

February 21st, 2017

Via Email

Mr. William Fees Site Management Supervisor Eastern Regional Office-Toxics Cleanup Program WA Department of Ecology 4601 N. Monroe Street Spokane, WA 99205-1295

Re: Riverbank Sampling Results

Tesoro Logistics (Former Chevron) Pasco Bulk Fuel Terminal 2900 Sacajawea Park Road, Pasco, Washington 99301 Ecology Facility Site ID: 55763995; Cleanup Site ID: 4867

Dear Mr. Fees:

Enclosed please find a soil sample data summary table (Table 1), site figures (Figures 1 and 2), and copies of laboratory data reports for the riverbank soil sampling completed on September 18th, 2016 and December 8th, 2016 at the Tesoro Logistics (Former Chevron) Pasco Bulk Fuel Terminal on Sacajawea Road in Pasco, Washington.

Nine soil samples were collected approximately one foot above the estimated daily/seasonal low water table level. The samples were analyzed for volatile organic compounds (VOCs), total petroleum hydrocarbons reported as gasoline (TPHg), as diesel (TPHd), and as motor oil (TPHmo), and percent solids/moisture.

No VOCs or TPHg were detected at or above their respective reporting limits. TPHd and/or TPHmo were detected in three samples (RB-6, RB-8, and RB-9) at concentrations up to 640 milligrams per kilogram (mg/kg). The Washington Department of Ecology Method A cleanup level for TPHmo of 500 mg/kg was exceeded in one sample (RB-6).

CEECON Testing, Inc.

434 North Canal Street, Suite Six South San Francisco, CA 94080 CEECON@msn.com

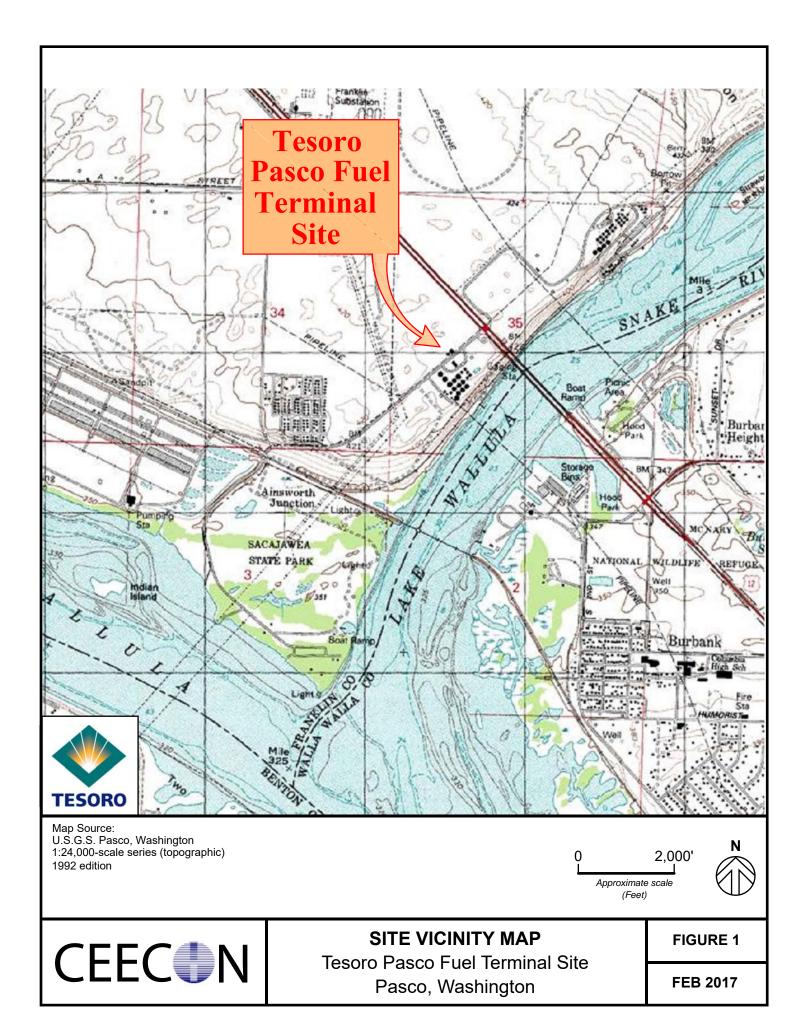


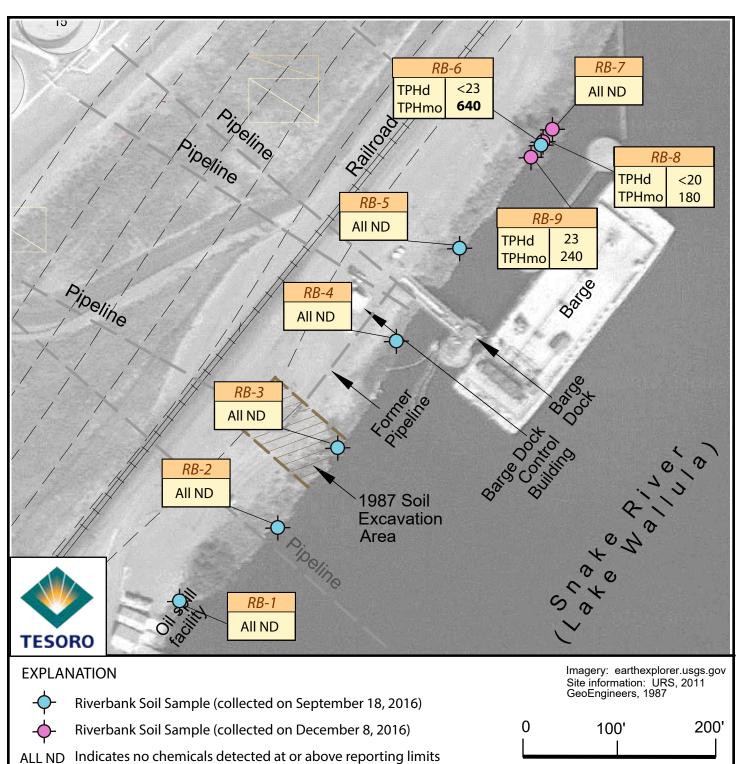
These data are transmitted on behalf of Tesoro Logistics Operations LLC (Tesoro). Please feel free to call me at (650) 827-7474 if you have any questions. I will be in touch shortly to discuss the status of this site further.

Sincerely, CEECON Testing, Inc.

Michael Hodges President

cc: Anastasia Duarte RS, Tesoro Logistics GP, LLC Kirt Rhoads, Tesoro Logistics





<20

Indicates petroleum hydrocarbons not detected ar or above reporting limit shown

BOLD

Indicates chemical concentration exceeds Washington Department of Ecology Method A Cleanup Level





RIVERBANK SOIL SAMPLING LOCATIONS

Tesoro Pasco Fuel Terminal Site Pasco, Washington

FIGURE 2

FEB 2017



THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Seattle 5755 8th Street East Tacoma, WA 98424 Tel: (253)922-2310

TestAmerica Job ID: 580-62576-1 Client Project/Site: Tesoro Pasco

For:

Tesoro Logistics Operations LLC 3450 South 344th Way, Suite 201 Auburn, Washington 98001-9540

Attn: Jeff Baker



Authorized for release by: 9/27/2016 11:57:36 AM

Christabel Escarez, Project Manager I (253)922-2310

christabel.escarez@testamericainc.com

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Review your project results through
Total Access

Have a Question?



Visit us at: www.testamericainc.com

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

Client: Tesoro Logistics Operations LLC Project/Site: Tesoro Pasco

TestAmerica Job ID: 580-62576-1

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Case Narrative

Client: Tesoro Logistics Operations LLC

Project/Site: Tesoro Pasco

TestAmerica Job ID: 580-62576-1

Job ID: 580-62576-1

Laboratory: TestAmerica Seattle

Narrative

Job Narrative 580-62576-1

Receipt

The samples were received on 9/19/2016 3:50 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 9.5° C.

Receipt Exceptions

The following samples were received at the laboratory outside the required temperature criteria: RB - 1 (580-62576-1), RB - 2 (580-62576-2), RB - 3 (580-62576-3), RB - 4 (580-62576-4), RB - 5 (580-62576-5) and RB - 6 (580-62576-6). The samples were 9.5°C on receipt.

The following samples were received without labels on the containers. The containers (brass sleeves) were in individual zip-lock bags that had the sample IDs only written on them.

RB - 1 (580-62576-1), RB - 2 (580-62576-2), RB - 3 (580-62576-3), RB - 4 (580-62576-4), RB - 5 (580-62576-5) and RB - 6 (580-62576-6)

GC/MS VOA

Method(s) 8260C: Surrogate recovery for the following samples was outside control limits: RB - 1 (580-62576-1), RB - 2 (580-62576-2), RB - 3 (580-62576-3), RB - 4 (580-62576-4), RB - 5 (580-62576-5) and RB - 6 (580-62576-6). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method(s) 8260C: The continuing calibration verification (CCV) associated with batch 580-228180 recovered outside acceptance criteria, low biased, for Naphthalene, Ethylene Dibromide, and 2-Methyl-2-Propanol. A reporting limit (RL) standard was analyzed, and the target analyte was detected. Since the associated samples were non-detect for this analyte, the data have been reported.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC Semi VOA

Method(s) NWTPH-Dx: The continuing calibration verification (CCV) associated with batch 580-228057 recovered above the upper control limit for Motor Oil (>C24-C36). The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The following samples are impacted: RB - 1 (580-62576-1), RB - 2 (580-62576-2), RB - 3 (580-62576-3), RB - 4 (580-62576-4), RB - 5 (580-62576-5), (CCV 580-228057/25) and (580-62576-A-1-F DU).

Method(s) NWTPH-Dx: The following sample contained a hydrocarbon pattern in the diesel range; however, the elution pattern was later than the typical diesel fuel pattern used by the laboratory for quantitative purposes: RB - 6 (580-62576-6).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

General Chemistry

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Organic Prep

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

TestAmerica Seattle 9/27/2016

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Q

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Definitions/Glossary

Client: Tesoro Logistics Operations LLC

Project/Site: Tesoro Pasco

TestAmerica Job ID: 580-62576-1

Qualifiers

GC/MS VOA

Qualifier	Qualifier	Description	n

Surrogate is outside control limits

Glossary

EDL

MDC

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity

MDL Method Detection Limit ML Minimum Level (Dioxin)

NC Not Calculated

Not detected at the reporting limit (or MDL or EDL if shown) ND

Estimated Detection Limit

Minimum detectable concentration

PQL Practical Quantitation Limit

QC **Quality Control** Relative error ratio RER

RLReporting Limit or Requested Limit (Radiochemistry)

RPD Relative Percent Difference, a measure of the relative difference between two points

TEF Toxicity Equivalent Factor (Dioxin) TEQ Toxicity Equivalent Quotient (Dioxin)

