



January 6th, 2017

Via Email

Mr. Patrick Cabbage, L.G.
Eastern Regional Office-Toxics Cleanup Program
WA Department of Ecology
4601 N. Monroe Street
Spokane, WA 99205-1295

Re: **2nd Semi-Annual 2016 Ground-Water Monitoring Data Transmittal**
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. Cabbage:

Enclosed please find monitoring data summary tables, site figures, and copies of laboratory data reports for the 2nd semi-annual 2016 ground-water monitoring event completed on December 5-6, 2016 at the Tesoro Logistics (Former Chevron) Pasco Bulk Fuel Terminal on Sacajawea Road in Pasco, Washington. 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: Jeffrey M. Baker, P.E., Tesoro
Ryan Biggs, Tesoro Logistics

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

TABLES

TABLE 1
DECEMBER 2016 GROUND-WATER MONITORING DATA - TESORO WELLS
Tesoro Logistics Pasco Terminal
Pasco, Washington

| Sample Location | Date Sampled | Ground-Water Sample Analysis Results (ug/l) | | | | | | | | | | | Ground-Water Elevation Data (feet) | | | | | |
|--------------------------------------|-------------------------|---|------------------------|------------------------|--------------|--------------|-------------------|------------------|------|---------|-------------|------------------|------------------------------------|------------------|--------|-------------------------|------------------------|------|
| | | TPHmo (NWTPH- Rx) | TPHd (NWTPH- Dx) | TPHg (NWTPH- Gx) | Benz- ene | Tol- uene | Ethyl- benzene | Total Xylenes | MTBE | Ethanol | 1,2- DCA | Naph- thalene | Well Screen Depth Interval | TOC Elevation | DTW | Elev- ation (MSL) | Change in Elevation | |
| Tesoro Logistics (former CPL) | | | | | | | | | | | | | | | | | | |
| MW-1 | -- | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | 73.9 - 93.9 | 419.40 | Dry | -- | -- |
| MW-2 | 12/5/16 | <250 | 410 | <50 | <2.0 | <2.0 | <3.0 | <3.0 | <1.0 | <10,000 | <1.0 | <2.0 | 63.3 - 83.3 | 417.28 | 74.02 | 343.26 | 0.50 | |
| MW-3 | 12/6/16 | 290 | 6,600 | 290 | <2.0 | <2.0 | <3.0 | <3.0 | <1.0 | <10,000 | <1.0 | <2.0 | 74.95 - 94.95 | 423.42 | 80.17 | 343.25 | 0.43 | |
| MW-4 | -- | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | 56.75 - 76.75 | 412.09 | -- | -- | -- | |
| MW-5 | Well destroyed May 1987 | | | | | | | | | | | | | | | | | |
| MW-6 | 12/5/16 | <250 | <110 | <50 | <2.0 | <2.0 | <3.0 | <3.0 | <1.0 | <10,000 | <1.0 | <2.0 | 8.5 - 23.5 | 358.61 | 16.91 | 341.70 | 0.24 | |
| MW-7 | 12/5/16 | <250 | <110 | <50 | <2.0 | <2.0 | <3.0 | <3.0 | <1.0 | <10,000 | <1.0 | <2.0 | 57 - 77 | 411.40 | 68.18 | 343.22 | 0.56 | |
| MW-8 | -- | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | 29 - 54 | 383.91 | -- | -- | -- | |
| MW-9 | Well destroyed May 1987 | | | | | | | | | | | | | | | | | |
| MW-10 | -- | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | 55 - 78 | 407.91 | -- | -- | -- | |
| MW-11 | 12/5/16 | <250 | 360 | <50 | <2.0 | <2.0 | <3.0 | <3.0 | <1.0 | <10,000 | <1.0 | <2.0 | 84.5 - 74.5 | 423.48 | 80.29 | 343.19 | 0.13 | |
| MW-12 | 12/6/16 | <250 | <110 | <50 | <2.0 | <2.0 | <3.0 | <3.0 | <1.0 | <10,000 | <1.0 | <2.0 | 33 - 60; | 423.65 | 80.48 | 343.17 | 0.50 | |
| | Duplicate | <250 | 150 | <50 | <2.0 | <2.0 | <3.0 | <3.0 | <1.0 | <10,000 | <1.0 | <2.0 | 75 - 85 | | | | | 0.00 |
| MW-13 | -- | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS | 18.5 - 47.5 | -- | Dry | -- | -- | |
| MW-14 | 12/5/16 | <250 | <110 | <50 | <2.0 | <2.0 | <3.0 | <3.0 | <1.0 | <10,000 | <1.0 | <2.0 | 27.5 - 53; | 421.97 | 78.75 | 343.22 | 0.57 | |
| | | | | | | | | | | | | | 72.5 - 82.5 | | | | | |
| RW-1 | -- | Well buried - status unknown | | | | | | | | | | | 64- 98 | 417.29 | -- | -- | -- | |
| Equipment Blank: | | | | | | | | | | | | | | | | | | |
| CEB | 12/6/16 | <250 | <110 | <50 | <2.0 | <2.0 | <3.0 | <3.0 | <1.0 | <10,000 | <1.0 | <2.0 | | | | | | |
| Trip Blank: | | | | | | | | | | | | | | | | | | |
| Trip Blank (1) | 12/5/16 | <250 | <110 | <50 | <2.0 | <2.0 | <3.0 | <3.0 | <1.0 | <10,000 | <1.0 | <2.0 | | | | | | |
| Trip Blank (2) | 12/6/16 | <250 | <110 | <50 | <2.0 | <2.0 | <3.0 | <3.0 | <1.0 | <10,000 | <1.0 | <2.0 | | | | | | |
| Ecology Criteria ⁽¹⁾ | | 500 | 500 | 1,000 | 5 | 1,000 | 700 | 1,000 | 20 | NE | 5 | 160 | | | | | | |

TABLE 1 (cont.)

Notes:

(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

Concentrations in **bold** exceed Ecology Method A cleanup levels.

Change in elevations calculated using previous data collected 9/29-30, 2016.

TPHmo = Total Petroleum Hydrocarbons as Motor Oil
TPHd = Total Petroleum Hydrocarbons as Diesel
TPHg = Total Petroleum Hydrocarbons as Gasoline
TOC = Top of casing elevation in feet MSL

DTW = Depth to water
MSL = Mean sea level
NS = Not sampled
-- = Not analyzed

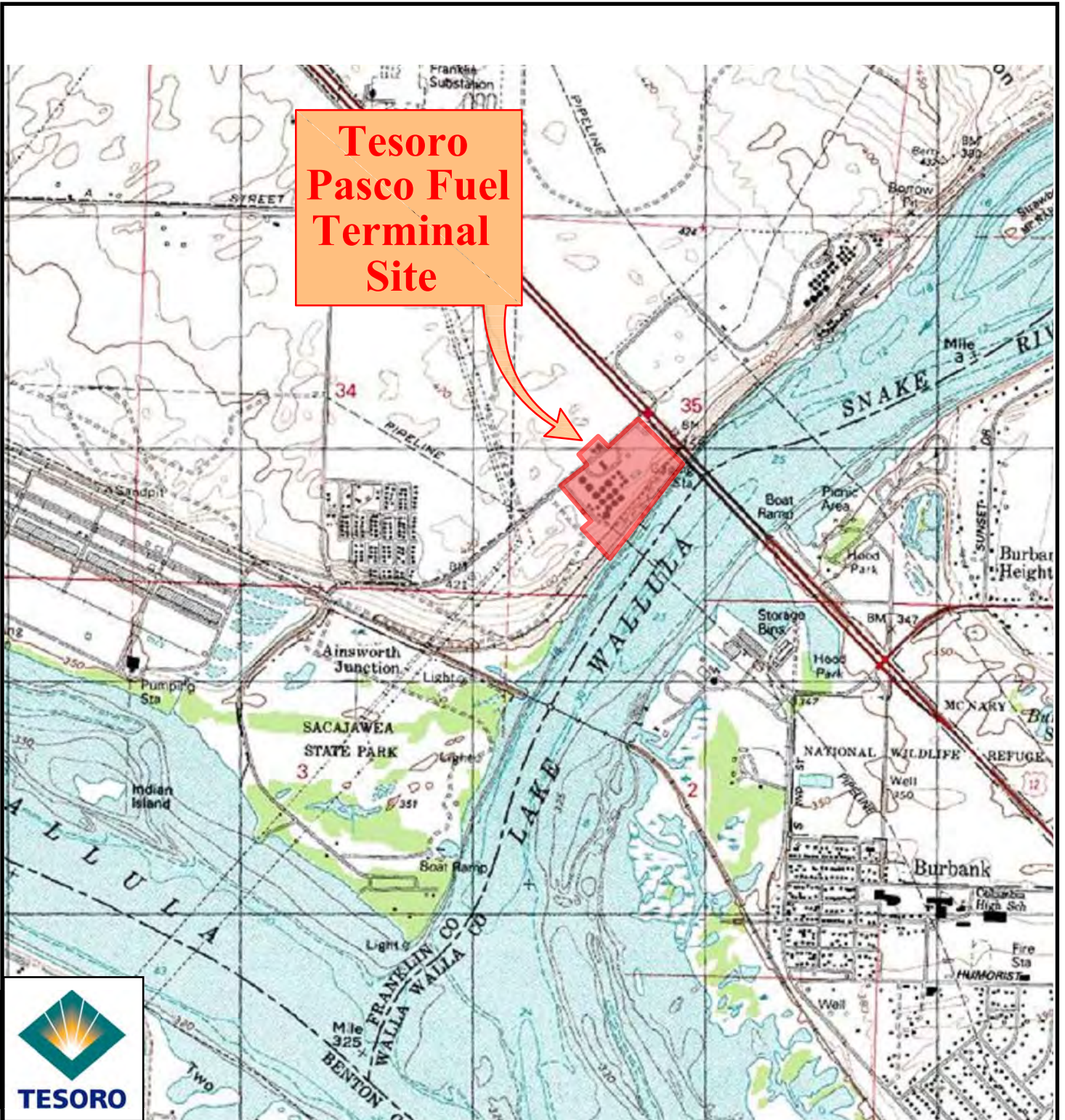
TABLE 2
DECEMBER 2016 WATER QUALITY AND NATURAL ATTENUATION
PARAMETER DATA - TESORO WELLS
Tesoro Logistics Pasco Terminal
Pasco, Washington

| Sample ID | Date | FIELD MEASUREMENTS | | | | | ANALYTICAL PARAMETERS (Field and Lab) | | | | | |
|--------------------------------------|---------|------------------------------|----------------------|------|-------|-----|---------------------------------------|---------|--------------|-----------|---------|------------|
| | | pH | Specific Conductance | DO | Temp. | ORP | Sulfate | Nitrate | Ferrous Iron | Manganese | Methane | Alkalinity |
| | | S.U. | mS/cm | mg/L | °C | mV | mg/L | ppm | ppm | mg/L | mg/L | mg/L |
| Tesoro Logistics (former CPL) | | | | | | | | | | | | |
| MW-1 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-2 | 12/5/16 | 6.63 | 1.05 | 6.16 | 15.80 | 282 | 89 | -- | -- | -- | <0.0050 | 400 |
| MW-3 | 12/2/16 | 6.86 | 0.963 | 3.24 | 16.06 | 36 | -- | -- | -- | -- | -- | -- |
| MW-4 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-6 | 12/5/16 | 6.83 | 0.851 | 6.84 | 14.54 | 207 | 93 | -- | -- | <0.020 | <0.0050 | 170 |
| MW-7 | 12/5/16 | 7.06 | 0.839 | 7.90 | 15.85 | 165 | -- | -- | -- | -- | -- | -- |
| MW-8 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-10 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-11 | 12/5/16 | 6.70 | 0.933 | 1.73 | 17.14 | 204 | -- | -- | -- | -- | -- | -- |
| MW-12 | 12/6/16 | 6.80 | 0.993 | 3.22 | 14.52 | 121 | -- | -- | -- | 0.19 | 0.063 | 270 |
| MW-13 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-14 | 12/5/16 | 6.97 | 0.855 | 6.29 | 15.43 | 178 | -- | -- | -- | -- | -- | -- |
| RW-1 | -- | Well buried - status unknown | | | | | | | | | | |

Notes:

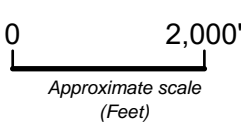
| | | |
|-------|-------------------------------|---|
| -- | Not analyzed or measured | Water quality parameters collected in the field using a multiparameter Horiba U-55 meter. |
| S.U. | Standard Unit | Dissolved oxygen (DO) measured using portable meter with downhole probe. |
| mS/cm | millisiemens per centimeter | Sulfate analyzed by EPA Method 300. |
| mg/L | milligrams per liter | Nitrate and ferrous iron measured in the field using colorimeter test kits. |
| ppm | parts per million | Manganese analyzed by EPA Method 200.7. |
| °C | degrees celsius | Methane analyzed by Method RSK 175M. |
| mV | millivolts | Alkalinity analyzed by SM2320B. |
| ORP | Oxidation Reduction Potential | |

FIGURES



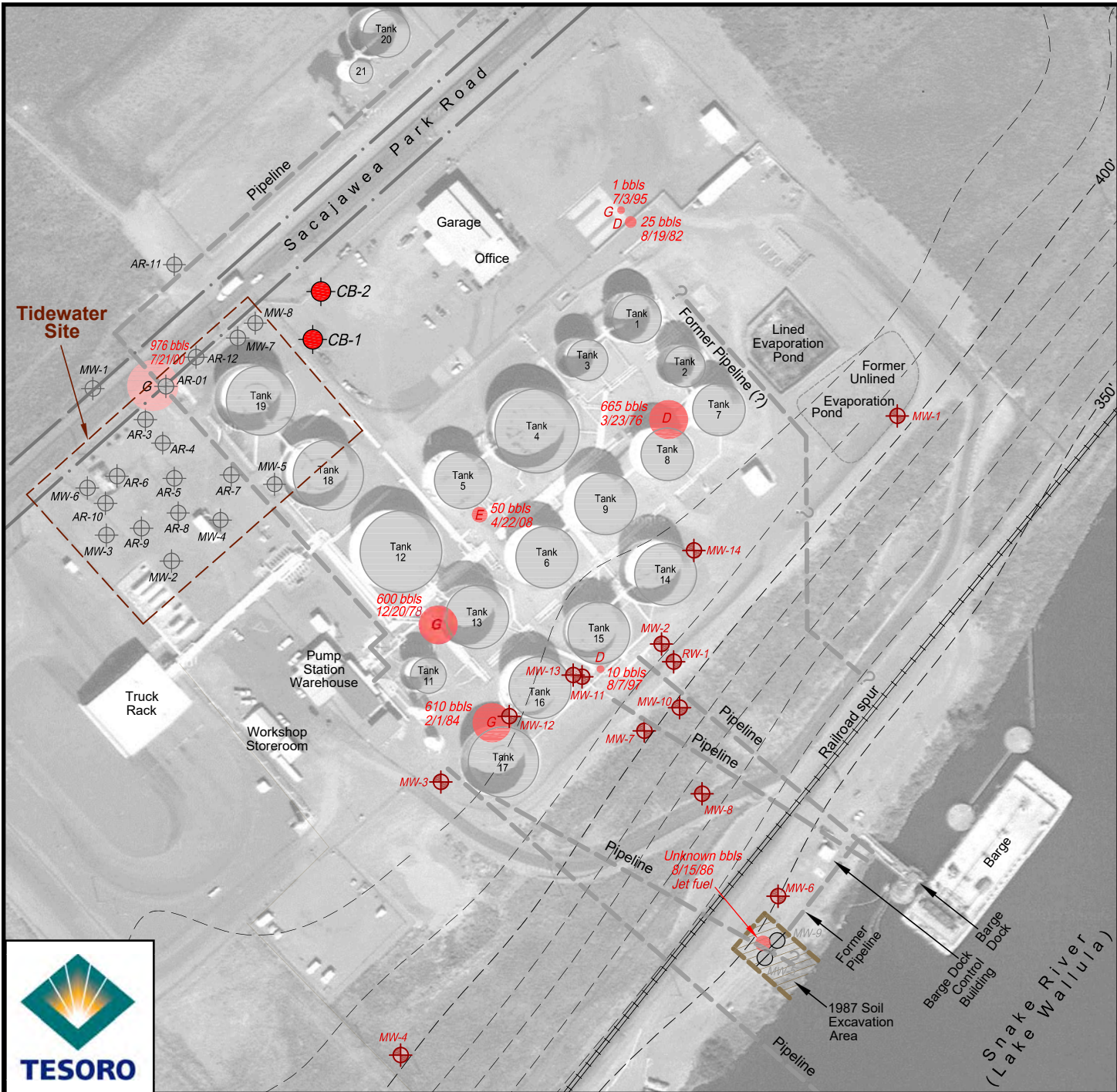
TESORO

Map Source:
U.S.G.S. Pasco, Washington
1:24,000-scale series (topographic)
1992 edition



SITE VICINITY MAP
Tesoro Pasco Fuel Terminal Site
Pasco, Washington

FIGURE 1
DEC 2016



EXPLANATION

- Tesoro well
 - Tidewater well
 - Former well
 - Tesoro boring (6/15)
- | | | |
|--|-----------------|--------------|
| | Previous spill | |
| Number of barrels (circle relative to size of spill) | Date of spill | Fuel spilled |
| | 610 bbls 2/1/84 | |

Imagery: earthexplorer.usgs.gov
 Site information: URS, 2011,
 GeoEngineers, 1987

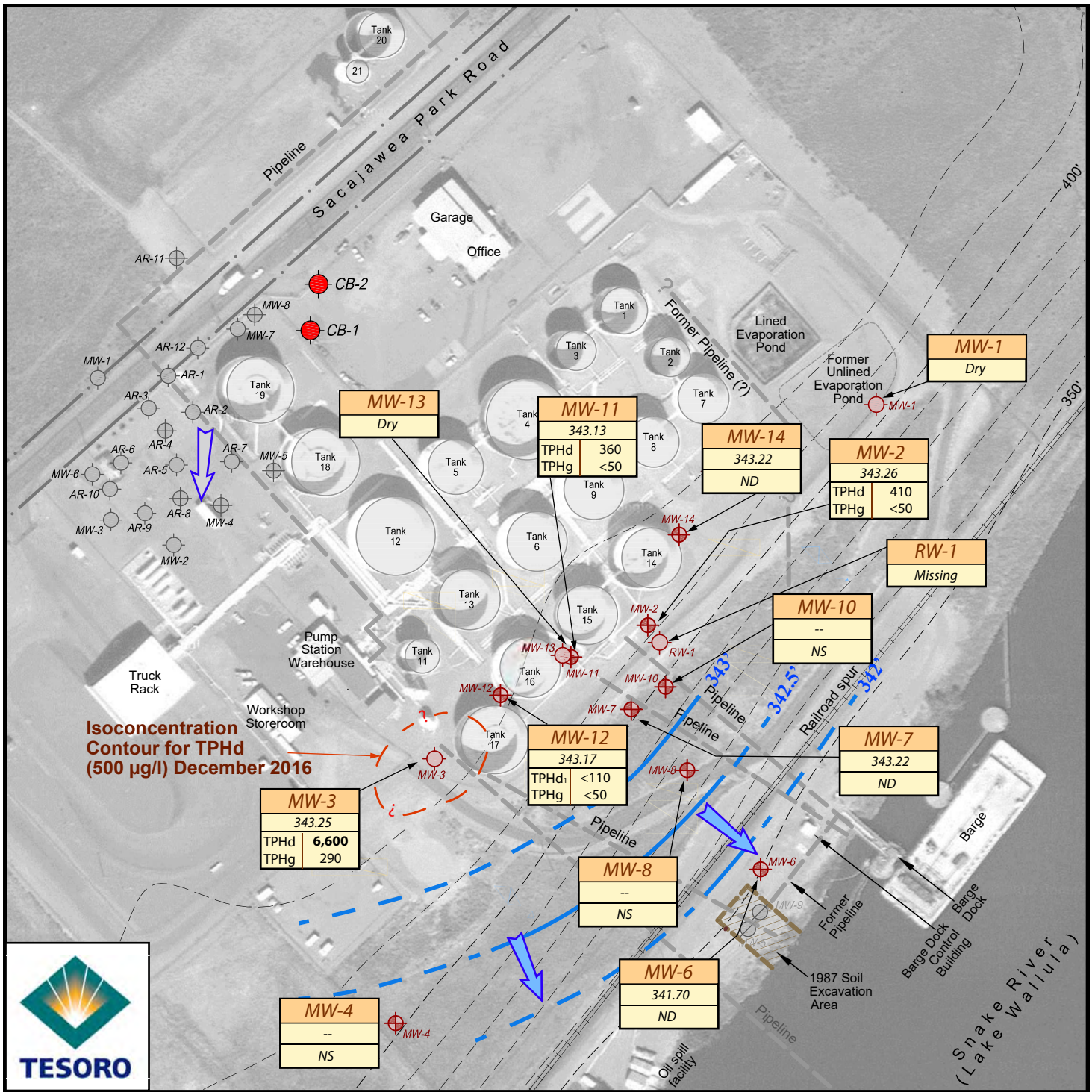
0 200'

Approximate scale (Feet)



AREA MAP
 Tesoro Pasco Fuel Terminal Site
 Pasco, Washington

FIGURE 2
 DEC 2016

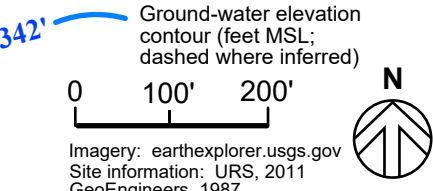


- EXPLANATION**
- Tesoro well
 - Tidewater well
 - Former well
 - Tesoro boring (6/15)

| | | | |
|------|---------------------------------|-------|-----|
| MW-3 | 343.25' | 6,600 | 290 |
| ND | Non-detect for all constituents | | |
| NS | Not sampled | | |

Ground-water flow direction inferred from historical conditions (nearly flat gradient) near Snake River

Concentrations in **bold** exceed Ecology cleanup levels



¹ TPHd detected in duplicate sample at 150 ug/l



2016 GROUND-WATER MONITORING RESULTS
DECEMBER 5-6
 Tesoro Pasco Fuel Terminal Site
 Pasco, Washington

FIGURE 3
DEC 2016

ATTACHMENT
2016 DECEMBER LABORATORY DATA
REPORTS

TestAmerica

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: 580-64763-1
Client Project/Site: Tesoro Pasco
Sampling Event: Pasco

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

Attn: Jeff Baker



Authorized for release by:
12/21/2016 5:53:35 PM

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

LINKS

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results through
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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.

