

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

September 30, 2011

Project: Edmonds Terminal

Submittal Date: 08/23/2011
Group Number: 1263017
PO Number: 0015074659
Release Number: JOLITZ
State of Sample Origin: WA

<u>Client Sample Description</u>	<u>Lancaster Labs (LLI) #</u>
B1-4.5-5 Grab Soil Sample	6384560
B1-9.5-10 Grab Soil Sample	6384561
B1-14-14.5 Grab Soil Sample	6384562
B3-4.5-5 Grab Soil Sample	6384563
B3-7-7.5 Grab Soil Sample	6384564
B3-9-10 Grab Soil Sample	6384565
B3-12-12.5 Grab Soil Sample	6384566
B3-14-14.5 Grab Soil Sample	6384567
B5-4.5-5 Grab Soil Sample	6384568
B5-9-9.5 Grab Soil Sample	6384569
B5-11.5-12 Grab Soil Sample	6384570
B5-13.5-14 Grab Soil Sample	6384571
B2-4-4.5 Grab Soil Sample	6384572
B2-7-7.5 Grab Soil Sample	6384573
B2-9.5-10 Grab Soil Sample	6384574
B2-12-12.5 Grab Soil Sample	6384575
B2-14.5-15 Grab Soil Sample	6384576
B4-4.5-5 Grab Soil Sample	6384577
B4-9.5-10 Grab Soil Sample	6384578
B4-13-13.5 Grab Soil Sample	6384579
B4-14.5-15 Grab Soil Sample	6384580
B6-4.5-5 Grab Soil Sample	6384581
B6-7-7.5 Grab Soil Sample	6384582
B6-9-9.5 Grab Soil Sample	6384583
B6-11-11.5 Grab Soil Sample	6384584
B6-13-13.5 Grab Soil Sample	6384585
B7-4.5-5 Grab Soil Sample	6384586
B7-8-8.5 Grab Soil Sample	6384587

B7-9.5-10 Grab Soil Sample	6384588
B7-14-14.5 Grab Soil Sample	6384589
Trip Blank Methanol Sample	6384590

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,



Chad A. Moline
Group Leader

Sample Description: B1-4.5-5 Grab Soil Sample
Unocal Edmonds Terminal
 11720 Unoco Road - Edmonds, WA

LLI Sample # SW 6384560
LLI Group # 1263017
Account # 11964

Project Name: Edmonds Terminal

Collected: 08/22/2011 09:47 by DR

Chevron

6001 Bollinger Canyon Rd L4310
 San Ramon CA 94583

Submitted: 08/23/2011 09:05

Reported: 09/30/2011 09:55

EDM11

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS Semivolatiles SW-846 8270C SIM			mg/kg	mg/kg	
10722	Acenaphthene	83-32-9	N.D.	0.00069	1
10722	Acenaphthylene	208-96-8	N.D.	0.00035	1
10722	Anthracene	120-12-7	N.D.	0.00035	1
10722	Benzo(a)anthracene	56-55-3	N.D.	0.00069	1
10722	Benzo(a)pyrene	50-32-8	N.D.	0.00069	1
10722	Benzo(b)fluoranthene	205-99-2	N.D.	0.00069	1
10722	Benzo(g,h,i)perylene	191-24-2	N.D.	0.00069	1
10722	Benzo(k)fluoranthene	207-08-9	N.D.	0.00069	1
10722	Chrysene	218-01-9	0.00038	0.00035	1
10722	Dibenz(a,h)anthracene	53-70-3	N.D.	0.00069	1
10722	Fluoranthene	206-44-0	N.D.	0.00069	1
10722	Fluorene	86-73-7	N.D.	0.00069	1
10722	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.00069	1
10722	1-Methylnaphthalene	90-12-0	N.D.	0.00069	1
10722	2-Methylnaphthalene	91-57-6	N.D.	0.00069	1
10722	Naphthalene	91-20-3	N.D.	0.00069	1
10722	Phenanthrene	85-01-8	N.D.	0.00069	1
10722	Pyrene	129-00-0	N.D.	0.00069	1

The GC/MS semivolatile internal standard peak areas were outside of the QC limits.

GC Volatiles ECY 97-602 NWTPH-Gx			mg/kg	mg/kg	
02006	NWTPH-Gx soil C7-C12	n.a.	N.D.	1.1	26.85

GC Volatiles SW-846 8021B			mg/kg	mg/kg	
08179	Benzene	71-43-2	N.D.	0.0022	26.85

GC Petroleum ECY 97-602 NWTPH-Dx			mg/kg	mg/kg	
Hydrocarbons modified					
02214	DRO C12-C24 w/Si Gel	n.a.	N.D.	3.1	1
02214	HRO C24-C40 w/Si Gel	n.a.	14	10	1

The LCS recovery is outside the QC limits. Results from the re-extraction are within the limits. The hold time had expired prior to the re-extraction; therefore, all results are reported from the original extraction. Similar results were obtained in both extracts.

Wet Chemistry SM20 2540 G			%	%	
00111	Moisture	n.a.	3.7	0.50	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

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.



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: B1-4.5-5 Grab Soil Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # SW 6384560
LLI Group # 1263017
Account # 11964

Project Name: Edmonds Terminal

Collected: 08/22/2011 09:47 by DR

Chevron

6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

Submitted: 08/23/2011 09:05

Reported: 09/30/2011 09:55

EDM11

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10722	PAH SIM 8270 Soil Microwave	SW-846 8270C SIM	1	11258SLG026	09/28/2011 22:56	Gregory J Drahovsky	1
10810	BNA Soil Microwave SIM PAH	SW-846 3546	1	11258SLG026	09/02/2011 11:15	Kelli M Barto	1
02006	NWTPH-Gx soil C7-C12	ECY 97-602 NWTPH-Gx	1	11241A31A	08/29/2011 18:23	Marie D John	26.85
08179	Method 8021 Soil Master	SW-846 8021B	1	11241A31A	08/29/2011 18:23	Marie D John	26.85
06647	GC-5g Field Preserved MeOH	SW-846 5035A	1	201123525332	08/22/2011 09:47	Client Supplied	n.a.
06647	GC-5g Field Preserved MeOH	SW-846 5035A	2	201123525332	08/22/2011 09:47	Client Supplied	n.a.
02214	NWTPH-Dx soil w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	112430025A	09/10/2011 05:11	Tracy A Cole	1
07024	DRO Alternate Soil Extraction	SW-846 3550B	1	112430025A	09/01/2011 07:00	Joseph S Feister	1
00111	Moisture	SM20 2540 G	1	11241820004A	08/29/2011 22:33	Scott W Freisher	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: B1-9.5-10 Grab Soil Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # SW 6384561
LLI Group # 1263017
Account # 11964

Project Name: Edmonds Terminal

Collected: 08/22/2011 09:53 by DR

Chevron

6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

Submitted: 08/23/2011 09:05

Reported: 09/30/2011 09:55

EDM12

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS Semivolatiles SW-846 8270C SIM			mg/kg	mg/kg	
10722	Acenaphthene	83-32-9	N.D.	0.0085	10
10722	Acenaphthylene	208-96-8	0.014	0.0043	10
10722	Anthracene	120-12-7	0.010	0.0043	10
10722	Benzo(a)anthracene	56-55-3	N.D.	0.0085	10
10722	Benzo(a)pyrene	50-32-8	N.D.	0.0085	10
10722	Benzo(b)fluoranthene	205-99-2	0.016	0.0085	10
10722	Benzo(g,h,i)perylene	191-24-2	0.013	0.0085	10
10722	Benzo(k)fluoranthene	207-08-9	N.D.	0.0085	10
10722	Chrysene	218-01-9	0.013	0.0043	10
10722	Dibenz(a,h)anthracene	53-70-3	N.D.	0.0085	10
10722	Fluoranthene	206-44-0	0.037	0.0085	10
10722	Fluorene	86-73-7	0.010	0.0085	10
10722	Indeno(1,2,3-cd)pyrene	193-39-5	0.0092	0.0085	10
10722	1-Methylnaphthalene	90-12-0	0.18	0.0085	10
10722	2-Methylnaphthalene	91-57-6	0.043	0.0085	10
10722	Naphthalene	91-20-3	0.15	0.0085	10
10722	Phenanthrene	85-01-8	0.056	0.0085	10
10722	Pyrene	129-00-0	0.028	0.0085	10
GC Volatiles ECY 97-602 NWTPH-Gx			mg/kg	mg/kg	
02006	NWTPH-Gx soil C7-C12	n.a.	25	17	331.93
Reporting limits were raised due to sample foaming.					
GC Volatiles SW-846 8021B			mg/kg	mg/kg	
08179	Benzene	71-43-2	0.23	0.034	331.93
Reporting limits were raised due to sample foaming.					
GC Petroleum ECY 97-602 NWTPH-Dx			mg/kg	mg/kg	
Hydrocarbons modified					
02214	DRO C12-C24 w/Si Gel	n.a.	5.3	3.8	1
02214	HRO C24-C40 w/Si Gel	n.a.	42	13	1
The LCS recovery is outside the QC limits. Results from the re-extraction are within the limits. The hold time had expired prior to the re-extraction; therefore, all results are reported from the original extraction. Similar results were obtained in both extracts.					
Wet Chemistry SM20 2540 G			%	%	
00111	Moisture	n.a.	21.7	0.50	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

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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: B1-9.5-10 Grab Soil Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # SW 6384561
LLI Group # 1263017
Account # 11964

Project Name: Edmonds Terminal

Collected: 08/22/2011 09:53 by DR

Chevron

6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

Submitted: 08/23/2011 09:05

Reported: 09/30/2011 09:55

EDM12

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10722	PAH SIM 8270 Soil Microwave	SW-846 8270C SIM	1	11258SLG026	09/20/2011 09:23	Mark A Clark	10
10810	BNA Soil Microwave SIM PAH	SW-846 3546	1	11258SLG026	09/02/2011 11:15	Kelli M Barto	1
02006	NWTPH-Gx soil C7-C12	ECY 97-602 NWTPH-Gx	1	11241A31A	08/30/2011 13:28	Marie D John	331.93
08179	Method 8021 Soil Master	SW-846 8021B	1	11241A31A	08/30/2011 13:28	Marie D John	331.93
06647	GC-5g Field Preserved MeOH	SW-846 5035A	1	201123525332	08/22/2011 09:53	Client Supplied	n.a.
06647	GC-5g Field Preserved MeOH	SW-846 5035A	2	201123525332	08/22/2011 09:53	Client Supplied	n.a.
02214	NWTPH-Dx soil w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	112430025A	09/10/2011 04:28	Tracy A Cole	1
07024	DRO Alternate Soil Extraction	SW-846 3550B	1	112430025A	09/01/2011 07:00	Joseph S Feister	1
00111	Moisture	SM20 2540 G	1	11241820004A	08/29/2011 22:33	Scott W Freisher	1



Analysis Report

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Sample Description: B1-14-14.5 Grab Soil Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # SW 6384562
LLI Group # 1263017
Account # 11964

Project Name: Edmonds Terminal

Collected: 08/22/2011 09:57 by DR

Chevron

6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

Submitted: 08/23/2011 09:05

Reported: 09/30/2011 09:55

EDM13

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC Volatiles					
02006	NWTPH-Gx soil C7-C12	n.a.	N.D.	2.1	33.55
GC Volatiles					
08179	Benzene	71-43-2	0.17	0.0043	33.55
GC Petroleum Hydrocarbons					
ECY 97-602 NWTPH-Dx modified					
02214	DRO C12-C24 w/Si Gel	n.a.	N.D.	4.8	1
02214	HRO C24-C40 w/Si Gel	n.a.	N.D.	16	1
Wet Chemistry					
SM20 2540 G					
00111	Moisture	n.a.	37.5	0.50	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

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
10810	BNA Soil Microwave SIM PAH	SW-846 3546	1	11244SLE026	09/02/2011 11:15	Kelli M Barto	1
02006	NWTPH-Gx soil C7-C12	ECY 97-602 NWTPH-Gx	1	11241A31A	08/30/2011 01:34	Marie D John	33.55
08179	Method 8021 Soil Master	SW-846 8021B	1	11241A31A	08/30/2011 01:34	Marie D John	33.55
06647	GC-5g Field Preserved MeOH	SW-846 5035A	1	201123525332	08/22/2011 09:57	Client Supplied	n.a.
06647	GC-5g Field Preserved MeOH	SW-846 5035A	2	201123525332	08/22/2011 09:57	Client Supplied	n.a.
02214	NWTPH-Dx soil w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	112430025A	09/10/2011 03:24	Anita M Dale	1
07024	DRO Alternate Soil Extraction	SW-846 3550B	1	112430025A	09/01/2011 07:00	Joseph S Feister	1
00111	Moisture	SM20 2540 G	1	11241820004A	08/29/2011 22:33	Scott W Freisher	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: B3-4.5-5 Grab Soil Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # SW 6384563
LLI Group # 1263017
Account # 11964

Project Name: Edmonds Terminal

Collected: 08/22/2011 10:33 by DR

Chevron

6001 Bollinger Canyon Rd L4310
 San Ramon CA 94583

Submitted: 08/23/2011 09:05

Reported: 09/30/2011 09:55

EDM31

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC Volatiles					
02006	NWTPH-Gx soil C7-C12	n.a.	N.D.	1.1	25.88
GC Volatiles					
08179	Benzene	71-43-2	N.D.	0.0022	25.88
GC Petroleum Hydrocarbons					
ECY 97-602 NWTPH-Dx modified					
02214	DRO C12-C24 w/Si Gel	n.a.	N.D.	3.2	1
02214	HRO C24-C40 w/Si Gel	n.a.	N.D.	11	1
Wet Chemistry					
SM20 2540 G					
00111	Moisture	n.a.	5.1	0.50	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

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
10810	BNA Soil Microwave SIM PAH	SW-846 3546	1	11244SLE026	09/02/2011 11:15	Kelli M Barto	1
02006	NWTPH-Gx soil C7-C12	ECY 97-602 NWTPH-Gx	1	11241A31A	08/29/2011 18:59	Marie D John	25.88
08179	Method 8021 Soil Master	SW-846 8021B	1	11241A31A	08/29/2011 18:59	Marie D John	25.88
06647	GC-5g Field Preserved MeOH	SW-846 5035A	1	201123525332	08/22/2011 10:33	Client Supplied	n.a.
06647	GC-5g Field Preserved MeOH	SW-846 5035A	2	201123525332	08/22/2011 10:33	Client Supplied	n.a.
02214	NWTPH-Dx soil w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	112430025A	09/10/2011 03:02	Anita M Dale	1
07024	DRO Alternate Soil Extraction	SW-846 3550B	1	112430025A	09/01/2011 07:00	Joseph S Feister	1
00111	Moisture	SM20 2540 G	1	11241820004A	08/29/2011 22:33	Scott W Freisher	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: B3-7-7.5 Grab Soil Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # SW 6384564
LLI Group # 1263017
Account # 11964

Project Name: Edmonds Terminal

Collected: 08/22/2011 10:40 by DR

Chevron

6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

Submitted: 08/23/2011 09:05

Reported: 09/30/2011 09:55

EDM32

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS Semivolatiles SW-846 8270C SIM			mg/kg	mg/kg	
10722	Acenaphthene	83-32-9	0.0010	0.00073	1
10722	Acenaphthylene	208-96-8	0.00099	0.00037	1
10722	Anthracene	120-12-7	N.D.	0.00037	1
10722	Benzo(a)anthracene	56-55-3	N.D.	0.00073	1
10722	Benzo(a)pyrene	50-32-8	N.D.	0.00073	1
10722	Benzo(b)fluoranthene	205-99-2	0.0023	0.00073	1
10722	Benzo(g,h,i)perylene	191-24-2	N.D.	0.00073	1
10722	Benzo(k)fluoranthene	207-08-9	N.D.	0.00073	1
10722	Chrysene	218-01-9	0.0017	0.00037	1
10722	Dibenz(a,h)anthracene	53-70-3	N.D.	0.00073	1
10722	Fluoranthene	206-44-0	0.0030	0.00073	1
10722	Fluorene	86-73-7	0.0032	0.00073	1
10722	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.00073	1
10722	1-Methylnaphthalene	90-12-0	0.0026	0.00073	1
10722	2-Methylnaphthalene	91-57-6	0.0031	0.00073	1
10722	Naphthalene	91-20-3	0.0037	0.00073	1
10722	Phenanthrene	85-01-8	0.0045	0.00073	1
10722	Pyrene	129-00-0	0.0033	0.00073	1

GC Volatiles ECY 97-602 NWTPH-Gx			mg/kg	mg/kg	
02006	NWTPH-Gx soil C7-C12	n.a.	N.D.	1.1	24.13

GC Volatiles SW-846 8021B			mg/kg	mg/kg	
08179	Benzene	71-43-2	N.D.	0.0021	24.13

GC Petroleum ECY 97-602 NWTPH-Dx			mg/kg	mg/kg	
Hydrocarbons modified					
02214	DRO C12-C24 w/Si Gel	n.a.	110	3.3	1
02214	HRO C24-C40 w/Si Gel	n.a.	70	11	1

The LCS recovery is outside the QC limits. Results from the re-extraction are within the limits. The hold time had expired prior to the re-extraction; therefore, all results are reported from the original extraction. Similar results were obtained in both extracts.

Wet Chemistry SM20 2540 G			%	%	
00111	Moisture	n.a.	8.9	0.50	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

General Sample Comments

State of Washington Lab Certification No. C259

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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: B3-7-7.5 Grab Soil Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # SW 6384564
LLI Group # 1263017
Account # 11964

Project Name: Edmonds Terminal

Collected: 08/22/2011 10:40 by DR

Chevron

6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

Submitted: 08/23/2011 09:05

Reported: 09/30/2011 09:55

EDM32

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10722	PAH SIM 8270 Soil Microwave	SW-846 8270C SIM	1	11258SLG026	09/21/2011 07:33	Mark A Clark	1
10810	BNA Soil Microwave SIM PAH	SW-846 3546	1	11258SLG026	09/02/2011 11:15	Kelli M Barto	1
02006	NWTPH-Gx soil C7-C12	ECY 97-602 NWTPH-Gx	1	11241A31A	08/29/2011 19:35	Marie D John	24.13
08179	Method 8021 Soil Master	SW-846 8021B	1	11241A31A	08/29/2011 19:35	Marie D John	24.13
06647	GC-5g Field Preserved MeOH	SW-846 5035A	1	201123525332	08/22/2011 10:40	Client Supplied	n.a.
06647	GC-5g Field Preserved MeOH	SW-846 5035A	2	201123525332	08/22/2011 10:40	Client Supplied	n.a.
02214	NWTPH-Dx soil w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	112430025A	09/10/2011 05:54	Tracy A Cole	1
07024	DRO Alternate Soil Extraction	SW-846 3550B	1	112430025A	09/01/2011 07:00	Joseph S Feister	1
00111	Moisture	SM20 2540 G	1	11241820004A	08/29/2011 22:33	Scott W Freisher	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: B3-9-10 Grab Soil Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # SW 6384565
LLI Group # 1263017
Account # 11964

Project Name: Edmonds Terminal

Collected: 08/22/2011 10:45 by DR

Chevron

6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

Submitted: 08/23/2011 09:05

Reported: 09/30/2011 09:55

EDM33

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry			ASTM D422	% Passing	
07103	75 mm	n.a.	100	0.50	1
07103	37.5 mm	n.a.	100	0.50	1
07103	19 mm	n.a.	100	0.50	1
07103	4.75 mm	n.a.	90.0	0.50	1
07103	3.35 mm	n.a.	88.2	0.50	1
07103	2.36 mm	n.a.	86.3	0.50	1
07103	1.18 mm	n.a.	82.8	0.50	1
07103	0.6 mm	n.a.	72.1	0.50	1
07103	0.3 mm	n.a.	46.6	0.50	1
07103	0.15 mm	n.a.	30.3	0.50	1
07103	0.075 mm	n.a.	23.8	0.50	1
07103	0.064 mm	n.a.	22.5	0.50	1
07103	0.05 mm	n.a.	20.0	0.50	1
07103	0.02 mm	n.a.	13.0	0.50	1
07103	0.005 mm	n.a.	2.5	0.50	1
07103	0.002 mm	n.a.	1.5	0.50	1
07103	0.001 mm	n.a.	0.50	0.50	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
07103	Grain Size to 1 um	ASTM D422	1	11235710301A	08/23/2011 20:20	Luz M Groff	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: B3-12-12.5 Grab Soil Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # SW 6384566
LLI Group # 1263017
Account # 11964

Project Name: Edmonds Terminal

Collected: 08/22/2011 10:53 by DR

Chevron

6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

Submitted: 08/23/2011 09:05

Reported: 09/30/2011 09:55

EDM34

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS Semivolatiles SW-846 8270C SIM			mg/kg	mg/kg	
10722	Acenaphthene	83-32-9	0.00090	0.00075	1
10722	Acenaphthylene	208-96-8	0.00057	0.00037	1
10722	Anthracene	120-12-7	N.D.	0.00037	1
10722	Benzo(a)anthracene	56-55-3	N.D.	0.00075	1
10722	Benzo(a)pyrene	50-32-8	N.D.	0.00075	1
10722	Benzo(b)fluoranthene	205-99-2	0.0023	0.00075	1
10722	Benzo(g,h,i)perylene	191-24-2	N.D.	0.00075	1
10722	Benzo(k)fluoranthene	207-08-9	N.D.	0.00075	1
10722	Chrysene	218-01-9	0.0014	0.00037	1
10722	Dibenz(a,h)anthracene	53-70-3	N.D.	0.00075	1
10722	Fluoranthene	206-44-0	0.0028	0.00075	1
10722	Fluorene	86-73-7	0.0041	0.00075	1
10722	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.00075	1
10722	1-Methylnaphthalene	90-12-0	0.0025	0.00075	1
10722	2-Methylnaphthalene	91-57-6	0.0025	0.00075	1
10722	Naphthalene	91-20-3	0.0040	0.00075	1
10722	Phenanthrene	85-01-8	0.0039	0.00075	1
10722	Pyrene	129-00-0	0.0027	0.00075	1

GC Volatiles ECY 97-602 NWTPH-Gx			mg/kg	mg/kg	
02006	NWTPH-Gx soil C7-C12	n.a.	6.8	1	21.83

GC Volatiles SW-846 8021B			mg/kg	mg/kg	
08179	Benzene	71-43-2	N.D.	0.0020	21.83

GC Petroleum ECY 97-602 NWTPH-Dx			mg/kg	mg/kg	
Hydrocarbons modified					
02214	DRO C12-C24 w/Si Gel	n.a.	43	3.3	1
02214	HRO C24-C40 w/Si Gel	n.a.	46	11	1

The LCS recovery is outside the QC limits. Results from the re-extraction are within the limits. The hold time had expired prior to the re-extraction; therefore, all results are reported from the original extraction. Similar results were obtained in both extracts.

Wet Chemistry SM20 2540 G			%	%	
00111	Moisture	n.a.	10.7	0.50	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

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.



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: B3-12-12.5 Grab Soil Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # SW 6384566
LLI Group # 1263017
Account # 11964

Project Name: Edmonds Terminal

Collected: 08/22/2011 10:53 by DR

Chevron

6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

Submitted: 08/23/2011 09:05

Reported: 09/30/2011 09:55

EDM34

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10722	PAH SIM 8270 Soil Microwave	SW-846 8270C SIM	1	11258SLG026	09/21/2011 08:06	Mark A Clark	1
10810	BNA Soil Microwave SIM PAH	SW-846 3546	1	11258SLG026	09/02/2011 11:15	Kelli M Barto	1
02006	NWTPH-Gx soil C7-C12	ECY 97-602 NWTPH-Gx	1	11241A31A	08/30/2011 02:10	Marie D John	21.83
08179	Method 8021 Soil Master	SW-846 8021B	1	11241A31A	08/30/2011 02:10	Marie D John	21.83
06647	GC-5g Field Preserved MeOH	SW-846 5035A	1	201123525332	08/22/2011 10:53	Client Supplied	n.a.
06647	GC-5g Field Preserved MeOH	SW-846 5035A	2	201123525332	08/22/2011 10:53	Client Supplied	n.a.
02214	NWTPH-Dx soil w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	112430025A	09/10/2011 04:50	Tracy A Cole	1
07024	DRO Alternate Soil Extraction	SW-846 3550B	1	112430025A	09/01/2011 07:00	Joseph S Feister	1
00111	Moisture	SM20 2540 G	1	11241820004A	08/29/2011 22:33	Scott W Freisher	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: B3-14-14.5 Grab Soil Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # SW 6384567
LLI Group # 1263017
Account # 11964

Project Name: Edmonds Terminal

Collected: 08/22/2011 11:00 by DR

Chevron

6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

Submitted: 08/23/2011 09:05

Reported: 09/30/2011 09:55

EDM35

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC Volatiles					
02006	NWTPH-Gx soil C7-C12	n.a.	1.3	1	22.64
GC Volatiles					
08179	Benzene	71-43-2	0.0040	0.0020	22.64
GC Petroleum Hydrocarbons					
ECY 97-602 NWTPH-Dx modified					
02214	DRO C12-C24 w/Si Gel	n.a.	N.D.	3.3	1
02214	HRO C24-C40 w/Si Gel	n.a.	N.D.	11	1
Wet Chemistry					
SM20 2540 G					
00111	Moisture	n.a.	8.7	0.50	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

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
10810	BNA Soil Microwave SIM PAH	SW-846 3546	1	11244SLE026	09/02/2011 11:15	Kelli M Barto	1
02006	NWTPH-Gx soil C7-C12	ECY 97-602 NWTPH-Gx	1	11241A31A	08/30/2011 00:58	Marie D John	22.64
08179	Method 8021 Soil Master	SW-846 8021B	1	11241A31A	08/30/2011 00:58	Marie D John	22.64
06647	GC-5g Field Preserved MeOH	SW-846 5035A	1	201123525332	08/22/2011 11:00	Client Supplied	n.a.
06647	GC-5g Field Preserved MeOH	SW-846 5035A	2	201123525332	08/22/2011 11:00	Client Supplied	n.a.
02214	NWTPH-Dx soil w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	112430025A	09/10/2011 03:45	Anita M Dale	1
07024	DRO Alternate Soil Extraction	SW-846 3550B	1	112430025A	09/01/2011 07:00	Joseph S Feister	1
00111	Moisture	SM20 2540 G	1	11241820004A	08/29/2011 22:33	Scott W Freisher	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: B5-4.5-5 Grab Soil Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # SW 6384568
LLI Group # 1263017
Account # 11964

Project Name: Edmonds Terminal

Collected: 08/22/2011 11:17 by DR

Chevron

6001 Bollinger Canyon Rd L4310
 San Ramon CA 94583

Submitted: 08/23/2011 09:05

Reported: 09/30/2011 09:55

EDM51

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC Volatiles					
02006	NWTPH-Gx soil C7-C12	n.a.	N.D.	1.1	23.79
GC Volatiles					
08179	Benzene	71-43-2	N.D.	0.0022	23.79
GC Petroleum Hydrocarbons					
ECY 97-602 NWTPH-Dx modified					
02214	DRO C12-C24 w/Si Gel	n.a.	N.D.	3.5	1
02214	HRO C24-C40 w/Si Gel	n.a.	N.D.	12	1
Wet Chemistry					
SM20 2540 G					
00111	Moisture	n.a.	14.4	0.50	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

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
10810	BNA Soil Microwave SIM PAH	SW-846 3546	1	11244SLE026	09/02/2011 11:15	Kelli M Barto	1
02006	NWTPH-Gx soil C7-C12	ECY 97-602 NWTPH-Gx	1	11241A31A	08/29/2011 20:11	Marie D John	23.79
08179	Method 8021 Soil Master	SW-846 8021B	1	11241A31A	08/29/2011 20:11	Marie D John	23.79
06647	GC-5g Field Preserved MeOH	SW-846 5035A	1	201123525332	08/22/2011 11:17	Client Supplied	n.a.
06647	GC-5g Field Preserved MeOH	SW-846 5035A	2	201123525332	08/22/2011 11:17	Client Supplied	n.a.
02214	NWTPH-Dx soil w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	112430025A	09/10/2011 04:07	Anita M Dale	1
07024	DRO Alternate Soil Extraction	SW-846 3550B	1	112430025A	09/01/2011 07:00	Joseph S Feister	1
00111	Moisture	SM20 2540 G	1	11241820004A	08/29/2011 22:33	Scott W Freisher	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: B5-9-9.5 Grab Soil Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # SW 6384569
LLI Group # 1263017
Account # 11964

Project Name: Edmonds Terminal

Collected: 08/22/2011 11:22 by DR

Chevron

6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

Submitted: 08/23/2011 09:05

Reported: 09/30/2011 09:55

EDM52

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS Semivolatiles SW-846 8270C SIM			mg/kg	mg/kg	
10722	Acenaphthene	83-32-9	0.011	0.0016	1
10722	Acenaphthylene	208-96-8	0.026	0.00081	1
10722	Anthracene	120-12-7	0.014	0.00081	1
10722	Benzo(a)anthracene	56-55-3	0.0085	0.0016	1
10722	Benzo(a)pyrene	50-32-8	0.0092	0.0016	1
10722	Benzo(b)fluoranthene	205-99-2	0.025	0.0016	1
10722	Benzo(g,h,i)perylene	191-24-2	0.0058	0.0016	1
10722	Benzo(k)fluoranthene	207-08-9	0.0058	0.0016	1
10722	Chrysene	218-01-9	0.0086	0.00081	1
10722	Dibenz(a,h)anthracene	53-70-3	N.D.	0.0016	1
10722	Fluoranthene	206-44-0	0.064	0.0016	1
10722	Fluorene	86-73-7	0.019	0.0016	1
10722	Indeno(1,2,3-cd)pyrene	193-39-5	0.0048	0.0016	1
10722	1-Methylnaphthalene	90-12-0	0.017	0.0016	1
10722	2-Methylnaphthalene	91-57-6	0.017	0.0016	1
10722	Naphthalene	91-20-3	0.13	0.0016	1
10722	Phenanthrene	85-01-8	0.065	0.0016	1
10722	Pyrene	129-00-0	0.048	0.0016	1
GC Volatiles ECY 97-602 NWTPH-Gx			mg/kg	mg/kg	
02006	NWTPH-Gx soil C7-C12	n.a.	N.D.	42	431.93
Reporting limits were raised due to sample foaming.					
GC Volatiles SW-846 8021B			mg/kg	mg/kg	
08179	Benzene	71-43-2	N.D.	0.083	431.93
Reporting limits were raised due to sample foaming.					
GC Petroleum ECY 97-602 NWTPH-Dx			mg/kg	mg/kg	
Hydrocarbons modified					
02214	DRO C12-C24 w/Si Gel	n.a.	16,000	720	100
02214	HRO C24-C40 w/Si Gel	n.a.	11,000	2,400	100
Wet Chemistry SM20 2540 G			%	%	
00111	Moisture	n.a.	58.6	0.50	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

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.

Sample Description: B5-9-9.5 Grab Soil Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # SW 6384569
LLI Group # 1263017
Account # 11964

Project Name: Edmonds Terminal

Collected: 08/22/2011 11:22 by DR

Chevron

6001 Bollinger Canyon Rd L4310
 San Ramon CA 94583

Submitted: 08/23/2011 09:05

Reported: 09/30/2011 09:55

EDM52

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10722	PAH SIM 8270 Soil Microwave	SW-846 8270C SIM	1	11258SLG026	09/22/2011 05:33	Mark A Clark	1
10810	BNA Soil Microwave SIM PAH	SW-846 3546	1	11258SLG026	09/02/2011 11:15	Kelli M Barto	1
02006	NWTPH-Gx soil C7-C12	ECY 97-602 NWTPH-Gx	1	11241A31A	08/30/2011 09:26	Marie D John	431.93
08179	Method 8021 Soil Master	SW-846 8021B	1	11241A31A	08/30/2011 09:26	Marie D John	431.93
06647	GC-5g Field Preserved MeOH	SW-846 5035A	1	201123525332	08/22/2011 11:22	Client Supplied	n.a.
06647	GC-5g Field Preserved MeOH	SW-846 5035A	2	201123525332	08/22/2011 11:22	Client Supplied	n.a.
02214	NWTPH-Dx soil w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	112430031A	09/13/2011 21:16	Dustin A Underkoffler	100
07024	DRO Alternate Soil Extraction	SW-846 3550B	1	112430031A	09/01/2011 07:15	Katheryne V Sponheimer	1
00111	Moisture	SM20 2540 G	1	11241820004A	08/29/2011 22:33	Scott W Freisher	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: B5-11.5-12 Grab Soil Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # SW 6384570
LLI Group # 1263017
Account # 11964

Project Name: Edmonds Terminal

Collected: 08/22/2011 11:30 by DR

Chevron

6001 Bollinger Canyon Rd L4310
 San Ramon CA 94583

Submitted: 08/23/2011 09:05

Reported: 09/30/2011 09:55

EDM53

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC Volatiles					
02006	NWTPH-Gx soil C7-C12	ECY 97-602 NWTPH-Gx n.a.	mg/kg N.D.	mg/kg 1.2	23.34
GC Volatiles					
08179	Benzene	SW-846 8021B 71-43-2	mg/kg N.D.	mg/kg 0.0023	23.34
GC Petroleum Hydrocarbons					
ECY 97-602 NWTPH-Dx modified					
02214	DRO C12-C24 w/Si Gel	n.a.	mg/kg N.D.	mg/kg 3.8	1
02214	HRO C24-C40 w/Si Gel	n.a.	mg/kg N.D.	mg/kg 13	1
Wet Chemistry					
SM20 2540 G					
00111	Moisture	n.a.	% 20.2	% 0.50	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

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
10810	BNA Soil Microwave SIM PAH	SW-846 3546	1	11244SLE026	09/02/2011 11:15	Kelli M Barto	1
02006	NWTPH-Gx soil C7-C12	ECY 97-602 NWTPH-Gx	1	11241A31A	08/30/2011 10:05	Marie D John	23.34
08179	Method 8021 Soil Master	SW-846 8021B	1	11241A31A	08/30/2011 10:05	Marie D John	23.34
06647	GC-5g Field Preserved MeOH	SW-846 5035A	1	201123525332	08/22/2011 11:30	Client Supplied	n.a.
06647	GC-5g Field Preserved MeOH	SW-846 5035A	2	201123525332	08/22/2011 11:30	Client Supplied	n.a.
02214	NWTPH-Dx soil w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	112430031A	09/10/2011 07:20	Anita M Dale	1
07024	DRO Alternate Soil Extraction	SW-846 3550B	1	112430031A	09/01/2011 07:15	Katheryne V Sponheimer	1
00111	Moisture	SM20 2540 G	1	11241820004A	08/29/2011 22:33	Scott W Freisher	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: B5-13.5-14 Grab Soil Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # SW 6384571
LLI Group # 1263017
Account # 11964

Project Name: Edmonds Terminal

Collected: 08/22/2011 11:36 by DR

Chevron

6001 Bollinger Canyon Rd L4310
 San Ramon CA 94583

Submitted: 08/23/2011 09:05

Reported: 09/30/2011 09:55

EDM54

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC Volatiles					
02006	NWTPH-Gx soil C7-C12	n.a.	N.D.	1.2	24.23
GC Volatiles					
08179	Benzene	71-43-2	N.D.	0.0024	24.23
GC Petroleum Hydrocarbons					
ECY 97-602 NWTPH-Dx modified					
02214	DRO C12-C24 w/Si Gel	n.a.	N.D.	3.7	1
02214	HRO C24-C40 w/Si Gel	n.a.	N.D.	12	1
Wet Chemistry					
SM20 2540 G					
00111	Moisture	n.a.	19.5	0.50	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

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
10810	BNA Soil Microwave SIM PAH	SW-846 3546	1	11244SLE026	09/02/2011 11:15	Kelli M Barto	1
02006	NWTPH-Gx soil C7-C12	ECY 97-602 NWTPH-Gx	1	11241A31A	08/30/2011 02:46	Marie D John	24.23
08179	Method 8021 Soil Master	SW-846 8021B	1	11241A31A	08/30/2011 02:46	Marie D John	24.23
06647	GC-5g Field Preserved MeOH	SW-846 5035A	1	201123525332	08/22/2011 11:36	Client Supplied	n.a.
06647	GC-5g Field Preserved MeOH	SW-846 5035A	2	201123525332	08/22/2011 11:36	Client Supplied	n.a.
02214	NWTPH-Dx soil w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	112430031A	09/10/2011 07:42	Anita M Dale	1
07024	DRO Alternate Soil Extraction	SW-846 3550B	1	112430031A	09/01/2011 07:15	Katheryne V Sponheimer	1
00111	Moisture	SM20 2540 G	1	11241820004B	08/29/2011 22:33	Scott W Freisher	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: B2-4-4.5 Grab Soil Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # SW 6384572
LLI Group # 1263017
Account # 11964

Project Name: Edmonds Terminal

Collected: 08/22/2011 11:54 by DR

Chevron

6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

Submitted: 08/23/2011 09:05

Reported: 09/30/2011 09:55

EDM21

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS Semivolatiles SW-846 8270C SIM			mg/kg	mg/kg	
10722	Acenaphthene	83-32-9	N.D.	0.0071	10
10722	Acenaphthylene	208-96-8	0.0040	0.0036	10
10722	Anthracene	120-12-7	0.0076	0.0036	10
10722	Benzo(a)anthracene	56-55-3	0.020	0.0071	10
10722	Benzo(a)pyrene	50-32-8	0.038	0.0071	10
10722	Benzo(b)fluoranthene	205-99-2	0.048	0.0071	10
10722	Benzo(g,h,i)perylene	191-24-2	0.064	0.0071	10
10722	Benzo(k)fluoranthene	207-08-9	0.018	0.0071	10
10722	Chrysene	218-01-9	0.048	0.0036	10
10722	Dibenz(a,h)anthracene	53-70-3	0.013	0.0071	10
10722	Fluoranthene	206-44-0	0.025	0.0071	10
10722	Fluorene	86-73-7	N.D.	0.0071	10
10722	Indeno(1,2,3-cd)pyrene	193-39-5	0.023	0.0071	10
10722	1-Methylnaphthalene	90-12-0	N.D.	0.0071	10
10722	2-Methylnaphthalene	91-57-6	N.D.	0.0071	10
10722	Naphthalene	91-20-3	N.D.	0.0071	10
10722	Phenanthrene	85-01-8	0.021	0.0071	10
10722	Pyrene	129-00-0	0.030	0.0071	10
GC Volatiles ECY 97-602 NWTPH-Gx			mg/kg	mg/kg	
02006	NWTPH-Gx soil C7-C12	n.a.	N.D.	9.2	215.25
Reporting limits were raised due to sample foaming.					
GC Volatiles SW-846 8021B			mg/kg	mg/kg	
08179	Benzene	71-43-2	N.D.	0.018	215.25
Reporting limits were raised due to sample foaming.					
GC Petroleum ECY 97-602 NWTPH-Dx			mg/kg	mg/kg	
Hydrocarbons modified					
02214	DRO C12-C24 w/Si Gel	n.a.	620	32	10
02214	HRO C24-C40 w/Si Gel	n.a.	720	110	10
Wet Chemistry SM20 2540 G			%	%	
00111	Moisture	n.a.	6.4	0.50	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

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.



