCS/LCSD target analyte recoveries are within the QC acceptance limits; however, the surrogate recoveries were again outside of the QC acceptance limits. The hold time had expired prior to the second extraction so all results are reported from the original extract. Similar results were obtained in both extracts.

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	11278A20A	10/06/2011 02:50	Marie D John	1
01146	GC VOA Water Prep	SW-846 5030B	1	11278A20A	10/06/2011 02:50	Marie D John	1
02211	NWTPH-Dx water w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	112780038A	10/16/2011 22:38	Glorines Suarez-Rivera	1
02135	Extraction - DRO Water Special	ECY 97-602 NWTPH-Dx 06/97	1	112780038A	10/06/2011 08:20	Catherine R Wiker	1



Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Sample Description: DUP-2 Grab Water Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # WW 6422767
LLI Group # 1268940
Account # 11964

Project Name: Edmonds Terminal

Collected: 09/28/2011 by SLM

Chevron

6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

Submitted: 09/29/2011 09:05

Reported: 10/27/2011 22:45

-DUP2

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC Volatiles					
	ECY 97-602 NWTPH-Gx		ug/l	ug/l	
08273	NWTPH-Gx water C7-C12	n.a.	62	50	1
GC Petroleum Hydrocarbons					
	ECY 97-602 NWTPH-Dx modified		ug/l	ug/l	
02211	DRO C12-C24 w/Si Gel	n.a.	45	29	1
02211	HRO C24-C40 w/Si Gel	n.a.	N.D.	68	1
The reverse surrogate, capric acid, was present at 0%.					

The recovery for a target analyte and surrogate in the Laboratory Control Spike is outside the QC acceptance limits as noted on the QC Summary. The following corrective action was taken:
The sample was re-extracted outside of the method required holding time, and LCS/LCSD target analyte recoveries are within the QC acceptance limits; however, the surrogate recoveries were again outside of the QC acceptance limits. The hold time had expired prior to the second extraction so all results are reported from the original extract. Similar results were obtained in both extracts.

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	11278A20A	10/06/2011 03:12	Marie D John	1
01146	GC VOA Water Prep	SW-846 5030B	1	11278A20A	10/06/2011 03:12	Marie D John	1
02211	NWTPH-Dx water w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	112780038A	10/16/2011 23:00	Glorines Suarez-Rivera	1
02135	Extraction - DRO Water Special	ECY 97-602 NWTPH-Dx 06/97	1	112780038A	10/06/2011 08:20	Catherine R Wiker	1



Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Sample Description: MW-501 Grab Water Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # WW 6422768
LLI Group # 1268940
Account # 11964

Project Name: Edmonds Terminal

Collected: 09/28/2011 09:15 by SLM

Chevron

6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

Submitted: 09/29/2011 09:05

Reported: 10/27/2011 22:45

501--

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC Volatiles					
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx n.a.	ug/l N.D.	ug/l 50	1
GC Petroleum Hydrocarbons					
02211	DRO C12-C24 w/Si Gel	ECY 97-602 NWTPH-Dx modified n.a.	ug/l N.D.	ug/l 29	1
02211	HRO C24-C40 w/Si Gel	n.a.	N.D.	67	1
The reverse surrogate, capric acid, was present at 0%.					

The recovery for a target analyte and surrogate in the Laboratory Control Spike is outside the QC acceptance limits as noted on the QC Summary. The following corrective action was taken:
The sample was re-extracted outside of the method required holding time, and LCS/LCSD target analyte recoveries are within the QC acceptance limits; however, the surrogate recoveries were again outside of the QC acceptance limits. The hold time had expired prior to the second extraction so all results are reported from the original extract. Similar results were obtained in both extracts.