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Case Narrative

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

TestAmerica Job ID: 580-64763-1

Job ID: 580-64763-1

Laboratory: TestAmerica Seattle

Narrative

Job Narrative 580-64763-1

Comments

No additional comments.

Receipt

The samples were received on 12/8/2016 4:35 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 0.0° C and 0.6° C.

Receipt Exceptions

For the following samples, the client submitted only hydrochloric acid preserved VOA vials. One of the analyses, 8015C_DAI, requires unpreserved VOA vials. Confirmed with Lab that this is fine to run unpreserved. CMW-02-1216 (580-64763-1), CMW-03-1216 (580-64763-2), CMW-03-1216 (580-64763-2[MS]), CMW-03-1216 (580-64763-2[MSD]), CMW-06-1216 (580-64763-3), CMW-07-1216 (580-64763-4), CMW-11-1216 (580-64763-5), CMW-12-1216 (580-64763-6), CMW-12D-1216 (580-64763-7), CMW-14-1216 (580-64763-8), CEB (580-64763-9), Trip Blank(1) (580-64763-10) and Trip Blank(2) (580-64763-11)

GC/MS VOA

Method(s) 8260C: The %RPD of the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for preparation batch 580-234631 recovered outside control limits for the following analytes: t-Butyl alcohol and 1,2-Dibromoethane. The recoveries in the Matrix Spike and Matrix Spike Duplicate and % RPD are acceptable.

Method(s) 8260C: The %RPD of the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for preparation batch 234889 recovered outside control limits for, 2-Dibromoethane, 1,2-DCA, Benzene, ETBE, Ethylbenzene, m and p-Xylene, o-Xylene, t-Butyl alcohol, Toluene, and total Xylenes. Both the LCS and LCSD %recoveries are acceptable and the data has been reported. The samples were non detect for these analytes.

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 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: CMW-12D-1216 (580-64763-7).

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: CMW-02-1216 (580-64763-1).

Method(s) 8015C: Surrogate recovery for the following samples was outside the upper control limit: CMW-02-1216 (580-64763-1), CMW-03-1216 (580-64763-2), CMW-06-1216 (580-64763-3), CMW-07-1216 (580-64763-4), CMW-11-1216 (580-64763-5), CMW-12-1216 (580-64763-6), CMW-12D-1216 (580-64763-7), CMW-14-1216 (580-64763-8), CEB (580-64763-9) and (MB 490-395509/6). This sample did not contain any target analytes; therefore, re-extraction and/or re-analysis was not performed and the data has been reported.

Method(s) 8015C: The surrogate recovery for the laboratory control sample (LCS), matrix spike (MS), and matrix spike duplicate (MSD) associated with analytical batch 490-395509 was outside the upper control limits. All associated samples were non-detect (ND) for all target analytes; therefore, the data has been qualified and reported.

Method(s) RSK-175: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with analytical batch 490-394897.

Method(s) RSK-175: The duplicate (DU) recoveries and precision for analytical batch 490-394897 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory sample control duplicate (LCS/LCSD) precision was within acceptance limits.

Method(s) RSK-175: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with analytical batch 490-395459.

Case Narrative

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

TestAmerica Job ID: 580-64763-1

Job ID: 580-64763-1 (Continued)

Laboratory: TestAmerica Seattle (Continued)

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

Metals

No analytical or quality issues were noted, other than those described 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.



Definitions/Glossary

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

TestAmerica Job ID: 580-64763-1

Qualifiers

GC/MS VOA

| Qualifier | Qualifier Description |
|-----------|--|
| * | RPD of the LCS and LCSD exceeds the control limits |

GC VOA

| Qualifier | Qualifier Description |
|-----------|-------------------------------------|
| X | Surrogate is outside control limits |

Glossary

| Abbreviation | These commonly used abbreviations may or may not be present in this report. |
|----------------|---|
| α | 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 |
| RL | Reporting 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 Sample Results

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

TestAmerica Job ID: 580-64763-1

Client Sample ID: CMW-02-1216

Lab Sample ID: 580-64763-1

Date Collected: 12/05/16 13:55

Matrix: Water

Date Received: 12/08/16 16:35

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

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|----------------------------|--------|-----------|-----|-----|------|---|----------|----------------|---------|
| 1,2-Dibromoethane | ND | | 1.0 | | ug/L | | | 12/15/16 17:53 | 1 |
| 1,2-DCA | ND | | 1.0 | | ug/L | | | 12/15/16 17:53 | 1 |
| Benzene | ND | | 2.0 | | ug/L | | | 12/15/16 17:53 | 1 |
| DIPE | ND | | 1.0 | | ug/L | | | 12/15/16 17:53 | 1 |
| Ethyl-t-butyl ether (ETBE) | ND | | 5.0 | | ug/L | | | 12/15/16 17:53 | 1 |
| Ethylbenzene | ND | | 3.0 | | ug/L | | | 12/15/16 17:53 | 1 |
| MTBE | ND | | 1.0 | | ug/L | | | 12/15/16 17:53 | 1 |
| Naphthalene | ND | | 2.0 | | ug/L | | | 12/15/16 17:53 | 1 |
| t-Butyl alcohol | ND | | 25 | | ug/L | | | 12/15/16 17:53 | 1 |
| Tert-amyl methyl ether | ND | | 5.0 | | ug/L | | | 12/15/16 17:53 | 1 |
| Toluene | ND | | 2.0 | | ug/L | | | 12/15/16 17:53 | 1 |
| Xylenes, Total | ND | | 3.0 | | ug/L | | | 12/15/16 17:53 | 1 |

| Surrogate | %Recovery | Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|------------------------------|-----------|-----------|----------|----------|----------------|---------|
| 1,2-Dichloroethane-d4 (Surr) | 104 | | 65 - 143 | | 12/15/16 17:53 | 1 |
| 4-Bromofluorobenzene (Surr) | 99 | | 75 - 125 | | 12/15/16 17:53 | 1 |
| Dibromofluoromethane (Surr) | 100 | | 77 - 118 | | 12/15/16 17:53 | 1 |
| Toluene-d8 (Surr) | 104 | | 82 - 122 | | 12/15/16 17:53 | 1 |
| Trifluorotoluene (Surr) | 96 | | 80 - 141 | | 12/15/16 17:53 | 1 |

Method: 8015C - Nonhalogenated Organic using GC/FID (Direct Aqueous Injection)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|----------|--------|-----------|----|-----|------|---|----------|----------------|---------|
| Ethanol | ND | | 10 | | mg/L | | | 12/19/16 12:41 | 1 |
| Methanol | ND | | 10 | | mg/L | | | 12/19/16 12:41 | 1 |

| Surrogate | %Recovery | Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|--------------------------|-----------|-----------|----------|----------|----------------|---------|
| Isopropyl acetate (Surr) | 153 | X | 52 - 128 | | 12/19/16 12:41 | 1 |

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

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|----------|--------|-----------|-------|-----|------|---|----------|----------------|---------|
| Gasoline | ND | | 0.050 | | mg/L | | | 12/15/16 13:33 | 1 |

| Surrogate | %Recovery | Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|-----------------------------|-----------|-----------|----------|----------|----------------|---------|
| 4-Bromofluorobenzene (Surr) | 98 | | 50 - 150 | | 12/15/16 13:33 | 1 |
| Trifluorotoluene (Surr) | 85 | | 50 - 150 | | 12/15/16 13:33 | 1 |

Method: RSK-175 - Dissolved Gases (GC)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---------|--------|-----------|--------|-----|------|---|----------|----------------|---------|
| Methane | ND | | 0.0050 | | mg/L | | | 12/16/16 12:18 | 1 |

| Surrogate | %Recovery | Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|------------------|-----------|-----------|----------|----------|----------------|---------|
| Acetylene (Surr) | 79 | | 62 - 124 | | 12/16/16 12:18 | 1 |

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

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|----------------------|--------|-----------|------|-----|------|---|----------------|----------------|---------|
| #2 Diesel (C10-C24) | 0.41 | | 0.11 | | mg/L | | 12/14/16 14:15 | 12/16/16 01:40 | 1 |
| Motor Oil (>C24-C36) | ND | | 0.25 | | mg/L | | 12/14/16 14:15 | 12/16/16 01:40 | 1 |

| Surrogate | %Recovery | Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|-------------|-----------|-----------|----------|----------------|----------------|---------|
| o-Terphenyl | 78 | | 50 - 150 | 12/14/16 14:15 | 12/16/16 01:40 | 1 |

TestAmerica Seattle

Client Sample Results

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

TestAmerica Job ID: 580-64763-1

Client Sample ID: CMW-02-1216

Lab Sample ID: 580-64763-1

Date Collected: 12/05/16 13:55

Matrix: Water

Date Received: 12/08/16 16:35

Method: 200.7 Rev 4.4 - Metals (ICP) - Dissolved

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|-----------|--------|-----------|-------|-----|------|---|----------------|----------------|---------|
| Manganese | ND | | 0.020 | | mg/L | | 12/16/16 18:43 | 12/20/16 15:56 | 1 |

General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|--|------------|-----------|-----|-----|------|---|----------|----------------|---------|
| Sulfate | 89 | | 1.2 | | mg/L | | | 12/19/16 11:37 | 1 |
| Analyte | Result | Qualifier | RL | RL | Unit | D | Prepared | Analyzed | Dil Fac |
| Alkalinity | 400 | | 5.0 | | mg/L | | | 12/19/16 13:09 | 1 |
| Bicarbonate Alkalinity as CaCO3 | 400 | | 5.0 | | mg/L | | | 12/19/16 13:09 | 1 |
| Carbonate Alkalinity as CaCO3 | ND | | 5.0 | | mg/L | | | 12/19/16 13:09 | 1 |
| Hydroxide Alkalinity as CaCO3 | ND | | 5.0 | | mg/L | | | 12/19/16 13:09 | 1 |



Client Sample Results

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

TestAmerica Job ID: 580-64763-1

Client Sample ID: CMW-03-1216

Lab Sample ID: 580-64763-2

Date Collected: 12/06/16 14:20

Matrix: Water

Date Received: 12/08/16 16:35

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

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|----------------------------|--------|-----------|-----|-----|------|---|----------|----------------|---------|
| 1,2-Dibromoethane | ND | * | 1.0 | | ug/L | | | 12/15/16 22:54 | 1 |
| 1,2-DCA | ND | | 1.0 | | ug/L | | | 12/15/16 22:54 | 1 |
| Benzene | ND | | 2.0 | | ug/L | | | 12/15/16 22:54 | 1 |
| DIPE | ND | | 1.0 | | ug/L | | | 12/15/16 22:54 | 1 |
| Ethyl-t-butyl ether (ETBE) | ND | | 5.0 | | ug/L | | | 12/15/16 22:54 | 1 |
| Ethylbenzene | ND | | 3.0 | | ug/L | | | 12/15/16 22:54 | 1 |
| MTBE | ND | | 1.0 | | ug/L | | | 12/15/16 22:54 | 1 |
| Naphthalene | ND | | 2.0 | | ug/L | | | 12/15/16 22:54 | 1 |
| t-Butyl alcohol | ND | * | 25 | | ug/L | | | 12/15/16 22:54 | 1 |
| Tert-amyl methyl ether | ND | | 5.0 | | ug/L | | | 12/15/16 22:54 | 1 |
| Toluene | ND | | 2.0 | | ug/L | | | 12/15/16 22:54 | 1 |
| Xylenes, Total | ND | | 3.0 | | ug/L | | | 12/15/16 22:54 | 1 |

| Surrogate | %Recovery | Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|------------------------------|-----------|-----------|----------|----------|----------------|---------|
| 1,2-Dichloroethane-d4 (Surr) | 91 | | 65 - 143 | | 12/15/16 22:54 | 1 |
| 4-Bromofluorobenzene (Surr) | 86 | | 75 - 125 | | 12/15/16 22:54 | 1 |
| Dibromofluoromethane (Surr) | 87 | | 77 - 118 | | 12/15/16 22:54 | 1 |
| Toluene-d8 (Surr) | 105 | | 82 - 122 | | 12/15/16 22:54 | 1 |
| Trifluorotoluene (Surr) | 93 | | 80 - 141 | | 12/15/16 22:54 | 1 |

Method: 8015C - Nonhalogenated Organic using GC/FID (Direct Aqueous Injection)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|----------|--------|-----------|----|-----|------|---|----------|----------------|---------|
| Ethanol | ND | | 10 | | mg/L | | | 12/19/16 12:59 | 1 |
| Methanol | ND | | 10 | | mg/L | | | 12/19/16 12:59 | 1 |

| Surrogate | %Recovery | Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|--------------------------|-----------|-----------|----------|----------|----------------|---------|
| Isopropyl acetate (Surr) | 142 | X | 52 - 128 | | 12/19/16 12:59 | 1 |

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

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|----------|--------|-----------|-------|-----|------|---|----------|----------------|---------|
| Gasoline | 0.29 | | 0.050 | | mg/L | | | 12/15/16 22:25 | 1 |

| Surrogate | %Recovery | Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|-----------------------------|-----------|-----------|----------|----------|----------------|---------|
| 4-Bromofluorobenzene (Surr) | 100 | | 50 - 150 | | 12/15/16 22:25 | 1 |
| Trifluorotoluene (Surr) | 86 | | 50 - 150 | | 12/15/16 22:25 | 1 |

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

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|----------------------|--------|-----------|------|-----|------|---|----------------|----------------|---------|
| #2 Diesel (C10-C24) | 6.6 | | 0.11 | | mg/L | | 12/14/16 14:15 | 12/16/16 00:14 | 1 |
| Motor Oil (>C24-C36) | 0.29 | | 0.25 | | mg/L | | 12/14/16 14:15 | 12/16/16 00:14 | 1 |

| Surrogate | %Recovery | Qualifier | Limits | Prepared | Analyzed | Dil Fac | |
|-------------|-----------|-----------|----------|----------|----------------|----------------|---|
| o-Terphenyl | 92 | | 50 - 150 | | 12/14/16 14:15 | 12/16/16 00:14 | 1 |

TestAmerica Seattle

Client Sample Results

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

TestAmerica Job ID: 580-64763-1

Client Sample ID: CMW-06-1216

Lab Sample ID: 580-64763-3

Date Collected: 12/05/16 09:17

Matrix: Water

Date Received: 12/08/16 16:35

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

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|----------------------------|--------|-----------|-----|-----|------|---|----------|----------------|---------|
| 1,2-Dibromoethane | ND | | 1.0 | | ug/L | | | 12/15/16 18:20 | 1 |
| 1,2-DCA | ND | | 1.0 | | ug/L | | | 12/15/16 18:20 | 1 |
| Benzene | ND | | 2.0 | | ug/L | | | 12/15/16 18:20 | 1 |
| DIPE | ND | | 1.0 | | ug/L | | | 12/15/16 18:20 | 1 |
| Ethyl-t-butyl ether (ETBE) | ND | | 5.0 | | ug/L | | | 12/15/16 18:20 | 1 |
| Ethylbenzene | ND | | 3.0 | | ug/L | | | 12/15/16 18:20 | 1 |
| MTBE | ND | | 1.0 | | ug/L | | | 12/15/16 18:20 | 1 |
| Naphthalene | ND | | 2.0 | | ug/L | | | 12/15/16 18:20 | 1 |
| t-Butyl alcohol | ND | | 25 | | ug/L | | | 12/15/16 18:20 | 1 |
| Tert-amyl methyl ether | ND | | 5.0 | | ug/L | | | 12/15/16 18:20 | 1 |
| Toluene | ND | | 2.0 | | ug/L | | | 12/15/16 18:20 | 1 |
| Xylenes, Total | ND | | 3.0 | | ug/L | | | 12/15/16 18:20 | 1 |

| Surrogate | %Recovery | Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|------------------------------|-----------|-----------|----------|----------|----------------|---------|
| 1,2-Dichloroethane-d4 (Surr) | 106 | | 65 - 143 | | 12/15/16 18:20 | 1 |
| 4-Bromofluorobenzene (Surr) | 97 | | 75 - 125 | | 12/15/16 18:20 | 1 |
| Dibromofluoromethane (Surr) | 101 | | 77 - 118 | | 12/15/16 18:20 | 1 |
| Toluene-d8 (Surr) | 104 | | 82 - 122 | | 12/15/16 18:20 | 1 |
| Trifluorotoluene (Surr) | 95 | | 80 - 141 | | 12/15/16 18:20 | 1 |

Method: 8015C - Nonhalogenated Organic using GC/FID (Direct Aqueous Injection)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|----------|--------|-----------|----|-----|------|---|----------|----------------|---------|
| Ethanol | ND | | 10 | | mg/L | | | 12/19/16 13:05 | 1 |
| Methanol | ND | | 10 | | mg/L | | | 12/19/16 13:05 | 1 |

| Surrogate | %Recovery | Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|--------------------------|-----------|-----------|----------|----------|----------------|---------|
| Isopropyl acetate (Surr) | 140 | X | 52 - 128 | | 12/19/16 13:05 | 1 |

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

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|----------|--------|-----------|-------|-----|------|---|----------|----------------|---------|
| Gasoline | ND | | 0.050 | | mg/L | | | 12/15/16 14:05 | 1 |

| Surrogate | %Recovery | Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|-----------------------------|-----------|-----------|----------|----------|----------------|---------|
| 4-Bromofluorobenzene (Surr) | 99 | | 50 - 150 | | 12/15/16 14:05 | 1 |
| Trifluorotoluene (Surr) | 83 | | 50 - 150 | | 12/15/16 14:05 | 1 |

Method: RSK-175 - Dissolved Gases (GC)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---------|--------|-----------|--------|-----|------|---|----------|----------------|---------|
| Methane | ND | | 0.0050 | | mg/L | | | 12/16/16 12:21 | 1 |

| Surrogate | %Recovery | Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|------------------|-----------|-----------|----------|----------|----------------|---------|
| Acetylene (Surr) | 91 | | 62 - 124 | | 12/16/16 12:21 | 1 |

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

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|----------------------|--------|-----------|------|-----|------|---|----------------|----------------|---------|
| #2 Diesel (C10-C24) | ND | | 0.11 | | mg/L | | 12/14/16 14:15 | 12/16/16 02:01 | 1 |
| Motor Oil (>C24-C36) | ND | | 0.25 | | mg/L | | 12/14/16 14:15 | 12/16/16 02:01 | 1 |

| Surrogate | %Recovery | Qualifier | Limits | Prepared | Analyzed | Dil Fac | |
|-------------|-----------|-----------|----------|----------|----------------|----------------|---|
| o-Terphenyl | 86 | | 50 - 150 | | 12/14/16 14:15 | 12/16/16 02:01 | 1 |

TestAmerica Seattle

Client Sample Results

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

TestAmerica Job ID: 580-64763-1

Client Sample ID: CMW-06-1216

Lab Sample ID: 580-64763-3

Date Collected: 12/05/16 09:17

Matrix: Water

Date Received: 12/08/16 16:35

Method: 200.7 Rev 4.4 - Metals (ICP) - Dissolved

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|-----------|--------|-----------|-------|-----|------|---|----------------|----------------|---------|
| Manganese | ND | | 0.020 | | mg/L | | 12/16/16 18:43 | 12/20/16 16:26 | 1 |

General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---------------------------------|--------|-----------|-----|-----|------|---|----------|----------------|---------|
| Sulfate | 93 | | 12 | | mg/L | | | 12/20/16 09:42 | 10 |
| Analyte | Result | Qualifier | RL | RL | Unit | D | Prepared | Analyzed | Dil Fac |
| Alkalinity | 170 | | 5.0 | | mg/L | | | 12/19/16 13:09 | 1 |
| Bicarbonate Alkalinity as CaCO3 | 170 | | 5.0 | | mg/L | | | 12/19/16 13:09 | 1 |
| Carbonate Alkalinity as CaCO3 | ND | | 5.0 | | mg/L | | | 12/19/16 13:09 | 1 |
| Hydroxide Alkalinity as CaCO3 | ND | | 5.0 | | mg/L | | | 12/19/16 13:09 | 1 |