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: B2-4-4.5 Grab Soil Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # SW 6384572
LLI Group # 1263017
Account # 11964

Project Name: Edmonds Terminal

Collected: 08/22/2011 11:54 by DR

Chevron

6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

Submitted: 08/23/2011 09:05

Reported: 09/30/2011 09:55

EDM21

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10722	PAH SIM 8270 Soil Microwave	SW-846 8270C SIM	1	11258SLG026	09/20/2011 11:35	Mark A Clark	10
10810	BNA Soil Microwave SIM PAH	SW-846 3546	1	11258SLG026	09/02/2011 11:15	Kelli M Barto	1
02006	NWTPH-Gx soil C7-C12	ECY 97-602 NWTPH-Gx	1	11241A31A	08/30/2011 12:50	Marie D John	215.25
08179	Method 8021 Soil Master	SW-846 8021B	1	11241A31A	08/30/2011 12:50	Marie D John	215.25
06647	GC-5g Field Preserved MeOH	SW-846 5035A	1	201123525332	08/22/2011 11:54	Client Supplied	n.a.
06647	GC-5g Field Preserved MeOH	SW-846 5035A	2	201123525332	08/22/2011 11:54	Client Supplied	n.a.
02214	NWTPH-Dx soil w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	112430031A	09/10/2011 09:29	Anita M Dale	10
07024	DRO Alternate Soil Extraction	SW-846 3550B	1	112430031A	09/01/2011 07:15	Katheryne V Sponheimer	1
00111	Moisture	SM20 2540 G	1	11241820004B	08/29/2011 22:33	Scott W Freisher	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: B2-7-7.5 Grab Soil Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # SW 6384573
LLI Group # 1263017
Account # 11964

Project Name: Edmonds Terminal

Collected: 08/22/2011 11:58 by DR

Chevron

6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

Submitted: 08/23/2011 09:05

Reported: 09/30/2011 09:55

EDM22

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS Semivolatiles SW-846 8270C SIM			mg/kg	mg/kg	
10722	Acenaphthene	83-32-9	N.D.	0.00075	1
10722	Acenaphthylene	208-96-8	0.00059	0.00038	1
10722	Anthracene	120-12-7	N.D.	0.00038	1
10722	Benzo(a)anthracene	56-55-3	N.D.	0.00075	1
10722	Benzo(a)pyrene	50-32-8	N.D.	0.00075	1
10722	Benzo(b)fluoranthene	205-99-2	0.0019	0.00075	1
10722	Benzo(g,h,i)perylene	191-24-2	N.D.	0.00075	1
10722	Benzo(k)fluoranthene	207-08-9	N.D.	0.00075	1
10722	Chrysene	218-01-9	0.0012	0.00038	1
10722	Dibenz(a,h)anthracene	53-70-3	N.D.	0.00075	1
10722	Fluoranthene	206-44-0	0.0018	0.00075	1
10722	Fluorene	86-73-7	0.0015	0.00075	1
10722	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.00075	1
10722	1-Methylnaphthalene	90-12-0	0.0014	0.00075	1
10722	2-Methylnaphthalene	91-57-6	0.0021	0.00075	1
10722	Naphthalene	91-20-3	0.0033	0.00075	1
10722	Phenanthrene	85-01-8	0.0026	0.00075	1
10722	Pyrene	129-00-0	0.0020	0.00075	1
GC Volatiles ECY 97-602 NWTPH-Gx			mg/kg	mg/kg	
02006	NWTPH-Gx soil C7-C12	n.a.	N.D.	1	21.79
GC Volatiles SW-846 8021B			mg/kg	mg/kg	
08179	Benzene	71-43-2	N.D.	0.0020	21.79
GC Petroleum Hydrocarbons ECY 97-602 NWTPH-Dx modified			mg/kg	mg/kg	
02214	DRO C12-C24 w/Si Gel	n.a.	30	3.4	1
02214	HRO C24-C40 w/Si Gel	n.a.	37	11	1
Wet Chemistry SM20 2540 G			%	%	
00111	Moisture	n.a.	11.5	0.50	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

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
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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: B2-7-7.5 Grab Soil Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # SW 6384573
LLI Group # 1263017
Account # 11964

Project Name: Edmonds Terminal

Collected: 08/22/2011 11:58 by DR

Chevron

6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

Submitted: 08/23/2011 09:05

Reported: 09/30/2011 09:55

EDM22

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10722	PAH SIM 8270 Soil Microwave	SW-846 8270C SIM	1	11258SLG026	09/21/2011 09:12	Mark A Clark	1
10810	BNA Soil Microwave SIM PAH	SW-846 3546	1	11258SLG026	09/02/2011 11:15	Kelli M Barto	1
02006	NWTPH-Gx soil C7-C12	ECY 97-602 NWTPH-Gx	1	11241A31A	08/30/2011 03:22	Marie D John	21.79
08179	Method 8021 Soil Master	SW-846 8021B	1	11241A31A	08/30/2011 03:22	Marie D John	21.79
06647	GC-5g Field Preserved MeOH	SW-846 5035A	1	201123525332	08/22/2011 11:58	Client Supplied	n.a.
06647	GC-5g Field Preserved MeOH	SW-846 5035A	2	201123525332	08/22/2011 11:58	Client Supplied	n.a.
02214	NWTPH-Dx soil w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	112430031A	09/10/2011 08:03	Anita M Dale	1
07024	DRO Alternate Soil Extraction	SW-846 3550B	1	112430031A	09/01/2011 07:15	Katheryne V Sponheimer	1
00111	Moisture	SM20 2540 G	1	11241820004B	08/29/2011 22:33	Scott W Freisher	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: B2-9.5-10 Grab Soil Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # SW 6384574
LLI Group # 1263017
Account # 11964

Project Name: Edmonds Terminal

Collected: 08/22/2011 12:00 by DR

Chevron

6001 Bollinger Canyon Rd L4310
 San Ramon CA 94583

Submitted: 08/23/2011 09:05

Reported: 09/30/2011 09:55

EDM23

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS Semivolatiles SW-846 8270C SIM			mg/kg	mg/kg	
10722	Acenaphthene	83-32-9	0.0012	0.00076	1
10722	Acenaphthylene	208-96-8	0.00071	0.00038	1
10722	Anthracene	120-12-7	0.0080	0.00038	1
10722	Benzo(a)anthracene	56-55-3	0.0015	0.00076	1
10722	Benzo(a)pyrene	50-32-8	0.0012	0.00076	1
10722	Benzo(b)fluoranthene	205-99-2	0.0051	0.00076	1
10722	Benzo(g,h,i)perylene	191-24-2	N.D.	0.00076	1
10722	Benzo(k)fluoranthene	207-08-9	N.D.	0.00076	1
10722	Chrysene	218-01-9	0.0031	0.00038	1
10722	Dibenz(a,h)anthracene	53-70-3	N.D.	0.00076	1
10722	Fluoranthene	206-44-0	0.0049	0.00076	1
10722	Fluorene	86-73-7	0.0052	0.00076	1
10722	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.00076	1
10722	1-Methylnaphthalene	90-12-0	0.0037	0.00076	1
10722	2-Methylnaphthalene	91-57-6	0.0047	0.00076	1
10722	Naphthalene	91-20-3	0.0061	0.00076	1
10722	Phenanthrene	85-01-8	0.014	0.00076	1
10722	Pyrene	129-00-0	0.0074	0.00076	1
GC Volatiles ECY 97-602 NWTPH-Gx			mg/kg	mg/kg	
02006	NWTPH-Gx soil C7-C12	n.a.	16	1	20.92
GC Volatiles SW-846 8021B			mg/kg	mg/kg	
08179	Benzene	71-43-2	N.D.	0.0019	20.92
GC Petroleum Hydrocarbons ECY 97-602 NWTPH-Dx modified			mg/kg	mg/kg	
02214	DRO C12-C24 w/Si Gel	n.a.	100	3.4	1
02214	HRO C24-C40 w/Si Gel	n.a.	100	11	1
Wet Chemistry SM20 2540 G			%	%	
00111	Moisture	n.a.	12.4	0.50	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

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
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Sample Description: B2-9.5-10 Grab Soil Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # SW 6384574
LLI Group # 1263017
Account # 11964

Project Name: Edmonds Terminal

Collected: 08/22/2011 12:00 by DR

Chevron

6001 Bollinger Canyon Rd L4310
 San Ramon CA 94583

Submitted: 08/23/2011 09:05

Reported: 09/30/2011 09:55

EDM23

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10722	PAH SIM 8270 Soil Microwave	SW-846 8270C SIM	1	11258SLG026	09/22/2011 07:14	Mark A Clark	1
10810	BNA Soil Microwave SIM PAH	SW-846 3546	1	11258SLG026	09/02/2011 11:15	Kelli M Barto	1
02006	NWTPH-Gx soil C7-C12	ECY 97-602 NWTPH-Gx	1	11241A31A	08/30/2011 03:58	Marie D John	20.92
08179	Method 8021 Soil Master	SW-846 8021B	1	11241A31A	08/30/2011 03:58	Marie D John	20.92
06647	GC-5g Field Preserved MeOH	SW-846 5035A	1	201123525332	08/22/2011 12:00	Client Supplied	n.a.
06647	GC-5g Field Preserved MeOH	SW-846 5035A	2	201123525332	08/22/2011 12:00	Client Supplied	n.a.
02214	NWTPH-Dx soil w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	112430031A	09/10/2011 08:46	Anita M Dale	1
07024	DRO Alternate Soil Extraction	SW-846 3550B	1	112430031A	09/01/2011 07:15	Katheryne V Sponheimer	1
00111	Moisture	SM20 2540 G	1	11241820004B	08/29/2011 22:33	Scott W Freisher	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: B2-12-12.5 Grab Soil Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # SW 6384575
LLI Group # 1263017
Account # 11964

Project Name: Edmonds Terminal

Collected: 08/22/2011 12:12 by DR

Chevron

6001 Bollinger Canyon Rd L4310
 San Ramon CA 94583

Submitted: 08/23/2011 09:05

Reported: 09/30/2011 09:55

EDM24

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS Semivolatiles SW-846 8270C SIM			mg/kg	mg/kg	
10722	Acenaphthene	83-32-9	N.D.	0.00074	1
10722	Acenaphthylene	208-96-8	0.00052	0.00037	1
10722	Anthracene	120-12-7	0.0039	0.00037	1
10722	Benzo(a)anthracene	56-55-3	N.D.	0.00074	1
10722	Benzo(a)pyrene	50-32-8	N.D.	0.00074	1
10722	Benzo(b)fluoranthene	205-99-2	0.0034	0.00074	1
10722	Benzo(g,h,i)perylene	191-24-2	N.D.	0.00074	1
10722	Benzo(k)fluoranthene	207-08-9	N.D.	0.00074	1
10722	Chrysene	218-01-9	0.0023	0.00037	1
10722	Dibenz(a,h)anthracene	53-70-3	N.D.	0.00074	1
10722	Fluoranthene	206-44-0	0.0019	0.00074	1
10722	Fluorene	86-73-7	0.0024	0.00074	1
10722	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.00074	1
10722	1-Methylnaphthalene	90-12-0	0.0017	0.00074	1
10722	2-Methylnaphthalene	91-57-6	0.0018	0.00074	1
10722	Naphthalene	91-20-3	0.0033	0.00074	1
10722	Phenanthrene	85-01-8	0.0063	0.00074	1
10722	Pyrene	129-00-0	0.0028	0.00074	1
GC Volatiles ECY 97-602 NWTPH-Gx			mg/kg	mg/kg	
02006	NWTPH-Gx soil C7-C12	n.a.	2.0	1	22.28
GC Volatiles SW-846 8021B			mg/kg	mg/kg	
08179	Benzene	71-43-2	N.D.	0.0020	22.28
GC Petroleum Hydrocarbons ECY 97-602 NWTPH-Dx modified			mg/kg	mg/kg	
02214	DRO C12-C24 w/Si Gel	n.a.	130	33	10
02214	HRO C24-C40 w/Si Gel	n.a.	530	110	10
Wet Chemistry SM20 2540 G			%	%	
00111	Moisture	n.a.	9.7	0.50	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

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
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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: B2-12-12.5 Grab Soil Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # SW 6384575
LLI Group # 1263017
Account # 11964

Project Name: Edmonds Terminal

Collected: 08/22/2011 12:12 by DR

Chevron

6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

Submitted: 08/23/2011 09:05

Reported: 09/30/2011 09:55

EDM24

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10722	PAH SIM 8270 Soil Microwave	SW-846 8270C SIM	1	11258SLG026	09/22/2011 07:47	Mark A Clark	1
10810	BNA Soil Microwave SIM PAH	SW-846 3546	1	11258SLG026	09/02/2011 11:15	Kelli M Barto	1
02006	NWTPH-Gx soil C7-C12	ECY 97-602 NWTPH-Gx	1	11241A31A	08/29/2011 20:47	Marie D John	22.28
08179	Method 8021 Soil Master	SW-846 8021B	1	11241A31A	08/29/2011 20:47	Marie D John	22.28
06647	GC-5g Field Preserved MeOH	SW-846 5035A	1	201123525332	08/22/2011 12:12	Client Supplied	n.a.
06647	GC-5g Field Preserved MeOH	SW-846 5035A	2	201123525332	08/22/2011 12:12	Client Supplied	n.a.
02214	NWTPH-Dx soil w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	112430031A	09/10/2011 09:51	Anita M Dale	10
07024	DRO Alternate Soil Extraction	SW-846 3550B	1	112430031A	09/01/2011 07:15	Katheryne V Sponheimer	1
00111	Moisture	SM20 2540 G	1	11241820004B	08/29/2011 22:33	Scott W Freisher	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: B2-14.5-15 Grab Soil Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # SW 6384576
LLI Group # 1263017
Account # 11964

Project Name: Edmonds Terminal

Collected: 08/22/2011 12:10 by DR

Chevron

6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

Submitted: 08/23/2011 09:05

Reported: 09/30/2011 09:55

EDM25

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC Volatiles					
02006	NWTPH-Gx soil C7-C12	ECY 97-602 NWTPH-Gx n.a.	mg/kg N.D.	mg/kg 1.2	27.3
GC Volatiles					
08179	Benzene	SW-846 8021B 71-43-2	mg/kg N.D.	mg/kg 0.0024	27.3
GC Petroleum Hydrocarbons					
ECY 97-602 NWTPH-Dx modified					
02214	DRO C12-C24 w/Si Gel	n.a.	mg/kg N.D.	mg/kg 3.4	1
02214	HRO C24-C40 w/Si Gel	n.a.	mg/kg N.D.	mg/kg 11	1
Wet Chemistry					
SM20 2540 G					
00111	Moisture	n.a.	% 10.8	% 0.50	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

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
10810	BNA Soil Microwave SIM PAH	SW-846 3546	1	11244SLE026	09/02/2011 11:15	Kelli M Barto	1
02006	NWTPH-Gx soil C7-C12	ECY 97-602 NWTPH-Gx	1	11241A31A	08/29/2011 21:23	Marie D John	27.3
08179	Method 8021 Soil Master	SW-846 8021B	1	11241A31A	08/29/2011 21:23	Marie D John	27.3
06647	GC-5g Field Preserved MeOH	SW-846 5035A	1	201123525332	08/22/2011 12:10	Client Supplied	n.a.
06647	GC-5g Field Preserved MeOH	SW-846 5035A	2	201123525332	08/22/2011 12:10	Client Supplied	n.a.
02214	NWTPH-Dx soil w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	112440027A	09/03/2011 23:14	Tracy A Cole	1
07024	DRO Alternate Soil Extraction	SW-846 3550B	1	112440027A	09/02/2011 07:15	Katheryne V Sponheimer	1
00111	Moisture	SM20 2540 G	1	11241820004B	08/29/2011 22:33	Scott W Freisher	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: B4-4.5-5 Grab Soil Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # SW 6384577
LLI Group # 1263017
Account # 11964

Project Name: Edmonds Terminal

Collected: 08/22/2011 13:00 by DR

Chevron

6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

Submitted: 08/23/2011 09:05

Reported: 09/30/2011 09:55

EDM41

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS Semivolatiles SW-846 8270C SIM			mg/kg	mg/kg	
10722	Acenaphthene	83-32-9	N.D.	0.00071	1
10722	Acenaphthylene	208-96-8	N.D.	0.00035	1
10722	Anthracene	120-12-7	N.D.	0.00035	1
10722	Benzo(a)anthracene	56-55-3	N.D.	0.00071	1
10722	Benzo(a)pyrene	50-32-8	N.D.	0.00071	1
10722	Benzo(b)fluoranthene	205-99-2	N.D.	0.00071	1
10722	Benzo(g,h,i)perylene	191-24-2	N.D.	0.00071	1
10722	Benzo(k)fluoranthene	207-08-9	N.D.	0.00071	1
10722	Chrysene	218-01-9	N.D.	0.00035	1
10722	Dibenz(a,h)anthracene	53-70-3	N.D.	0.00071	1
10722	Fluoranthene	206-44-0	N.D.	0.00071	1
10722	Fluorene	86-73-7	N.D.	0.00071	1
10722	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.00071	1
10722	1-Methylnaphthalene	90-12-0	N.D.	0.00071	1
10722	2-Methylnaphthalene	91-57-6	N.D.	0.00071	1
10722	Naphthalene	91-20-3	N.D.	0.00071	1
10722	Phenanthrene	85-01-8	N.D.	0.00071	1
10722	Pyrene	129-00-0	N.D.	0.00071	1
GC Volatiles ECY 97-602 NWTPH-Gx			mg/kg	mg/kg	
02006	NWTPH-Gx soil C7-C12	n.a.	N.D.	1	23.43
GC Volatiles SW-846 8021B			mg/kg	mg/kg	
08179	Benzene	71-43-2	N.D.	0.0020	23.43
GC Petroleum Hydrocarbons ECY 97-602 NWTPH-Dx modified			mg/kg	mg/kg	
02214	DRO C12-C24 w/Si Gel	n.a.	160	16	5
02214	HRO C24-C40 w/Si Gel	n.a.	N.D.	53	5
Wet Chemistry SM20 2540 G			%	%	
00111	Moisture	n.a.	6.0	0.50	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

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
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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: B4-4.5-5 Grab Soil Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # SW 6384577
LLI Group # 1263017
Account # 11964

Project Name: Edmonds Terminal

Collected: 08/22/2011 13:00 by DR

Chevron

6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

Submitted: 08/23/2011 09:05

Reported: 09/30/2011 09:55

EDM41

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10722	PAH SIM 8270 Soil Microwave	SW-846 8270C SIM	1	11258SLG026	09/21/2011 10:52	Mark A Clark	1
10810	BNA Soil Microwave SIM PAH	SW-846 3546	1	11258SLG026	09/02/2011 11:15	Kelli M Barto	1
02006	NWTPH-Gx soil C7-C12	ECY 97-602 NWTPH-Gx	1	11241A31A	08/30/2011 00:22	Marie D John	23.43
08179	Method 8021 Soil Master	SW-846 8021B	1	11241A31A	08/30/2011 00:22	Marie D John	23.43
06647	GC-5g Field Preserved MeOH	SW-846 5035A	1	201123525332	08/22/2011 13:00	Client Supplied	n.a.
06647	GC-5g Field Preserved MeOH	SW-846 5035A	2	201123525332	08/22/2011 13:00	Client Supplied	n.a.
02214	NWTPH-Dx soil w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	112440027A	09/04/2011 00:58	Tracy A Cole	5
07024	DRO Alternate Soil Extraction	SW-846 3550B	1	112440027A	09/02/2011 07:15	Katheryne V Sponheimer	1
00111	Moisture	SM20 2540 G	1	11241820004B	08/29/2011 22:33	Scott W Freisher	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: B4-9.5-10 Grab Soil Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # SW 6384578
LLI Group # 1263017
Account # 11964

Project Name: Edmonds Terminal

Collected: 08/22/2011 13:10 by DR

Chevron

6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

Submitted: 08/23/2011 09:05

Reported: 09/30/2011 09:55

EDM42

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS Semivolatiles SW-846 8270C SIM			mg/kg	mg/kg	
10722	Acenaphthene	83-32-9	0.026	0.0077	10
10722	Acenaphthylene	208-96-8	0.0077	0.0039	10
10722	Anthracene	120-12-7	0.020	0.0039	10
10722	Benzo(a)anthracene	56-55-3	0.0096	0.0077	10
10722	Benzo(a)pyrene	50-32-8	N.D.	0.0077	10
10722	Benzo(b)fluoranthene	205-99-2	0.013	0.0077	10
10722	Benzo(g,h,i)perylene	191-24-2	N.D.	0.0077	10
10722	Benzo(k)fluoranthene	207-08-9	N.D.	0.0077	10
10722	Chrysene	218-01-9	0.027	0.0039	10
10722	Dibenz(a,h)anthracene	53-70-3	N.D.	0.0077	10
10722	Fluoranthene	206-44-0	0.029	0.0077	10
10722	Fluorene	86-73-7	0.10	0.0077	10
10722	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.0077	10
10722	1-Methylnaphthalene	90-12-0	0.12	0.0077	10
10722	2-Methylnaphthalene	91-57-6	0.069	0.0077	10
10722	Naphthalene	91-20-3	0.11	0.0077	10
10722	Phenanthrene	85-01-8	0.14	0.0077	10
10722	Pyrene	129-00-0	0.039	0.0077	10
GC Volatiles ECY 97-602 NWTPH-Gx			mg/kg	mg/kg	
02006	NWTPH-Gx soil C7-C12	n.a.	13	11	238.45
Reporting limits were raised due to sample foaming.					
GC Volatiles SW-846 8021B			mg/kg	mg/kg	
08179	Benzene	71-43-2	0.024	0.022	238.45
Reporting limits were raised due to sample foaming.					
GC Petroleum ECY 97-602 NWTPH-Dx			mg/kg	mg/kg	
Hydrocarbons modified					
02214	DRO C12-C24 w/Si Gel	n.a.	2,900	86	25
02214	HRO C24-C40 w/Si Gel	n.a.	1,500	290	25
Wet Chemistry SM20 2540 G			%	%	
00111	Moisture	n.a.	13.5	0.50	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

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.



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: B4-9.5-10 Grab Soil Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # SW 6384578
LLI Group # 1263017
Account # 11964

Project Name: Edmonds Terminal

Collected: 08/22/2011 13:10 by DR

Chevron

6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

Submitted: 08/23/2011 09:05

Reported: 09/30/2011 09:55

EDM42

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10722	PAH SIM 8270 Soil Microwave	SW-846 8270C SIM	1	11258SLG026	09/20/2011 14:22	Mark A Clark	10
10810	BNA Soil Microwave SIM PAH	SW-846 3546	1	11258SLG026	09/02/2011 11:15	Kelli M Barto	1
02006	NWTPH-Gx soil C7-C12	ECY 97-602 NWTPH-Gx	1	11242A16A	08/30/2011 21:15	Marie D John	238.45
08179	Method 8021 Soil Master	SW-846 8021B	1	11242A16A	08/30/2011 21:15	Marie D John	238.45
06647	GC-5g Field Preserved MeOH	SW-846 5035A	1	201123525332	08/22/2011 13:10	Client Supplied	n.a.
06647	GC-5g Field Preserved MeOH	SW-846 5035A	2	201123525332	08/22/2011 13:10	Client Supplied	n.a.
02214	NWTPH-Dx soil w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	112440027A	09/04/2011 02:00	Tracy A Cole	25
07024	DRO Alternate Soil Extraction	SW-846 3550B	1	112440027A	09/02/2011 07:15	Katheryne V Sponheimer	1
00111	Moisture	SM20 2540 G	1	11241820004B	08/29/2011 22:33	Scott W Freisher	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: B4-13-13.5 Grab Soil Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # SW 6384579
LLI Group # 1263017
Account # 11964

Project Name: Edmonds Terminal

Collected: 08/22/2011 13:18 by DR

Chevron

6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

Submitted: 08/23/2011 09:05

Reported: 09/30/2011 09:55

EDM43

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS Semivolatiles SW-846 8270C SIM			mg/kg	mg/kg	
10722	Acenaphthene	83-32-9	0.0059	0.00079	1
10722	Acenaphthylene	208-96-8	0.00090	0.00040	1
10722	Anthracene	120-12-7	0.0019	0.00040	1
10722	Benzo(a)anthracene	56-55-3	N.D.	0.00079	1
10722	Benzo(a)pyrene	50-32-8	N.D.	0.00079	1
10722	Benzo(b)fluoranthene	205-99-2	N.D.	0.00079	1
10722	Benzo(g,h,i)perylene	191-24-2	N.D.	0.00079	1
10722	Benzo(k)fluoranthene	207-08-9	N.D.	0.00079	1
10722	Chrysene	218-01-9	0.00080	0.00040	1
10722	Dibenz(a,h)anthracene	53-70-3	N.D.	0.00079	1
10722	Fluoranthene	206-44-0	0.00082	0.00079	1
10722	Fluorene	86-73-7	0.022	0.00079	1
10722	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.00079	1
10722	1-Methylnaphthalene	90-12-0	0.020	0.00079	1
10722	2-Methylnaphthalene	91-57-6	0.026	0.00079	1
10722	Naphthalene	91-20-3	0.027	0.00079	1
10722	Phenanthrene	85-01-8	0.0037	0.00079	1
10722	Pyrene	129-00-0	0.0014	0.00079	1
GC Volatiles ECY 97-602 NWTPH-Gx			mg/kg	mg/kg	
02006	NWTPH-Gx soil C7-C12	n.a.	1.8	1.2	25.23
GC Volatiles SW-846 8021B			mg/kg	mg/kg	
08179	Benzene	71-43-2	0.010	0.0024	25.23
GC Petroleum Hydrocarbons ECY 97-602 NWTPH-Dx modified			mg/kg	mg/kg	
02214	DRO C12-C24 w/Si Gel	n.a.	4.2	3.6	1
02214	HRO C24-C40 w/Si Gel	n.a.	N.D.	12	1
Wet Chemistry SM20 2540 G			%	%	
00111	Moisture	n.a.	16.0	0.50	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

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
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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: B4-13-13.5 Grab Soil Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # SW 6384579
LLI Group # 1263017
Account # 11964

Project Name: Edmonds Terminal

Collected: 08/22/2011 13:18 by DR

Chevron

6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

Submitted: 08/23/2011 09:05

Reported: 09/30/2011 09:55

EDM43

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10722	PAH SIM 8270 Soil Microwave	SW-846 8270C SIM	1	11258SLG026	09/20/2011 14:55	Mark A Clark	1
10810	BNA Soil Microwave SIM PAH	SW-846 3546	1	11258SLG026	09/02/2011 11:15	Kelli M Barto	1
02006	NWTPH-Gx soil C7-C12	ECY 97-602 NWTPH-Gx	1	11242A16A	08/30/2011 16:02	Marie D John	25.23
08179	Method 8021 Soil Master	SW-846 8021B	1	11242A16A	08/30/2011 16:02	Marie D John	25.23
06647	GC-5g Field Preserved MeOH	SW-846 5035A	1	201123525332	08/22/2011 13:18	Client Supplied	n.a.
06647	GC-5g Field Preserved MeOH	SW-846 5035A	2	201123525332	08/22/2011 13:18	Client Supplied	n.a.
02214	NWTPH-Dx soil w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	112440027A	09/04/2011 00:17	Tracy A Cole	1
07024	DRO Alternate Soil Extraction	SW-846 3550B	1	112440027A	09/02/2011 07:15	Katheryne V Sponheimer	1
00111	Moisture	SM20 2540 G	1	11241820004B	08/29/2011 22:33	Scott W Freisher	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: B4-14.5-15 Grab Soil Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # SW 6384580
LLI Group # 1263017
Account # 11964

Project Name: Edmonds Terminal

Collected: 08/22/2011 13:20 by DR

Chevron

6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

Submitted: 08/23/2011 09:05

Reported: 09/30/2011 09:55

EDM44

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC Volatiles					
	ECY 97-602 NWTPH-Gx		mg/kg	mg/kg	
02006	NWTPH-Gx soil C7-C12	n.a.	N.D.	11	222.37
Reporting limits were raised due to sample foaming.					
GC Volatiles					
	SW-846 8021B		mg/kg	mg/kg	
08179	Benzene	71-43-2	N.D.	0.021	222.37
Reporting limits were raised due to sample foaming.					
GC Petroleum Hydrocarbons					
	ECY 97-602 NWTPH-Dx modified		mg/kg	mg/kg	
02214	DRO C12-C24 w/Si Gel	n.a.	N.D.	3.6	1
02214	HRO C24-C40 w/Si Gel	n.a.	N.D.	12	1
Wet Chemistry					
	SM20 2540 G		%	%	
00111	Moisture	n.a.	16.6	0.50	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

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
10810	BNA Soil Microwave SIM PAH	SW-846 3546	1	11244SLE026	09/02/2011 11:15	Kelli M Barto	1
02006	NWTPH-Gx soil C7-C12	ECY 97-602 NWTPH-Gx	1	11242A16A	08/30/2011 21:53	Marie D John	222.37
08179	Method 8021 Soil Master	SW-846 8021B	1	11242A16A	08/30/2011 21:53	Marie D John	222.37
06647	GC-5g Field Preserved MeOH	SW-846 5035A	1	201123525332	08/22/2011 13:20	Client Supplied	n.a.
06647	GC-5g Field Preserved MeOH	SW-846 5035A	2	201123525332	08/22/2011 13:20	Client Supplied	n.a.
02214	NWTPH-Dx soil w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	112440027A	09/03/2011 23:56	Tracy A Cole	1
07024	DRO Alternate Soil Extraction	SW-846 3550B	1	112440027A	09/02/2011 07:15	Katheryne V Sponheimer	1
00111	Moisture	SM20 2540 G	1	11241820004B	08/29/2011 22:33	Scott W Freisher	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 2

Sample Description: B6-4.5-5 Grab Soil Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # SW 6384581
LLI Group # 1263017
Account # 11964

Project Name: Edmonds Terminal

Collected: 08/22/2011 14:00 by DR

Chevron

6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

Submitted: 08/23/2011 09:05

Reported: 09/30/2011 09:55

EDM61

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS Semivolatiles SW-846 8270C SIM			mg/kg	mg/kg	
10722	Acenaphthene	83-32-9	0.11	0.015	20
10722	Acenaphthylene	208-96-8	0.037	0.0073	20
10722	Anthracene	120-12-7	0.20	0.0073	20
10722	Benzo(a)anthracene	56-55-3	0.074	0.015	20
10722	Benzo(a)pyrene	50-32-8	0.071	0.015	20
10722	Benzo(b)fluoranthene	205-99-2	0.067	0.015	20
10722	Benzo(g,h,i)perylene	191-24-2	0.023	0.015	20
10722	Benzo(k)fluoranthene	207-08-9	0.021	0.015	20
10722	Chrysene	218-01-9	0.17	0.0073	20
10722	Dibenz(a,h)anthracene	53-70-3	N.D.	0.015	20
10722	Fluoranthene	206-44-0	0.19	0.015	20
10722	Fluorene	86-73-7	0.41	0.015	20
10722	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.015	20
10722	1-Methylnaphthalene	90-12-0	0.48	0.015	20
10722	2-Methylnaphthalene	91-57-6	0.46	0.015	20
10722	Naphthalene	91-20-3	0.096	0.015	20
10722	Phenanthrene	85-01-8	0.80	0.015	20
10722	Pyrene	129-00-0	0.29	0.015	20
GC Volatiles ECY 97-602 NWTPH-Gx			mg/kg	mg/kg	
02006	NWTPH-Gx soil C7-C12	n.a.	190	11	243.66
Reporting limits were raised due to sample foaming.					
GC Volatiles SW-846 8021B			mg/kg	mg/kg	
08179	Benzene	71-43-2	N.D.	0.021	243.66
Reporting limits were raised due to sample foaming.					
GC Petroleum ECY 97-602 NWTPH-Dx			mg/kg	mg/kg	
Hydrocarbons modified					
02214	DRO C12-C24 w/Si Gel	n.a.	470	33	10
02214	HRO C24-C40 w/Si Gel	n.a.	310	110	10
Wet Chemistry SM20 2540 G			%	%	
00111	Moisture	n.a.	9.0	0.50	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

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.



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: B6-4.5-5 Grab Soil Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # SW 6384581
LLI Group # 1263017
Account # 11964

Project Name: Edmonds Terminal

Collected: 08/22/2011 14:00 by DR

Chevron

6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

Submitted: 08/23/2011 09:05

Reported: 09/30/2011 09:55

EDM61

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10722	PAH SIM 8270 Soil Microwave	SW-846 8270C SIM	1	11258SLD026	09/16/2011 23:32	Gregory J Drahovsky	20
10810	BNA Soil Microwave SIM PAH	SW-846 3546	1	11258SLD026	09/03/2011 07:40	Katheryne V Sponheimer	1
02006	NWTPH-Gx soil C7-C12	ECY 97-602 NWTPH-Gx	1	11242A16A	08/31/2011 00:24	Marie D John	243.66
08179	Method 8021 Soil Master	SW-846 8021B	1	11242A16A	08/31/2011 00:24	Marie D John	243.66
06647	GC-5g Field Preserved MeOH	SW-846 5035A	1	201123525332	08/22/2011 14:00	Client Supplied	n.a.
06647	GC-5g Field Preserved MeOH	SW-846 5035A	2	201123525332	08/22/2011 14:00	Client Supplied	n.a.
02214	NWTPH-Dx soil w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	112440027A	09/04/2011 01:40	Tracy A Cole	10
07024	DRO Alternate Soil Extraction	SW-846 3550B	1	112440027A	09/02/2011 07:15	Katheryne V Sponheimer	1
00111	Moisture	SM20 2540 G	1	11241820005A	08/29/2011 22:01	Scott W Freisher	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: B6-7-7.5 Grab Soil Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # SW 6384582
LLI Group # 1263017
Account # 11964

Project Name: Edmonds Terminal

Collected: 08/22/2011 14:08 by DR

Chevron

6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

Submitted: 08/23/2011 09:05

Reported: 09/30/2011 09:55

EDM62

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS Semivolatiles SW-846 8270C SIM			mg/kg	mg/kg	
10722	Acenaphthene	83-32-9	0.91	0.015	20
10722	Acenaphthylene	208-96-8	0.42	0.0073	20
10722	Anthracene	120-12-7	0.64	0.0073	20
10722	Benzo(a)anthracene	56-55-3	0.29	0.015	20
10722	Benzo(a)pyrene	50-32-8	0.27	0.015	20
10722	Benzo(b)fluoranthene	205-99-2	0.22	0.015	20
10722	Benzo(g,h,i)perylene	191-24-2	0.056	0.015	20
10722	Benzo(k)fluoranthene	207-08-9	0.24	0.015	20
10722	Chrysene	218-01-9	0.84	0.0073	20
10722	Dibenz(a,h)anthracene	53-70-3	0.026	0.015	20
10722	Fluoranthene	206-44-0	0.85	0.015	20
10722	Fluorene	86-73-7	3.6	0.015	20
10722	Indeno(1,2,3-cd)pyrene	193-39-5	0.048	0.015	20
10722	1-Methylnaphthalene	90-12-0	16	0.29	400
10722	2-Methylnaphthalene	91-57-6	20	0.29	400
10722	Naphthalene	91-20-3	0.21	0.015	20
10722	Phenanthrene	85-01-8	12	0.29	400
10722	Pyrene	129-00-0	1.2	0.015	20
GC Volatiles ECY 97-602 NWTPH-Gx			mg/kg	mg/kg	
02006	NWTPH-Gx soil C7-C12	n.a.	720	42	939.54
GC Volatiles SW-846 8021B			mg/kg	mg/kg	
08179	Benzene	71-43-2	N.D.	0.55	939.54
GC Petroleum ECY 97-602 NWTPH-Dx			mg/kg	mg/kg	
Hydrocarbons modified					
02214	DRO C12-C24 w/Si Gel	n.a.	16,000	330	100
02214	HRO C24-C40 w/Si Gel	n.a.	4,900	1,100	100
Due to dilution of the sample extract, capric acid recovery could not be determined.					
Wet Chemistry SM20 2540 G			%	%	
00111	Moisture	n.a.	9.8	0.50	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

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.

Sample Description: B6-7-7.5 Grab Soil Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # SW 6384582
LLI Group # 1263017
Account # 11964

Project Name: Edmonds Terminal

Collected: 08/22/2011 14:08 by DR

Chevron

6001 Bollinger Canyon Rd L4310
 San Ramon CA 94583

Submitted: 08/23/2011 09:05

Reported: 09/30/2011 09:55

EDM62

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10722	PAH SIM 8270 Soil Microwave	SW-846 8270C SIM	1	11258SLD026	09/17/2011 00:05	Gregory J Drahovsky	20
10722	PAH SIM 8270 Soil Microwave	SW-846 8270C SIM	1	11258SLD026	09/18/2011 22:22	Gregory J Drahovsky	400
10810	BNA Soil Microwave SIM PAH	SW-846 3546	1	11258SLD026	09/03/2011 07:40	Katheryne V Sponheimer	1
02006	NWTPH-Gx soil C7-C12	ECY 97-602 NWTPH-Gx	1	11242A16B	08/31/2011 13:13	Carrie E Miller	939.54
08179	Method 8021 Soil Master	SW-846 8021B	1	11242A16B	08/31/2011 13:13	Carrie E Miller	939.54
06647	GC-5g Field Preserved MeOH	SW-846 5035A	1	201123525332	08/22/2011 14:08	Client Supplied	n.a.
06647	GC-5g Field Preserved MeOH	SW-846 5035A	2	201123525332	08/22/2011 14:08	Client Supplied	n.a.
02214	NWTPH-Dx soil w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	112440027A	09/08/2011 14:39	Glorines Suarez-Rivera	100
07024	DRO Alternate Soil Extraction	SW-846 3550B	1	112440027A	09/02/2011 07:15	Katheryne V Sponheimer	1
00111	Moisture	SM20 2540 G	1	11241820005A	08/29/2011 22:01	Scott W Freisher	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: B6-9-9.5 Grab Soil Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # SW 6384583
LLI Group # 1263017
Account # 11964

Project Name: Edmonds Terminal

Collected: 08/22/2011 14:15 by DR

Chevron

6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

Submitted: 08/23/2011 09:05

Reported: 09/30/2011 09:55

EDM63

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS Semivolatiles SW-846 8270C SIM			mg/kg	mg/kg	
10722	Acenaphthene	83-32-9	16	0.32	20
10722	Acenaphthylene	208-96-8	5.9	0.16	20
10722	Anthracene	120-12-7	14	0.16	20
10722	Benzo(a)anthracene	56-55-3	4.1	0.32	20
10722	Benzo(a)pyrene	50-32-8	2.2	0.32	20
10722	Benzo(b)fluoranthene	205-99-2	2.4	0.32	20
10722	Benzo(g,h,i)perylene	191-24-2	0.57	0.32	20
10722	Benzo(k)fluoranthene	207-08-9	1.7	0.32	20
10722	Chrysene	218-01-9	11	0.16	20
10722	Dibenz(a,h)anthracene	53-70-3	N.D.	0.32	20
10722	Fluoranthene	206-44-0	12	0.32	20
10722	Fluorene	86-73-7	58	0.32	20
10722	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.32	20
10722	1-Methylnaphthalene	90-12-0	330	6.3	400
10722	2-Methylnaphthalene	91-57-6	450	6.3	400
10722	Naphthalene	91-20-3	53	0.32	20
10722	Phenanthrene	85-01-8	150	0.32	20
10722	Pyrene	129-00-0	18	0.32	20

Reporting limits were raised due to interference from the sample matrix.

GC Volatiles ECY 97-602 NWTPH-Gx			mg/kg	mg/kg	
02006	NWTPH-Gx soil C7-C12	n.a.	2,400	130	1403.65

GC Volatiles SW-846 8021B			mg/kg	mg/kg	
08179	Benzene	71-43-2	0.97	0.27	1403.65

GC Petroleum ECY 97-602 NWTPH-Dx			mg/kg	mg/kg	
Hydrocarbons modified					
02214	DRO C12-C24 w/Si Gel	n.a.	170,000	3,600	50
02214	HRO C24-C40 w/Si Gel	n.a.	48,000	12,000	50

Due to dilution of the sample extract, capric acid recovery could not be determined.

Wet Chemistry SM20 2540 G			%	%	
00111	Moisture	n.a.	58.0	0.50	1

"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.

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.

Sample Description: B6-9-9.5 Grab Soil Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # SW 6384583
LLI Group # 1263017
Account # 11964

Project Name: Edmonds Terminal

Collected: 08/22/2011 14:15 by DR

Chevron

6001 Bollinger Canyon Rd L4310
 San Ramon CA 94583

Submitted: 08/23/2011 09:05

Reported: 09/30/2011 09:55

EDM63

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10722	PAH SIM 8270 Soil Microwave	SW-846 8270C SIM	1	11258SLD026	09/17/2011 00:39	Gregory J Drahovsky	20
10722	PAH SIM 8270 Soil Microwave	SW-846 8270C SIM	1	11258SLD026	09/18/2011 22:56	Gregory J Drahovsky	400
10810	BNA Soil Microwave SIM PAH	SW-846 3546	1	11258SLD026	09/03/2011 07:40	Katheryne V Sponheimer	1
02006	NWTPH-Gx soil C7-C12	ECY 97-602 NWTPH-Gx	1	11242A16A	08/31/2011 09:11	Marie D John	1403.65
08179	Method 8021 Soil Master	SW-846 8021B	1	11242A16A	08/31/2011 09:11	Marie D John	1403.65
06647	GC-5g Field Preserved MeOH	SW-846 5035A	1	201123525332	08/22/2011 14:15	Client Supplied	n.a.
06647	GC-5g Field Preserved MeOH	SW-846 5035A	2	201123525332	08/22/2011 14:15	Client Supplied	n.a.
02214	NWTPH-Dx soil w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	112440027A	09/08/2011 15:22	Glorines Suarez-Rivera	50
07024	DRO Alternate Soil Extraction	SW-846 3550B	1	112440027A	09/02/2011 07:15	Katheryne V Sponheimer	1
00111	Moisture	SM20 2540 G	1	11241820005A	08/29/2011 22:01	Scott W Freisher	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: B6-11-11.5 Grab Soil Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # SW 6384584
LLI Group # 1263017
Account # 11964

Project Name: Edmonds Terminal

Collected: 08/22/2011 14:22 by DR

Chevron

6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

Submitted: 08/23/2011 09:05

Reported: 09/30/2011 09:55

EDM64

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS Semivolatiles SW-846 8270C SIM			mg/kg	mg/kg	
10722	Acenaphthene	83-32-9	0.045	0.016	20
10722	Acenaphthylene	208-96-8	0.016	0.0079	20
10722	Anthracene	120-12-7	0.034	0.0079	20
10722	Benzo(a)anthracene	56-55-3	N.D.	0.016	20
10722	Benzo(a)pyrene	50-32-8	N.D.	0.016	20
10722	Benzo(b)fluoranthene	205-99-2	N.D.	0.016	20
10722	Benzo(g,h,i)perylene	191-24-2	N.D.	0.016	20
10722	Benzo(k)fluoranthene	207-08-9	N.D.	0.016	20
10722	Chrysene	218-01-9	0.023	0.0079	20
10722	Dibenz(a,h)anthracene	53-70-3	N.D.	0.016	20
10722	Fluoranthene	206-44-0	0.024	0.016	20
10722	Fluorene	86-73-7	0.17	0.016	20
10722	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.016	20
10722	1-Methylnaphthalene	90-12-0	0.54	0.016	20
10722	2-Methylnaphthalene	91-57-6	0.54	0.016	20
10722	Naphthalene	91-20-3	0.046	0.016	20
10722	Phenanthrene	85-01-8	0.30	0.016	20
10722	Pyrene	129-00-0	0.038	0.016	20
GC Volatiles ECY 97-602 NWT PH-Gx			mg/kg	mg/kg	
02006	NWT PH-Gx soil C7-C12	n.a.	30	12	241.8
Reporting limits were raised due to sample foaming.					
GC Volatiles SW-846 8021B			mg/kg	mg/kg	
08179	Benzene	71-43-2	N.D.	0.023	241.8
Reporting limits were raised due to sample foaming.					
GC Petroleum ECY 97-602 NWT PH-Dx			mg/kg	mg/kg	
Hydrocarbons modified					
02214	DRO C12-C24 w/Si Gel	n.a.	230	3.6	1
02214	HRO C24-C40 w/Si Gel	n.a.	57	12	1
The caprice acid reverse surrogate recovery is 0%.					
Wet Chemistry SM20 2540 G			%	%	
00111	Moisture	n.a.	16.6	0.50	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

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.

Sample Description: B6-11-11.5 Grab Soil Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # SW 6384584
LLI Group # 1263017
Account # 11964

Project Name: Edmonds Terminal

Collected: 08/22/2011 14:22 by DR

Chevron

6001 Bollinger Canyon Rd L4310
 San Ramon CA 94583

Submitted: 08/23/2011 09:05

Reported: 09/30/2011 09:55

EDM64

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10722	PAH SIM 8270 Soil Microwave	SW-846 8270C SIM	1	11258SLD026	09/17/2011 01:12	Gregory J Drahovsky	20
10810	BNA Soil Microwave SIM PAH	SW-846 3546	1	11258SLD026	09/03/2011 07:40	Katheryne V Sponheimer	1
02006	NWTPH-Gx soil C7-C12	ECY 97-602 NWTPH-Gx	1	11242A16A	08/31/2011 09:49	Marie D John	241.8
08179	Method 8021 Soil Master	SW-846 8021B	1	11242A16A	08/31/2011 09:49	Marie D John	241.8
06647	GC-5g Field Preserved MeOH	SW-846 5035A	1	201123525332	08/22/2011 14:22	Client Supplied	n.a.
06647	GC-5g Field Preserved MeOH	SW-846 5035A	2	201123525332	08/22/2011 14:22	Client Supplied	n.a.
02214	NWTPH-Dx soil w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	112440027A	09/08/2011 15:00	Glorines Suarez-Rivera	1
07024	DRO Alternate Soil Extraction	SW-846 3550B	1	112440027A	09/02/2011 07:15	Katheryne V Sponheimer	1
00111	Moisture	SM20 2540 G	1	11241820005A	08/29/2011 22:01	Scott W Freisher	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: B6-13-13.5 Grab Soil Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # SW 6384585
LLI Group # 1263017
Account # 11964

Project Name: Edmonds Terminal

Collected: 08/22/2011 14:20 by DR

Chevron

6001 Bollinger Canyon Rd L4310
 San Ramon CA 94583

Submitted: 08/23/2011 09:05

Reported: 09/30/2011 09:55

EDM65

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC Volatiles					
02006	NWTPH-Gx soil C7-C12	n.a.	N.D.	1.4	29.48
GC Volatiles					
08179	Benzene	71-43-2	N.D.	0.0028	29.48
GC Petroleum Hydrocarbons					
ECY 97-602 NWTPH-Dx modified					
02214	DRO C12-C24 w/Si Gel	n.a.	N.D.	3.5	1
02214	HRO C24-C40 w/Si Gel	n.a.	N.D.	12	1
Wet Chemistry					
SM20 2540 G					
00111	Moisture	n.a.	15.0	0.50	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

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
10810	BNA Soil Microwave SIM PAH	SW-846 3546	1	11245SLD026	09/03/2011 07:40	Katheryne V Sponheimer	1
02006	NWTPH-Gx soil C7-C12	ECY 97-602 NWTPH-Gx	1	11242A16A	08/30/2011 16:40	Marie D John	29.48
08179	Method 8021 Soil Master	SW-846 8021B	1	11242A16A	08/30/2011 16:40	Marie D John	29.48
06647	GC-5g Field Preserved MeOH	SW-846 5035A	1	201123525332	08/22/2011 14:20	Client Supplied	n.a.
06647	GC-5g Field Preserved MeOH	SW-846 5035A	2	201123525332	08/22/2011 14:20	Client Supplied	n.a.
02214	NWTPH-Dx soil w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	112440027A	09/03/2011 23:35	Tracy A Cole	1
07024	DRO Alternate Soil Extraction	SW-846 3550B	1	112440027A	09/02/2011 07:15	Katheryne V Sponheimer	1
00111	Moisture	SM20 2540 G	1	11241820005A	08/29/2011 22:01	Scott W Freisher	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 2

Sample Description: B7-4.5-5 Grab Soil Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # SW 6384586
LLI Group # 1263017
Account # 11964

Project Name: Edmonds Terminal

Collected: 08/22/2011 14:43 by DR

Chevron

6001 Bollinger Canyon Rd L4310
 San Ramon CA 94583

Submitted: 08/23/2011 09:05

Reported: 09/30/2011 09:55

EDM71

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS Semivolatiles SW-846 8270C SIM			mg/kg	mg/kg	
10722	Acenaphthene	83-32-9	0.024	0.015	20
10722	Acenaphthylene	208-96-8	0.011	0.0074	20
10722	Anthracene	120-12-7	0.16	0.0074	20
10722	Benzo(a)anthracene	56-55-3	0.045	0.015	20
10722	Benzo(a)pyrene	50-32-8	0.053	0.015	20
10722	Benzo(b)fluoranthene	205-99-2	0.047	0.015	20
10722	Benzo(g,h,i)perylene	191-24-2	N.D.	0.015	20
10722	Benzo(k)fluoranthene	207-08-9	0.053	0.015	20
10722	Chrysene	218-01-9	0.16	0.0074	20
10722	Dibenz(a,h)anthracene	53-70-3	N.D.	0.015	20
10722	Fluoranthene	206-44-0	0.13	0.015	20
10722	Fluorene	86-73-7	0.10	0.015	20
10722	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.015	20
10722	1-Methylnaphthalene	90-12-0	0.065	0.015	20
10722	2-Methylnaphthalene	91-57-6	0.095	0.015	20
10722	Naphthalene	91-20-3	0.024	0.015	20
10722	Phenanthrene	85-01-8	0.21	0.015	20
10722	Pyrene	129-00-0	0.22	0.015	20
GC Volatiles ECY 97-602 NWT PH-Gx			mg/kg	mg/kg	
02006	NWT PH-Gx soil C7-C12	n.a.	230	41	934.29
Reporting limits were raised due to sample foaming.					
GC Volatiles SW-846 8021B			mg/kg	mg/kg	
08179	Benzene	71-43-2	N.D.	0.083	934.29
Reporting limits were raised due to sample foaming.					
GC Petroleum ECY 97-602 NWT PH-Dx			mg/kg	mg/kg	
Hydrocarbons modified					
02214	DRO C12-C24 w/Si Gel	n.a.	260	17	5
02214	HRO C24-C40 w/Si Gel	n.a.	210	55	5
Wet Chemistry SM20 2540 G			%	%	
00111	Moisture	n.a.	9.8	0.50	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

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.