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	11278A20A	10/06/2011 03:34	Marie D John	1
01146	GC VOA Water Prep	SW-846 5030B	1	11278A20A	10/06/2011 03:34	Marie D John	1
02211	NWTPH-Dx water w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	112780038A	10/16/2011 23:22	Glorines Suarez-Rivera	1
02135	Extraction - DRO Water Special	ECY 97-602 NWTPH-Dx 06/97	1	112780038A	10/06/2011 08:20	Catherine R Wiker	1



Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Sample Description: MW-501MS Grab Water Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # WW 6422769
LLI Group # 1268940
Account # 11964

Project Name: Edmonds Terminal

Collected: 09/28/2011 09:15 by SLM

Chevron

6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

Submitted: 09/29/2011 09:05

Reported: 10/27/2011 22:45

501--

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC Volatiles					
	ECY 97-602 NWTPH-Gx		ug/l	ug/l	
08273	NWTPH-Gx water C7-C12	n.a.	1,100	50	1
GC Petroleum Hydrocarbons					
	ECY 97-602 NWTPH-Dx modified		ug/l	ug/l	
02211	DRO C12-C24 w/Si Gel	n.a.	N.D.	29	1
02211	HRO C24-C40 w/Si Gel	n.a.	N.D.	68	1
The reverse surrogate, capric acid, was present at 0%.					

The recovery for a target analyte and surrogate in the Laboratory Control Spike is outside the QC acceptance limits as noted on the QC Summary. Sufficient sample was not available to repeat the analysis.

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	11278A20A	10/06/2011 03:56	Marie D John	1
01146	GC VOA Water Prep	SW-846 5030B	1	11278A20A	10/06/2011 03:56	Marie D John	1
02211	NWTPH-Dx water w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	112780038A	10/16/2011 23:43	Glorines Suarez-Rivera	1
02135	Extraction - DRO Water Special	ECY 97-602 NWTPH-Dx 06/97	1	112780038A	10/06/2011 08:20	Catherine R Wiker	1



Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Page 1 of 1

Sample Description: MW-501MSD Grab Water Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # WW 6422770
LLI Group # 1268940
Account # 11964

Project Name: Edmonds Terminal

Collected: 09/28/2011 09:15 by SLM

Chevron

6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

Submitted: 09/29/2011 09:05

Reported: 10/27/2011 22:45

501--

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC Volatiles					
	ECY 97-602 NWTPH-Gx		ug/l	ug/l	
08273	NWTPH-Gx water C7-C12	n.a.	1,100	50	1
GC Petroleum Hydrocarbons					
	ECY 97-602 NWTPH-Dx modified		ug/l	ug/l	
02211	DRO C12-C24 w/Si Gel	n.a.	N.D.	29	1
02211	HRO C24-C40 w/Si Gel	n.a.	N.D.	67	1
The reverse surrogate, capric acid, was present at 0%.					

The recovery for a target analyte and surrogate in the Laboratory Control Spike is outside the QC acceptance limits as noted on the QC Summary. Sufficient sample was not available to repeat the analysis.

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	11278A20A	10/06/2011 04:18	Marie D John	1
01146	GC VOA Water Prep	SW-846 5030B	1	11278A20A	10/06/2011 04:18	Marie D John	1
02211	NWTPH-Dx water w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	112780038A	10/17/2011 00:05	Glorines Suarez-Rivera	1
02135	Extraction - DRO Water Special	ECY 97-602 NWTPH-Dx 06/97	1	112780038A	10/06/2011 08:20	Catherine R Wiker	1



Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Sample Description: MW-136 Grab Water Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # WW 6422771
LLI Group # 1268940
Account # 11964

Project Name: Edmonds Terminal

Collected: 09/28/2011 11:04 by SLM

Chevron

6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

Submitted: 09/29/2011 09:05

Reported: 10/27/2011 22:45

136--

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC Volatiles					
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx n.a.	ug/l N.D.	ug/l 50	1
GC Petroleum Hydrocarbons					
02211	DRO C12-C24 w/Si Gel	ECY 97-602 NWTPH-Dx modified n.a.	ug/l 40	ug/l 29	1
02211	HRO C24-C40 w/Si Gel	n.a.	N.D.	67	1
The reverse surrogate, capric acid, was present at 0%.					