Client: Tesoro Logistics Operations LLC

Project/Site: Tesoro Pasco

Client Sample ID: RB - 1

Date Collected: 09/18/16 09:16

Date Received: 09/19/16 15:50

o-Terphenyl

Percent Solids Percent Moisture

Analyte

General Chemistry

TestAmerica Job ID: 580-62576-1

Lab Sample ID: 580-62576-1

Matrix: Solid Percent Solids: 79.3

	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
t-Butyl alcohol	ND		2200		ug/Kg	-	09/19/16 18:24	09/23/16 15:50	1
Methyl tert-butyl ether	ND		59		ug/Kg	₽	09/19/16 18:24	09/23/16 15:50	1
Diisopropyl ether	ND		59		ug/Kg	₩	09/19/16 18:24	09/23/16 15:50	1
Ethyl t-butyl ether	ND		59		ug/Kg	₽	09/19/16 18:24	09/23/16 15:50	1
Tert-amyl methyl ether	ND		59		ug/Kg	₽	09/19/16 18:24	09/23/16 15:50	1
Benzene	ND		24		ug/Kg	₩	09/19/16 18:24	09/23/16 15:50	1
1,2-Dichloroethane	ND		24		ug/Kg		09/19/16 18:24	09/23/16 15:50	1
Toluene	ND		59		ug/Kg	₩	09/19/16 18:24	09/23/16 15:50	1
1,2-Dibromoethane	ND		24		ug/Kg	₩	09/19/16 18:24	09/23/16 15:50	1
Ethylbenzene	ND		59		ug/Kg		09/19/16 18:24	09/23/16 15:50	1
Naphthalene	ND		59		ug/Kg	₽	09/19/16 18:24	09/23/16 15:50	1
Xylenes, Total	ND		300		ug/Kg	₩	09/19/16 18:24	09/23/16 15:50	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Trifluorotoluene (Surr)			52 - 152				09/19/16 18:24	09/23/16 15:50	1
Toluene-d8 (Surr)	99		79 - 119				09/19/16 18:24	09/23/16 15:50	1
1,2-Dichloroethane-d4 (Surr)	100		81 - 121				09/19/16 18:24	09/23/16 15:50	1
4-Bromofluorobenzene (Surr)	98		79 - 120				09/19/16 18:24	09/23/16 15:50	1
Dibromofluoromethane (Surr)	98		78 - 118				09/19/16 18:24	09/23/16 15:50	1
Method: NWTPH-Gx - Northwes	st - Volatile Petro	oleum Prod	ucts (GC)						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	ND		5.9		mg/Kg	\$	09/19/16 18:24	09/21/16 02:51	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Surrogate 4-Bromofluorobenzene (Surr)		Qualifier	Limits 50 - 150				Prepared 09/19/16 18:24	Analyzed 09/21/16 02:51	Dil Fac
	107		50 - 150	Silica Gel	Cleanup				
4-Bromofluorobenzene (Surr)	107		50 - 150	Silica Gel MDL	•	D			1
4-Bromofluorobenzene (Surr) Method: NWTPH-Dx - Semi-Vola	107	Products by	50 - 150 NWTPH with \$		•	D	09/19/16 18:24	09/21/16 02:51	Dil Fac
4-Bromofluorobenzene (Surr) Method: NWTPH-Dx - Semi-Vola Analyte	107 atile Petroleum Result	Products by	50 - 150 / NWTPH with S		Unit		09/19/16 18:24 Prepared	09/21/16 02:51 Analyzed	

50 - 150

RL

0.1

0.1

RL Unit

%

%

84

79.3

20.7

Result Qualifier

09/20/16 12:33

Prepared

09/23/16 21:52

Analyzed

09/20/16 16:10

09/20/16 16:10

Dil Fac

Client: Tesoro Logistics Operations LLC

Project/Site: Tesoro Pasco

Client Sample ID: RB - 2

Date Collected: 09/18/16 09:27

Date Received: 09/19/16 15:50

Percent Moisture

TestAmerica Job ID: 580-62576-1

Lab Sample ID: 580-62576-2

Matrix: Solid Percent Solids: 96.2

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
t-Butyl alcohol	ND		1600		ug/Kg	₽	09/19/16 18:24	09/23/16 16:17	
Methyl tert-butyl ether	ND		42		ug/Kg	₽	09/19/16 18:24	09/23/16 16:17	
Diisopropyl ether	ND		42		ug/Kg	₽	09/19/16 18:24	09/23/16 16:17	
Ethyl t-butyl ether	ND		42		ug/Kg	₽	09/19/16 18:24	09/23/16 16:17	
Tert-amyl methyl ether	ND		42		ug/Kg	₽	09/19/16 18:24	09/23/16 16:17	1
Benzene	ND		17		ug/Kg	₽	09/19/16 18:24	09/23/16 16:17	1
1,2-Dichloroethane	ND		17		ug/Kg	\$	09/19/16 18:24	09/23/16 16:17	
Toluene	ND		42		ug/Kg	₽	09/19/16 18:24	09/23/16 16:17	•
1,2-Dibromoethane	ND		17		ug/Kg	₽	09/19/16 18:24	09/23/16 16:17	•
Ethylbenzene	ND		42		ug/Kg	₩	09/19/16 18:24	09/23/16 16:17	· · · · · · · · · ·
Naphthalene	ND		42		ug/Kg	₽	09/19/16 18:24	09/23/16 16:17	•
Xylenes, Total	ND		210		ug/Kg	\$	09/19/16 18:24	09/23/16 16:17	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fa
Trifluorotoluene (Surr)	155	X	52 - 152				09/19/16 18:24	09/23/16 16:17	
Toluene-d8 (Surr)	99		79 - 119				09/19/16 18:24	09/23/16 16:17	
1,2-Dichloroethane-d4 (Surr)	100		81 - 121				09/19/16 18:24	09/23/16 16:17	
4-Bromofluorobenzene (Surr)	97		79 - 120				09/19/16 18:24	09/23/16 16:17	
Dibromofluoromethane (Surr)	100		78 - 118				09/19/16 18:24	09/23/16 16:17	1
Method: NWTPH-Gx - Northwe	est - Volatile Petro	oleum Prod	ucts (GC)						
Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	ND		4.2		mg/Kg	\	09/19/16 18:24	09/21/16 03:22	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	106		50 - 150				09/19/16 18:24	09/21/16 03:22	1
Mothod: NWTDU Dv. Comi Va	eletile Detveleum	Duadinata hi	· NIMTDII with 6	Nilles Ca	l Claamum				
Method: NWTPH-Dx - Semi-Vo Analyte		Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fa
#2 Diesel (C10-C24)	ND		23		mg/Kg		09/20/16 12:33	09/23/16 22:33	
Motor Oil (>C24-C36)	ND		45		mg/Kg	₽	09/20/16 12:33	09/23/16 22:33	,
Surra mata	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fa
Surrogate							09/20/16 12:33	09/23/16 22:33	
	98		50 - 150				09/20/10 12.55	09/23/10 22.33	
o-Terphenyl			50 - 150				09/20/10 12:33	09/23/10/22:33	
Surrogate o-Terphenyl General Chemistry Analyte	98	Qualifier	50 - 150 RL	RL	Unit	D	Prepared	Analyzed	Dil Fa
o-Terphenyl General Chemistry	98	Qualifier		RL_	Unit %	D			

09/20/16 16:10

0.1

%

Client: Tesoro Logistics Operations LLC

Project/Site: Tesoro Pasco

Client Sample ID: RB - 3

Date Collected: 09/18/16 09:39

Date Received: 09/19/16 15:50

Percent Moisture

TestAmerica Job ID: 580-62576-1

Lab Sample ID: 580-62576-3

Matrix: Solid
Percent Solids: 98.9

ate Neceiveu. 09/19/10 15.50								reiceili 30ii	us. 30.3
Method: 8260C - Volatile Orga	anic Compounds	by GC/MS							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
t-Butyl alcohol	ND		1500		ug/Kg	₩	09/19/16 18:24	09/23/16 16:44	
Methyl tert-butyl ether	ND		41		ug/Kg	₩	09/19/16 18:24	09/23/16 16:44	
Diisopropyl ether	ND		41		ug/Kg	₩	09/19/16 18:24	09/23/16 16:44	
Ethyl t-butyl ether	ND		41		ug/Kg	₩	09/19/16 18:24	09/23/16 16:44	
Tert-amyl methyl ether	ND		41		ug/Kg	⇔	09/19/16 18:24	09/23/16 16:44	
Benzene	ND		16		ug/Kg	₩	09/19/16 18:24	09/23/16 16:44	
1,2-Dichloroethane	ND		16		ug/Kg	₩.	09/19/16 18:24	09/23/16 16:44	
Toluene	ND		41		ug/Kg	₩	09/19/16 18:24	09/23/16 16:44	
1,2-Dibromoethane	ND		16		ug/Kg	₩	09/19/16 18:24	09/23/16 16:44	
Ethylbenzene	ND		41		ug/Kg	₽	09/19/16 18:24	09/23/16 16:44	
Naphthalene	ND		41		ug/Kg	₩	09/19/16 18:24	09/23/16 16:44	
Xylenes, Total	ND		200		ug/Kg	₩	09/19/16 18:24	09/23/16 16:44	
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fa
Trifluorotoluene (Surr)	158	X	52 - 152				09/19/16 18:24	09/23/16 16:44	
Toluene-d8 (Surr)	98		79 - 119				09/19/16 18:24	09/23/16 16:44	
1,2-Dichloroethane-d4 (Surr)	100		81 - 121				09/19/16 18:24	09/23/16 16:44	
4-Bromofluorobenzene (Surr)	96		79 - 120				09/19/16 18:24	09/23/16 16:44	
Dibromofluoromethane (Surr)	99		78 - 118				09/19/16 18:24	09/23/16 16:44	
Method: NWTPH-Gx - Northw	est - Volatile Petro	oleum Prod	ucts (GC)						
Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
Gasoline	ND		4.1		mg/Kg	<u> </u>	09/19/16 18:24	09/21/16 03:53	
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fa
4-Bromofluorobenzene (Surr)	107		50 - 150				09/19/16 18:24	09/21/16 03:53	
Method: NWTPH-Dx - Semi-V	olatile Petroleum	Products by	v NWTPH with S	Silica Gel	l Cleanup				
Analyte		Qualifier	RL	MDL	-	D	Prepared	Analyzed	Dil Fa
#2 Diesel (C10-C24)	ND		25		mg/Kg	<u> </u>	09/20/16 12:33	09/23/16 22:53	
Motor Oil (>C24-C36)	ND		49		mg/Kg	₩	09/20/16 12:33	09/23/16 22:53	
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fa
o-Terphenyl	91		50 - 150				09/20/16 12:33	09/23/16 22:53	
General Chemistry									
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fa
Percent Solids	98.9		0.1		%			09/20/16 16:10	

09/20/16 16:10

0.1

Client: Tesoro Logistics Operations LLC

Project/Site: Tesoro Pasco

Client Sample ID: RB - 4

Date Collected: 09/18/16 09:52

Date Received: 09/19/16 15:50

Percent Moisture

TestAmerica Job ID: 580-62576-1

Lab Sample ID: 580-62576-4

Percent Solids: 95.5

Matrix: Solid

ND ND ND ND ND ND		1600 43 43 43 43 43		ug/Kg ug/Kg ug/Kg ug/Kg ug/Kg ug/Kg	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	09/19/16 18:24 09/19/16 18:24 09/19/16 18:24 09/19/16 18:24 09/19/16 18:24	09/23/16 17:11 09/23/16 17:11 09/23/16 17:11 09/23/16 17:11 09/23/16 17:11	1
ND ND ND ND		43 43 43		ug/Kg ug/Kg ug/Kg	\$ \$	09/19/16 18:24 09/19/16 18:24	09/23/16 17:11 09/23/16 17:11	1
ND ND ND		43 43		ug/Kg ug/Kg	\$	09/19/16 18:24	09/23/16 17:11	1
ND ND		43		ug/Kg	₩			
ND						09/19/16 18:24	09/23/16 17:11	
		17		ua/Ka				1
ND				ug/Ng	₩	09/19/16 18:24	09/23/16 17:11	1
		17		ug/Kg		09/19/16 18:24	09/23/16 17:11	1
ND		43		ug/Kg	₽	09/19/16 18:24	09/23/16 17:11	1
ND		17		ug/Kg	₽	09/19/16 18:24	09/23/16 17:11	1
ND		43		ug/Kg	φ.	09/19/16 18:24	09/23/16 17:11	1
ND		43		ug/Kg	₽	09/19/16 18:24	09/23/16 17:11	1
ND		220		ug/Kg	₽	09/19/16 18:24	09/23/16 17:11	1
covery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
154	X	52 - 152				09/19/16 18:24	09/23/16 17:11	1
99		79 - 119				09/19/16 18:24	09/23/16 17:11	1
100		81 - 121				09/19/16 18:24	09/23/16 17:11	1
97		79 - 120				09/19/16 18:24	09/23/16 17:11	1
98		78 - 118				09/19/16 18:24	09/23/16 17:11	1
Petro	Jaum Produc	ets (GC)						
		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
ND	· ·	4.3		mg/Kg	<u> </u>	09/19/16 18:24	09/21/16 04:25	1
overy	Qualifier	Limits				Prepared	Analyzed	Dil Fac
107		50 - 150				09/19/16 18:24	09/21/16 04:25	1
	ND ND ND 154 99 100 97 98 Petro Result ND covery	ND ND ND ND ND ND Covery Qualifier 154 X 99 100 97 98 Petroleum Product Result Qualifier ND Covery Qualifier	ND 43 ND 43 ND 43 ND 220 covery Qualifier Limits 154 X 52 - 152 99 79 - 119 100 81 - 121 97 79 - 120 98 78 - 118 covery Qualifier RL ND 43 ND	ND 43 ND 43 ND 220 covery Qualifier Limits 154 X 52 - 152 99 79 - 119 100 81 - 121 97 79 - 120 98 78 - 118 covery Qualifier RL ND 4.3 covery Qualifier Limits 50 - 150	ND	ND	ND 43 ug/Kg © 09/19/16 18:24 ND 43 ug/Kg © 09/19/16 18:24 ND 220 ug/Kg © 09/19/16 18:24 20 09/19/16 18:24 09/19/16 18:24 20 09/19/16 18:24 09/19/16 18:24 20 09/19/16 18:24 09/19/16 18:24 20 09/19/16 18:24 09/19/16 18:24 20 09/19/16 18:24 09/19/16 18:24 20 09/19/16 18:24 09/19/16 18:24 20 09/19/16 18:24 09/19/16 18:24 20 09/19/16 18:24 09/19/16 18:24 21 09/19/16 18:24 09/19/16 18:24 22 09/19/16 18:24 09/19/16 18:24 23 09/19/16 18:24 09/19/16 18:24 24 09/19/16 18:24 09/19/16 18:24 25 09/19/16 18:24 09/19/16 18:24 36 09/19/16 18:24 09/19/16 18:24	ND