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: B7-4.5-5 Grab Soil Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # SW 6384586
LLI Group # 1263017
Account # 11964

Project Name: Edmonds Terminal

Collected: 08/22/2011 14:43 by DR

Chevron

6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

Submitted: 08/23/2011 09:05

Reported: 09/30/2011 09:55

EDM71

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10722	PAH SIM 8270 Soil Microwave	SW-846 8270C SIM	1	11258SLD026	09/17/2011 01:45	Gregory J Drahovsky	20
10810	BNA Soil Microwave SIM PAH	SW-846 3546	1	11258SLD026	09/03/2011 07:40	Katheryne V Sponheimer	1
02006	NWTPH-Gx soil C7-C12	ECY 97-602 NWTPH-Gx	1	11242A16B	08/31/2011 13:51	Carrie E Miller	934.29
08179	Method 8021 Soil Master	SW-846 8021B	1	11242A16B	08/31/2011 13:51	Carrie E Miller	934.29
06647	GC-5g Field Preserved MeOH	SW-846 5035A	1	201123525332	08/22/2011 14:43	Client Supplied	n.a.
06647	GC-5g Field Preserved MeOH	SW-846 5035A	2	201123525332	08/22/2011 14:43	Client Supplied	n.a.
02214	NWTPH-Dx soil w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	112450017A	09/14/2011 03:22	Dustin A Underkoffler	5
07024	DRO Alternate Soil Extraction	SW-846 3550B	1	112450017A	09/03/2011 00:05	Olivia Arosemena	1
00111	Moisture	SM20 2540 G	1	11241820005A	08/29/2011 22:01	Scott W Freisher	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: B7-8-8.5 Grab Soil Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # SW 6384587
LLI Group # 1263017
Account # 11964

Project Name: Edmonds Terminal

Collected: 08/22/2011 14:48 by DR

Chevron

6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

Submitted: 08/23/2011 09:05

Reported: 09/30/2011 09:55

EDM72

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS Semivolatiles SW-846 8270C SIM			mg/kg	mg/kg	
10722	Acenaphthene	83-32-9	5.6	0.40	20
10722	Acenaphthylene	208-96-8	2.1	0.20	20
10722	Anthracene	120-12-7	4.0	0.20	20
10722	Benzo(a)anthracene	56-55-3	2.2	0.40	20
10722	Benzo(a)pyrene	50-32-8	2.1	0.40	20
10722	Benzo(b)fluoranthene	205-99-2	2.1	0.40	20
10722	Benzo(g,h,i)perylene	191-24-2	0.54	0.40	20
10722	Benzo(k)fluoranthene	207-08-9	1.8	0.40	20
10722	Chrysene	218-01-9	8.7	0.20	20
10722	Dibenz(a,h)anthracene	53-70-3	N.D.	0.40	20
10722	Fluoranthene	206-44-0	8.9	0.40	20
10722	Fluorene	86-73-7	30	0.40	20
10722	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.40	20
10722	1-Methylnaphthalene	90-12-0	71	0.40	20
10722	2-Methylnaphthalene	91-57-6	100	0.40	20
10722	Naphthalene	91-20-3	26	0.40	20
10722	Phenanthrene	85-01-8	98	0.40	20
10722	Pyrene	129-00-0	10	0.40	20

Reporting limits were raised due to interference from the sample matrix.

GC Volatiles ECY 97-602 NWTPH-Gx			mg/kg	mg/kg	
02006	NWTPH-Gx soil C7-C12	n.a.	1,400	770	15935.67

Reporting limits were raised due to sample foaming.

GC Volatiles SW-846 8021B			mg/kg	mg/kg	
08179	Benzene	71-43-2	N.D.	1.5	15935.67

Reporting limits were raised due to sample foaming.

GC Petroleum ECY 97-602 NWTPH-Dx			mg/kg	mg/kg	
Hydrocarbons modified					
02214	DRO C12-C24 w/Si Gel	n.a.	72,000	3,600	500
02214	HRO C24-C40 w/Si Gel	n.a.	38,000	12,000	500

Wet Chemistry SM20 2540 G			%	%	
00111	Moisture	n.a.	16.9	0.50	1

"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.

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.



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: B7-8-8.5 Grab Soil Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # SW 6384587
LLI Group # 1263017
Account # 11964

Project Name: Edmonds Terminal

Collected: 08/22/2011 14:48 by DR

Chevron

6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

Submitted: 08/23/2011 09:05

Reported: 09/30/2011 09:55

EDM72

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10722	PAH SIM 8270 Soil Microwave	SW-846 8270C SIM	1	11258SLD026	09/17/2011 02:19	Gregory J Drahovsky	20
10810	BNA Soil Microwave SIM PAH	SW-846 3546	1	11258SLD026	09/03/2011 07:40	Katheryne V Sponheimer	1
02006	NWTPH-Gx soil C7-C12	ECY 97-602 NWTPH-Gx	1	11242A16B	08/31/2011 14:45	Carrie E Miller	15935.67
08179	Method 8021 Soil Master	SW-846 8021B	1	11242A16B	08/31/2011 14:45	Carrie E Miller	15935.67
06647	GC-5g Field Preserved MeOH	SW-846 5035A	1	201123525332	08/22/2011 14:48	Client Supplied	n.a.
06647	GC-5g Field Preserved MeOH	SW-846 5035A	2	201123525332	08/22/2011 14:48	Client Supplied	n.a.
02214	NWTPH-Dx soil w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	112450017A	09/14/2011 04:48	Dustin A Underkoffler	500
07024	DRO Alternate Soil Extraction	SW-846 3550B	1	112450017A	09/03/2011 00:05	Olivia Arosemena	1
00111	Moisture	SM20 2540 G	1	11241820005A	08/29/2011 22:01	Scott W Freisher	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: B7-9.5-10 Grab Soil Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # SW 6384588
LLI Group # 1263017
Account # 11964

Project Name: Edmonds Terminal

Collected: 08/22/2011 14:56 by DR

Chevron

6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

Submitted: 08/23/2011 09:05

Reported: 09/30/2011 09:55

EDM73

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS Semivolatiles SW-846 8270C SIM			mg/kg	mg/kg	
10722	Acenaphthene	83-32-9	N.D.	0.018	20
10722	Acenaphthylene	208-96-8	0.10	0.0089	20
10722	Anthracene	120-12-7	0.14	0.0089	20
10722	Benzo(a)anthracene	56-55-3	0.057	0.018	20
10722	Benzo(a)pyrene	50-32-8	0.023	0.018	20
10722	Benzo(b)fluoranthene	205-99-2	0.034	0.018	20
10722	Benzo(g,h,i)perylene	191-24-2	0.019	0.018	20
10722	Benzo(k)fluoranthene	207-08-9	N.D.	0.018	20
10722	Chrysene	218-01-9	0.17	0.0089	20
10722	Dibenz(a,h)anthracene	53-70-3	N.D.	0.018	20
10722	Fluoranthene	206-44-0	N.D.	0.018	20
10722	Fluorene	86-73-7	0.50	0.018	20
10722	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.018	20
10722	1-Methylnaphthalene	90-12-0	1.1	0.018	20
10722	2-Methylnaphthalene	91-57-6	1.1	0.018	20
10722	Naphthalene	91-20-3	N.D.	0.018	20
10722	Phenanthrene	85-01-8	1.1	0.018	20
10722	Pyrene	129-00-0	0.22	0.018	20

Reporting limits were raised due to interference from the sample matrix.

GC Volatiles ECY 97-602 NWTPH-Gx			mg/kg	mg/kg	
02006	NWTPH-Gx soil C7-C12	n.a.	47	15	275.66

Reporting limits were raised due to sample foaming.

GC Volatiles SW-846 8021B			mg/kg	mg/kg	
08179	Benzene	71-43-2	N.D.	0.030	275.66

Reporting limits were raised due to sample foaming.

GC Petroleum ECY 97-602 NWTPH-Dx			mg/kg	mg/kg	
Hydrocarbons modified					
02214	DRO C12-C24 w/Si Gel	n.a.	4,200	81	20
02214	HRO C24-C40 w/Si Gel	n.a.	1,700	270	20

Wet Chemistry SM20 2540 G			%	%	
00111	Moisture	n.a.	25.7	0.50	1

"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.

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.

Sample Description: B7-9.5-10 Grab Soil Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # SW 6384588
LLI Group # 1263017
Account # 11964

Project Name: Edmonds Terminal

Collected: 08/22/2011 14:56 by DR

Chevron

6001 Bollinger Canyon Rd L4310
 San Ramon CA 94583

Submitted: 08/23/2011 09:05

Reported: 09/30/2011 09:55

EDM73

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10722	PAH SIM 8270 Soil Microwave	SW-846 8270C SIM	1	11258SLD026	09/28/2011 21:13	Gregory J Drahovsky	20
10810	BNA Soil Microwave SIM PAH	SW-846 3546	1	11258SLD026	09/03/2011 07:40	Katheryne V Sponheimer	1
02006	NWTPH-Gx soil C7-C12	ECY 97-602 NWTPH-Gx	1	11242A16B	08/31/2011 15:22	Carrie E Miller	275.66
08179	Method 8021 Soil Master	SW-846 8021B	1	11242A16B	08/31/2011 15:22	Carrie E Miller	275.66
06647	GC-5g Field Preserved MeOH	SW-846 5035A	1	201123525332	08/22/2011 14:56	Client Supplied	n.a.
06647	GC-5g Field Preserved MeOH	SW-846 5035A	2	201123525332	08/22/2011 14:56	Client Supplied	n.a.
02214	NWTPH-Dx soil w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	112450017A	09/16/2011 17:09	Dustin A Underkoffler	20
07024	DRO Alternate Soil Extraction	SW-846 3550B	1	112450017A	09/03/2011 00:05	Olivia Arosemena	1
00111	Moisture	SM20 2540 G	1	11241820005A	08/29/2011 22:01	Scott W Freisher	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: B7-14-14.5 Grab Soil Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # SW 6384589
LLI Group # 1263017
Account # 11964

Project Name: Edmonds Terminal

Collected: 08/22/2011 14:59 by DR

Chevron

6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

Submitted: 08/23/2011 09:05

Reported: 09/30/2011 09:55

EDM74

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC Volatiles					
02006	NWTPH-Gx soil C7-C12	n.a.	N.D.	1.0	22.07
GC Volatiles					
08179	Benzene	71-43-2	N.D.	0.0021	22.07
GC Petroleum Hydrocarbons					
ECY 97-602 NWTPH-Dx modified					
02214	DRO C12-C24 w/Si Gel	n.a.	N.D.	3.6	1
02214	HRO C24-C40 w/Si Gel	n.a.	N.D.	12	1
Wet Chemistry					
SM20 2540 G					
00111	Moisture	n.a.	15.6	0.50	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

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
10810	BNA Soil Microwave SIM PAH	SW-846 3546	1	11245SLD026	09/03/2011 07:40	Katheryne V Sponheimer	1
02006	NWTPH-Gx soil C7-C12	ECY 97-602 NWTPH-Gx	1	11242A16A	08/30/2011 17:18	Marie D John	22.07
08179	Method 8021 Soil Master	SW-846 8021B	1	11242A16A	08/30/2011 17:18	Marie D John	22.07
06647	GC-5g Field Preserved MeOH	SW-846 5035A	1	201123525332	08/22/2011 14:59	Client Supplied	n.a.
06647	GC-5g Field Preserved MeOH	SW-846 5035A	2	201123525332	08/22/2011 14:59	Client Supplied	n.a.
02214	NWTPH-Dx soil w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	112450017A	09/14/2011 03:01	Dustin A Underkoffler	1
07024	DRO Alternate Soil Extraction	SW-846 3550B	1	112450017A	09/03/2011 00:05	Olivia Arosemena	1
00111	Moisture	SM20 2540 G	1	11241820005A	08/29/2011 22:01	Scott W Freisher	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 Methanol Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # G5 6384590
LLI Group # 1263017
Account # 11964

Project Name: Edmonds Terminal

Collected: 08/22/2011

Chevron

Submitted: 08/23/2011 09:05

6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

Reported: 09/30/2011 09:55

EDMOT

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC Volatiles					
02006	NWTPH-Gx soil C7-C12	ECY 97-602 n.a.	NWTPH-Gx N.D.	mg/kg 1.0	25
GC Volatiles					
08179	Benzene	SW-846 8021B 71-43-2	mg/kg N.D.	mg/kg 0.0020	25

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
02006	NWTPH-Gx soil C7-C12	ECY 97-602 NWTPH-Gx	1	11238A31A	08/26/2011 18:57	Marie D John	25
08179	Method 8021 Soil Master	SW-846 8021B	1	11238A31A	08/26/2011 18:57	Marie D John	25
06647	GC-5g Field Preserved MeOH	SW-846 5035A	1	201123525332	08/22/2011 00:00	Client Supplied	n.a.

Quality Control Summary

 Client Name: Chevron
 Reported: 09/30/11 at 09:55 AM

Group Number: 1263017

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: 11258SLD026	Sample number(s): 6384581-6384584, 6384586-6384588							
Acenaphthene	N.D.	0.00067	mg/kg	92	91	73-104	1	30
Acenaphthylene	N.D.	0.00033	mg/kg	90	88	67-100	2	30
Anthracene	N.D.	0.00033	mg/kg	95	92	69-107	3	30
Benzo(a)anthracene	N.D.	0.00067	mg/kg	89	87	74-112	2	30
Benzo(a)pyrene	N.D.	0.00067	mg/kg	92	90	70-109	3	30
Benzo(b)fluoranthene	N.D.	0.00067	mg/kg	89	86	60-126	3	30
Benzo(g,h,i)perylene	N.D.	0.00067	mg/kg	105	104	49-135	1	30
Benzo(k)fluoranthene	N.D.	0.00067	mg/kg	97	96	65-130	1	30
Chrysene	N.D.	0.00033	mg/kg	92	89	79-111	4	30
Dibenz(a,h)anthracene	N.D.	0.00067	mg/kg	104	104	49-135	1	30
Fluoranthene	N.D.	0.00067	mg/kg	95	96	78-114	1	30
Fluorene	N.D.	0.00067	mg/kg	94	93	75-110	1	30
Indeno(1,2,3-cd)pyrene	N.D.	0.00067	mg/kg	102	101	53-128	2	30
1-Methylnaphthalene	N.D.	0.00067	mg/kg	95	92	72-114	3	30
2-Methylnaphthalene	N.D.	0.00067	mg/kg	92	89	62-115	3	30
Naphthalene	N.D.	0.00067	mg/kg	91	87	67-105	4	30
Phenanthrene	N.D.	0.00067	mg/kg	93	91	76-109	3	30
Pyrene	N.D.	0.00067	mg/kg	87	86	71-109	2	30
Batch number: 11258SLG026	Sample number(s): 6384560-6384561, 6384564, 6384566, 6384569, 6384572-6384575, 6384577-6384579							
Acenaphthene	N.D.	0.00067	mg/kg	90	88	73-104	2	30
Acenaphthylene	N.D.	0.00033	mg/kg	92	91	67-100	0	30
Anthracene	N.D.	0.00033	mg/kg	98	96	69-107	3	30
Benzo(a)anthracene	N.D.	0.00067	mg/kg	92	91	74-112	1	30
Benzo(a)pyrene	N.D.	0.00067	mg/kg	87	88	70-109	1	30
Benzo(b)fluoranthene	N.D.	0.00067	mg/kg	93	92	60-126	2	30
Benzo(g,h,i)perylene	N.D.	0.00067	mg/kg	103	103	49-135	0	30
Benzo(k)fluoranthene	N.D.	0.00067	mg/kg	88	88	65-130	0	30
Chrysene	N.D.	0.00033	mg/kg	89	89	79-111	0	30
Dibenz(a,h)anthracene	N.D.	0.00067	mg/kg	103	103	49-135	0	30
Fluoranthene	N.D.	0.00067	mg/kg	98	97	78-114	1	30
Fluorene	N.D.	0.00067	mg/kg	94	90	75-110	3	30
Indeno(1,2,3-cd)pyrene	N.D.	0.00067	mg/kg	102	102	53-128	0	30
1-Methylnaphthalene	N.D.	0.00067	mg/kg	94	93	72-114	0	30
2-Methylnaphthalene	N.D.	0.00067	mg/kg	92	91	62-115	0	30
Naphthalene	N.D.	0.00067	mg/kg	92	92	67-105	1	30
Phenanthrene	N.D.	0.00067	mg/kg	94	91	76-109	3	30
Pyrene	N.D.	0.00067	mg/kg	89	88	71-109	1	30
Batch number: 11238A31A	Sample number(s): 6384590							
Benzene	N.D.	0.0020	mg/kg	95	94	76-118	2	30
NWTPH-Gx soil C7-C12	N.D.	1.0	mg/kg	94	93	67-119	1	30
Batch number: 11241A31A	Sample number(s): 6384560-6384564, 6384566-6384577							

*- 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

Group Number: 1263017

Reported: 09/30/11 at 09:55 AM

<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>
Benzene	N.D.	0.0020	mg/kg	88	88	76-118	0	30
NWTPH-Gx soil C7-C12	N.D.	1.0	mg/kg	96	90	67-119	6	30
Batch number: 11242A16A	Sample number(s): 6384578-6384581, 6384583-6384585, 6384589							
Benzene	N.D.	0.0020	mg/kg	101	91	76-118	11	30
NWTPH-Gx soil C7-C12	N.D.	1.0	mg/kg	94	95	67-119	2	30
Batch number: 11242A16B	Sample number(s): 6384582, 6384586-6384588							
Benzene	N.D.	0.0020	mg/kg	101	91	76-118	11	30
NWTPH-Gx soil C7-C12	N.D.	1.0	mg/kg	94	95	67-119	2	30
Batch number: 112430025A	Sample number(s): 6384560-6384564, 6384566-6384568							
DRO C12-C24 w/Si Gel	N.D.	3.0	mg/kg	122*		60-120		
HRO C24-C40 w/Si Gel	N.D.	10.	mg/kg					
Batch number: 112430031A	Sample number(s): 6384569-6384575							
DRO C12-C24 w/Si Gel	N.D.	3.0	mg/kg	116		60-120		
HRO C24-C40 w/Si Gel	N.D.	10.	mg/kg					
Batch number: 112440027A	Sample number(s): 6384576-6384585							
DRO C12-C24 w/Si Gel	N.D.	3.0	mg/kg	120		60-120		
HRO C24-C40 w/Si Gel	N.D.	10.	mg/kg					
Batch number: 112450017A	Sample number(s): 6384586-6384589							
DRO C12-C24 w/Si Gel	N.D.	3.0	mg/kg	101		60-120		
HRO C24-C40 w/Si Gel	N.D.	10.	mg/kg					
Batch number: 11241820004A	Sample number(s): 6384560-6384564, 6384566-6384570							
Moisture				100		99-101		
Batch number: 11241820004B	Sample number(s): 6384571-6384580							
Moisture				100		99-101		
Batch number: 11241820005A	Sample number(s): 6384581-6384589							
Moisture				100		99-101		

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: 112430025A	Sample number(s): 6384560-6384564, 6384566-6384568								
DRO C12-C24 w/Si Gel						N.D.	N.D.	0 (1)	20
HRO C24-C40 w/Si Gel						13	11	15 (1)	20
Batch number: 112430031A	Sample number(s): 6384569-6384575								
DRO C12-C24 w/Si Gel						BKG: 6384574	89	58	42*
HRO C24-C40 w/Si Gel							88	94	7 (1)
Batch number: 112440027A	Sample number(s): 6384576-6384585								
DRO C12-C24 w/Si Gel						BKG: 6384576	N.D.	N.D.	0 (1)
HRO C24-C40 w/Si Gel							N.D.	N.D.	0 (1)

*- 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: 09/30/11 at 09:55 AM

Group Number: 1263017

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: 112450017A DRO C12-C24 w/Si Gel HRO C24-C40 w/Si Gel	Sample number(s): 6384586-6384589				BKG: 6384586		230	1,700	151*	20
						190	830	127* (1)	20	
Batch number: 11241820004A Moisture	Sample number(s): 6384560-6384564, 6384566-6384570				BKG: 6384563		5.1	5.1	1	15
Batch number: 11241820004B Moisture	Sample number(s): 6384571-6384580				BKG: 6384577		6.0	6.1	1	15
Batch number: 11241820005A Moisture	Sample number(s): 6384581-6384589				BKG: 6384585		15.0	15.8	5	15

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: PAH SIM 8270 Soil Microwave
 Batch number: 11258SLD026

	Nitrobenzene-d5	2-Fluorobiphenyl	Terphenyl-d14
6384581	235*	86	92
6384582	1104*	86	188*
6384583	4553*	632*	731*
6384584	93	94	96
6384586	146	82	101
6384587	2453*	452*	1129*
6384588	222*	94	119
Blank	100	109	118
LCS	93	101	106
LCSD	88	99	102
Limits:	53-152	66-118	63-129

 Analysis Name: PAH SIM 8270 Soil Microwave
 Batch number: 11258SLG026

	Nitrobenzene-d5	2-Fluorobiphenyl	Terphenyl-d14
6384560	108	105	106
6384561	117	85	92
6384564	120	113	114
6384566	126	98	111
6384569	119	79	95
6384572	110	95	119
6384573	118	95	112
6384574	124	80	113
6384575	121	94	117
6384577	120	98	125

*- 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: 09/30/11 at 09:55 AM

Group Number: 1263017

Surrogate Quality Control

6384578	118	99	102
6384579	122	98	100
Blank	110	100	111
LCS	109	98	108
LCSD	109	97	107

Limits: 53-152 66-118 63-129

Analysis Name: Method 8021 Soil Master
Batch number: 11238A31A
Trifluorotoluene-F Trifluorotoluene-P

6384590	110	95
Blank	89	85
LCS	104	91
LCSD	102	91

Limits: 61-122 73-117

Analysis Name: Method 8021 Soil Master
Batch number: 11241A31A
Trifluorotoluene-F Trifluorotoluene-P

6384560	92	88
6384561	89	91
6384562	74	74
6384563	97	98
6384564	96	95
6384566	97	98
6384567	94	90
6384568	87	86
6384569	96	84
6384570	80	76
6384571	87	90
6384572	125*	120*
6384573	91	86
6384574	82	77
6384575	103	97
6384576	116	105
6384577	101	98
Blank	105	98
LCS	103	93
LCSD	99	93

Limits: 61-122 73-117

Analysis Name: Method 8021 Soil Master
Batch number: 11242A16A
Trifluorotoluene-F Trifluorotoluene-P

6384578	93	108
6384579	82	95
6384580	75	90
6384581	81	101
6384583	77	89
6384584	78	91
6384585	76	93

*- 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: 09/30/11 at 09:55 AM

Group Number: 1263017

Surrogate Quality Control

6384589	77	89
Blank	87	101
LCS	85	96
LCSD	84	94

Limits: 61-122 73-117

Analysis Name: Method 8021 Soil Master
Batch number: 11242A16B
Trifluorotoluene-F Trifluorotoluene-P

6384582	98	98
6384586	83	96
6384587	78	55*
6384588	74	83
Blank	80	97
LCS	85	96
LCSD	84	94

Limits: 61-122 73-117

Analysis Name: NWTPH-Dx soil w/Si Gel
Batch number: 112430025A
Orthoterphenyl

6384560	117
6384561	103
6384562	58
6384563	117
6384564	110
6384566	107
6384567	114
6384568	110
Blank	118
DUP	116
LCS	128

Limits: 50-150

Analysis Name: NWTPH-Dx soil w/Si Gel
Batch number: 112430031A
Orthoterphenyl

6384569	341*
6384570	64
6384571	76
6384572	109
6384573	93
6384574	105
6384575	98
Blank	107
DUP	103
LCS	129

Limits: 50-150

Analysis Name: NWTPH-Dx soil w/Si Gel

*- 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: 09/30/11 at 09:55 AM

Group Number: 1263017

Surrogate Quality Control

Batch number: 112440027A
Orthoterphenyl

6384576	90
6384577	103
6384578	348*
6384579	109
6384580	65
6384581	100
6384582	2785*
6384583	9663*
6384584	138
6384585	93
Blank	107
DUP	98
LCS	119

Limits: 50-150

Analysis Name: NWTPH-Dx soil w/Si Gel
Batch number: 112450017A
Orthoterphenyl

6384586	123
6384587	1479*
6384588	327*
6384589	132
Blank	128
DUP	249*
LCS	135

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



For Lancaster Laboratories use only
 Acct. #: 11964 Sample #: 6384560-90 SCR#: 1013710 221601

1263017

Facility #: <u>Edmonds Terminal</u> Site Address: <u>11720 Unow Rd, Edmonds WA</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/NB</u> Service Order #: <u>30045362</u> <input type="checkbox"/> Non SAR: _____				Matrix <input type="checkbox"/> Potable <input type="checkbox"/> NPDES <input type="checkbox"/> Water <input type="checkbox"/> Soil <input type="checkbox"/> Oil <input type="checkbox"/> Air Total Number of Containers: _____		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"/> NMTPH G <input checked="" type="checkbox"/> NMTPH D <input type="checkbox"/> Lead Total <input type="checkbox"/> Diss. <input type="checkbox"/> Method <input type="checkbox"/> VP/IEPH <input type="checkbox"/> NMTPH HClID <input type="checkbox"/> quantification porosity (total: effective) grain size Benzene 8021 B PAH (HOLD)				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	NMTPH G	NMTPH D	Lead Total	Diss.	Method	VP/IEPH	NMTPH HClID	quantification	porosity (total: effective)	grain size	Benzene 8021 B	PAH (HOLD)	Comments / Remarks	
B1-4.5-5	8/22/11	947	X		X				W				X	X									X	X	page 1 of 3 HOLD PAH pending dx results extraction OK	
B1-9.5-10		953							W				X	X									X	X		
B1-14-14.5		957							W				X	X									X	X		
B1-9-9.5		1000							W				X	X									X	X		
B3-4.5-5		1033							W				X	X									X	X		
B3-7-7.5		1040							W				X	X									X	X		
B3-9-10		1045							W				X	X									X	X		
B3-12-12.5		1053							W				X	X									X	X		
B3-14-14.5		1100							W				X	X									X	X		
B5-4.5-5		1117							W				X	X									X	X		
B5-9-9.5		1122							W				X	X									X	X		
B5-11.5-12		1130							W				X	X									X	X		
B5-13.5-14		1136							W				X	X									X	X		

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>8/19/11</u>	Time: <u>11:45</u>	Received by: <u>[Signature]</u>	Date:	Time:
Relinquished by: <u>[Signature]</u>	Date: <u>8/22/11</u>	Time: <u>1:00</u>	Received by: <u>[Signature]</u>	Date:	Time:
Relinquished by:	Date:	Time:	Received by:	Date:	Time:
Relinquished by Commercial Carrier:	UPS <input checked="" type="checkbox"/> FedEx Other _____		Received by: <u>[Signature]</u>	Date: <u>8-23-11</u>	Time: <u>9:05</u>
Temperature Upon Receipt: <u>11-23 C</u>	Custody Seals Intact? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No				

Chevron Northwest Region Analysis Request/Chain of Custody



Acct. #: 11964

For Lancaster Laboratories use only
Sample #: 6384560-90

SCR#: _____
221602

1263017

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 Andersen
 Consultant Phone #: 206 325 5254 Fax #: _____
 Sampler: OR/NB
 Service Order #: 80045362 Non SAR: _____

Matrix		Analyses Requested																		
		Preservation Codes																		
Potable	NPDES	Soil	Water	Oil	Air	Total Number of Containers	BTEX + MTBE	8260	8260 full scan	Oxygenates	TPH G	TPH D	Lead Total	Method	VPI/EPH	NWTPH HClID	quantification	Benzene 8021B	PAH (HOLD)	
<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 checked="" 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"/>

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
B2-4-4.5	8/22/11	1154	X		X				3
B2-7-7.5		1158							
B2-9.5-10		1200							
B2-12-12.5		1212							
B2-14.5-15		1210							
B4-4.5-5		1300							
B4-9.5-10		1310							
B4-13-13.5		1318							
B4-14.5-15		1320							
B6-4.5-5		1400							
B6-7-7.5		1408							
B6-9-9.5		1415							
B6-11-11.5		1422							

Comments / Remarks
 page 2/3
 hold PAH pending Dx results extraction - ok

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>8/22/11</u>	Time: <u>1600</u>	Received by: <u>FedEx</u>	Date:	Time:
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 _____	Date:	Time:	Received by: <u>Burandy Burday</u>	Date: <u>8-23-11</u>	Time: <u>905</u>
Temperature Upon Receipt <u>1.1-2.3 C°</u>	Custody Seals Intact? <u>Yes</u> / No				

Chevron Northwest Region Analysis Request/Chain of Custody

221603



For Lancaster Laboratories use only
 Acct. #: 11964 Sample #: 6384560-90 SCR#: _____

1263017

Facility #: <u>Edmonds Terminal</u> Site Address: <u>11720 Union Rd, Edmonds WA</u> Chevron PM: <u>Kim Tolitz</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>DEWG</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 <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th colspan="10">Preservation Codes</th> </tr> <tr> <td><input type="checkbox"/> BTEX + MTBE</td> <td><input type="checkbox"/> 8021</td> <td><input type="checkbox"/> 8260</td> <td><input type="checkbox"/> Naphth</td> <td><input type="checkbox"/> 8260 full scan</td> <td><input type="checkbox"/> Oxygenates</td> <td><input checked="" type="checkbox"/> NMTPH G</td> <td><input checked="" type="checkbox"/> NMTPH D</td> <td><input type="checkbox"/> Lead Total</td> <td><input type="checkbox"/> Method</td> <td><input type="checkbox"/> VP/MEPH</td> <td><input type="checkbox"/> NWTPH H CID</td> <td><input type="checkbox"/> quantification</td> </tr> <tr> <td colspan="10" style="text-align: center;"> Benzene 8021B PAH (hold) </td> </tr> </table>										Preservation Codes										<input type="checkbox"/> BTEX + MTBE	<input type="checkbox"/> 8021	<input type="checkbox"/> 8260	<input type="checkbox"/> Naphth	<input type="checkbox"/> 8260 full scan	<input type="checkbox"/> Oxygenates	<input checked="" type="checkbox"/> NMTPH G	<input checked="" type="checkbox"/> NMTPH D	<input type="checkbox"/> Lead Total	<input type="checkbox"/> Method	<input type="checkbox"/> VP/MEPH	<input type="checkbox"/> NWTPH H CID	<input type="checkbox"/> quantification	Benzene 8021B PAH (hold)										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	
Preservation Codes																																																	
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Benzene 8021B PAH (hold)																																																	
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	NMTPH G	NMTPH D	Lead Total	Method	VP/MEPH	NWTPH H CID	quantification	Benzene 8021B	PAH (hold)																								
B6-4.5-5		8/22/11	1400	X		X				3							X	X						X	X																								
B6-7-7.5			1408																																														
B6-9-9.5			1415																																														
B6-11-11.5			1422																																														
B6-13-13.5			1420																																														
B7-4.5-5			1443																																														
B7-8-8.5			1448																																														
B7-9.5-10			1456																																														
B7-14-14.5			1459																																														
TRIP Blank						X											X							X																									
Comments / Remarks page 3/3 PAH - hold pending dx results (extraction ok)																																																	
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>8/22/11</u> Time: <u>1600</u> Received by: <u>FedEx</u> 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 <u>FedEx</u> Other _____ Temperature Upon Receipt <u>1.1-2.3</u> °C 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

September 30, 2011

Project: Edmonds Terminal

Submittal Date: 08/25/2011
Group Number: 1263519
PO Number: 0015074659
Release Number: JOLITZ
State of Sample Origin: WA

<u>Client Sample Description</u>	<u>Lancaster Labs (LLI) #</u>
B16-3.5-4 Grab Soil Sample	6387544
B16-4-4.5 Grab Soil Sample	6387545
B16-4.5-5 Grab Soil Sample	6387546
B16-6-6.5 Grab Soil Sample	6387547
B17-3.5-4 Grab Soil Sample	6387548
B17-4-4.5 Grab Soil Sample	6387549
B17-5.5-6 Grab Soil Sample	6387550
B12-0.5-1 Grab Soil Sample	6387551
B12-1-1.5 Grab Soil Sample	6387552
B12-2.5-3 Grab Soil Sample	6387553
B12-3.5-4 Grab Soil Sample	6387554
Trip Blank Methanol Sample	6387555
B17-4.5-5 Grab Soil Sample	6387556

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

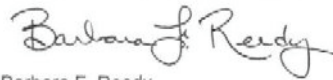
Attn: Rebecca Andresen

Attn: Scott Zorn

Attn: Dave Rasar

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

Respectfully Submitted,



Barbara F. Reedy
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: B16-3.5-4 Grab Soil Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # SW 6387544
LLI Group # 1263519
Account # 11964

Project Name: Edmonds Terminal

Collected: 08/24/2011 09:03 by DR

Chevron

6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

Submitted: 08/25/2011 09:00

Reported: 09/30/2011 11:24

UE161

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS Semivolatiles SW-846 8270C SIM			mg/kg	mg/kg	
10722	Acenaphthene	83-32-9	N.D.	0.00075	1
10722	Acenaphthylene	208-96-8	0.0075	0.00038	1
10722	Anthracene	120-12-7	0.0029	0.00038	1
10722	Benzo(a)anthracene	56-55-3	0.012	0.00075	1
10722	Benzo(a)pyrene	50-32-8	0.012	0.00075	1
10722	Benzo(b)fluoranthene	205-99-2	0.020	0.00075	1
10722	Benzo(g,h,i)perylene	191-24-2	0.0096	0.00075	1
10722	Benzo(k)fluoranthene	207-08-9	0.010	0.00075	1
10722	Chrysene	218-01-9	0.017	0.00038	1
10722	Dibenz(a,h)anthracene	53-70-3	0.0028	0.00075	1
10722	Fluoranthene	206-44-0	0.023	0.00075	1
10722	Fluorene	86-73-7	N.D.	0.00075	1
10722	Indeno(1,2,3-cd)pyrene	193-39-5	0.0088	0.00075	1
10722	1-Methylnaphthalene	90-12-0	N.D.	0.00075	1
10722	2-Methylnaphthalene	91-57-6	N.D.	0.00075	1
10722	Naphthalene	91-20-3	0.0011	0.00075	1
10722	Phenanthrene	85-01-8	0.0061	0.00075	1
10722	Pyrene	129-00-0	0.028	0.00075	1
GC Volatiles ECY 97-602 NWTPH-Gx			mg/kg	mg/kg	
02006	NWTPH-Gx soil C7-C12	n.a.	N.D.	11	248.06
Reporting limits were raised due to sample foaming.					
GC Volatiles SW-846 8021B			mg/kg	mg/kg	
08179	Benzene	71-43-2	N.D.	0.023	248.06
Reporting limits were raised due to sample foaming.					
GC Petroleum ECY 97-602 NWTPH-Dx			mg/kg	mg/kg	
Hydrocarbons modified					
02214	DRO C12-C24 w/Si Gel	n.a.	100	3.4	1
02214	HRO C24-C40 w/Si Gel	n.a.	280	11	1
Wet Chemistry SM20 2540 G			%	%	
00111	Moisture	n.a.	13.0	0.50	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

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.



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: B16-3.5-4 Grab Soil Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # SW 6387544
LLI Group # 1263519
Account # 11964

Project Name: Edmonds Terminal

Collected: 08/24/2011 09:03 by DR

Chevron

6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

Submitted: 08/25/2011 09:00

Reported: 09/30/2011 11:24

UE161

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10722	PAH SIM 8270 Soil Microwave	SW-846 8270C SIM	1	11258SLF026	09/20/2011 23:49	Mark A Clark	1
10810	BNA Soil Microwave SIM PAH	SW-846 3546	1	11258SLF026	09/05/2011 10:30	Olivia Arosemena	1
02006	NWTPH-Gx soil C7-C12	ECY 97-602 NWTPH-Gx	1	11249A31A	09/06/2011 16:49	Marie D John	248.06
08179	Method 8021 Soil Master	SW-846 8021B	1	11249A31A	09/06/2011 16:49	Marie D John	248.06
06647	GC-5g Field Preserved MeOH	SW-846 5035A	1	201123825371	08/24/2011 09:03	Client Supplied	n.a.
06647	GC-5g Field Preserved MeOH	SW-846 5035A	2	201123825371	08/24/2011 09:03	Client Supplied	n.a.
02214	NWTPH-Dx soil w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	112490011A	09/16/2011 01:11	Dustin A Underkoffler	1
07024	DRO Alternate Soil Extraction	SW-846 3550B	1	112490011A	09/06/2011 23:30	David V Hershey Jr	1
00111	Moisture	SM20 2540 G	1	11245820001A	09/02/2011 22:12	Scott W Freisher	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: B16-4-4.5 Grab Soil Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # SW 6387545
LLI Group # 1263519
Account # 11964

Project Name: Edmonds Terminal

Collected: 08/24/2011 08:55 by DR

Chevron

6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

Submitted: 08/25/2011 09:00

Reported: 09/30/2011 11:24

UE162

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS Semivolatiles SW-846 8270C SIM			mg/kg	mg/kg	
10722	Acenaphthene	83-32-9	0.0023	0.0012	1
10722	Acenaphthylene	208-96-8	0.043	0.00062	1
10722	Anthracene	120-12-7	0.027	0.00062	1
10722	Benzo(a)anthracene	56-55-3	0.11	0.0012	1
10722	Benzo(a)pyrene	50-32-8	0.10	0.0012	1
10722	Benzo(b)fluoranthene	205-99-2	0.18	0.0012	1
10722	Benzo(g,h,i)perylene	191-24-2	0.061	0.0012	1
10722	Benzo(k)fluoranthene	207-08-9	0.061	0.0012	1
10722	Chrysene	218-01-9	0.14	0.00062	1
10722	Dibenz(a,h)anthracene	53-70-3	0.022	0.0012	1
10722	Fluoranthene	206-44-0	0.25	0.0012	1
10722	Fluorene	86-73-7	0.0094	0.0012	1
10722	Indeno(1,2,3-cd)pyrene	193-39-5	0.064	0.0012	1
10722	1-Methylnaphthalene	90-12-0	0.0036	0.0012	1
10722	2-Methylnaphthalene	91-57-6	0.0055	0.0012	1
10722	Naphthalene	91-20-3	0.0094	0.0012	1
10722	Phenanthrene	85-01-8	0.088	0.0012	1
10722	Pyrene	129-00-0	0.23	0.0012	1
GC Volatiles ECY 97-602 NWTPH-Gx			mg/kg	mg/kg	
02006	NWTPH-Gx soil C7-C12	n.a.	N.D.	140	1795.01
Reporting limits were raised due to sample foaming.					
GC Volatiles SW-846 8021B			mg/kg	mg/kg	
08179	Benzene	71-43-2	N.D.	0.27	1795.01
Reporting limits were raised due to sample foaming.					
GC Petroleum ECY 97-602 NWTPH-Dx			mg/kg	mg/kg	
Hydrocarbons modified					
02214	DRO C12-C24 w/Si Gel	n.a.	18,000	280	50
02214	HRO C24-C40 w/Si Gel	n.a.	8,300	940	50
Wet Chemistry SM20 2540 G			%	%	
00111	Moisture	n.a.	46.9	0.50	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

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.

Sample Description: B16-4-4.5 Grab Soil Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # SW 6387545
LLI Group # 1263519
Account # 11964

Project Name: Edmonds Terminal

Collected: 08/24/2011 08:55 by DR

Chevron

6001 Bollinger Canyon Rd L4310
 San Ramon CA 94583

Submitted: 08/25/2011 09:00

Reported: 09/30/2011 11:24

UE162

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10722	PAH SIM 8270 Soil Microwave	SW-846 8270C SIM	1	11258SLF026	09/22/2011 03:19	Mark A Clark	1
10810	BNA Soil Microwave SIM PAH	SW-846 3546	1	11258SLF026	09/05/2011 10:30	Olivia Arosemena	1
02006	NWTPH-Gx soil C7-C12	ECY 97-602 NWTPH-Gx	1	11249A31A	09/06/2011 23:40	Marie D John	1795.01
08179	Method 8021 Soil Master	SW-846 8021B	1	11249A31A	09/06/2011 23:40	Marie D John	1795.01
06647	GC-5g Field Preserved MeOH	SW-846 5035A	1	201123825371	08/24/2011 08:55	Client Supplied	n.a.
06647	GC-5g Field Preserved MeOH	SW-846 5035A	2	201123825371	08/24/2011 08:55	Client Supplied	n.a.
02214	NWTPH-Dx soil w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	112490011A	09/16/2011 08:33	Carrie E Miller	50
07024	DRO Alternate Soil Extraction	SW-846 3550B	1	112490011A	09/06/2011 23:30	David V Hershey Jr	1
00111	Moisture	SM20 2540 G	1	11245820001A	09/02/2011 22:12	Scott W Freisher	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: B16-4.5-5 Grab Soil Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # SW 6387546
LLI Group # 1263519
Account # 11964

Project Name: Edmonds Terminal

Collected: 08/24/2011 08:58 by DR

Chevron

6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

Submitted: 08/25/2011 09:00

Reported: 09/30/2011 11:24

UE163

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS Semivolatiles SW-846 8270C SIM			mg/kg	mg/kg	
10722	Acenaphthene	83-32-9	N.D.	0.00079	1
10722	Acenaphthylene	208-96-8	N.D.	0.00039	1
10722	Anthracene	120-12-7	N.D.	0.00039	1
10722	Benzo(a)anthracene	56-55-3	0.00081	0.00079	1
10722	Benzo(a)pyrene	50-32-8	0.00089	0.00079	1
10722	Benzo(b)fluoranthene	205-99-2	0.0013	0.00079	1
10722	Benzo(g,h,i)perylene	191-24-2	N.D.	0.00079	1
10722	Benzo(k)fluoranthene	207-08-9	N.D.	0.00079	1
10722	Chrysene	218-01-9	0.0011	0.00039	1
10722	Dibenz(a,h)anthracene	53-70-3	N.D.	0.00079	1
10722	Fluoranthene	206-44-0	0.0017	0.00079	1
10722	Fluorene	86-73-7	N.D.	0.00079	1
10722	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.00079	1
10722	1-Methylnaphthalene	90-12-0	N.D.	0.00079	1
10722	2-Methylnaphthalene	91-57-6	N.D.	0.00079	1
10722	Naphthalene	91-20-3	N.D.	0.00079	1
10722	Phenanthrene	85-01-8	N.D.	0.00079	1
10722	Pyrene	129-00-0	0.0016	0.00079	1
GC Volatiles ECY 97-602 NWTPH-Gx			mg/kg	mg/kg	
02006	NWTPH-Gx soil C7-C12	n.a.	N.D.	1.2	25.1
GC Volatiles SW-846 8021B			mg/kg	mg/kg	
08179	Benzene	71-43-2	0.0028	0.0024	25.1
GC Petroleum Hydrocarbons ECY 97-602 NWTPH-Dx modified			mg/kg	mg/kg	
02214	DRO C12-C24 w/Si Gel	n.a.	4.0	3.5	1
02214	HRO C24-C40 w/Si Gel	n.a.	N.D.	12	1
Wet Chemistry SM20 2540 G			%	%	
00111	Moisture	n.a.	15.3	0.50	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

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
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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: B16-4.5-5 Grab Soil Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # SW 6387546
LLI Group # 1263519
Account # 11964

Project Name: Edmonds Terminal

Collected: 08/24/2011 08:58 by DR

Chevron

6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

Submitted: 08/25/2011 09:00

Reported: 09/30/2011 11:24

UE163

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10722	PAH SIM 8270 Soil Microwave	SW-846 8270C SIM	1	11258SLE026	09/16/2011 14:49	Joseph M Gambler	1
10810	BNA Soil Microwave SIM PAH	SW-846 3546	1	11258SLE026	09/04/2011 07:50	Katheryne V Sponheimer	1
02006	NWTPH-Gx soil C7-C12	ECY 97-602 NWTPH-Gx	1	11249A31A	09/06/2011 20:43	Marie D John	25.1
08179	Method 8021 Soil Master	SW-846 8021B	1	11249A31A	09/06/2011 20:43	Marie D John	25.1
06647	GC-5g Field Preserved MeOH	SW-846 5035A	1	201123825371	08/24/2011 08:58	Client Supplied	n.a.
06647	GC-5g Field Preserved MeOH	SW-846 5035A	2	201123825371	08/24/2011 08:58	Client Supplied	n.a.
02214	NWTPH-Dx soil w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	112490011A	09/13/2011 00:58	Dustin A Underkoffler	1
07024	DRO Alternate Soil Extraction	SW-846 3550B	1	112490011A	09/06/2011 23:30	David V Hershey Jr	1
00111	Moisture	SM20 2540 G	1	11245820001A	09/02/2011 22:12	Scott W Freisher	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: B16-6-6.5 Grab Soil Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # SW 6387547
LLI Group # 1263519
Account # 11964

Project Name: Edmonds Terminal

Collected: 08/24/2011 09:10 by DR

Chevron

6001 Bollinger Canyon Rd L4310
 San Ramon CA 94583

Submitted: 08/25/2011 09:00

Reported: 09/30/2011 11:24

UE164

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC Volatiles					
02006	NWTPH-Gx soil C7-C12	n.a.	N.D.	1.5	29.29
GC Volatiles					
08179	Benzene	71-43-2	N.D.	0.0031	29.29
GC Petroleum Hydrocarbons					
ECY 97-602 NWTPH-Dx modified					
02214	DRO C12-C24 w/Si Gel	n.a.	N.D.	3.9	1
02214	HRO C24-C40 w/Si Gel	n.a.	N.D.	13	1
Wet Chemistry					
SM20 2540 G					
00111	Moisture	n.a.	23.2	0.50	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

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
10810	BNA Soil Microwave SIM PAH	SW-846 3546	1	11246SLB026	09/04/2011 07:50	Katheryne V Sponheimer	1
02006	NWTPH-Gx soil C7-C12	ECY 97-602 NWTPH-Gx	1	11249A31A	09/06/2011 21:16	Marie D John	29.29
08179	Method 8021 Soil Master	SW-846 8021B	1	11249A31A	09/06/2011 21:16	Marie D John	29.29
06647	GC-5g Field Preserved MeOH	SW-846 5035A	1	201123825371	08/24/2011 09:10	Client Supplied	n.a.
06647	GC-5g Field Preserved MeOH	SW-846 5035A	2	201123825371	08/24/2011 09:10	Client Supplied	n.a.
02214	NWTPH-Dx soil w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	112490011A	09/13/2011 00:37	Dustin A Underkoffler	1
07024	DRO Alternate Soil Extraction	SW-846 3550B	1	112490011A	09/06/2011 23:30	David V Hershey Jr	1
00111	Moisture	SM20 2540 G	1	11245820001A	09/02/2011 22:12	Scott W Freisher	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: B17-3.5-4 Grab Soil Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # SW 6387548
LLI Group # 1263519
Account # 11964

Project Name: Edmonds Terminal

Collected: 08/24/2011 10:43 by DR

Chevron

6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

Submitted: 08/25/2011 09:00

Reported: 09/30/2011 11:24

UE171

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS Semivolatiles SW-846 8270C SIM			mg/kg	mg/kg	
10722	Acenaphthene	83-32-9	N.D.	0.00071	1
10722	Acenaphthylene	208-96-8	N.D.	0.00035	1
10722	Anthracene	120-12-7	N.D.	0.00035	1
10722	Benzo(a)anthracene	56-55-3	0.00071	0.00071	1
10722	Benzo(a)pyrene	50-32-8	0.00078	0.00071	1
10722	Benzo(b)fluoranthene	205-99-2	0.0012	0.00071	1
10722	Benzo(g,h,i)perylene	191-24-2	N.D.	0.00071	1
10722	Benzo(k)fluoranthene	207-08-9	N.D.	0.00071	1
10722	Chrysene	218-01-9	0.00093	0.00035	1
10722	Dibenz(a,h)anthracene	53-70-3	N.D.	0.00071	1
10722	Fluoranthene	206-44-0	0.0013	0.00071	1
10722	Fluorene	86-73-7	N.D.	0.00071	1
10722	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.00071	1
10722	1-Methylnaphthalene	90-12-0	N.D.	0.00071	1
10722	2-Methylnaphthalene	91-57-6	N.D.	0.00071	1
10722	Naphthalene	91-20-3	N.D.	0.00071	1
10722	Phenanthrene	85-01-8	N.D.	0.00071	1
10722	Pyrene	129-00-0	0.0012	0.00071	1
GC Volatiles ECY 97-602 NWTPH-Gx			mg/kg	mg/kg	
02006	NWTPH-Gx soil C7-C12	n.a.	N.D.	12	292.49
Reporting limits were raised due to sample foaming.					
GC Volatiles SW-846 8021B			mg/kg	mg/kg	
08179	Benzene	71-43-2	N.D.	0.025	292.49
Reporting limits were raised due to sample foaming.					
GC Petroleum ECY 97-602 NWTPH-Dx			mg/kg	mg/kg	
Hydrocarbons modified					
02214	DRO C12-C24 w/Si Gel	n.a.	550	16	5
02214	HRO C24-C40 w/Si Gel	n.a.	1,200	53	5
Wet Chemistry SM20 2540 G			%	%	
00111	Moisture	n.a.	6.4	0.50	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

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.