The recovery for a target analyte and surrogate in the Laboratory Control Spike is outside the QC acceptance limits as noted on the QC Summary. The following corrective action was taken:
The sample was re-extracted outside of the method required holding time, and LCS/LCSD target analyte recoveries are within the QC acceptance limits; however, the surrogate recoveries were again outside of the QC acceptance limits. The hold time had expired prior to the second extraction so all results are reported from the original extract. Similar results were obtained in both extracts.

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	11279B20A	10/07/2011 13:03	Marie D John	1
01146	GC VOA Water Prep	SW-846 5030B	1	11279B20A	10/07/2011 13:03	Marie D John	1
02211	NWTPH-Dx water w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	112780038A	10/17/2011 00:27	Glorines Suarez-Rivera	1
02135	Extraction - DRO Water Special	ECY 97-602 NWTPH-Dx 06/97	1	112780038A	10/06/2011 08:20	Catherine R Wiker	1



Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Sample Description: MW-129R Grab Water Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # WW 6422772
LLI Group # 1268940
Account # 11964

Project Name: Edmonds Terminal

Collected: 09/28/2011 12:55 by SLM

Chevron

6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

Submitted: 09/29/2011 09:05

Reported: 10/27/2011 22:45

129R-

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC Volatiles					
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx n.a.	ug/l N.D.	ug/l 50	1
GC Petroleum Hydrocarbons					
02211	DRO C12-C24 w/Si Gel	ECY 97-602 NWTPH-Dx modified n.a.	ug/l 2,700	ug/l 29	1
02211	HRO C24-C40 w/Si Gel	n.a.	230	67	1
The reverse surrogate, capric acid, was present at 6%.					

The recovery for a target analyte and surrogate in the Laboratory Control Spike is outside the QC acceptance limits as noted on the QC Summary. The following corrective action was taken:
The sample was re-extracted outside of the method required holding time, and LCS/LCSD target analyte recoveries are within the QC acceptance limits; however, the surrogate recoveries were again outside of the QC acceptance limits. The hold time had expired prior to the second extraction so all results are reported from the original extract. Similar results were obtained in both extracts.

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	11279B20A	10/07/2011 13:25	Marie D John	1
01146	GC VOA Water Prep	SW-846 5030B	1	11279B20A	10/07/2011 13:25	Marie D John	1
02211	NWTPH-Dx water w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	112780038A	10/17/2011 00:48	Glorines Suarez-Rivera	1
02135	Extraction - DRO Water Special	ECY 97-602 NWTPH-Dx 06/97	1	112780038A	10/06/2011 08:20	Catherine R Wiker	1



Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Sample Description: MW-108 Grab Water Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # WW 6422773
LLI Group # 1268940
Account # 11964

Project Name: Edmonds Terminal

Collected: 09/28/2011 11:00 by SLM

Chevron

6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

Submitted: 09/29/2011 09:05

Reported: 10/27/2011 22:45

--108

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC Volatiles					
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx n.a.	ug/l N.D.	ug/l 50	1
GC Petroleum Hydrocarbons					
02211	DRO C12-C24 w/Si Gel	ECY 97-602 NWTPH-Dx modified n.a.	ug/l N.D.	ug/l 30	1
02211	HRO C24-C40 w/Si Gel	n.a.	N.D.	69	1
The reverse surrogate, capric acid, was present at 0%.					

The recovery for a target analyte and surrogate in the Laboratory Control Spike is outside the QC acceptance limits as noted on the QC Summary. The following corrective action was taken:
The sample was re-extracted outside of the method required holding time, and LCS/LCSD target analyte recoveries are within the QC acceptance limits; however, the surrogate recoveries were again outside of the QC acceptance limits. The hold time had expired prior to the second extraction so all results are reported from the original extract. Similar results were obtained in both extracts.