Client Sample Results

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

TestAmerica Job ID: 580-64763-1

Client Sample ID: CMW-07-1216

Lab Sample ID: 580-64763-4

Date Collected: 12/05/16 10:40

Matrix: Water

Date Received: 12/08/16 16:35

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

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|----------------------------|--------|-----------|-----|-----|------|---|----------|----------------|---------|
| 1,2-Dibromoethane | ND | | 1.0 | | ug/L | | | 12/15/16 18:46 | 1 |
| 1,2-DCA | ND | | 1.0 | | ug/L | | | 12/15/16 18:46 | 1 |
| Benzene | ND | | 2.0 | | ug/L | | | 12/15/16 18:46 | 1 |
| DIPE | ND | | 1.0 | | ug/L | | | 12/15/16 18:46 | 1 |
| Ethyl-t-butyl ether (ETBE) | ND | | 5.0 | | ug/L | | | 12/15/16 18:46 | 1 |
| Ethylbenzene | ND | | 3.0 | | ug/L | | | 12/15/16 18:46 | 1 |
| MTBE | ND | | 1.0 | | ug/L | | | 12/15/16 18:46 | 1 |
| Naphthalene | ND | | 2.0 | | ug/L | | | 12/15/16 18:46 | 1 |
| t-Butyl alcohol | ND | | 25 | | ug/L | | | 12/15/16 18:46 | 1 |
| Tert-amyl methyl ether | ND | | 5.0 | | ug/L | | | 12/15/16 18:46 | 1 |
| Toluene | ND | | 2.0 | | ug/L | | | 12/15/16 18:46 | 1 |
| Xylenes, Total | ND | | 3.0 | | ug/L | | | 12/15/16 18:46 | 1 |

| Surrogate | %Recovery | Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|------------------------------|-----------|-----------|----------|----------|----------------|---------|
| 1,2-Dichloroethane-d4 (Surr) | 106 | | 65 - 143 | | 12/15/16 18:46 | 1 |
| 4-Bromofluorobenzene (Surr) | 100 | | 75 - 125 | | 12/15/16 18:46 | 1 |
| Dibromofluoromethane (Surr) | 100 | | 77 - 118 | | 12/15/16 18:46 | 1 |
| Toluene-d8 (Surr) | 104 | | 82 - 122 | | 12/15/16 18:46 | 1 |
| Trifluorotoluene (Surr) | 96 | | 80 - 141 | | 12/15/16 18:46 | 1 |

Method: 8015C - Nonhalogenated Organic using GC/FID (Direct Aqueous Injection)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|----------|--------|-----------|----|-----|------|---|----------|----------------|---------|
| Ethanol | ND | | 10 | | mg/L | | | 12/19/16 13:11 | 1 |
| Methanol | ND | | 10 | | mg/L | | | 12/19/16 13:11 | 1 |

| Surrogate | %Recovery | Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|--------------------------|-----------|-----------|----------|----------|----------------|---------|
| Isopropyl acetate (Surr) | 146 | X | 52 - 128 | | 12/19/16 13:11 | 1 |

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

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|----------|--------|-----------|-------|-----|------|---|----------|----------------|---------|
| Gasoline | ND | | 0.050 | | mg/L | | | 12/15/16 14:36 | 1 |

| Surrogate | %Recovery | Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|-----------------------------|-----------|-----------|----------|----------|----------------|---------|
| 4-Bromofluorobenzene (Surr) | 99 | | 50 - 150 | | 12/15/16 14:36 | 1 |
| Trifluorotoluene (Surr) | 84 | | 50 - 150 | | 12/15/16 14:36 | 1 |

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

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|----------------------|--------|-----------|------|-----|------|---|----------------|----------------|---------|
| #2 Diesel (C10-C24) | ND | | 0.11 | | mg/L | | 12/14/16 14:15 | 12/16/16 02:43 | 1 |
| Motor Oil (>C24-C36) | ND | | 0.25 | | mg/L | | 12/14/16 14:15 | 12/16/16 02:43 | 1 |

| Surrogate | %Recovery | Qualifier | Limits | Prepared | Analyzed | Dil Fac | |
|-------------|-----------|-----------|----------|----------|----------------|----------------|---|
| o-Terphenyl | 89 | | 50 - 150 | | 12/14/16 14:15 | 12/16/16 02:43 | 1 |

TestAmerica Seattle

Client Sample Results

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

TestAmerica Job ID: 580-64763-1

Client Sample ID: CMW-11-1216

Lab Sample ID: 580-64763-5

Date Collected: 12/05/16 15:27

Matrix: Water

Date Received: 12/08/16 16:35

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

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|----------------------------|--------|-----------|-----|-----|------|---|----------|----------------|---------|
| 1,2-Dibromoethane | ND | | 1.0 | | ug/L | | | 12/15/16 19:13 | 1 |
| 1,2-DCA | ND | | 1.0 | | ug/L | | | 12/15/16 19:13 | 1 |
| Benzene | ND | | 2.0 | | ug/L | | | 12/15/16 19:13 | 1 |
| DIPE | ND | | 1.0 | | ug/L | | | 12/15/16 19:13 | 1 |
| Ethyl-t-butyl ether (ETBE) | ND | | 5.0 | | ug/L | | | 12/15/16 19:13 | 1 |
| Ethylbenzene | ND | | 3.0 | | ug/L | | | 12/15/16 19:13 | 1 |
| MTBE | ND | | 1.0 | | ug/L | | | 12/15/16 19:13 | 1 |
| Naphthalene | ND | | 2.0 | | ug/L | | | 12/15/16 19:13 | 1 |
| t-Butyl alcohol | ND | | 25 | | ug/L | | | 12/15/16 19:13 | 1 |
| Tert-amyl methyl ether | ND | | 5.0 | | ug/L | | | 12/15/16 19:13 | 1 |
| Toluene | ND | | 2.0 | | ug/L | | | 12/15/16 19:13 | 1 |
| Xylenes, Total | ND | | 3.0 | | ug/L | | | 12/15/16 19:13 | 1 |

| Surrogate | %Recovery | Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|------------------------------|-----------|-----------|----------|----------|----------------|---------|
| 1,2-Dichloroethane-d4 (Surr) | 107 | | 65 - 143 | | 12/15/16 19:13 | 1 |
| 4-Bromofluorobenzene (Surr) | 96 | | 75 - 125 | | 12/15/16 19:13 | 1 |
| Dibromofluoromethane (Surr) | 102 | | 77 - 118 | | 12/15/16 19:13 | 1 |
| Toluene-d8 (Surr) | 106 | | 82 - 122 | | 12/15/16 19:13 | 1 |
| Trifluorotoluene (Surr) | 94 | | 80 - 141 | | 12/15/16 19:13 | 1 |

Method: 8015C - Nonhalogenated Organic using GC/FID (Direct Aqueous Injection)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|----------|--------|-----------|----|-----|------|---|----------|----------------|---------|
| Ethanol | ND | | 10 | | mg/L | | | 12/19/16 13:18 | 1 |
| Methanol | ND | | 10 | | mg/L | | | 12/19/16 13:18 | 1 |

| Surrogate | %Recovery | Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|--------------------------|-----------|-----------|----------|----------|----------------|---------|
| Isopropyl acetate (Surr) | 146 | X | 52 - 128 | | 12/19/16 13:18 | 1 |

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

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|----------|--------|-----------|-------|-----|------|---|----------|----------------|---------|
| Gasoline | ND | | 0.050 | | mg/L | | | 12/15/16 15:07 | 1 |

| Surrogate | %Recovery | Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|-----------------------------|-----------|-----------|----------|----------|----------------|---------|
| 4-Bromofluorobenzene (Surr) | 99 | | 50 - 150 | | 12/15/16 15:07 | 1 |
| Trifluorotoluene (Surr) | 85 | | 50 - 150 | | 12/15/16 15:07 | 1 |

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

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|----------------------|--------|-----------|------|-----|------|---|----------------|----------------|---------|
| #2 Diesel (C10-C24) | 0.36 | | 0.11 | | mg/L | | 12/14/16 14:15 | 12/16/16 03:04 | 1 |
| Motor Oil (>C24-C36) | ND | | 0.25 | | mg/L | | 12/14/16 14:15 | 12/16/16 03:04 | 1 |

| Surrogate | %Recovery | Qualifier | Limits | Prepared | Analyzed | Dil Fac | |
|-------------|-----------|-----------|----------|----------|----------------|----------------|---|
| o-Terphenyl | 78 | | 50 - 150 | | 12/14/16 14:15 | 12/16/16 03:04 | 1 |

TestAmerica Seattle

Client Sample Results

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

TestAmerica Job ID: 580-64763-1

Client Sample ID: CMW-12-1216

Lab Sample ID: 580-64763-6

Date Collected: 12/06/16 11:30

Matrix: Water

Date Received: 12/08/16 16:35

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

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|----------------------------|--------|-----------|-----|-----|------|---|----------|----------------|---------|
| 1,2-Dibromoethane | ND | * | 1.0 | | ug/L | | | 12/15/16 21:00 | 1 |
| 1,2-DCA | ND | | 1.0 | | ug/L | | | 12/15/16 21:00 | 1 |
| Benzene | ND | | 2.0 | | ug/L | | | 12/15/16 21:00 | 1 |
| DIPE | ND | | 1.0 | | ug/L | | | 12/15/16 21:00 | 1 |
| Ethyl-t-butyl ether (ETBE) | ND | | 5.0 | | ug/L | | | 12/15/16 21:00 | 1 |
| Ethylbenzene | ND | | 3.0 | | ug/L | | | 12/15/16 21:00 | 1 |
| MTBE | ND | | 1.0 | | ug/L | | | 12/15/16 21:00 | 1 |
| Naphthalene | ND | | 2.0 | | ug/L | | | 12/15/16 21:00 | 1 |
| t-Butyl alcohol | ND | * | 25 | | ug/L | | | 12/15/16 21:00 | 1 |
| Tert-amyl methyl ether | ND | | 5.0 | | ug/L | | | 12/15/16 21:00 | 1 |
| Toluene | ND | | 2.0 | | ug/L | | | 12/15/16 21:00 | 1 |
| Xylenes, Total | ND | | 3.0 | | ug/L | | | 12/15/16 21:00 | 1 |

| Surrogate | %Recovery | Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|------------------------------|-----------|-----------|----------|----------|----------------|---------|
| 1,2-Dichloroethane-d4 (Surr) | 93 | | 65 - 143 | | 12/15/16 21:00 | 1 |
| 4-Bromofluorobenzene (Surr) | 86 | | 75 - 125 | | 12/15/16 21:00 | 1 |
| Dibromofluoromethane (Surr) | 88 | | 77 - 118 | | 12/15/16 21:00 | 1 |
| Toluene-d8 (Surr) | 104 | | 82 - 122 | | 12/15/16 21:00 | 1 |
| Trifluorotoluene (Surr) | 93 | | 80 - 141 | | 12/15/16 21:00 | 1 |

Method: 8015C - Nonhalogenated Organic using GC/FID (Direct Aqueous Injection)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|----------|--------|-----------|----|-----|------|---|----------|----------------|---------|
| Ethanol | ND | | 10 | | mg/L | | | 12/19/16 13:24 | 1 |
| Methanol | ND | | 10 | | mg/L | | | 12/19/16 13:24 | 1 |

| Surrogate | %Recovery | Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|--------------------------|-----------|-----------|----------|----------|----------------|---------|
| Isopropyl acetate (Surr) | 145 | X | 52 - 128 | | 12/19/16 13:24 | 1 |

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

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|----------|--------|-----------|-------|-----|------|---|----------|----------------|---------|
| Gasoline | ND | | 0.050 | | mg/L | | | 12/15/16 16:10 | 1 |

| Surrogate | %Recovery | Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|-----------------------------|-----------|-----------|----------|----------|----------------|---------|
| 4-Bromofluorobenzene (Surr) | 98 | | 50 - 150 | | 12/15/16 16:10 | 1 |
| Trifluorotoluene (Surr) | 81 | | 50 - 150 | | 12/15/16 16:10 | 1 |

Method: RSK-175 - Dissolved Gases (GC)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|----------------|--------------|-----------|--------|-----|------|---|----------|----------------|---------|
| Methane | 0.063 | | 0.0050 | | mg/L | | | 12/19/16 13:58 | 1 |

| Surrogate | %Recovery | Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|------------------|-----------|-----------|----------|----------|----------------|---------|
| Acetylene (Surr) | 97 | | 62 - 124 | | 12/19/16 13:58 | 1 |

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

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|----------------------|--------|-----------|------|-----|------|---|----------------|----------------|---------|
| #2 Diesel (C10-C24) | ND | | 0.11 | | mg/L | | 12/14/16 14:15 | 12/16/16 01:18 | 1 |
| Motor Oil (>C24-C36) | ND | | 0.25 | | mg/L | | 12/14/16 14:15 | 12/16/16 01:18 | 1 |

| Surrogate | %Recovery | Qualifier | Limits | Prepared | Analyzed | Dil Fac | |
|-------------|-----------|-----------|----------|----------|----------------|----------------|---|
| o-Terphenyl | 85 | | 50 - 150 | | 12/14/16 14:15 | 12/16/16 01:18 | 1 |

TestAmerica Seattle

Client Sample Results

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

TestAmerica Job ID: 580-64763-1

Client Sample ID: CMW-12-1216

Lab Sample ID: 580-64763-6

Date Collected: 12/06/16 11:30

Matrix: Water

Date Received: 12/08/16 16:35

Method: 200.7 Rev 4.4 - Metals (ICP) - Dissolved

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|-----------|--------|-----------|-------|-----|------|---|----------------|----------------|---------|
| Manganese | 0.19 | | 0.020 | | mg/L | | 12/16/16 18:43 | 12/20/16 16:29 | 1 |

General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---------------------------------|--------|-----------|-----|-----|------|---|----------|----------------|---------|
| Sulfate | 95 | | 12 | | mg/L | | | 12/20/16 09:57 | 10 |
| Analyte | Result | Qualifier | RL | RL | Unit | D | Prepared | Analyzed | Dil Fac |
| Alkalinity | 270 | | 5.0 | | mg/L | | | 12/19/16 13:09 | 1 |
| Bicarbonate Alkalinity as CaCO3 | 270 | | 5.0 | | mg/L | | | 12/19/16 13:09 | 1 |
| Carbonate Alkalinity as CaCO3 | ND | | 5.0 | | mg/L | | | 12/19/16 13:09 | 1 |
| Hydroxide Alkalinity as CaCO3 | ND | | 5.0 | | mg/L | | | 12/19/16 13:09 | 1 |



Client Sample Results

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

TestAmerica Job ID: 580-64763-1

Client Sample ID: CMW-12D-1216

Lab Sample ID: 580-64763-7

Date Collected: 12/06/16 11:30

Matrix: Water

Date Received: 12/08/16 16:35

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

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|----------------------------|--------|-----------|-----|-----|------|---|----------|----------------|---------|
| 1,2-Dibromoethane | ND | * | 1.0 | | ug/L | | | 12/15/16 21:29 | 1 |
| 1,2-DCA | ND | | 1.0 | | ug/L | | | 12/15/16 21:29 | 1 |
| Benzene | ND | | 2.0 | | ug/L | | | 12/15/16 21:29 | 1 |
| DIPE | ND | | 1.0 | | ug/L | | | 12/15/16 21:29 | 1 |
| Ethyl-t-butyl ether (ETBE) | ND | | 5.0 | | ug/L | | | 12/15/16 21:29 | 1 |
| Ethylbenzene | ND | | 3.0 | | ug/L | | | 12/15/16 21:29 | 1 |
| MTBE | ND | | 1.0 | | ug/L | | | 12/15/16 21:29 | 1 |
| Naphthalene | ND | | 2.0 | | ug/L | | | 12/15/16 21:29 | 1 |
| t-Butyl alcohol | ND | * | 25 | | ug/L | | | 12/15/16 21:29 | 1 |
| Tert-amyl methyl ether | ND | | 5.0 | | ug/L | | | 12/15/16 21:29 | 1 |
| Toluene | ND | | 2.0 | | ug/L | | | 12/15/16 21:29 | 1 |
| Xylenes, Total | ND | | 3.0 | | ug/L | | | 12/15/16 21:29 | 1 |

| Surrogate | %Recovery | Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|------------------------------|-----------|-----------|----------|----------|----------------|---------|
| 1,2-Dichloroethane-d4 (Surr) | 93 | | 65 - 143 | | 12/15/16 21:29 | 1 |
| 4-Bromofluorobenzene (Surr) | 86 | | 75 - 125 | | 12/15/16 21:29 | 1 |
| Dibromofluoromethane (Surr) | 89 | | 77 - 118 | | 12/15/16 21:29 | 1 |
| Toluene-d8 (Surr) | 106 | | 82 - 122 | | 12/15/16 21:29 | 1 |
| Trifluorotoluene (Surr) | 93 | | 80 - 141 | | 12/15/16 21:29 | 1 |

Method: 8015C - Nonhalogenated Organic using GC/FID (Direct Aqueous Injection)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|----------|--------|-----------|----|-----|------|---|----------|----------------|---------|
| Ethanol | ND | | 10 | | mg/L | | | 12/19/16 13:30 | 1 |
| Methanol | ND | | 10 | | mg/L | | | 12/19/16 13:30 | 1 |

| Surrogate | %Recovery | Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|--------------------------|-----------|-----------|----------|----------|----------------|---------|
| Isopropyl acetate (Surr) | 142 | X | 52 - 128 | | 12/19/16 13:30 | 1 |

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

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|----------|--------|-----------|-------|-----|------|---|----------|----------------|---------|
| Gasoline | ND | | 0.050 | | mg/L | | | 12/15/16 16:41 | 1 |

| Surrogate | %Recovery | Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|-----------------------------|-----------|-----------|----------|----------|----------------|---------|
| 4-Bromofluorobenzene (Surr) | 98 | | 50 - 150 | | 12/15/16 16:41 | 1 |
| Trifluorotoluene (Surr) | 82 | | 50 - 150 | | 12/15/16 16:41 | 1 |

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

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|----------------------|--------|-----------|------|-----|------|---|----------------|----------------|---------|
| #2 Diesel (C10-C24) | 0.15 | | 0.11 | | mg/L | | 12/15/16 13:56 | 12/17/16 06:14 | 1 |
| Motor Oil (>C24-C36) | ND | | 0.25 | | mg/L | | 12/15/16 13:56 | 12/17/16 06:14 | 1 |

| Surrogate | %Recovery | Qualifier | Limits | Prepared | Analyzed | Dil Fac | |
|-------------|-----------|-----------|----------|----------|----------------|----------------|---|
| o-Terphenyl | 84 | | 50 - 150 | | 12/15/16 13:56 | 12/17/16 06:14 | 1 |

TestAmerica Seattle

Client Sample Results

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

TestAmerica Job ID: 580-64763-1

Client Sample ID: CMW-14-1216

Lab Sample ID: 580-64763-8

Date Collected: 12/05/16 12:10

Matrix: Water

Date Received: 12/08/16 16:35

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

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|----------------------------|--------|-----------|-----|-----|------|---|----------|----------------|---------|
| 1,2-Dibromoethane | ND | | 1.0 | | ug/L | | | 12/15/16 19:39 | 1 |
| 1,2-DCA | ND | | 1.0 | | ug/L | | | 12/15/16 19:39 | 1 |
| Benzene | ND | | 2.0 | | ug/L | | | 12/15/16 19:39 | 1 |
| DIPE | ND | | 1.0 | | ug/L | | | 12/15/16 19:39 | 1 |
| Ethyl-t-butyl ether (ETBE) | ND | | 5.0 | | ug/L | | | 12/15/16 19:39 | 1 |
| Ethylbenzene | ND | | 3.0 | | ug/L | | | 12/15/16 19:39 | 1 |
| MTBE | ND | | 1.0 | | ug/L | | | 12/15/16 19:39 | 1 |
| Naphthalene | ND | | 2.0 | | ug/L | | | 12/15/16 19:39 | 1 |
| t-Butyl alcohol | ND | | 25 | | ug/L | | | 12/15/16 19:39 | 1 |
| Tert-amyl methyl ether | ND | | 5.0 | | ug/L | | | 12/15/16 19:39 | 1 |
| Toluene | ND | | 2.0 | | ug/L | | | 12/15/16 19:39 | 1 |
| Xylenes, Total | ND | | 3.0 | | ug/L | | | 12/15/16 19:39 | 1 |

| Surrogate | %Recovery | Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|------------------------------|-----------|-----------|----------|----------|----------------|---------|
| 1,2-Dichloroethane-d4 (Surr) | 107 | | 65 - 143 | | 12/15/16 19:39 | 1 |
| 4-Bromofluorobenzene (Surr) | 97 | | 75 - 125 | | 12/15/16 19:39 | 1 |
| Dibromofluoromethane (Surr) | 98 | | 77 - 118 | | 12/15/16 19:39 | 1 |
| Toluene-d8 (Surr) | 106 | | 82 - 122 | | 12/15/16 19:39 | 1 |
| Trifluorotoluene (Surr) | 96 | | 80 - 141 | | 12/15/16 19:39 | 1 |

