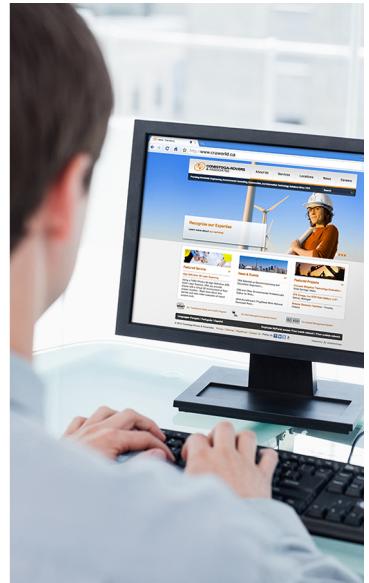
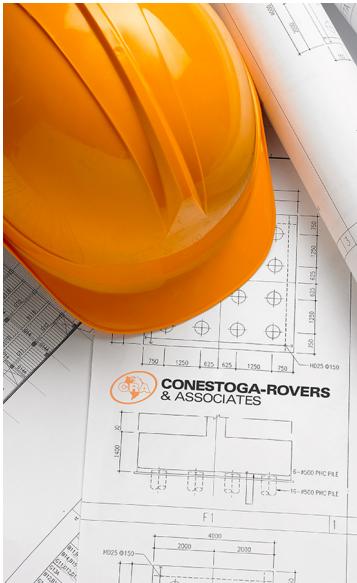




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## Remediation Progress Report Third Quarter 2013

Phillips 66 Renton Terminal  
2423 Lind Avenue Southwest  
Renton, Washington

Agreed Order No. DE 7882  
Agency No. 2070

### Conestoga-Rovers & Associates

20818 44th Ave. West, Suite 190  
Lynnwood, Washington 98036

July 2014 • 070496 • Report No. 32



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## Remediation Progress Report Third Quarter 2013

Phillips 66 Renton Terminal  
2423 Lind Avenue Southwest  
Renton, Washington

Agreed Order No. DE 7882  
Agency No. 2070

A handwritten signature in black ink that reads "Matthew Davis".

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Matthew Davis, LG

---

Edwin Turner, LG

**Conestoga-Rovers & Associates**  
20818 44th Avenue West, Ste 190  
Lynnwood, Washington 98036

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## Section 1.0 Introduction

This remediation progress report summarizes the field activities, system operational parameters, compliance sampling results, and system performance for the period of July 1, 2013 through September 30, 2013 at the Phillips 66 Company (Phillips 66) Renton Terminal located at 2423 Lind Avenue Southwest, Renton, Washington (Figure 1). On August 5, 2010 ExxonMobil Oil Corporation, ConocoPhillips (now Phillips 66) Risk Management and Remediation, and The Washington State Department of Ecology (Ecology) entered into an Agreed Order (Order No. DE 7882). Prior to the agreed order, the site was divided into two separate sites; the northern portion associated with the pre-1990 release in the loading rack area managed by BP and ExxonMobil and the southern portion associated with the November 2002 release from AST No. 2 managed by Phillips 66. The agreed order was set in place to coordinate assessment and remediation activities between the two responsible parties. The purpose of this quarterly remediation progress report is to present the results of and evaluate the performance of the interim remedial actions. Remediation activities were completed in accordance with the Interim Action Work Plan included as an appendix to the Agreed Order and the site-specific Health and Safety Plan (HASP).

## Section 2.0 Description of Remediation Systems and Operational Status

### Phillips 66 Remediation System

The Phillips 66 remediation system is a dual-phase extraction (DPE) system consisting of six extraction wells (RWx-2, LAIx-4, LAIx-5, LAIx-7, LAIx-8, and LAIx-9) from which both soil vapor and groundwater are extracted and three extraction wells (LAIx-6, HWx-1W, and HWx-1E) from which only groundwater is extracted. The locations of the extraction wells are presented on Figure 2.

Extracted groundwater is pumped from the wells to a groundwater treatment system consisting of an oil/water separator, air stripper, solids settling tank, particulate filters, and 2-stage liquid-phase granular activated carbon (GAC) system. The treated water effluent is discharged to the combined sanitary/stormwater system under King County Discharge Authorization Permit No. 4057-03. Air effluent from the air stripper is routed to a 3-stage vapor-phase GAC vessel system that is part of the soil vapor treatment system.

Extracted soil vapor is pulled from the wells via vacuum to a soil vapor treatment system consisting of an air-water separator and the 3-stage GAC vessel system. The treated air effluent is discharged to the atmosphere under Puget Sound Clean Air Agency (PSCAA) discharge permit No. 9648. A process and instrumentation diagram is presented on Figure 3.

During the reporting period, the Phillips 66 remediation system ran for 54 days resulting in an uptime of 56 percent. The following system shutdowns occurred during the reporting period:

- July 2, 2013 – System down due to an oil water separator high level alarm
- July 10, 2013 - System down due to an air stripper sump high level alarm
- July 23, 2013 – System shut down due to an air compressor pressure switch failure
- August 8, 2013 – System down due to an air stripper sump high level alarm
- September 9, 2013 – System off due to a power outage
- September 26, 2013 – System down due to an unknown high level alarm

### **ExxonMobil/BP Remediation System**

The ExxonMobil/BP remediation system is a groundwater extraction (GWE) system consisting of two GWE wells (R-1 and R-2). The locations of the system wells are presented on Figure 2.

Extracted groundwater is pumped from the wells to a groundwater treatment system consisting of an oil-water separator and air stripper. The treated water effluent is discharged to the combined sanitary/stormwater system under King County Discharge Authorization Permit 264-05. Air effluent from the air stripper is discharged to the atmosphere under PSCAA discharge permit No. 3601. A process and instrumentation diagram is presented on Figure 4.