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	11279B20A	10/07/2011 13:47	Marie D John	1
01146	GC VOA Water Prep	SW-846 5030B	1	11279B20A	10/07/2011 13:47	Marie D John	1
02211	NWTPH-Dx water w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	112780038A	10/17/2011 01:10	Glorines Suarez-Rivera	1
02135	Extraction - DRO Water Special	ECY 97-602 NWTPH-Dx 06/97	1	112780038A	10/06/2011 08:20	Catherine R Wiker	1



Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Sample Description: MW-109 Grab Water Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # WW 6422774
LLI Group # 1268940
Account # 11964

Project Name: Edmonds Terminal

Collected: 09/28/2011 09:50 by SLM

Chevron

6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

Submitted: 09/29/2011 09:05

Reported: 10/27/2011 22:45

--109

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC Volatiles					
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx n.a.	ug/l N.D.	ug/l 50	1
GC Petroleum Hydrocarbons					
02211	DRO C12-C24 w/Si Gel	ECY 97-602 NWTPH-Dx modified n.a.	ug/l N.D.	ug/l 32	1
02211	HRO C24-C40 w/Si Gel	n.a.	N.D.	75	1
The reverse surrogate, capric acid, was present at 0%.					

The recovery for a target analyte and surrogate in the Laboratory Control Spike is outside the QC acceptance limits as noted on the QC Summary. The following corrective action was taken:
The sample was re-extracted outside of the method required holding time, and LCS/LCSD target analyte recoveries are within the QC acceptance limits; however, the surrogate recoveries were again outside of the QC acceptance limits. The hold time had expired prior to the second extraction so all results are reported from the original extract. Similar results were obtained in both extracts.

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	11279B20A	10/07/2011 14:09	Marie D John	1
01146	GC VOA Water Prep	SW-846 5030B	1	11279B20A	10/07/2011 14:09	Marie D John	1
02211	NWTPH-Dx water w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	112780038A	10/17/2011 01:32	Glorines Suarez-Rivera	1
02135	Extraction - DRO Water Special	ECY 97-602 NWTPH-Dx 06/97	1	112780038A	10/06/2011 08:20	Catherine R Wiker	1



Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Sample Description: LM-2 Grab Water Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # WW 6422775
LLI Group # 1268940
Account # 11964

Project Name: Edmonds Terminal

Collected: 09/28/2011 13:20 by SLM

Chevron

6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

Submitted: 09/29/2011 09:05

Reported: 10/27/2011 22:45

-LM2-

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC Volatiles					
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx n.a.	ug/l N.D.	ug/l 50	1
GC Petroleum Hydrocarbons					
02211	DRO C12-C24 w/Si Gel	ECY 97-602 NWTPH-Dx modified n.a.	ug/l N.D.	ug/l 29	1
02211	HRO C24-C40 w/Si Gel	n.a.	N.D.	67	1
The reverse surrogate, capric acid, was present at 0%.					

The recovery for a target analyte and surrogate in the Laboratory Control Spike is outside the QC acceptance limits as noted on the QC Summary. The following corrective action was taken:
The sample was re-extracted outside of the method required holding time, and LCS/LCSD target analyte recoveries are within the QC acceptance limits; however, the surrogate recoveries were again outside of the QC acceptance limits. The hold time had expired prior to the second extraction so all results are reported from the original extract. Similar results were obtained in both extracts.

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	11279B20A	10/07/2011 14:31	Marie D John	1
01146	GC VOA Water Prep	SW-846 5030B	1	11279B20A	10/07/2011 14:31	Marie D John	1
02211	NWTPH-Dx water w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	112780038A	10/17/2011 01:53	Glorines Suarez-Rivera	1
02135	Extraction - DRO Water Special	ECY 97-602 NWTPH-Dx 06/97	1	112780038A	10/06/2011 08:20	Catherine R Wiker	1



Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Page 1 of 1

Sample Description: MW-135 Grab Water Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # WW 6422776
LLI Group # 1268940
Account # 11964

Project Name: Edmonds Terminal

Collected: 09/28/2011 10:55 by SLM

Chevron

6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

Submitted: 09/29/2011 09:05

Reported: 10/27/2011 22:45

--135

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC Volatiles					
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx n.a.	ug/l N.D.	ug/l 50	1
GC Petroleum Hydrocarbons					
02211	DRO C12-C24 w/Si Gel	ECY 97-602 NWTPH-Dx modified n.a.	ug/l N.D.	ug/l 29	1
02211	HRO C24-C40 w/Si Gel	n.a.	N.D.	69	1
The reverse surrogate, capric acid, was present at 0%.					