Method: 8015C - Nonhalogenated Organic using GC/FID (Direct Aqueous Injection)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|----------|--------|-----------|----|-----|------|---|----------|----------------|---------|
| Ethanol | ND | | 10 | | mg/L | | | 12/19/16 13:36 | 1 |
| Methanol | ND | | 10 | | mg/L | | | 12/19/16 13:36 | 1 |

| Surrogate | %Recovery | Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|--------------------------|-----------|-----------|----------|----------|----------------|---------|
| Isopropyl acetate (Surr) | 138 | X | 52 - 128 | | 12/19/16 13:36 | 1 |

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

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|----------|--------|-----------|-------|-----|------|---|----------|----------------|---------|
| Gasoline | ND | | 0.050 | | mg/L | | | 12/15/16 17:13 | 1 |

| Surrogate | %Recovery | Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|-----------------------------|-----------|-----------|----------|----------|----------------|---------|
| 4-Bromofluorobenzene (Surr) | 100 | | 50 - 150 | | 12/15/16 17:13 | 1 |
| Trifluorotoluene (Surr) | 83 | | 50 - 150 | | 12/15/16 17:13 | 1 |

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

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|----------------------|--------|-----------|------|-----|------|---|----------------|----------------|---------|
| #2 Diesel (C10-C24) | ND | | 0.11 | | mg/L | | 12/14/16 14:15 | 12/16/16 03:26 | 1 |
| Motor Oil (>C24-C36) | ND | | 0.25 | | mg/L | | 12/14/16 14:15 | 12/16/16 03:26 | 1 |

| Surrogate | %Recovery | Qualifier | Limits | Prepared | Analyzed | Dil Fac | |
|-------------|-----------|-----------|----------|----------|----------------|----------------|---|
| o-Terphenyl | 87 | | 50 - 150 | | 12/14/16 14:15 | 12/16/16 03:26 | 1 |

TestAmerica Seattle

Client Sample Results

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

TestAmerica Job ID: 580-64763-1

Client Sample ID: CEB

Lab Sample ID: 580-64763-9

Date Collected: 12/06/16 12:45

Matrix: Water

Date Received: 12/08/16 16:35

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

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|----------------------------|--------|-----------|-----|-----|------|---|----------|----------------|---------|
| 1,2-Dibromoethane | ND | * | 1.0 | | ug/L | | | 12/15/16 21:57 | 1 |
| 1,2-DCA | ND | | 1.0 | | ug/L | | | 12/15/16 21:57 | 1 |
| Benzene | ND | | 2.0 | | ug/L | | | 12/15/16 21:57 | 1 |
| DIPE | ND | | 1.0 | | ug/L | | | 12/15/16 21:57 | 1 |
| Ethyl-t-butyl ether (ETBE) | ND | | 5.0 | | ug/L | | | 12/15/16 21:57 | 1 |
| Ethylbenzene | ND | | 3.0 | | ug/L | | | 12/15/16 21:57 | 1 |
| MTBE | ND | | 1.0 | | ug/L | | | 12/15/16 21:57 | 1 |
| Naphthalene | ND | | 2.0 | | ug/L | | | 12/15/16 21:57 | 1 |
| t-Butyl alcohol | ND | * | 25 | | ug/L | | | 12/15/16 21:57 | 1 |
| Tert-amyl methyl ether | ND | | 5.0 | | ug/L | | | 12/15/16 21:57 | 1 |
| Toluene | ND | | 2.0 | | ug/L | | | 12/15/16 21:57 | 1 |
| Xylenes, Total | ND | | 3.0 | | ug/L | | | 12/15/16 21:57 | 1 |

| Surrogate | %Recovery | Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|------------------------------|-----------|-----------|----------|----------|----------------|---------|
| 1,2-Dichloroethane-d4 (Surr) | 93 | | 65 - 143 | | 12/15/16 21:57 | 1 |
| 4-Bromofluorobenzene (Surr) | 87 | | 75 - 125 | | 12/15/16 21:57 | 1 |
| Dibromofluoromethane (Surr) | 88 | | 77 - 118 | | 12/15/16 21:57 | 1 |
| Toluene-d8 (Surr) | 106 | | 82 - 122 | | 12/15/16 21:57 | 1 |
| Trifluorotoluene (Surr) | 93 | | 80 - 141 | | 12/15/16 21:57 | 1 |

Method: 8015C - Nonhalogenated Organic using GC/FID (Direct Aqueous Injection)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|----------|--------|-----------|----|-----|------|---|----------|----------------|---------|
| Ethanol | ND | | 10 | | mg/L | | | 12/19/16 13:42 | 1 |
| Methanol | ND | | 10 | | mg/L | | | 12/19/16 13:42 | 1 |

| Surrogate | %Recovery | Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|--------------------------|-----------|-----------|----------|----------|----------------|---------|
| Isopropyl acetate (Surr) | 137 | X | 52 - 128 | | 12/19/16 13:42 | 1 |

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

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|----------|--------|-----------|-------|-----|------|---|----------|----------------|---------|
| Gasoline | ND | | 0.050 | | mg/L | | | 12/15/16 17:44 | 1 |

| Surrogate | %Recovery | Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|-----------------------------|-----------|-----------|----------|----------|----------------|---------|
| 4-Bromofluorobenzene (Surr) | 99 | | 50 - 150 | | 12/15/16 17:44 | 1 |
| Trifluorotoluene (Surr) | 82 | | 50 - 150 | | 12/15/16 17:44 | 1 |

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

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|----------------------|--------|-----------|------|-----|------|---|----------------|----------------|---------|
| #2 Diesel (C10-C24) | ND | | 0.11 | | mg/L | | 12/15/16 13:56 | 12/17/16 05:53 | 1 |
| Motor Oil (>C24-C36) | ND | | 0.25 | | mg/L | | 12/15/16 13:56 | 12/17/16 05:53 | 1 |

| Surrogate | %Recovery | Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|-------------|-----------|-----------|----------|----------------|----------------|---------|
| o-Terphenyl | 88 | | 50 - 150 | 12/15/16 13:56 | 12/17/16 05:53 | 1 |

TestAmerica Seattle

Client Sample Results

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

TestAmerica Job ID: 580-64763-1

Client Sample ID: Trip Blank(1)

Lab Sample ID: 580-64763-10

Date Collected: 12/05/16 16:00

Matrix: Water

Date Received: 12/08/16 16:35

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

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|----------------------------|--------|-----------|-----|-----|------|---|----------|----------------|---------|
| 1,2-Dibromoethane | ND | | 1.0 | | ug/L | | | 12/16/16 11:46 | 1 |
| 1,2-DCA | ND | | 1.0 | | ug/L | | | 12/16/16 11:46 | 1 |
| Benzene | ND | | 2.0 | | ug/L | | | 12/16/16 11:46 | 1 |
| DIPE | ND | | 1.0 | | ug/L | | | 12/16/16 11:46 | 1 |
| Ethyl-t-butyl ether (ETBE) | ND | | 5.0 | | ug/L | | | 12/16/16 11:46 | 1 |
| Ethylbenzene | ND | | 3.0 | | ug/L | | | 12/16/16 11:46 | 1 |
| MTBE | ND | | 1.0 | | ug/L | | | 12/16/16 11:46 | 1 |
| Naphthalene | ND | | 2.0 | | ug/L | | | 12/16/16 11:46 | 1 |
| t-Butyl alcohol | ND | | 25 | | ug/L | | | 12/16/16 11:46 | 1 |
| Tert-amyl methyl ether | ND | | 5.0 | | ug/L | | | 12/16/16 11:46 | 1 |
| Toluene | ND | | 2.0 | | ug/L | | | 12/16/16 11:46 | 1 |
| Xylenes, Total | ND | | 3.0 | | ug/L | | | 12/16/16 11:46 | 1 |

| Surrogate | %Recovery | Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|------------------------------|-----------|-----------|----------|----------|----------------|---------|
| 1,2-Dichloroethane-d4 (Surr) | 108 | | 65 - 143 | | 12/16/16 11:46 | 1 |
| 4-Bromofluorobenzene (Surr) | 98 | | 75 - 125 | | 12/16/16 11:46 | 1 |
| Dibromofluoromethane (Surr) | 101 | | 77 - 118 | | 12/16/16 11:46 | 1 |
| Toluene-d8 (Surr) | 105 | | 82 - 122 | | 12/16/16 11:46 | 1 |
| Trifluorotoluene (Surr) | 95 | | 80 - 141 | | 12/16/16 11:46 | 1 |

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

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|----------|--------|-----------|-------|-----|------|---|----------|----------------|---------|
| Gasoline | ND | | 0.050 | | mg/L | | | 12/16/16 17:15 | 1 |

| Surrogate | %Recovery | Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|-----------------------------|-----------|-----------|----------|----------|----------------|---------|
| 4-Bromofluorobenzene (Surr) | 95 | | 50 - 150 | | 12/16/16 17:15 | 1 |
| Trifluorotoluene (Surr) | 73 | | 50 - 150 | | 12/16/16 17:15 | 1 |

Client Sample Results

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

TestAmerica Job ID: 580-64763-1

Client Sample ID: Trip Blank(2)

Lab Sample ID: 580-64763-11

Date Collected: 12/06/16 17:30

Matrix: Water

Date Received: 12/08/16 16:35

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

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|----------------------------|--------|-----------|-----|-----|------|---|----------|----------------|---------|
| 1,2-Dibromoethane | ND | * | 1.0 | | ug/L | | | 12/19/16 21:57 | 1 |
| 1,2-DCA | ND | * | 1.0 | | ug/L | | | 12/19/16 21:57 | 1 |
| Benzene | ND | * | 2.0 | | ug/L | | | 12/19/16 21:57 | 1 |
| DIPE | ND | | 1.0 | | ug/L | | | 12/19/16 21:57 | 1 |
| Ethyl-t-butyl ether (ETBE) | ND | * | 5.0 | | ug/L | | | 12/19/16 21:57 | 1 |
| Ethylbenzene | ND | * | 3.0 | | ug/L | | | 12/19/16 21:57 | 1 |
| MTBE | ND | | 1.0 | | ug/L | | | 12/19/16 21:57 | 1 |
| Naphthalene | ND | | 2.0 | | ug/L | | | 12/19/16 21:57 | 1 |
| t-Butyl alcohol | ND | * | 25 | | ug/L | | | 12/19/16 21:57 | 1 |
| Tert-amyl methyl ether | ND | | 5.0 | | ug/L | | | 12/19/16 21:57 | 1 |
| Toluene | ND | * | 2.0 | | ug/L | | | 12/19/16 21:57 | 1 |
| Xylenes, Total | ND | * | 3.0 | | ug/L | | | 12/19/16 21:57 | 1 |

| Surrogate | %Recovery | Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|------------------------------|-----------|-----------|----------|----------|----------------|---------|
| 1,2-Dichloroethane-d4 (Surr) | 102 | | 65 - 143 | | 12/19/16 21:57 | 1 |
| 4-Bromofluorobenzene (Surr) | 96 | | 75 - 125 | | 12/19/16 21:57 | 1 |
| Dibromofluoromethane (Surr) | 100 | | 77 - 118 | | 12/19/16 21:57 | 1 |
| Toluene-d8 (Surr) | 104 | | 82 - 122 | | 12/19/16 21:57 | 1 |
| Trifluorotoluene (Surr) | 96 | | 80 - 141 | | 12/19/16 21:57 | 1 |

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

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|----------|--------|-----------|-------|-----|------|---|----------|----------------|---------|
| Gasoline | ND | | 0.050 | | mg/L | | | 12/15/16 12:31 | 1 |

| Surrogate | %Recovery | Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|-----------------------------|-----------|-----------|----------|----------|----------------|---------|
| 4-Bromofluorobenzene (Surr) | 97 | | 50 - 150 | | 12/15/16 12:31 | 1 |
| Trifluorotoluene (Surr) | 50 | | 50 - 150 | | 12/15/16 12:31 | 1 |

QC Sample Results

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

TestAmerica Job ID: 580-64763-1

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

Lab Sample ID: MB 580-234603/5
Matrix: Water
Analysis Batch: 234603

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

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|----------------------------|-----------|--------------|-----|-----|------|---|----------|----------------|---------|
| 1,2-Dibromoethane | ND | | 1.0 | | ug/L | | | 12/15/16 11:03 | 1 |
| 1,2-DCA | ND | | 1.0 | | ug/L | | | 12/15/16 11:03 | 1 |
| Benzene | ND | | 2.0 | | ug/L | | | 12/15/16 11:03 | 1 |
| DIPE | ND | | 1.0 | | ug/L | | | 12/15/16 11:03 | 1 |
| Ethyl-t-butyl ether (ETBE) | ND | | 5.0 | | ug/L | | | 12/15/16 11:03 | 1 |
| Ethylbenzene | ND | | 3.0 | | ug/L | | | 12/15/16 11:03 | 1 |
| MTBE | ND | | 1.0 | | ug/L | | | 12/15/16 11:03 | 1 |
| Naphthalene | ND | | 2.0 | | ug/L | | | 12/15/16 11:03 | 1 |
| t-Butyl alcohol | ND | | 25 | | ug/L | | | 12/15/16 11:03 | 1 |
| Tert-amyl methyl ether | ND | | 5.0 | | ug/L | | | 12/15/16 11:03 | 1 |
| Toluene | ND | | 2.0 | | ug/L | | | 12/15/16 11:03 | 1 |
| Xylenes, Total | ND | | 3.0 | | ug/L | | | 12/15/16 11:03 | 1 |

| Surrogate | MB %Recovery | MB Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|------------------------------|--------------|--------------|----------|----------|----------------|---------|
| 1,2-Dichloroethane-d4 (Surr) | 103 | | 65 - 143 | | 12/15/16 11:03 | 1 |
| 4-Bromofluorobenzene (Surr) | 97 | | 75 - 125 | | 12/15/16 11:03 | 1 |
| Dibromofluoromethane (Surr) | 101 | | 77 - 118 | | 12/15/16 11:03 | 1 |
| Toluene-d8 (Surr) | 104 | | 82 - 122 | | 12/15/16 11:03 | 1 |
| Trifluorotoluene (Surr) | 97 | | 80 - 141 | | 12/15/16 11:03 | 1 |

Lab Sample ID: LCS 580-234603/6
Matrix: Water
Analysis Batch: 234603

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

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|----------------------------|-------------|------------|---------------|------|---|------|--------------|
| 1,2-Dibromoethane | 10.0 | 10.9 | | ug/L | | 109 | 66 - 133 |
| 1,2-DCA | 10.0 | 10.7 | | ug/L | | 106 | 58 - 143 |
| Benzene | 10.0 | 10.1 | | ug/L | | 100 | 80 - 120 |
| DIPE | 12.5 | 12.7 | | ug/L | | 101 | 51 - 150 |
| Ethyl-t-butyl ether (ETBE) | 12.5 | 12.7 | | ug/L | | 102 | 73 - 116 |
| Ethylbenzene | 10.0 | 10.8 | | ug/L | | 108 | 75 - 119 |
| MTBE | 10.0 | 10.1 | | ug/L | | 100 | 65 - 125 |
| m-Xylene & p-Xylene | 10.0 | 10.1 | | ug/L | | 101 | 75 - 119 |
| Naphthalene | 10.0 | 10.6 | | ug/L | | 106 | 55 - 134 |
| o-Xylene | 10.0 | 10.6 | | ug/L | | 106 | 74 - 120 |
| t-Butyl alcohol | 100 | 94.0 | | ug/L | | 94 | 20 - 150 |
| Tert-amyl methyl ether | 12.5 | 12.5 | | ug/L | | 100 | 75 - 125 |
| Toluene | 10.0 | 10.4 | | ug/L | | 104 | 75 - 120 |
| Xylenes, Total | 20.0 | 20.7 | | ug/L | | 103 | 75 - 119 |

| Surrogate | LCS %Recovery | LCS Qualifier | Limits |
|------------------------------|---------------|---------------|----------|
| 1,2-Dichloroethane-d4 (Surr) | 101 | | 65 - 143 |
| 4-Bromofluorobenzene (Surr) | 98 | | 75 - 125 |
| Dibromofluoromethane (Surr) | 100 | | 77 - 118 |
| Toluene-d8 (Surr) | 104 | | 82 - 122 |
| Trifluorotoluene (Surr) | 94 | | 80 - 141 |

TestAmerica Seattle

QC Sample Results

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

TestAmerica Job ID: 580-64763-1

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

Lab Sample ID: LCSD 580-234603/7

Matrix: Water

Analysis Batch: 234603

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

| Analyte | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|----------------------------|-------------|-------------|----------------|------|---|------|--------------|-----|-----------|
| 1,2-Dibromoethane | 10.0 | 10.0 | | ug/L | | 100 | 66 - 133 | 8 | 17 |
| 1,2-DCA | 10.0 | 10.2 | | ug/L | | 102 | 58 - 143 | 4 | 17 |
| Benzene | 10.0 | 9.76 | | ug/L | | 97 | 80 - 120 | 3 | 14 |
| DIPE | 12.5 | 12.4 | | ug/L | | 99 | 51 - 150 | 2 | 20 |
| Ethyl-t-butyl ether (ETBE) | 12.5 | 12.2 | | ug/L | | 98 | 73 - 116 | 4 | 17 |
| Ethylbenzene | 10.0 | 9.85 | | ug/L | | 98 | 75 - 119 | 9 | 14 |
| MTBE | 10.0 | 9.68 | | ug/L | | 97 | 65 - 125 | 4 | 18 |
| m-Xylene & p-Xylene | 10.0 | 9.64 | | ug/L | | 96 | 75 - 119 | 5 | 14 |
| Naphthalene | 10.0 | 9.91 | | ug/L | | 99 | 55 - 134 | 7 | 30 |
| o-Xylene | 10.0 | 10.2 | | ug/L | | 101 | 74 - 120 | 4 | 16 |
| t-Butyl alcohol | 100 | 99.7 | | ug/L | | 100 | 20 - 150 | 6 | 13 |
| Tert-amyl methyl ether | 12.5 | 11.8 | | ug/L | | 94 | 75 - 125 | 6 | 16 |
| Toluene | 10.0 | 9.69 | | ug/L | | 97 | 75 - 120 | 7 | 19 |
| Xylenes, Total | 20.0 | 19.8 | | ug/L | | 99 | 75 - 119 | 4 | 15 |

| Surrogate | LCSD %Recovery | LCSD Qualifier | LCSD Limits |
|------------------------------|----------------|----------------|-------------|
| 1,2-Dichloroethane-d4 (Surr) | 105 | | 65 - 143 |
| 4-Bromofluorobenzene (Surr) | 99 | | 75 - 125 |
| Dibromofluoromethane (Surr) | 101 | | 77 - 118 |
| Toluene-d8 (Surr) | 104 | | 82 - 122 |
| Trifluorotoluene (Surr) | 97 | | 80 - 141 |

Lab Sample ID: MB 580-234631/5

Matrix: Water

Analysis Batch: 234631

Client Sample ID: Method Blank

Prep Type: Total/NA

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|----------------------------|-----------|--------------|-----|-----|------|---|----------|----------------|---------|
| 1,2-Dibromoethane | ND | | 1.0 | | ug/L | | | 12/15/16 15:17 | 1 |
| 1,2-DCA | ND | | 1.0 | | ug/L | | | 12/15/16 15:17 | 1 |
| Benzene | ND | | 2.0 | | ug/L | | | 12/15/16 15:17 | 1 |
| DIPE | ND | | 1.0 | | ug/L | | | 12/15/16 15:17 | 1 |
| Ethyl-t-butyl ether (ETBE) | ND | | 5.0 | | ug/L | | | 12/15/16 15:17 | 1 |
| Ethylbenzene | ND | | 3.0 | | ug/L | | | 12/15/16 15:17 | 1 |
| MTBE | ND | | 1.0 | | ug/L | | | 12/15/16 15:17 | 1 |
| Naphthalene | ND | | 2.0 | | ug/L | | | 12/15/16 15:17 | 1 |
| t-Butyl alcohol | ND | | 25 | | ug/L | | | 12/15/16 15:17 | 1 |
| Tert-amyl methyl ether | ND | | 5.0 | | ug/L | | | 12/15/16 15:17 | 1 |
| Toluene | ND | | 2.0 | | ug/L | | | 12/15/16 15:17 | 1 |
| Xylenes, Total | ND | | 3.0 | | ug/L | | | 12/15/16 15:17 | 1 |

| Surrogate | MB %Recovery | MB Qualifier | MB Limits | Prepared | Analyzed | Dil Fac |
|------------------------------|--------------|--------------|-----------|----------|----------------|---------|
| 1,2-Dichloroethane-d4 (Surr) | 95 | | 65 - 143 | | 12/15/16 15:17 | 1 |
| 4-Bromofluorobenzene (Surr) | 85 | | 75 - 125 | | 12/15/16 15:17 | 1 |
| Dibromofluoromethane (Surr) | 89 | | 77 - 118 | | 12/15/16 15:17 | 1 |
| Toluene-d8 (Surr) | 105 | | 82 - 122 | | 12/15/16 15:17 | 1 |
| Trifluorotoluene (Surr) | 94 | | 80 - 141 | | 12/15/16 15:17 | 1 |