During the reporting period, the ExxonMobil/BP remediation system ran for 80 days resulting in an uptime of 82.5 percent. The following system shutdowns occurred during the reporting period:

- August 12, 2013 – System down due to an air stripper transfer tank high level alarm
- September 5, 2013 – System down due to an air stripper transfer tank high level alarm
- September 9, 2013 – System down due to an air stripper transfer tank high level alarm
- September 26, 2013 – System down due to an air stripper transfer tank high level alarm

## Section 3.0 Third Quarter 2013 Remediation Activities

### Phillips 66 Remediation System

Remediation activities for the Phillips 66 remediation system consist of equipment maintenance, performance monitoring, monthly compliance sampling, system shutdown response, and troubleshooting/repairs. Scheduled visits for routine O&M are made once a week. Performance monitoring and monthly compliance sampling was performed on July 16, 2013, August 20, 2013, and September 19, 2013. Hydraulic monitoring to assess containment of the contaminant plume was performed on August 19, 2013. A summary of the operational data collected for the Phillips 66 system is presented in Table 1.

The following equipment repairs and maintenance activities were completed:

- July 10, 2013 – Replaced discharge flow meter
- July 23, 2013 – Replaced pressure switch on air compressor

### ExxonMobil/BP Remediation System

Remediation activities for the ExxonMobil/BP remediation system consist of equipment maintenance, performance monitoring, monthly compliance sampling, system shutdown response, and troubleshooting/repairs. Scheduled visits for routine O&M are made once a week. Performance monitoring and monthly compliance sampling was performed on July 16, 2013, August 20, 2013, and September 19, 2013. Hydraulic monitoring to assess containment of the contaminant plume was performed on August 19, 2013. A summary of the operational data collected for the ExxonMobil/BP system is presented in Table 2.

The following equipment repairs and maintenance activities were completed:

- September 9, 2013 – Cleaned out tank solids

## Section 4.0 Summary of Compliance Sampling

### Phillips 66 Remediation System

The King County Discharge Authorization for the Phillips 66 system requires semi-annual compliance sampling. Samples were collected monthly during this period to monitor performance and verify compliance on July 16, 2013, August 20, 2013, and September 19, 2013.

Groundwater samples were collected from the wellfield influent, air stripper effluent, midpoint between the two GAC vessels, and the treated water effluent. Samples were analyzed for total petroleum hydrocarbons quantified as gasoline (TPHg) per Ecology Method NWTPH-Gx, TPH quantified as diesel (TPHd) and TPH quantified as oil (TPHo) per Ecology Method NWTPH-Dx, and benzene, toluene, ethylbenzene, total xylenes (BTEX) per EPA Method 8260. The point of compliance for the permit is after the last GAC vessel. All samples collected demonstrated compliance with the permit conditions. Laboratory analytical reports are presented in Appendix A. Water compliance sampling data is presented on Table 3.

The PSCAA air discharge permit for the Phillips 66 system requires monthly compliance sampling for TPHg and benzene. Compliance samples were collected on July 16, 2013, August 20, 2013, and September 19, 2013. Air samples were collected from the soil vapor extraction (SVE) wellfield influent, air stripper effluent, total vapor-phase GAC influent, midpoint between GAC vessels 1 and 2, midpoint between GAC vessels 2 and 3, and the treated vapor effluent. Samples were analyzed for TPHg and BTEX per EPA method TO-14. All samples collected demonstrated compliance with permit conditions. Air compliance sampling data is presented on Table 4.

### **ExxonMobil/BP Remediation System**

The King County Discharge Authorization for the ExxonMobil/BP system requires semi-annual compliance sampling. Samples were collected monthly this period to monitor performance and verify compliance on July 16, 2013, August 20, 2013, and September 19, 2013. Groundwater samples were collected from the well R-1 influent, well R-2 influent, total influent, and treated water effluent. Samples were analyzed for TPHg per Ecology Method NWTPH-Gx, TPHd and TPHo per Ecology Method NWTPH-Dx, and BTEX per EPA Method 8260. The point of compliance for the permit is at the treated water effluent. All samples collected demonstrated compliance with the permit conditions. Laboratory analytical reports are presented in Appendix A. Water compliance sampling data is presented on Table 5.

The PSCAA air discharge permit for the ExxonMobil/BP system requires monthly compliance sampling for TPHg and BTEX. Compliance samples were collected on July 16, 2013, August 20, 2013, and September 19, 2013. Air samples were collected from the air stripper effluent and analyzed for TPHg and BTEX per EPA Method TO-14. All samples collected demonstrated compliance with permit conditions. Air compliance sampling data is presented on Table 6.

## Section 5.0 Summary of System Performance

### Phillips 66 Remediation System

During the reporting period, the volume of groundwater extracted has decreased from the previous reporting period and is consistent with historical volumes. The decrease in groundwater extraction volumes can be attributed primarily to seasonal fluctuations in groundwater elevations. Influent contaminant concentrations in extracted groundwater have decreased from previous reporting periods and are consistent with historical trends during the dry season. Concentrations continue an overall downward trend. Influent concentrations will continue to be monitored to determine if this trend continues.

SVE well field influent concentrations have increased from the previous reporting period, which is consistent with historical trends during the dry season as more of the smear zone is exposed. Mass removal rates and total mass removed are presented on Table 7 and Figures 5 and 6.

During the reporting period, the Phillips 66 DPE system operated consistently with the exception of the downtimes noted in Section 2.0. The process volumes and mass removed for the reporting period are as follows:

<i>Period</i>	<i>SVE Hours</i>	<i>Gallons of Water extracted</i>	<i>Pounds of TPH Removed</i>
Prior to July 16, 2013	76,330.3	4,362,195	53,852.2
July 16, 2013 to October 3, 2013	1116.0	83,332	49.5
Since System Startup	77,446.3	4,445,527	53,901.6

### ExxonMobil/BP Remediation System

During the reporting period, the volume of groundwater extracted has decreased from the previous reporting period. The decrease in the volume of water extracted is due to a lower water table during the dry season and is consistent with historical volumes. Influent contaminant concentrations continue to be significantly lower than concentrations in monitoring wells surrounding the extraction wells. Based on influent concentrations, the current system does not appear to be effectively capturing areas of the plume with the highest concentrations. Contaminant removal rates for the ExxonMobil/BP system are consistent with historical removal rates. Mass removal rates and total mass removed are presented on Table 8 and Figures 7 and 8.