The recovery for a target analyte and surrogate in the Laboratory Control Spike is outside the QC acceptance limits as noted on the QC Summary. Sufficient sample was not available to repeat the analysis.

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	11279B20A	10/07/2011 14:53	Marie D John	1
01146	GC VOA Water Prep	SW-846 5030B	1	11279B20A	10/07/2011 14:53	Marie D John	1
02211	NWTPH-Dx water w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	112780038A	10/17/2011 02:15	Glorines Suarez-Rivera	1
02135	Extraction - DRO Water Special	ECY 97-602 NWTPH-Dx 06/97	1	112780038A	10/06/2011 08:20	Catherine R Wiker	1



Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Sample Description: RB-1 Grab Water Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # WW 6422777
LLI Group # 1268940
Account # 11964

Project Name: Edmonds Terminal

Collected: 09/28/2011 11:59 by SLM

Chevron

6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

Submitted: 09/29/2011 09:05

Reported: 10/27/2011 22:45

RB-1-

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC Volatiles					
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx n.a.	ug/l N.D.	ug/l 50	1
GC Petroleum Hydrocarbons					
02211	DRO C12-C24 w/Si Gel	ECY 97-602 NWTPH-Dx modified n.a.	ug/l N.D.	ug/l 29	1
02211	HRO C24-C40 w/Si Gel	n.a.	N.D.	67	1
The reverse surrogate, capric acid, was present at 0%.					

11681 10g Silica Gel Column Cleanup

The reverse surrogate, capric acid, was present at 0%.

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	11279B20A	10/07/2011 12:41	Marie D John	1
01146	GC VOA Water Prep	SW-846 5030B	1	11279B20A	10/07/2011 12:41	Marie D John	1
02211	NWTPH-Dx water w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	112790005A	10/18/2011 21:38	Glorines Suarez-Rivera	1
02135	Extraction - DRO Water Special	ECY 97-602 NWTPH-Dx 06/97	1	112790005A	10/06/2011 16:25	Bronson L Cole	1



Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Sample Description: Trip Blank Water Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # WW 6422778
LLI Group # 1268940
Account # 11964

Project Name: Edmonds Terminal

Collected: 09/28/2011

Chevron

Submitted: 09/29/2011 09:05

6001 Bollinger Canyon Rd L4310

Reported: 10/27/2011 22:45

San Ramon CA 94583

TBUNO

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC Volatiles	ECY 97-602 NWTPH-Gx		ug/l	ug/l	
08273	NWTPH-Gx water C7-C12	n.a.	N.D.	50	1

General Sample Comments

State of Washington Lab Certification No. C259

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	11279B20A	10/07/2011 12:19	Marie D John	1
01146	GC VOA Water Prep	SW-846 5030B	1	11279B20A	10/07/2011 12:19	Marie D John	1

Quality Control Summary

 Client Name: Chevron
 Reported: 10/27/11 at 10:45 PM

Group Number: 1268940

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Laboratory Compliance Quality Control

<u>Analysis Name</u>	<u>Blank Result</u>	<u>Blank MDL</u>	<u>Report Units</u>	<u>LCS %REC</u>	<u>LCSD %REC</u>	<u>LCS/LCSD Limits</u>	<u>RPD</u>	<u>RPD Max</u>
Batch number: 11278A20A NWTPH-Gx water C7-C12	Sample number(s): 6422766-6422770 N.D.	50.	ug/l	91	90	75-135	1	30
Batch number: 11279B20A NWTPH-Gx water C7-C12	Sample number(s): 6422771-6422778 N.D.	50.	ug/l	109	91	75-135	18	30
Batch number: 112780038A DRO C12-C24 w/Si Gel HRO C24-C40 w/Si Gel	Sample number(s): 6422766-6422776 N.D.	30.	ug/l	0*		56-103		
	N.D.	70.	ug/l					
Batch number: 112790005A DRO C12-C24 w/Si Gel HRO C24-C40 w/Si Gel	Sample number(s): 6422777 N.D.	30.	ug/l	64	75	56-103	16	20
	N.D.	70.	ug/l					