TestAmerica Seattle

QC Sample Results

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

TestAmerica Job ID: 580-64763-1

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

Lab Sample ID: LCS 580-234631/11

Matrix: Water

Analysis Batch: 234631

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|----------------------------|-------------|------------|---------------|------|---|------|--------------|
| 1,2-Dibromoethane | 10.0 | 9.05 | | ug/L | | 90 | 66 - 133 |
| 1,2-DCA | 10.0 | 9.63 | | ug/L | | 96 | 58 - 143 |
| Benzene | 10.0 | 8.78 | | ug/L | | 87 | 80 - 120 |
| DIPE | 12.5 | 11.4 | | ug/L | | 91 | 51 - 150 |
| Ethyl-t-butyl ether (ETBE) | 12.5 | 11.0 | | ug/L | | 88 | 73 - 116 |
| Ethylbenzene | 10.0 | 8.75 | | ug/L | | 87 | 75 - 119 |
| MTBE | 10.0 | 8.99 | | ug/L | | 90 | 65 - 125 |
| m-Xylene & p-Xylene | 10.0 | 8.10 | | ug/L | | 81 | 75 - 119 |
| Naphthalene | 10.0 | 10.7 | | ug/L | | 107 | 55 - 134 |
| o-Xylene | 10.0 | 8.89 | | ug/L | | 89 | 74 - 120 |
| t-Butyl alcohol | 100 | 65.1 | | ug/L | | 65 | 20 - 150 |
| Tert-amyl methyl ether | 12.5 | 11.0 | | ug/L | | 88 | 75 - 125 |
| Toluene | 10.0 | 8.14 | | ug/L | | 81 | 75 - 120 |
| Xylenes, Total | 20.0 | 17.0 | | ug/L | | 85 | 75 - 119 |

| Surrogate | LCS %Recovery | LCS Qualifier | Limits |
|------------------------------|---------------|---------------|----------|
| 1,2-Dichloroethane-d4 (Surr) | 92 | | 65 - 143 |
| 4-Bromofluorobenzene (Surr) | 84 | | 75 - 125 |
| Dibromofluoromethane (Surr) | 85 | | 77 - 118 |
| Toluene-d8 (Surr) | 95 | | 82 - 122 |
| Trifluorotoluene (Surr) | 91 | | 80 - 141 |

Lab Sample ID: LCSD 580-234631/12

Matrix: Water

Analysis Batch: 234631

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

| Analyte | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|----------------------------|-------------|-------------|----------------|------|---|------|--------------|-----|-----------|
| 1,2-Dibromoethane | 10.0 | 11.1 | * | ug/L | | 111 | 66 - 133 | 20 | 17 |
| 1,2-DCA | 10.0 | 10.6 | | ug/L | | 106 | 58 - 143 | 9 | 17 |
| Benzene | 10.0 | 9.60 | | ug/L | | 96 | 80 - 120 | 9 | 14 |
| DIPE | 12.5 | 12.2 | | ug/L | | 98 | 51 - 150 | 7 | 20 |
| Ethyl-t-butyl ether (ETBE) | 12.5 | 12.1 | | ug/L | | 97 | 73 - 116 | 10 | 17 |
| Ethylbenzene | 10.0 | 9.65 | | ug/L | | 96 | 75 - 119 | 10 | 14 |
| MTBE | 10.0 | 9.92 | | ug/L | | 99 | 65 - 125 | 10 | 18 |
| m-Xylene & p-Xylene | 10.0 | 8.93 | | ug/L | | 89 | 75 - 119 | 10 | 14 |
| Naphthalene | 10.0 | 12.7 | | ug/L | | 127 | 55 - 134 | 17 | 30 |
| o-Xylene | 10.0 | 9.90 | | ug/L | | 99 | 74 - 120 | 11 | 16 |
| t-Butyl alcohol | 100 | 87.9 | * | ug/L | | 88 | 20 - 150 | 30 | 13 |
| Tert-amyl methyl ether | 12.5 | 11.9 | | ug/L | | 95 | 75 - 125 | 8 | 16 |
| Toluene | 10.0 | 9.67 | | ug/L | | 97 | 75 - 120 | 17 | 19 |
| Xylenes, Total | 20.0 | 18.8 | | ug/L | | 94 | 75 - 119 | 10 | 15 |

| Surrogate | LCSD %Recovery | LCSD Qualifier | Limits |
|------------------------------|----------------|----------------|----------|
| 1,2-Dichloroethane-d4 (Surr) | 90 | | 65 - 143 |
| 4-Bromofluorobenzene (Surr) | 86 | | 75 - 125 |
| Dibromofluoromethane (Surr) | 83 | | 77 - 118 |
| Toluene-d8 (Surr) | 104 | | 82 - 122 |

TestAmerica Seattle

QC Sample Results

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

TestAmerica Job ID: 580-64763-1

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

Lab Sample ID: LCSD 580-234631/12
Matrix: Water
Analysis Batch: 234631

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

| Surrogate | LCSD | | Limits |
|-------------------------|-----------|-----------|----------|
| | %Recovery | Qualifier | |
| Trifluorotoluene (Surr) | 91 | | 80 - 141 |

Lab Sample ID: 580-64763-2 MS
Matrix: Water
Analysis Batch: 234631

Client Sample ID: CMW-03-1216
Prep Type: Total/NA

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS | | Unit | D | %Rec | %Rec. Limits | |
|----------------------------|---------------|------------------|-------------|--------|-----------|------|---|------|--------------|-------|
| | | | | Result | Qualifier | | | | Limit | Limit |
| 1,2-Dibromoethane | ND | * | 10.0 | 10.4 | | ug/L | | 104 | 66 - 133 | |
| 1,2-DCA | ND | | 10.0 | 11.4 | | ug/L | | 114 | 58 - 143 | |
| Benzene | ND | | 10.0 | 11.6 | | ug/L | | 116 | 80 - 120 | |
| DIPE | ND | | 12.5 | 14.1 | | ug/L | | 113 | 51 - 150 | |
| Ethyl-t-butyl ether (ETBE) | ND | | 12.5 | 13.4 | | ug/L | | 107 | 73 - 116 | |
| Ethylbenzene | ND | | 10.0 | 11.3 | | ug/L | | 112 | 75 - 119 | |
| MTBE | ND | | 10.0 | 10.1 | | ug/L | | 101 | 65 - 125 | |
| m-Xylene & p-Xylene | ND | | 10.0 | 10.7 | | ug/L | | 104 | 75 - 119 | |
| Naphthalene | ND | | 10.0 | 9.63 | | ug/L | | 96 | 55 - 134 | |
| o-Xylene | ND | | 10.0 | 11.3 | | ug/L | | 113 | 74 - 120 | |
| t-Butyl alcohol | ND | * | 100 | 91.5 | | ug/L | | 91 | 20 - 150 | |
| Tert-amyl methyl ether | ND | | 12.5 | 13.0 | | ug/L | | 104 | 75 - 125 | |
| Toluene | ND | | 10.0 | 11.7 | | ug/L | | 112 | 75 - 120 | |
| Xylenes, Total | ND | | 20.0 | 22.0 | | ug/L | | 110 | 75 - 119 | |

| Surrogate | MS | | Limits |
|------------------------------|-----------|-----------|----------|
| | %Recovery | Qualifier | |
| 1,2-Dichloroethane-d4 (Surr) | 88 | | 65 - 143 |
| 4-Bromofluorobenzene (Surr) | 89 | | 75 - 125 |
| Dibromofluoromethane (Surr) | 88 | | 77 - 118 |
| Toluene-d8 (Surr) | 102 | | 82 - 122 |
| Trifluorotoluene (Surr) | 97 | | 80 - 141 |

Lab Sample ID: 580-64763-2 MSD
Matrix: Water
Analysis Batch: 234631

Client Sample ID: CMW-03-1216
Prep Type: Total/NA

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD | | Unit | D | %Rec | %Rec. Limits | | RPD | Limit |
|----------------------------|---------------|------------------|-------------|--------|-----------|------|---|------|--------------|-------|-----|-------|
| | | | | Result | Qualifier | | | | Limit | Limit | | |
| 1,2-Dibromoethane | ND | * | 10.0 | 10.3 | | ug/L | | 102 | 66 - 133 | 2 | 35 | |
| 1,2-DCA | ND | | 10.0 | 11.1 | | ug/L | | 111 | 58 - 143 | 2 | 35 | |
| Benzene | ND | | 10.0 | 11.1 | | ug/L | | 111 | 80 - 120 | 4 | 35 | |
| DIPE | ND | | 12.5 | 13.9 | | ug/L | | 111 | 51 - 150 | 2 | 35 | |
| Ethyl-t-butyl ether (ETBE) | ND | | 12.5 | 13.6 | | ug/L | | 108 | 73 - 116 | 1 | 35 | |
| Ethylbenzene | ND | | 10.0 | 10.9 | | ug/L | | 109 | 75 - 119 | 3 | 35 | |
| MTBE | ND | | 10.0 | 10.0 | | ug/L | | 100 | 65 - 125 | 1 | 35 | |
| m-Xylene & p-Xylene | ND | | 10.0 | 10.4 | | ug/L | | 101 | 75 - 119 | 3 | 35 | |
| Naphthalene | ND | | 10.0 | 8.91 | | ug/L | | 89 | 55 - 134 | 8 | 35 | |
| o-Xylene | ND | | 10.0 | 11.2 | | ug/L | | 112 | 74 - 120 | 1 | 35 | |
| t-Butyl alcohol | ND | * | 100 | 83.0 | | ug/L | | 83 | 20 - 150 | 10 | 35 | |
| Tert-amyl methyl ether | ND | | 12.5 | 12.8 | | ug/L | | 103 | 75 - 125 | 1 | 35 | |
| Toluene | ND | | 10.0 | 11.3 | | ug/L | | 108 | 75 - 120 | 4 | 35 | |
| Xylenes, Total | ND | | 20.0 | 21.6 | | ug/L | | 108 | 75 - 119 | 2 | 35 | |

TestAmerica Seattle

QC Sample Results

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

TestAmerica Job ID: 580-64763-1

| <i>Surrogate</i> | <i>MSD %Recovery</i> | <i>MSD Qualifier</i> | <i>Limits</i> |
|------------------------------|----------------------|----------------------|---------------|
| 1,2-Dichloroethane-d4 (Surr) | 87 | | 65 - 143 |
| 4-Bromofluorobenzene (Surr) | 90 | | 75 - 125 |
| Dibromofluoromethane (Surr) | 89 | | 77 - 118 |
| Toluene-d8 (Surr) | 103 | | 82 - 122 |
| Trifluorotoluene (Surr) | 96 | | 80 - 141 |

Lab Sample ID: MB 580-234669/5
Matrix: Water
Analysis Batch: 234669

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

| <i>Analyte</i> | <i>MB Result</i> | <i>MB Qualifier</i> | <i>RL</i> | <i>MDL</i> | <i>Unit</i> | <i>D</i> | <i>Prepared</i> | <i>Analyzed</i> | <i>Dil Fac</i> |
|----------------------------|------------------|---------------------|-----------|------------|-------------|----------|-----------------|-----------------|----------------|
| 1,2-Dibromoethane | ND | | 1.0 | | ug/L | | | 12/16/16 10:00 | 1 |
| 1,2-DCA | ND | | 1.0 | | ug/L | | | 12/16/16 10:00 | 1 |
| Benzene | ND | | 2.0 | | ug/L | | | 12/16/16 10:00 | 1 |
| DIPE | ND | | 1.0 | | ug/L | | | 12/16/16 10:00 | 1 |
| Ethyl-t-butyl ether (ETBE) | ND | | 5.0 | | ug/L | | | 12/16/16 10:00 | 1 |
| Ethylbenzene | ND | | 3.0 | | ug/L | | | 12/16/16 10:00 | 1 |
| MTBE | ND | | 1.0 | | ug/L | | | 12/16/16 10:00 | 1 |
| Naphthalene | ND | | 2.0 | | ug/L | | | 12/16/16 10:00 | 1 |
| t-Butyl alcohol | ND | | 25 | | ug/L | | | 12/16/16 10:00 | 1 |
| Tert-amyl methyl ether | ND | | 5.0 | | ug/L | | | 12/16/16 10:00 | 1 |
| Toluene | ND | | 2.0 | | ug/L | | | 12/16/16 10:00 | 1 |
| Xylenes, Total | ND | | 3.0 | | ug/L | | | 12/16/16 10:00 | 1 |

| <i>Surrogate</i> | <i>MB %Recovery</i> | <i>MB Qualifier</i> | <i>Limits</i> | <i>Prepared</i> | <i>Analyzed</i> | <i>Dil Fac</i> |
|------------------------------|---------------------|---------------------|---------------|-----------------|-----------------|----------------|
| 1,2-Dichloroethane-d4 (Surr) | 105 | | 65 - 143 | | 12/16/16 10:00 | 1 |
| 4-Bromofluorobenzene (Surr) | 96 | | 75 - 125 | | 12/16/16 10:00 | 1 |
| Dibromofluoromethane (Surr) | 98 | | 77 - 118 | | 12/16/16 10:00 | 1 |
| Toluene-d8 (Surr) | 103 | | 82 - 122 | | 12/16/16 10:00 | 1 |
| Trifluorotoluene (Surr) | 93 | | 80 - 141 | | 12/16/16 10:00 | 1 |

Lab Sample ID: LCS 580-234669/6
Matrix: Water
Analysis Batch: 234669

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

| <i>Analyte</i> | <i>Spike Added</i> | <i>LCS Result</i> | <i>LCS Qualifier</i> | <i>Unit</i> | <i>D</i> | <i>%Rec</i> | <i>%Rec. Limits</i> |
|----------------------------|--------------------|-------------------|----------------------|-------------|----------|-------------|---------------------|
| 1,2-Dibromoethane | 10.0 | 10.6 | | ug/L | | 106 | 66 - 133 |
| 1,2-DCA | 10.0 | 10.7 | | ug/L | | 107 | 58 - 143 |
| Benzene | 10.0 | 9.96 | | ug/L | | 99 | 80 - 120 |
| DIPE | 12.5 | 12.9 | | ug/L | | 103 | 51 - 150 |
| Ethyl-t-butyl ether (ETBE) | 12.5 | 12.4 | | ug/L | | 99 | 73 - 116 |
| Ethylbenzene | 10.0 | 10.5 | | ug/L | | 104 | 75 - 119 |
| MTBE | 10.0 | 9.51 | | ug/L | | 95 | 65 - 125 |
| m-Xylene & p-Xylene | 10.0 | 10.4 | | ug/L | | 104 | 75 - 119 |
| Naphthalene | 10.0 | 10.1 | | ug/L | | 101 | 55 - 134 |
| o-Xylene | 10.0 | 10.7 | | ug/L | | 107 | 74 - 120 |
| t-Butyl alcohol | 100 | 99.2 | | ug/L | | 99 | 20 - 150 |
| Tert-amyl methyl ether | 12.5 | 12.0 | | ug/L | | 96 | 75 - 125 |
| Toluene | 10.0 | 10.4 | | ug/L | | 104 | 75 - 120 |
| Xylenes, Total | 20.0 | 21.1 | | ug/L | | 105 | 75 - 119 |

| <i>Surrogate</i> | <i>LCS %Recovery</i> | <i>LCS Qualifier</i> | <i>Limits</i> |
|------------------------------|----------------------|----------------------|---------------|
| 1,2-Dichloroethane-d4 (Surr) | 106 | | 65 - 143 |

TestAmerica Seattle

QC Sample Results

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

TestAmerica Job ID: 580-64763-1

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

Lab Sample ID: LCS 580-234669/6
Matrix: Water
Analysis Batch: 234669

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

| Surrogate | LCS %Recovery | LCS Qualifier | Limits |
|-----------------------------|------------------|------------------|----------|
| 4-Bromofluorobenzene (Surr) | 97 | | 75 - 125 |
| Dibromofluoromethane (Surr) | 100 | | 77 - 118 |
| Toluene-d8 (Surr) | 104 | | 82 - 122 |
| Trifluorotoluene (Surr) | 95 | | 80 - 141 |

Lab Sample ID: LCSD 580-234669/7
Matrix: Water
Analysis Batch: 234669

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

| Analyte | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|----------------------------|----------------|----------------|-------------------|------|---|------|-----------------|-----|--------------|
| 1,2-Dibromoethane | 10.0 | 10.0 | | ug/L | | 100 | 66 - 133 | 6 | 17 |
| 1,2-DCA | 10.0 | 10.3 | | ug/L | | 103 | 58 - 143 | 4 | 17 |
| Benzene | 10.0 | 9.78 | | ug/L | | 97 | 80 - 120 | 2 | 14 |
| DIPE | 12.5 | 12.8 | | ug/L | | 102 | 51 - 150 | 1 | 20 |
| Ethyl-t-butyl ether (ETBE) | 12.5 | 12.1 | | ug/L | | 97 | 73 - 116 | 2 | 17 |
| Ethylbenzene | 10.0 | 9.99 | | ug/L | | 100 | 75 - 119 | 5 | 14 |
| MTBE | 10.0 | 9.58 | | ug/L | | 96 | 65 - 125 | 1 | 18 |
| m-Xylene & p-Xylene | 10.0 | 10.1 | | ug/L | | 100 | 75 - 119 | 3 | 14 |
| Naphthalene | 10.0 | 10.3 | | ug/L | | 103 | 55 - 134 | 2 | 30 |
| o-Xylene | 10.0 | 10.5 | | ug/L | | 104 | 74 - 120 | 2 | 16 |
| t-Butyl alcohol | 100 | 92.3 | | ug/L | | 92 | 20 - 150 | 7 | 13 |
| Tert-amyl methyl ether | 12.5 | 11.9 | | ug/L | | 95 | 75 - 125 | 1 | 16 |
| Toluene | 10.0 | 10.1 | | ug/L | | 101 | 75 - 120 | 3 | 19 |
| Xylenes, Total | 20.0 | 20.6 | | ug/L | | 103 | 75 - 119 | 2 | 15 |

| Surrogate | LCSD %Recovery | LCSD Qualifier | Limits |
|------------------------------|-------------------|-------------------|----------|
| 1,2-Dichloroethane-d4 (Surr) | 106 | | 65 - 143 |
| 4-Bromofluorobenzene (Surr) | 97 | | 75 - 125 |
| Dibromofluoromethane (Surr) | 99 | | 77 - 118 |
| Toluene-d8 (Surr) | 103 | | 82 - 122 |
| Trifluorotoluene (Surr) | 96 | | 80 - 141 |

Lab Sample ID: MB 580-234889/5
Matrix: Water
Analysis Batch: 234889

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

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|----------------------------|--------------|-----------------|-----|-----|------|---|----------|----------------|---------|
| 1,2-Dibromoethane | ND | | 1.0 | | ug/L | | | 12/19/16 20:39 | 1 |
| 1,2-DCA | ND | | 1.0 | | ug/L | | | 12/19/16 20:39 | 1 |
| Benzene | ND | | 2.0 | | ug/L | | | 12/19/16 20:39 | 1 |
| DIPE | ND | | 1.0 | | ug/L | | | 12/19/16 20:39 | 1 |
| Ethyl-t-butyl ether (ETBE) | ND | | 5.0 | | ug/L | | | 12/19/16 20:39 | 1 |
| Ethylbenzene | ND | | 3.0 | | ug/L | | | 12/19/16 20:39 | 1 |
| MTBE | ND | | 1.0 | | ug/L | | | 12/19/16 20:39 | 1 |
| Naphthalene | ND | | 2.0 | | ug/L | | | 12/19/16 20:39 | 1 |
| t-Butyl alcohol | ND | | 25 | | ug/L | | | 12/19/16 20:39 | 1 |
| Tert-amyl methyl ether | ND | | 5.0 | | ug/L | | | 12/19/16 20:39 | 1 |
| Toluene | ND | | 2.0 | | ug/L | | | 12/19/16 20:39 | 1 |

TestAmerica Seattle

QC Sample Results

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

TestAmerica Job ID: 580-64763-1

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

Lab Sample ID: MB 580-234889/5
Matrix: Water
Analysis Batch: 234889

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

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|------------------------------|--------------|--------------|----------|-----|------|---|----------|----------------|---------|
| Xylenes, Total | ND | | 3.0 | | ug/L | | | 12/19/16 20:39 | 1 |
| Surrogate | MB %Recovery | MB Qualifier | Limits | | | | Prepared | Analyzed | Dil Fac |
| 1,2-Dichloroethane-d4 (Surr) | 103 | | 65 - 143 | | | | | 12/19/16 20:39 | 1 |
| 4-Bromofluorobenzene (Surr) | 97 | | 75 - 125 | | | | | 12/19/16 20:39 | 1 |
| Dibromofluoromethane (Surr) | 98 | | 77 - 118 | | | | | 12/19/16 20:39 | 1 |
| Toluene-d8 (Surr) | 105 | | 82 - 122 | | | | | 12/19/16 20:39 | 1 |
| Trifluorotoluene (Surr) | 96 | | 80 - 141 | | | | | 12/19/16 20:39 | 1 |