During the reporting period the ExxonMobil/BP groundwater extraction system operated consistently with the exception of the downtimes noted in Section 2.0. The process volumes and mass removed for the reporting period are as follows:

<b>Period</b>	<b>Gallons of Water extracted</b>	<b>Pounds of TPH Removed</b>
January 2007 to July 16, 2013	4,435,716	215.39
July 16, 2013 to October 3, 2013	127,482	4.32
Since January 2007	4,563,198	219.71

\* Data prior to January 2007 not available

The primary purpose of the Phillips 66 and ExxonMobil/BP remediation systems is to remove contaminant mass from the subsurface and hydraulically contain the groundwater contaminant plume to prevent further migration. Hydraulic monitoring was performed during the groundwater sampling activities. Procedures for hydraulic monitoring are included in the Site Interim Compliance Monitoring Plan (CMP). Groundwater elevation contours in the area of the Phillips 66 system indicate radial flow from the middle of the tank farm area, which is consistent with historical flow patterns at the Site. Groundwater elevation contours in the northern portion where the ExxonMobil/BP system is operating indicate a flow direction inward toward trench R-1 and west toward trench R-2, consistent with historical groundwater flow directions. Groundwater elevation contours are presented on Figure 9.

## Section 6.0 Conclusions

### Phillips 66 Remediation System

The Phillips 66 remediation system continues to operate consistent with historical performance. The current system size and configuration does not allow the SVE system to perform optimally. Isolating vacuum to higher concentration wells and reducing vacuum dilution would dramatically improve the performance of the SVE system. This, however, would require significant changes to the current system components. These system improvements will be addressed as part of the final remedial action.

Groundwater flow directions and gradients on the southern portion of the Site are consistent with historical groundwater flow directions. The GWE portion of the Phillips 66 system does

not appear to have a significant effect on flow directions and gradients. Groundwater quality data in wells to the south (downgradient) of tank 2 indicate that despite apparent inadequate groundwater control, contaminant migration is not likely occurring.

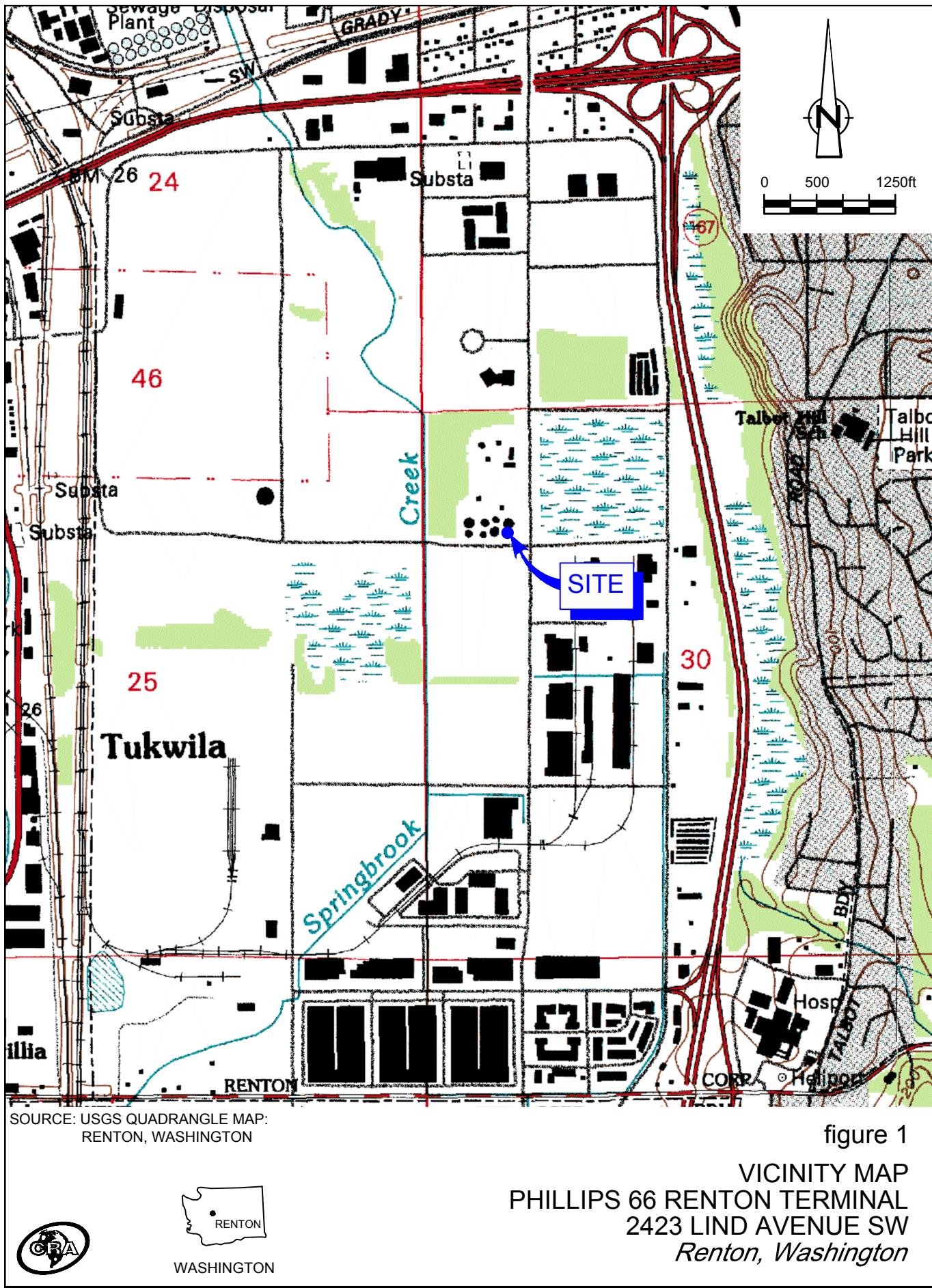
### **ExxonMobil/BP Remediation System**