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
 Background (BKG) = the sample used in conjunction with the duplicate

<u>Analysis Name</u>	<u>MS %REC</u>	<u>MSD %REC</u>	<u>MS/MSD Limits</u>	<u>RPD</u>	<u>RPD MAX</u>	<u>BKG Conc</u>	<u>DUP Conc</u>	<u>DUP RPD</u>	<u>Dup RPD Max</u>
Batch number: 11278A20A NWTPH-Gx water C7-C12	Sample number(s): 6422766-6422770 UNSPK: 6422768	100	75-135	0	30				
Batch number: 112780038A DRO C12-C24 w/Si Gel	Sample number(s): 6422766-6422776 UNSPK: 6422768	0*	60-120	0	20				

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

 Analysis Name: NWTPH-Gx water C7-C12
 Batch number: 11278A20A
 Trifluorotoluene-F

6422766	91
6422767	91
6422768	89

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Chevron
Reported: 10/27/11 at 10:45 PM

Group Number: 1268940

Surrogate Quality Control

6422769 112
6422770 113
Blank 90
LCS 111
LCSD 108
MS 112
MSD 113

Limits: 63-135

Analysis Name: NWTPH-Gx water C7-C12
Batch number: 11279B20A
Trifluorotoluene-F

6422771 90
6422772 91
6422773 91
6422774 89
6422775 87
6422776 88
6422777 90
6422778 90
Blank 89
LCS 113
LCSD 111

Limits: 63-135

Analysis Name: NWTPH-Dx water w/Si Gel
Batch number: 112780038A
Orthoterphenyl

6422766 89
6422767 81
6422768 91
6422769 174*
6422770 159*
6422771 84
6422772 92
6422773 83
6422774 91
6422775 81
6422776 80
Blank 107
LCS 178*
MS 174*
MSD 159*

Limits: 50-150

Analysis Name: NWTPH-Dx water w/Si Gel
Batch number: 112790005A
Orthoterphenyl

6422777 81
Blank 82
LCS 86

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Chevron
Reported: 10/27/11 at 10:45 PM

Group Number: 1268940

Surrogate Quality Control

LCSD 99

Limits: 50-150

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Chevron Northwest Region Analysis Request/Chain of Custody



221609

11964
Acct. #: 13225 Sample #: 6422766-78 For Lancaster Laboratories use only

SCR#: gr # 1268940

Date 9/29/11 (3)

Facility #: Edmonds Terminal
 Site Address: 11720 Union Rd, Edmonds WA
 Chevron PM: Kim Jolitz Lead Consultant: ARCADIS
 Consultant/Office: ARCADIS / Seattle
 Consultant Prj. Mgr.: Rebecca Andresen
 Consultant Phone #: 2067255254 Fax #: _____
 Sampler: PR, SLN, SWM
 Service Order #: 30040362 Non SAR: _____

Matrix		Analyses Requested																			
Soil	Water	Oil	Air	Preservation Codes																	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	BTEX + MTBE 8021 <input type="checkbox"/> 8260 <input type="checkbox"/> Naphth <input type="checkbox"/> 8260 full scan <input type="checkbox"/> Oxygenates <input type="checkbox"/> TPH G <input checked="" type="checkbox"/> TPH D <input checked="" type="checkbox"/> Extended Ring <input type="checkbox"/> Silica Gel Cleanup <input checked="" type="checkbox"/> Lead Total <input type="checkbox"/> Diss. <input type="checkbox"/> Method <input type="checkbox"/> VP/NEPH <input type="checkbox"/> quantification <input type="checkbox"/>																	