Lab Sample ID: LCS 580-234889/6
Matrix: Water
Analysis Batch: 234889

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

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|------------------------------|---------------|---------------|---------------|------|---|------|--------------|
| 1,2-Dibromoethane | 10.0 | 11.1 | | ug/L | | 111 | 66 - 133 |
| 1,2-DCA | 10.0 | 11.9 | | ug/L | | 119 | 58 - 143 |
| Benzene | 10.0 | 11.0 | | ug/L | | 110 | 80 - 120 |
| DIPE | 12.5 | 14.4 | | ug/L | | 115 | 51 - 150 |
| Ethyl-t-butyl ether (ETBE) | 12.5 | 14.1 | | ug/L | | 113 | 73 - 116 |
| Ethylbenzene | 10.0 | 11.3 | | ug/L | | 113 | 75 - 119 |
| MTBE | 10.0 | 10.9 | | ug/L | | 109 | 65 - 125 |
| m-Xylene & p-Xylene | 10.0 | 10.9 | | ug/L | | 109 | 75 - 119 |
| Naphthalene | 10.0 | 11.2 | | ug/L | | 112 | 55 - 134 |
| o-Xylene | 10.0 | 11.6 | | ug/L | | 116 | 74 - 120 |
| t-Butyl alcohol | 100 | 103 | | ug/L | | 103 | 20 - 150 |
| Tert-amyl methyl ether | 12.5 | 13.3 | | ug/L | | 106 | 75 - 125 |
| Toluene | 10.0 | 11.2 | | ug/L | | 112 | 75 - 120 |
| Xylenes, Total | 20.0 | 22.5 | | ug/L | | 112 | 75 - 119 |
| Surrogate | LCS %Recovery | LCS Qualifier | Limits | | | | |
| 1,2-Dichloroethane-d4 (Surr) | 102 | | 65 - 143 | | | | |
| 4-Bromofluorobenzene (Surr) | 98 | | 75 - 125 | | | | |
| Dibromofluoromethane (Surr) | 101 | | 77 - 118 | | | | |
| Toluene-d8 (Surr) | 104 | | 82 - 122 | | | | |
| Trifluorotoluene (Surr) | 95 | | 80 - 141 | | | | |

Lab Sample ID: LCSD 580-234889/7
Matrix: Water
Analysis Batch: 234889

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

| Analyte | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|----------------------------|-------------|-------------|----------------|------|---|------|--------------|-----|-----------|
| 1,2-Dibromoethane | 10.0 | 9.23 | * | ug/L | | 92 | 66 - 133 | 18 | 17 |
| 1,2-DCA | 10.0 | 9.24 | * | ug/L | | 92 | 58 - 143 | 25 | 17 |
| Benzene | 10.0 | 8.87 | * | ug/L | | 88 | 80 - 120 | 22 | 14 |
| DIPE | 12.5 | 11.9 | | ug/L | | 95 | 51 - 150 | 20 | 20 |
| Ethyl-t-butyl ether (ETBE) | 12.5 | 11.6 | * | ug/L | | 92 | 73 - 116 | 20 | 17 |
| Ethylbenzene | 10.0 | 9.24 | * | ug/L | | 92 | 75 - 119 | 20 | 14 |
| MTBE | 10.0 | 9.11 | | ug/L | | 91 | 65 - 125 | 18 | 18 |

TestAmerica Seattle

QC Sample Results

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

TestAmerica Job ID: 580-64763-1

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

Lab Sample ID: LCSD 580-234889/7
Matrix: Water
Analysis Batch: 234889

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

| Analyte | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|------------------------|-------------|-------------|----------------|------|---|------|--------------|-----|-----------|
| m-Xylene & p-Xylene | 10.0 | 8.96 | * | ug/L | | 89 | 75 - 119 | 20 | 14 |
| Naphthalene | 10.0 | 9.71 | | ug/L | | 97 | 55 - 134 | 14 | 30 |
| o-Xylene | 10.0 | 9.37 | * | ug/L | | 94 | 74 - 120 | 21 | 16 |
| t-Butyl alcohol | 100 | 26.7 | * | ug/L | | 27 | 20 - 150 | 118 | 13 |
| Tert-amyl methyl ether | 12.5 | 11.5 | | ug/L | | 92 | 75 - 125 | 15 | 16 |
| Toluene | 10.0 | 9.06 | * | ug/L | | 91 | 75 - 120 | 21 | 19 |
| Xylenes, Total | 20.0 | 18.3 | * | ug/L | | 91 | 75 - 119 | 20 | 15 |

| Surrogate | LCSD %Recovery | LCSD Qualifier | LCSD Limits |
|------------------------------|----------------|----------------|-------------|
| 1,2-Dichloroethane-d4 (Surr) | 103 | | 65 - 143 |
| 4-Bromofluorobenzene (Surr) | 97 | | 75 - 125 |
| Dibromofluoromethane (Surr) | 99 | | 77 - 118 |
| Toluene-d8 (Surr) | 103 | | 82 - 122 |
| Trifluorotoluene (Surr) | 97 | | 80 - 141 |

Method: 8015C - Nonhalogenated Organic using GC/FID (Direct Aqueous Injection)

Lab Sample ID: MB 490-395509/6
Matrix: Water
Analysis Batch: 395509

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

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|----------|-----------|--------------|----|-----|------|---|----------|----------------|---------|
| Ethanol | ND | | 10 | | mg/L | | | 12/19/16 12:20 | 1 |
| Methanol | ND | | 10 | | mg/L | | | 12/19/16 12:20 | 1 |

| Surrogate | MB %Recovery | MB Qualifier | MB Limits | Prepared | Analyzed | Dil Fac |
|--------------------------|--------------|--------------|-----------|----------|----------------|---------|
| Isopropyl acetate (Surr) | 145 | X | 52 - 128 | | 12/19/16 12:20 | 1 |

Lab Sample ID: LCS 490-395509/7
Matrix: Water
Analysis Batch: 395509

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

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|----------|-------------|------------|---------------|------|---|------|--------------|
| Ethanol | 50.0 | 53.4 | | mg/L | | 107 | 70 - 130 |
| Methanol | 50.0 | 51.9 | | mg/L | | 104 | 70 - 130 |

| Surrogate | LCS %Recovery | LCS Qualifier | LCS Limits |
|--------------------------|---------------|---------------|------------|
| Isopropyl acetate (Surr) | 149 | X | 52 - 128 |

Lab Sample ID: 580-64763-2 MS
Matrix: Water
Analysis Batch: 395509

Client Sample ID: CMW-03-1216
Prep Type: Total/NA

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|----------|---------------|------------------|-------------|-----------|--------------|------|---|------|--------------|
| Ethanol | ND | | 50.0 | 53.3 | | mg/L | | 107 | 65 - 130 |
| Methanol | ND | | 50.0 | 51.7 | | mg/L | | 103 | 64 - 138 |

TestAmerica Seattle

QC Sample Results

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

TestAmerica Job ID: 580-64763-1

Method: 8015C - Nonhalogenated Organic using GC/FID (Direct Aqueous Injection) (Continued)

Lab Sample ID: 580-64763-2 MS
Matrix: Water
Analysis Batch: 395509

Client Sample ID: CMW-03-1216
Prep Type: Total/NA

| Surrogate | MS MS | | Limits |
|--------------------------|-----------|-----------|----------|
| | %Recovery | Qualifier | |
| Isopropyl acetate (Surr) | 144 | X | 52 - 128 |

Lab Sample ID: 580-64763-2 MSD
Matrix: Water
Analysis Batch: 395509

Client Sample ID: CMW-03-1216
Prep Type: Total/NA

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD MSD | | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|----------|---------------|------------------|-------------|---------|-----------|------|---|------|--------------|-----|-----------|
| | | | | Result | Qualifier | | | | | | |
| Ethanol | ND | | 50.0 | 54.1 | | mg/L | | 108 | 65 - 130 | 1 | 11 |
| Methanol | ND | | 50.0 | 52.6 | | mg/L | | 105 | 64 - 138 | 2 | 21 |

| Surrogate | MSD MSD | | Limits |
|--------------------------|-----------|-----------|----------|
| | %Recovery | Qualifier | |
| Isopropyl acetate (Surr) | 143 | X | 52 - 128 |

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

Lab Sample ID: MB 580-234502/6
Matrix: Water
Analysis Batch: 234502

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

| Analyte | MB MB | | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|----------|--------|-----------|-------|-----|------|---|----------|----------------|---------|
| | Result | Qualifier | | | | | | | |
| Gasoline | ND | | 0.050 | | mg/L | | | 12/15/16 10:25 | 1 |

| Surrogate | MB MB | | Limits | Prepared | Analyzed | Dil Fac |
|-----------------------------|-----------|-----------|----------|----------|----------------|---------|
| | %Recovery | Qualifier | | | | |
| 4-Bromofluorobenzene (Surr) | 98 | | 50 - 150 | | 12/15/16 10:25 | 1 |
| Trifluorotoluene (Surr) | 84 | | 50 - 150 | | 12/15/16 10:25 | 1 |

Lab Sample ID: LCS 580-234502/7
Matrix: Water
Analysis Batch: 234502

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

| Analyte | Spike Added | LCS LCS | | Unit | D | %Rec | %Rec. Limits |
|----------|-------------|---------|-----------|------|---|------|--------------|
| | | Result | Qualifier | | | | |
| Gasoline | 1.16 | 1.11 | | mg/L | | 96 | 79 - 110 |

| Surrogate | LCS LCS | | Limits |
|-----------------------------|-----------|-----------|----------|
| | %Recovery | Qualifier | |
| 4-Bromofluorobenzene (Surr) | 107 | | 50 - 150 |
| Trifluorotoluene (Surr) | 87 | | 50 - 150 |

Lab Sample ID: LCSD 580-234502/8
Matrix: Water
Analysis Batch: 234502

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

| Analyte | Spike Added | LCSD LCSD | | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|----------|-------------|-----------|-----------|------|---|------|--------------|-----|-----------|
| | | Result | Qualifier | | | | | | |
| Gasoline | 1.16 | 1.13 | | mg/L | | 97 | 79 - 110 | 2 | 20 |

| Surrogate | LCSD LCSD | | Limits |
|-----------------------------|-----------|-----------|----------|
| | %Recovery | Qualifier | |
| 4-Bromofluorobenzene (Surr) | 107 | | 50 - 150 |

TestAmerica Seattle

QC Sample Results

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

TestAmerica Job ID: 580-64763-1

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

Lab Sample ID: LCSD 580-234502/8
Matrix: Water
Analysis Batch: 234502

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

| | LCSD %Recovery | LCSD Qualifier | Limits |
|-------------------------|-------------------|-------------------|----------|
| <i>Surrogate</i> | | | |
| Trifluorotoluene (Surr) | 87 | | 50 - 150 |

Lab Sample ID: 580-64763-2 MS
Matrix: Water
Analysis Batch: 234502

Client Sample ID: CMW-03-1216
Prep Type: Total/NA

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|-----------------------------|------------------|---------------------|----------------|--------------|-----------------|------|---|------|-----------------|
| Gasoline | 0.29 | | 1.16 | 1.27 | | mg/L | | 84 | 50 - 150 |
| <i>Surrogate</i> | | | | | | | | | |
| | MS %Recovery | MS Qualifier | Limits | | | | | | |
| 4-Bromofluorobenzene (Surr) | 108 | | 50 - 150 | | | | | | |
| Trifluorotoluene (Surr) | 82 | | 50 - 150 | | | | | | |

Lab Sample ID: 580-64763-2 MSD
Matrix: Water
Analysis Batch: 234502

Client Sample ID: CMW-03-1216
Prep Type: Total/NA

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | Limit |
|-----------------------------|------------------|---------------------|----------------|---------------|------------------|------|---|------|-----------------|-----|-------|
| Gasoline | 0.29 | | 1.16 | 1.20 | | mg/L | | 78 | 50 - 150 | 6 | 35 |
| <i>Surrogate</i> | | | | | | | | | | | |
| | MSD %Recovery | MSD Qualifier | Limits | | | | | | | | |
| 4-Bromofluorobenzene (Surr) | 107 | | 50 - 150 | | | | | | | | |
| Trifluorotoluene (Surr) | 82 | | 50 - 150 | | | | | | | | |

Lab Sample ID: MB 580-234694/6
Matrix: Water
Analysis Batch: 234694

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

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|-----------------------------|-----------------|-----------------|----------|----------|----------------|---------|----------|----------------|---------|
| Gasoline | ND | | 0.050 | | mg/L | | | 12/16/16 15:39 | 1 |
| <i>Surrogate</i> | | | | | | | | | |
| | MB %Recovery | MB Qualifier | Limits | Prepared | Analyzed | Dil Fac | | | |
| 4-Bromofluorobenzene (Surr) | 94 | | 50 - 150 | | 12/16/16 15:39 | 1 | | | |
| Trifluorotoluene (Surr) | 71 | | 50 - 150 | | 12/16/16 15:39 | 1 | | | |

Lab Sample ID: LCS 580-234694/7
Matrix: Water
Analysis Batch: 234694

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

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|-----------------------------|------------------|------------------|------------------|------|---|------|-----------------|
| Gasoline | 1.16 | 1.11 | | mg/L | | 96 | 79 - 110 |
| <i>Surrogate</i> | | | | | | | |
| | LCS %Recovery | LCS Qualifier | Limits | | | | |
| 4-Bromofluorobenzene (Surr) | 100 | | 50 - 150 | | | | |
| Trifluorotoluene (Surr) | 76 | | 50 - 150 | | | | |

TestAmerica Seattle

QC Sample Results

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

TestAmerica Job ID: 580-64763-1

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

Lab Sample ID: LCSD 580-234694/8
Matrix: Water
Analysis Batch: 234694

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

| Analyte | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|-----------------------------|------------------|-----------------------|----------------|------|---|------|--------------|-----|-----------|
| Gasoline | 1.16 | 1.10 | | mg/L | | 95 | 79 - 110 | 1 | 20 |
| Surrogate | %Recovery | LCSD Qualifier | Limits | | | | | | |
| 4-Bromofluorobenzene (Surr) | 100 | | 50 - 150 | | | | | | |
| Trifluorotoluene (Surr) | 75 | | 50 - 150 | | | | | | |

Method: RSK-175 - Dissolved Gases (GC)

Lab Sample ID: MB 490-394897/5
Matrix: Water
Analysis Batch: 394897

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

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|------------------|------------------|---------------------|---------------|-----|------|---|-----------------|-----------------|----------------|
| Methane | ND | | 0.0050 | | mg/L | | | 12/16/16 10:14 | 1 |
| Surrogate | %Recovery | MB Qualifier | Limits | | | | Prepared | Analyzed | Dil Fac |
| Acetylene (Surr) | 90 | | 62 - 124 | | | | | 12/16/16 10:14 | 1 |

Lab Sample ID: LCS 490-394897/8
Matrix: Water
Analysis Batch: 394897

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

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits | | |
|------------------|------------------|----------------------|---------------|------|---|------|--------------|--|--|
| Methane | 0.287 | 0.269 | | mg/L | | 94 | 80 - 120 | | |
| Surrogate | %Recovery | LCS Qualifier | Limits | | | | | | |
| Acetylene (Surr) | 90 | | 62 - 124 | | | | | | |

Lab Sample ID: LCSD 490-394897/9
Matrix: Water
Analysis Batch: 394897

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

| Analyte | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|------------------|------------------|-----------------------|----------------|------|---|------|--------------|-----|-----------|
| Methane | 0.287 | 0.276 | | mg/L | | 96 | 80 - 120 | 2 | 33 |
| Surrogate | %Recovery | LCSD Qualifier | Limits | | | | | | |
| Acetylene (Surr) | 89 | | 62 - 124 | | | | | | |

Lab Sample ID: MRL 490-394897/2
Matrix: Water
Analysis Batch: 394897

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

| Analyte | Spike Added | MRL Result | MRL Qualifier | Unit | D | %Rec | %Rec. Limits | | |
|---------|-------------|------------|---------------|------|---|------|--------------|--|--|
| Methane | 6.37 | 5.65 | | ug/L | | 89 | 70 - 130 | | |

TestAmerica Seattle

QC Sample Results

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

TestAmerica Job ID: 580-64763-1

Method: RSK-175 - Dissolved Gases (GC) (Continued)

Lab Sample ID: MRL 490-394897/2
Matrix: Water
Analysis Batch: 394897

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

| Surrogate | MRL %Recovery | MRL Qualifier | Limits |
|------------------|------------------|------------------|--------|
| Acetylene (Surr) | | | |

Lab Sample ID: MB 490-395459/7
Matrix: Water
Analysis Batch: 395459

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

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---------|--------------|-----------------|--------|-----|------|---|----------|----------------|---------|
| Methane | ND | | 0.0050 | | mg/L | | | 12/19/16 11:58 | 1 |

| Surrogate | MB %Recovery | MB Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|------------------|-----------------|-----------------|----------|----------|----------------|---------|
| Acetylene (Surr) | 98 | | 62 - 124 | | 12/19/16 11:58 | 1 |

Lab Sample ID: LCS 490-395459/9
Matrix: Water
Analysis Batch: 395459

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

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---------|----------------|---------------|------------------|------|---|------|-----------------|
| Methane | 0.287 | 0.286 | | mg/L | | 100 | 80 - 120 |

| Surrogate | LCS %Recovery | LCS Qualifier | Limits |
|------------------|------------------|------------------|----------|
| Acetylene (Surr) | 91 | | 62 - 124 |

Lab Sample ID: LCSD 490-395459/10
Matrix: Water
Analysis Batch: 395459

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

| Analyte | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---------|----------------|----------------|-------------------|------|---|------|-----------------|-----|--------------|
| Methane | 0.287 | 0.298 | | mg/L | | 104 | 80 - 120 | 4 | 33 |

| Surrogate | LCSD %Recovery | LCSD Qualifier | Limits |
|------------------|-------------------|-------------------|----------|
| Acetylene (Surr) | 94 | | 62 - 124 |

Lab Sample ID: MRL 490-395459/3
Matrix: Water
Analysis Batch: 395459

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

| Analyte | Spike Added | MRL Result | MRL Qualifier | Unit | D | %Rec | %Rec. Limits |
|---------|----------------|---------------|------------------|------|---|------|-----------------|
| Methane | 6.37 | 5.45 | | ug/L | | 86 | 70 - 130 |

| Surrogate | MRL %Recovery | MRL Qualifier | Limits |
|------------------|------------------|------------------|--------|
| Acetylene (Surr) | | | |

QC Sample Results

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

TestAmerica Job ID: 580-64763-1

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

Lab Sample ID: MB 580-234517/1-A
Matrix: Water
Analysis Batch: 234606

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 234517

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|----------------------|-----------|--------------|------|-----|------|---|----------------|----------------|---------|
| #2 Diesel (C10-C24) | ND | | 0.11 | | mg/L | | 12/14/16 14:15 | 12/15/16 23:10 | 1 |
| Motor Oil (>C24-C36) | ND | | 0.25 | | mg/L | | 12/14/16 14:15 | 12/15/16 23:10 | 1 |

| Surrogate | MB %Recovery | MB Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|---------------------|--------------|--------------|----------|----------------|----------------|---------|
| <i>o</i> -Terphenyl | 91 | | 50 - 150 | 12/14/16 14:15 | 12/15/16 23:10 | 1 |

Lab Sample ID: LCS 580-234517/2-A
Matrix: Water
Analysis Batch: 234606

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 234517

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | Limits |
|----------------------|-------------|------------|---------------|------|---|------|----------|
| #2 Diesel (C10-C24) | 2.01 | 1.79 | | mg/L | | 89 | 59 - 120 |
| Motor Oil (>C24-C36) | 2.01 | 1.89 | | mg/L | | 94 | 53 - 129 |

| Surrogate | LCS %Recovery | LCS Qualifier | Limits |
|---------------------|---------------|---------------|----------|
| <i>o</i> -Terphenyl | 75 | | 50 - 150 |

Lab Sample ID: LCSD 580-234517/3-A
Matrix: Water
Analysis Batch: 234606

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 234517

| Analyte | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | Limits | RPD | Limit |
|----------------------|-------------|-------------|----------------|------|---|------|----------|-----|-------|
| #2 Diesel (C10-C24) | 2.01 | 1.78 | | mg/L | | 88 | 59 - 120 | 1 | 27 |
| Motor Oil (>C24-C36) | 2.01 | 1.86 | | mg/L | | 93 | 53 - 129 | 2 | 19 |

| Surrogate | LCSD %Recovery | LCSD Qualifier | Limits |
|---------------------|----------------|----------------|----------|
| <i>o</i> -Terphenyl | 75 | | 50 - 150 |

Lab Sample ID: 580-64763-2 MS
Matrix: Water
Analysis Batch: 234606

Client Sample ID: CMW-03-1216
Prep Type: Total/NA
Prep Batch: 234517

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | Limits |
|----------------------|---------------|------------------|-------------|-----------|--------------|------|---|------|----------|
| #2 Diesel (C10-C24) | 6.6 | | 2.03 | 8.73 | | mg/L | | 106 | 59 - 120 |
| Motor Oil (>C24-C36) | 0.29 | | 2.03 | 2.31 | | mg/L | | 99 | 63 - 129 |

| Surrogate | MS %Recovery | MS Qualifier | Limits |
|---------------------|--------------|--------------|----------|
| <i>o</i> -Terphenyl | 79 | | 50 - 150 |