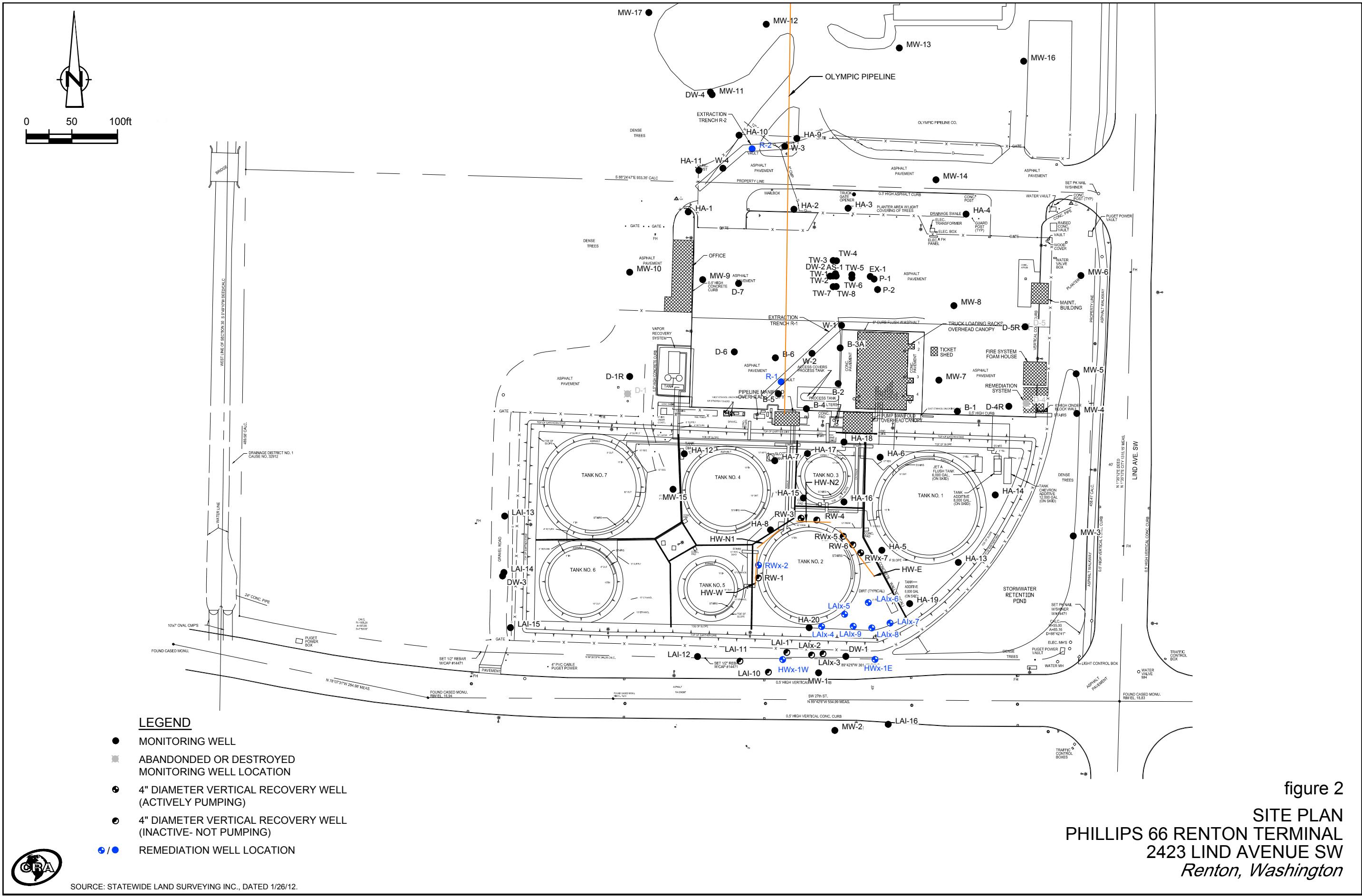
The ExxonMobil/BP system continues to operate consistent with historical performance. Groundwater elevation contours were consistent with historical groundwater flow directions. Based on the results of the recent remedial investigation, a significant portion of the contaminant plume to the north is outside of the influence of the current remediation system and will be addressed as part of the final remedial action.

The following activities will be performed during 4th Quarter 2013:

- O&M of the current remediation systems in accordance with the CMP
- Groundwater sampling and hydraulic monitoring in accordance with the CMP
- Activities in preparation of new system installation

## Figures





70496-2RM00(032)GN-WA002 NOV 18/2013

CLIENT

PHILLIPS 66 COMPANY

PROJECT

RENTON TERMINAL

RENTON, WASHINGTON

PROJECT # 070496

TITLE

DUAL PHASE EXTRACTION TREATMENT  
SYSTEM PROCESS FLOW DIAGRAM

DRAWING STATUS

No	Revision	Date	Initial

SCALE VERIFICATION

THIS BAR MEASURES 1' ON ORIGINAL. ADJUST SCALE ACCORDINGLY.

Approved



Source Reference:

Designed By: 11/01/11

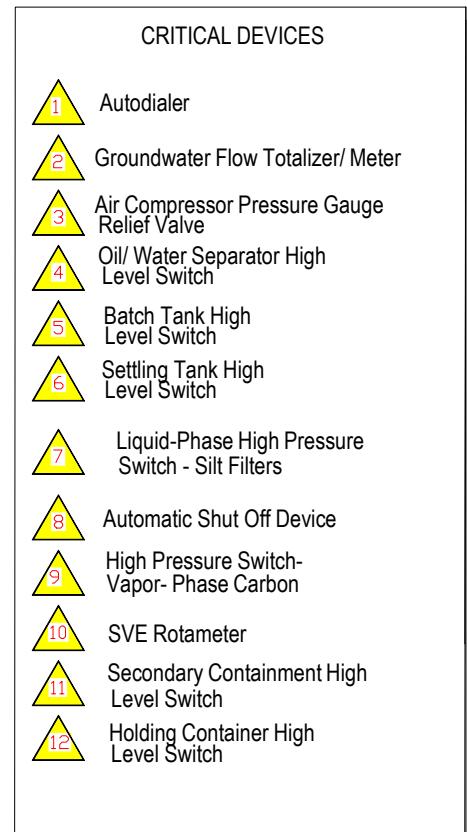
Drafted By: VAM 11/01/11

Reviewed By: 11/01/11

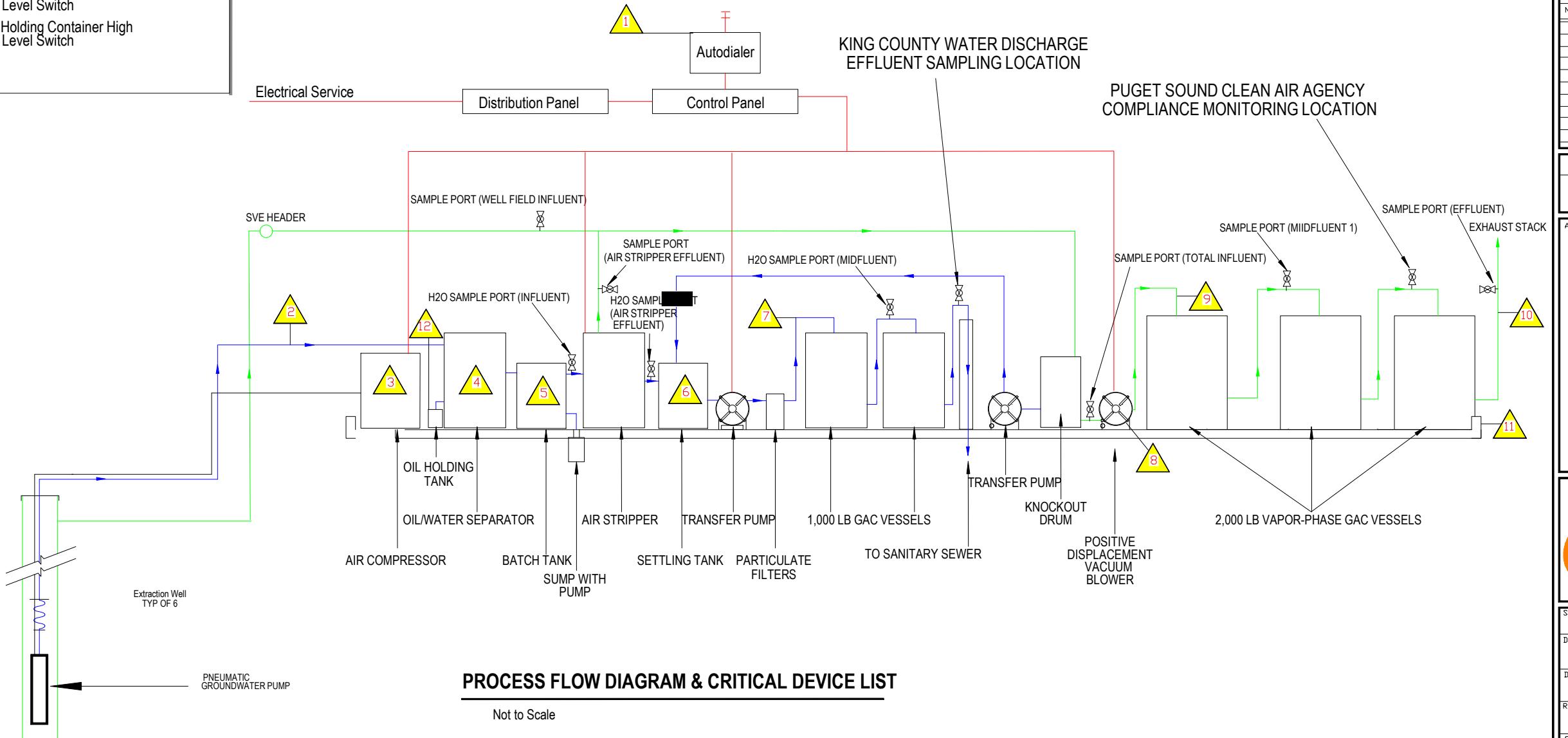
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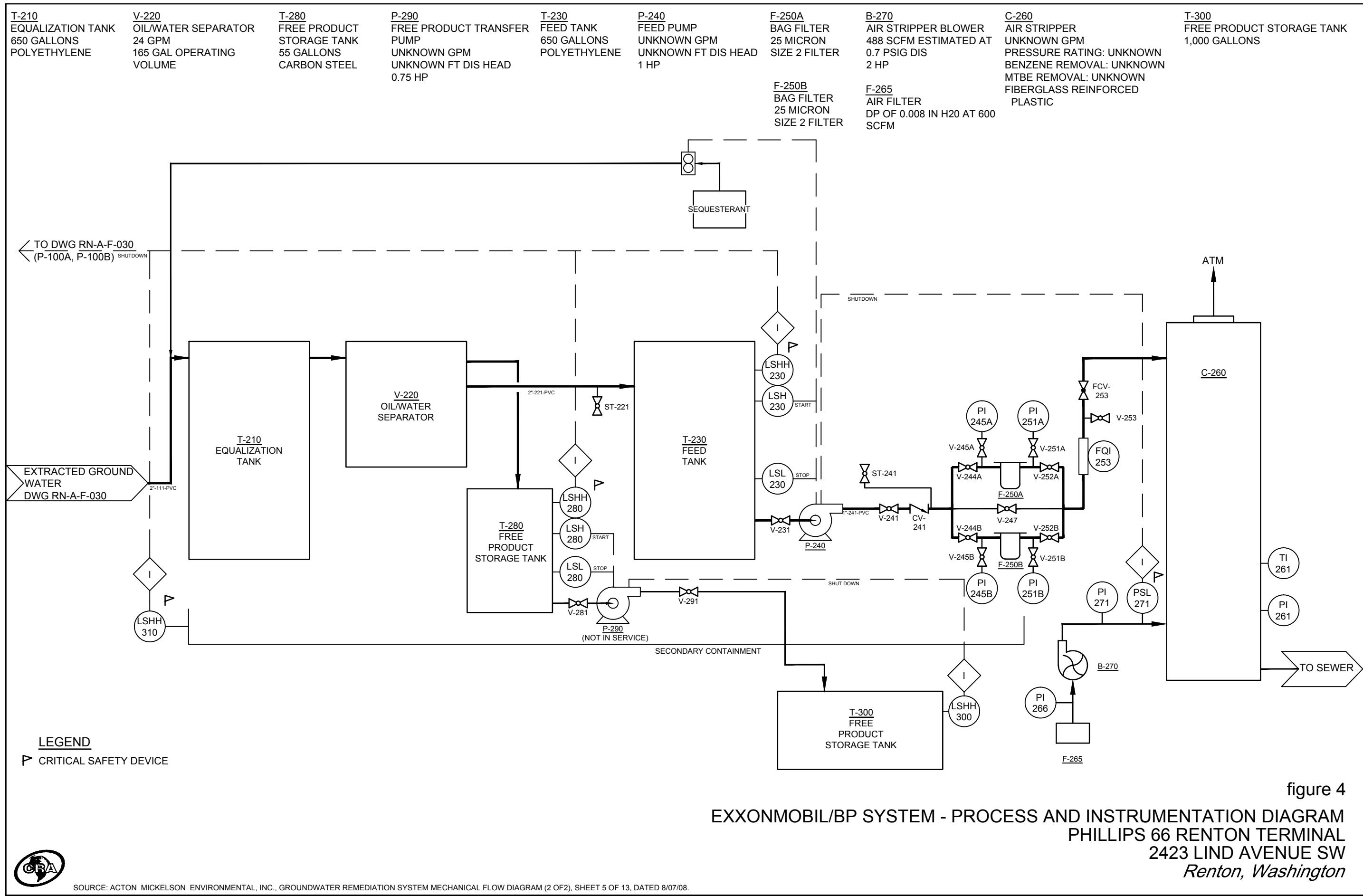
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04/04/11