Preservative Codes

H = HCl T = Thiosulfate
 N = HNO₃ B = NaOH
 S = H₂SO₄ O = Other

J value reporting needed
 Must meet lowest detection limits possible for 8260 compounds

8021 MTBE Confirmation

Confirm MTBE + Naphthalene
 Confirm highest hit by 8260
 Confirm all hits by 8260
 Run ___ oxy s on highest hit
 Run ___ oxy s on all hits

Sample Identification	Date Collected	Time Collected	Grab	Composite	Soil	Water	Oil	Air	Total Number of Containers	BTEX + MTBE 8021	8260	Naphth	8260 full scan	Oxygenates	TPH G	TPH D	Extended Ring	Silica Gel Cleanup	Lead Total	Diss.	Method	VP/NEPH	N/TPH HClID	quantification
MW-500	9/28/11	927	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>			5						<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>								
Dup-2																								
MW-501		915																						
MW-501MS		915																						
MW-501MSD		915																						
MW-136		1104																						
MW-129R		1255																						
MW-108		1100																						
MW-109		950																						
LM-2		1320																						
MW-135		1055																						
RB-1		1159																						
Trip Blank									2															

Comments / Remarks

page 1 of 1

Turnaround Time Requested (TAT) (please circle)

STD. TAT 72 hour 48 hour
 24 hour 4 day 5 day

Data Package Options (please circle if required)

QC Summary Type I - Full
 Type VI (Raw Data) Disk / EDD
 WIP (RWQCB) Standard Format
 Disk _____ Other.

Relinquished by: <u>[Signature]</u>	Date: <u>9/28/11</u>	Time: <u>1600</u>	Received by: <u>Fed Ex</u>	Date: <u>9/28/11</u>	Time: <u>1600</u>
Relinquished by:	Date:	Time:	Received by:	Date:	Time:
Relinquished by Commercial Carrier:	Date:	Time:	Received by:	Date:	Time:
UPS FedEx <input checked="" type="checkbox"/> Other _____	Temperature Upon Receipt _____ °C <u>1.1-3.3</u>		Custody Seals Intact? <input checked="" type="checkbox"/> Yes No	Date: <u>9/29/11</u>	Time: <u>905</u>

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

RL	Reporting Limit	BMQL	Below Minimum Quantitation Level
N.D.	none detected	MPN	Most Probable Number
TNTC	Too Numerous To Count	CP Units	cobalt-chloroplatinate units
IU	International Units	NTU	nephelometric turbidity units
umhos/cm	micromhos/cm	ng	nanogram(s)
C	degrees Celsius	F	degrees Fahrenheit
meq	milliequivalents	lb.	pound(s)
g	gram(s)	kg	kilogram(s)
ug	microgram(s)	mg	milligram(s)
ml	milliliter(s)	l	liter(s)
m3	cubic meter(s)	ul	microliter(s)
<	less than - The number following the sign is the <u>limit of quantitation</u> , the smallest amount of analyte which can be reliably determined using this specific test.		
>	greater than		
J	estimated value – The result is \geq the Method Detection Limit (MDL) and $<$ the Limit of Quantitation (LOQ).		
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter of gas per liter of gas.		
ppb	parts per billion		
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.		

U.S. EPA CLP Data Qualifiers:

Organic Qualifiers	Inorganic Qualifiers
A TIC is a possible aldol-condensation product	B Value is $<$ CRDL, but \geq IDL
B Analyte was also detected in the blank	E Estimated due to interference
C Pesticide result confirmed by GC/MS	M Duplicate injection precision not met
D Compound quantitated on a diluted sample	N Spike sample not within control limits
E Concentration exceeds the calibration range of the instrument	S Method of standard additions (MSA) used for calculation
N Presumptive evidence of a compound (TICs only)	U Compound was not detected
P Concentration difference between primary and confirmation columns $>$ 25%	W Post digestion spike out of control limits
U Compound was not detected	* Duplicate analysis not within control limits
X,Y,Z Defined in case narrative	+ Correlation coefficient for MSA $<$ 0.995

Analytical test results meet all requirements of NELAC unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

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