Sample Description: B17-3.5-4 Grab Soil Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # SW 6387548
LLI Group # 1263519
Account # 11964

Project Name: Edmonds Terminal

Collected: 08/24/2011 10:43 by DR

Chevron

6001 Bollinger Canyon Rd L4310
 San Ramon CA 94583

Submitted: 08/25/2011 09:00

Reported: 09/30/2011 11:24

UE171

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10722	PAH SIM 8270 Soil Microwave	SW-846 8270C SIM	1	11258SLE026	09/21/2011 21:17	Gregory J Drahovsky	1
10810	BNA Soil Microwave SIM PAH	SW-846 3546	1	11258SLE026	09/04/2011 07:50	Katheryne V Sponheimer	1
02006	NWTPH-Gx soil C7-C12	ECY 97-602 NWTPH-Gx	1	11249A31A	09/07/2011 02:41	Marie D John	292.49
08179	Method 8021 Soil Master	SW-846 8021B	1	11249A31A	09/07/2011 02:41	Marie D John	292.49
06647	GC-5g Field Preserved MeOH	SW-846 5035A	1	201123825371	08/24/2011 10:43	Client Supplied	n.a.
06647	GC-5g Field Preserved MeOH	SW-846 5035A	2	201123825371	08/24/2011 10:43	Client Supplied	n.a.
02214	NWTPH-Dx soil w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	112490011A	09/16/2011 07:50	Carrie E Miller	5
07024	DRO Alternate Soil Extraction	SW-846 3550B	1	112490011A	09/06/2011 23:30	David V Hershey Jr	1
00111	Moisture	SM20 2540 G	1	11245820001A	09/02/2011 22:12	Scott W Freisher	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: B17-4-4.5 Grab Soil Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # SW 6387549
LLI Group # 1263519
Account # 11964

Project Name: Edmonds Terminal

Collected: 08/24/2011 10:28 by DR

Chevron

6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

Submitted: 08/25/2011 09:00

Reported: 09/30/2011 11:24

UE172

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS Semivolatiles SW-846 8270C SIM			mg/kg	mg/kg	
10722	Acenaphthene	83-32-9	N.D.	0.0011	1
10722	Acenaphthylene	208-96-8	N.D.	0.00057	1
10722	Anthracene	120-12-7	N.D.	0.00057	1
10722	Benzo(a)anthracene	56-55-3	N.D.	0.0011	1
10722	Benzo(a)pyrene	50-32-8	N.D.	0.0011	1
10722	Benzo(b)fluoranthene	205-99-2	N.D.	0.0011	1
10722	Benzo(g,h,i)perylene	191-24-2	N.D.	0.0011	1
10722	Benzo(k)fluoranthene	207-08-9	N.D.	0.0011	1
10722	Chrysene	218-01-9	N.D.	0.00057	1
10722	Dibenz(a,h)anthracene	53-70-3	N.D.	0.0011	1
10722	Fluoranthene	206-44-0	N.D.	0.0011	1
10722	Fluorene	86-73-7	N.D.	0.0011	1
10722	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.0011	1
10722	1-Methylnaphthalene	90-12-0	N.D.	0.0011	1
10722	2-Methylnaphthalene	91-57-6	N.D.	0.0011	1
10722	Naphthalene	91-20-3	N.D.	0.0011	1
10722	Phenanthrene	85-01-8	N.D.	0.0011	1
10722	Pyrene	129-00-0	N.D.	0.0011	1
GC Volatiles ECY 97-602 NWTPH-Gx			mg/kg	mg/kg	
02006	NWTPH-Gx soil C7-C12	n.a.	N.D.	2.3	33.73
GC Volatiles SW-846 8021B			mg/kg	mg/kg	
08179	Benzene	71-43-2	0.0066	0.0046	33.73
GC Petroleum Hydrocarbons ECY 97-602 NWTPH-Dx modified			mg/kg	mg/kg	
02214	DRO C12-C24 w/Si Gel	n.a.	14,000	260	50
02214	HRO C24-C40 w/Si Gel	n.a.	8,200	850	50
Wet Chemistry SM20 2540 G			%	%	
00111	Moisture	n.a.	41.6	0.50	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

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
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Sample Description: B17-4-4.5 Grab Soil Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # SW 6387549
LLI Group # 1263519
Account # 11964

Project Name: Edmonds Terminal

Collected: 08/24/2011 10:28 by DR

Chevron

6001 Bollinger Canyon Rd L4310
 San Ramon CA 94583

Submitted: 08/25/2011 09:00

Reported: 09/30/2011 11:24

UE172

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10722	PAH SIM 8270 Soil Microwave	SW-846 8270C SIM	1	11258SLE026	09/21/2011 21:51	Gregory J Drahovsky	1
10810	BNA Soil Microwave SIM PAH	SW-846 3546	1	11258SLE026	09/04/2011 07:50	Katheryne V Sponheimer	1
02006	NWTPH-Gx soil C7-C12	ECY 97-602 NWTPH-Gx	1	11249A31A	09/07/2011 03:17	Marie D John	33.73
08179	Method 8021 Soil Master	SW-846 8021B	1	11249A31A	09/07/2011 03:17	Marie D John	33.73
06647	GC-5g Field Preserved MeOH	SW-846 5035A	1	201123825371	08/24/2011 10:28	Client Supplied	n.a.
06647	GC-5g Field Preserved MeOH	SW-846 5035A	2	201123825371	08/24/2011 10:28	Client Supplied	n.a.
02214	NWTPH-Dx soil w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	112490011A	09/16/2011 08:12	Carrie E Miller	50
07024	DRO Alternate Soil Extraction	SW-846 3550B	1	112490011A	09/06/2011 23:30	David V Hershey Jr	1
00111	Moisture	SM20 2540 G	1	11245820001A	09/02/2011 22:12	Scott W Freisher	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: B17-5.5-6 Grab Soil Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # SW 6387550
LLI Group # 1263519
Account # 11964

Project Name: Edmonds Terminal

Collected: 08/24/2011 10:36 by DR

Chevron

6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

Submitted: 08/25/2011 09:00

Reported: 09/30/2011 11:24

UE173

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC Volatiles					
	ECY 97-602 NWTPH-Gx		mg/kg	mg/kg	
02006	NWTPH-Gx soil C7-C12	n.a.	N.D.	17	287.63
Reporting limits were raised due to sample foaming.					
GC Volatiles					
	SW-846 8021B		mg/kg	mg/kg	
08179	Benzene	71-43-2	N.D.	0.033	287.63
Reporting limits were raised due to sample foaming.					
GC Petroleum Hydrocarbons					
	ECY 97-602 NWTPH-Dx modified		mg/kg	mg/kg	
02214	DRO C12-C24 w/Si Gel	n.a.	N.D.	4.3	1
02214	HRO C24-C40 w/Si Gel	n.a.	N.D.	14	1
Wet Chemistry					
	SM20 2540 G		%	%	
00111	Moisture	n.a.	31.0	0.50	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

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
10810	BNA Soil Microwave SIM PAH	SW-846 3546	1	11246SLB026	09/04/2011 07:50	Katheryne V Sponheimer	1
02006	NWTPH-Gx soil C7-C12	ECY 97-602 NWTPH-Gx	1	11249A31A	09/07/2011 03:53	Marie D John	287.63
08179	Method 8021 Soil Master	SW-846 8021B	1	11249A31A	09/07/2011 03:53	Marie D John	287.63
06647	GC-5g Field Preserved MeOH	SW-846 5035A	1	201123825371	08/24/2011 10:36	Client Supplied	n.a.
06647	GC-5g Field Preserved MeOH	SW-846 5035A	2	201123825371	08/24/2011 10:36	Client Supplied	n.a.
02214	NWTPH-Dx soil w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	112490011A	09/13/2011 01:18	Dustin A Underkoffler	1
07024	DRO Alternate Soil Extraction	SW-846 3550B	1	112490011A	09/06/2011 23:30	David V Hershey Jr	1
00111	Moisture	SM20 2540 G	1	11245820001A	09/02/2011 22:12	Scott W Freisher	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: B12-0.5-1 Grab Soil Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # SW 6387551
LLI Group # 1263519
Account # 11964

Project Name: Edmonds Terminal

Collected: 08/24/2011 12:56 by DR

Chevron

6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

Submitted: 08/25/2011 09:00

Reported: 09/30/2011 11:24

UE121

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS Semivolatiles SW-846 8270C SIM			mg/kg	mg/kg	
10722	Acenaphthene	83-32-9	N.D.	0.00087	1
10722	Acenaphthylene	208-96-8	0.00094	0.00043	1
10722	Anthracene	120-12-7	0.00099	0.00043	1
10722	Benzo(a)anthracene	56-55-3	0.0070	0.00087	1
10722	Benzo(a)pyrene	50-32-8	0.0083	0.00087	1
10722	Benzo(b)fluoranthene	205-99-2	0.015	0.00087	1
10722	Benzo(g,h,i)perylene	191-24-2	0.0043	0.00087	1
10722	Benzo(k)fluoranthene	207-08-9	0.0053	0.00087	1
10722	Chrysene	218-01-9	0.011	0.00043	1
10722	Dibenz(a,h)anthracene	53-70-3	0.0012	0.00087	1
10722	Fluoranthene	206-44-0	0.019	0.00087	1
10722	Fluorene	86-73-7	N.D.	0.00087	1
10722	Indeno(1,2,3-cd)pyrene	193-39-5	0.0041	0.00087	1
10722	1-Methylnaphthalene	90-12-0	N.D.	0.00087	1
10722	2-Methylnaphthalene	91-57-6	N.D.	0.00087	1
10722	Naphthalene	91-20-3	N.D.	0.00087	1
10722	Phenanthrene	85-01-8	0.0085	0.00087	1
10722	Pyrene	129-00-0	0.016	0.00087	1
GC Volatiles ECY 97-602 NWTPH-Gx			mg/kg	mg/kg	
02006	NWTPH-Gx soil C7-C12	n.a.	N.D.	17	317.12
Reporting limits were raised due to sample foaming.					
GC Volatiles SW-846 8021B			mg/kg	mg/kg	
08179	Benzene	71-43-2	N.D.	0.033	317.12
Reporting limits were raised due to sample foaming.					
GC Petroleum ECY 97-602 NWTPH-Dx			mg/kg	mg/kg	
Hydrocarbons modified					
02214	DRO C12-C24 w/Si Gel	n.a.	140	7.9	2
02214	HRO C24-C40 w/Si Gel	n.a.	150	26	2
Wet Chemistry SM20 2540 G			%	%	
00111	Moisture	n.a.	24.2	0.50	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

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.

Sample Description: B12-0.5-1 Grab Soil Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # SW 6387551
LLI Group # 1263519
Account # 11964

Project Name: Edmonds Terminal

Collected: 08/24/2011 12:56 by DR

Chevron

6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

Submitted: 08/25/2011 09:00

Reported: 09/30/2011 11:24

UE121

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10722	PAH SIM 8270 Soil Microwave	SW-846 8270C SIM	1	11258SLE026	09/21/2011 22:25	Gregory J Drahovsky	1
10810	BNA Soil Microwave SIM PAH	SW-846 3546	1	11258SLE026	09/04/2011 07:50	Katheryne V Sponheimer	1
02006	NWTPH-Gx soil C7-C12	ECY 97-602 NWTPH-Gx	1	11249A16A	09/07/2011 03:59	Marie D John	317.12
08179	Method 8021 Soil Master	SW-846 8021B	1	11249A16A	09/07/2011 03:59	Marie D John	317.12
06647	GC-5g Field Preserved MeOH	SW-846 5035A	1	201123825371	08/24/2011 12:56	Client Supplied	n.a.
06647	GC-5g Field Preserved MeOH	SW-846 5035A	2	201123825371	08/24/2011 12:56	Client Supplied	n.a.
02214	NWTPH-Dx soil w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	112490011A	09/27/2011 04:23	Glorines Suarez-Rivera	2
07024	DRO Alternate Soil Extraction	SW-846 3550B	1	112490011A	09/06/2011 23:30	David V Hershey Jr	1
00111	Moisture	SM20 2540 G	1	11245820001A	09/02/2011 22:12	Scott W Freisher	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: B12-1-1.5 Grab Soil Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # SW 6387552
LLI Group # 1263519
Account # 11964

Project Name: Edmonds Terminal

Collected: 08/24/2011 13:02 by DR

Chevron

6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

Submitted: 08/25/2011 09:00

Reported: 09/30/2011 11:24

UE122

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS Semivolatiles SW-846 8270C SIM			mg/kg	mg/kg	
10722	Acenaphthene	83-32-9	N.D.	0.00096	1
10722	Acenaphthylene	208-96-8	N.D.	0.00048	1
10722	Anthracene	120-12-7	N.D.	0.00048	1
10722	Benzo(a)anthracene	56-55-3	N.D.	0.00096	1
10722	Benzo(a)pyrene	50-32-8	N.D.	0.00096	1
10722	Benzo(b)fluoranthene	205-99-2	N.D.	0.00096	1
10722	Benzo(g,h,i)perylene	191-24-2	N.D.	0.00096	1
10722	Benzo(k)fluoranthene	207-08-9	N.D.	0.00096	1
10722	Chrysene	218-01-9	N.D.	0.00048	1
10722	Dibenz(a,h)anthracene	53-70-3	N.D.	0.00096	1
10722	Fluoranthene	206-44-0	N.D.	0.00096	1
10722	Fluorene	86-73-7	N.D.	0.00096	1
10722	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.00096	1
10722	1-Methylnaphthalene	90-12-0	N.D.	0.00096	1
10722	2-Methylnaphthalene	91-57-6	N.D.	0.00096	1
10722	Naphthalene	91-20-3	N.D.	0.00096	1
10722	Phenanthrene	85-01-8	N.D.	0.00096	1
10722	Pyrene	129-00-0	N.D.	0.00096	1
GC Volatiles ECY 97-602 NWTPH-Gx			mg/kg	mg/kg	
02006	NWTPH-Gx soil C7-C12	n.a.	34	19	327.24
Reporting limits were raised due to sample foaming.					
GC Volatiles SW-846 8021B			mg/kg	mg/kg	
08179	Benzene	71-43-2	N.D.	0.038	327.24
Reporting limits were raised due to sample foaming.					
GC Petroleum ECY 97-602 NWTPH-Dx			mg/kg	mg/kg	
Hydrocarbons modified					
02214	DRO C12-C24 w/Si Gel	n.a.	120	4.3	1
02214	HRO C24-C40 w/Si Gel	n.a.	100	14	1
Wet Chemistry SM20 2540 G			%	%	
00111	Moisture	n.a.	30.7	0.50	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

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.

Sample Description: B12-1-1.5 Grab Soil Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # SW 6387552
LLI Group # 1263519
Account # 11964

Project Name: Edmonds Terminal

Collected: 08/24/2011 13:02 by DR

Chevron

6001 Bollinger Canyon Rd L4310
 San Ramon CA 94583

Submitted: 08/25/2011 09:00

Reported: 09/30/2011 11:24

UE122

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10722	PAH SIM 8270 Soil Microwave	SW-846 8270C SIM	1	11258SLE026	09/21/2011 22:59	Gregory J Drahovsky	1
10810	BNA Soil Microwave SIM PAH	SW-846 3546	1	11258SLE026	09/04/2011 07:50	Katheryne V Sponheimer	1
02006	NWTPH-Gx soil C7-C12	ECY 97-602 NWTPH-Gx	1	11249A16A	09/07/2011 04:37	Marie D John	327.24
08179	Method 8021 Soil Master	SW-846 8021B	1	11249A16A	09/07/2011 04:37	Marie D John	327.24
06647	GC-5g Field Preserved MeOH	SW-846 5035A	1	201123825371	08/24/2011 13:02	Client Supplied	n.a.
06647	GC-5g Field Preserved MeOH	SW-846 5035A	2	201123825371	08/24/2011 13:02	Client Supplied	n.a.
02214	NWTPH-Dx soil w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	112490011A	09/16/2011 07:29	Glorines Suarez-Rivera	1
07024	DRO Alternate Soil Extraction	SW-846 3550B	1	112490011A	09/06/2011 23:30	David V Hershey Jr	1
00111	Moisture	SM20 2540 G	1	11245820001A	09/02/2011 22:12	Scott W Freisher	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: B12-2.5-3 Grab Soil Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # SW 6387553
LLI Group # 1263519
Account # 11964

Project Name: Edmonds Terminal

Collected: 08/24/2011 13:18 by DR

Chevron

6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

Submitted: 08/25/2011 09:00

Reported: 09/30/2011 11:24

UE123

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS Semivolatiles SW-846 8270C SIM			mg/kg	mg/kg	
10722	Acenaphthene	83-32-9	N.D.	0.0054	5
10722	Acenaphthylene	208-96-8	0.0087	0.0027	5
10722	Anthracene	120-12-7	0.0073	0.0027	5
10722	Benzo(a)anthracene	56-55-3	0.051	0.0054	5
10722	Benzo(a)pyrene	50-32-8	0.057	0.0054	5
10722	Benzo(b)fluoranthene	205-99-2	0.084	0.0054	5
10722	Benzo(g,h,i)perylene	191-24-2	0.038	0.0054	5
10722	Benzo(k)fluoranthene	207-08-9	0.035	0.0054	5
10722	Chrysene	218-01-9	0.064	0.0027	5
10722	Dibenz(a,h)anthracene	53-70-3	0.0093	0.0054	5
10722	Fluoranthene	206-44-0	0.11	0.0054	5
10722	Fluorene	86-73-7	N.D.	0.0054	5
10722	Indeno(1,2,3-cd)pyrene	193-39-5	0.036	0.0054	5
10722	1-Methylnaphthalene	90-12-0	N.D.	0.0054	5
10722	2-Methylnaphthalene	91-57-6	N.D.	0.0054	5
10722	Naphthalene	91-20-3	0.0059	0.0054	5
10722	Phenanthrene	85-01-8	0.049	0.0054	5
10722	Pyrene	129-00-0	0.088	0.0054	5

Reporting limits were raised due to interference from the sample matrix.

GC Volatiles ECY 97-602 NWT PH-Gx			mg/kg	mg/kg	
02006	NWT PH-Gx soil C7-C12	n.a.	N.D.	25	388.49
Reporting limits were raised due to sample foaming.					

GC Volatiles SW-846 8021B			mg/kg	mg/kg	
08179	Benzene	71-43-2	N.D.	0.051	388.49
Reporting limits were raised due to sample foaming.					

GC Petroleum ECY 97-602 NWT PH-Dx			mg/kg	mg/kg	
Hydrocarbons modified					
02214	DRO C12-C24 w/Si Gel	n.a.	160	4.9	1
02214	HRO C24-C40 w/Si Gel	n.a.	75	16	1

Wet Chemistry SM20 2540 G			%	%	
00111	Moisture	n.a.	38.6	0.50	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

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.

Sample Description: B12-2.5-3 Grab Soil Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # SW 6387553
LLI Group # 1263519
Account # 11964

Project Name: Edmonds Terminal

Collected: 08/24/2011 13:18 by DR

Chevron

6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

Submitted: 08/25/2011 09:00

Reported: 09/30/2011 11:24

UE123

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10722	PAH SIM 8270 Soil Microwave	SW-846 8270C SIM	1	11258SLE026	09/16/2011 20:45	Gregory J Drahovsky	5
10810	BNA Soil Microwave SIM PAH	SW-846 3546	1	11258SLE026	09/04/2011 07:50	Katheryne V Sponheimer	1
02006	NWTPH-Gx soil C7-C12	ECY 97-602 NWTPH-Gx	1	11249A16A	09/07/2011 05:14	Marie D John	388.49
08179	Method 8021 Soil Master	SW-846 8021B	1	11249A16A	09/07/2011 05:14	Marie D John	388.49
06647	GC-5g Field Preserved MeOH	SW-846 5035A	1	201123825371	08/24/2011 13:18	Client Supplied	n.a.
06647	GC-5g Field Preserved MeOH	SW-846 5035A	2	201123825371	08/24/2011 13:18	Client Supplied	n.a.
02214	NWTPH-Dx soil w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	112490011A	09/13/2011 01:39	Dustin A Underkoffler	1
07024	DRO Alternate Soil Extraction	SW-846 3550B	1	112490011A	09/06/2011 23:30	David V Hershey Jr	1
00111	Moisture	SM20 2540 G	1	11245820001A	09/02/2011 22:12	Scott W Freisher	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: B12-3.5-4 Grab Soil Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # SW 6387554
LLI Group # 1263519
Account # 11964

Project Name: Edmonds Terminal

Collected: 08/24/2011 13:35 by DR

Chevron

6001 Bollinger Canyon Rd L4310
 San Ramon CA 94583

Submitted: 08/25/2011 09:00

Reported: 09/30/2011 11:24

UE124

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS Semivolatiles SW-846 8270C SIM			mg/kg	mg/kg	
10722	Acenaphthene	83-32-9	N.D.	0.00083	1
10722	Acenaphthylene	208-96-8	N.D.	0.00042	1
10722	Anthracene	120-12-7	N.D.	0.00042	1
10722	Benzo(a)anthracene	56-55-3	N.D.	0.00083	1
10722	Benzo(a)pyrene	50-32-8	N.D.	0.00083	1
10722	Benzo(b)fluoranthene	205-99-2	N.D.	0.00083	1
10722	Benzo(g,h,i)perylene	191-24-2	N.D.	0.00083	1
10722	Benzo(k)fluoranthene	207-08-9	N.D.	0.00083	1
10722	Chrysene	218-01-9	0.00058	0.00042	1
10722	Dibenz(a,h)anthracene	53-70-3	N.D.	0.00083	1
10722	Fluoranthene	206-44-0	0.00095	0.00083	1
10722	Fluorene	86-73-7	N.D.	0.00083	1
10722	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.00083	1
10722	1-Methylnaphthalene	90-12-0	N.D.	0.00083	1
10722	2-Methylnaphthalene	91-57-6	N.D.	0.00083	1
10722	Naphthalene	91-20-3	N.D.	0.00083	1
10722	Phenanthrene	85-01-8	N.D.	0.00083	1
10722	Pyrene	129-00-0	N.D.	0.00083	1
GC Volatiles ECY 97-602 NWTPH-Gx			mg/kg	mg/kg	
02006	NWTPH-Gx soil C7-C12	n.a.	N.D.	1.4	28.09
GC Volatiles SW-846 8021B			mg/kg	mg/kg	
08179	Benzene	71-43-2	N.D.	0.0028	28.09
GC Petroleum Hydrocarbons ECY 97-602 NWTPH-Dx modified			mg/kg	mg/kg	
02214	DRO C12-C24 w/Si Gel	n.a.	4.1	3.8	1
02214	HRO C24-C40 w/Si Gel	n.a.	28	13	1
Wet Chemistry SM20 2540 G			%	%	
00111	Moisture	n.a.	20.1	0.50	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

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
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Sample Description: B12-3.5-4 Grab Soil Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # SW 6387554
LLI Group # 1263519
Account # 11964

Project Name: Edmonds Terminal

Collected: 08/24/2011 13:35 by DR

Chevron

6001 Bollinger Canyon Rd L4310
 San Ramon CA 94583

Submitted: 08/25/2011 09:00

Reported: 09/30/2011 11:24

UE124

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10722	PAH SIM 8270 Soil Microwave	SW-846 8270C SIM	1	11258SLE026	09/16/2011 21:19	Gregory J Drahovsky	1
10810	BNA Soil Microwave SIM PAH	SW-846 3546	1	11258SLE026	09/04/2011 07:50	Katheryne V Sponheimer	1
02006	NWTPH-Gx soil C7-C12	ECY 97-602 NWTPH-Gx	1	11249A16A	09/07/2011 14:03	Marie D John	28.09
08179	Method 8021 Soil Master	SW-846 8021B	1	11249A16A	09/07/2011 14:03	Marie D John	28.09
06647	GC-5g Field Preserved MeOH	SW-846 5035A	1	201123825371	08/24/2011 13:35	Client Supplied	n.a.
06647	GC-5g Field Preserved MeOH	SW-846 5035A	2	201123825371	08/24/2011 13:35	Client Supplied	n.a.
02214	NWTPH-Dx soil w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	112500004A	09/13/2011 09:56	Dustin A Underkoffler	1
07024	DRO Alternate Soil Extraction	SW-846 3550B	1	112500004A	09/07/2011 14:00	Wanda F Oswald	1
00111	Moisture	SM20 2540 G	1	11245820001A	09/02/2011 22:12	Scott W Freisher	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 Methanol Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # G5 6387555
LLI Group # 1263519
Account # 11964

Project Name: Edmonds Terminal

Collected: 08/24/2011

Chevron

Submitted: 08/25/2011 09:00

6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

Reported: 09/30/2011 11:24

UE1T1

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC Volatiles					
02006	NWTPH-Gx soil C7-C12	ECY 97-602 NWTPH-Gx n.a.	mg/kg N.D.	mg/kg 1.0	25
GC Volatiles					
08179	Benzene	SW-846 8021B 71-43-2	mg/kg N.D.	mg/kg 0.0020	25

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
02006	NWTPH-Gx soil C7-C12	ECY 97-602 NWTPH-Gx	1	11249A16A	09/07/2011 09:01	Marie D John	25
08179	Method 8021 Soil Master	SW-846 8021B	1	11249A16A	09/07/2011 09:01	Marie D John	25
06647	GC-5g Field Preserved MeOH	SW-846 5035A	1	201123825371	08/24/2011 00:00	Client Supplied	n.a.

Sample Description: B17-4.5-5 Grab Soil Sample
Unocal Edmonds Terminal
 11720 Unoco Road - Edmonds, WA

LLI Sample # SW 6387556
LLI Group # 1263519
Account # 11964

Project Name: Edmonds Terminal

Collected: 08/24/2011 10:31 by DR

Chevron

6001 Bollinger Canyon Rd L4310
 San Ramon CA 94583

Submitted: 08/25/2011 09:00

Reported: 09/30/2011 11:24

UE174

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS Semivolatiles SW-846 8270C SIM			mg/kg	mg/kg	
10722	Acenaphthene	83-32-9	1.0	0.042	50
10722	Acenaphthylene	208-96-8	N.D.	0.021	50
10722	Anthracene	120-12-7	6.2	0.021	50
10722	Benzo(a)anthracene	56-55-3	86	2.1	2500
10722	Benzo(a)pyrene	50-32-8	85	2.1	2500
10722	Benzo(b)fluoranthene	205-99-2	120	2.1	2500
10722	Benzo(g,h,i)perylene	191-24-2	50	2.1	2500
10722	Benzo(k)fluoranthene	207-08-9	38	2.1	2500
10722	Chrysene	218-01-9	95	1.1	2500
10722	Dibenz(a,h)anthracene	53-70-3	6.6	0.042	50
10722	Fluoranthene	206-44-0	130	2.1	2500
10722	Fluorene	86-73-7	0.92	0.042	50
10722	Indeno(1,2,3-cd)pyrene	193-39-5	48	2.1	2500
10722	1-Methylnaphthalene	90-12-0	0.29	0.042	50
10722	2-Methylnaphthalene	91-57-6	0.37	0.042	50
10722	Naphthalene	91-20-3	0.67	0.042	50
10722	Phenanthrene	85-01-8	51	2.1	2500
10722	Pyrene	129-00-0	120	2.1	2500

The GC/MS semivolatile internal standard peak areas were outside of the QC limits for both the initial injection and the re-injection. The values here are from the initial injection of the sample.

GC Volatiles ECY 97-602 NWTPH-Gx			mg/kg	mg/kg	
02006	NWTPH-Gx soil C7-C12	n.a.	170	170	3244.74
Reporting limits were raised due to sample foaming.					

GC Volatiles SW-846 8021B			mg/kg	mg/kg	
08179	Benzene	71-43-2	N.D.	0.34	3244.74
Reporting limits were raised due to sample foaming.					

GC Petroleum ECY 97-602 NWTPH-Dx			mg/kg	mg/kg	
Hydrocarbons modified					
02214	DRO C12-C24 w/Si Gel	n.a.	55	3.9	1
02214	HRO C24-C40 w/Si Gel	n.a.	43	13	1

Wet Chemistry SM20 2540 G			%	%	
00111	Moisture	n.a.	22.6	0.50	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

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.

Sample Description: B17-4.5-5 Grab Soil Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # SW 6387556
LLI Group # 1263519
Account # 11964

Project Name: Edmonds Terminal

Collected: 08/24/2011 10:31 by DR

Chevron

6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

Submitted: 08/25/2011 09:00

Reported: 09/30/2011 11:24

UE174

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10722	PAH SIM 8270 Soil Microwave	SW-846 8270C SIM	1	11258SLE026	09/18/2011 21:15	Gregory J Drahovsky	50
10722	PAH SIM 8270 Soil Microwave	SW-846 8270C SIM	1	11258SLE026	09/22/2011 12:12	Joseph M Gambler	2500
10810	BNA Soil Microwave SIM PAH	SW-846 3546	1	11258SLE026	09/04/2011 07:50	Katheryne V Sponheimer	1
02006	NWTPH-Gx soil C7-C12	ECY 97-602 NWTPH-Gx	1	11249A16A	09/07/2011 05:52	Marie D John	3244.74
08179	Method 8021 Soil Master	SW-846 8021B	1	11249A16A	09/07/2011 05:52	Marie D John	3244.74
06647	GC-5g Field Preserved MeOH	SW-846 5035A	1	201123825371	08/24/2011 10:31	Client Supplied	n.a.
06647	GC-5g Field Preserved MeOH	SW-846 5035A	2	201123825371	08/24/2011 10:31	Client Supplied	n.a.
02214	NWTPH-Dx soil w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	112500004A	09/13/2011 10:17	Dustin A Underkoffler	1
07024	DRO Alternate Soil Extraction	SW-846 3550B	1	112500004A	09/07/2011 14:00	Wanda F Oswald	1
00111	Moisture	SM20 2540 G	1	11245820001A	09/02/2011 22:12	Scott W Freisher	1

Quality Control Summary

 Client Name: Chevron
 Reported: 09/30/11 at 11:24 AM

Group Number: 1263519

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: 11258SLE026	Sample number(s): 6387546,6387548-6387549,6387551-6387554,6387556							
Acenaphthene	N.D.	0.00067	mg/kg	88		73-104		
Acenaphthylene	N.D.	0.00033	mg/kg	86		67-100		
Anthracene	N.D.	0.00033	mg/kg	91		69-107		
Benzo(a)anthracene	N.D.	0.00067	mg/kg	89		74-112		
Benzo(a)pyrene	N.D.	0.00067	mg/kg	90		70-109		
Benzo(b)fluoranthene	N.D.	0.00067	mg/kg	90		60-126		
Benzo(g,h,i)perylene	N.D.	0.00067	mg/kg	93		49-135		
Benzo(k)fluoranthene	N.D.	0.00067	mg/kg	91		65-130		
Chrysene	N.D.	0.00033	mg/kg	88		79-111		
Dibenz(a,h)anthracene	N.D.	0.00067	mg/kg	94		49-135		
Fluoranthene	N.D.	0.00067	mg/kg	97		78-114		
Fluorene	N.D.	0.00067	mg/kg	92		75-110		
Indeno(1,2,3-cd)pyrene	N.D.	0.00067	mg/kg	94		53-128		
1-Methylnaphthalene	N.D.	0.00067	mg/kg	92		72-114		
2-Methylnaphthalene	N.D.	0.00067	mg/kg	87		62-115		
Naphthalene	N.D.	0.00067	mg/kg	86		67-105		
Phenanthrene	N.D.	0.00067	mg/kg	88		76-109		
Pyrene	N.D.	0.00067	mg/kg	86		71-109		
Batch number: 11258SLF026	Sample number(s): 6387544-6387545							
Acenaphthene	N.D.	0.00067	mg/kg	91		73-104		
Acenaphthylene	N.D.	0.00033	mg/kg	94		67-100		
Anthracene	N.D.	0.00033	mg/kg	100		69-107		
Benzo(a)anthracene	N.D.	0.00067	mg/kg	94		74-112		
Benzo(a)pyrene	N.D.	0.00067	mg/kg	89		70-109		
Benzo(b)fluoranthene	N.D.	0.00067	mg/kg	97		60-126		
Benzo(g,h,i)perylene	N.D.	0.00067	mg/kg	104		49-135		
Benzo(k)fluoranthene	N.D.	0.00067	mg/kg	86		65-130		
Chrysene	N.D.	0.00033	mg/kg	91		79-111		
Dibenz(a,h)anthracene	N.D.	0.00067	mg/kg	104		49-135		
Fluoranthene	N.D.	0.00067	mg/kg	98		78-114		
Fluorene	N.D.	0.00067	mg/kg	93		75-110		
Indeno(1,2,3-cd)pyrene	N.D.	0.00067	mg/kg	103		53-128		
1-Methylnaphthalene	N.D.	0.00067	mg/kg	95		72-114		
2-Methylnaphthalene	N.D.	0.00067	mg/kg	93		62-115		
Naphthalene	N.D.	0.00067	mg/kg	93		67-105		
Phenanthrene	N.D.	0.00067	mg/kg	92		76-109		
Pyrene	N.D.	0.00067	mg/kg	90		71-109		
Batch number: 11249A16A	Sample number(s): 6387551-6387556							
Benzene	N.D.	0.0020	mg/kg	97	102	76-118	6	30
NWTPH-Gx soil C7-C12	N.D.	1.0	mg/kg	102	99	67-119	3	30
Batch number: 11249A31A	Sample number(s): 6387544-6387550							
Benzene	N.D.	0.0020	mg/kg	98	95	76-118	3	30

*- 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 Group Number: 1263519
 Reported: 09/30/11 at 11:24 AM

<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>
NWTPH-Gx soil C7-C12	N.D.	1.0	mg/kg	87	82	67-119	6	30
Batch number: 112490011A	Sample number(s): 6387544-6387553							
DRO C12-C24 w/Si Gel	N.D.	3.0	mg/kg	94		60-120		
HRO C24-C40 w/Si Gel	N.D.	10.	mg/kg					
Batch number: 112500004A	Sample number(s): 6387554, 6387556							
DRO C12-C24 w/Si Gel	N.D.	3.0	mg/kg	94		60-120		
HRO C24-C40 w/Si Gel	N.D.	10.	mg/kg					
Batch number: 11245820001A	Sample number(s): 6387544-6387554, 6387556							
Moisture				100		99-101		

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: 11258SLE026	Sample number(s): 6387546, 6387548-6387549, 6387551-6387554, 6387556 UNSPK: 6387546								
Acenaphthene	83	76	65-110	10	30				
Acenaphthylene	86	79	63-120	10	30				
Anthracene	86	78	56-121	11	30				
Benzo(a)anthracene	80	70	66-114	14	30				
Benzo(a)pyrene	77	69	57-117	12	30				
Benzo(b)fluoranthene	76	67	26-142	13	30				
Benzo(g,h,i)perylene	47	47	33-141	2	30				
Benzo(k)fluoranthene	90	78	49-145	15	30				
Chrysene	79	70	41-126	13	30				
Dibenz(a,h)anthracene	62	61	29-138	4	30				
Fluoranthene	90	81	47-135	11	30				
Fluorene	86	80	65-116	9	30				
Indeno(1,2,3-cd)pyrene	58	57	25-136	4	30				
1-Methylnaphthalene	87	81	50-118	9	30				
2-Methylnaphthalene	83	78	49-134	7	30				
Naphthalene	84	79	61-113	7	30				
Phenanthrene	83	76	37-134	10	30				
Pyrene	76	67	31-120	13	30				
Batch number: 11258SLF026	Sample number(s): 6387544-6387545 UNSPK: P58LFUS								
Acenaphthene	93	93	65-110	0	30				
Acenaphthylene	101	106	63-120	4	30				
Anthracene	100	101	56-121	2	30				
Benzo(a)anthracene	95	98	66-114	3	30				
Benzo(a)pyrene	89	93	57-117	4	30				
Benzo(b)fluoranthene	96	108	26-142	8	30				
Benzo(g,h,i)perylene	79	77	33-141	2	30				
Benzo(k)fluoranthene	77	82	49-145	5	30				
Chrysene	89	95	41-126	4	30				
Dibenz(a,h)anthracene	95	92	29-138	3	30				
Fluoranthene	101	114	47-135	8	30				
Fluorene	98	96	65-116	2	30				
Indeno(1,2,3-cd)pyrene	90	90	25-136	0	30				

*- 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

Group Number: 1263519

Reported: 09/30/11 at 11:24 AM

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</u> <u>%REC</u>	<u>MSD</u> <u>%REC</u>	<u>MS/MSD</u> <u>Limits</u>	<u>RPD</u> <u>RPD</u>	<u>RPD</u> <u>MAX</u>	<u>BKG</u> <u>Conc</u>	<u>DUP</u> <u>Conc</u>	<u>DUP</u> <u>RPD</u>	<u>Dup</u> <u>RPD</u> <u>Max</u>
1-Methylnaphthalene	97	100	50-118	3	30				
2-Methylnaphthalene	96	99	49-134	3	30				
Naphthalene	93	97	61-113	4	30				
Phenanthrene	88	95	37-134	6	30				
Pyrene	82	90	31-120	5	30				
Batch number: 112490011A	Sample number(s): 6387544-6387553 BKG: 6387544								
DRO C12-C24 w/Si Gel						90	49	58*	20
HRO C24-C40 w/Si Gel						250	140	52* (1)	20
Batch number: 112500004A	Sample number(s): 6387554,6387556 BKG: 6387554								
DRO C12-C24 w/Si Gel						3.3	N.D.	200* (1)	20
HRO C24-C40 w/Si Gel						23	12	58* (1)	20
Batch number: 11245820001A	Sample number(s): 6387544-6387554,6387556 BKG: P390710								
Moisture						18.1	16.4	9	15

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: PAH SIM 8270 Soil Microwave

Batch number: 11258SLE026

	Nitrobenzene-d5	2-Fluorobiphenyl	Terphenyl-d14
6387546	86	75	67
6387548	112	107	111
6387549	104	101	107
6387551	106	101	109
6387552	107	102	106
6387553	80	83	85
6387554	89	90	94
6387556	100	64*	393*
Blank	89	95	105
LCS	87	92	104
MS	90	90	90
MSD	91	85	84

Limits: 53-152 66-118 63-129

Analysis Name: PAH SIM 8270 Soil Microwave

Batch number: 11258SLF026

	Nitrobenzene-d5	2-Fluorobiphenyl	Terphenyl-d14
6387544	119	98	109
6387545	113	88	92
Blank	107	98	108
LCS	109	97	109
MS	122	98	108

*- 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: 09/30/11 at 11:24 AM

Group Number: 1263519

Surrogate Quality Control

MSD	125	99	109
Limits:	53-152	66-118	63-129

Analysis Name: Method 8021 Soil Master
Batch number: 11249A16A
Trifluorotoluene-F Trifluorotoluene-P

6387551	87	107
6387552	79	89
6387553	71	87
6387554	61	73
6387555	82	99
6387556	48*	57*
Blank	83	100
LCS	88	95
LCSD	87	100

Limits: 61-122 73-117

Analysis Name: Method 8021 Soil Master
Batch number: 11249A31A
Trifluorotoluene-F Trifluorotoluene-P

6387544	90	95
6387545	72	76
6387546	82	86
6387547	77	79
6387548	104	113
6387549	71	78
6387550	80	97
Blank	92	100
LCS	93	100
LCSD	87	95

Limits: 61-122 73-117

Analysis Name: NWTPH-Dx soil w/Si Gel
Batch number: 112490011A
Orthoterphenyl

6387544	124
6387545	1757*
6387546	84
6387547	71
6387548	105
6387549	1049*
6387550	102
6387551	76
6387552	80
6387553	107
Blank	112
DUP	111
LCS	126

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.