Lab Sample ID: 580-64763-2 MSD
Matrix: Water
Analysis Batch: 234606

Client Sample ID: CMW-03-1216
Prep Type: Total/NA
Prep Batch: 234517

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | Limits | RPD | Limit |
|----------------------|---------------|------------------|-------------|------------|---------------|------|---|------|----------|-----|-------|
| #2 Diesel (C10-C24) | 6.6 | | 2.12 | 8.36 | | mg/L | | 84 | 59 - 120 | 4 | 27 |
| Motor Oil (>C24-C36) | 0.29 | | 2.12 | 2.24 | | mg/L | | 92 | 63 - 129 | 3 | 19 |

TestAmerica Seattle

QC Sample Results

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

TestAmerica Job ID: 580-64763-1

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

Lab Sample ID: 580-64763-2 MSD
Matrix: Water
Analysis Batch: 234606

Client Sample ID: CMW-03-1216
Prep Type: Total/NA
Prep Batch: 234517

| Surrogate | MSD %Recovery | MSD Qualifier | Limits |
|---------------------|------------------|------------------|----------|
| <i>o</i> -Terphenyl | 83 | | 50 - 150 |

Lab Sample ID: MB 580-234616/1-A
Matrix: Water
Analysis Batch: 234743

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 234616

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|----------------------|--------------|-----------------|------|-----|------|---|----------------|----------------|---------|
| #2 Diesel (C10-C24) | ND | | 0.11 | | mg/L | | 12/15/16 13:56 | 12/17/16 04:48 | 1 |
| Motor Oil (>C24-C36) | ND | | 0.25 | | mg/L | | 12/15/16 13:56 | 12/17/16 04:48 | 1 |

| Surrogate | MB %Recovery | MB Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|---------------------|-----------------|-----------------|----------|----------------|----------------|---------|
| <i>o</i> -Terphenyl | 94 | | 50 - 150 | 12/15/16 13:56 | 12/17/16 04:48 | 1 |

Lab Sample ID: LCS 580-234616/2-A
Matrix: Water
Analysis Batch: 234743

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 234616

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | Limits |
|----------------------|----------------|---------------|------------------|------|---|------|----------|
| #2 Diesel (C10-C24) | 2.01 | 1.73 | | mg/L | | 86 | 59 - 120 |
| Motor Oil (>C24-C36) | 2.01 | 1.79 | | mg/L | | 89 | 53 - 129 |

| Surrogate | LCS %Recovery | LCS Qualifier | Limits |
|---------------------|------------------|------------------|----------|
| <i>o</i> -Terphenyl | 74 | | 50 - 150 |

Lab Sample ID: LCSD 580-234616/3-A
Matrix: Water
Analysis Batch: 234743

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 234616

| Analyte | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | Limits | RPD | RPD Limit |
|----------------------|----------------|----------------|-------------------|------|---|------|----------|-----|--------------|
| #2 Diesel (C10-C24) | 2.01 | 1.67 | | mg/L | | 83 | 59 - 120 | 3 | 27 |
| Motor Oil (>C24-C36) | 2.01 | 1.77 | | mg/L | | 88 | 53 - 129 | 1 | 19 |

| Surrogate | LCSD %Recovery | LCSD Qualifier | Limits |
|---------------------|-------------------|-------------------|----------|
| <i>o</i> -Terphenyl | 73 | | 50 - 150 |

Method: 200.7 Rev 4.4 - Metals (ICP)

Lab Sample ID: LCS 580-234777/11-A
Matrix: Water
Analysis Batch: 235007

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 234777

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | Limits |
|-----------|----------------|---------------|------------------|------|---|------|----------|
| Manganese | 0.100 | 0.109 | | mg/L | | 109 | 85 - 115 |

TestAmerica Seattle

QC Sample Results

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

TestAmerica Job ID: 580-64763-1

Method: 200.7 Rev 4.4 - Metals (ICP) (Continued)

Lab Sample ID: LCSD 580-234777/12-A
Matrix: Water
Analysis Batch: 235007

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 234777

| Analyte | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | Limit |
|-----------|-------------|-------------|----------------|------|---|------|--------------|-----|-------|
| Manganese | 0.100 | 0.110 | | mg/L | | 110 | 85 - 115 | 1 | 20 |

Lab Sample ID: MB 580-234431/4-B
Matrix: Water
Analysis Batch: 235007

Client Sample ID: Method Blank
Prep Type: Dissolved
Prep Batch: 234777

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|-----------|-----------|--------------|-------|-----|------|---|----------------|----------------|---------|
| Manganese | ND | | 0.020 | | mg/L | | 12/16/16 18:43 | 12/20/16 15:46 | 1 |

Lab Sample ID: 580-64763-1 MS
Matrix: Water
Analysis Batch: 235007

Client Sample ID: CMW-02-1216
Prep Type: Dissolved
Prep Batch: 234777

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|-----------|---------------|------------------|-------------|-----------|--------------|------|---|------|--------------|
| Manganese | ND | | 0.100 | 0.105 | | mg/L | | 105 | 70 - 130 |

Lab Sample ID: 580-64763-1 MSD
Matrix: Water
Analysis Batch: 235007

Client Sample ID: CMW-02-1216
Prep Type: Dissolved
Prep Batch: 234777

| Analyte | Sample Result | Sample Qualifier | Spike Added | MSD Result | MSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | Limit |
|-----------|---------------|------------------|-------------|------------|---------------|------|---|------|--------------|-----|-------|
| Manganese | ND | | 0.100 | 0.105 | | mg/L | | 105 | 70 - 130 | 0 | 20 |

Lab Sample ID: 580-64763-1 DU
Matrix: Water
Analysis Batch: 235007

Client Sample ID: CMW-02-1216
Prep Type: Dissolved
Prep Batch: 234777

| Analyte | Sample Result | Sample Qualifier | DU Result | DU Qualifier | Unit | D | RPD | Limit |
|-----------|---------------|------------------|-----------|--------------|------|---|-----|-------|
| Manganese | ND | | ND | | mg/L | | NC | 20 |

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 580-234934/3
Matrix: Water
Analysis Batch: 234934

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

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---------|-----------|--------------|-----|-----|------|---|----------|----------------|---------|
| Sulfate | ND | | 1.2 | | mg/L | | | 12/19/16 08:47 | 1 |

Lab Sample ID: LCS 580-234934/4
Matrix: Water
Analysis Batch: 234934

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

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---------|-------------|------------|---------------|------|---|------|--------------|
| Sulfate | 50.0 | 48.5 | | mg/L | | 97 | 90 - 110 |

TestAmerica Seattle

QC Sample Results

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

TestAmerica Job ID: 580-64763-1

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCSD 580-234934/5
 Matrix: Water
 Analysis Batch: 234934

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

| Analyte | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|---------|-------------|-------------|----------------|------|---|------|--------------|-----|-----------|
| Sulfate | 50.0 | 48.5 | | mg/L | | 97 | 90 - 110 | 0 | 15 |

Method: SM 2320B - Alkalinity

Lab Sample ID: LCS 580-234869/2
 Matrix: Water
 Analysis Batch: 234869

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

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|------------|-------------|------------|---------------|------|---|------|--------------|-----|-----------|
| Alkalinity | 100 | 93.8 | | mg/L | | 94 | 85 - 115 | | |

Lab Sample ID: 580-64763-1 DU
 Matrix: Water
 Analysis Batch: 234869

Client Sample ID: CMW-02-1216
 Prep Type: Total/NA

| Analyte | Sample Result | Sample Qualifier | DU Result | DU Qualifier | Unit | D | RPD | RPD Limit |
|---------------------------------|---------------|------------------|-----------|--------------|------|---|-----|-----------|
| Alkalinity | 400 | | 407 | | mg/L | | 2 | 17 |
| Bicarbonate Alkalinity as CaCO3 | 400 | | 407 | | mg/L | | 2 | 20 |
| Carbonate Alkalinity as CaCO3 | ND | | ND | | mg/L | | NC | 20 |
| Hydroxide Alkalinity as CaCO3 | ND | | ND | | mg/L | | NC | 20 |

Lab Chronicle

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

TestAmerica Job ID: 580-64763-1

Client Sample ID: CMW-02-1216

Date Collected: 12/05/16 13:55

Date Received: 12/08/16 16:35

Lab Sample ID: 580-64763-1

Matrix: Water

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|-----------|------------|---------------|-----|-----------------|--------------|----------------------|---------|---------|
| Total/NA | Analysis | 8260C | | 1 | 234603 | 12/15/16 17:53 | IWH | TAL SEA |
| Total/NA | Analysis | 8015C | | 1 | 395509 | 12/19/16 12:41 | SH | TAL NSH |
| Total/NA | Analysis | NWTPH-Gx | | 1 | 234502 | 12/15/16 13:33 | TL1 | TAL SEA |
| Total/NA | Analysis | RSK-175 | | 1 | 394897 | 12/16/16 12:18 | NMB | TAL NSH |
| Total/NA | Prep | 3510C | | | 234517 | 12/14/16 14:15 | JCV | TAL SEA |
| Total/NA | Analysis | NWTPH-Dx | | 1 | 234606 | 12/16/16 01:40 | D1R | TAL SEA |
| Dissolved | Filtration | FILTRATION | | | 234431 | 12/13/16 16:20 | R1K | TAL SEA |
| Dissolved | Prep | 200.7 | | | 234777 | 12/16/16 18:43 | PAB | TAL SEA |
| Dissolved | Analysis | 200.7 Rev 4.4 | | 1 | 235007 | 12/20/16 15:56 | HJM | TAL SEA |
| Total/NA | Analysis | 300.0 | | 1 | 234934 | 12/19/16 11:37 | RSB | TAL SEA |
| Total/NA | Analysis | SM 2320B | | 1 | 234869 | 12/19/16 13:09 | RSB | TAL SEA |

Client Sample ID: CMW-03-1216

Date Collected: 12/06/16 14:20

Date Received: 12/08/16 16:35

Lab Sample ID: 580-64763-2

Matrix: Water

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|-----------|------------|--------------|-----|-----------------|--------------|----------------------|---------|---------|
| Total/NA | Analysis | 8260C | | 1 | 234631 | 12/15/16 22:54 | TL1 | TAL SEA |
| Total/NA | Analysis | 8015C | | 1 | 395509 | 12/19/16 12:59 | SH | TAL NSH |
| Total/NA | Analysis | NWTPH-Gx | | 1 | 234502 | 12/15/16 22:25 | TL1 | TAL SEA |
| Total/NA | Prep | 3510C | | | 234517 | 12/14/16 14:15 | JCV | TAL SEA |
| Total/NA | Analysis | NWTPH-Dx | | 1 | 234606 | 12/16/16 00:14 | D1R | TAL SEA |

Client Sample ID: CMW-06-1216

Date Collected: 12/05/16 09:17

Date Received: 12/08/16 16:35

Lab Sample ID: 580-64763-3

Matrix: Water

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|-----------|------------|---------------|-----|-----------------|--------------|----------------------|---------|---------|
| Total/NA | Analysis | 8260C | | 1 | 234603 | 12/15/16 18:20 | IWH | TAL SEA |
| Total/NA | Analysis | 8015C | | 1 | 395509 | 12/19/16 13:05 | SH | TAL NSH |
| Total/NA | Analysis | NWTPH-Gx | | 1 | 234502 | 12/15/16 14:05 | TL1 | TAL SEA |
| Total/NA | Analysis | RSK-175 | | 1 | 394897 | 12/16/16 12:21 | NMB | TAL NSH |
| Total/NA | Prep | 3510C | | | 234517 | 12/14/16 14:15 | JCV | TAL SEA |
| Total/NA | Analysis | NWTPH-Dx | | 1 | 234606 | 12/16/16 02:01 | D1R | TAL SEA |
| Dissolved | Filtration | FILTRATION | | | 234431 | 12/13/16 16:20 | R1K | TAL SEA |
| Dissolved | Prep | 200.7 | | | 234777 | 12/16/16 18:43 | PAB | TAL SEA |
| Dissolved | Analysis | 200.7 Rev 4.4 | | 1 | 235007 | 12/20/16 16:26 | HJM | TAL SEA |
| Total/NA | Analysis | 300.0 | | 10 | 234934 | 12/20/16 09:42 | RSB | TAL SEA |
| Total/NA | Analysis | SM 2320B | | 1 | 234869 | 12/19/16 13:09 | RSB | TAL SEA |

TestAmerica Seattle

Lab Chronicle

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

TestAmerica Job ID: 580-64763-1

Client Sample ID: CMW-07-1216

Lab Sample ID: 580-64763-4

Date Collected: 12/05/16 10:40

Matrix: Water

Date Received: 12/08/16 16:35

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|-----------|------------|--------------|-----|-----------------|--------------|----------------------|---------|---------|
| Total/NA | Analysis | 8260C | | 1 | 234603 | 12/15/16 18:46 | IWH | TAL SEA |
| Total/NA | Analysis | 8015C | | 1 | 395509 | 12/19/16 13:11 | SH | TAL NSH |
| Total/NA | Analysis | NWTPH-Gx | | 1 | 234502 | 12/15/16 14:36 | TL1 | TAL SEA |
| Total/NA | Prep | 3510C | | | 234517 | 12/14/16 14:15 | JCV | TAL SEA |
| Total/NA | Analysis | NWTPH-Dx | | 1 | 234606 | 12/16/16 02:43 | D1R | TAL SEA |

Client Sample ID: CMW-11-1216

Lab Sample ID: 580-64763-5

Date Collected: 12/05/16 15:27

Matrix: Water

Date Received: 12/08/16 16:35

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|-----------|------------|--------------|-----|-----------------|--------------|----------------------|---------|---------|
| Total/NA | Analysis | 8260C | | 1 | 234603 | 12/15/16 19:13 | IWH | TAL SEA |
| Total/NA | Analysis | 8015C | | 1 | 395509 | 12/19/16 13:18 | SH | TAL NSH |
| Total/NA | Analysis | NWTPH-Gx | | 1 | 234502 | 12/15/16 15:07 | TL1 | TAL SEA |
| Total/NA | Prep | 3510C | | | 234517 | 12/14/16 14:15 | JCV | TAL SEA |
| Total/NA | Analysis | NWTPH-Dx | | 1 | 234606 | 12/16/16 03:04 | D1R | TAL SEA |

Client Sample ID: CMW-12-1216

Lab Sample ID: 580-64763-6

Date Collected: 12/06/16 11:30

Matrix: Water

Date Received: 12/08/16 16:35

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|-----------|------------|---------------|-----|-----------------|--------------|----------------------|---------|---------|
| Total/NA | Analysis | 8260C | | 1 | 234631 | 12/15/16 21:00 | TL1 | TAL SEA |
| Total/NA | Analysis | 8015C | | 1 | 395509 | 12/19/16 13:24 | SH | TAL NSH |
| Total/NA | Analysis | NWTPH-Gx | | 1 | 234502 | 12/15/16 16:10 | TL1 | TAL SEA |
| Total/NA | Analysis | RSK-175 | | 1 | 395459 | 12/19/16 13:58 | NMB | TAL NSH |
| Total/NA | Prep | 3510C | | | 234517 | 12/14/16 14:15 | JCV | TAL SEA |
| Total/NA | Analysis | NWTPH-Dx | | 1 | 234606 | 12/16/16 01:18 | D1R | TAL SEA |
| Dissolved | Filtration | FILTRATION | | | 234431 | 12/13/16 16:20 | R1K | TAL SEA |
| Dissolved | Prep | 200.7 | | | 234777 | 12/16/16 18:43 | PAB | TAL SEA |
| Dissolved | Analysis | 200.7 Rev 4.4 | | 1 | 235007 | 12/20/16 16:29 | HJM | TAL SEA |
| Total/NA | Analysis | 300.0 | | 10 | 234934 | 12/20/16 09:57 | RSB | TAL SEA |
| Total/NA | Analysis | SM 2320B | | 1 | 234869 | 12/19/16 13:09 | RSB | TAL SEA |

Client Sample ID: CMW-12D-1216

Lab Sample ID: 580-64763-7

Date Collected: 12/06/16 11:30

Matrix: Water

Date Received: 12/08/16 16:35

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|-----------|------------|--------------|-----|-----------------|--------------|----------------------|---------|---------|
| Total/NA | Analysis | 8260C | | 1 | 234631 | 12/15/16 21:29 | TL1 | TAL SEA |
| Total/NA | Analysis | 8015C | | 1 | 395509 | 12/19/16 13:30 | SH | TAL NSH |
| Total/NA | Analysis | NWTPH-Gx | | 1 | 234502 | 12/15/16 16:41 | TL1 | TAL SEA |

TestAmerica Seattle

Lab Chronicle

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

TestAmerica Job ID: 580-64763-1

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|-----------|------------|--------------|-----|-----------------|--------------|----------------------|---------|---------|
| Total/NA | Prep | 3510C | | | 234616 | 12/15/16 13:56 | JCV | TAL SEA |
| Total/NA | Analysis | NWTPH-Dx | | 1 | 234743 | 12/17/16 06:14 | CJ | TAL SEA |

Client Sample ID: CMW-14-1216

Lab Sample ID: 580-64763-8

Date Collected: 12/05/16 12:10

Matrix: Water

Date Received: 12/08/16 16:35

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|-----------|------------|--------------|-----|-----------------|--------------|----------------------|---------|---------|
| Total/NA | Analysis | 8260C | | 1 | 234603 | 12/15/16 19:39 | IWH | TAL SEA |
| Total/NA | Analysis | 8015C | | 1 | 395509 | 12/19/16 13:36 | SH | TAL NSH |
| Total/NA | Analysis | NWTPH-Gx | | 1 | 234502 | 12/15/16 17:13 | TL1 | TAL SEA |
| Total/NA | Prep | 3510C | | | 234517 | 12/14/16 14:15 | JCV | TAL SEA |
| Total/NA | Analysis | NWTPH-Dx | | 1 | 234606 | 12/16/16 03:26 | D1R | TAL SEA |

Client Sample ID: CEB

Lab Sample ID: 580-64763-9

Date Collected: 12/06/16 12:45

Matrix: Water

Date Received: 12/08/16 16:35

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|-----------|------------|--------------|-----|-----------------|--------------|----------------------|---------|---------|
| Total/NA | Analysis | 8260C | | 1 | 234631 | 12/15/16 21:57 | TL1 | TAL SEA |
| Total/NA | Analysis | 8015C | | 1 | 395509 | 12/19/16 13:42 | SH | TAL NSH |
| Total/NA | Analysis | NWTPH-Gx | | 1 | 234502 | 12/15/16 17:44 | TL1 | TAL SEA |
| Total/NA | Prep | 3510C | | | 234616 | 12/15/16 13:56 | JCV | TAL SEA |
| Total/NA | Analysis | NWTPH-Dx | | 1 | 234743 | 12/17/16 05:53 | CJ | TAL SEA |

Client Sample ID: Trip Blank(1)

Lab Sample ID: 580-64763-10

Date Collected: 12/05/16 16:00

Matrix: Water

Date Received: 12/08/16 16:35

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|-----------|------------|--------------|-----|-----------------|--------------|----------------------|---------|---------|
| Total/NA | Analysis | 8260C | | 1 | 234669 | 12/16/16 11:46 | W1T | TAL SEA |
| Total/NA | Analysis | NWTPH-Gx | | 1 | 234694 | 12/16/16 17:15 | TL1 | TAL SEA |

Client Sample ID: Trip Blank(2)

Lab Sample ID: 580-64763-11

Date Collected: 12/06/16 17:30

Matrix: Water

Date Received: 12/08/16 16:35

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|-----------|------------|--------------|-----|-----------------|--------------|----------------------|---------|---------|
| Total/NA | Analysis | 8260C | | 1 | 234889 | 12/19/16 21:57 | J1J | TAL SEA |
| Total/NA | Analysis | NWTPH-Gx | | 1 | 234502 | 12/15/16 12:31 | TL1 | TAL SEA |

Laboratory References:

TAL NSH = TestAmerica Nashville, 2960 Foster Creighton Drive, Nashville, TN 37204, TEL (615)726-0177

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

Certification Summary

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

TestAmerica Job ID: 580-64763-1

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 Program | 10 | C553 | 02-17-17 |
| The following analytes are included in this report, but certification is not offered by the governing authority: | | | | |
| Analysis Method | Prep Method | Matrix | Analyte | |
| 8260C | | Water | t-Butyl alcohol | |
| 8260C | | Water | Xylenes, Total | |
| SM 2320B | | Water | Hydroxide Alkalinity as CaCO3 | |

Laboratory: TestAmerica Nashville

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

| Authority | Program | EPA Region | Certification ID | Expiration Date |
|----------------------------------|---------------|------------|------------------|-----------------|
| A2LA | A2LA | | NA: NELAP & A2LA | 12-31-17 |
| A2LA | ISO/IEC 17025 | | 0453.07 | 12-31-17 |
| Alaska (UST) | State Program | 10 | UST-087 | 07-24-17 |
| Arizona | State Program | 9 | AZ0473 | 05-05-17 |
| Arkansas DEQ | State Program | 6 | 88-0737 | 04-25-17 |
| California | State Program | 9 | 2938 | 10-31-16 * |
| Connecticut | State Program | 1 | PH-0220 | 12-31-17 |
| Florida | NELAP | 4 | E87358 | 06-30-17 |
| Georgia | State Program | 4 | N/A | 12-31-17 |
| Illinois | NELAP | 5 | 200010 | 12-09-17 |
| Iowa | State Program | 7 | 131 | 04-01-18 |
| Kansas | NELAP | 7 | E-10229 | 10-31-17 |
| Kentucky (UST) | State Program | 4 | 19 | 06-30-17 |
| Kentucky (WW) | State Program | 4 | 90038 | 12-31-16 * |
| Louisiana | NELAP | 6 | 30613 | 06-30-17 |
| Maine | State Program | 1 | TN00032 | 11-03-17 |
| Maryland | State Program | 3 | 316 | 03-31-17 |
| Massachusetts | State Program | 1 | M-TN032 | 06-30-17 |
| Minnesota | NELAP | 5 | 047-999-345 | 12-31-16 * |
| Mississippi | State Program | 4 | N/A | 06-30-17 |
| Montana (UST) | State Program | 8 | NA | 02-24-20 |
| Nevada | State Program | 9 | TN00032 | 07-31-17 |
| New Hampshire | NELAP | 1 | 2963 | 10-09-17 |
| New Jersey | NELAP | 2 | TN965 | 06-30-17 |
| New York | NELAP | 2 | 11342 | 03-31-17 |
| North Carolina (WW/SW) | State Program | 4 | 387 | 12-31-16 * |
| North Dakota | State Program | 8 | R-146 | 06-30-17 |
| Ohio VAP | State Program | 5 | CL0033 | 07-10-17 |
| Oklahoma | State Program | 6 | 9412 | 08-31-17 |
| Oregon | NELAP | 10 | TN200001 | 04-27-17 |
| Pennsylvania | NELAP | 3 | 68-00585 | 06-30-17 |
| Rhode Island | State Program | 1 | LAO00268 | 12-30-16 * |
| South Carolina | State Program | 4 | 84009 (001) | 02-18-17 * |
| South Carolina (Do Not Use - DW) | State Program | 4 | 84009 (002) | 12-16-17 |
| Tennessee | State Program | 4 | 2008 | 02-23-17 * |
| Texas | NELAP | 6 | T104704077 | 08-31-17 |
| USDA | Federal | | P330-13-00306 | 01-01-17 |
| Utah | NELAP | 8 | TN00032 | 07-31-17 |
| Virginia | NELAP | 3 | 460152 | 06-14-17 |

* Certification renewal pending - certification considered valid.