09/20/16 16:10

0.1

%

Client: Tesoro Logistics Operations LLC

Project/Site: Tesoro Pasco

Client Sample ID: RB - 5

Date Collected: 09/18/16 10:04

Date Received: 09/19/16 15:50

Percent Moisture

TestAmerica Job ID: 580-62576-1

Lab Sample ID: 580-62576-5

Percent Solids: 92.3

Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
t-Butyl alcohol	ND		1700		ug/Kg	-	09/19/16 18:24	09/23/16 17:38	1
Methyl tert-butyl ether	ND		47		ug/Kg	₽	09/19/16 18:24	09/23/16 17:38	1
Diisopropyl ether	ND		47		ug/Kg	₩	09/19/16 18:24	09/23/16 17:38	1
Ethyl t-butyl ether	ND		47		ug/Kg		09/19/16 18:24	09/23/16 17:38	1
Tert-amyl methyl ether	ND		47		ug/Kg	₽	09/19/16 18:24	09/23/16 17:38	1
Benzene	ND		19		ug/Kg	₩	09/19/16 18:24	09/23/16 17:38	1
1,2-Dichloroethane	ND		19		ug/Kg	\$	09/19/16 18:24	09/23/16 17:38	1
Toluene	ND		47		ug/Kg	₩	09/19/16 18:24	09/23/16 17:38	1
1,2-Dibromoethane	ND		19		ug/Kg	₩	09/19/16 18:24	09/23/16 17:38	1
Ethylbenzene	ND		47		ug/Kg		09/19/16 18:24	09/23/16 17:38	1
Naphthalene	ND		47		ug/Kg	₩	09/19/16 18:24	09/23/16 17:38	1
Xylenes, Total	ND		230		ug/Kg	\$	09/19/16 18:24	09/23/16 17:38	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Trifluorotoluene (Surr)	153	X	52 - 152				09/19/16 18:24	09/23/16 17:38	1
Toluene-d8 (Surr)	99		79 - 119				09/19/16 18:24	09/23/16 17:38	1
1,2-Dichloroethane-d4 (Surr)	98		81 - 121				09/19/16 18:24	09/23/16 17:38	1
4-Bromofluorobenzene (Surr)	96		79 - 120				09/19/16 18:24	09/23/16 17:38	1
Dibromofluoromethane (Surr)	100		78 - 118				09/19/16 18:24	09/23/16 17:38	1
- Method: NWTPH-Gx - Northw	vest - Volatile Petro	oleum Produ	ucts (GC)						
Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	ND ND		4.7		mg/Kg	\	09/19/16 18:24	09/21/16 04:56	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Surrogate 4-Bromofluorobenzene (Surr)	%Recovery 108	Qualifier	Limits 50 - 150				Prepared 09/19/16 18:24	Analyzed 09/21/16 04:56	Dil Fac
4-Bromofluorobenzene (Surr)	108		50 - 150	Nilsa Ca	l Claamus		<u> </u>		
	108 Olatile Petroleum		50 - 150		l Cleanup Unit	D	<u> </u>		1
4-Bromofluorobenzene (Surr) Method: NWTPH-Dx - Semi-V	108 Olatile Petroleum	Products by	50 - 150 NWTPH with S			D	09/19/16 18:24	09/21/16 04:56	Dil Fac
4-Bromofluorobenzene (Surr) Method: NWTPH-Dx - Semi-V Analyte	108 Colatile Petroleum I Result	Products by	50 - 150 NWTPH with S		Unit		09/19/16 18:24 Prepared	09/21/16 04:56 Analyzed	Dil Fac
4-Bromofluorobenzene (Surr) Method: NWTPH-Dx - Semi-V Analyte #2 Diesel (C10-C24)	700 108 Petroleum I Result ND	Products by Qualifier	50 - 150 7 NWTPH with S RL 22		Unit mg/Kg		09/19/16 18:24 Prepared 09/20/16 12:33	09/21/16 04:56 Analyzed 09/23/16 23:55	Dil Fac
Method: NWTPH-Dx - Semi-V Analyte #2 Diesel (C10-C24) Motor Oil (>C24-C36)	70latile Petroleum I Result ND ND	Products by Qualifier	50 - 150 7 NWTPH with S RL 22 45		Unit mg/Kg		09/19/16 18:24 Prepared 09/20/16 12:33 09/20/16 12:33	09/21/16 04:56 Analyzed 09/23/16 23:55 09/23/16 23:55	Dil Fac
4-Bromofluorobenzene (Surr) Method: NWTPH-Dx - Semi-V Analyte #2 Diesel (C10-C24) Motor Oil (>C24-C36) Surrogate o-Terphenyl	70latile Petroleum I Result ND ND %Recovery	Products by Qualifier	50 - 150 7 NWTPH with S RL 22 45 Limits		Unit mg/Kg		09/19/16 18:24 Prepared 09/20/16 12:33 09/20/16 12:33 Prepared	09/21/16 04:56 Analyzed 09/23/16 23:55 09/23/16 23:55 Analyzed	Dil Fac
4-Bromofluorobenzene (Surr) Method: NWTPH-Dx - Semi-V Analyte #2 Diesel (C10-C24) Motor Oil (>C24-C36) Surrogate	Tolatile Petroleum I Result ND ND ND %Recovery 76	Products by Qualifier	50 - 150 7 NWTPH with S RL 22 45 Limits	MDL	Unit mg/Kg		09/19/16 18:24 Prepared 09/20/16 12:33 09/20/16 12:33 Prepared	09/21/16 04:56 Analyzed 09/23/16 23:55 09/23/16 23:55 Analyzed	Dil Fac
4-Bromofluorobenzene (Surr) Method: NWTPH-Dx - Semi-V Analyte #2 Diesel (C10-C24) Motor Oil (>C24-C36) Surrogate o-Terphenyl General Chemistry	Tolatile Petroleum I Result ND ND ND %Recovery 76	Products by Qualifier Qualifier	50 - 150 NWTPH with \$ RL 22 45 Limits 50 - 150	MDL	Unit mg/Kg mg/Kg	— <u>₩</u>	09/19/16 18:24 Prepared 09/20/16 12:33 09/20/16 12:33 Prepared 09/20/16 12:33	09/21/16 04:56 Analyzed 09/23/16 23:55 09/23/16 23:55 Analyzed 09/23/16 23:55	Dil Face

09/20/16 16:10

0.1

%

Client: Tesoro Logistics Operations LLC

Project/Site: Tesoro Pasco

Percent Moisture

Client Sample ID: RB - 6

Date Collected: 09/18/16 10:17 Date Received: 09/19/16 15:50 Lab Sample ID: 580-62576-6

Matrix: Solid
Percent Solids: 96.9

							reiceill 30ii	us. 30.3
Compounds I	by GC/MS							
Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
ND		1600		ug/Kg	<u>\$</u>	09/19/16 18:24	09/23/16 18:05	1
ND		42		ug/Kg	₽	09/19/16 18:24	09/23/16 18:05	1
ND		42		ug/Kg	₽	09/19/16 18:24	09/23/16 18:05	1
ND		42		ug/Kg	\$	09/19/16 18:24	09/23/16 18:05	
ND		42		ug/Kg	₽	09/19/16 18:24	09/23/16 18:05	1
ND		17		ug/Kg	₽	09/19/16 18:24	09/23/16 18:05	1
ND		17		ug/Kg	φ.	09/19/16 18:24	09/23/16 18:05	1
ND		42		ug/Kg	₩	09/19/16 18:24	09/23/16 18:05	1
ND		17		ug/Kg	₩	09/19/16 18:24	09/23/16 18:05	1
ND		42		ug/Kg		09/19/16 18:24	09/23/16 18:05	1
ND		42		ug/Kg	₽	09/19/16 18:24	09/23/16 18:05	1
ND		210		ug/Kg	₩	09/19/16 18:24	09/23/16 18:05	1
%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
154	X	52 - 152				09/19/16 18:24	09/23/16 18:05	1
99		79 - 119				09/19/16 18:24	09/23/16 18:05	1
101		81 - 121				09/19/16 18:24	09/23/16 18:05	1
96		79 - 120				09/19/16 18:24	09/23/16 18:05	1
99		78 - 118				09/19/16 18:24	09/23/16 18:05	1
Volatile Petre	oleum Produ	icte (GC)						
			MDL	Unit	D	Prepared	Analyzed	Dil Fac
ND		4.2		mg/Kg	<u> </u>	09/19/16 18:24	09/21/16 05:27	1
%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
110		50 - 150				09/19/16 18:24	09/21/16 05:27	1
						09/19/10 10.24	09/21/10 00:21	
	_	RL RL			D	Prepared	Analyzed	Dil Fa
ND				mg/Kg	<u></u>	09/20/16 12:33	09/24/16 00:15	
640		47		mg/Kg	₽	09/20/16 12:33	09/24/16 00:15	1
%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
88		50 - 150				09/20/16 12:33	09/24/16 00:15	1
	0 110				_			_
	Qualifier		RL		D	Prepared		Dil Fac
96.9		0.1		%			09/20/16 16:10	1
	Result	ND N	Result Qualifier RL 1600 1600 ND 42 ND 42 ND 42 ND 42 ND 42 ND 17 ND 17 ND 17 ND 42 ND 17 ND 42 ND 17 ND 42 ND 42 ND 42 ND 42 ND 210	Result Qualifier RL MDL	Result Qualifier RL MDL Unit	Result Qualifier RL MDL Unit D	Result Qualifier RL MDL Unit Ug/Kg 09/19/16 18:24 ND	No