Quality Control Summary

Client Name: Chevron
Reported: 09/30/11 at 11:24 AM

Group Number: 1263519

Surrogate Quality Control

Analysis Name: NWTPH-Dx soil w/Si Gel
Batch number: 112500004A
Orthoterphenyl

6387554	118
6387556	129
Blank	118
DUP	122
LCS	126

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



Group: _____

Acct. #: 11964

For Lancaster Laboratories use only

Sample #: 6387544-56

SCR#: _____

221608

Sample Identification				Date Collected				Time Collected				Matrix		Analyses Requested												Preservative Codes		
														Preservation Codes														
Facility #: <u>Edmonds Terminal</u>												Matrix												Preservative Codes				
Site Address: <u>11720 Unico Rd, Edmonds WA</u>												Potable <input type="checkbox"/> NPDES <input type="checkbox"/>												H = HCl T = Thiosulfate				
Chevron PM: <u>Kim Jolitz</u> Lead Consultant: <u>ARCADIS</u>												Oil <input type="checkbox"/> Air <input type="checkbox"/>												N = HNO ₃ B = NaOH				
Consultant/Office: <u>ARCADIS / Seattle</u>												Total Number of Containers												S = H ₂ SO ₄ O = Other				
Consultant Prj. Mgr.: <u>Rebecca Andresen</u>												BTEX + MTBE 8021 <input type="checkbox"/> 8260 <input type="checkbox"/> Naphth <input type="checkbox"/>												<input type="checkbox"/> J value reporting needed				
Consultant Phone #: <u>206 325 5254</u> Fax #: _____												8260 full scan												<input type="checkbox"/> Must meet lowest detection limits possible for 8260 compounds				
Sampler: <u>PRMG</u>												Oxygenates												8021 MTBE Confirmation				
Service Order #: <u>180045362</u> <input type="checkbox"/> Non SAR: _____												MWTPH G												<input type="checkbox"/> Confirm MTBE + Naphthalene				
												MWTPH D												<input type="checkbox"/> Confirm highest hit by 8260				
												Lead Total <input type="checkbox"/> Diss. <input type="checkbox"/> Method _____												<input type="checkbox"/> Confirm all hits by 8260				
												VP/IEPH												<input type="checkbox"/> Run ___ oxy s on highest hit				
												NMTPH/HCl <input type="checkbox"/> quantification												<input type="checkbox"/> Run ___ oxy s on all hits				
												Benzene 8021B												Comments / Remarks <u>page 1 of 1</u> <u>PAH on hold pending DX results</u> <u>PAH extraction OK</u>				
												PAH (HOLD)																
B16-3.5-4	8/24/11	903	X	X		3				X	X																	
B16-4-4.5		855																										
B16-4.5-5		858																										
B16-6-6.5		910																										
B17-3.5-4		1043																										
B17-4-4.5		1031																										
B17-5.5-6		1036																										
B12-0.5-1		1256																										
B12-1-1.5		1302																										
B12-2.5-3		1318																										
B12-3.5-4		1335																										
Trip Blank						2																						

Turnaround Time Requested (TAT) (please circle) <input checked="" type="radio"/> STD. TAT 72 hour 48 hour <input type="radio"/> 24 hour 4 day 5 day	Relinquished by: <u>[Signature]</u>	Date: <u>8/24/11</u>	Time: <u>1600</u>	Received by: <u>FedEx</u>	Date: <u>8/24/11</u>	Time: <u>1600</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 Other _____		Received by: <u>[Signature]</u>	Date: <u>8-25-11</u>	Time: <u>900</u>
	Temperature Upon Receipt: <u>15-21</u> °C	Custody Seals Intact? <input checked="" type="radio"/> 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

September 30, 2011

Project: Edmonds Terminal

Submittal Date: 08/25/2011
Group Number: 1263520
PO Number: 0015074659
Release Number: JOLITZ
State of Sample Origin: WA

<u>Client Sample Description</u>	<u>Lancaster Labs (LLI) #</u>
B9-4.5-5 Grab Soil Sample	6387557
B9-8.5-9 Grab Soil Sample	6387558
B9-9.5-10 Grab Soil Sample	6387559
B9-10.5-11 Grab Soil Sample	6387560
B9-11-11.5 Grab Soil Sample	6387561
B9-12.5-13 Grab Soil Sample	6387562
B8-4.5-5 Grab Soil Sample	6387563
B8-7.5-8 Grab Soil Sample	6387564
B8-9.5-10 Grab Soil Sample	6387565
B8-11-11.5 Grab Soil Sample	6387566
B8-14.5-15 Grab Soil Sample	6387567
B8-13.5-14 Grab Soil Sample	6387568
B11-4.5-5 Grab Soil Sample	6387569
B11-7.5-8 Grab Soil Sample	6387570
B11-8.5-9 Grab Soil Sample	6387571
B11-9.5-10 Grab Soil Sample	6387572
B11-10-10.5 Grab Soil Sample	6387573
B11-11-11.5 Grab Soil Sample	6387574
B11-13.5-14 Grab Soil Sample	6387575
B13-4.5-5 Grab Soil Sample	6387576
B13-6-6.5 Grab Soil Sample	6387577
B13-7-7.5 Grab Soil Sample	6387578
B13-9-9.5 Grab Soil Sample	6387579
B13-10-10.5 Grab Soil Sample	6387580
B13-11.5-12 Grab Soil Sample	6387581
B15-4.5-5 Grab Soil Sample	6387582
B15-6.5-7 Grab Soil Sample	6387583
B15-8.5-9 Grab Soil Sample	6387584

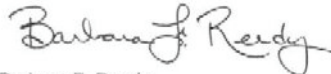
B15-11-11.5 Grab Soil Sample	6387585
B15-12-13 Grab Soil Sample	6387586
Trip Blank Methanol Sample	6387587

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,



Barbara F. Reedy
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: B9-4.5-5 Grab Soil Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # SW 6387557
LLI Group # 1263520
Account # 11964

Project Name: Edmonds Terminal

Collected: 08/23/2011 10:27 by DR

Chevron

6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

Submitted: 08/25/2011 09:00

Reported: 09/30/2011 10:59

ED9-1

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC Volatiles					
02006	NWTPH-Gx soil C7-C12	n.a.	N.D.	1.1	25.17
GC Volatiles					
08179	Benzene	71-43-2	N.D.	0.0022	25.17
GC Petroleum Hydrocarbons					
ECY 97-602 NWTPH-Dx modified					
02214	DRO C12-C24 w/Si Gel	n.a.	N.D.	3.2	1
02214	HRO C24-C40 w/Si Gel	n.a.	27	11	1
Wet Chemistry					
SM20 2540 G					
00111	Moisture	n.a.	7.7	0.50	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

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
10810	BNA Soil Microwave SIM PAH	SW-846 3546	1	11245SLD026	09/03/2011 07:40	Katheryne V Sponheimer	1
02006	NWTPH-Gx soil C7-C12	ECY 97-602 NWTPH-Gx	1	11244A31A	09/01/2011 19:23	Marie D John	25.17
08179	Method 8021 Soil Master	SW-846 8021B	1	11244A31A	09/01/2011 19:23	Marie D John	25.17
06647	GC-5g Field Preserved MeOH	SW-846 5035A	1	201123825371	08/23/2011 10:27	Client Supplied	n.a.
06647	GC-5g Field Preserved MeOH	SW-846 5035A	2	201123825371	08/23/2011 10:27	Client Supplied	n.a.
02214	NWTPH-Dx soil w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	112460029A	09/10/2011 16:47	Dustin A Underkoffler	1
07024	DRO Alternate Soil Extraction	SW-846 3550B	1	112460029A	09/06/2011 07:40	Katheryne V Sponheimer	1
00111	Moisture	SM20 2540 G	1	11245820001A	09/02/2011 22:12	Scott W Freisher	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: B9-8.5-9 Grab Soil Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # SW 6387558
LLI Group # 1263520
Account # 11964

Project Name: Edmonds Terminal

Collected: 08/23/2011 10:36 by DR

Chevron

6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

Submitted: 08/25/2011 09:00

Reported: 09/30/2011 10:59

ED9-2

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS Semivolatiles SW-846 8270C SIM			mg/kg	mg/kg	
10722	Acenaphthene	83-32-9	0.32	0.015	20
10722	Acenaphthylene	208-96-8	0.065	0.0076	20
10722	Anthracene	120-12-7	0.31	0.0076	20
10722	Benzo(a)anthracene	56-55-3	0.17	0.015	20
10722	Benzo(a)pyrene	50-32-8	0.23	0.015	20
10722	Benzo(b)fluoranthene	205-99-2	0.11	0.015	20
10722	Benzo(g,h,i)perylene	191-24-2	0.027	0.015	20
10722	Benzo(k)fluoranthene	207-08-9	0.25	0.015	20
10722	Chrysene	218-01-9	0.42	0.0076	20
10722	Dibenz(a,h)anthracene	53-70-3	0.016	0.015	20
10722	Fluoranthene	206-44-0	0.54	0.015	20
10722	Fluorene	86-73-7	0.42	0.015	20
10722	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.015	20
10722	1-Methylnaphthalene	90-12-0	0.34	0.015	20
10722	2-Methylnaphthalene	91-57-6	0.087	0.015	20
10722	Naphthalene	91-20-3	0.018	0.015	20
10722	Phenanthrene	85-01-8	0.10	0.015	20
10722	Pyrene	129-00-0	1.3	0.015	20
GC Volatiles ECY 97-602 NWTPH-Gx			mg/kg	mg/kg	
02006	NWTPH-Gx soil C7-C12	n.a.	270	11	243.86
Reporting limits were raised due to sample foaming.					
GC Volatiles SW-846 8021B			mg/kg	mg/kg	
08179	Benzene	71-43-2	N.D.	0.023	243.86
Reporting limits were raised due to sample foaming.					
GC Petroleum ECY 97-602 NWTPH-Dx			mg/kg	mg/kg	
Hydrocarbons modified					
02214	DRO C12-C24 w/Si Gel	n.a.	14,000	350	100
02214	HRO C24-C40 w/Si Gel	n.a.	6,700	1,200	100
Wet Chemistry SM20 2540 G			%	%	
00111	Moisture	n.a.	13.4	0.50	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

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.

Sample Description: B9-8.5-9 Grab Soil Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # SW 6387558
LLI Group # 1263520
Account # 11964

Project Name: Edmonds Terminal

Collected: 08/23/2011 10:36 by DR

Chevron

6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

Submitted: 08/25/2011 09:00

Reported: 09/30/2011 10:59

ED9-2

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10722	PAH SIM 8270 Soil Microwave	SW-846 8270C SIM	1	11258SLD026	09/17/2011 02:52	Gregory J Drahovsky	20
10810	BNA Soil Microwave SIM PAH	SW-846 3546	1	11258SLD026	09/03/2011 07:40	Katheryne V Sponheimer	1
02006	NWTPH-Gx soil C7-C12	ECY 97-602 NWTPH-Gx	1	11244A31A	09/02/2011 00:09	Marie D John	243.86
08179	Method 8021 Soil Master	SW-846 8021B	1	11244A31A	09/02/2011 00:09	Marie D John	243.86
06647	GC-5g Field Preserved MeOH	SW-846 5035A	1	201123825371	08/23/2011 10:36	Client Supplied	n.a.
06647	GC-5g Field Preserved MeOH	SW-846 5035A	2	201123825371	08/23/2011 10:36	Client Supplied	n.a.
02214	NWTPH-Dx soil w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	112460029A	09/14/2011 11:24	Dustin A Underkoffler	100
07024	DRO Alternate Soil Extraction	SW-846 3550B	1	112460029A	09/06/2011 07:40	Katheryne V Sponheimer	1
00111	Moisture	SM20 2540 G	1	11245820001A	09/02/2011 22:12	Scott W Freisher	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: B9-9.5-10 Grab Soil Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # SW 6387559
LLI Group # 1263520
Account # 11964

Project Name: Edmonds Terminal

Collected: 08/23/2011 10:41 by DR

Chevron

6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

Submitted: 08/25/2011 09:00

Reported: 09/30/2011 10:59

ED9-3

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS Semivolatiles SW-846 8270C SIM			mg/kg	mg/kg	
10722	Acenaphthene	83-32-9	0.0012	0.00076	1
10722	Acenaphthylene	208-96-8	0.00043	0.00038	1
10722	Anthracene	120-12-7	0.0027	0.00038	1
10722	Benzo(a)anthracene	56-55-3	0.0018	0.00076	1
10722	Benzo(a)pyrene	50-32-8	0.0018	0.00076	1
10722	Benzo(b)fluoranthene	205-99-2	0.0012	0.00076	1
10722	Benzo(g,h,i)perylene	191-24-2	N.D.	0.00076	1
10722	Benzo(k)fluoranthene	207-08-9	0.0016	0.00076	1
10722	Chrysene	218-01-9	0.0044	0.00038	1
10722	Dibenz(a,h)anthracene	53-70-3	N.D.	0.00076	1
10722	Fluoranthene	206-44-0	0.0036	0.00076	1
10722	Fluorene	86-73-7	0.0045	0.00076	1
10722	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.00076	1
10722	1-Methylnaphthalene	90-12-0	0.0010	0.00076	1
10722	2-Methylnaphthalene	91-57-6	0.0015	0.00076	1
10722	Naphthalene	91-20-3	0.0011	0.00076	1
10722	Phenanthrene	85-01-8	0.0021	0.00076	1
10722	Pyrene	129-00-0	0.0083	0.00076	1
GC Volatiles ECY 97-602 NWTPH-Gx			mg/kg	mg/kg	
02006	NWTPH-Gx soil C7-C12	n.a.	N.D.	1.2	26.85
GC Volatiles SW-846 8021B			mg/kg	mg/kg	
08179	Benzene	71-43-2	N.D.	0.0025	26.85
GC Petroleum Hydrocarbons ECY 97-602 NWTPH-Dx modified			mg/kg	mg/kg	
02214	DRO C12-C24 w/Si Gel	n.a.	23	3.5	1
02214	HRO C24-C40 w/Si Gel	n.a.	N.D.	12	1
Wet Chemistry SM20 2540 G			%	%	
00111	Moisture	n.a.	13.1	0.50	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

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
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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: B9-9.5-10 Grab Soil Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # SW 6387559
LLI Group # 1263520
Account # 11964

Project Name: Edmonds Terminal

Collected: 08/23/2011 10:41 by DR

Chevron

6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

Submitted: 08/25/2011 09:00

Reported: 09/30/2011 10:59

ED9-3

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10722	PAH SIM 8270 Soil Microwave	SW-846 8270C SIM	1	11258SLD026	09/17/2011 03:26	Gregory J Drahovsky	1
10810	BNA Soil Microwave SIM PAH	SW-846 3546	1	11258SLD026	09/03/2011 07:40	Katheryne V Sponheimer	1
02006	NWTPH-Gx soil C7-C12	ECY 97-602 NWTPH-Gx	1	11244A31A	09/01/2011 19:58	Marie D John	26.85
08179	Method 8021 Soil Master	SW-846 8021B	1	11244A31A	09/01/2011 19:58	Marie D John	26.85
06647	GC-5g Field Preserved MeOH	SW-846 5035A	1	201123825371	08/23/2011 10:41	Client Supplied	n.a.
06647	GC-5g Field Preserved MeOH	SW-846 5035A	2	201123825371	08/23/2011 10:41	Client Supplied	n.a.
02214	NWTPH-Dx soil w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	112460029A	09/10/2011 16:25	Dustin A Underkoffler	1
07024	DRO Alternate Soil Extraction	SW-846 3550B	1	112460029A	09/06/2011 07:40	Katheryne V Sponheimer	1
00111	Moisture	SM20 2540 G	1	11245820001A	09/02/2011 22:12	Scott W Freisher	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 2

Sample Description: B9-10.5-11 Grab Soil Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # SW 6387560
LLI Group # 1263520
Account # 11964

Project Name: Edmonds Terminal

Collected: 08/23/2011 10:52 by DR

Chevron

6001 Bollinger Canyon Rd L4310
 San Ramon CA 94583

Submitted: 08/25/2011 09:00

Reported: 09/30/2011 10:59

ED9-4

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS Semivolatiles SW-846 8270C SIM			mg/kg	mg/kg	
10722	Acenaphthene	83-32-9	0.047	0.016	20
10722	Acenaphthylene	208-96-8	0.016	0.0080	20
10722	Anthracene	120-12-7	0.056	0.0080	20
10722	Benzo(a)anthracene	56-55-3	0.031	0.016	20
10722	Benzo(a)pyrene	50-32-8	0.018	0.016	20
10722	Benzo(b)fluoranthene	205-99-2	N.D.	0.016	20
10722	Benzo(g,h,i)perylene	191-24-2	N.D.	0.016	20
10722	Benzo(k)fluoranthene	207-08-9	N.D.	0.016	20
10722	Chrysene	218-01-9	0.063	0.0080	20
10722	Dibenz(a,h)anthracene	53-70-3	N.D.	0.016	20
10722	Fluoranthene	206-44-0	0.052	0.016	20
10722	Fluorene	86-73-7	0.21	0.016	20
10722	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.016	20
10722	1-Methylnaphthalene	90-12-0	0.017	0.016	20
10722	2-Methylnaphthalene	91-57-6	N.D.	0.016	20
10722	Naphthalene	91-20-3	N.D.	0.016	20
10722	Phenanthrene	85-01-8	0.018	0.016	20
10722	Pyrene	129-00-0	0.093	0.016	20
GC Volatiles ECY 97-602 NWTPH-Gx			mg/kg	mg/kg	
02006	NWTPH-Gx soil C7-C12	n.a.	N.D.	1.5	31.08
GC Volatiles SW-846 8021B			mg/kg	mg/kg	
08179	Benzene	71-43-2	N.D.	0.0030	31.08
GC Petroleum Hydrocarbons ECY 97-602 NWTPH-Dx modified			mg/kg	mg/kg	
02214	DRO C12-C24 w/Si Gel	n.a.	640	18	5
02214	HRO C24-C40 w/Si Gel	n.a.	280	60	5
Wet Chemistry SM20 2540 G			%	%	
00111	Moisture	n.a.	16.3	0.50	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

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
---------	---------------	--------	---------------	------------------------	---------	-----------------

Sample Description: B9-10.5-11 Grab Soil Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # SW 6387560
LLI Group # 1263520
Account # 11964

Project Name: Edmonds Terminal

Collected: 08/23/2011 10:52 by DR

Chevron

6001 Bollinger Canyon Rd L4310
 San Ramon CA 94583

Submitted: 08/25/2011 09:00

Reported: 09/30/2011 10:59

ED9-4

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10722	PAH SIM 8270 Soil Microwave	SW-846 8270C SIM	1	11258SLD026	09/17/2011 03:59	Gregory J Drahovsky	20
10810	BNA Soil Microwave SIM PAH	SW-846 3546	1	11258SLD026	09/03/2011 07:40	Katheryne V Sponheimer	1
02006	NWTPH-Gx soil C7-C12	ECY 97-602 NWTPH-Gx	1	11244A31A	09/01/2011 20:34	Marie D John	31.08
08179	Method 8021 Soil Master	SW-846 8021B	1	11244A31A	09/01/2011 20:34	Marie D John	31.08
06647	GC-5g Field Preserved MeOH	SW-846 5035A	1	201123825371	08/23/2011 10:52	Client Supplied	n.a.
06647	GC-5g Field Preserved MeOH	SW-846 5035A	2	201123825371	08/23/2011 10:52	Client Supplied	n.a.
02214	NWTPH-Dx soil w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	112460029A	09/10/2011 18:55	Dustin A Underkoffler	5
07024	DRO Alternate Soil Extraction	SW-846 3550B	1	112460029A	09/06/2011 07:40	Katheryne V Sponheimer	1
00111	Moisture	SM20 2540 G	1	11245820001A	09/02/2011 22:12	Scott W Freisher	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: B9-11-11.5 Grab Soil Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # SW 6387561
LLI Group # 1263520
Account # 11964

Project Name: Edmonds Terminal

Collected: 08/23/2011 10:54 by DR

Chevron

6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

Submitted: 08/25/2011 09:00

Reported: 09/30/2011 10:59

ED9-5

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS Semivolatiles SW-846 8270C SIM			mg/kg	mg/kg	
10722	Acenaphthene	83-32-9	0.36	0.015	20
10722	Acenaphthylene	208-96-8	0.14	0.0075	20
10722	Anthracene	120-12-7	0.43	0.0075	20
10722	Benzo(a)anthracene	56-55-3	0.15	0.015	20
10722	Benzo(a)pyrene	50-32-8	0.11	0.015	20
10722	Benzo(b)fluoranthene	205-99-2	0.068	0.015	20
10722	Benzo(g,h,i)perylene	191-24-2	N.D.	0.015	20
10722	Benzo(k)fluoranthene	207-08-9	0.11	0.015	20
10722	Chrysene	218-01-9	0.47	0.0075	20
10722	Dibenz(a,h)anthracene	53-70-3	N.D.	0.015	20
10722	Fluoranthene	206-44-0	0.45	0.015	20
10722	Fluorene	86-73-7	1.7	0.015	20
10722	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.015	20
10722	1-Methylnaphthalene	90-12-0	1.1	0.015	20
10722	2-Methylnaphthalene	91-57-6	0.30	0.015	20
10722	Naphthalene	91-20-3	0.096	0.015	20
10722	Phenanthrene	85-01-8	1.2	0.015	20
10722	Pyrene	129-00-0	0.68	0.015	20
GC Volatiles ECY 97-602 NWTPH-Gx			mg/kg	mg/kg	
02006	NWTPH-Gx soil C7-C12	n.a.	950	240	5219.68
Reporting limits were raised due to sample foaming.					
GC Volatiles SW-846 8021B			mg/kg	mg/kg	
08179	Benzene	71-43-2	1.1	0.48	5219.68
Reporting limits were raised due to sample foaming.					
GC Petroleum ECY 97-602 NWTPH-Dx			mg/kg	mg/kg	
Hydrocarbons modified					
02214	DRO C12-C24 w/Si Gel	n.a.	11,000	140	20
02214	HRO C24-C40 w/Si Gel	n.a.	4,300	460	20
Wet Chemistry SM20 2540 G			%	%	
00111	Moisture	n.a.	12.5	0.50	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

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.

Sample Description: B9-11-11.5 Grab Soil Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # SW 6387561
LLI Group # 1263520
Account # 11964

Project Name: Edmonds Terminal

Collected: 08/23/2011 10:54 by DR

Chevron

6001 Bollinger Canyon Rd L4310
 San Ramon CA 94583

Submitted: 08/25/2011 09:00

Reported: 09/30/2011 10:59

ED9-5

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10722	PAH SIM 8270 Soil Microwave	SW-846 8270C SIM	1	11258SLD026	09/17/2011 04:32	Gregory J Drahovsky	20
10810	BNA Soil Microwave SIM PAH	SW-846 3546	1	11258SLD026	09/03/2011 07:40	Katheryne V Sponheimer	1
02006	NWTPH-Gx soil C7-C12	ECY 97-602 NWTPH-Gx	1	11244A31B	09/02/2011 18:00	Marie D John	5219.68
08179	Method 8021 Soil Master	SW-846 8021B	1	11244A31B	09/02/2011 18:00	Carrie E Miller	5219.68
06647	GC-5g Field Preserved MeOH	SW-846 5035A	1	201123825371	08/23/2011 10:54	Client Supplied	n.a.
06647	GC-5g Field Preserved MeOH	SW-846 5035A	2	201123825371	08/23/2011 10:54	Client Supplied	n.a.
02214	NWTPH-Dx soil w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	112460029A	09/14/2011 11:45	Dustin A Underkoffler	20
07024	DRO Alternate Soil Extraction	SW-846 3550B	1	112460029A	09/06/2011 07:40	Katheryne V Sponheimer	1
00111	Moisture	SM20 2540 G	1	11245820001A	09/02/2011 22:12	Scott W Freisher	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: B9-12.5-13 Grab Soil Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # SW 6387562
LLI Group # 1263520
Account # 11964

Project Name: Edmonds Terminal

Collected: 08/23/2011 10:58 by DR

Chevron

6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

Submitted: 08/25/2011 09:00

Reported: 09/30/2011 10:59

ED9-6

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS Semivolatiles SW-846 8270C SIM			mg/kg	mg/kg	
10722	Acenaphthene	83-32-9	0.0092	0.00085	1
10722	Acenaphthylene	208-96-8	0.0011	0.00043	1
10722	Anthracene	120-12-7	0.0074	0.00043	1
10722	Benzo(a)anthracene	56-55-3	N.D.	0.00085	1
10722	Benzo(a)pyrene	50-32-8	N.D.	0.00085	1
10722	Benzo(b)fluoranthene	205-99-2	N.D.	0.00085	1
10722	Benzo(g,h,i)perylene	191-24-2	N.D.	0.00085	1
10722	Benzo(k)fluoranthene	207-08-9	N.D.	0.00085	1
10722	Chrysene	218-01-9	0.0011	0.00043	1
10722	Dibenz(a,h)anthracene	53-70-3	N.D.	0.00085	1
10722	Fluoranthene	206-44-0	0.0023	0.00085	1
10722	Fluorene	86-73-7	0.049	0.00085	1
10722	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.00085	1
10722	1-Methylnaphthalene	90-12-0	0.010	0.00085	1
10722	2-Methylnaphthalene	91-57-6	0.011	0.00085	1
10722	Naphthalene	91-20-3	0.0089	0.00085	1
10722	Phenanthrene	85-01-8	0.0031	0.00085	1
10722	Pyrene	129-00-0	0.0030	0.00085	1
GC Volatiles ECY 97-602 NWTPH-Gx			mg/kg	mg/kg	
02006	NWTPH-Gx soil C7-C12	n.a.	N.D.	1.3	25.79
GC Volatiles SW-846 8021B			mg/kg	mg/kg	
08179	Benzene	71-43-2	N.D.	0.0026	25.79
The recovery for the sample surrogate is outside the QC acceptance limits as noted on the QC Summary. A reanalysis was not performed to confirm a matrix effect.					
GC Petroleum ECY 97-602 NWTPH-Dx			mg/kg	mg/kg	
Hydrocarbons modified					
02214	DRO C12-C24 w/Si Gel	n.a.	8.3	3.8	1
02214	HRO C24-C40 w/Si Gel	n.a.	N.D.	13	1
Wet Chemistry SM20 2540 G			%	%	
00111	Moisture	n.a.	22.0	0.50	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

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.

Sample Description: B9-12.5-13 Grab Soil Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # SW 6387562
LLI Group # 1263520
Account # 11964

Project Name: Edmonds Terminal

Collected: 08/23/2011 10:58 by DR

Chevron

6001 Bollinger Canyon Rd L4310
 San Ramon CA 94583

Submitted: 08/25/2011 09:00

Reported: 09/30/2011 10:59

ED9-6

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10722	PAH SIM 8270 Soil Microwave	SW-846 8270C SIM	1	11258SLD026	09/17/2011 05:06	Gregory J Drahovsky	1
10810	BNA Soil Microwave SIM PAH	SW-846 3546	1	11258SLD026	09/03/2011 07:40	Katheryne V Sponheimer	1
02006	NWTPH-Gx soil C7-C12	ECY 97-602 NWTPH-Gx	1	11244A31A	09/01/2011 21:10	Marie D John	25.79
08179	Method 8021 Soil Master	SW-846 8021B	1	11244A31A	09/01/2011 21:10	Marie D John	25.79
06647	GC-5g Field Preserved MeOH	SW-846 5035A	1	201123825371	08/23/2011 10:58	Client Supplied	n.a.
06647	GC-5g Field Preserved MeOH	SW-846 5035A	2	201123825371	08/23/2011 10:58	Client Supplied	n.a.
02214	NWTPH-Dx soil w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	112460029A	09/10/2011 16:04	Dustin A Underkoffler	1
07024	DRO Alternate Soil Extraction	SW-846 3550B	1	112460029A	09/06/2011 07:40	Katheryne V Sponheimer	1
00111	Moisture	SM20 2540 G	1	11245820001A	09/02/2011 22:12	Scott W Freisher	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: B8-4.5-5 Grab Soil Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # SW 6387563
LLI Group # 1263520
Account # 11964

Project Name: Edmonds Terminal

Collected: 08/23/2011 11:37 by DR

Chevron

6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

Submitted: 08/25/2011 09:00

Reported: 09/30/2011 10:59

ED8-1

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS Semivolatiles SW-846 8270C SIM			mg/kg	mg/kg	
10722	Acenaphthene	83-32-9	0.22	0.014	20
10722	Acenaphthylene	208-96-8	0.098	0.0072	20
10722	Anthracene	120-12-7	0.15	0.0072	20
10722	Benzo(a)anthracene	56-55-3	0.060	0.014	20
10722	Benzo(a)pyrene	50-32-8	0.088	0.014	20
10722	Benzo(b)fluoranthene	205-99-2	0.054	0.014	20
10722	Benzo(g,h,i)perylene	191-24-2	N.D.	0.014	20
10722	Benzo(k)fluoranthene	207-08-9	0.11	0.014	20
10722	Chrysene	218-01-9	0.26	0.0072	20
10722	Dibenz(a,h)anthracene	53-70-3	N.D.	0.014	20
10722	Fluoranthene	206-44-0	0.30	0.014	20
10722	Fluorene	86-73-7	0.92	0.014	20
10722	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.014	20
10722	1-Methylnaphthalene	90-12-0	2.3	0.014	20
10722	2-Methylnaphthalene	91-57-6	1.8	0.014	20
10722	Naphthalene	91-20-3	0.088	0.014	20
10722	Phenanthrene	85-01-8	3.2	0.014	20
10722	Pyrene	129-00-0	0.34	0.014	20
GC Volatiles ECY 97-602 NWTPH-Gx			mg/kg	mg/kg	
02006	NWTPH-Gx soil C7-C12	n.a.	1,000	120	2743.9
GC Volatiles SW-846 8021B			mg/kg	mg/kg	
08179	Benzene	71-43-2	N.D.	0.24	2743.9
Reporting limits were raised due to interference from the sample matrix.					
GC Petroleum ECY 97-602 NWTPH-Dx			mg/kg	mg/kg	
Hydrocarbons modified					
02214	DRO C12-C24 w/Si Gel	n.a.	11,000	320	100
02214	HRO C24-C40 w/Si Gel	n.a.	4,500	1,100	100
Wet Chemistry SM20 2540 G			%	%	
00111	Moisture	n.a.	7.7	0.50	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

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.

Sample Description: B8-4.5-5 Grab Soil Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # SW 6387563
LLI Group # 1263520
Account # 11964

Project Name: Edmonds Terminal

Collected: 08/23/2011 11:37 by DR

Chevron

6001 Bollinger Canyon Rd L4310
 San Ramon CA 94583

Submitted: 08/25/2011 09:00

Reported: 09/30/2011 10:59

ED8-1

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10722	PAH SIM 8270 Soil Microwave	SW-846 8270C SIM	1	11258SLD026	09/17/2011 05:39	Gregory J Drahovsky	20
10810	BNA Soil Microwave SIM PAH	SW-846 3546	1	11258SLD026	09/03/2011 07:40	Katheryne V Sponheimer	1
02006	NWTPH-Gx soil C7-C12	ECY 97-602 NWTPH-Gx	1	11244A31A	09/01/2011 23:34	Marie D John	2743.9
08179	Method 8021 Soil Master	SW-846 8021B	1	11244A31A	09/01/2011 23:34	Marie D John	2743.9
06647	GC-5g Field Preserved MeOH	SW-846 5035A	1	201123825371	08/23/2011 11:37	Client Supplied	n.a.
06647	GC-5g Field Preserved MeOH	SW-846 5035A	2	201123825371	08/23/2011 11:37	Client Supplied	n.a.
02214	NWTPH-Dx soil w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	112460029A	09/14/2011 09:28	Dustin A Underkoffler	100
07024	DRO Alternate Soil Extraction	SW-846 3550B	1	112460029A	09/06/2011 07:40	Katheryne V Sponheimer	1
00111	Moisture	SM20 2540 G	1	11245820002A	09/02/2011 21:47	Scott W Freisher	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: B8-7.5-8 Grab Soil Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # SW 6387564
LLI Group # 1263520
Account # 11964

Project Name: Edmonds Terminal

Collected: 08/23/2011 11:52 by DR

Chevron

6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

Submitted: 08/25/2011 09:00

Reported: 09/30/2011 10:59

ED8-2

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS Semivolatiles SW-846 8270C SIM			mg/kg	mg/kg	
10722	Acenaphthene	83-32-9	0.31	0.014	20
10722	Acenaphthylene	208-96-8	0.12	0.0068	20
10722	Anthracene	120-12-7	0.21	0.0068	20
10722	Benzo(a)anthracene	56-55-3	0.076	0.014	20
10722	Benzo(a)pyrene	50-32-8	0.055	0.014	20
10722	Benzo(b)fluoranthene	205-99-2	0.037	0.014	20
10722	Benzo(g,h,i)perylene	191-24-2	0.017	0.014	20
10722	Benzo(k)fluoranthene	207-08-9	0.059	0.014	20
10722	Chrysene	218-01-9	0.29	0.0068	20
10722	Dibenz(a,h)anthracene	53-70-3	N.D.	0.014	20
10722	Fluoranthene	206-44-0	0.33	0.014	20
10722	Fluorene	86-73-7	1.2	0.014	20
10722	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.014	20
10722	1-Methylnaphthalene	90-12-0	6.7	0.014	20
10722	2-Methylnaphthalene	91-57-6	7.4	0.14	200
10722	Naphthalene	91-20-3	0.35	0.014	20
10722	Phenanthrene	85-01-8	5.4	0.014	20
10722	Pyrene	129-00-0	0.33	0.014	20
GC Volatiles ECY 97-602 NWTPH-Gx			mg/kg	mg/kg	
02006	NWTPH-Gx soil C7-C12	n.a.	260	14	350.21
GC Volatiles SW-846 8021B			mg/kg	mg/kg	
08179	Benzene	71-43-2	N.D.	0.0029	35.02
GC Petroleum Hydrocarbons ECY 97-602 NWTPH-Dx modified			mg/kg	mg/kg	
02214	DRO C12-C24 w/Si Gel	n.a.	6,800	150	50
02214	HRO C24-C40 w/Si Gel	n.a.	2,300	510	50
Wet Chemistry SM20 2540 G			%	%	
00111	Moisture	n.a.	2.7	0.50	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

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
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Analysis Report

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

Page 2 of 2

Sample Description: B8-7.5-8 Grab Soil Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # SW 6387564
LLI Group # 1263520
Account # 11964

Project Name: Edmonds Terminal

Collected: 08/23/2011 11:52 by DR

Chevron

6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

Submitted: 08/25/2011 09:00

Reported: 09/30/2011 10:59

ED8-2

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10722	PAH SIM 8270 Soil Microwave	SW-846 8270C SIM	1	11258SLD026	09/18/2011 23:31	Gregory J Drahovsky	20
10722	PAH SIM 8270 Soil Microwave	SW-846 8270C SIM	1	11258SLD026	09/19/2011 05:41	Gregory J Drahovsky	200
10810	BNA Soil Microwave SIM PAH	SW-846 3546	1	11258SLD026	09/03/2011 07:40	Katheryne V Sponheimer	1
02006	NWTPH-Gx soil C7-C12	ECY 97-602 NWTPH-Gx	1	11249A31A	09/06/2011 21:53	Marie D John	350.21
08179	Method 8021 Soil Master	SW-846 8021B	1	11244A31A	09/01/2011 21:46	Marie D John	35.02
06647	GC-5g Field Preserved MeOH	SW-846 5035A	1	201123825371	08/23/2011 11:52	Client Supplied	n.a.
06647	GC-5g Field Preserved MeOH	SW-846 5035A	2	201123825371	08/23/2011 11:52	Client Supplied	n.a.
02214	NWTPH-Dx soil w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	112460029A	09/14/2011 09:06	Dustin A Underkoffler	50
07024	DRO Alternate Soil Extraction	SW-846 3550B	1	112460029A	09/06/2011 07:40	Katheryne V Sponheimer	1
00111	Moisture	SM20 2540 G	1	11245820002A	09/02/2011 21:47	Scott W Freisher	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: B8-9.5-10 Grab Soil Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # SW 6387565
LLI Group # 1263520
Account # 11964

Project Name: Edmonds Terminal

Collected: 08/23/2011 11:45 by DR

Chevron

6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

Submitted: 08/25/2011 09:00

Reported: 09/30/2011 10:59

ED8-3

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS Semivolatiles SW-846 8270C SIM			mg/kg	mg/kg	
10722	Acenaphthene	83-32-9	1.4	0.075	20
10722	Acenaphthylene	208-96-8	0.59	0.037	20
10722	Anthracene	120-12-7	1.0	0.037	20
10722	Benzo(a)anthracene	56-55-3	0.38	0.075	20
10722	Benzo(a)pyrene	50-32-8	0.40	0.075	20
10722	Benzo(b)fluoranthene	205-99-2	0.22	0.075	20
10722	Benzo(g,h,i)perylene	191-24-2	0.11	0.075	20
10722	Benzo(k)fluoranthene	207-08-9	0.42	0.075	20
10722	Chrysene	218-01-9	1.5	0.037	20
10722	Dibenz(a,h)anthracene	53-70-3	N.D.	0.075	20
10722	Fluoranthene	206-44-0	1.8	0.075	20
10722	Fluorene	86-73-7	6.2	0.075	20
10722	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.075	20
10722	1-Methylnaphthalene	90-12-0	28	0.075	20
10722	2-Methylnaphthalene	91-57-6	37	0.075	20
10722	Naphthalene	91-20-3	5.7	0.075	20
10722	Phenanthrene	85-01-8	23	0.075	20
10722	Pyrene	129-00-0	2.0	0.075	20

Reporting limits were raised due to interference from the sample matrix.

GC Volatiles ECY 97-602 NWTPH-Gx			mg/kg	mg/kg	
02006	NWTPH-Gx soil C7-C12	n.a.	730	59	1309.74

GC Volatiles SW-846 8021B			mg/kg	mg/kg	
08179	Benzene	71-43-2	3.2	0.12	1309.74

GC Petroleum Hydrocarbons ECY 97-602 NWTPH-Dx modified			mg/kg	mg/kg	
02214	DRO C12-C24 w/Si Gel	n.a.	50,000	3,400	500
02214	HRO C24-C40 w/Si Gel	n.a.	25,000	11,000	500

Wet Chemistry SM20 2540 G			%	%	
00111	Moisture	n.a.	11.4	0.50	1

"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.

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.

Sample Description: B8-9.5-10 Grab Soil Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # SW 6387565
LLI Group # 1263520
Account # 11964

Project Name: Edmonds Terminal

Collected: 08/23/2011 11:45 by DR

Chevron

6001 Bollinger Canyon Rd L4310
 San Ramon CA 94583

Submitted: 08/25/2011 09:00

Reported: 09/30/2011 10:59

ED8-3

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10722	PAH SIM 8270 Soil Microwave	SW-846 8270C SIM	1	11258SLD026	09/19/2011 00:04	Gregory J Drahovsky	20
10810	BNA Soil Microwave SIM PAH	SW-846 3546	1	11258SLD026	09/03/2011 07:40	Katheryne V Sponheimer	1
02006	NWTPH-Gx soil C7-C12	ECY 97-602 NWTPH-Gx	1	11249A31A	09/06/2011 22:29	Marie D John	1309.74
08179	Method 8021 Soil Master	SW-846 8021B	1	11249A31A	09/06/2011 22:29	Marie D John	1309.74
06647	GC-5g Field Preserved MeOH	SW-846 5035A	1	201123825371	08/23/2011 11:45	Client Supplied	n.a.
06647	GC-5g Field Preserved MeOH	SW-846 5035A	2	201123825371	08/23/2011 11:45	Client Supplied	n.a.
02214	NWTPH-Dx soil w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	112460029A	09/14/2011 08:45	Dustin A Underkoffler	500
07024	DRO Alternate Soil Extraction	SW-846 3550B	1	112460029A	09/06/2011 07:40	Katheryne V Sponheimer	1
00111	Moisture	SM20 2540 G	1	11245820002A	09/02/2011 21:47	Scott W Freisher	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: B8-11-11.5 Grab Soil Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # SW 6387566
LLI Group # 1263520
Account # 11964

Project Name: Edmonds Terminal

Collected: 08/23/2011 12:06 by DR

Chevron

6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

Submitted: 08/25/2011 09:00

Reported: 09/30/2011 10:59

ED8-4

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS Semivolatiles SW-846 8270C SIM			mg/kg	mg/kg	
10722	Acenaphthene	83-32-9	0.36	0.017	20
10722	Acenaphthylene	208-96-8	0.18	0.0084	20
10722	Anthracene	120-12-7	N.D.	0.0084	20
10722	Benzo(a)anthracene	56-55-3	0.11	0.017	20
10722	Benzo(a)pyrene	50-32-8	0.062	0.017	20
10722	Benzo(b)fluoranthene	205-99-2	0.033	0.017	20
10722	Benzo(g,h,i)perylene	191-24-2	N.D.	0.017	20
10722	Benzo(k)fluoranthene	207-08-9	0.083	0.017	20
10722	Chrysene	218-01-9	0.36	0.0084	20
10722	Dibenz(a,h)anthracene	53-70-3	N.D.	0.017	20
10722	Fluoranthene	206-44-0	0.28	0.017	20
10722	Fluorene	86-73-7	1.4	0.017	20
10722	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.017	20
10722	1-Methylnaphthalene	90-12-0	4.7	0.017	20
10722	2-Methylnaphthalene	91-57-6	5.3	0.017	20
10722	Naphthalene	91-20-3	0.15	0.017	20
10722	Phenanthrene	85-01-8	3.7	0.017	20
10722	Pyrene	129-00-0	0.45	0.017	20
GC Volatiles ECY 97-602 NWTPH-Gx			mg/kg	mg/kg	
02006	NWTPH-Gx soil C7-C12	n.a.	300	120	2312.99
Reporting limits were raised due to sample foaming.					
GC Volatiles SW-846 8021B			mg/kg	mg/kg	
08179	Benzene	71-43-2	0.51	0.23	2312.99
Reporting limits were raised due to sample foaming.					
GC Petroleum ECY 97-602 NWTPH-Dx			mg/kg	mg/kg	
Hydrocarbons modified					
02214	DRO C12-C24 w/Si Gel	n.a.	4,900	190	50
02214	HRO C24-C40 w/Si Gel	n.a.	3,000	630	50
Wet Chemistry SM20 2540 G			%	%	
00111	Moisture	n.a.	20.6	0.50	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

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.