Certification Summary

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

TestAmerica Job ID: 580-64763-1

Laboratory: TestAmerica Nashville (Continued)

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

| Authority | Program | EPA Region | Certification ID | Expiration Date |
|-------------------|---------------|------------|------------------|-----------------|
| Washington | State Program | 10 | C789 | 07-19-17 |
| West Virginia DEP | State Program | 3 | 219 | 02-28-17 * |
| Wisconsin | State Program | 5 | 998020430 | 08-31-17 |
| Wyoming (UST) | A2LA | 8 | 453.07 | 12-31-17 |

* Certification renewal pending - certification considered valid.

Sample Summary

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

TestAmerica Job ID: 580-64763-1

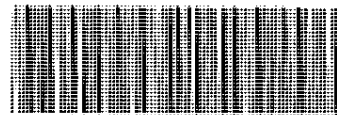
| Lab Sample ID | Client Sample ID | Matrix | Collected | Received |
|---------------|------------------|--------|----------------|----------------|
| 580-64763-1 | CMW-02-1216 | Water | 12/05/16 13:55 | 12/08/16 16:35 |
| 580-64763-2 | CMW-03-1216 | Water | 12/06/16 14:20 | 12/08/16 16:35 |
| 580-64763-3 | CMW-06-1216 | Water | 12/05/16 09:17 | 12/08/16 16:35 |
| 580-64763-4 | CMW-07-1216 | Water | 12/05/16 10:40 | 12/08/16 16:35 |
| 580-64763-5 | CMW-11-1216 | Water | 12/05/16 15:27 | 12/08/16 16:35 |
| 580-64763-6 | CMW-12-1216 | Water | 12/06/16 11:30 | 12/08/16 16:35 |
| 580-64763-7 | CMW-12D-1216 | Water | 12/06/16 11:30 | 12/08/16 16:35 |
| 580-64763-8 | CMW-14-1216 | Water | 12/05/16 12:10 | 12/08/16 16:35 |
| 580-64763-9 | CEB | Water | 12/06/16 12:45 | 12/08/16 16:35 |
| 580-64763-10 | Trip Blank(1) | Water | 12/05/16 16:00 | 12/08/16 16:35 |
| 580-64763-11 | Trip Blank(2) | Water | 12/06/16 17:30 | 12/08/16 16:35 |



TestAmerica Seattle

5755 8th Street East
Tacoma, WA 98424
Phone (253) 922-2310 Fax (253) 922-5047

Chain of Custody Record



TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

580-64763 Chain of Custody

| | | | | | | | | | | | | | | | | | | | | | |
|--|--|--|--|----------------------------------|--|--|--|---|--|---|--|---|--|-----------------------------------|--|---------------------------|--|-----------------------------------|--|-----------------------------------|--|
| Client Information | | | | Sampler: <u>Reed</u> | | Lab PM: Cruz, Sheri L | | COC No: 580-22636-7530.1 | | | | | | | | | | | | | |
| Client Contact: Michael Hodges | | | | Phone: <u>415/359-6453</u> | | E-Mail: <u>sheri.cruz@testamericainc.com</u> | | Page: | | | | | | | | | | | | | |
| Company: CEECON Testing, Inc. | | | | Analysis Requested | | | | | | Job #: <u>64763</u> | | | | | | | | | | | |
| Address: 434 North Canal Street Suite Six | | | | Due Date Requested: | | | | | | Preservation Codes: | | | | | | | | | | | |
| City: South San Francisco | | | | TAT Requested (days): | | | | | | A - HCL M - Hexane | | | | | | | | | | | |
| State, Zip: CA, 94080 | | | | | | | | | | B - NaOH N - None | | | | | | | | | | | |
| Phone: 253-896-8708(Tel) | | | | PO #: | | | | | | C - Zn Acetate O - AsNaO2 | | | | | | | | | | | |
| Email: ceecon@msn.com | | | | WO #: | | | | | | D - Nitric Acid P - Na2O4S | | | | | | | | | | | |
| Project Name: Tesoro Pasco | | | | Project #: 58010386 | | | | | | E - NaHSO4 Q - Na2SO3 | | | | | | | | | | | |
| Site: Washington | | | | SSOW#: | | | | | | F - MeOH R - Na2S2O3 | | | | | | | | | | | |
| | | | | | | | | | | G - Amchlor S - H2SO4 | | | | | | | | | | | |
| | | | | | | | | | | H - Ascorbic Acid T - TSP Dodecahydrate | | | | | | | | | | | |
| | | | | | | | | | | I - Ice U - Acetone | | | | | | | | | | | |
| | | | | | | | | | | J - DI Water V - MCAA | | | | | | | | | | | |
| | | | | | | | | | | K - EDTA W - pH 4-5 | | | | | | | | | | | |
| | | | | | | | | | | L - EDA Z - other (specify) | | | | | | | | | | | |
| | | | | | | | | | | Other: | | | | | | | | | | | |
| Sample Identification | | | | Sample Date | | Sample Time | | Sample Type (C=Comp, G=grab) | | Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air) | | Field Filtered Sample (Yes or No) | | Perform MS/MSD (Yes or No) | | Analysis Requested | | Total Number of containers | | Special Instructions/Note: | |
| | | | | | | | | | | | | | | | | | | | | | |
| C-MW-02 - 1216 | | | | 12/5/16 | | 1:55 | | Water | | | | | | | | | | | | | |
| C-MW-03 - 1216 | | | | 12/6/16 | | 2:20 | | Water | | | | | | | | | | | | MS/MSD | |
| C-MW-06 - 1216 | | | | 12/5/16 | | 9:17 | | Water | | | | | | | | | | | | | |
| C-MW-07 - 1216 | | | | 12/5/16 | | 10:40 | | Water | | | | | | | | | | | | | |
| C-MW-11 - 1216 | | | | 12/5/16 | | 3:27 | | Water | | | | | | | | | | | | | |
| C-MW-12 - 1216 | | | | 12/6/16 | | 11:30 | | Water | | | | | | | | | | | | | |
| C-MW-12D - 1216 | | | | 12/6/16 | | 11:30 | | Water | | | | | | | | | | | | | |
| C-MW-14 - 1216 | | | | 12/5/16 | | 12:10 | | Water | | | | | | | | | | | | | |
| CEB | | | | 12/6/16 | | 12:45 | | Water | | | | | | | | | | | | | |
| Trip Blank | | | | 12/5/16 12/6/16 | | 4:00 5:30 | | Water | | | | | | | | | | | | | |
| Possible Hazard Identification | | | | | | | | | | | | Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) | | | | | | | | | |
| <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological | | | | | | | | | | | | <input type="checkbox"/> Return To Client <input checked="" type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months | | | | | | | | | |
| Deliverable Requested: I, II, III, IV, Other (specify) | | | | | | | | | | | | Special Instructions/QC Requirements: | | | | | | | | | |
| Empty Kit Relinquished by: | | | | Date: | | | | Time: | | | | Method of Shipment: | | | | | | | | | |
| Relinquished by: <u>Michael Hodges</u> | | | | Date/Time: <u>12/8/16 4:35pm</u> | | | | Company: <u>CEECON</u> | | | | Received by: <u>B. Hall</u> | | | | | | | | | |
| Relinquished by: | | | | Date/Time: | | | | Company: | | | | Received by: | | | | | | | | | |
| Relinquished by: | | | | Date/Time: | | | | Company: | | | | Received by: | | | | | | | | | |
| Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No | | | | Custody Seal No.: | | | | Cooler Temperature(s) °C and Other Remarks: | | | | 12/21/2016 | | | | | | | | | |

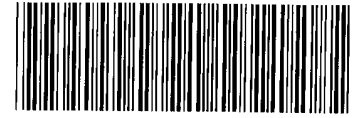


Tesoro pasco

TBR Cooler Corde Und. 9
Cooler Dschlg w/s @ Lab
~~YB~~/Packs Packing Busby
C/1 do w/s

TBR² Cooler Corde Und. 5
Cooler Dschlg w/s @ Lab
~~YB~~/Packs Packing Busby
U/0 C/1 do.

COOLER RECEIPT FORM



580-64763 Chain of Custody

Cooler Received/Opened On 12/15/2016 @1007

Time Samples Removed From Cooler _____ Time Samples Placed In Storage _____ (2 Hour Window)

1. Tracking # 8595 (last 4 digits, FedEx) Courier: _____
IR Gun ID 31470366 pH Strip Lot NA Chlorine Strip Lot NA

2. Temperature of rep. sample or temp blank when opened: 5.2 Degrees Celsius

3. If Item #2 temperature is 0°C or less, was the representative sample or temp blank frozen? YES NO NA

4. Were custody seals on outside of cooler? YES...NO...NA

If yes, how many and where: 1 (front)

5. Were the seals intact, signed, and dated correctly? YES...NO...NA

6. Were custody papers inside cooler? YES...NO...NA

I certify that I opened the cooler and answered questions 1-6 (initial) KA

7. Were custody seals on containers: YES NO and Intact YES...NO...NA

Were these signed and dated correctly? YES...NO...NA

8. Packing mat'l used? Bubblewrap Plastic bag Peanuts Vermiculite Foam Insert Paper Other None

9. Cooling process: Ice Ice-pack Ice (direct contact) Dry ice Other None

10. Did all containers arrive in good condition (unbroken)? YES...NO...NA

11. Were all container labels complete (#, date, signed, pres., etc)? YES...NO...NA

12. Did all container labels and tags agree with custody papers? YES...NO...NA

13a. Were VOA vials received? YES...NO...NA

b. Was there any observable headspace present in any VOA vial? YES...NO...NA

14. Was there a Trip Blank in this cooler? YES...NO...NA If multiple coolers, sequence # _____

I certify that I unloaded the cooler and answered questions 7-14 (initial) MA

15a. On pres'd bottles, did pH test strips suggest preservation reached the correct pH level? YES...NO...NA

b. Did the bottle labels indicate that the correct preservatives were used? YES...NO...NA

16. Was residual chlorine present? YES...NO...NA

I certify that I checked for chlorine and pH as per SOP and answered questions 15-16 (initial) SA

17. Were custody papers properly filled out (ink, signed, etc)? YES...NO...NA

18. Did you sign the custody papers in the appropriate place? YES...NO...NA

19. Were correct containers used for the analysis requested? YES...NO...NA

20. Was sufficient amount of sample sent in each container? YES...NO...NA

I certify that I entered this project into LIMS and answered questions 17-20 (initial) SA

I certify that I attached a label with the unique LIMS number to each container (initial) SA

21. Were there Non-Conformance issues at login? YES...NO...# Was a NCM generated? YES...NO...#

TestAmerica Seattle
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 Tacoma, WA 98424
 Phone (253) 922-2310 Fax (253) 922-5047

Chain of Custody Record

580-64763

TestAmerica
 THE LEADER IN ENVIRONMENTAL TESTING

Client Information (Sub Contract Lab)

Client Contact: **TestAmerica Laboratories, Inc**
 Shipping/Receiving

Address: **2960 Foster Creighton Drive, Nashville, TN 37204**
 Phone: **615-726-0177(Tel) 615-726-3404(Fax)**
 Email: **WO #**

Project Name: **Tesororo - Pasco/Burbank**
 Tesoro Pasco
 Site: **SSOW#**

Due Date Requested: **12/20/2016**
 TAT Requested (days):

PO #: **58010386**
 WO #:

Project #: **58010386**
 SSO#:

Lab P.M.: **CRUZ, Sheri L**
 E-Mail: **sheri.cruz@testamericainc.com**

Accreditations Required (See note): **Washington**
 State Program - Washington

COC No: **580-43016.1**
 Page: **Page 1 of 2**
 Job #: **580-64763-1**

Preservation Codes:
 A - HCl
 B - NaOH
 C - Zn Acetate
 D - Nitric Acid
 E - NaHSO4
 F - MeOH
 G - Amchlor
 H - Ascorbic Acid
 I - Ice
 J - DI Water
 K - EDTA
 L - EDA
 M - Hexane
 N - None
 O - AsN6O2
 P - Na2O4S
 Q - Na2SO3
 R - Na2S2O3
 S - H2SO4
 T - TSP Dodecahydrate
 U - Acetone
 V - MCAA
 W - pH 4.5
 Z - other (specify)

Analysis Requested:
 8015C_DAI (MOD) Alcohols
 RSK_175/ Methane

Field Filtered Sample (Yes or No)
 Perform MSD (Yes or No)

Special Instructions/Note:
 Total Number of containers

| Sample Identification - Client ID (Lab ID) | Sample Date | Sample Time | Sample Type (C=Comp, G=grab) | Matrix (W=Water, S=solid, O=Wastebell, B=Brine/Seawater Anal) | Preservation Code | Field Filtered Sample (Yes or No) | Perform MSD (Yes or No) | 8015C_DAI (MOD) Alcohols | RSK_175/ Methane | Total Number of containers | Special Instructions/Note |
|--|-------------|-------------|------------------------------|---|-------------------|-----------------------------------|-------------------------|--------------------------|------------------|----------------------------|---------------------------|
| CMW-02-1216 (580-64763-1) | 12/5/16 | 13:55 | Pacific | Water | | | | X | | 6 | |
| CMW-03-1216 (580-64763-2) | 12/6/16 | 14:20 | Pacific | Water | | | | X | | 3 | |
| CMW-03-1216 (580-64763-2MS) | 12/6/16 | 14:20 | Pacific | Water | | | | X | | 3 | |
| CMW-03-1216 (580-64763-2MSD) | 12/6/16 | 14:20 | Pacific | Water | MSD | | | X | | 3 | |
| CMW-06-1216 (580-64763-3) | 12/5/16 | 09:17 | Pacific | Water | | | | X | | 6 | |
| CMW-07-1216 (580-64763-4) | 12/5/16 | 10:40 | Pacific | Water | | | | X | | 3 | |
| CMW-11-1216 (580-64763-5) | 12/5/16 | 15:27 | Pacific | Water | | | | X | | 3 | |
| CMW-12-1216 (580-64763-6) | 12/6/16 | 11:30 | Pacific | Water | | | | X | | 6 | |
| CMW-12D-1216 (580-64763-7) | 12/6/16 | 11:30 | Pacific | Water | | | | X | | 3 | |

Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/matrix, being analyzed, the samples must be shipped back to the TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to TestAmerica Laboratories, Inc. attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to TestAmerica Laboratories, Inc.

Possible Hazard Identification

Unconfirmed
 Deliverable Requested: I, II, III, IV, Other (specify) **Primary Deliverable Rank: 2**

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
 Return To Client Disposal By Lab Archive For **Months**

Empty Kit Relinquished by: **Date:** **Time:** **Method of Shipment:**

Relinquished by: **12/14/16 1526** **SEAMA** **Received by:** **12/16/16** **1007** **THAN**

Relinquished by: **Date/Time:** **Company:**

Custody Seals Intact: **Δ Yes Δ No** Custody Seal No.: **52**

5755 8th Street East
Tacoma, WA 98424
Phone (253) 922-2310 Fax (253) 922-5047

Chain of Custody Record



Client Information (Sub Contract Lab)

Client Contact: Shipping/Receiving
Company: TestAmerica Laboratories, Inc
Address: 2960 Foster Creighton Drive
City: Nashville
State, Zip: TN, 37204
Phone: 615-726-0177(Tel) 615-726-3404(Fax)
Email:
Project Name: Tesco Pasco
Site: Tesco - Pasco/Burbank
Sampler:
Lab P/N: Cruz, Sheri L
E-Mail: sheri.cruz@testamericainc.com
Accreditations Required (See note): State Program - Washington
Carrier Tracking No(s):
COC No.: 580-43016.2
Page: Page 2 of 2
Job #: 580-64763-1

Due Date Requested: 12/20/2016
TAT Requested (days):
Analysis Requested

| Sample ID | Sample Date | Sample Time | Sample Type (C=comp, G=grab) | Matrix (W=water, S=solid, O=water/oil, BT=tissue, A=air) | Field Filtered Sample (Yes or No) | Perform MS/MSD (Yes or No) | 8015C_DAI (MOD) Alcohols | RSK_175/ Methane | Total Number of containers | Special Instructions/Note: |
|---------------------------|-------------|-------------|------------------------------|--|-----------------------------------|----------------------------|--------------------------|------------------|----------------------------|----------------------------|
| CMW-14-1216 (580-64763-8) | 12/5/16 | 12:10 | | Water | | X | | | 3 | |
| CEB (580-64763-9) | 12/6/16 | 12:45 | | Water | | X | | | 3 | Loc: 580 64763 |

Possible Hazard Identification

Unconfirmed Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2
Empty Kit Relinquished by: Date: Time: Method of Shipment:
Relinquished by: B. Stull Date/Time: 12/14/16 1520 Company: SEATA Received by: Date/Time: 12/15/16 0907 Company: TAW
Relinquished by: Date/Time: Company: Received by: Date/Time: Company:
Custody Seals Intact: Custody Seal No.: Cooler Temperature(s) °C and Other Remarks: 5.2

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
 Return To Client Disposal By Lab Archive For _____ Months

Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon our subcontracted laboratories. This sample shipment is forwarded under chain-of-custody. |
Special Instructions/QC Requirements:
Cooler Temperature(s) °C and Other Remarks: 5.2

Login Sample Receipt Checklist

Client: Tesoro Logistics Operations LLC

Job Number: 580-64763-1

Login Number: 64763

List Source: TestAmerica Seattle

List Number: 1

Creator: Blankinship, Tom X

| Question | Answer | Comment |
|---|--------|---|
| Radioactivity wasn't checked or is \leq background as measured by a survey meter. | 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. | True | |
| Containers are not broken or leaking. | True | |
| Sample collection date/times are provided. | True | |
| Appropriate sample containers are used. | True | Unpreserved VOA vials for MW07 were not received. |
| Sample bottles are completely filled. | True | |
| Sample Preservation Verified. | True | |
| There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs | True | |
| Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4"). | True | |
| Multiphasic samples are not present. | True | |
| Samples do not require splitting or compositing. | True | |
| Residual Chlorine Checked. | N/A | |



Login Sample Receipt Checklist

Client: Tesoro Logistics Operations LLC

Job Number: 580-64763-1

Login Number: 64763
List Number: 2
Creator: Vest, Laura E

List Source: TestAmerica Nashville
List Creation: 12/15/16 06:21 PM

| Question | Answer | Comment |
|---|--------|---------|
| Radioactivity wasn't checked or is \leq background as measured by a survey meter. | True | |
| The cooler's custody seal, if present, is intact. | True | |
| Sample custody seals, if present, are intact. | N/A | |
| 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 | 2.5 |
| 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. | True | |
| 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 <math><6\text{mm}</math> (1/4"). | True | |
| Multiphasic samples are not present. | True | |
| Samples do not require splitting or compositing. | True | |
| Residual Chlorine Checked. | N/A | |