09/20/16 16:10

TestAmerica Job ID: 580-62576-1

Client: Tesoro Logistics Operations LLC Project/Site: Tesoro Pasco

Method: 8260C - Volatile Organic Compounds by GC/MS

Lab Sample ID: MB 580-228169/7-A

Matrix: Solid

Analysis Batch: 228180

Client Sample ID: Method Blank Prep Type: Total/NA

Prep Batch: 228169

	MB	MB						
Analyte	Result	Qualifier Ri	. MDL	Unit	D	Prepared	Analyzed	Dil Fac
t-Butyl alcohol	ND	150)	ug/Kg		09/23/16 10:27	09/23/16 14:02	1
Methyl tert-butyl ether	ND	40)	ug/Kg		09/23/16 10:27	09/23/16 14:02	1
Diisopropyl ether	ND	4)	ug/Kg		09/23/16 10:27	09/23/16 14:02	1
Ethyl t-butyl ether	ND	4)	ug/Kg		09/23/16 10:27	09/23/16 14:02	
Tert-amyl methyl ether	ND	4)	ug/Kg		09/23/16 10:27	09/23/16 14:02	•
Benzene	ND	10	6	ug/Kg		09/23/16 10:27	09/23/16 14:02	
1,2-Dichloroethane	ND	10	3	ug/Kg		09/23/16 10:27	09/23/16 14:02	
Toluene	ND	4)	ug/Kg		09/23/16 10:27	09/23/16 14:02	
1,2-Dibromoethane	ND	10	6	ug/Kg		09/23/16 10:27	09/23/16 14:02	
Ethylbenzene	ND	4)	ug/Kg		09/23/16 10:27	09/23/16 14:02	
Naphthalene	ND	40)	ug/Kg		09/23/16 10:27	09/23/16 14:02	
Xylenes, Total	ND	200)	ug/Kg		09/23/16 10:27	09/23/16 14:02	

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Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Trifluorotoluene (Surr)	99		52 - 152	09/23/16 10:27	09/23/16 14:02	1
Toluene-d8 (Surr)	99		79 - 119	09/23/16 10:27	09/23/16 14:02	1
1,2-Dichloroethane-d4 (Surr)	99		81 - 121	09/23/16 10:27	09/23/16 14:02	1
4-Bromofluorobenzene (Surr)	96		79 - 120	09/23/16 10:27	09/23/16 14:02	1
Dibromofluoromethane (Surr)	97		78 ₋ 118	09/23/16 10:27	09/23/16 14:02	1

Lab Sample ID: LCS 580-228169/8-A

Matrix: Solid

Analysis Batch: 228180

Client Sample ID: Lab Control Sample Prep Type: Total/NA

Prep Batch: 228169

Spike	LCS	LCS				%Rec.			
Added	Result	Qualifier	Unit	D	%Rec	Limits			
8000	7170		ug/Kg		90	48 - 144			
801	783		ug/Kg		98	58 - 134			
1000	1070		ug/Kg		107	69 - 120			
1000	1010		ug/Kg		101	75 - 122			
1000	1040		ug/Kg		103	65 - 118			
803	779		ug/Kg		97	70 - 118			
801	804		ug/Kg		100	71 - 121			
801	813		ug/Kg		101	67 - 119			
801	721		ug/Kg		90	69 - 119			
803	754		ug/Kg		94	66 - 119			
802	752		ug/Kg		94	69 - 126			
801	739		ug/Kg		92	66 - 127			
801	713		ug/Kg		89	45 - 141			
1600	1490		ug/Kg		93	70 - 121			
	Added 8000 801 1000 1000 1000 803 801 801	Added Result 8000 7170 801 783 1000 1070 1000 1010 1000 1040 803 779 801 804 801 721 803 754 802 752 801 739 801 739 801 713	Added Result Qualifier 8000 7170 801 783 1000 1070 1000 1010 1000 1040 803 779 801 804 801 813 801 721 803 754 802 752 801 739 801 713	Added Result Qualifier Unit 8000 7170 ug/Kg 801 783 ug/Kg 1000 1070 ug/Kg 1000 1010 ug/Kg 1000 1040 ug/Kg 803 779 ug/Kg 801 804 ug/Kg 801 813 ug/Kg 801 721 ug/Kg 803 754 ug/Kg 802 752 ug/Kg 801 739 ug/Kg 801 713 ug/Kg	Added Result Qualifier Unit D 8000 7170 ug/Kg ug/Kg 801 783 ug/Kg ug/Kg 1000 1070 ug/Kg ug/Kg 1000 1010 ug/Kg ug/Kg 803 779 ug/Kg 801 804 ug/Kg 801 813 ug/Kg 801 721 ug/Kg 803 754 ug/Kg 802 752 ug/Kg 801 739 ug/Kg 801 713 ug/Kg	Added Result Qualifier Unit D %Rec 8000 7170 ug/Kg 90 801 783 ug/Kg 98 1000 1070 ug/Kg 107 1000 1010 ug/Kg 101 1000 1040 ug/Kg 97 801 804 ug/Kg 100 801 813 ug/Kg 101 801 721 ug/Kg 90 803 754 ug/Kg 94 802 752 ug/Kg 94 801 739 ug/Kg 92 801 713 ug/Kg 89	Spike LCS LCS WRec. Added Result Qualifier Unit D %Rec Limits 8000 7170 ug/Kg 90 48 - 144 801 783 ug/Kg 98 58 - 134 1000 1070 ug/Kg 107 69 - 120 1000 1010 ug/Kg 101 75 - 122 1000 1040 ug/Kg 103 65 - 118 803 779 ug/Kg 97 70 - 118 801 804 ug/Kg 100 71 - 121 801 813 ug/Kg 101 67 - 119 801 721 ug/Kg 90 69 - 119 803 754 ug/Kg 94 66 - 119 802 752 ug/Kg 94 69 - 126 801 739 ug/Kg 92 66 - 127 801 713 ug/Kg 89 45 - 141		

LCS LCS

Surrogate	%Recovery	Qualifier	Limits
Trifluorotoluene (Surr)	100		52 - 152
Toluene-d8 (Surr)	99		79 - 119
1,2-Dichloroethane-d4 (Surr)	99		81 - 121
4-Bromofluorobenzene (Surr)	97		79 - 120
Dibromofluoromethane (Surr)	101		78 - 118

TestAmerica Seattle

TestAmerica Job ID: 580-62576-1

Client: Tesoro Logistics Operations LLC Project/Site: Tesoro Pasco

Lab Sample ID: LCSD 580-228169/9-A

Analysis Batch: 228180

Matrix: Solid

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA
Prep Batch: 228169

	Spike	LCSD	LCSD				%Rec.		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
t-Butyl alcohol	8000	8360		ug/Kg		105	48 - 144	15	40
Methyl tert-butyl ether	801	790		ug/Kg		99	58 - 134	1	20
Diisopropyl ether	1000	1080		ug/Kg		107	69 - 120	0	15
Ethyl t-butyl ether	1000	1020		ug/Kg		102	75 - 122	1	17
Tert-amyl methyl ether	1000	1060		ug/Kg		106	65 - 118	3	22
Benzene	803	808		ug/Kg		101	70 - 118	4	19
1,2-Dichloroethane	801	824		ug/Kg		103	71 - 121	2	18
Toluene	801	810		ug/Kg		101	67 - 119	0	19
1,2-Dibromoethane	801	773		ug/Kg		96	69 - 119	7	15
Ethylbenzene	803	777		ug/Kg		97	66 - 119	3	23
m-Xylene & p-Xylene	802	766		ug/Kg		96	69 - 126	2	23
o-Xylene	801	768		ug/Kg		96	66 - 127	4	22
Naphthalene	801	784		ug/Kg		98	45 - 141	10	34
Xylenes, Total	1600	1530		ug/Kg		96	70 - 121	3	17

LCSD LCSD

Surrogate	%Recovery	Qualifier	Limits
Trifluorotoluene (Surr)	99		52 - 152
Toluene-d8 (Surr)	99		79 - 119
1,2-Dichloroethane-d4 (Surr)	99		81 - 121
4-Bromofluorobenzene (Surr)	96		79 - 120
Dibromofluoromethane (Surr)	101		78 - 118

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

Lab Sample ID: MB 580-227926/1-A Client Sample ID: Method Blank

Ma

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latrix: Solid								Prep Type: To	tal/NA
nalysis Batch: 227940								Prep Batch: 2	227926
	MB	MB							
nalyte	Result	Qualifier	RL	MDI I	Unit	D	Prepared	Analyzed	Dil Fac

Analyte 09/20/16 16:02 4.0 09/20/16 22:11 Gasoline ND mg/Kg

Surrogate %Recovery Qualifier Limits Prepared Analyzed Dil Fac 4-Bromofluorobenzene (Surr) 104 50 - 150 09/20/16 16:02 09/20/16 22:11

Lab Sample ID: LCS 580-227926/2-A Client Sample ID: Lab Control Sample Prep Type: Total/NA

Matrix: Solid Analysis Batch: 227940

MB MB

Prep Batch: 227926 LCS LCS Spike %Rec. Analyte Added Result Qualifier Unit %Rec Limits

Gasoline 40.1 68 - 120 38.1 95 mg/Kg LCS LCS

Surrogate %Recovery Qualifier Limits 4-Bromofluorobenzene (Surr) 116 50 - 150

TestAmerica Seattle

Spike

Added

40.1

LCSD LCSD

38.9

Result Qualifier

Unit

mg/Kg

D

97

Client: Tesoro Logistics Operations LLC

Project/Site: Tesoro Pasco

TestAmerica Job ID: 580-62576-1

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC) (Continued)

Lab Sample ID: LCSD 580-227926/3-A

Matrix: Solid

Analyte

Gasoline

Analysis Batch: 227940

Client Sample ID: Lab Control Sample Dup

68 - 120

Prep Type: Total/NA

Prep Batch: 227926

%Rec Limits RPD Limit 2

LCSD LCSD

Limits Surrogate %Recovery Qualifier 50 _ 150 4-Bromofluorobenzene (Surr) 99

Method: NWTPH-Dx - Semi-Volatile Petroleum Products by NWTPH with Silica Gel Cleanup

Lab Sample ID: MB 580-227889/1-B

Matrix: Solid

Analysis Batch: 228307

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 227889

MR MR

Result Qualifier RL MDL Unit D Dil Fac Analyte Prepared Analyzed 25 #2 Diesel (C10-C24) 09/20/16 12:33 ND mg/Kg 09/23/16 20:50 Motor Oil (>C24-C36) 50 09/23/16 20:50 ND mg/Kg 09/20/16 12:33

MB MB

Surrogate %Recovery Qualifier Limits Prepared Analyzed Dil Fac o-Terphenyl 86 50 - 150 09/20/16 12:33 09/23/16 20:50

Lab Sample ID: LCS 580-227889/2-B

Matrix: Solid

Analysis Batch: 228307

Client Sample ID: Lab Control Sample

Prep Type: Total/NA **Prep Batch: 227889**

LCS LCS Spike Added Result Qualifier Limits Analyte Unit D %Rec #2 Diesel (C10-C24) 503 513 mg/Kg 102 64 - 127 503 570 Motor Oil (>C24-C36) mg/Kg 113 70 - 125

Spike

Added

503

503

LCSD LCSD

Qualifier

Unit

mg/Kg

mg/Kg

D

112

Result

514

561

LCS LCS

Surrogate %Recovery Qualifier I imits o-Terphenyl 90 50 - 150

Lab Sample ID: LCSD 580-227889/3-B

Matrix: Solid

#2 Diesel (C10-C24)

Motor Oil (>C24-C36)

Analyte

Analysis Batch: 228307

Client Sample ID: Lab Control Sample Dup

70 - 125

Prep Type: Total/NA

Prep Batch: 227889

2

17

RPD %Rec. %Rec Limits **RPD** Limit 102 64 - 127 16

LCSD LCSD

Surrogate %Recovery Qualifier Limits o-Terphenyl 91 50 - 150

Lab Sample ID: 580-62576-1 DU

Matrix: Solid

Analysis Batch: 228307

Client Sample ID: RB - 1

Prep Type: Total/NA

Prep Batch: 227889

DU DU Sample Sample RPD Analyte Result Qualifier Result Qualifier Unit D RPD Limit ₩ #2 Diesel (C10-C24) ND ND mg/Kg NC 35 Ä Motor Oil (>C24-C36) ND ND mg/Kg 35

TestAmerica Seattle

QC Sample Results

Client: Tesoro Logistics Operations LLC

Project/Site: Tesoro Pasco

	DU	DU	
Surrogate	%Recovery	Qualifier	Limits
o-Terphenyl	91		50 - 150

TestAmerica Job ID: 580-62576-1

3

4

6

8

9

Client: Tesoro Logistics Operations LLC

Project/Site: Tesoro Pasco

Client Sample ID: RB - 1

Date Collected: 09/18/16 09:16 Date Received: 09/19/16 15:50

Lab Sample ID: 580-62576-1

Matrix: Solid

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216			227932	09/20/16 16:10	CJZ	TAL SEA