Sample Description: B8-11-11.5 Grab Soil Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # SW 6387566
LLI Group # 1263520
Account # 11964

Project Name: Edmonds Terminal

Collected: 08/23/2011 12:06 by DR

Chevron

6001 Bollinger Canyon Rd L4310
 San Ramon CA 94583

Submitted: 08/25/2011 09:00

Reported: 09/30/2011 10:59

ED8-4

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10722	PAH SIM 8270 Soil Microwave	SW-846 8270C SIM	1	11258SLD026	09/21/2011 20:43	Gregory J Drahovsky	20
10810	BNA Soil Microwave SIM PAH	SW-846 3546	1	11258SLD026	09/03/2011 07:40	Katheryne V Sponheimer	1
02006	NWTPH-Gx soil C7-C12	ECY 97-602 NWTPH-Gx	1	11244A31B	09/02/2011 18:34	Carrie E Miller	2312.99
08179	Method 8021 Soil Master	SW-846 8021B	1	11244A31B	09/02/2011 18:34	Carrie E Miller	2312.99
06647	GC-5g Field Preserved MeOH	SW-846 5035A	1	201123825371	08/23/2011 12:06	Client Supplied	n.a.
06647	GC-5g Field Preserved MeOH	SW-846 5035A	2	201123825371	08/23/2011 12:06	Client Supplied	n.a.
02214	NWTPH-Dx soil w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	112460030A	09/16/2011 09:59	Carrie E Miller	50
07024	DRO Alternate Soil Extraction	SW-846 3550B	1	112460030A	09/06/2011 07:40	Katheryne V Sponheimer	1
00111	Moisture	SM20 2540 G	1	11245820002A	09/02/2011 21:47	Scott W Freisher	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: B8-14.5-15 Grab Soil Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # SW 6387567
LLI Group # 1263520
Account # 11964

Project Name: Edmonds Terminal

Collected: 08/23/2011 12:02 by DR

Chevron

6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

Submitted: 08/25/2011 09:00

Reported: 09/30/2011 10:59

ED8-5

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC Volatiles					
02006	NWTPH-Gx soil C7-C12	ECY 97-602 NWTPH-Gx n.a.	mg/kg N.D.	mg/kg 1.2	25.63
GC Volatiles					
08179	Benzene	SW-846 8021B 71-43-2	mg/kg 0.0056	mg/kg 0.0024	25.63
GC Petroleum Hydrocarbons					
ECY 97-602 NWTPH-Dx modified					
02214	DRO C12-C24 w/Si Gel	n.a.	N.D.	3.5	1
02214	HRO C24-C40 w/Si Gel	n.a.	N.D.	12	1
Wet Chemistry					
SM20 2540 G					
00111	Moisture	n.a.	% 14.6	% 0.50	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

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
10810	BNA Soil Microwave SIM PAH	SW-846 3546	1	11245SLD026	09/03/2011 07:40	Katheryne V Sponheimer	1
02006	NWTPH-Gx soil C7-C12	ECY 97-602 NWTPH-Gx	1	11244A31B	09/02/2011 14:15	Carrie E Miller	25.63
08179	Method 8021 Soil Master	SW-846 8021B	1	11244A31B	09/02/2011 14:15	Carrie E Miller	25.63
06647	GC-5g Field Preserved MeOH	SW-846 5035A	1	201123825371	08/23/2011 12:02	Client Supplied	n.a.
06647	GC-5g Field Preserved MeOH	SW-846 5035A	2	201123825371	08/23/2011 12:02	Client Supplied	n.a.
02214	NWTPH-Dx soil w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	112460030A	09/10/2011 16:25	Dustin A Underkoffler	1
07024	DRO Alternate Soil Extraction	SW-846 3550B	1	112460030A	09/06/2011 07:40	Katheryne V Sponheimer	1
00111	Moisture	SM20 2540 G	1	11245820002A	09/02/2011 21:47	Scott W Freisher	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: B8-13.5-14 Grab Soil Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # SW 6387568
LLI Group # 1263520
Account # 11964

Project Name: Edmonds Terminal

Collected: 08/23/2011 12:10 by DR

Chevron

6001 Bollinger Canyon Rd L4310
 San Ramon CA 94583

Submitted: 08/25/2011 09:00

Reported: 09/30/2011 10:59

ED8-6

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS Semivolatiles SW-846 8270C SIM			mg/kg	mg/kg	
10722	Acenaphthene	83-32-9	N.D.	0.0080	10
10722	Acenaphthylene	208-96-8	0.070	0.0040	10
10722	Anthracene	120-12-7	0.024	0.0040	10
10722	Benzo(a)anthracene	56-55-3	0.098	0.0080	10
10722	Benzo(a)pyrene	50-32-8	0.10	0.0080	10
10722	Benzo(b)fluoranthene	205-99-2	0.18	0.0080	10
10722	Benzo(g,h,i)perylene	191-24-2	0.072	0.0080	10
10722	Benzo(k)fluoranthene	207-08-9	0.077	0.0080	10
10722	Chrysene	218-01-9	0.13	0.0040	10
10722	Dibenz(a,h)anthracene	53-70-3	0.026	0.0080	10
10722	Fluoranthene	206-44-0	0.16	0.0080	10
10722	Fluorene	86-73-7	N.D.	0.0080	10
10722	Indeno(1,2,3-cd)pyrene	193-39-5	0.069	0.0080	10
10722	1-Methylnaphthalene	90-12-0	N.D.	0.0080	10
10722	2-Methylnaphthalene	91-57-6	N.D.	0.0080	10
10722	Naphthalene	91-20-3	N.D.	0.0080	10
10722	Phenanthrene	85-01-8	0.039	0.0080	10
10722	Pyrene	129-00-0	0.19	0.0080	10
GC Volatiles ECY 97-602 NWT PH-Gx			mg/kg	mg/kg	
02006	NWT PH-Gx soil C7-C12	n.a.	N.D.	1.2	24.26
GC Volatiles SW-846 8021B			mg/kg	mg/kg	
08179	Benzene	71-43-2	0.0073	0.0024	24.26
GC Petroleum Hydrocarbons ECY 97-602 NWT PH-Dx modified			mg/kg	mg/kg	
02214	DRO C12-C24 w/Si Gel	n.a.	40	3.6	1
02214	HRO C24-C40 w/Si Gel	n.a.	14	12	1
Wet Chemistry SM20 2540 G			%	%	
00111	Moisture	n.a.	17.7	0.50	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

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
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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: B8-13.5-14 Grab Soil Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # SW 6387568
LLI Group # 1263520
Account # 11964

Project Name: Edmonds Terminal

Collected: 08/23/2011 12:10 by DR

Chevron

6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

Submitted: 08/25/2011 09:00

Reported: 09/30/2011 10:59

ED8-6

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10722	PAH SIM 8270 Soil Microwave	SW-846 8270C SIM	1	11258SLF026	09/21/2011 01:29	Mark A Clark	10
10810	BNA Soil Microwave SIM PAH	SW-846 3546	1	11258SLF026	09/05/2011 10:30	Olivia Arosemena	1
02006	NWTPH-Gx soil C7-C12	ECY 97-602 NWTPH-Gx	1	11244A31B	09/02/2011 16:02	Carrie E Miller	24.26
08179	Method 8021 Soil Master	SW-846 8021B	1	11244A31B	09/02/2011 16:02	Carrie E Miller	24.26
06647	GC-5g Field Preserved MeOH	SW-846 5035A	1	201123825371	08/23/2011 12:10	Client Supplied	n.a.
06647	GC-5g Field Preserved MeOH	SW-846 5035A	2	201123825371	08/23/2011 12:10	Client Supplied	n.a.
02214	NWTPH-Dx soil w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	112460030A	09/10/2011 16:47	Dustin A Underkoffler	1
07024	DRO Alternate Soil Extraction	SW-846 3550B	1	112460030A	09/06/2011 07:40	Katheryne V Sponheimer	1
00111	Moisture	SM20 2540 G	1	11245820002A	09/02/2011 21:47	Scott W Freisher	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: B11-4.5-5 Grab Soil Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # SW 6387569
LLI Group # 1263520
Account # 11964

Project Name: Edmonds Terminal

Collected: 08/23/2011 12:58 by DR

Chevron

6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

Submitted: 08/25/2011 09:00

Reported: 09/30/2011 10:59

ED111

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS Semivolatiles SW-846 8270C SIM			mg/kg	mg/kg	
10722	Acenaphthene	83-32-9	N.D.	0.0069	10
10722	Acenaphthylene	208-96-8	0.070	0.0035	10
10722	Anthracene	120-12-7	0.033	0.0035	10
10722	Benzo(a)anthracene	56-55-3	0.16	0.0069	10
10722	Benzo(a)pyrene	50-32-8	0.17	0.0069	10
10722	Benzo(b)fluoranthene	205-99-2	0.28	0.0069	10
10722	Benzo(g,h,i)perylene	191-24-2	0.11	0.0069	10
10722	Benzo(k)fluoranthene	207-08-9	0.13	0.0069	10
10722	Chrysene	218-01-9	0.20	0.0035	10
10722	Dibenz(a,h)anthracene	53-70-3	0.032	0.0069	10
10722	Fluoranthene	206-44-0	0.33	0.0069	10
10722	Fluorene	86-73-7	0.0094	0.0069	10
10722	Indeno(1,2,3-cd)pyrene	193-39-5	0.10	0.0069	10
10722	1-Methylnaphthalene	90-12-0	N.D.	0.0069	10
10722	2-Methylnaphthalene	91-57-6	N.D.	0.0069	10
10722	Naphthalene	91-20-3	0.011	0.0069	10
10722	Phenanthrene	85-01-8	0.11	0.0069	10
10722	Pyrene	129-00-0	0.28	0.0069	10
GC Volatiles ECY 97-602 NWTPH-Gx			mg/kg	mg/kg	
02006	NWTPH-Gx soil C7-C12	n.a.	N.D.	1.3	31.85
GC Volatiles SW-846 8021B			mg/kg	mg/kg	
08179	Benzene	71-43-2	N.D.	0.0027	31.85
GC Petroleum Hydrocarbons ECY 97-602 NWTPH-Dx modified			mg/kg	mg/kg	
02214	DRO C12-C24 w/Si Gel	n.a.	360	16	5
02214	HRO C24-C40 w/Si Gel	n.a.	650	53	5
Wet Chemistry SM20 2540 G			%	%	
00111	Moisture	n.a.	5.1	0.50	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

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
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Sample Description: B11-4.5-5 Grab Soil Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # SW 6387569
LLI Group # 1263520
Account # 11964

Project Name: Edmonds Terminal

Collected: 08/23/2011 12:58 by DR

Chevron

6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

Submitted: 08/25/2011 09:00

Reported: 09/30/2011 10:59

ED111

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10722	PAH SIM 8270 Soil Microwave	SW-846 8270C SIM	1	11258SLF026	09/21/2011 02:02	Mark A Clark	10
10810	BNA Soil Microwave SIM PAH	SW-846 3546	1	11258SLF026	09/05/2011 10:30	Olivia Arosemena	1
02006	NWTPH-Gx soil C7-C12	ECY 97-602 NWTPH-Gx	1	11244A31A	09/01/2011 22:58	Marie D John	31.85
08179	Method 8021 Soil Master	SW-846 8021B	1	11244A31A	09/01/2011 22:58	Marie D John	31.85
06647	GC-5g Field Preserved MeOH	SW-846 5035A	1	201123825371	08/23/2011 12:58	Client Supplied	n.a.
06647	GC-5g Field Preserved MeOH	SW-846 5035A	2	201123825371	08/23/2011 12:58	Client Supplied	n.a.
02214	NWTPH-Dx soil w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	112460030A	09/11/2011 02:07	Dustin A Underkoffler	5
07024	DRO Alternate Soil Extraction	SW-846 3550B	1	112460030A	09/06/2011 07:40	Katheryne V Sponheimer	1
00111	Moisture	SM20 2540 G	1	11245820002A	09/02/2011 21:47	Scott W Freisher	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: B11-7.5-8 Grab Soil Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA**

**LLI Sample # SW 6387570
LLI Group # 1263520
Account # 11964**

Project Name: Edmonds Terminal

Collected: 08/23/2011 13:03 by DR

Chevron

6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

Submitted: 08/25/2011 09:00

Reported: 09/30/2011 10:59

ED112

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS Semivolatiles SW-846 8270C SIM			mg/kg	mg/kg	
10722	Acenaphthene	83-32-9	N.D.	0.00080	1
10722	Acenaphthylene	208-96-8	0.0052	0.00040	1
10722	Anthracene	120-12-7	0.0021	0.00040	1
10722	Benzo(a)anthracene	56-55-3	0.0075	0.00080	1
10722	Benzo(a)pyrene	50-32-8	0.0084	0.00080	1
10722	Benzo(b)fluoranthene	205-99-2	0.014	0.00080	1
10722	Benzo(g,h,i)perylene	191-24-2	0.0058	0.00080	1
10722	Benzo(k)fluoranthene	207-08-9	0.0064	0.00080	1
10722	Chrysene	218-01-9	0.0096	0.00040	1
10722	Dibenz(a,h)anthracene	53-70-3	0.0016	0.00080	1
10722	Fluoranthene	206-44-0	0.015	0.00080	1
10722	Fluorene	86-73-7	N.D.	0.00080	1
10722	Indeno(1,2,3-cd)pyrene	193-39-5	0.0056	0.00080	1
10722	1-Methylnaphthalene	90-12-0	N.D.	0.00080	1
10722	2-Methylnaphthalene	91-57-6	N.D.	0.00080	1
10722	Naphthalene	91-20-3	0.0016	0.00080	1
10722	Phenanthrene	85-01-8	0.0050	0.00080	1
10722	Pyrene	129-00-0	0.013	0.00080	1
GC Volatiles ECY 97-602 NWTPH-Gx			mg/kg	mg/kg	
02006	NWTPH-Gx soil C7-C12	n.a.	240	120	2561.54
Reporting limits were raised due to sample foaming.					
GC Volatiles SW-846 8021B			mg/kg	mg/kg	
08179	Benzene	71-43-2	N.D.	0.25	2561.54
Reporting limits were raised due to sample foaming.					
GC Petroleum ECY 97-602 NWTPH-Dx			mg/kg	mg/kg	
Hydrocarbons modified					
02214	DRO C12-C24 w/Si Gel	n.a.	24,000	360	50
02214	HRO C24-C40 w/Si Gel	n.a.	11,000	1,200	50
Due to the nature of the sample extract matrix, the extract could only be concentrated to a final volume of 10 ml instead of the usual volume of 5 ml. The reporting limits were raised accordingly.					
Wet Chemistry SM20 2540 G			%	%	
00111	Moisture	n.a.	17.7	0.50	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

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.

Sample Description: B11-7.5-8 Grab Soil Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # SW 6387570
LLI Group # 1263520
Account # 11964

Project Name: Edmonds Terminal

Collected: 08/23/2011 13:03 by DR

Chevron

6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

Submitted: 08/25/2011 09:00

Reported: 09/30/2011 10:59

ED112

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10722	PAH SIM 8270 Soil Microwave	SW-846 8270C SIM	1	11258SLF026	09/22/2011 03:52	Mark A Clark	1
10810	BNA Soil Microwave SIM PAH	SW-846 3546	1	11258SLF026	09/05/2011 10:30	Olivia Arosemena	1
02006	NWTPH-Gx soil C7-C12	ECY 97-602 NWTPH-Gx	1	11249A31A	09/06/2011 23:04	Marie D John	2561.54
08179	Method 8021 Soil Master	SW-846 8021B	1	11249A31A	09/06/2011 23:04	Marie D John	2561.54
06647	GC-5g Field Preserved MeOH	SW-846 5035A	1	201123825371	08/23/2011 13:03	Client Supplied	n.a.
06647	GC-5g Field Preserved MeOH	SW-846 5035A	2	201123825371	08/23/2011 13:03	Client Supplied	n.a.
02214	NWTPH-Dx soil w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	112460030A	09/16/2011 10:42	Carrie E Miller	50
07024	DRO Alternate Soil Extraction	SW-846 3550B	1	112460030A	09/06/2011 07:40	Katheryne V Sponheimer	1
00111	Moisture	SM20 2540 G	1	11245820002A	09/02/2011 21:47	Scott W Freisher	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: B11-8.5-9 Grab Soil Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # SW 6387571
LLI Group # 1263520
Account # 11964

Project Name: Edmonds Terminal

Collected: 08/23/2011 13:05 by DR

Chevron

6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

Submitted: 08/25/2011 09:00

Reported: 09/30/2011 10:59

ED113

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS Semivolatiles SW-846 8270C SIM			mg/kg	mg/kg	
10722	Acenaphthene	83-32-9	N.D.	0.00097	1
10722	Acenaphthylene	208-96-8	0.0050	0.00048	1
10722	Anthracene	120-12-7	0.0025	0.00048	1
10722	Benzo(a)anthracene	56-55-3	0.0071	0.00097	1
10722	Benzo(a)pyrene	50-32-8	0.0084	0.00097	1
10722	Benzo(b)fluoranthene	205-99-2	0.014	0.00097	1
10722	Benzo(g,h,i)perylene	191-24-2	0.0054	0.00097	1
10722	Benzo(k)fluoranthene	207-08-9	0.0072	0.00097	1
10722	Chrysene	218-01-9	0.011	0.00048	1
10722	Dibenz(a,h)anthracene	53-70-3	0.0015	0.00097	1
10722	Fluoranthene	206-44-0	0.017	0.00097	1
10722	Fluorene	86-73-7	N.D.	0.00097	1
10722	Indeno(1,2,3-cd)pyrene	193-39-5	0.0053	0.00097	1
10722	1-Methylnaphthalene	90-12-0	N.D.	0.00097	1
10722	2-Methylnaphthalene	91-57-6	0.0011	0.00097	1
10722	Naphthalene	91-20-3	0.0020	0.00097	1
10722	Phenanthrene	85-01-8	0.0071	0.00097	1
10722	Pyrene	129-00-0	0.016	0.00097	1
GC Volatiles ECY 97-602 NWTPH-Gx			mg/kg	mg/kg	
02006	NWTPH-Gx soil C7-C12	n.a.	N.D.	75	1264.7
Reporting limits were raised due to sample foaming.					
GC Volatiles SW-846 8021B			mg/kg	mg/kg	
08179	Benzene	71-43-2	N.D.	0.15	1264.7
Reporting limits were raised due to sample foaming.					
GC Petroleum ECY 97-602 NWTPH-Dx			mg/kg	mg/kg	
Hydrocarbons modified					
02214	DRO C12-C24 w/Si Gel	n.a.	7.5	4.4	1
02214	HRO C24-C40 w/Si Gel	n.a.	N.D.	15	1
Wet Chemistry SM20 2540 G			%	%	
00111	Moisture	n.a.	32.3	0.50	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

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.



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: B11-8.5-9 Grab Soil Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # SW 6387571
LLI Group # 1263520
Account # 11964

Project Name: Edmonds Terminal

Collected: 08/23/2011 13:05 by DR

Chevron

6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

Submitted: 08/25/2011 09:00

Reported: 09/30/2011 10:59

ED113

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10722	PAH SIM 8270 Soil Microwave	SW-846 8270C SIM	1	11258SLF026	09/21/2011 02:35	Mark A Clark	1
10810	BNA Soil Microwave SIM PAH	SW-846 3546	1	11258SLF026	09/05/2011 10:30	Olivia Arosemena	1
02006	NWTPH-Gx soil C7-C12	ECY 97-602 NWTPH-Gx	1	11244A31B	09/02/2011 19:14	Carrie E Miller	1264.7
08179	Method 8021 Soil Master	SW-846 8021B	1	11244A31B	09/02/2011 19:14	Carrie E Miller	1264.7
06647	GC-5g Field Preserved MeOH	SW-846 5035A	1	201123825371	08/23/2011 13:05	Client Supplied	n.a.
06647	GC-5g Field Preserved MeOH	SW-846 5035A	2	201123825371	08/23/2011 13:05	Client Supplied	n.a.
02214	NWTPH-Dx soil w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	112460030A	09/10/2011 17:30	Dustin A Underkoffler	1
07024	DRO Alternate Soil Extraction	SW-846 3550B	1	112460030A	09/06/2011 07:40	Katheryne V Sponheimer	1
00111	Moisture	SM20 2540 G	1	11245820002A	09/02/2011 21:47	Scott W Freisher	1

Sample Description: B11-9.5-10 Grab Soil Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # SW 6387572
LLI Group # 1263520
Account # 11964

Project Name: Edmonds Terminal

Collected: 08/23/2011 13:08 by DR

Chevron

6001 Bollinger Canyon Rd L4310
 San Ramon CA 94583

Submitted: 08/25/2011 09:00

Reported: 09/30/2011 10:59

ED114

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS Semivolatiles SW-846 8270C SIM			mg/kg	mg/kg	
10722	Acenaphthene	83-32-9	N.D.	0.040	10
10722	Acenaphthylene	208-96-8	0.68	0.020	10
10722	Anthracene	120-12-7	0.22	0.020	10
10722	Benzo(a)anthracene	56-55-3	0.93	0.040	10
10722	Benzo(a)pyrene	50-32-8	1.1	0.040	10
10722	Benzo(b)fluoranthene	205-99-2	2.1	0.040	10
10722	Benzo(g,h,i)perylene	191-24-2	0.55	0.040	10
10722	Benzo(k)fluoranthene	207-08-9	0.73	0.040	10
10722	Chrysene	218-01-9	1.3	0.020	10
10722	Dibenz(a,h)anthracene	53-70-3	0.21	0.040	10
10722	Fluoranthene	206-44-0	1.0	0.040	10
10722	Fluorene	86-73-7	0.051	0.040	10
10722	Indeno(1,2,3-cd)pyrene	193-39-5	0.57	0.040	10
10722	1-Methylnaphthalene	90-12-0	N.D.	0.040	10
10722	2-Methylnaphthalene	91-57-6	0.053	0.040	10
10722	Naphthalene	91-20-3	0.048	0.040	10
10722	Phenanthrene	85-01-8	0.20	0.040	10
10722	Pyrene	129-00-0	1.8	0.040	10

Reporting limits were raised due to interference from the sample matrix.

GC Volatiles ECY 97-602 NWTPH-Gx			mg/kg	mg/kg	
02006	NWTPH-Gx soil C7-C12	n.a.	N.D.	1.3	27.65

GC Volatiles SW-846 8021B			mg/kg	mg/kg	
08179	Benzene	71-43-2	0.0034	0.0027	27.65

GC Petroleum ECY 97-602 NWTPH-Dx			mg/kg	mg/kg	
Hydrocarbons modified					
02214	DRO C12-C24 w/Si Gel	n.a.	5.3	3.6	1
02214	HRO C24-C40 w/Si Gel	n.a.	N.D.	12	1

Wet Chemistry SM20 2540 G			%	%	
00111	Moisture	n.a.	17.3	0.50	1

"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.

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.



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: B11-9.5-10 Grab Soil Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # SW 6387572
LLI Group # 1263520
Account # 11964

Project Name: Edmonds Terminal

Collected: 08/23/2011 13:08 by DR

Chevron

6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

Submitted: 08/25/2011 09:00

Reported: 09/30/2011 10:59

ED114

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10722	PAH SIM 8270 Soil Microwave	SW-846 8270C SIM	1	11258SLF026	09/21/2011 03:08	Mark A Clark	10
10810	BNA Soil Microwave SIM PAH	SW-846 3546	1	11258SLF026	09/05/2011 10:30	Olivia Arosemena	1
02006	NWTPH-Gx soil C7-C12	ECY 97-602 NWTPH-Gx	1	11244A31B	09/02/2011 14:49	Carrie E Miller	27.65
08179	Method 8021 Soil Master	SW-846 8021B	1	11244A31B	09/02/2011 14:49	Carrie E Miller	27.65
06647	GC-5g Field Preserved MeOH	SW-846 5035A	1	201123825371	08/23/2011 13:08	Client Supplied	n.a.
06647	GC-5g Field Preserved MeOH	SW-846 5035A	2	201123825371	08/23/2011 13:08	Client Supplied	n.a.
02214	NWTPH-Dx soil w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	112460030A	09/10/2011 17:08	Dustin A Underkoffler	1
07024	DRO Alternate Soil Extraction	SW-846 3550B	1	112460030A	09/06/2011 07:40	Katheryne V Sponheimer	1
00111	Moisture	SM20 2540 G	1	11245820002A	09/02/2011 21:47	Scott W Freisher	1

Sample Description: B11-10-10.5 Grab Soil Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # SW 6387573
LLI Group # 1263520
Account # 11964

Project Name: Edmonds Terminal

Collected: 08/23/2011 13:20 by DR

Chevron

6001 Bollinger Canyon Rd L4310
 San Ramon CA 94583

Submitted: 08/25/2011 09:00

Reported: 09/30/2011 10:59

ED115

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS Semivolatiles SW-846 8270C SIM			mg/kg	mg/kg	
10722	Acenaphthene	83-32-9	0.039	0.016	20
10722	Acenaphthylene	208-96-8	2.6	0.0080	20
10722	Anthracene	120-12-7	0.69	0.0080	20
10722	Benzo(a)anthracene	56-55-3	0.74	0.016	20
10722	Benzo(a)pyrene	50-32-8	2.7	0.016	20
10722	Benzo(b)fluoranthene	205-99-2	3.7	0.016	20
10722	Benzo(g,h,i)perylene	191-24-2	1.3	0.016	20
10722	Benzo(k)fluoranthene	207-08-9	1.3	0.016	20
10722	Chrysene	218-01-9	0.95	0.0080	20
10722	Dibenz(a,h)anthracene	53-70-3	0.43	0.016	20
10722	Fluoranthene	206-44-0	0.25	0.016	20
10722	Fluorene	86-73-7	0.15	0.016	20
10722	Indeno(1,2,3-cd)pyrene	193-39-5	1.1	0.016	20
10722	1-Methylnaphthalene	90-12-0	N.D.	0.016	20
10722	2-Methylnaphthalene	91-57-6	0.020	0.016	20
10722	Naphthalene	91-20-3	0.022	0.016	20
10722	Phenanthrene	85-01-8	0.041	0.016	20
10722	Pyrene	129-00-0	1.4	0.016	20
GC Volatiles ECY 97-602 NWTPH-Gx			mg/kg	mg/kg	
02006	NWTPH-Gx soil C7-C12	n.a.	150	52	1057.74
Reporting limits were raised due to sample foaming.					
GC Volatiles SW-846 8021B			mg/kg	mg/kg	
08179	Benzene	71-43-2	N.D.	0.10	1057.74
Reporting limits were raised due to sample foaming.					
GC Petroleum ECY 97-602 NWTPH-Dx			mg/kg	mg/kg	
Hydrocarbons modified					
02214	DRO C12-C24 w/Si Gel	n.a.	25,000	360	50
02214	HRO C24-C40 w/Si Gel	n.a.	12,000	1,200	50
Due to the nature of the sample extract matrix, the extract could only be concentrated to a final volume of 10 ml instead of the usual volume of 5 ml. The reporting limits were raised accordingly.					
Wet Chemistry SM20 2540 G			%	%	
00111	Moisture	n.a.	17.9	0.50	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

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.



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: B11-10-10.5 Grab Soil Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # SW 6387573
LLI Group # 1263520
Account # 11964

Project Name: Edmonds Terminal

Collected: 08/23/2011 13:20 by DR

Chevron

6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

Submitted: 08/25/2011 09:00

Reported: 09/30/2011 10:59

ED115

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10722	PAH SIM 8270 Soil Microwave	SW-846 8270C SIM	1	11258SLF026	09/22/2011 06:07	Mark A Clark	20
10810	BNA Soil Microwave SIM PAH	SW-846 3546	1	11258SLF026	09/05/2011 10:30	Olivia Arosemena	1
02006	NWTPH-Gx soil C7-C12	ECY 97-602 NWTPH-Gx	1	11244A31B	09/02/2011 20:32	Carrie E Miller	1057.74
08179	Method 8021 Soil Master	SW-846 8021B	1	11244A31B	09/02/2011 20:32	Carrie E Miller	1057.74
06647	GC-5g Field Preserved MeOH	SW-846 5035A	1	201123825371	08/23/2011 13:20	Client Supplied	n.a.
06647	GC-5g Field Preserved MeOH	SW-846 5035A	2	201123825371	08/23/2011 13:20	Client Supplied	n.a.
02214	NWTPH-Dx soil w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	112460030A	09/16/2011 11:46	Carrie E Miller	50
07024	DRO Alternate Soil Extraction	SW-846 3550B	1	112460030A	09/06/2011 07:40	Katheryne V Sponheimer	1
00111	Moisture	SM20 2540 G	1	11245820002A	09/02/2011 21:47	Scott W Freisher	1

Sample Description: B11-11-11.5 Grab Soil Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # SW 6387574
LLI Group # 1263520
Account # 11964

Project Name: Edmonds Terminal

Collected: 08/23/2011 13:29 by DR

Chevron

6001 Bollinger Canyon Rd L4310
 San Ramon CA 94583

Submitted: 08/25/2011 09:00

Reported: 09/30/2011 10:59

ED116

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS Semivolatiles SW-846 8270C SIM			mg/kg	mg/kg	
10722	Acenaphthene	83-32-9	0.020	0.010	10
10722	Acenaphthylene	208-96-8	0.0068	0.0050	10
10722	Anthracene	120-12-7	N.D.	0.0050	10
10722	Benzo(a)anthracene	56-55-3	0.014	0.010	10
10722	Benzo(a)pyrene	50-32-8	N.D.	0.010	10
10722	Benzo(b)fluoranthene	205-99-2	0.014	0.010	10
10722	Benzo(g,h,i)perylene	191-24-2	N.D.	0.010	10
10722	Benzo(k)fluoranthene	207-08-9	N.D.	0.010	10
10722	Chrysene	218-01-9	0.048	0.0050	10
10722	Dibenz(a,h)anthracene	53-70-3	N.D.	0.010	10
10722	Fluoranthene	206-44-0	0.039	0.010	10
10722	Fluorene	86-73-7	0.10	0.010	10
10722	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.010	10
10722	1-Methylnaphthalene	90-12-0	0.11	0.010	10
10722	2-Methylnaphthalene	91-57-6	0.10	0.010	10
10722	Naphthalene	91-20-3	0.028	0.010	10
10722	Phenanthrene	85-01-8	0.27	0.010	10
10722	Pyrene	129-00-0	0.062	0.010	10
GC Volatiles ECY 97-602 NWTPH-Gx			mg/kg	mg/kg	
02006	NWTPH-Gx soil C7-C12	n.a.	N.D.	2.1	34.63
GC Volatiles SW-846 8021B			mg/kg	mg/kg	
08179	Benzene	71-43-2	N.D.	0.0042	34.63
The recovery for the sample surrogate is outside the QC acceptance limits as noted on the QC Summary. A reanalysis was not performed to confirm a matrix effect.					
GC Petroleum ECY 97-602 NWTPH-Dx			mg/kg	mg/kg	
Hydrocarbons modified					
02214	DRO C12-C24 w/Si Gel	n.a.	310	4.5	1
02214	HRO C24-C40 w/Si Gel	n.a.	150	15	1
Wet Chemistry SM20 2540 G			%	%	
00111	Moisture	n.a.	34.1	0.50	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

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.



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: B11-11-11.5 Grab Soil Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # SW 6387574
LLI Group # 1263520
Account # 11964

Project Name: Edmonds Terminal

Collected: 08/23/2011 13:29 by DR

Chevron

6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

Submitted: 08/25/2011 09:00

Reported: 09/30/2011 10:59

ED116

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10722	PAH SIM 8270 Soil Microwave	SW-846 8270C SIM	1	11258SLF026	09/21/2011 03:41	Mark A Clark	10
10810	BNA Soil Microwave SIM PAH	SW-846 3546	1	11258SLF026	09/05/2011 10:30	Olivia Arosemena	1
02006	NWTPH-Gx soil C7-C12	ECY 97-602 NWTPH-Gx	1	11244A31B	09/02/2011 16:35	Carrie E Miller	34.63
08179	Method 8021 Soil Master	SW-846 8021B	1	11244A31B	09/02/2011 16:35	Carrie E Miller	34.63
06647	GC-5g Field Preserved MeOH	SW-846 5035A	1	201123825371	08/23/2011 13:29	Client Supplied	n.a.
06647	GC-5g Field Preserved MeOH	SW-846 5035A	2	201123825371	08/23/2011 13:29	Client Supplied	n.a.
02214	NWTPH-Dx soil w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	112460030A	09/10/2011 17:51	Dustin A Underkoffler	1
07024	DRO Alternate Soil Extraction	SW-846 3550B	1	112460030A	09/06/2011 07:40	Katheryne V Sponheimer	1
00111	Moisture	SM20 2540 G	1	11245820002A	09/02/2011 21:47	Scott W Freisher	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: B11-13.5-14 Grab Soil Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # SW 6387575
LLI Group # 1263520
Account # 11964

Project Name: Edmonds Terminal

Collected: 08/23/2011 13:30 by DR

Chevron

6001 Bollinger Canyon Rd L4310
 San Ramon CA 94583

Submitted: 08/25/2011 09:00

Reported: 09/30/2011 10:59

ED117

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC Volatiles					
02006	NWTPH-Gx soil C7-C12	n.a.	N.D.	1	21.01
GC Volatiles					
08179	Benzene	71-43-2	N.D.	0.0020	21.01
GC Petroleum Hydrocarbons					
ECY 97-602 NWTPH-Dx modified					
02214	DRO C12-C24 w/Si Gel	n.a.	N.D.	3.5	1
02214	HRO C24-C40 w/Si Gel	n.a.	N.D.	12	1
Wet Chemistry					
SM20 2540 G					
00111	Moisture	n.a.	14.9	0.50	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

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
10810	BNA Soil Microwave SIM PAH	SW-846 3546	1	11246SLG026	09/05/2011 10:30	Olivia Arosemena	1
02006	NWTPH-Gx soil C7-C12	ECY 97-602 NWTPH-Gx	1	11244A31B	09/02/2011 15:28	Carrie E Miller	21.01
08179	Method 8021 Soil Master	SW-846 8021B	1	11244A31B	09/02/2011 15:28	Carrie E Miller	21.01
06647	GC-5g Field Preserved MeOH	SW-846 5035A	1	201123825371	08/23/2011 13:30	Client Supplied	n.a.
06647	GC-5g Field Preserved MeOH	SW-846 5035A	2	201123825371	08/23/2011 13:30	Client Supplied	n.a.
02214	NWTPH-Dx soil w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	112460030A	09/10/2011 16:04	Dustin A Underkoffler	1
07024	DRO Alternate Soil Extraction	SW-846 3550B	1	112460030A	09/06/2011 07:40	Katheryne V Sponheimer	1
00111	Moisture	SM20 2540 G	1	11245820002A	09/02/2011 21:47	Scott W Freisher	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: B13-4.5-5 Grab Soil Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # SW 6387576
LLI Group # 1263520
Account # 11964

Project Name: Edmonds Terminal

Collected: 08/23/2011 14:43 by DR

Chevron

6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

Submitted: 08/25/2011 09:00

Reported: 09/30/2011 10:59

ED131

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS Semivolatiles SW-846 8270C SIM			mg/kg	mg/kg	
10722	Acenaphthene	83-32-9	N.D.	0.00072	1
10722	Acenaphthylene	208-96-8	0.0041	0.00036	1
10722	Anthracene	120-12-7	0.0040	0.00036	1
10722	Benzo(a)anthracene	56-55-3	0.0033	0.00072	1
10722	Benzo(a)pyrene	50-32-8	0.0027	0.00072	1
10722	Benzo(b)fluoranthene	205-99-2	0.0091	0.00072	1
10722	Benzo(g,h,i)perylene	191-24-2	0.0026	0.00072	1
10722	Benzo(k)fluoranthene	207-08-9	0.0028	0.00072	1
10722	Chrysene	218-01-9	0.0095	0.00036	1
10722	Dibenz(a,h)anthracene	53-70-3	0.00074	0.00072	1
10722	Fluoranthene	206-44-0	0.011	0.00072	1
10722	Fluorene	86-73-7	0.0017	0.00072	1
10722	Indeno(1,2,3-cd)pyrene	193-39-5	0.0022	0.00072	1
10722	1-Methylnaphthalene	90-12-0	0.0062	0.00072	1
10722	2-Methylnaphthalene	91-57-6	0.0086	0.00072	1
10722	Naphthalene	91-20-3	0.011	0.00072	1
10722	Phenanthrene	85-01-8	0.014	0.00072	1
10722	Pyrene	129-00-0	0.011	0.00072	1
GC Volatiles ECY 97-602 NWTPH-Gx			mg/kg	mg/kg	
02006	NWTPH-Gx soil C7-C12	n.a.	N.D.	12	279.1
Reporting limits were raised due to sample foaming.					
GC Volatiles SW-846 8021B			mg/kg	mg/kg	
08179	Benzene	71-43-2	N.D.	0.025	279.1
Reporting limits were raised due to sample foaming.					
GC Petroleum ECY 97-602 NWTPH-Dx			mg/kg	mg/kg	
Hydrocarbons modified					
02214	DRO C12-C24 w/Si Gel	n.a.	11	3.3	1
02214	HRO C24-C40 w/Si Gel	n.a.	64	11	1
Wet Chemistry SM20 2540 G			%	%	
00111	Moisture	n.a.	9.2	0.50	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

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.



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: B13-4.5-5 Grab Soil Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # SW 6387576
LLI Group # 1263520
Account # 11964

Project Name: Edmonds Terminal

Collected: 08/23/2011 14:43 by DR

Chevron

6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

Submitted: 08/25/2011 09:00

Reported: 09/30/2011 10:59

ED131

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10722	PAH SIM 8270 Soil Microwave	SW-846 8270C SIM	1	11258SLF026	09/21/2011 05:54	Mark A Clark	1
10810	BNA Soil Microwave SIM PAH	SW-846 3546	1	11258SLF026	09/05/2011 10:30	Olivia Arosemena	1
02006	NWTPH-Gx soil C7-C12	ECY 97-602 NWTPH-Gx	1	11244A31B	09/02/2011 17:19	Carrie E Miller	279.1
08179	Method 8021 Soil Master	SW-846 8021B	1	11244A31B	09/02/2011 17:19	Carrie E Miller	279.1
06647	GC-5g Field Preserved MeOH	SW-846 5035A	1	201123825371	08/23/2011 14:43	Client Supplied	n.a.
06647	GC-5g Field Preserved MeOH	SW-846 5035A	2	201123825371	08/23/2011 14:43	Client Supplied	n.a.
02214	NWTPH-Dx soil w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	112460031A	09/10/2011 22:08	Dustin A Underkoffler	1
07024	DRO Alternate Soil Extraction	SW-846 3550B	1	112460031A	09/06/2011 07:40	Katheryne V Sponheimer	1
00111	Moisture	SM20 2540 G	1	11245820003A	09/02/2011 20:42	Scott W Freisher	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: B13-6-6.5 Grab Soil Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # SW 6387577
LLI Group # 1263520
Account # 11964

Project Name: Edmonds Terminal

Collected: 08/23/2011 15:04 by DR

Chevron

6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

Submitted: 08/25/2011 09:00

Reported: 09/30/2011 10:59

ED132

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS Semivolatiles SW-846 8270C SIM			mg/kg	mg/kg	
10722	Acenaphthene	83-32-9	N.D.	0.0081	10
10722	Acenaphthylene	208-96-8	0.023	0.0040	10
10722	Anthracene	120-12-7	0.020	0.0040	10
10722	Benzo(a)anthracene	56-55-3	0.023	0.0081	10
10722	Benzo(a)pyrene	50-32-8	0.025	0.0081	10
10722	Benzo(b)fluoranthene	205-99-2	0.044	0.0081	10
10722	Benzo(g,h,i)perylene	191-24-2	0.015	0.0081	10
10722	Benzo(k)fluoranthene	207-08-9	0.018	0.0081	10
10722	Chrysene	218-01-9	0.051	0.0040	10
10722	Dibenz(a,h)anthracene	53-70-3	N.D.	0.0081	10
10722	Fluoranthene	206-44-0	0.075	0.0081	10
10722	Fluorene	86-73-7	0.016	0.0081	10
10722	Indeno(1,2,3-cd)pyrene	193-39-5	0.013	0.0081	10
10722	1-Methylnaphthalene	90-12-0	0.047	0.0081	10
10722	2-Methylnaphthalene	91-57-6	0.053	0.0081	10
10722	Naphthalene	91-20-3	0.11	0.0081	10
10722	Phenanthrene	85-01-8	0.079	0.0081	10
10722	Pyrene	129-00-0	0.085	0.0081	10
GC Volatiles ECY 97-602 NWTPH-Gx			mg/kg	mg/kg	
02006	NWTPH-Gx soil C7-C12	n.a.	N.D.	15	311.62
Reporting limits were raised due to sample foaming.					
GC Volatiles SW-846 8021B			mg/kg	mg/kg	
08179	Benzene	71-43-2	N.D.	0.031	311.62
Reporting limits were raised due to sample foaming.					
GC Petroleum ECY 97-602 NWTPH-Dx			mg/kg	mg/kg	
Hydrocarbons modified					
02214	DRO C12-C24 w/Si Gel	n.a.	110	18	5
02214	HRO C24-C40 w/Si Gel	n.a.	250	62	5
Wet Chemistry SM20 2540 G			%	%	
00111	Moisture	n.a.	18.9	0.50	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

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.



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: B13-6-6.5 Grab Soil Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # SW 6387577
LLI Group # 1263520
Account # 11964

Project Name: Edmonds Terminal

Collected: 08/23/2011 15:04 by DR

Chevron

6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

Submitted: 08/25/2011 09:00

Reported: 09/30/2011 10:59

ED132

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10722	PAH SIM 8270 Soil Microwave	SW-846 8270C SIM	1	11258SLF026	09/21/2011 04:47	Mark A Clark	10
10810	BNA Soil Microwave SIM PAH	SW-846 3546	1	11258SLF026	09/05/2011 10:30	Olivia Arosemena	1
02006	NWTPH-Gx soil C7-C12	ECY 97-602 NWTPH-Gx	1	11249A31A	09/06/2011 11:22	Marie D John	311.62
08179	Method 8021 Soil Master	SW-846 8021B	1	11249A31A	09/06/2011 11:22	Marie D John	311.62
06647	GC-5g Field Preserved MeOH	SW-846 5035A	1	201123825371	08/23/2011 15:04	Client Supplied	n.a.
06647	GC-5g Field Preserved MeOH	SW-846 5035A	2	201123825371	08/23/2011 15:04	Client Supplied	n.a.
02214	NWTPH-Dx soil w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	112460031A	09/10/2011 23:37	Dustin A Underkoffler	5
07024	DRO Alternate Soil Extraction	SW-846 3550B	1	112460031A	09/06/2011 07:40	Katheryne V Sponheimer	1
00111	Moisture	SM20 2540 G	1	11245820003A	09/02/2011 20:42	Scott W Freisher	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: B13-7-7.5 Grab Soil Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # SW 6387578
LLI Group # 1263520
Account # 11964

Project Name: Edmonds Terminal

Collected: 08/23/2011 15:10 by DR

Chevron

6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

Submitted: 08/25/2011 09:00

Reported: 09/30/2011 10:59

ED133

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS Semivolatiles SW-846 8270C SIM			mg/kg	mg/kg	
10722	Acenaphthene	83-32-9	0.037	0.0097	10
10722	Acenaphthylene	208-96-8	0.026	0.0048	10
10722	Anthracene	120-12-7	0.070	0.0048	10
10722	Benzo(a)anthracene	56-55-3	0.070	0.0097	10
10722	Benzo(a)pyrene	50-32-8	0.031	0.0097	10
10722	Benzo(b)fluoranthene	205-99-2	0.12	0.0097	10
10722	Benzo(g,h,i)perylene	191-24-2	0.012	0.0097	10
10722	Benzo(k)fluoranthene	207-08-9	N.D.	0.0097	10
10722	Chrysene	218-01-9	0.23	0.0048	10
10722	Dibenz(a,h)anthracene	53-70-3	N.D.	0.0097	10
10722	Fluoranthene	206-44-0	0.099	0.0097	10
10722	Fluorene	86-73-7	0.13	0.0097	10
10722	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.0097	10
10722	1-Methylnaphthalene	90-12-0	0.079	0.0097	10
10722	2-Methylnaphthalene	91-57-6	0.030	0.0097	10
10722	Naphthalene	91-20-3	0.040	0.0097	10
10722	Phenanthrene	85-01-8	0.39	0.0097	10
10722	Pyrene	129-00-0	0.31	0.0097	10

The GC/MS semivolatile internal standard peak areas were outside of the QC limits for both the initial injection and the re-injection. The values here are from the initial injection of the sample.

GC Volatiles ECY 97-602 NWTPH-Gx			mg/kg	mg/kg	
02006	NWTPH-Gx soil C7-C12	n.a.	200	80	1359.33
Reporting limits were raised due to sample foaming.					

GC Volatiles SW-846 8021B			mg/kg	mg/kg	
08179	Benzene	71-43-2	N.D.	0.16	1359.33
Reporting limits were raised due to sample foaming.					

GC Petroleum ECY 97-602 NWTPH-Dx			mg/kg	mg/kg	
Hydrocarbons modified					
02214	DRO C12-C24 w/Si Gel	n.a.	12,000	2,200	500
02214	HRO C24-C40 w/Si Gel	n.a.	N.D.	7,400	500

Wet Chemistry SM20 2540 G			%	%	
00111	Moisture	n.a.	32.2	0.50	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

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.

Sample Description: B13-7-7.5 Grab Soil Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # SW 6387578
LLI Group # 1263520
Account # 11964

Project Name: Edmonds Terminal

Collected: 08/23/2011 15:10 by DR

Chevron

6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

Submitted: 08/25/2011 09:00

Reported: 09/30/2011 10:59

ED133

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10722	PAH SIM 8270 Soil Microwave	SW-846 8270C SIM	1	11258SLF026	09/22/2011 06:40	Mark A Clark	10
10810	BNA Soil Microwave SIM PAH	SW-846 3546	1	11258SLF026	09/05/2011 10:30	Olivia Arosemena	1
02006	NWTPH-Gx soil C7-C12	ECY 97-602 NWTPH-Gx	1	11249A31A	09/06/2011 11:56	Marie D John	1359.33
08179	Method 8021 Soil Master	SW-846 8021B	1	11249A31A	09/06/2011 11:56	Marie D John	1359.33
06647	GC-5g Field Preserved MeOH	SW-846 5035A	1	201123825371	08/23/2011 15:10	Client Supplied	n.a.
06647	GC-5g Field Preserved MeOH	SW-846 5035A	2	201123825371	08/23/2011 15:10	Client Supplied	n.a.
02214	NWTPH-Dx soil w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	112460031A	09/22/2011 22:07	Anita M Dale	500
07024	DRO Alternate Soil Extraction	SW-846 3550B	1	112460031A	09/06/2011 07:40	Katheryne V Sponheimer	1
00111	Moisture	SM20 2540 G	1	11245820003A	09/02/2011 20:42	Scott W Freisher	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: B13-9-9.5 Grab Soil Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # SW 6387579
LLI Group # 1263520
Account # 11964

Project Name: Edmonds Terminal

Collected: 08/23/2011 15:10 by DR

Chevron

6001 Bollinger Canyon Rd L4310
 San Ramon CA 94583

Submitted: 08/25/2011 09:00

Reported: 09/30/2011 10:59

ED134

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC Volatiles					
02006	NWTPH-Gx soil C7-C12	n.a.	N.D.	1.3	25.5
GC Volatiles					
08179	Benzene	71-43-2	0.018	0.0025	25.5
GC Petroleum Hydrocarbons					
ECY 97-602 NWTPH-Dx modified					
02214	DRO C12-C24 w/Si Gel	n.a.	N.D.	3.7	1
02214	HRO C24-C40 w/Si Gel	n.a.	N.D.	12	1
Wet Chemistry					
SM20 2540 G					
00111	Moisture	n.a.	18.4	0.50	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

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
10810	BNA Soil Microwave SIM PAH	SW-846 3546	1	11246SLG026	09/05/2011 10:30	Olivia Arosemena	1
02006	NWTPH-Gx soil C7-C12	ECY 97-602 NWTPH-Gx	1	11249A31A	09/06/2011 12:29	Marie D John	25.5
08179	Method 8021 Soil Master	SW-846 8021B	1	11249A31A	09/06/2011 12:29	Marie D John	25.5
06647	GC-5g Field Preserved MeOH	SW-846 5035A	1	201123825371	08/23/2011 15:10	Client Supplied	n.a.
06647	GC-5g Field Preserved MeOH	SW-846 5035A	2	201123825371	08/23/2011 15:10	Client Supplied	n.a.
02214	NWTPH-Dx soil w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	112460031A	09/10/2011 19:38	Dustin A Underkoffler	1
07024	DRO Alternate Soil Extraction	SW-846 3550B	1	112460031A	09/06/2011 07:40	Katheryne V Sponheimer	1
00111	Moisture	SM20 2540 G	1	11245820003A	09/02/2011 20:42	Scott W Freisher	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 2

Sample Description: B13-10-10.5 Grab Soil Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # SW 6387580
LLI Group # 1263520
Account # 11964

Project Name: Edmonds Terminal

Collected: 08/23/2011 15:20 by DR

Chevron

6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

Submitted: 08/25/2011 09:00

Reported: 09/30/2011 10:59

ED135

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS Semivolatiles SW-846 8270C SIM			mg/kg	mg/kg	
10722	Acenaphthene	83-32-9	0.051	0.0096	10
10722	Acenaphthylene	208-96-8	0.024	0.0048	10
10722	Anthracene	120-12-7	N.D.	0.0048	10
10722	Benzo(a)anthracene	56-55-3	0.031	0.0096	10
10722	Benzo(a)pyrene	50-32-8	0.016	0.0096	10
10722	Benzo(b)fluoranthene	205-99-2	0.045	0.0096	10
10722	Benzo(g,h,i)perylene	191-24-2	N.D.	0.0096	10
10722	Benzo(k)fluoranthene	207-08-9	N.D.	0.0096	10
10722	Chrysene	218-01-9	0.094	0.0048	10
10722	Dibenz(a,h)anthracene	53-70-3	N.D.	0.0096	10
10722	Fluoranthene	206-44-0	0.072	0.0096	10
10722	Fluorene	86-73-7	0.17	0.0096	10
10722	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.0096	10
10722	1-Methylnaphthalene	90-12-0	0.12	0.0096	10
10722	2-Methylnaphthalene	91-57-6	0.033	0.0096	10
10722	Naphthalene	91-20-3	0.057	0.0096	10
10722	Phenanthrene	85-01-8	0.11	0.0096	10
10722	Pyrene	129-00-0	0.12	0.0096	10
GC Volatiles ECY 97-602 NWTPH-Gx			mg/kg	mg/kg	
02006	NWTPH-Gx soil C7-C12	n.a.	110	36	607.77
Reporting limits were raised due to sample foaming.					
GC Volatiles SW-846 8021B			mg/kg	mg/kg	
08179	Benzene	71-43-2	N.D.	0.071	607.77
Reporting limits were raised due to sample foaming.					
GC Petroleum Hydrocarbons ECY 97-602 NWTPH-Dx modified			mg/kg	mg/kg	
02214	DRO C12-C24 w/Si Gel	n.a.	1,300	22	5
02214	HRO C24-C40 w/Si Gel	n.a.	740	73	5
Wet Chemistry SM20 2540 G			%	%	
00111	Moisture	n.a.	31.6	0.50	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

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.