**EXPLANATION**

- SVE Piping
- Electrical Power Wiring
- Groundwater Piping





SOURCE: ACTON MICKELSON ENVIRONMENTAL, INC., GROUNDWATER REMEDIATION SYSTEM MECHANICAL FLOW DIAGRAM (2 OF2), SHEET 5 OF 13, DATED 8/07/08.

70496-2RM00(032)GN-WA003 NOV 18/2013

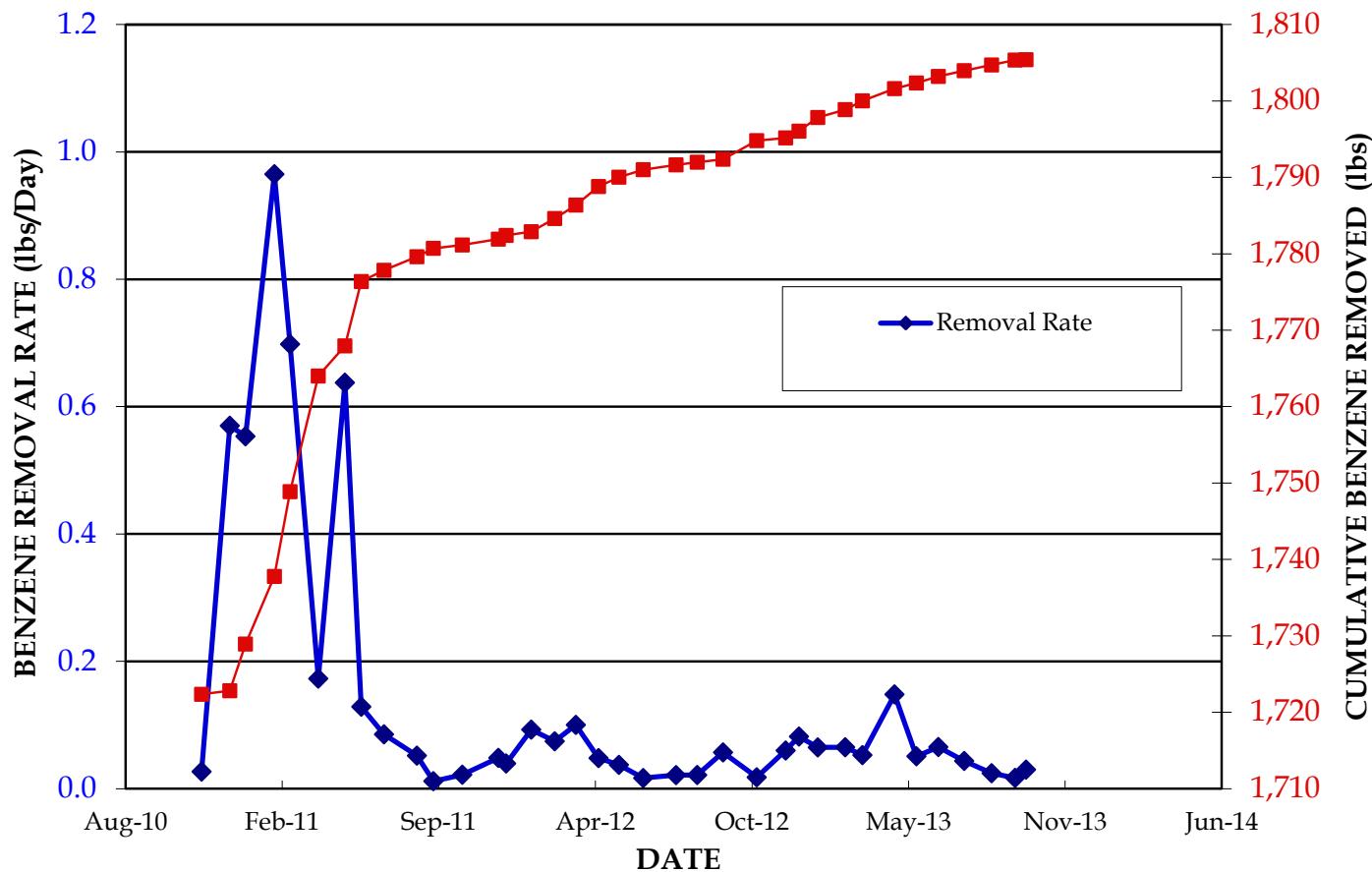


figure 5

PHILLIPS 66 SYSTEM - BENZENE MASS REMOVAL GRAPH  
PHILLIPS 66 RENTON TERMINAL  
*Renton Washington*



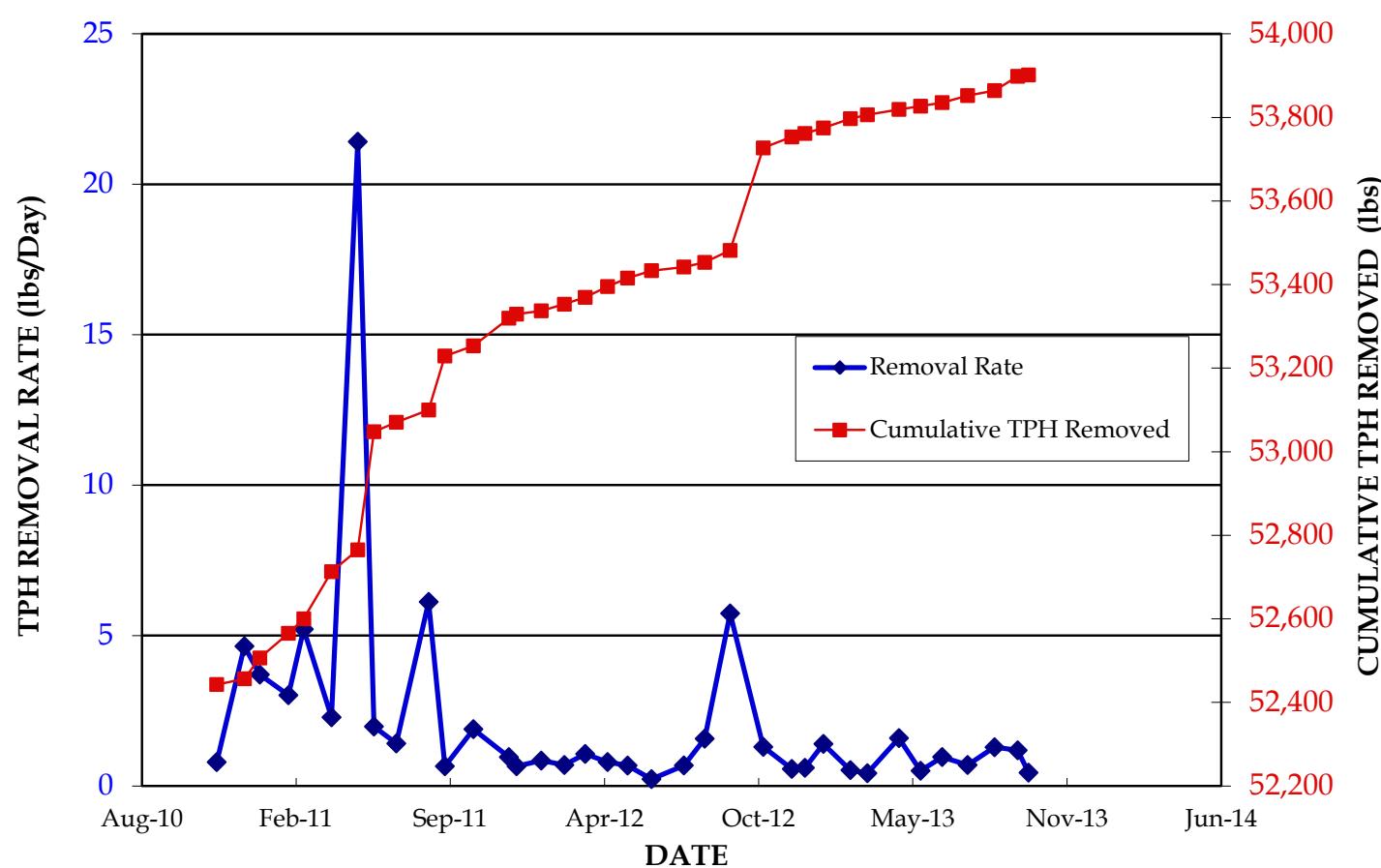


figure 6

PHILLIPS 66 SYSTEM - TPH MASS REMOVAL GRAPH  