Lab Sample ID: 580-62576-1

Matrix: Solid

Percent Solids: 79.3

Client Sample ID: RB - 1

Date Collected: 09/18/16 09:16 Date Received: 09/19/16 15:50

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			228169	09/19/16 18:24	JSM	TAL SEA
Total/NA	Analysis	8260C		1	228180	09/23/16 15:50	W1T	TAL SEA
Total/NA	Prep	5035			227926	09/19/16 18:24	J1J	TAL SEA
Total/NA	Analysis	NWTPH-Gx		1	227940	09/21/16 02:51	JW1L	TAL SEA
Total/NA	Prep	3546			227889	09/20/16 12:33	CJZ	TAL SEA
Total/NA	Cleanup	3630C			228023	09/21/16 15:17	CJZ	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	228307	09/23/16 21:52	KZ1	TAL SEA

Client Sample ID: RB - 2

Date Collected: 09/18/16 09:27

Date Received: 09/19/16 15:50

Lab Samp	le ID:	580-6257	6-2
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Matrix: Solid

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216			227932	09/20/16 16:10	CJZ	TAL SEA

Client Sample ID: RB - 2

Date Collected: 09/18/16 09:27

Date Received: 09/19/16 15:50

Lab Samp	le II	D: 5	80-62	2576-	2
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Matrix: Solid

Percent Solids: 96.2

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			228169	09/19/16 18:24	JSM	TAL SEA
Total/NA	Analysis	8260C		1	228180	09/23/16 16:17	W1T	TAL SEA
Total/NA	Prep	5035			227926	09/19/16 18:24	J1J	TAL SEA
Total/NA	Analysis	NWTPH-Gx		1	227940	09/21/16 03:22	JW1L	TAL SEA
Total/NA	Prep	3546			227889	09/20/16 12:33	CJZ	TAL SEA
Total/NA	Cleanup	3630C			228023	09/21/16 15:17	CJZ	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	228307	09/23/16 22:33	KZ1	TAL SEA

Client Sample ID: RB - 3

Date Collected: 09/18/16 09:39

Date Received: 09/19/16 15:50

Lab Sampl	e ID:	580-62	2576-3
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Matrix: Solid

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1	227932	09/20/16 16:10	CJZ	TAL SEA

TestAmerica Seattle

Project/Site: Tesoro Pasco

Client Sample ID: RB - 3

Date Collected: 09/18/16 09:39 Date Received: 09/19/16 15:50

Lab Sample ID: 580-62576-3

Matrix: Solid Percent Solids: 98.9

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			228169	09/19/16 18:24	JSM	TAL SEA
Total/NA	Analysis	8260C		1	228180	09/23/16 16:44	W1T	TAL SEA
Total/NA	Prep	5035			227926	09/19/16 18:24	J1J	TAL SEA
Total/NA	Analysis	NWTPH-Gx		1	227940	09/21/16 03:53	JW1L	TAL SEA
Total/NA	Prep	3546			227889	09/20/16 12:33	CJZ	TAL SEA
Total/NA	Cleanup	3630C			228023	09/21/16 15:17	CJZ	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	228307	09/23/16 22:53	KZ1	TAL SEA

Client Sample ID: RB - 4 Lab Sample ID: 580-62576-4

Date Collected: 09/18/16 09:52

Date Received: 09/19/16 15:50

Total/NA

Prep

5035

Matrix: Solid

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1	227932	09/20/16 16:10	CJZ	TAL SEA

Client Sample ID: RB - 4 Lab Sample ID: 580-62576-4

Date Collected: 09/18/16 09:52 **Matrix: Solid** Percent Solids: 95.5 Date Received: 09/19/16 15:50

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Type Method		Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			228169	09/19/16 18:24	JSM	TAL SEA
Total/NA	Analysis	8260C		1	228180	09/23/16 17:11	W1T	TAL SEA
Total/NA	Prep	5035			227926	09/19/16 18:24	J1J	TAL SEA
Total/NA	Analysis	NWTPH-Gx		1	227940	09/21/16 04:25	JW1L	TAL SEA
Total/NA	Prep	3546			227889	09/20/16 12:33	CJZ	TAL SEA
Total/NA	Cleanup	3630C			228023	09/21/16 15:17	CJZ	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	228307	09/23/16 23:34	KZ1	TAL SEA

Client Sample ID: RB - 5 Lab Sample ID: 580-62576-5

Date Collected: 09/18/16 10:04 Date Received: 09/19/16 15:50

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216			227932	09/20/16 16:10	CJZ	TAL SEA

Client Sample ID: RB - 5 Lab Sample ID: 580-62576-5

Date Collected: 09/18/16 10:04 Matrix: Solid Date Received: 09/19/16 15:50 Percent Solids: 92.3

Batch Batch Dilution Batch Prepared Prep Type Method Type Run Factor Number or Analyzed Analyst Lab Total/NA 5035 Prep 228169 09/19/16 18:24 JSM TAL SEA Total/NA Analysis 8260C 228180 09/23/16 17:38 W1T TAL SEA

TestAmerica Seattle

Matrix: Solid

227926

09/19/16 18:24

J1J

TAL SEA

Lab Chronicle

Client: Tesoro Logistics Operations LLC

Project/Site: Tesoro Pasco

Client Sample ID: RB - 5

Date Collected: 09/18/16 10:04

TestAmerica Job ID: 580-62576-1

Lab Sample ID: 580-62576-5

Matrix: Solid

Percent Solids: 92.3

Date Received	: 09/19/16 15:50	U				
	Batch	Batch		Dilution	Batch	Prepared
Prep Type	Type	Method	Run	Factor	Number	or Analyzed
Total/NA	Analysis	NWTPH-Gx			227940	09/21/16 04:5
	Prep Type	Batch Prep Type Type	Batch Batch Prep Type Type Method	Prep Type Type Method Run	Batch Batch Dilution Prep Type Type Method Run Factor	Batch Batch Dilution Batch Prep Type Type Method Run Factor Number

Analyst Lab 56 JW1L TAL SEA Total/NA 3546 CJZ TAL SEA Prep 227889 09/20/16 12:33 Total/NA Cleanup 3630C 228023 09/21/16 15:17 CJZ TAL SEA Total/NA NWTPH-Dx 228307 TAL SEA Analysis 09/23/16 23:55 KZ1

Client Sample ID: RB - 6 Lab Sample ID: 580-62576-6

Date Collected: 09/18/16 10:17

Date Received: 09/19/16 15:50

Matrix: Solid

Batch Batch Dilution Batch Prepared Prep Type Туре Method Run Factor Number or Analyzed Analyst Total/NA Analysis D 2216 227932 09/20/16 16:10 CJZ TAL SEA

Client Sample ID: RB - 6

Date Collected: 09/18/16 10:17

Date Received: 09/19/16 15:50

Lab Sample ID: 580-62576-6

Matrix: Solid

Percent Solids: 96.9

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			228169	09/19/16 18:24	JSM	TAL SEA
Total/NA	Analysis	8260C		1	228180	09/23/16 18:05	W1T	TAL SEA
Total/NA	Prep	5035			227926	09/19/16 18:24	J1J	TAL SEA
Total/NA	Analysis	NWTPH-Gx		1	227940	09/21/16 05:27	JW1L	TAL SEA
Total/NA	Prep	3546			227889	09/20/16 12:33	CJZ	TAL SEA
Total/NA	Cleanup	3630C			228023	09/21/16 15:17	CJZ	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	228307	09/24/16 00:15	KZ1	TAL SEA

Laboratory References:

TAL SEA = TestAmerica Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310

TestAmerica Seattle

Certification Summary

Client: Tesoro Logistics Operations LLC

Project/Site: Tesoro Pasco

TestAmerica Job ID: 580-62576-1

Laboratory: TestAmerica Seattle

Unless otherwise noted, all analytes for this laboratory were covered under each certification below.

Authority	Program		EPA Region	Certification ID	Expiration Date
Vashington	State Pro	gram	10	C553	02-17-17
The following analytes	are included in this report, bu	authority:			
Analysis Method	Prep Method	Matrix	Analyt	e	
8260C	5035	Solid	t-Buty	alcohol	
8260C	5035	Solid	Xylene	es, Total	
D 2216		Solid	Perce	nt Moisture	
		Solid			

9

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Sample Summary

Client: Tesoro Logistics Operations LLC

Project/Site: Tesoro Pasco

TestAmerica Job ID: 580-62576-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
580-62576-1	RB - 1	Solid	09/18/16 09:16	09/19/16 15:50
580-62576-2	RB - 2	Solid	09/18/16 09:27	09/19/16 15:50
580-62576-3	RB - 3	Solid	09/18/16 09:39	09/19/16 15:50
580-62576-4	RB - 4	Solid	09/18/16 09:52	09/19/16 15:50
580-62576-5	RB - 5	Solid	09/18/16 10:04	09/19/16 15:50
580-62576-6	RR - 6	Solid	09/18/16 10:17	09/19/16 15:50

4

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6

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

434 North Canal Street, Suite 6

TEL: (650) 827-7474 FAX: (650) 827-7476

ANALYSIS REQUEST

TAT

	South San Fig	111C1SCU, CA 941	JOU			IA	(U)	0) 621-	7470					-	., .,		010	, , ,														
Project Manage	or:	D -60										T	T		T	T	T			T					E.T.	T	7	П	, wo	32		
Project Number:	STOPL OU	P.O.#:	-		Pro	oiect	Nam	e:			\dashv	8015			o l								2	H	7	Ŧ	7	X	199	13	٦	
	PAS	O PANK	Farer	nla	DAY	9/5	BS		7			8020		6	8/E,F								tibilit		8			7	0,	N N	(24)	μ,
Project Location	· WA			1	Sa	mple	r Sig	nature	: (Jine (602/	(8015)	5520 B/E,	Total Oil & Grease IR (5520 B/E,F,C)	assay			sticides	88			Reactivity, Corrosivity, Ignitibility		utant Met	17.5		A X	A STA	EPA MEMOS	(12 hr) or	IVICE (48
Sample	1	pling		ntair		P	Met	nod rved	M	atrix	2/8020)	as Gaso	esel/Oil	Grease (& Grease	Fish Blo	3020	3150	3080 - Pe	8080-PCE	3270	LEAD	y, Corros	Metals	COTA217	Zn, Ni		9-16	1000	Bay	ERVICE	ED SEF
ID	DATE	TIME	VOA	1L GLASS	MYLAR	HCI	HNOS	NONE	WATER	AIR	BTEX (602/8020)	BTEX/TPH as Gasoline (602/8020/8015)	TPH as Diesel/Oil (8015)	Total Oil & Grease (5520 B/E,F)	Total Oil	96 - Hour Fish Bloassay EPA 601/8010	EPA 602/8020	EPA 615/8150	EPA 608/8080 - Pesticides	EPA 608/8080-PCBs	EPA 625/8270	ORGANIC LEAD	Reactivit	CAM - 17 Metals	LEAD/743	Cd, Cr, Pb, Zn, Ni		NWIP	XIONX	3	RUSH SI	EXPEDITED SERVICE (48 hr) STANDARD SERVICE
RB-1	9-18·16	9:16 4·M	X	1		Ħ		1		X			П	1	1	T			7	1	1		\forall	7	T	T	1				11	V
RB.L	9.18-16	9:170 m	X				X			X					I					T				1	T				\Rightarrow		П	X
PB-3	9-18-16	9:39 a.m	LX			П	\perp			$A \perp$																			\geq	KI.	\Box	X
12B-4	7-18-16	9:52a.m	X			Ц	X			X																		7	\times			X
RB.5	9.18-16	10:04 a.M					\mathbb{Z}					-																7	\geq	K		\mathbb{X}
PB.6	9-18-16	10:17a.m	X			Ц	\times					·					Ш											2	\star		Ш	X
				\sqcup	L	Ц	\perp	Ц			1	Ш	Ц		1						L		1	1		L	Ц		\perp	Ш	Ц	Ш
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					_	Ц	\bot		\sqcup	4	\perp			\perp	_(Coole Vet/	er D)sc_	Sin	Bln	elon	ra I	ab_	_	_		Ц	\perp		Ш	\sqcup	Ш
						Н	1		\sqcup	$\perp \mid \perp$	\perp			\perp	V	Vet/	Pac	ks				Plas	st.'	c B	45	_	Ц	1		Ш	\sqcup	\sqcup
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Relinquished to	//\	9/19	ate 7	Time	0		eceiv	ed by	:							R	em	ark	s:													
Relinquished to	ру	Da	ate 1	Γime				ed by:	:	,													580-	6257	6 Ch	ain o	f Cus	stody				
Relinquished b	ру	Da	ate 7	ime		Re	ceiv	ed by	Labor	- 6	age 2	20 c	of 21			В	III T	o:	CE	- - - -	01	7				-	***		×	9	/27/2	2016