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: B13-10-10.5 Grab Soil Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # SW 6387580
LLI Group # 1263520
Account # 11964

Project Name: Edmonds Terminal

Collected: 08/23/2011 15:20 by DR

Chevron

6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

Submitted: 08/25/2011 09:00

Reported: 09/30/2011 10:59

ED135

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10722	PAH SIM 8270 Soil Microwave	SW-846 8270C SIM	1	11258SLF026	09/21/2011 05:20	Mark A Clark	10
10810	BNA Soil Microwave SIM PAH	SW-846 3546	1	11258SLF026	09/05/2011 10:30	Olivia Arosemena	1
02006	NWTPH-Gx soil C7-C12	ECY 97-602 NWTPH-Gx	1	11249A31A	09/06/2011 13:10	Marie D John	607.77
08179	Method 8021 Soil Master	SW-846 8021B	1	11249A31A	09/06/2011 13:10	Marie D John	607.77
06647	GC-5g Field Preserved MeOH	SW-846 5035A	1	201123825371	08/23/2011 15:20	Client Supplied	n.a.
06647	GC-5g Field Preserved MeOH	SW-846 5035A	2	201123825371	08/23/2011 15:20	Client Supplied	n.a.
02214	NWTPH-Dx soil w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	112460031A	09/10/2011 23:58	Dustin A Underkoffler	5
07024	DRO Alternate Soil Extraction	SW-846 3550B	1	112460031A	09/06/2011 07:40	Katheryne V Sponheimer	1
00111	Moisture	SM20 2540 G	1	11245820003A	09/02/2011 20:42	Scott W Freisher	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: B13-11.5-12 Grab Soil Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # SW 6387581
LLI Group # 1263520
Account # 11964

Project Name: Edmonds Terminal

Collected: 08/23/2011 15:27 by DR

Chevron

6001 Bollinger Canyon Rd L4310
 San Ramon CA 94583

Submitted: 08/25/2011 09:00

Reported: 09/30/2011 10:59

ED136

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC Volatiles					
02006	NWTPH-Gx soil C7-C12	n.a.	N.D.	1.4	26.72
GC Volatiles					
08179	Benzene	71-43-2	0.0056	0.0029	26.72
GC Petroleum Hydrocarbons					
ECY 97-602 NWTPH-Dx modified					
02214	DRO C12-C24 w/Si Gel	n.a.	N.D.	4.0	1
02214	HRO C24-C40 w/Si Gel	n.a.	N.D.	13	1
Wet Chemistry					
SM20 2540 G					
00111	Moisture	n.a.	25.3	0.50	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

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
10810	BNA Soil Microwave SIM PAH	SW-846 3546	1	11246SLG026	09/05/2011 10:30	Olivia Arosemena	1
02006	NWTPH-Gx soil C7-C12	ECY 97-602 NWTPH-Gx	1	11249A31A	09/06/2011 13:56	Marie D John	26.72
08179	Method 8021 Soil Master	SW-846 8021B	1	11249A31A	09/06/2011 13:56	Marie D John	26.72
06647	GC-5g Field Preserved MeOH	SW-846 5035A	1	201123825371	08/23/2011 15:27	Client Supplied	n.a.
06647	GC-5g Field Preserved MeOH	SW-846 5035A	2	201123825371	08/23/2011 15:27	Client Supplied	n.a.
02214	NWTPH-Dx soil w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	112460031A	09/10/2011 20:00	Dustin A Underkoffler	1
07024	DRO Alternate Soil Extraction	SW-846 3550B	1	112460031A	09/06/2011 07:40	Katheryne V Sponheimer	1
00111	Moisture	SM20 2540 G	1	11245820003A	09/02/2011 20:42	Scott W Freisher	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: B15-4.5-5 Grab Soil Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # SW 6387582
LLI Group # 1263520
Account # 11964

Project Name: Edmonds Terminal

Collected: 08/23/2011 16:22 by DR

Chevron

6001 Bollinger Canyon Rd L4310
 San Ramon CA 94583

Submitted: 08/25/2011 09:00

Reported: 09/30/2011 10:59

ED151

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS Semivolatiles SW-846 8270C SIM			mg/kg	mg/kg	
10722	Acenaphthene	83-32-9	N.D.	0.00070	1
10722	Acenaphthylene	208-96-8	N.D.	0.00035	1
10722	Anthracene	120-12-7	N.D.	0.00035	1
10722	Benzo(a)anthracene	56-55-3	N.D.	0.00070	1
10722	Benzo(a)pyrene	50-32-8	N.D.	0.00070	1
10722	Benzo(b)fluoranthene	205-99-2	N.D.	0.00070	1
10722	Benzo(g,h,i)perylene	191-24-2	N.D.	0.00070	1
10722	Benzo(k)fluoranthene	207-08-9	N.D.	0.00070	1
10722	Chrysene	218-01-9	0.00061	0.00035	1
10722	Dibenz(a,h)anthracene	53-70-3	N.D.	0.00070	1
10722	Fluoranthene	206-44-0	N.D.	0.00070	1
10722	Fluorene	86-73-7	N.D.	0.00070	1
10722	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.00070	1
10722	1-Methylnaphthalene	90-12-0	0.0018	0.00070	1
10722	2-Methylnaphthalene	91-57-6	0.0021	0.00070	1
10722	Naphthalene	91-20-3	0.0012	0.00070	1
10722	Phenanthrene	85-01-8	0.0015	0.00070	1
10722	Pyrene	129-00-0	N.D.	0.00070	1
GC Volatiles ECY 97-602 NWTPH-Gx			mg/kg	mg/kg	
02006	NWTPH-Gx soil C7-C12	n.a.	N.D.	1.3	29.6
GC Volatiles SW-846 8021B			mg/kg	mg/kg	
08179	Benzene	71-43-2	N.D.	0.0025	29.6
GC Petroleum Hydrocarbons ECY 97-602 NWTPH-Dx modified			mg/kg	mg/kg	
02214	DRO C12-C24 w/Si Gel	n.a.	4.5	3.2	1
02214	HRO C24-C40 w/Si Gel	n.a.	17	11	1
Wet Chemistry SM20 2540 G			%	%	
00111	Moisture	n.a.	6.3	0.50	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

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
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Sample Description: B15-4.5-5 Grab Soil Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # SW 6387582
LLI Group # 1263520
Account # 11964

Project Name: Edmonds Terminal

Collected: 08/23/2011 16:22 by DR

Chevron

6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

Submitted: 08/25/2011 09:00

Reported: 09/30/2011 10:59

ED151

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10722	PAH SIM 8270 Soil Microwave	SW-846 8270C SIM	1	11258SLF026	09/21/2011 06:27	Mark A Clark	1
10810	BNA Soil Microwave SIM PAH	SW-846 3546	1	11258SLF026	09/05/2011 10:30	Olivia Arosemena	1
02006	NWTPH-Gx soil C7-C12	ECY 97-602 NWTPH-Gx	1	11249A31A	09/06/2011 14:31	Marie D John	29.6
08179	Method 8021 Soil Master	SW-846 8021B	1	11249A31A	09/06/2011 14:31	Marie D John	29.6
06647	GC-5g Field Preserved MeOH	SW-846 5035A	1	201123825371	08/23/2011 16:22	Client Supplied	n.a.
06647	GC-5g Field Preserved MeOH	SW-846 5035A	2	201123825371	08/23/2011 16:22	Client Supplied	n.a.
02214	NWTPH-Dx soil w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	112460031A	09/10/2011 20:43	Dustin A Underkoffler	1
07024	DRO Alternate Soil Extraction	SW-846 3550B	1	112460031A	09/06/2011 07:40	Katheryne V Sponheimer	1
00111	Moisture	SM20 2540 G	1	11245820003A	09/02/2011 20:42	Scott W Freisher	1



Analysis Report

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Sample Description: B15-6.5-7 Grab Soil Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # SW 6387583
LLI Group # 1263520
Account # 11964

Project Name: Edmonds Terminal

Collected: 08/23/2011 16:28 by DR

Chevron

6001 Bollinger Canyon Rd L4310
 San Ramon CA 94583

Submitted: 08/25/2011 09:00

Reported: 09/30/2011 10:59

ED152

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC Volatiles					
02006	NWTPH-Gx soil C7-C12	n.a.	N.D.	1.3	27.52
GC Volatiles					
08179	Benzene	71-43-2	N.D.	0.0026	27.52
The recovery for the sample surrogate is outside the QC acceptance limits as noted on the QC Summary. A reanalysis was not performed to confirm a matrix effect.					
GC Petroleum Hydrocarbons					
02214	DRO C12-C24 w/Si Gel	n.a.	N.D.	3.6	1
02214	HRO C24-C40 w/Si Gel	n.a.	18	12	1
Wet Chemistry					
00111	Moisture	n.a.	16.6	0.50	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

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
10810	BNA Soil Microwave SIM PAH	SW-846 3546	1	11246SLG026	09/05/2011 10:30	Olivia Arosemena	1
02006	NWTPH-Gx soil C7-C12	ECY 97-602 NWTPH-Gx	1	11249A31A	09/06/2011 15:05	Marie D John	27.52
08179	Method 8021 Soil Master	SW-846 8021B	1	11249A31A	09/06/2011 15:05	Marie D John	27.52
06647	GC-5g Field Preserved MeOH	SW-846 5035A	1	201123825371	08/23/2011 16:28	Client Supplied	n.a.
06647	GC-5g Field Preserved MeOH	SW-846 5035A	2	201123825371	08/23/2011 16:28	Client Supplied	n.a.
02214	NWTPH-Dx soil w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	112460031A	09/10/2011 21:04	Dustin A Underkoffler	1
07024	DRO Alternate Soil Extraction	SW-846 3550B	1	112460031A	09/06/2011 07:40	Katheryne V Sponheimer	1
00111	Moisture	SM20 2540 G	1	11245820003A	09/02/2011 20:42	Scott W Freisher	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 2

Sample Description: B15-8.5-9 Grab Soil Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # SW 6387584
LLI Group # 1263520
Account # 11964

Project Name: Edmonds Terminal

Collected: 08/23/2011 16:32 by DR

Chevron

6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

Submitted: 08/25/2011 09:00

Reported: 09/30/2011 10:59

ED153

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS Semivolatiles SW-846 8270C SIM			mg/kg	mg/kg	
10722	Acenaphthene	83-32-9	N.D.	0.0011	1
10722	Acenaphthylene	208-96-8	N.D.	0.00056	1
10722	Anthracene	120-12-7	0.00074	0.00056	1
10722	Benzo(a)anthracene	56-55-3	N.D.	0.0011	1
10722	Benzo(a)pyrene	50-32-8	N.D.	0.0011	1
10722	Benzo(b)fluoranthene	205-99-2	N.D.	0.0011	1
10722	Benzo(g,h,i)perylene	191-24-2	N.D.	0.0011	1
10722	Benzo(k)fluoranthene	207-08-9	N.D.	0.0011	1
10722	Chrysene	218-01-9	0.00065	0.00056	1
10722	Dibenz(a,h)anthracene	53-70-3	N.D.	0.0011	1
10722	Fluoranthene	206-44-0	N.D.	0.0011	1
10722	Fluorene	86-73-7	0.0021	0.0011	1
10722	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.0011	1
10722	1-Methylnaphthalene	90-12-0	0.0030	0.0011	1
10722	2-Methylnaphthalene	91-57-6	0.0026	0.0011	1
10722	Naphthalene	91-20-3	0.0017	0.0011	1
10722	Phenanthrene	85-01-8	0.0023	0.0011	1
10722	Pyrene	129-00-0	N.D.	0.0011	1
GC Volatiles ECY 97-602 NWTPH-Gx			mg/kg	mg/kg	
02006	NWTPH-Gx soil C7-C12	n.a.	N.D.	2.4	34.93
GC Volatiles SW-846 8021B			mg/kg	mg/kg	
08179	Benzene	71-43-2	N.D.	0.0048	34.93
The recovery for the sample surrogate is outside the QC acceptance limits as noted on the QC Summary. A reanalysis was not performed to confirm a matrix effect.					
GC Petroleum ECY 97-602 NWTPH-Dx			mg/kg	mg/kg	
Hydrocarbons modified					
02214	DRO C12-C24 w/Si Gel	n.a.	7.8	5.1	1
02214	HRO C24-C40 w/Si Gel	n.a.	54	17	1
Wet Chemistry SM20 2540 G			%	%	
00111	Moisture	n.a.	41.5	0.50	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

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.

Sample Description: B15-8.5-9 Grab Soil Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # SW 6387584
LLI Group # 1263520
Account # 11964

Project Name: Edmonds Terminal

Collected: 08/23/2011 16:32 by DR

Chevron

6001 Bollinger Canyon Rd L4310
 San Ramon CA 94583

Submitted: 08/25/2011 09:00

Reported: 09/30/2011 10:59

ED153

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10722	PAH SIM 8270 Soil Microwave	SW-846 8270C SIM	1	11258SLF026	09/22/2011 02:45	Mark A Clark	1
10810	BNA Soil Microwave SIM PAH	SW-846 3546	1	11258SLF026	09/05/2011 10:30	Olivia Arosemena	1
02006	NWTPH-Gx soil C7-C12	ECY 97-602 NWTPH-Gx	1	11249A31A	09/06/2011 15:43	Marie D John	34.93
08179	Method 8021 Soil Master	SW-846 8021B	1	11249A31A	09/06/2011 15:43	Marie D John	34.93
06647	GC-5g Field Preserved MeOH	SW-846 5035A	1	201123825371	08/23/2011 16:32	Client Supplied	n.a.
06647	GC-5g Field Preserved MeOH	SW-846 5035A	2	201123825371	08/23/2011 16:32	Client Supplied	n.a.
02214	NWTPH-Dx soil w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	112460031A	09/10/2011 22:30	Dustin A Underkoffler	1
07024	DRO Alternate Soil Extraction	SW-846 3550B	1	112460031A	09/06/2011 07:40	Katheryne V Sponheimer	1
00111	Moisture	SM20 2540 G	1	11245820003A	09/02/2011 20:42	Scott W Freisher	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: B15-11-11.5 Grab Soil Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # SW 6387585
LLI Group # 1263520
Account # 11964

Project Name: Edmonds Terminal

Collected: 08/23/2011 16:40 by DR

Chevron

6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

Submitted: 08/25/2011 09:00

Reported: 09/30/2011 10:59

ED154

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC Volatiles					
	ECY 97-602 NWTPH-Gx		mg/kg	mg/kg	
02006	NWTPH-Gx soil C7-C12	n.a.	N.D.	15	271.63
Reporting limits were raised due to sample foaming.					
GC Volatiles					
	SW-846 8021B		mg/kg	mg/kg	
08179	Benzene	71-43-2	N.D.	0.029	271.63
Reporting limits were raised due to sample foaming.					
GC Petroleum Hydrocarbons					
	ECY 97-602 NWTPH-Dx modified		mg/kg	mg/kg	
02214	DRO C12-C24 w/Si Gel	n.a.	N.D.	4.0	1
02214	HRO C24-C40 w/Si Gel	n.a.	N.D.	13	1
Wet Chemistry					
	SM20 2540 G		%	%	
00111	Moisture	n.a.	26.1	0.50	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

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
10810	BNA Soil Microwave SIM PAH	SW-846 3546	1	11246SLG026	09/05/2011 10:30	Olivia Arosemena	1
02006	NWTPH-Gx soil C7-C12	ECY 97-602 NWTPH-Gx	1	11249A31A	09/06/2011 16:16	Marie D John	271.63
08179	Method 8021 Soil Master	SW-846 8021B	1	11249A31A	09/06/2011 16:16	Marie D John	271.63
06647	GC-5g Field Preserved MeOH	SW-846 5035A	1	201123825371	08/23/2011 16:40	Client Supplied	n.a.
06647	GC-5g Field Preserved MeOH	SW-846 5035A	2	201123825371	08/23/2011 16:40	Client Supplied	n.a.
02214	NWTPH-Dx soil w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	112460031A	09/10/2011 20:21	Dustin A Underkoffler	1
07024	DRO Alternate Soil Extraction	SW-846 3550B	1	112460031A	09/06/2011 07:40	Katheryne V Sponheimer	1
00111	Moisture	SM20 2540 G	1	11245820003B	09/02/2011 20:42	Scott W Freisher	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: B15-12-13 Grab Soil Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # SW 6387586
LLI Group # 1263520
Account # 11964

Project Name: Edmonds Terminal

Collected: 08/23/2011 16:45 by DR

Chevron

6001 Bollinger Canyon Rd L4310
 San Ramon CA 94583

Submitted: 08/25/2011 09:00

Reported: 09/30/2011 10:59

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry			ASTM D422		
			% Passing	% Passing	
07103	75 mm	n.a.	100	0.50	1
07103	37.5 mm	n.a.	100	0.50	1
07103	19 mm	n.a.	100	0.50	1
07103	4.75 mm	n.a.	98.3	0.50	1
07103	3.35 mm	n.a.	97.7	0.50	1
07103	2.36 mm	n.a.	96.2	0.50	1
07103	1.18 mm	n.a.	93.6	0.50	1
07103	0.6 mm	n.a.	84.0	0.50	1
07103	0.3 mm	n.a.	45.1	0.50	1
07103	0.15 mm	n.a.	27.7	0.50	1
07103	0.075 mm	n.a.	22.3	0.50	1
07103	0.064 mm	n.a.	20.0	0.50	1
07103	0.05 mm	n.a.	15.0	0.50	1
07103	0.02 mm	n.a.	4.5	0.50	1
07103	0.005 mm	n.a.	1.0	0.50	1
07103	0.002 mm	n.a.	1.0	0.50	1
07103	0.001 mm	n.a.	1.0	0.50	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
07103	Grain Size to 1 um	ASTM D422	1	11238710301A	08/26/2011 21:20	Luz M Groff	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 Methanol Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # G5 6387587
LLI Group # 1263520
Account # 11964

Project Name: Edmonds Terminal

Collected: 08/23/2011

Chevron

Submitted: 08/25/2011 09:00

6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

Reported: 09/30/2011 10:59

ED-T1

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC Volatiles					
02006	NWTPH-Gx soil C7-C12	ECY 97-602 n.a.	NWTPH-Gx N.D.	mg/kg 1.0	25
GC Volatiles					
08179	Benzene	SW-846 8021B 71-43-2	mg/kg N.D.	mg/kg 0.0020	25

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
02006	NWTPH-Gx soil C7-C12	ECY 97-602 NWTPH-Gx	1	11249A31A	09/06/2011 19:13	Marie D John	25
08179	Method 8021 Soil Master	SW-846 8021B	1	11249A31A	09/06/2011 19:13	Marie D John	25
06647	GC-5g Field Preserved MeOH	SW-846 5035A	1	201123825371	08/23/2011 00:00	Client Supplied	n.a.

Quality Control Summary

 Client Name: Chevron
 Reported: 09/30/11 at 10:59 AM

Group Number: 1263520

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: 11258SLD026	Sample number(s): 6387558-6387566							
Acenaphthene	N.D.	0.00067	mg/kg	92	91	73-104	1	30
Acenaphthylene	N.D.	0.00033	mg/kg	90	88	67-100	2	30
Anthracene	N.D.	0.00033	mg/kg	95	92	69-107	3	30
Benzo(a)anthracene	N.D.	0.00067	mg/kg	89	87	74-112	2	30
Benzo(a)pyrene	N.D.	0.00067	mg/kg	92	90	70-109	3	30
Benzo(b)fluoranthene	N.D.	0.00067	mg/kg	89	86	60-126	3	30
Benzo(g,h,i)perylene	N.D.	0.00067	mg/kg	105	104	49-135	1	30
Benzo(k)fluoranthene	N.D.	0.00067	mg/kg	97	96	65-130	1	30
Chrysene	N.D.	0.00033	mg/kg	92	89	79-111	4	30
Dibenz(a,h)anthracene	N.D.	0.00067	mg/kg	104	104	49-135	1	30
Fluoranthene	N.D.	0.00067	mg/kg	95	96	78-114	1	30
Fluorene	N.D.	0.00067	mg/kg	94	93	75-110	1	30
Indeno(1,2,3-cd)pyrene	N.D.	0.00067	mg/kg	102	101	53-128	2	30
1-Methylnaphthalene	N.D.	0.00067	mg/kg	95	92	72-114	3	30
2-Methylnaphthalene	N.D.	0.00067	mg/kg	92	89	62-115	3	30
Naphthalene	N.D.	0.00067	mg/kg	91	87	67-105	4	30
Phenanthrene	N.D.	0.00067	mg/kg	93	91	76-109	3	30
Pyrene	N.D.	0.00067	mg/kg	87	86	71-109	2	30
Batch number: 11258SLF026	Sample number(s): 6387568-6387574, 6387576-6387578, 6387580, 6387582, 6387584							
Acenaphthene	N.D.	0.00067	mg/kg	91	73-104			
Acenaphthylene	N.D.	0.00033	mg/kg	94	67-100			
Anthracene	N.D.	0.00033	mg/kg	100	69-107			
Benzo(a)anthracene	N.D.	0.00067	mg/kg	94	74-112			
Benzo(a)pyrene	N.D.	0.00067	mg/kg	89	70-109			
Benzo(b)fluoranthene	N.D.	0.00067	mg/kg	97	60-126			
Benzo(g,h,i)perylene	N.D.	0.00067	mg/kg	104	49-135			
Benzo(k)fluoranthene	N.D.	0.00067	mg/kg	86	65-130			
Chrysene	N.D.	0.00033	mg/kg	91	79-111			
Dibenz(a,h)anthracene	N.D.	0.00067	mg/kg	104	49-135			
Fluoranthene	N.D.	0.00067	mg/kg	98	78-114			
Fluorene	N.D.	0.00067	mg/kg	93	75-110			
Indeno(1,2,3-cd)pyrene	N.D.	0.00067	mg/kg	103	53-128			
1-Methylnaphthalene	N.D.	0.00067	mg/kg	95	72-114			
2-Methylnaphthalene	N.D.	0.00067	mg/kg	93	62-115			
Naphthalene	N.D.	0.00067	mg/kg	93	67-105			
Phenanthrene	N.D.	0.00067	mg/kg	92	76-109			
Pyrene	N.D.	0.00067	mg/kg	90	71-109			
Batch number: 11244A31A	Sample number(s): 6387557-6387560, 6387562-6387564, 6387569							
Benzene	N.D.	0.0020	mg/kg	88	90	76-118	2	30
NWTPH-Gx soil C7-C12	N.D.	1.0	mg/kg	92	98	67-119	6	30
Batch number: 11244A31B	Sample number(s): 6387561, 6387566-6387568, 6387571-6387576							
Benzene	N.D.	0.0020	mg/kg	88	90	76-118	2	30

*- 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 Group Number: 1263520
 Reported: 09/30/11 at 10:59 AM

<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>
NWTPH-Gx soil C7-C12	N.D.	1.0	mg/kg	92	98	67-119	6	30
Batch number: 11249A31A	Sample number(s): 6387564-6387565, 6387570, 6387577-6387585, 6387587							
Benzene	N.D.	0.0020	mg/kg	98	95	76-118	3	30
NWTPH-Gx soil C7-C12	N.D.	1.0	mg/kg	87	82	67-119	6	30
Batch number: 112460029A	Sample number(s): 6387557-6387565							
DRO C12-C24 w/Si Gel	N.D.	3.0	mg/kg	89		60-120		
HRO C24-C40 w/Si Gel	N.D.	10.	mg/kg					
Batch number: 112460030A	Sample number(s): 6387566-6387575							
DRO C12-C24 w/Si Gel	N.D.	3.0	mg/kg	92		60-120		
HRO C24-C40 w/Si Gel	N.D.	10.	mg/kg					
Batch number: 112460031A	Sample number(s): 6387576-6387585							
DRO C12-C24 w/Si Gel	N.D.	3.0	mg/kg	91		60-120		
HRO C24-C40 w/Si Gel	N.D.	10.	mg/kg					
Batch number: 11245820001A	Sample number(s): 6387557-6387562							
Moisture				100		99-101		
Batch number: 11245820002A	Sample number(s): 6387563-6387575							
Moisture				100		99-101		
Batch number: 11245820003A	Sample number(s): 6387576-6387584							
Moisture				100		99-101		
Batch number: 11245820003B	Sample number(s): 6387585							
Moisture				100		99-101		

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: 11258SLF026	Sample number(s): 6387568-6387574, 6387576-6387578, 6387580, 6387582, 6387584 UNSPK:								
	P58LFUS								
Acenaphthene	93	93	65-110	0	30				
Acenaphthylene	101	106	63-120	4	30				
Anthracene	100	101	56-121	2	30				
Benzo(a)anthracene	95	98	66-114	3	30				
Benzo(a)pyrene	89	93	57-117	4	30				
Benzo(b)fluoranthene	96	108	26-142	8	30				
Benzo(g,h,i)perylene	79	77	33-141	2	30				
Benzo(k)fluoranthene	77	82	49-145	5	30				
Chrysene	89	95	41-126	4	30				
Dibenz(a,h)anthracene	95	92	29-138	3	30				
Fluoranthene	101	114	47-135	8	30				
Fluorene	98	96	65-116	2	30				
Indeno(1,2,3-cd)pyrene	90	90	25-136	0	30				
1-Methylnaphthalene	97	100	50-118	3	30				
2-Methylnaphthalene	96	99	49-134	3	30				

*- 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 Group Number: 1263520
 Reported: 09/30/11 at 10:59 AM

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</u> <u>%REC</u>	<u>MSD</u> <u>%REC</u>	<u>MS/MSD</u> <u>Limits</u>	<u>RPD</u> <u>RPD</u>	<u>RPD</u> <u>MAX</u>	<u>BKG</u> <u>Conc</u>	<u>DUP</u> <u>Conc</u>	<u>DUP</u> <u>RPD</u>	<u>Dup</u> <u>RPD</u> <u>Max</u>
Naphthalene	93	97	61-113	4	30				
Phenanthrene	88	95	37-134	6	30				
Pyrene	82	90	31-120	5	30				
Batch number: 112460029A	Sample number(s): 6387557-6387565 BKG: 6387557								
DRO C12-C24 w/Si Gel	N.D. N.D. 0 (1) 20								
HRO C24-C40 w/Si Gel	25 47 62* (1) 20								
Batch number: 112460030A	Sample number(s): 6387566-6387575 BKG: 6387566								
DRO C12-C24 w/Si Gel	3,900 7,000 58* 20								
HRO C24-C40 w/Si Gel	2,400 3,600 40* (1) 20								
Batch number: 112460031A	Sample number(s): 6387576-6387585 BKG: 6387576								
DRO C12-C24 w/Si Gel	10 12 17 (1) 20								
HRO C24-C40 w/Si Gel	58 48 19 (1) 20								
Batch number: 11245820001A	Sample number(s): 6387557-6387562 BKG: P390710								
Moisture	18.1 16.4 9 15								
Batch number: 11245820002A	Sample number(s): 6387563-6387575 BKG: P392812								
Moisture	20.5 19.5 5 15								
Batch number: 11245820003A	Sample number(s): 6387576-6387584 BKG: 6387584								
Moisture	41.5 47.0 12 15								
Batch number: 11245820003B	Sample number(s): 6387585 BKG: 6387585								
Moisture	26.1 23.0 13 15								

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: PAH SIM 8270 Soil Microwave
 Batch number: 11258SLD026

	Nitrobenzene-d5	2-Fluorobiphenyl	Terphenyl-d14
6387558	929*	94	180*
6387559	91	95	99
6387560	131	97	104
6387561	797*	112	160*
6387562	93	86	87
6387563	396*	89	112
6387564	1267*	140*	102
6387565	2199*	127*	315*
6387566	288*	130*	165*
Blank	100	109	118
LCS	93	101	106
LCSD	88	99	102

*- 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: 09/30/11 at 10:59 AM

Group Number: 1263520

Surrogate Quality Control

Limits: 53-152 66-118 63-129

Analysis Name: PAH SIM 8270 Soil Microwave
Batch number: 11258SLF026

	Nitrobenzene-d5	2-Fluorobiphenyl	Terphenyl-d14
6387568	99	87	94
6387569	101	87	98
6387570	120	96	102
6387571	122	94	104
6387572	112	85	128
6387573	110	91	119
6387574	105	90	97
6387576	114	92	113
6387577	101	85	99
6387578	69	34*	61*
6387580	106	134*	127
6387582	123	97	113
6387584	116	90	93
Blank	107	98	108
LCS	109	97	109
MS	122	98	108
MSD	125	99	109

Limits: 53-152 66-118 63-129

Analysis Name: Method 8021 Soil Master
Batch number: 11244A31A

	Trifluorotoluene-F	Trifluorotoluene-P
6387557	90	84
6387558	104	97
6387559	88	83
6387560	85	77
6387562	78	70*
6387563	101	100
6387564		87
6387569	93	85
Blank	103	95
LCS	105	93
LCSD	109	95

Limits: 61-122 73-117

Analysis Name: Method 8021 Soil Master
Batch number: 11244A31B

	Trifluorotoluene-F	Trifluorotoluene-P
6387561	111	109
6387566	101	91
6387567	100	86
6387568	77	73
6387571	88	82
6387572	82	82
6387573	46*	43*
6387574	71	68*
6387575	80	76

*- 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: 09/30/11 at 10:59 AM

Group Number: 1263520

Surrogate Quality Control

6387576	116	108
Blank	98	97
LCS	105	93
LCSD	109	95

Limits: 61-122 73-117

Analysis Name: Method 8021 Soil Master
Batch number: 11249A31A
Trifluorotoluene-F Trifluorotoluene-P

6387564	100	
6387565	89	90
6387570	82	84
6387577	87	91
6387578	101	106
6387579	79	85
6387580	77	85
6387581	77	82
6387582	86	84
6387583	61	67*
6387584	61	64*
6387585	84	88
6387587	95	100
Blank	92	100
LCS	93	100
LCSD	87	95

Limits: 61-122 73-117

Analysis Name: NWTPH-Dx soil w/Si Gel
Batch number: 112460029A
Orthoterphenyl

6387557	107
6387558	670*
6387559	103
6387560	114
6387561	1473*
6387562	92
6387563	255*
6387564	223*
6387565	5797*
Blank	108
DUP	107
LCS	117

Limits: 50-150

Analysis Name: NWTPH-Dx soil w/Si Gel
Batch number: 112460030A
Orthoterphenyl

6387566	559*
6387567	88
6387568	96
6387569	93

*- 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: 09/30/11 at 10:59 AM

Group Number: 1263520

Surrogate Quality Control

6387570	1409*
6387571	90
6387572	100
6387573	1829*
6387574	95
6387575	105
Blank	106
DUP	910*
LCS	112

Limits: 50-150

Analysis Name: NWTPH-Dx soil w/Si Gel
Batch number: 112460031A
Orthoterphenyl

6387576	95
6387577	89
6387578	574*
6387579	93
6387580	106
6387581	91
6387582	110
6387583	99
6387584	90
6387585	95
Blank	105
DUP	103
LCS	111

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



Group: 1263520

For Lancaster Laboratories use only

221604

Acct. #: 11964

Sample #: 6387557-87

SCR#:

Facility #: <u>Edmonds Terminal</u> Site Address: <u>11720 Union Rd, Edmonds WA</u> Chevron PM: <u>Kim Jolitz</u> Lead Consultant: <u>ARCADIS</u> Consultant/Office: <u>Seattle, ARCADIS</u> Consultant Prj. Mgr.: <u>Rebecca Andresen</u> Consultant Phone #: <u>206 325 5259</u> Fax #: _____ Sampler: <u>DR/VG</u> Service Order #: <u>B0045302</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 <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"/> NW TPH G <input checked="" type="checkbox"/> NW TPH D <input checked="" type="checkbox"/> Extended Rng. <input checked="" type="checkbox"/> Sijica Gel Cleanup <input type="checkbox"/> Lead Total <input type="checkbox"/> Diss. <input type="checkbox"/> Method <input type="checkbox"/> VPH/EPH <input type="checkbox"/> NWTPH HCl/D <input type="checkbox"/> quantification <u>BENZENE 8021B</u> <u>PAH (HOLD)</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	Total Number of Containers					Comments / Remarks		
B9-4.5-5		8/23/11	1027	X	X	3	X						← LAMPL page 1 of 3 PAH on hold extraction ok - samples marked code in LAMPL ← LAMPL ← LAMPL
B9-8.5-9			1036										
B9-9.5-10			1041										
B9-10.5-11			1052										
B9-11-11.5			1054										
B9-12.5-13			1058										
B8-4.5-5			1137										
B8-7.5-8			1152										
B8-9.5-10			1145										
B8-11-11.5			1206										
B8-14.5-15			1202										
B8-13.5-14			1210										
B11-4.5-5			1258										
Turnaround Time Requested (TAT) (please circle) (STD. TAT) 72 hour 48 hour 24 hour 4 day 5 day				Relinquished by: <u>[Signature]</u> Relinquished by: _____ Relinquished by: _____		Date: 8/24/11 Date: _____ Date: _____	Time: 1600 Time: _____ Time: _____	Received by: <u>Fed Ex</u> Received by: _____ Received by: _____		Date: 8/24/11 Date: _____ Date: _____	Time: 1600 Time: _____ 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: _____ Relinquished by Commercial Carrier: UPS (FedEx) Other _____		Date: _____ Date: _____	Time: _____ Time: _____	Received by: <u>Brenndy Hunter</u> Received by: _____ Received by: _____		Date: 8-25-11 Date: _____ Date: _____	Time: 900 Time: _____ Time: _____		
Temperature Upon Receipt <u>1.5-2.1 C°</u>						Custody Seals Intact? (Yes) <input checked="" type="checkbox"/> No <input type="checkbox"/>							

Chevron Northwest Region Analysis Request/Chain of Custody



Group: 1263520

For Lancaster Laboratories use only

221605

Acct. #: 11964

Sample #: 6387557-87

SCR#:

Facility #: <u>Edmonds Terminal</u> Site Address: <u>11720 Unrow Rd, Edmonds WA</u> Chevron PM: <u>Kiva Solitz</u> Lead Consultant: <u>ARCADIS</u> Consultant/Office: <u>ARCADIS, Seattle</u> Consultant Prj. Mgr.: <u>Rebecca Andresen</u> Consultant Phone #: <u>2063255284</u> Fax #: _____ Sampler: <u>DLNB</u> Service Order #: <u>50045362</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 <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th colspan="10">Preservation Codes</th> </tr> <tr> <td><input type="checkbox"/> BTEX + MTBE</td> <td><input type="checkbox"/> 8021</td> <td><input type="checkbox"/> 8260</td> <td><input type="checkbox"/> Naphth</td> <td><input type="checkbox"/> 8260 full scan</td> <td>Oxygenates</td> <td>NW TPH G</td> <td>NW TPH D</td> <td>Lead Total</td> <td>VPH/EPH</td> <td>NWTPH HClID</td> <td><input type="checkbox"/> quantification</td> </tr> <tr> <td colspan="10" style="text-align: center;"> Extended Rng. <input checked="" type="checkbox"/> Silica Gel Cleanup Method <input type="checkbox"/> Diss. <input type="checkbox"/> </td> </tr> <tr> <td colspan="10" style="text-align: center;"> Parosity (total): effective (Solvent 8021B) PAH (HOLD) </td> </tr> </table>										Preservation Codes										<input type="checkbox"/> BTEX + MTBE	<input type="checkbox"/> 8021	<input type="checkbox"/> 8260	<input type="checkbox"/> Naphth	<input type="checkbox"/> 8260 full scan	Oxygenates	NW TPH G	NW TPH D	Lead Total	VPH/EPH	NWTPH HClID	<input type="checkbox"/> quantification	Extended Rng. <input checked="" type="checkbox"/> Silica Gel Cleanup Method <input type="checkbox"/> Diss. <input type="checkbox"/>										Parosity (total): effective (Solvent 8021B) PAH (HOLD)										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	
Preservation Codes																																																											
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Extended Rng. <input checked="" type="checkbox"/> Silica Gel Cleanup Method <input type="checkbox"/> Diss. <input type="checkbox"/>																																																											
Parosity (total): effective (Solvent 8021B) PAH (HOLD)																																																											
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	NW TPH G	NW TPH D	Lead Total	VPH/EPH	NWTPH HClID	<input type="checkbox"/> quantification	Parosity (total): effective	(Solvent 8021B)	PAH (HOLD)	Comments / Remarks																																	
B11-7.5-8		8/23/11	1303	X		X				3																page 2 of 3 PAH on hold pending DR results -extraction OK																																	
B11-8.5-9			1305																																																								
B11-9.5-10			1308																																																								
B11-10-10.5			1320																																																								
B11-11-11.5			1329																																																								
B11-13.5-14			1330							1																																																	
B11-14.5-15			1341							3																																																	
B13-4.5-5			1443																																																								
B13-6-6.5			1504																																																								
B13-7-7.5			1510																																																								
B13-9-9.5			1510																																																								
B13-10-10.5			1520																																																								
B13-11.5-12			1527																																																								
Turnaround Time Requested (TAT) (please circle) <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 33%;">STD. TAT</td> <td style="width: 33%;">72 hour</td> <td style="width: 33%;">48 hour</td> </tr> <tr> <td>24 hour</td> <td>4 day</td> <td>5 day</td> </tr> </table>				STD. TAT	72 hour	48 hour	24 hour	4 day	5 day	Relinquished by: <u>[Signature]</u>		Date: <u>8/24/11</u> Time: <u>1600</u>		Received by: <u>FedEx</u>		Date: <u>8/24/11</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-collapse: collapse;"> <tr> <td style="width: 33%;">QC Summary</td> <td style="width: 33%;">Type I - Full</td> <td style="width: 33%;">Type VI (Raw Data)</td> </tr> <tr> <td>WIP (RWQCB)</td> <td>Disk / EDD</td> <td>Standard Format</td> </tr> <tr> <td>Disk</td> <td>Other.</td> <td></td> </tr> </table>				QC Summary	Type I - Full	Type VI (Raw Data)	WIP (RWQCB)	Disk / EDD	Standard Format	Disk	Other.		Relinquished by: _____		Date: _____ Time: _____		Received by: _____		Date: _____ Time: _____																																								
QC Summary	Type I - Full	Type VI (Raw Data)																																																									
WIP (RWQCB)	Disk / EDD	Standard Format																																																									
Disk	Other.																																																										
Relinquished by: <u>Commercial Carrier:</u>				UPS <input type="checkbox"/> <u>FedEx</u> <input checked="" type="checkbox"/> Other: _____		Received by: <u>Brendy Buckley</u>		Date: <u>8-25-11</u> Time: <u>900</u>																																																			
Temperature Upon Receipt: <u>15-21</u> °C				Custody Seals Intact? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No																																																							

Chevron Northwest Region Analysis Request/Chain of Custody



Group: 1263520

For Lancaster Laboratories use only

221606

Acct #: 11964

Sample #: 6387557-87

SCR#:

Facility #: <u>Edmonds Terminal</u>		Matrix		Analyses Requested				Preservative Codes														
Site Address: <u>11720 Union Rd, Edmonds WA</u>		<input type="checkbox"/> Potable <input type="checkbox"/> NPDES	<input type="checkbox"/> Water <input type="checkbox"/> Air	Preservation Codes				Preservative Codes														
Chevron PM: <u>Rim Jolitz</u> Lead Consultant: <u>ARCADIS</u>				BTEX + MTBE <input type="checkbox"/> 8021 <input type="checkbox"/> 8260 <input type="checkbox"/> Naphth <input type="checkbox"/>				H = HCl T = Thiosulfate N = HNO ₃ B = NaOH S = H ₂ SO ₄ O = Other														
Consultant/Office: <u>ARCADIS / Seattle</u>				8260 full scan				<input type="checkbox"/> J value reporting needed <input type="checkbox"/> Must meet lowest detection limits possible for 8260 compounds														
Consultant Prj. Mgr.: <u>Rebecca Andresen</u>		Oxygenates <input type="checkbox"/> NW TPH G				8021 MTBE Confirmation																
Consultant Phone #: <u>206 825 5254</u> Fax #: _____		Extended Rng. <input checked="" type="checkbox"/> Silica Gel Cleanup				<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																
Sampler: <u>DLN</u>		Lead Total <input type="checkbox"/> Diss. <input type="checkbox"/> Method _____				<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																
Service Order #: <u>B0845362</u> <input type="checkbox"/> Non SAR: _____		VP/IEPH				Comments / Remarks																
Sample Identification		Date Collected	Time Collected	Grab	Composite	Soil	Water	Oil	Air	Total Number of Containers	BTEX + MTBE <input type="checkbox"/> 8021 <input type="checkbox"/> 8260 <input type="checkbox"/> Naphth <input type="checkbox"/>	8260 full scan	Oxygenates <input type="checkbox"/> NW TPH G	Extended Rng. <input checked="" type="checkbox"/> Silica Gel Cleanup	Lead Total <input type="checkbox"/> Diss. <input type="checkbox"/> Method _____	VP/IEPH	NWTPH H CLID <input type="checkbox"/> Quantification	<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				
B15-4.5-5		8/23/11	1622	X		X				3								Page 3 of 3 PAH on hold pending DX results extraction OK				
B15-6.5-7			1628							3												
B15-8.5-9			1632							3												
B15-11-11.5			1640							3												
B15-12-13			1645							3												
TRIP BLANK										2												
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>8/24/11</u> Time: <u>1600</u> Received by: <u>FedEx</u> Date: <u>8/24/11</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 <u>FedEx</u> Other: _____ Received by: <u>Brandy Barclay</u> Date: <u>8-25-11</u> Time: <u>1400</u> Temperature Upon Receipt: <u>1.5-2.1</u> °C 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.

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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 06, 2011

Project: Edmonds Terminal

Submittal Date: 08/26/2011
Group Number: 1263763
PO Number: 0015074659
Release Number: JOLITZ
State of Sample Origin: WA

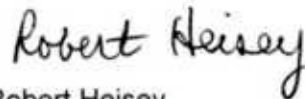
<u>Client Sample Description</u>	<u>Lancaster Labs (LLI) #</u>
B14-0.5-1 Grab Soil Sample	6389118
B14-1.5-2 Grab Soil Sample	6389119
B14-2.5-3 Grab Soil Sample	6389120
B14-3.5-4 Grab Soil Sample	6389121
B10-0.5-1 Grab Soil Sample	6389122
B10-1.5-2 Grab Soil Sample	6389123
B10-2.5-3 Grab Soil Sample	6389124
B10-3.5-4 Grab Soil Sample	6389125
B10-2-2.5 Grab Soil Sample	6389126
Trip Blank Methanol Sample	6389127

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,



Robert Heisey
Senior Specialist

Sample Description: B14-0.5-1 Grab Soil Sample
Unocal Edmonds Terminal
 11720 Unoco Road - Edmonds, WA

LLI Sample # SW 6389118
LLI Group # 1263763
Account # 11964

Project Name: Edmonds Terminal

Collected: 08/25/2011 08:32 by DR

Chevron

6001 Bollinger Canyon Rd L4310
 San Ramon CA 94583

Submitted: 08/26/2011 09:05

Reported: 10/06/2011 13:19

ED141

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS Semivolatiles SW-846 8270C SIM			mg/kg	mg/kg	
10722	Acenaphthene	83-32-9	N.D.	0.0016	1
10722	Acenaphthylene	208-96-8	0.0029	0.00079	1
10722	Anthracene	120-12-7	0.0031	0.00079	1
10722	Benzo(a)anthracene	56-55-3	0.014	0.0016	1
10722	Benzo(a)pyrene	50-32-8	0.022	0.0016	1
10722	Benzo(b)fluoranthene	205-99-2	0.031	0.0016	1
10722	Benzo(g,h,i)perylene	191-24-2	0.012	0.0016	1
10722	Benzo(k)fluoranthene	207-08-9	0.014	0.0016	1
10722	Chrysene	218-01-9	0.019	0.00079	1
10722	Dibenz(a,h)anthracene	53-70-3	0.0028	0.0016	1
10722	Fluoranthene	206-44-0	0.024	0.0016	1
10722	Fluorene	86-73-7	0.0017	0.0016	1
10722	Indeno(1,2,3-cd)pyrene	193-39-5	0.011	0.0016	1
10722	1-Methylnaphthalene	90-12-0	0.0095	0.0016	1
10722	2-Methylnaphthalene	91-57-6	0.011	0.0016	1
10722	Naphthalene	91-20-3	0.017	0.0016	1
10722	Phenanthrene	85-01-8	0.016	0.0016	1
10722	Pyrene	129-00-0	0.021	0.0016	1
GC Volatiles ECY 97-602 NWTPH-Gx			mg/kg	mg/kg	
02006	NWTPH-Gx soil C7-C12	n.a.	N.D.	57	596.59
Reporting limits were raised due to sample foaming.					
GC Volatiles SW-846 8021B			mg/kg	mg/kg	
08179	Benzene	71-43-2	N.D.	0.11	596.59
Reporting limits were raised due to sample foaming.					
GC Petroleum ECY 97-602 NWTPH-Dx			mg/kg	mg/kg	
Hydrocarbons modified					
02214	DRO C12-C24 w/Si Gel	n.a.	16	7.2	1
02214	HRO C24-C40 w/Si Gel	n.a.	110	24	1
Wet Chemistry SM20 2540 G			%	%	
00111	Moisture	n.a.	58.1	0.50	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

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.