Login Sample Receipt Checklist

Client: Tesoro Logistics Operations LLC

Job Number: 580-62576-1

Login Number: 62576 List Source: TestAmerica Seattle

List Number: 1

Creator: Blankinship, Tom X

Question	Answer	Comment
Radioactivity wasn't checked or is = background as measured by a survey meter.</td <td>True</td> <td></td>	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	False	Refer to Job Narrative for details.
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	False	Refer to Job Narrative for details.
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	False	Only bulk volume received, volatiles requested.
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

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THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Seattle 5755 8th Street East Tacoma, WA 98424 Tel: (253)922-2310

TestAmerica Job ID: 580-64798-1

Client Project/Site: Pasco Tank Farm Facility

For:

Tesoro Logistics Operations LLC 3450 South 344th Way, Suite 201 Auburn, Washington 98001-9540

Attn: Jeff Baker

gmin.

Authorized for release by: 12/22/2016 4:09:11 PM Robert Greer, Project Manager II (253)922-2310

robert.greer@testamericainc.com

Designee for

Sheri Cruz, Project Manager I (253)922-2310 sheri.cruz@testamericainc.com

----- LINKS ------

Review your project results through
Total Access

Have a Question?



Visit us at: www.testamericainc.com

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

Client: Tesoro Logistics Operations LLC Project/Site: Pasco Tank Farm Facility

TestAmerica Job ID: 580-64798-1

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Case Narrative

Client: Tesoro Logistics Operations LLC Project/Site: Pasco Tank Farm Facility

TestAmerica Job ID: 580-64798-1

Job ID: 580-64798-1

Laboratory: TestAmerica Seattle

Narrative

Job Narrative 580-64798-1

Comments

No additional comments.

Receipt

The samples were received on 12/8/2016 4:40 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was -0.5° C.

Receipt Exceptions

The containers lacked labels upon receipt. The ID alone is written on the respective bags that contain the samples.

GC/MS VOA

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC Semi VOA

Method(s) NWTPH-Dx: The following sample contained a hydrocarbon pattern in the diesel range; however, the elution pattern was later than the typical diesel fuel pattern used by the laboratory for quantitative purposes: RB-9 (580-64798-3).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

General Chemistry

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Organic Prep

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

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Definitions/Glossary

Client: Tesoro Logistics Operations LLC Project/Site: Pasco Tank Farm Facility

Reporting Limit or Requested Limit (Radiochemistry)

Toxicity Equivalent Factor (Dioxin)

Toxicity Equivalent Quotient (Dioxin)

Relative Percent Difference, a measure of the relative difference between two points

TestAmerica Job ID: 580-64798-1

Glossary

RL

RPD

TEF

TEQ

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio

TestAmerica Seattle

2

Client: Tesoro Logistics Operations LLC Project/Site: Pasco Tank Farm Facility

Client Sample ID: RB-7

Analyte

Percent Solids

Percent Moisture

Date Collected: 12/08/16 11:35

Date Received: 12/08/16 16:40

Lab Sample ID: 580-64798-1

Matrix: Solid Percent Solids: 94.5

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
t-Butyl alcohol	ND		1600		ug/Kg	<u> </u>	12/08/16 17:00	12/15/16 16:45	
Methyl tert-butyl ether	ND		43		ug/Kg	₩	12/08/16 17:00	12/15/16 16:45	
Diisopropyl ether	ND		43		ug/Kg	₩	12/08/16 17:00	12/15/16 16:45	
Ethyl t-butyl ether	ND		43		ug/Kg		12/08/16 17:00	12/15/16 16:45	
Tert-amyl methyl ether	ND		43		ug/Kg	₩	12/08/16 17:00	12/15/16 16:45	•
Benzene	ND		17		ug/Kg	₩	12/08/16 17:00	12/15/16 16:45	•
1,2-Dichloroethane	ND		17		ug/Kg		12/08/16 17:00	12/15/16 16:45	
Toluene	ND		43		ug/Kg	₩	12/08/16 17:00	12/15/16 16:45	
1,2-Dibromoethane	ND		17		ug/Kg	₩	12/08/16 17:00	12/15/16 16:45	
Ethylbenzene	ND		43		ug/Kg	₩	12/08/16 17:00	12/15/16 16:45	•
Naphthalene	ND		43		ug/Kg	₩	12/08/16 17:00	12/15/16 16:45	
Xylenes, Total	ND		210		ug/Kg	₽	12/08/16 17:00	12/15/16 16:45	
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fa
Trifluorotoluene (Surr)	99		52 - 152				12/08/16 17:00	12/15/16 16:45	
Toluene-d8 (Surr)	100		79 - 119				12/08/16 17:00	12/15/16 16:45	
1,2-Dichloroethane-d4 (Surr)	102		81 - 121				12/08/16 17:00	12/15/16 16:45	
4-Bromofluorobenzene (Surr)	99		79 - 120				12/08/16 17:00	12/15/16 16:45	
Dibromofluoromethane (Surr)	97		78 - 118				12/08/16 17:00	12/15/16 16:45	
Method: NWTPH-Gx - Nortl	nwest - Volatile	e Petroleui	m Products (GC)					
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
Gasoline	ND		4.4		mg/Kg	- -	12/08/16 17:00	12/16/16 00:33	
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fa
4-Bromofluorobenzene (Surr)	101		50 - 150				12/08/16 17:00	12/16/16 00:33	
Trifluorotoluene (Surr)	115		50 - 150				12/08/16 17:00	12/16/16 00:33	
Method: NWTPH-Dx - Norti	nwest - Semi-V	olatile Pet	roleum Prod	ucts (G	C)				
Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
#2 Diesel (C10-C24)	ND		24		mg/Kg	<u> </u>	12/20/16 12:17	12/20/16 21:08	
Motor Oil (>C24-C36)	ND		48		mg/Kg	₽	12/20/16 12:17	12/20/16 21:08	
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fa
o-Terphenyl	101		50 - 150				12/20/16 12:17	12/20/16 21:08	
General Chemistry									
Amalusta	Daguill	O	D.	D.	11!4	_	Duamanasi	A malumad	D

Analyzed

12/20/16 10:24

12/20/16 10:24

Dil Fac

RL

0.1

0.1

RL Unit

%

%

D

Prepared

Result Qualifier

94.5

4

Client: Tesoro Logistics Operations LLC Project/Site: Pasco Tank Farm Facility

Client Sample ID: RB-8

Percent Solids

Percent Moisture

Date Collected: 12/08/16 11:40

Date Received: 12/08/16 16:40

Lab Sample ID: 580-64798-2

Matrix: Solid
Percent Solids: 95.4

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Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
t-Butyl alcohol	ND		1700		ug/Kg	<u> </u>	12/08/16 17:00	12/15/16 17:12	
Methyl tert-butyl ether	ND		46		ug/Kg	₩	12/08/16 17:00	12/15/16 17:12	
Diisopropyl ether	ND		46		ug/Kg	₩	12/08/16 17:00	12/15/16 17:12	
Ethyl t-butyl ether	ND		46		ug/Kg	.	12/08/16 17:00	12/15/16 17:12	•
Tert-amyl methyl ether	ND		46		ug/Kg	₩	12/08/16 17:00	12/15/16 17:12	
Benzene	ND		18		ug/Kg	₩	12/08/16 17:00	12/15/16 17:12	•
1,2-Dichloroethane	ND		18		ug/Kg	ф.	12/08/16 17:00	12/15/16 17:12	
Toluene	ND		46		ug/Kg	₩	12/08/16 17:00	12/15/16 17:12	
1,2-Dibromoethane	ND		18		ug/Kg	₩	12/08/16 17:00	12/15/16 17:12	
Ethylbenzene	ND		46		ug/Kg	₽	12/08/16 17:00	12/15/16 17:12	
Naphthalene	ND		46		ug/Kg	☼	12/08/16 17:00	12/15/16 17:12	
Xylenes, Total	ND		230		ug/Kg	₩	12/08/16 17:00	12/15/16 17:12	
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fa
Trifluorotoluene (Surr)	98		52 - 152				12/08/16 17:00	12/15/16 17:12	
Toluene-d8 (Surr)	101		79 - 119				12/08/16 17:00	12/15/16 17:12	
1,2-Dichloroethane-d4 (Surr)	102		81 - 121				12/08/16 17:00	12/15/16 17:12	
4-Bromofluorobenzene (Surr)	99		79 - 120				12/08/16 17:00	12/15/16 17:12	
Dibromofluoromethane (Surr)	99		78 - 118				12/08/16 17:00	12/15/16 17:12	•
Method: NWTPH-Gx - Nort	hwest - Volatile	e Petroleui	m Products (GC)					
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	ND		4.1		mg/Kg	₩	12/08/16 17:00	12/17/16 01:37	•
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fa
4-Bromofluorobenzene (Surr)	100		50 - 150				12/08/16 17:00	12/17/16 01:37	
Trifluorotoluene (Surr)	113		50 - 150				12/08/16 17:00	12/17/16 01:37	
Method: NWTPH-Dx - Nort	hwest - Semi-V	olatile Pet	roleum Prod	ucts (G	C)				
Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
#2 Diesel (C10-C24)	ND		20		mg/Kg	— ☆	12/20/16 12:17	12/20/16 21:30	
Motor Oil (>C24-C36)	180		39		mg/Kg	≎	12/20/16 12:17	12/20/16 21:30	
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fa
o-Terphenyl	95		50 - 150				12/20/16 12:17	12/20/16 21:30	
General Chemistry Analyte									

12/20/16 10:24

12/20/16 10:24

0.1

0.1

95.4

4.6

%

%

Client: Tesoro Logistics Operations LLC Project/Site: Pasco Tank Farm Facility

Percent Moisture

Client Sample ID: RB-9 Lab Sample ID: 580-64798-3

Date Collected: 12/08/16 11:45
Date Received: 12/08/16 16:40
Matrix: Solid
Percent Solids: 88.7

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
t-Butyl alcohol	ND		2000		ug/Kg	<u>₩</u>	12/08/16 17:00	12/15/16 17:39	1
Methyl tert-butyl ether	ND		52		ug/Kg	₩	12/08/16 17:00	12/15/16 17:39	1
Diisopropyl ether	ND		52		ug/Kg	☼	12/08/16 17:00	12/15/16 17:39	1
Ethyl t-butyl ether	ND		52		ug/Kg	₩	12/08/16 17:00	12/15/16 17:39	1
Tert-amyl methyl ether	ND		52		ug/Kg	₩	12/08/16 17:00	12/15/16 17:39	1
Benzene	ND		21		ug/Kg	₩	12/08/16 17:00	12/15/16 17:39	1
1,2-Dichloroethane	ND		21		ug/Kg	ф	12/08/16 17:00	12/15/16 17:39	•
Toluene	ND		52		ug/Kg	☆	12/08/16 17:00	12/15/16 17:39	1
1,2-Dibromoethane	ND		21		ug/Kg	☆	12/08/16 17:00	12/15/16 17:39	1
Ethylbenzene	ND		52		ug/Kg	₩	12/08/16 17:00	12/15/16 17:39	1
Naphthalene	ND		52		ug/Kg	☼	12/08/16 17:00	12/15/16 17:39	1
Xylenes, Total	ND		260		ug/Kg	₽	12/08/16 17:00	12/15/16 17:39	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Trifluorotoluene (Surr)	98		52 - 152				12/08/16 17:00	12/15/16 17:39	
Toluene-d8 (Surr)	101		79 - 119				12/08/16 17:00	12/15/16 17:39	
1,2-Dichloroethane-d4 (Surr)	102		81 - 121				12/08/16 17:00	12/15/16 17:39	1
4-Bromofluorobenzene (Surr)	101		79 - 120				12/08/16 17:00	12/15/16 17:39	
Dibromofluoromethane (Surr)	99		78 - 118				12/08/16 17:00	12/15/16 17:39	1
Method: NWTPH-Gx - Nortl	hwest - Volatile	e Petroleui	m Products (GC)					
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	ND		4.9		mg/Kg		12/08/16 17:00	12/17/16 02:08	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fa
4-Bromofluorobenzene (Surr)	99		50 - 150				12/08/16 17:00	12/17/16 02:08	
Trifluorotoluene (Surr)	119		50 - 150				12/08/16 17:00	12/17/16 02:08	1
Method: NWTPH-Dx - North	hwest - Semi-V	olatile Pet	roleum Prod	ucts (G	C)				
Analyte	Result	Qualifier	RL	MDL	Únit	D	Prepared	Analyzed	Dil Fa
#2 Diesel (C10-C24)	23		23		mg/Kg	<u></u>	12/20/16 12:17	12/20/16 21:52	1
Motor Oil (>C24-C36)	240		45		mg/Kg	≎	12/20/16 12:17	12/20/16 21:52	,
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fa
o-Terphenyl	96		50 - 150				12/20/16 12:17	12/20/16 21:52	
General Chemistry									
General Chemistry Analyte		Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result 88.7	Qualifier	RL 0.1	RL	Unit %	<u>D</u>	Prepared	Analyzed 12/20/16 10:24	Dil Fac

12/20/16 10:24

0.1

Client: Tesoro Logistics Operations LLC Project/Site: Pasco Tank Farm Facility

Method: 8260C - Volatile Organic Compounds by GC/MS

Lab Sample ID: MB 580-234624/1-A

Matrix: Solid

Analysis Batch: 234565

Client Sample ID: Method Blank Prep Type: Total/NA Prep Batch: 234624

								p = a = 0 =					
_	MB	MB						•					
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac				
t-Butyl alcohol	ND		1500		ug/Kg		12/15/16 14:31	12/15/16 15:25	1				
Methyl tert-butyl ether	ND		40		ug/Kg		12/15/16 14:31	12/15/16 15:25	1				
Diisopropyl ether	ND		40		ug/Kg		12/15/16 14:31	12/15/16 15:25	1				
Ethyl t-butyl ether	ND		40		ug/Kg		12/15/16 14:31	12/15/16 15:25	1				
Tert-amyl methyl ether	ND		40		ug/Kg		12/15/16 14:31	12/15/16 15:25	1				
Benzene	ND		16		ug/Kg		12/15/16 14:31	12/15/16 15:25	1				
1,2-Dichloroethane	ND		16		ug/Kg		12/15/16 14:31	12/15/16 15:25	1				
Toluene	ND		40		ug/Kg		12/15/16 14:31	12/15/16 15:25	1				
1,2-Dibromoethane	ND		16		ug/Kg		12/15/16 14:31	12/15/16 15:25	1				
Ethylbenzene	ND		40		ug/Kg		12/15/16 14:31	12/15/16 15:25	1				
Naphthalene	ND		40		ug/Kg		12/15/16 14:31	12/15/16 15:25	1				
Xylenes, Total	ND		200		ug/Kg		12/15/16 14:31	12/15/16 15:25	1				

MB MB

Surrogate	%Recovery Q	Qualifier Limits	Prepared	Analyzed	Dil Fac
Trifluorotoluene (Surr)	100	52 - 152	12/15/16 14:31	12/15/16 15:25	1
Toluene-d8 (Surr)	100	79 - 119	12/15/16 14:31	12/15/16 15:25	1
1,2-Dichloroethane-d4 (Surr)	101	81 - 121	12/15/16 14:31	12/15/16 15:25	1
4-Bromofluorobenzene (Surr)	99	79 - 120	12/15/16 14:31	12/15/16 15:25	1
Dibromofluoromethane (Surr)	98	78 - 118	12/15/16 14:31	12/15/16 15:25	1

Lab Sample ID: LCS 580-234624/2-A

Matrix: Solid

Analysis Batch: 234565

Client Sample ID: Lab Control Sample

Prep Type: Total/NA Prep Batch: 234624

%Rec.

LCS LCS Spike Analyte Added Result Qualifier Unit D %Rec Limits 8000 t-Butyl alcohol 7070 88 48 - 144 ug/Kg Methyl tert-butyl ether 801 765 ug/Kg 95 58 - 134 Diisopropyl ether 1000 967 ug/Kg 97 69 - 120 Ethyl t-butyl ether 1000 951 ug/Kg 95 75 - 122 Tert-amyl methyl ether 1000 920 ug/Kg 92 65 - 118 803 754 94 Benzene ug/Kg 70 - 118 1,2-Dichloroethane 801 784 ug/Kg 98 71 - 121 801 782 Toluene 98 67 - 119 ug/Kg 1,2-Dibromoethane 801 761 95 69 - 119 ug/Kg Ethylbenzene 803 793 99 66 - 119 ug/Kg m-Xylene & p-Xylene 802 799 ug/Kg 100 69 - 126 o-Xylene 801 764 95 66 - 127 ug/Kg Naphthalene 801 729 ug/Kg 91 45 - 141 70 - 121 Xylenes, Total 1600 1560 98 ug/Kg

Surrogate	%Recovery	Qualifier	Limits
Trifluorotoluene (Surr)	102		52 - 152
Toluene-d8 (Surr)	100		79 - 119
1,2-Dichloroethane-d4 (Surr)	101		81 - 121
4-Bromofluorobenzene (Surr)	101		79 - 120
Dibromofluoromethane (Surr)	101		78 - 118

TestAmerica Seattle

TestAmerica Job ID: 580-64798-1

Client: Tesoro Logistics Operations LLC Project/Site: Pasco Tank Farm Facility

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCSD 580-234624/3-A Client Sample ID: Lab Control Sample Dup **Matrix: Solid** Prep Type: Total/NA **Analysis Batch: 234565** Prep Batch: 234624

Spike	LCSD	LCSD				%Rec.		RPD
Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
8000	7580		ug/Kg		95	48 - 144	7	40
801	778		ug/Kg		97	58 - 134	2	20
1000	992		ug/Kg		99	69 - 120	3	15
1000	965		ug/Kg		96	75 - 122	1	17
1000	946		ug/Kg		94	65 - 118	3	22
803	759		ug/Kg		94	70 - 118	1	19
801	788		ug/Kg		98	71 - 121	0	18
801	800		ug/Kg		100	67 - 119	2	19
801	789		ug/Kg		98	69 - 119	4	15
803	806		ug/Kg		100	66 - 119	2	23
802	811		ug/Kg		101	69 - 126	2	23
801	776		ug/Kg		97	66 - 127	2	22
801	786		ug/Kg		98	45 - 141	8	34
1600	1590		ug/Kg		99	70 - 121	2	17
	Added 8000 801 1000 1000 1000 803 801 801	Added Result 8000 7580 801 778 1000 992 1000 965 1000 946 803 759 801 788 801 800 803 806 802 811 801 776 801 786	Added Result Qualifier 8000 7580 801 778 1000 992 1000 965 1000 946 803 759 801 788 801 800 803 806 802 811 801 776 801 786	Added Result Qualifier Unit 8000 7580 ug/Kg 801 778 ug/Kg 1000 992 ug/Kg 1000 965 ug/Kg 1000 946 ug/Kg 803 759 ug/Kg 801 788 ug/Kg 801 800 ug/Kg 801 789 ug/Kg 803 806 ug/Kg 802 811 ug/Kg 801 776 ug/Kg 801 786 ug/Kg	Added Result Qualifier Unit D 8000 7580 ug/Kg ug/Kg 801 778 ug/Kg ug/Kg 1000 992 ug/Kg 1000 946 ug/Kg 803 759 ug/Kg 801 788 ug/Kg 801 800 ug/Kg 801 789 ug/Kg 802 811 ug/Kg 801 776 ug/Kg 801 786 ug/Kg	Added Result Qualifier Unit D %Rec 8000 7580 ug/Kg 95 801 778 ug/Kg 97 1000 992 ug/Kg 99 1000 965 ug/Kg 96 1000 946 ug/Kg 94 803 759 ug/Kg 94 801 788 ug/Kg 98 801 800 ug/Kg 100 801 789 ug/Kg 98 803 806 ug/Kg 100 802 811 ug/Kg 101 801 776 ug/Kg 97 801 786 ug/Kg 98	Added Result Qualifier Unit D %Rec Limits 8000 7580 ug/Kg 95 48 - 144 801 778 ug/Kg 97 58 - 134 1000 992 ug/Kg 99 69 - 120 1000 965 ug/Kg 96 75 - 122 1000 946 ug/Kg 94 65 - 118 803 759 ug/Kg 94 70 - 118 801 788 ug/Kg 98 71 - 121 801 800 ug/Kg 100 67 - 119 801 789 ug/Kg 98 69 - 119 803 806 ug/Kg 100 66 - 119 802 811 ug/Kg 101 69 - 126 801 776 ug/Kg 97 66 - 127 801 786 ug/Kg 98 45 - 141	Added Result Qualifier Unit D %Rec Limits RPD 8000 7580 ug/Kg 95 48 - 144 7 801 778 ug/Kg 97 58 - 134 2 1000 992 ug/Kg 99 69 - 120 3 1000 965 ug/Kg 96 75 - 122 1 1000 946 ug/Kg 94 65 - 118 3 803 759 ug/Kg 94 70 - 118 1 801 788 ug/Kg 98 71 - 121 0 801 800 ug/Kg 100 67 - 119 2 801 789 ug/Kg 98 69 - 119 4 803 806 ug/Kg 100 66 - 119 2 802 811 ug/Kg 97 66 - 127 2 801 776 ug/Kg 97 66 - 127 2 801 786

LCSD LCSD Surrogate %Recovery Qualifier Limits Trifluorotoluene (Surr) 101 52 - 152 Toluene-d8 (Surr) 98 79 - 119 81 - 121 1,2-Dichloroethane-d4 (Surr) 98 79 - 120 4-Bromofluorobenzene (Surr) 100 Dibromofluoromethane (Surr) 101 78 - 118

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

Lab Sample ID: MB 580-234701/1-A **Client Sample ID: Method Blank Matrix: Solid Prep Type: Total/NA**

Analysis Batch: 234712

	MB	MB							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	ND		4.0		mg/Kg		12/16/16 12:46	12/16/16 12:41	1

	MB	MB					
Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	101		50 - 150	12/16/16 12:46	12/16/16 12:41	1	
Trifluorotoluene (Surr)	105		50 - 150	12/16/16 12:46	12/16/16 12:41	1	

Lab Sample ID: LCS 580-234701/2-A

Client Sample ID: Lab Control Sample Matrix: Solid Prep Type: Total/NA **Analysis Batch: 234712** Prep Batch: 234701 Snika

	Spike	LUS	LUS				Mec.	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Gasoline	40.0	36.2		mg/Kg		91	68 - 120	 -

	LCS	LCS	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	106		50 - 150
Trifluorotoluene (Surr)	102		50 - 150

TestAmerica Seattle

Prep Batch: 234701

TestAmerica Job ID: 580-64798-1

Client Sample ID: Lab Control Sample

64 - 127

100

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Client: Tesoro Logistics Operations LLC Project/Site: Pasco Tank Farm Facility

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC) (Continued)