Sample Description: B14-0.5-1 Grab Soil Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # SW 6389118
LLI Group # 1263763
Account # 11964

Project Name: Edmonds Terminal

Collected: 08/25/2011 08:32 by DR

Chevron

6001 Bollinger Canyon Rd L4310
 San Ramon CA 94583

Submitted: 08/26/2011 09:05

Reported: 10/06/2011 13:19

ED141

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10722	PAH SIM 8270 Soil Microwave	SW-846 8270C SIM	1	11258SLE026	09/21/2011 23:32	Gregory J Drahovsky	1
10810	BNA Soil Microwave SIM PAH	SW-846 3546	1	11258SLE026	09/04/2011 07:50	Katheryne V Sponheimer	1
02006	NWTPH-Gx soil C7-C12	ECY 97-602 NWTPH-Gx	1	11249A16A	09/07/2011 06:30	Marie D John	596.59
08179	Method 8021 Soil Master	SW-846 8021B	1	11249A16A	09/07/2011 06:30	Marie D John	596.59
06647	GC-5g Field Preserved MeOH	SW-846 5035A	1	201123825382	08/25/2011 08:32	Client Supplied	n.a.
06647	GC-5g Field Preserved MeOH	SW-846 5035A	2	201123825382	08/25/2011 08:32	Client Supplied	n.a.
02214	NWTPH-Dx soil w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	112500004A	09/13/2011 07:11	Dustin A Underkoffler	1
07024	DRO Alternate Soil Extraction	SW-846 3550B	1	112500004A	09/07/2011 14:00	Wanda F Oswald	1
00111	Moisture	SM20 2540 G	1	11245820003B	09/02/2011 20:42	Scott W Freisher	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: B14-1.5-2 Grab Soil Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # SW 6389119
LLI Group # 1263763
Account # 11964

Project Name: Edmonds Terminal

Collected: 08/25/2011 08:45 by DR

Chevron

6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

Submitted: 08/26/2011 09:05

Reported: 10/06/2011 13:19

ED142

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC Volatiles					
	ECY 97-602 NWTPH-Gx		mg/kg	mg/kg	
02006	NWTPH-Gx soil C7-C12	n.a.	N.D.	11	286.04
Reporting limits were raised due to sample foaming.					
GC Volatiles					
	SW-846 8021B		mg/kg	mg/kg	
08179	Benzene	71-43-2	N.D.	0.023	286.04
Reporting limits were raised due to sample foaming.					

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
02006	NWTPH-Gx soil C7-C12	ECY 97-602 NWTPH-Gx	1	11249A16A	09/07/2011 10:17	Marie D John	286.04
08179	Method 8021 Soil Master	SW-846 8021B	1	11249A16A	09/07/2011 10:17	Marie D John	286.04
06647	GC-5g Field Preserved MeOH	SW-846 5035A	1	201123825382	08/25/2011 08:45	Client Supplied	n.a.
06647	GC-5g Field Preserved MeOH	SW-846 5035A	2	201123825382	08/25/2011 08:45	Client Supplied	n.a.



Analysis Report

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Page 1 of 1

Sample Description: B14-2.5-3 Grab Soil Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # SW 6389120
LLI Group # 1263763
Account # 11964

Project Name: Edmonds Terminal

Collected: 08/25/2011 08:58 by DR

Chevron

6001 Bollinger Canyon Rd L4310
 San Ramon CA 94583

Submitted: 08/26/2011 09:05

Reported: 10/06/2011 13:19

ED143

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC Volatiles					
	ECY 97-602 NWTPH-Gx		mg/kg	mg/kg	
02006	NWTPH-Gx soil C7-C12	n.a.	N.D.	25	378.89
Reporting limits were raised due to sample foaming.					
GC Volatiles					
	SW-846 8021B		mg/kg	mg/kg	
08179	Benzene	71-43-2	N.D.	0.051	378.89
Reporting limits were raised due to sample foaming.					
GC Petroleum Hydrocarbons					
	ECY 97-602 NWTPH-Dx modified		mg/kg	mg/kg	
02214	DRO C12-C24 w/Si Gel	n.a.	N.D.	5.0	1
02214	HRO C24-C40 w/Si Gel	n.a.	N.D.	17	1
Wet Chemistry					
	SM20 2540 G		%	%	
00111	Moisture	n.a.	40.2	0.50	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

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
10810	BNA Soil Microwave SIM PAH	SW-846 3546	1	11246SLB026	09/04/2011 07:50	Katheryne V Sponheimer	1
02006	NWTPH-Gx soil C7-C12	ECY 97-602 NWTPH-Gx	1	11249A16A	09/07/2011 10:55	Marie D John	378.89
08179	Method 8021 Soil Master	SW-846 8021B	1	11249A16A	09/07/2011 10:55	Marie D John	378.89
06647	GC-5g Field Preserved MeOH	SW-846 5035A	1	201123825382	08/25/2011 08:58	Client Supplied	n.a.
06647	GC-5g Field Preserved MeOH	SW-846 5035A	2	201123825382	08/25/2011 08:58	Client Supplied	n.a.
02214	NWTPH-Dx soil w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	112500004A	09/13/2011 06:50	Dustin A Underkoffler	1
07024	DRO Alternate Soil Extraction	SW-846 3550B	1	112500004A	09/07/2011 14:00	Wanda F Oswald	1
00111	Moisture	SM20 2540 G	1	11245820003B	09/02/2011 20:42	Scott W Freisher	1



Analysis Report

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Sample Description: B14-3.5-4 Grab Soil Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # SW 6389121
LLI Group # 1263763
Account # 11964

Project Name: Edmonds Terminal

Collected: 08/25/2011 09:05 by DR

Chevron

6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

Submitted: 08/26/2011 09:05

Reported: 10/06/2011 13:19

ED144

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS Semivolatiles SW-846 8270C SIM			mg/kg	mg/kg	
10722	Acenaphthene	83-32-9	N.D.	0.0012	1
10722	Acenaphthylene	208-96-8	N.D.	0.00060	1
10722	Anthracene	120-12-7	N.D.	0.00060	1
10722	Benzo(a)anthracene	56-55-3	N.D.	0.0012	1
10722	Benzo(a)pyrene	50-32-8	N.D.	0.0012	1
10722	Benzo(b)fluoranthene	205-99-2	N.D.	0.0012	1
10722	Benzo(g,h,i)perylene	191-24-2	N.D.	0.0012	1
10722	Benzo(k)fluoranthene	207-08-9	N.D.	0.0012	1
10722	Chrysene	218-01-9	N.D.	0.00060	1
10722	Dibenz(a,h)anthracene	53-70-3	N.D.	0.0012	1
10722	Fluoranthene	206-44-0	N.D.	0.0012	1
10722	Fluorene	86-73-7	N.D.	0.0012	1
10722	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.0012	1
10722	1-Methylnaphthalene	90-12-0	0.0018	0.0012	1
10722	2-Methylnaphthalene	91-57-6	0.0014	0.0012	1
10722	Naphthalene	91-20-3	0.0013	0.0012	1
10722	Phenanthrene	85-01-8	0.0013	0.0012	1
10722	Pyrene	129-00-0	N.D.	0.0012	1

The GC/MS semivolatile surrogate recovery of terphenyl-d14 was outside of QC limits in this sample.

GC Volatiles ECY 97-602 NWTPH-Gx			mg/kg	mg/kg	
02006	NWTPH-Gx soil C7-C12	n.a.	N.D.	29	406.28
Reporting limits were raised due to sample foaming.					

GC Volatiles SW-846 8021B			mg/kg	mg/kg	
08179	Benzene	71-43-2	N.D.	0.058	406.28
Reporting limits were raised due to sample foaming.					

GC Petroleum ECY 97-602 NWTPH-Dx			mg/kg	mg/kg	
Hydrocarbons modified					
02214	DRO C12-C24 w/Si Gel	n.a.	7.4	5.4	1
02214	HRO C24-C40 w/Si Gel	n.a.	76	18	1

Wet Chemistry SM20 2540 G			%	%	
00111	Moisture	n.a.	44.0	0.50	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

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.

Sample Description: B14-3.5-4 Grab Soil Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # SW 6389121
LLI Group # 1263763
Account # 11964

Project Name: Edmonds Terminal

Collected: 08/25/2011 09:05 by DR

Chevron

6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

Submitted: 08/26/2011 09:05

Reported: 10/06/2011 13:19

ED144

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10722	PAH SIM 8270 Soil Microwave	SW-846 8270C SIM	1	11258SLE026	09/30/2011 18:46	Gregory J Drahovsky	1
10810	BNA Soil Microwave SIM PAH	SW-846 3546	1	11258SLE026	09/04/2011 07:50	Katheryne V Sponheimer	1
02006	NWTPH-Gx soil C7-C12	ECY 97-602 NWTPH-Gx	1	11249A16A	09/07/2011 11:32	Marie D John	406.28
08179	Method 8021 Soil Master	SW-846 8021B	1	11249A16A	09/07/2011 11:32	Marie D John	406.28
06647	GC-5g Field Preserved MeOH	SW-846 5035A	1	201123825382	08/25/2011 09:05	Client Supplied	n.a.
06647	GC-5g Field Preserved MeOH	SW-846 5035A	2	201123825382	08/25/2011 09:05	Client Supplied	n.a.
02214	NWTPH-Dx soil w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	112500004A	09/16/2011 08:55	Elizabeth J Marin	1
07024	DRO Alternate Soil Extraction	SW-846 3550B	1	112500004A	09/07/2011 14:00	Wanda F Oswald	1
00111	Moisture	SM20 2540 G	1	11245820003B	09/02/2011 20:42	Scott W Freisher	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: B10-0.5-1 Grab Soil Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # SW 6389122
LLI Group # 1263763
Account # 11964

Project Name: Edmonds Terminal

Collected: 08/25/2011 09:40 by DR

Chevron

6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

Submitted: 08/26/2011 09:05

Reported: 10/06/2011 13:19

ED101

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS Semivolatiles SW-846 8270C SIM			mg/kg	mg/kg	
10722	Acenaphthene	83-32-9	0.038	0.00092	1
10722	Acenaphthylene	208-96-8	0.0015	0.00046	1
10722	Anthracene	120-12-7	0.040	0.00046	1
10722	Benzo(a)anthracene	56-55-3	0.15	0.00092	1
10722	Benzo(a)pyrene	50-32-8	0.14	0.00092	1
10722	Benzo(b)fluoranthene	205-99-2	0.22	0.00092	1
10722	Benzo(g,h,i)perylene	191-24-2	0.094	0.00092	1
10722	Benzo(k)fluoranthene	207-08-9	0.10	0.00092	1
10722	Chrysene	218-01-9	0.15	0.00046	1
10722	Dibenz(a,h)anthracene	53-70-3	0.027	0.00092	1
10722	Fluoranthene	206-44-0	0.37	0.00092	1
10722	Fluorene	86-73-7	0.021	0.00092	1
10722	Indeno(1,2,3-cd)pyrene	193-39-5	0.095	0.00092	1
10722	1-Methylnaphthalene	90-12-0	0.0050	0.00092	1
10722	2-Methylnaphthalene	91-57-6	0.0062	0.00092	1
10722	Naphthalene	91-20-3	0.016	0.00092	1
10722	Phenanthrene	85-01-8	0.19	0.00092	1
10722	Pyrene	129-00-0	0.24	0.00092	1
GC Volatiles ECY 97-602 NWTPH-Gx			mg/kg	mg/kg	
02006	NWTPH-Gx soil C7-C12	n.a.	N.D.	15	263.27
Reporting limits were raised due to sample foaming.					
GC Volatiles SW-846 8021B			mg/kg	mg/kg	
08179	Benzene	71-43-2	N.D.	0.030	263.27
Reporting limits were raised due to sample foaming.					
GC Petroleum ECY 97-602 NWTPH-Dx			mg/kg	mg/kg	
Hydrocarbons modified					
02214	DRO C12-C24 w/Si Gel	n.a.	360	8.4	2
02214	HRO C24-C40 w/Si Gel	n.a.	390	28	2
Wet Chemistry SM20 2540 G			%	%	
00111	Moisture	n.a.	28.7	0.50	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

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.

Sample Description: B10-0.5-1 Grab Soil Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # SW 6389122
LLI Group # 1263763
Account # 11964

Project Name: Edmonds Terminal

Collected: 08/25/2011 09:40 by DR

Chevron

6001 Bollinger Canyon Rd L4310
 San Ramon CA 94583

Submitted: 08/26/2011 09:05

Reported: 10/06/2011 13:19

ED101

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10722	PAH SIM 8270 Soil Microwave	SW-846 8270C SIM	1	11258SLE026	09/30/2011 19:20	Gregory J Drahovsky	1
10810	BNA Soil Microwave SIM PAH	SW-846 3546	1	11258SLE026	09/04/2011 07:50	Katheryne V Sponheimer	1
02006	NWTPH-Gx soil C7-C12	ECY 97-602 NWTPH-Gx	1	11249A16A	09/07/2011 12:10	Marie D John	263.27
08179	Method 8021 Soil Master	SW-846 8021B	1	11249A16A	09/07/2011 12:10	Marie D John	263.27
06647	GC-5g Field Preserved MeOH	SW-846 5035A	1	201123825382	08/25/2011 09:40	Client Supplied	n.a.
06647	GC-5g Field Preserved MeOH	SW-846 5035A	2	201123825382	08/25/2011 09:40	Client Supplied	n.a.
02214	NWTPH-Dx soil w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	112500004A	09/16/2011 09:16	Elizabeth J Marin	2
07024	DRO Alternate Soil Extraction	SW-846 3550B	1	112500004A	09/07/2011 14:00	Wanda F Oswald	1
00111	Moisture	SM20 2540 G	1	11245820003B	09/02/2011 20:42	Scott W Freisher	1

Sample Description: B10-1.5-2 Grab Soil Sample
Unocal Edmonds Terminal
 11720 Unoco Road - Edmonds, WA

LLI Sample # SW 6389123
LLI Group # 1263763
Account # 11964

Project Name: Edmonds Terminal

Collected: 08/25/2011 09:53 by DR

Chevron

6001 Bollinger Canyon Rd L4310
 San Ramon CA 94583

Submitted: 08/26/2011 09:05

Reported: 10/06/2011 13:19

ED102

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS Semivolatiles SW-846 8270C SIM			mg/kg	mg/kg	
10722	Acenaphthene	83-32-9	N.D.	0.0048	5
10722	Acenaphthylene	208-96-8	N.D.	0.0024	5
10722	Anthracene	120-12-7	N.D.	0.0024	5
10722	Benzo(a)anthracene	56-55-3	0.015	0.0048	5
10722	Benzo(a)pyrene	50-32-8	0.013	0.0048	5
10722	Benzo(b)fluoranthene	205-99-2	0.020	0.0048	5
10722	Benzo(g,h,i)perylene	191-24-2	N.D.	0.0048	5
10722	Benzo(k)fluoranthene	207-08-9	0.0090	0.0048	5
10722	Chrysene	218-01-9	0.016	0.0024	5
10722	Dibenz(a,h)anthracene	53-70-3	N.D.	0.0048	5
10722	Fluoranthene	206-44-0	0.022	0.0048	5
10722	Fluorene	86-73-7	N.D.	0.0048	5
10722	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.0048	5
10722	1-Methylnaphthalene	90-12-0	N.D.	0.0048	5
10722	2-Methylnaphthalene	91-57-6	N.D.	0.0048	5
10722	Naphthalene	91-20-3	N.D.	0.0048	5
10722	Phenanthrene	85-01-8	0.0093	0.0048	5
10722	Pyrene	129-00-0	0.016	0.0048	5

Reporting limits were raised due to interference from the sample matrix.

GC Volatiles ECY 97-602 NWT PH-Gx			mg/kg	mg/kg	
02006	NWT PH-Gx soil C7-C12	n.a.	N.D.	23	399.26

Reporting limits were raised due to sample foaming.

GC Volatiles SW-846 8021B			mg/kg	mg/kg	
08179	Benzene	71-43-2	N.D.	0.046	399.26

Reporting limits were raised due to sample foaming.

GC Petroleum ECY 97-602 NWT PH-Dx			mg/kg	mg/kg	
Hydrocarbons modified					
02214	DRO C12-C24 w/Si Gel	n.a.	12	4.3	1
02214	HRO C24-C40 w/Si Gel	n.a.	62	14	1

Wet Chemistry SM20 2540 G			%	%	
00111	Moisture	n.a.	30.2	0.50	1

"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.

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.

Sample Description: B10-1.5-2 Grab Soil Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # SW 6389123
LLI Group # 1263763
Account # 11964

Project Name: Edmonds Terminal

Collected: 08/25/2011 09:53 by DR

Chevron

6001 Bollinger Canyon Rd L4310
 San Ramon CA 94583

Submitted: 08/26/2011 09:05

Reported: 10/06/2011 13:19

ED102

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10722	PAH SIM 8270 Soil Microwave	SW-846 8270C SIM	1	11258SLE026	09/16/2011 22:25	Gregory J Drahovsky	5
10810	BNA Soil Microwave SIM PAH	SW-846 3546	1	11258SLE026	09/04/2011 07:50	Katheryne V Sponheimer	1
02006	NWTPH-Gx soil C7-C12	ECY 97-602 NWTPH-Gx	1	11249A16A	09/07/2011 12:48	Marie D John	399.26
08179	Method 8021 Soil Master	SW-846 8021B	1	11249A16A	09/07/2011 12:48	Marie D John	399.26
06647	GC-5g Field Preserved MeOH	SW-846 5035A	1	201123825382	08/25/2011 09:53	Client Supplied	n.a.
06647	GC-5g Field Preserved MeOH	SW-846 5035A	2	201123825382	08/25/2011 09:53	Client Supplied	n.a.
02214	NWTPH-Dx soil w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	112500004A	09/13/2011 07:31	Dustin A Underkoffler	1
07024	DRO Alternate Soil Extraction	SW-846 3550B	1	112500004A	09/07/2011 14:00	Wanda F Oswald	1
00111	Moisture	SM20 2540 G	1	11245820003B	09/02/2011 20:42	Scott W Freisher	1



Analysis Report

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Page 1 of 2

Sample Description: B10-2.5-3 Grab Soil Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # SW 6389124
LLI Group # 1263763
Account # 11964

Project Name: Edmonds Terminal

Collected: 08/25/2011 10:03 by DR

Chevron

6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

Submitted: 08/26/2011 09:05

Reported: 10/06/2011 13:19

ED103

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS Semivolatiles SW-846 8270C SIM			mg/kg	mg/kg	
10722	Acenaphthene	83-32-9	N.D.	0.00091	1
10722	Acenaphthylene	208-96-8	N.D.	0.00046	1
10722	Anthracene	120-12-7	N.D.	0.00046	1
10722	Benzo(a)anthracene	56-55-3	N.D.	0.00091	1
10722	Benzo(a)pyrene	50-32-8	N.D.	0.00091	1
10722	Benzo(b)fluoranthene	205-99-2	N.D.	0.00091	1
10722	Benzo(g,h,i)perylene	191-24-2	N.D.	0.00091	1
10722	Benzo(k)fluoranthene	207-08-9	N.D.	0.00091	1
10722	Chrysene	218-01-9	N.D.	0.00046	1
10722	Dibenz(a,h)anthracene	53-70-3	N.D.	0.00091	1
10722	Fluoranthene	206-44-0	N.D.	0.00091	1
10722	Fluorene	86-73-7	N.D.	0.00091	1
10722	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.00091	1
10722	1-Methylnaphthalene	90-12-0	N.D.	0.00091	1
10722	2-Methylnaphthalene	91-57-6	0.00095	0.00091	1
10722	Naphthalene	91-20-3	N.D.	0.00091	1
10722	Phenanthrene	85-01-8	N.D.	0.00091	1
10722	Pyrene	129-00-0	N.D.	0.00091	1
GC Volatiles ECY 97-602 NWTPH-Gx			mg/kg	mg/kg	
02006	NWTPH-Gx soil C7-C12	n.a.	N.D.	15	275.34
Reporting limits were raised due to sample foaming.					
GC Volatiles SW-846 8021B			mg/kg	mg/kg	
08179	Benzene	71-43-2	N.D.	0.030	275.34
Reporting limits were raised due to sample foaming.					
GC Petroleum ECY 97-602 NWTPH-Dx			mg/kg	mg/kg	
Hydrocarbons modified					
02214	DRO C12-C24 w/Si Gel	n.a.	N.D.	4.1	1
02214	HRO C24-C40 w/Si Gel	n.a.	27	14	1
Wet Chemistry SM20 2540 G			%	%	
00111	Moisture	n.a.	27.5	0.50	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

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.

Sample Description: B10-2.5-3 Grab Soil Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # SW 6389124
LLI Group # 1263763
Account # 11964

Project Name: Edmonds Terminal

Collected: 08/25/2011 10:03 by DR

Chevron

6001 Bollinger Canyon Rd L4310
 San Ramon CA 94583

Submitted: 08/26/2011 09:05

Reported: 10/06/2011 13:19

ED103

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10722	PAH SIM 8270 Soil Microwave	SW-846 8270C SIM	1	11258SLE026	09/22/2011 00:06	Gregory J Drahovsky	1
10810	BNA Soil Microwave SIM PAH	SW-846 3546	1	11258SLE026	09/04/2011 07:50	Katheryne V Sponheimer	1
02006	NWTPH-Gx soil C7-C12	ECY 97-602 NWTPH-Gx	1	11249A16A	09/07/2011 13:25	Marie D John	275.34
08179	Method 8021 Soil Master	SW-846 8021B	1	11249A16A	09/07/2011 13:25	Marie D John	275.34
06647	GC-5g Field Preserved MeOH	SW-846 5035A	1	201123825382	08/25/2011 10:03	Client Supplied	n.a.
06647	GC-5g Field Preserved MeOH	SW-846 5035A	2	201123825382	08/25/2011 10:03	Client Supplied	n.a.
02214	NWTPH-Dx soil w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	112500004A	09/13/2011 08:33	Dustin A Underkoffler	1
07024	DRO Alternate Soil Extraction	SW-846 3550B	1	112500004A	09/07/2011 14:00	Wanda F Oswald	1
00111	Moisture	SM20 2540 G	1	11245820003B	09/02/2011 20:42	Scott W Freisher	1

Sample Description: B10-3.5-4 Grab Soil Sample
Unocal Edmonds Terminal
 11720 Unoco Road - Edmonds, WA

LLI Sample # SW 6389125
LLI Group # 1263763
Account # 11964

Project Name: Edmonds Terminal

Collected: 08/25/2011 10:14 by DR

Chevron

6001 Bollinger Canyon Rd L4310
 San Ramon CA 94583

Submitted: 08/26/2011 09:05

Reported: 10/06/2011 13:19

ED104

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS Semivolatiles SW-846 8270C SIM			mg/kg	mg/kg	
10722	Acenaphthene	83-32-9	N.D.	0.00095	1
10722	Acenaphthylene	208-96-8	N.D.	0.00047	1
10722	Anthracene	120-12-7	0.00052	0.00047	1
10722	Benzo(a)anthracene	56-55-3	N.D.	0.00095	1
10722	Benzo(a)pyrene	50-32-8	N.D.	0.00095	1
10722	Benzo(b)fluoranthene	205-99-2	N.D.	0.00095	1
10722	Benzo(g,h,i)perylene	191-24-2	N.D.	0.00095	1
10722	Benzo(k)fluoranthene	207-08-9	N.D.	0.00095	1
10722	Chrysene	218-01-9	0.00067	0.00047	1
10722	Dibenz(a,h)anthracene	53-70-3	N.D.	0.00095	1
10722	Fluoranthene	206-44-0	N.D.	0.00095	1
10722	Fluorene	86-73-7	N.D.	0.00095	1
10722	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.00095	1
10722	1-Methylnaphthalene	90-12-0	0.0026	0.00095	1
10722	2-Methylnaphthalene	91-57-6	0.0024	0.00095	1
10722	Naphthalene	91-20-3	0.0016	0.00095	1
10722	Phenanthrene	85-01-8	0.0018	0.00095	1
10722	Pyrene	129-00-0	0.0011	0.00095	1
GC Volatiles ECY 97-602 NWTPH-Gx			mg/kg	mg/kg	
02006	NWTPH-Gx soil C7-C12	n.a.	N.D.	1.8	32
The recovery for the sample surrogate is outside the QC acceptance limits as noted on the QC Summary. A reanalysis was not performed to confirm a matrix effect.					
GC Volatiles SW-846 8021B			mg/kg	mg/kg	
08179	Benzene	71-43-2	N.D.	0.0037	32
The recovery for the sample surrogate is outside the QC acceptance limits as noted on the QC Summary. A reanalysis was not performed to confirm a matrix effect.					
GC Petroleum ECY 97-602 NWTPH-Dx			mg/kg	mg/kg	
Hydrocarbons modified					
02214	DRO C12-C24 w/Si Gel	n.a.	15	4.3	1
02214	HRO C24-C40 w/Si Gel	n.a.	41	14	1
Wet Chemistry SM20 2540 G			%	%	
00111	Moisture	n.a.	30.0	0.50	1
"Moisture" represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported above is on an as-received basis.					

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.

Sample Description: B10-3.5-4 Grab Soil Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # SW 6389125
LLI Group # 1263763
Account # 11964

Project Name: Edmonds Terminal

Collected: 08/25/2011 10:14 by DR

Chevron

6001 Bollinger Canyon Rd L4310
 San Ramon CA 94583

Submitted: 08/26/2011 09:05

Reported: 10/06/2011 13:19

ED104

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10722	PAH SIM 8270 Soil Microwave	SW-846 8270C SIM	1	11258SLE026	09/16/2011 22:58	Gregory J Drahovsky	1
10810	BNA Soil Microwave SIM PAH	SW-846 3546	1	11258SLE026	09/04/2011 07:50	Katheryne V Sponheimer	1
02006	NWTPH-Gx soil C7-C12	ECY 97-602 NWTPH-Gx	1	11249A16A	09/07/2011 14:41	Marie D John	32
08179	Method 8021 Soil Master	SW-846 8021B	1	11249A16A	09/07/2011 14:41	Marie D John	32
06647	GC-5g Field Preserved MeOH	SW-846 5035A	1	201123825382	08/25/2011 10:14	Client Supplied	n.a.
06647	GC-5g Field Preserved MeOH	SW-846 5035A	2	201123825382	08/25/2011 10:14	Client Supplied	n.a.
02214	NWTPH-Dx soil w/Si Gel	ECY 97-602 NWTPH-Dx modified	1	112500004A	09/13/2011 09:15	Dustin A Underkoffler	1
07024	DRO Alternate Soil Extraction	SW-846 3550B	1	112500004A	09/07/2011 14:00	Wanda F Oswald	1
00111	Moisture	SM20 2540 G	1	11245820003B	09/02/2011 20:42	Scott W Freisher	1



Analysis Report

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Sample Description: B10-2-2.5 Grab Soil Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # SW 6389126
LLI Group # 1263763
Account # 11964

Project Name: Edmonds Terminal

Collected: 08/25/2011 10:15 by DR

Chevron

6001 Bollinger Canyon Rd L4310
 San Ramon CA 94583

Submitted: 08/26/2011 09:05

Reported: 10/06/2011 13:19

ED105

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Wet Chemistry		ASTM D422	% Passing	% Passing	
07103	75 mm	n.a.	100	0.50	1
07103	37.5 mm	n.a.	100	0.50	1
07103	19 mm	n.a.	100	0.50	1
07103	4.75 mm	n.a.	99.9	0.50	1
07103	3.35 mm	n.a.	99.8	0.50	1
07103	2.36 mm	n.a.	99.7	0.50	1
07103	1.18 mm	n.a.	98.9	0.50	1
07103	0.6 mm	n.a.	92.0	0.50	1
07103	0.3 mm	n.a.	63.1	0.50	1
07103	0.15 mm	n.a.	40.8	0.50	1
07103	0.075 mm	n.a.	33.1	0.50	1
07103	0.064 mm	n.a.	29.0	0.50	1
07103	0.05 mm	n.a.	19.0	0.50	1
07103	0.02 mm	n.a.	9.0	0.50	1
07103	0.005 mm	n.a.	3.5	0.50	1
07103	0.002 mm	n.a.	1.5	0.50	1
07103	0.001 mm	n.a.	N.D.	0.50	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
07103	Grain Size to 1 um	ASTM D422	1	11238710301A	08/26/2011 21:20	Luz M Groff	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 Methanol Sample
Unocal Edmonds Terminal
11720 Unoco Road - Edmonds, WA

LLI Sample # G5 6389127
LLI Group # 1263763
Account # 11964

Project Name: Edmonds Terminal

Collected: 08/25/2011

Chevron

Submitted: 08/26/2011 09:05

6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

Reported: 10/06/2011 13:19

ED10T

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC Volatiles	ECY 97-602	NWTPH-Gx	mg/kg	mg/kg	
02006	NWTPH-Gx soil C7-C12	n.a.	N.D.	1.0	25
GC Volatiles	SW-846 8021B		mg/kg	mg/kg	
08179	Benzene	71-43-2	N.D.	0.0020	25

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
02006	NWTPH-Gx soil C7-C12	ECY 97-602 NWTPH-Gx	1	11249A16A	09/07/2011 09:39	Marie D John	25
08179	Method 8021 Soil Master	SW-846 8021B	1	11249A16A	09/07/2011 09:39	Marie D John	25
06647	GC-5g Field Preserved MeOH	SW-846 5035A	1	201123825382	08/25/2011 00:00	Client Supplied	n.a.

Quality Control Summary

 Client Name: Chevron
 Reported: 10/06/11 at 01:19 PM

Group Number: 1263763

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: 11258SLE026	Sample number(s): 6389118,6389121-6389125							
Acenaphthene	N.D.	0.00067	mg/kg	88		73-104		
Acenaphthylene	N.D.	0.00033	mg/kg	86		67-100		
Anthracene	N.D.	0.00033	mg/kg	91		69-107		
Benzo(a)anthracene	N.D.	0.00067	mg/kg	89		74-112		
Benzo(a)pyrene	N.D.	0.00067	mg/kg	90		70-109		
Benzo(b)fluoranthene	N.D.	0.00067	mg/kg	90		60-126		
Benzo(g,h,i)perylene	N.D.	0.00067	mg/kg	93		49-135		
Benzo(k)fluoranthene	N.D.	0.00067	mg/kg	91		65-130		
Chrysene	N.D.	0.00033	mg/kg	88		79-111		
Dibenz(a,h)anthracene	N.D.	0.00067	mg/kg	94		49-135		
Fluoranthene	N.D.	0.00067	mg/kg	97		78-114		
Fluorene	N.D.	0.00067	mg/kg	92		75-110		
Indeno(1,2,3-cd)pyrene	N.D.	0.00067	mg/kg	94		53-128		
1-Methylnaphthalene	N.D.	0.00067	mg/kg	92		72-114		
2-Methylnaphthalene	N.D.	0.00067	mg/kg	87		62-115		
Naphthalene	N.D.	0.00067	mg/kg	86		67-105		
Phenanthrene	N.D.	0.00067	mg/kg	88		76-109		
Pyrene	N.D.	0.00067	mg/kg	86		71-109		
Batch number: 11249A16A	Sample number(s): 6389118-6389125,6389127							
Benzene	N.D.	0.0020	mg/kg	97	102	76-118	6	30
NWTPH-Gx soil C7-C12	N.D.	1.0	mg/kg	102	99	67-119	3	30
Batch number: 112500004A	Sample number(s): 6389118,6389120-6389125							
DRO C12-C24 w/Si Gel	N.D.	3.0	mg/kg	94		60-120		
HRO C24-C40 w/Si Gel	N.D.	10.	mg/kg					
Batch number: 11245820003B	Sample number(s): 6389118,6389120-6389125							
Moisture				100		99-101		

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: 11258SLE026	Sample number(s): 6389118,6389121-6389125 UNSPK: P387546								
Acenaphthene	83	76	65-110	10	30				
Acenaphthylene	86	79	63-120	10	30				
Anthracene	86	78	56-121	11	30				

*- 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: 10/06/11 at 01:19 PM

Group Number: 1263763

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</u> <u>%REC</u>	<u>MSD</u> <u>%REC</u>	<u>MS/MSD</u> <u>Limits</u>	<u>RPD</u> <u>RPD</u>	<u>RPD</u> <u>MAX</u>	<u>BKG</u> <u>Conc</u>	<u>DUP</u> <u>Conc</u>	<u>DUP</u> <u>RPD</u>	<u>Dup RPD</u> <u>Max</u>
Benzo(a)anthracene	80	70	66-114	14	30				
Benzo(a)pyrene	77	69	57-117	12	30				
Benzo(b)fluoranthene	76	67	26-142	13	30				
Benzo(g,h,i)perylene	47	47	33-141	2	30				
Benzo(k)fluoranthene	90	78	49-145	15	30				
Chrysene	79	70	41-126	13	30				
Dibenz(a,h)anthracene	62	61	29-138	4	30				
Fluoranthene	90	81	47-135	11	30				
Fluorene	86	80	65-116	9	30				
Indeno(1,2,3-cd)pyrene	58	57	25-136	4	30				
1-Methylnaphthalene	87	81	50-118	9	30				
2-Methylnaphthalene	83	78	49-134	7	30				
Naphthalene	84	79	61-113	7	30				
Phenanthrene	83	76	37-134	10	30				
Pyrene	76	67	31-120	13	30				

Batch number: 112500004A	Sample number(s): 6389118,6389120-6389125	BKG: P387554		
DRO C12-C24 w/Si Gel		3.3	N.D.	200* (1) 20
HRO C24-C40 w/Si Gel		23	12	58* (1) 20
Batch number: 11245820003B	Sample number(s): 6389118,6389120-6389125	BKG: P387585		
Moisture		26.1	23.0	13 15

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: PAH SIM 8270 Soil Microwave
 Batch number: 11258SLE026

	Nitrobenzene-d5	2-Fluorobiphenyl	Terphenyl-d14
6389118	104	85	74
6389121	100	75	57*
6389122	86	78	72
6389123	84	75	63
6389124	102	96	103
6389125	84	83	80
Blank	89	95	105
LCS	87	92	104
MS	90	90	90
MSD	91	85	84

Limits: 53-152 66-118 63-129

 Analysis Name: Method 8021 Soil Master
 Batch number: 11249A16A

	Trifluorotoluene-F	Trifluorotoluene-P
6389118	61	72*

*- 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: 10/06/11 at 01:19 PM

Group Number: 1263763

Surrogate Quality Control

6389119	63	77
6389120	60*	77
6389121	64	75
6389122	58*	70*
6389123	63	78
6389124	67	82
6389125	53*	64*
6389127	79	100
Blank	83	100
LCS	88	95
LCSD	87	100

Limits: 61-122 73-117

Analysis Name: NWTPH-Dx soil w/Si Gel
Batch number: 112500004A
Orthoterphenyl

6389118	114
6389120	116
6389121	121
6389122	118
6389123	112
6389124	115
6389125	118
Blank	118
DUP	122
LCS	126

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



223957

For Lancaster Laboratories use only
 Acct. #: 11964 Sample #: 6389118-27 SCR#: _____

1263763

Facility #: <u>Edmonds Terminal</u> Site Address: <u>1770 Unoco 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/NG</u> Service Order #: <u>30045362</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 <input type="checkbox"/> Composite		Analyses Requested Preservation Codes BTEX + MTBE 8021 <input type="checkbox"/> 8260 <input type="checkbox"/> Naphth <input type="checkbox"/> 8260 full scan Oxygenates TPH G <input checked="" type="checkbox"/> TPH D <input checked="" type="checkbox"/> Extended Rtg. Silica Gel Cleanup Lead Total <input type="checkbox"/> Diss. <input type="checkbox"/> Method VPH/EPH NWTPH/HCID <input type="checkbox"/> quantification Grain Size Benzene 8021B PAH (HOLD)										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	TPH G	TPH D	Lead Total	Diss.	Method	VPH/EPH	NWTPH/HCID	quantification	Grain Size	Benzene 8021B	PAH (HOLD)	Comments / Remarks	
B14-0.5-1	8/25/11	832	X		X				3						X											page 1 of 1 HOLD PAH PAH extraction - o/c	
B14-1.5-2		845																									
B14-2.5-3		858																									
B14-3.5-4		905																									
B10-0.5-1		940																									
B10-1.5-2		953																									
B10-2.5-3		1003																									
B10-3.5-4		1014																									
B10-2-2.5		1015													X								X				
Trip Blank					X										X									X			

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>8/25/11</u> Time: <u>1600</u>		Received by: <u>Fed EX</u> Date: <u>8/25/11</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 <u>FedEx</u> Other _____ Temperature Upon Receipt <u>1.0</u> °C			Received by: <u>Brandy Dorely</u> Date: <u>8/26/11</u> Time: <u>095</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:

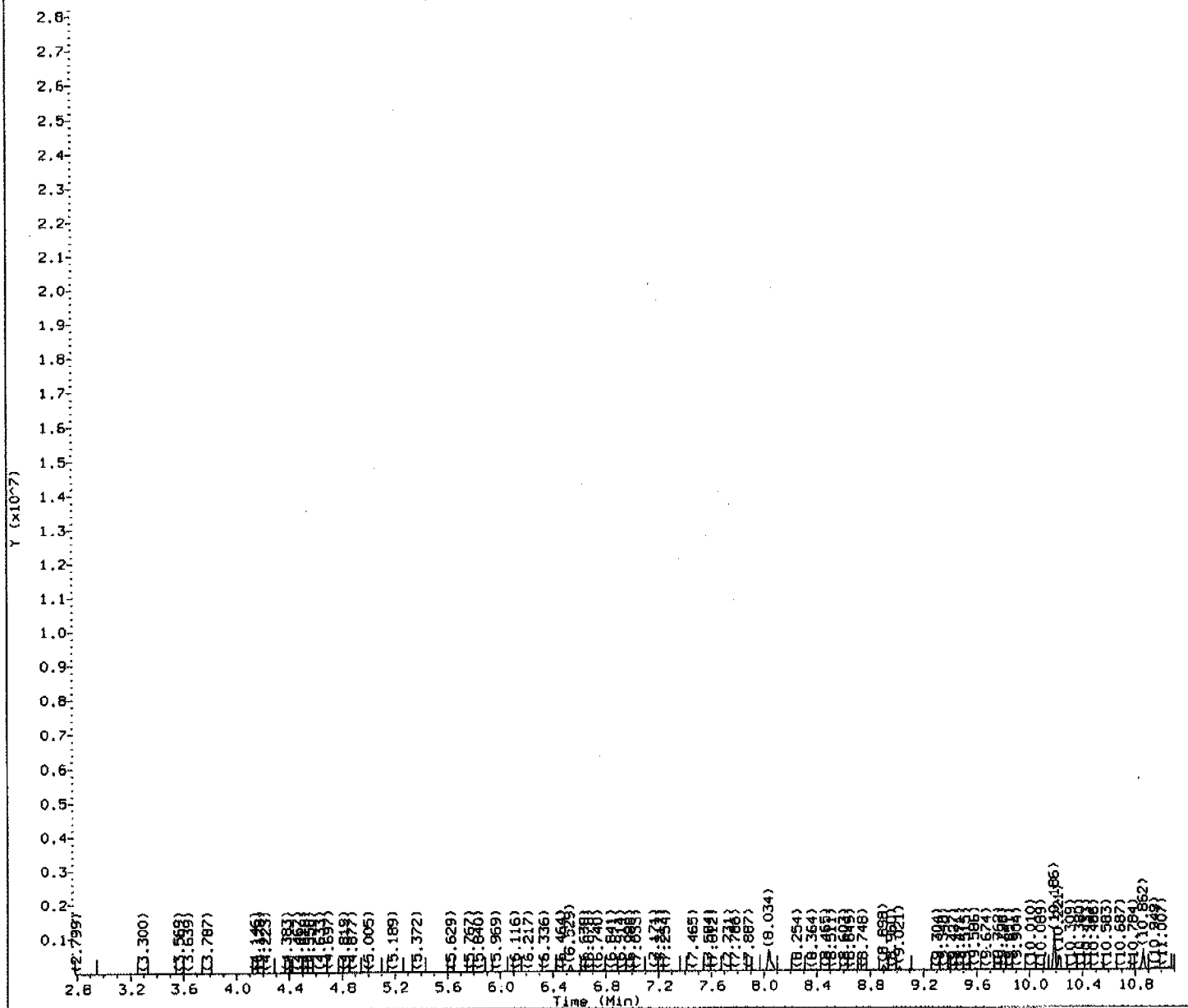
Organic Qualifiers	Inorganic Qualifiers
A TIC is a possible aldol-condensation product	B Value is $<$ CRDL, but \geq IDL
B Analyte was also detected in the blank	E Estimated due to interference
C Pesticide result confirmed by GC/MS	M Duplicate injection precision not met
D Compound quantitated on a diluted 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.

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Quant Report

Target Revision 3.5

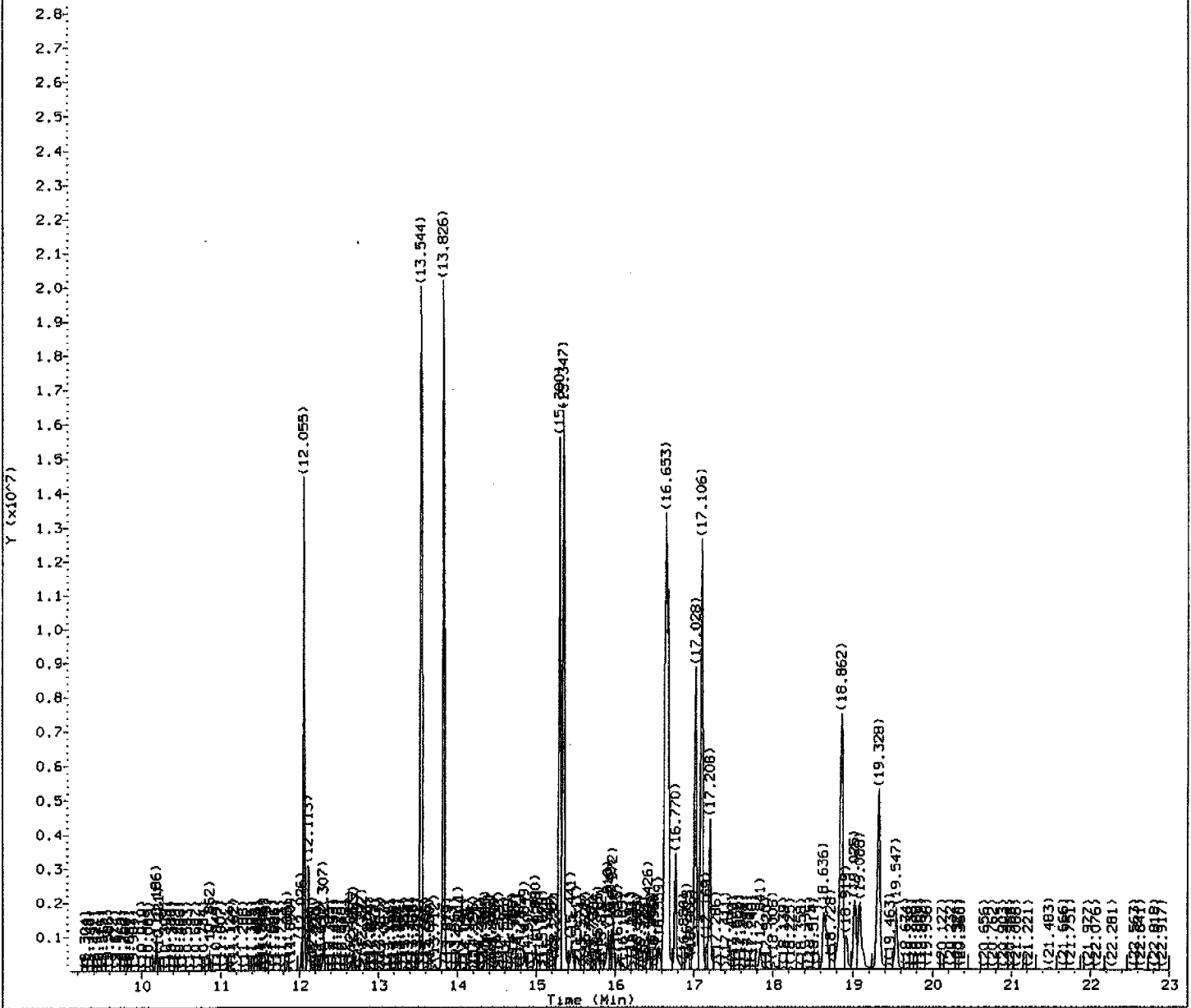
Data File: /chem/HP10976.i/11sep18.b/ii0686.d
 Injection date and time: 18-SEP-2011 21:15

Instrument ID: HP10976.i
 Analyst ID: gjd01970

Method used: /chem/HP10976.i/11sep18.b/ml1pah_2sim.m Sublist used: SList18pah
 Calibration date and time: 18-SEP-2011 19:56
 Date, time and analyst ID of latest file update: 19-Sep-2011 04:43 jmg00346

Sample Name: XXXXX

Lab Sample ID: 6387556



Quant Report

Target Revision 3.5

Data File: /chem/HP10976.i/11sep18.b/ii0686.d
Injection date and time: 18-SEP-2011 21:15

Instrument ID: HP10976.i
Analyst ID: gjd01970

Method used: /chem/HP10976.i/11sep18.b/mlpah_2sim.m Sublist used: SList18pah
Calibration date and time: 18-SEP-2011 19:56
Date, time and analyst ID of latest file update: 19-Sep-2011 04:43 jmg00346

Sample Name: XXXXX

Lab Sample ID: 6387556