Lab Sample ID: LCSD 580-234701/3-A Client Sample ID: Lab Control Sample Dup **Matrix: Solid** Prep Type: Total/NA **Analysis Batch: 234712** Prep Batch: 234701 Spike LCSD LCSD %Rec. **RPD** Analyte Added Result Qualifier Unit D %Rec Limits RPD Limit 40.0 68 - 120 2 25 Gasoline 37.1 mg/Kg 93

LCSD LCSD Surrogate %Recovery Qualifier Limits 4-Bromofluorobenzene (Surr) 105 50 - 150 Trifluorotoluene (Surr) 103 50 - 150

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Lab Sample ID: MB 580-234947/1-A **Client Sample ID: Method Blank Matrix: Solid** Prep Type: Total/NA

Analysis Batch: 234906

Prep Batch: 234947 MB MB Result Qualifier RL MDL Unit D Analyte Prepared Analyzed Dil Fac #2 Diesel (C10-C24) $\overline{\mathsf{ND}}$ 25 12/20/16 12:17 12/20/16 17:05 mg/Kg 50 Motor Oil (>C24-C36) ND mg/Kg 12/20/16 12:17 12/20/16 17:05 MB MB

Surrogate %Recovery Qualifier Limits Prepared Analyzed Dil Fac o-Terphenyl 98 50 - 150 12/20/16 12:17 12/20/16 17:05

501

mg/Kg

Lab Sample ID: LCS 580-234947/2-A **Matrix: Solid**

Analysis Batch: 234906

Prep Batch: 234947 LCS LCS Spike %Rec. Analyte Added Result Qualifier Unit %Rec Limits #2 Diesel (C10-C24) 503 486 mg/Kg 97 70 - 125

503

LCS LCS Surrogate %Recovery Qualifier Limits 92 50 - 150 o-Terphenyl

Lab Sample ID: LCSD 580-234947/3-A

Matrix: Solid

Motor Oil (>C24-C36)

Prep Type: Total/NA **Analysis Batch: 234906** Prep Batch: 234947 LCSD LCSD **RPD** Spike %Rec. Analyte Added Result Qualifier Unit %Rec Limits RPD Limit 475 #2 Diesel (C10-C24) 503 94 70 - 125 2 16 mg/Kg Motor Oil (>C24-C36) 503 490 97 64 - 127 17 mg/Kg

LCSD LCSD %Recovery Qualifier Limits Surrogate 50 - 150 o-Terphenyl

TestAmerica Seattle

12/22/2016

Client: Tesoro Logistics Operations LLC Project/Site: Pasco Tank Farm Facility

Lab Sample ID: 580-64798-1

Matrix: Solid

Client Sample ID: RB-7 Date Collected: 12/08/16 11:35

Client Sample ID: RB-7

Date Collected: 12/08/16 11:35

Date Received: 12/08/16 16:40

Date Received: 12/08/16 16:40

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216		1	234927	12/20/16 10:24	MMM	TAL SEA

Lab Sample ID: 580-64798-1

Matrix: Solid

Percent Solids: 94.5

Γ	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			234624	12/08/16 17:00	JSM	TAL SEA
Total/NA	Analysis	8260C		1	234565	12/15/16 16:45	TL1	TAL SEA
Total/NA	Prep	5035			234701	12/08/16 17:00	J1J	TAL SEA
Total/NA	Analysis	NWTPH-Gx		1	234712	12/16/16 00:33	W1T	TAL SEA
Total/NA	Prep	3546			234947	12/20/16 12:17	MMM	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	234906	12/20/16 21:08	KZ1	TAL SEA

Client Sample ID: RB-8 Lab Sample ID: 580-64798-2 Date Collected: 12/08/16 11:40

Matrix: Solid

Date Received: 12/08/16 16:40

Dilution Batch **Batch** Batch Prepared Number or Analyzed Analyst **Prep Type** Туре Method Run **Factor** Lab 234927 12/20/16 10:24 MMM D 2216 TAL SEA Total/NA Analysis

Client Sample ID: RB-8 Lab Sample ID: 580-64798-2

Date Collected: 12/08/16 11:40

Matrix: Solid Date Received: 12/08/16 16:40 Percent Solids: 95.4

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			234624	12/08/16 17:00	JSM	TAL SEA
Total/NA	Analysis	8260C		1	234565	12/15/16 17:12	TL1	TAL SEA
Total/NA	Prep	5035			234701	12/08/16 17:00	J1J	TAL SEA
Total/NA	Analysis	NWTPH-Gx		1	234712	12/17/16 01:37	W1T	TAL SEA
Total/NA	Prep	3546			234947	12/20/16 12:17	MMM	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	234906	12/20/16 21:30	KZ1	TAL SEA

Client Sample ID: RB-9 Lab Sample ID: 580-64798-3

Date Collected: 12/08/16 11:45

Date Received: 12/08/16 16:40

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	D 2216			234927	12/20/16 10:24	MMM	TAL SEA

Matrix: Solid

Lab Chronicle

Client: Tesoro Logistics Operations LLC Project/Site: Pasco Tank Farm Facility

Client Sample ID: RB-9

Date Collected: 12/08/16 11:45

Date Received: 12/08/16 16:40

TestAmerica Job ID: 580-64798-1

Lab Sample ID: 580-64798-3

Matrix: Solid

Percent Solids: 88.7

	Batch	Batch		Dilution	Batch	Prepared		
Prep Type	Type	Method	Run	Factor	Number	or Analyzed	Analyst	Lab
Total/NA	Prep	5035			234624	12/08/16 17:00	JSM	TAL SEA
Total/NA	Analysis	8260C		1	234565	12/15/16 17:39	TL1	TAL SEA
Total/NA	Prep	5035			234701	12/08/16 17:00	J1J	TAL SEA
Total/NA	Analysis	NWTPH-Gx		1	234712	12/17/16 02:08	W1T	TAL SEA
Total/NA	Prep	3546			234947	12/20/16 12:17	MMM	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	234906	12/20/16 21:52	KZ1	TAL SEA

Laboratory References:

TAL SEA = TestAmerica Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310

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Certification Summary

Client: Tesoro Logistics Operations LLC Project/Site: Pasco Tank Farm Facility

TestAmerica Job ID: 580-64798-1

Laboratory: TestAmerica Seattle

Unless otherwise noted, all analytes for this laboratory were covered under each certification below.

Authority	Program		EPA Region	Certification ID	Expiration Date
Washington	State Prog	gram	10	C553	02-17-17
The following analytes	s are included in this repo	rt, but certification is	s not offered by the g	overning authority:	
Analysis Method	Prep Method	Matrix	Analy	te	
8260C	5035	Solid	t-Buty	l alcohol	
8260C	5035	Solid	Xylen	es, Total	
D 2216		Solid	Perce	nt Moisture	
D 2216		Solid	Perce	nt Solids	

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Sample Summary

Client: Tesoro Logistics Operations LLC Project/Site: Pasco Tank Farm Facility

TestAmerica Job ID: 580-64798-1

Lab Sample ID	Client Sample ID	Matrix	Collected Received
580-64798-1	RB-7	Solid	12/08/16 11:35 12/08/16 16:4
580-64798-2	RB-8	Solid	12/08/16 11:40 12/08/16 16:4
580-64798-3	RB-9	Solid	12/08/16 11:45 12/08/16 16:4

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12/22/2016





Received by Laboratory:

434 North Canal Street, Suite 6 South San Francisco, CA 94080

Relinquished by

Date Time

TEL: (650) 827-7474 FAX: (650) 827-7476

Bill To:

CFERON

TAT **ANALYSIS REQUEST**

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

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Sample		pling	С	on	tain				eth ser	od ved		M	atri	x	/802c)	as Gasc	esel/Oil (Grease (s Grease	Fish Blo	010	150	1080 - Pes	3080-PCE	1240	270	LEAD	, Corros	Metais	ority Poli	7/421/2	in 'U7'	4- 1	$\langle \rangle$	4	1_1	ביוועם.	ED SER	RD SEF
ID	DATE	TIME	VOA	SLEEVE	1L GLASS	MYLAR	Ę	FNO.	īČĒ	NONE	WATER	100	ATR		BTEX (602/8020)	BTEX/TPH as Gasoline (602/8020/8015)	TPH as Diesel/Oil (8015)	Total Oil & Grease (5520 B/E,F)	Total Oli & Grease IR (5520 B/E,F,C)	96 - Hour Fish Bloassay	EPA 601/8010	EPA 615/8150	EPA 608/8	EPA 608/8080-PCBs	EPA 624/8240	EPA 625/8270	ORGANIC LEAD	Reactivity	CAM - 17 Metals	1 EAD/7420/7421 man	C4 C4 D4 72 11	2 3	A WITH	* XYX +	NA PAZZIO	Z.	ם וכא כנ	EXPEDIT	STANDARD SERVICE
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Login Sample Receipt Checklist

Client: Tesoro Logistics Operations LLC Job Number: 580-64798-1

Login Number: 64798 List Source: TestAmerica Seattle

List Number: 1

Creator: Blankinship, Tom X

Creator. Blankinship, Tolli X						
Question	Answer	Comment				
Radioactivity wasn't checked or is = background as measured by a survey meter.</td <td>True</td> <td></td>	True					
The cooler's custody seal, if present, is intact.	True					
Sample custody seals, if present, are intact.	True					
The cooler or samples do not appear to have been compromised or tampered with.	True					
Samples were received on ice.	True					
Cooler Temperature is acceptable.	True					
Cooler Temperature is recorded.	True					
COC is present.	True					
COC is filled out in ink and legible.	True					
COC is filled out with all pertinent information.	True					
Is the Field Sampler's name present on COC?	True					
There are no discrepancies between the containers received and the COC.	True					
Samples are received within Holding Time (excluding tests with immediate HTs)	True					
Sample containers have legible labels.	False	Refer to Job Narrative for details.				
Containers are not broken or leaking.	True					
Sample collection date/times are provided.	True					
Appropriate sample containers are used.	True					
Sample bottles are completely filled.	True					
Sample Preservation Verified.	N/A					
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True					
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A					
Multiphasic samples are not present.	True					
Samples do not require splitting or compositing.	True					
Residual Chlorine Checked.	N/A					

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TABLE 1 SUMMARY OF RIVERBANK SAMPLING RESULTS Tesoro Logistics Pasco Terminal

Pasco, Washington

		Soil Sample Analysis Results (mg/kg)					
	Date Sampled	VOCs	TPHg	TPHd	TPHmo	Percent Solids	Percent Moisture
RB-1	9/18/16	All ND	<5.9	<28	<56	79.3	20.7
RB-2	9/18/16	All ND	<4.2	<23	<45	96.2	3.8
RB-3	9/18/16	All ND	<4.1	<25	<49	98.9	1.1
RB-4	9/18/16	All ND	<4.3	<24	<47	96.5	4.5
RB-5	9/18/16	All ND	<4.7	<22	<45	92.3	7.7
RB-6	9/18/16	All ND	<4.2	<23	640	96.9	3.1
RB-7	12/8/16	All ND	<4.4	<24	<48	94.5	5.5
RB-8	12/8/16	All ND	<4.1	<20	180	96.4	4.6
RB-9	12/8/16	All ND	<4.9	23	240	88.7	11.3
Ecology Crite	ria ⁽¹⁾	Variable	1,000	500	500	NA	NA

Notes:

mg/kg = Milligrams per kilogram.

VOCs = Volatile Organic Compounds analyzed using Method 8260C.

ND/<X = Chemical not detected at or above laboratory reporting limit (RL). See lab report for specific VOC RLs.

TPHg = Total Petroleum Hydrocarbons as Gasoline analyzed using NWTPH-Gx-Northwest.

TPHd = Total Petroleum Hydrocarbons as Diesel analyzed using NWTPH-Dx-Northwest.

TPHmo = Total Petroleum Hydrocarbons as Motor Oil analyzed using NWTPHDx-Northwest.

NA = Not applicable.

(1) Washington Department of Ecology Method A cleanup levels as listed in Table 720-1 of the Model Toxics Control Act, revised 10/12/07.

Concentration in **bold** exceed Ecology Method A Cleanup Level.