PHILLIPS 66 RENTON TERMINAL  
*Renton Washington*



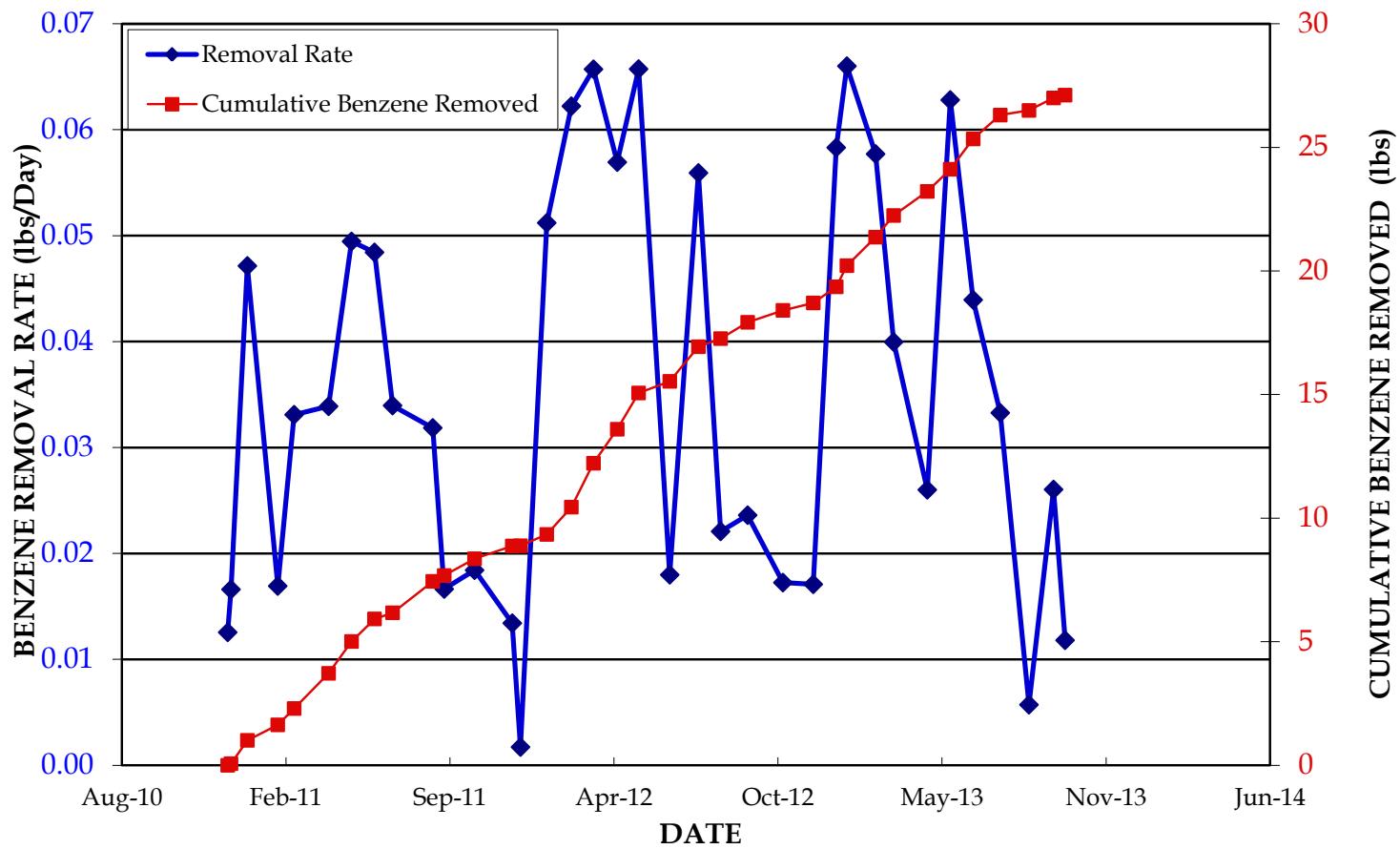


figure 7  
EXXONMOBIL / BP SYSTEM - BENZENE MASS REMOVAL GRAPH  
PHILLIPS 66 RENTON TERMINAL  
*Renton Washington*



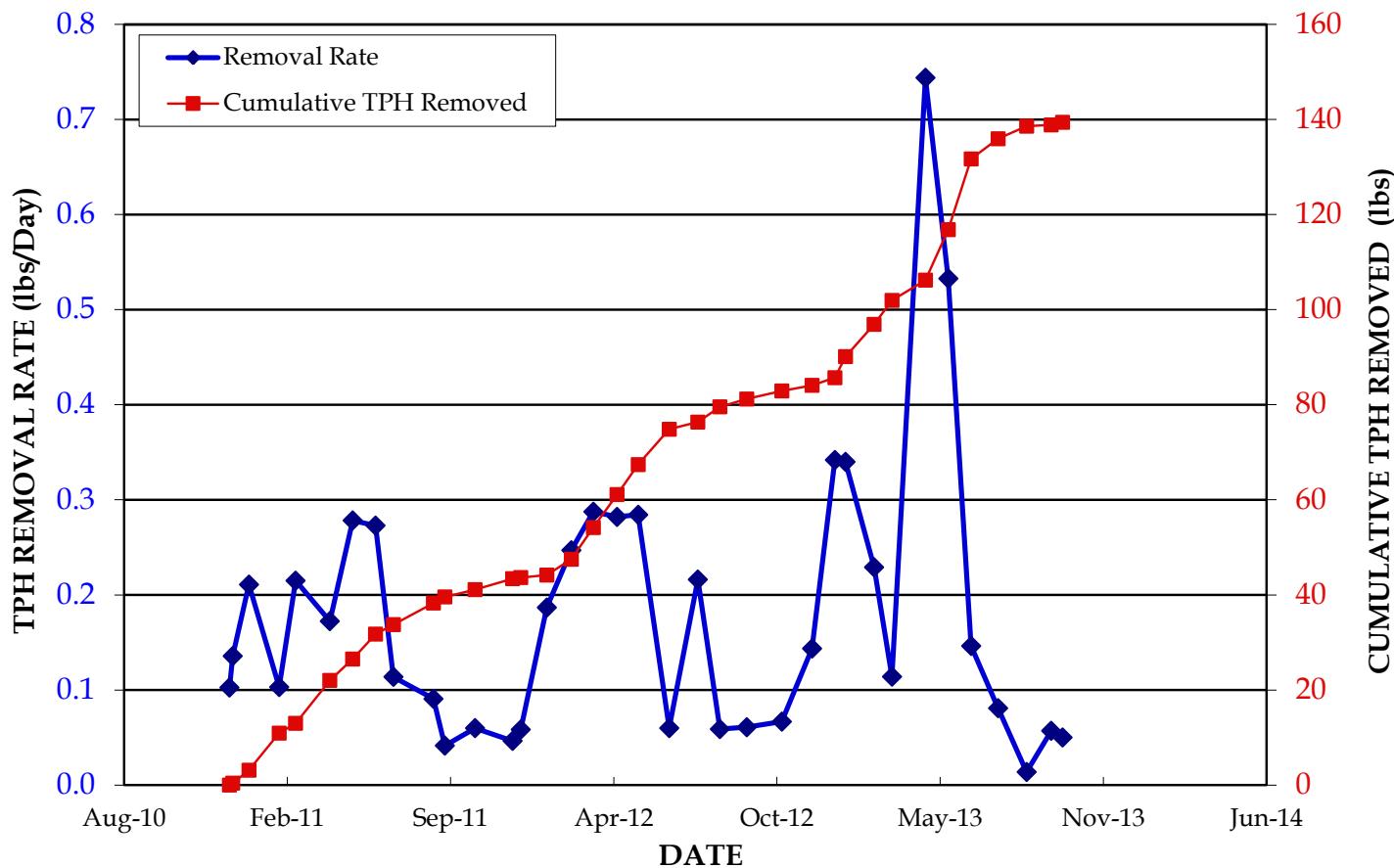
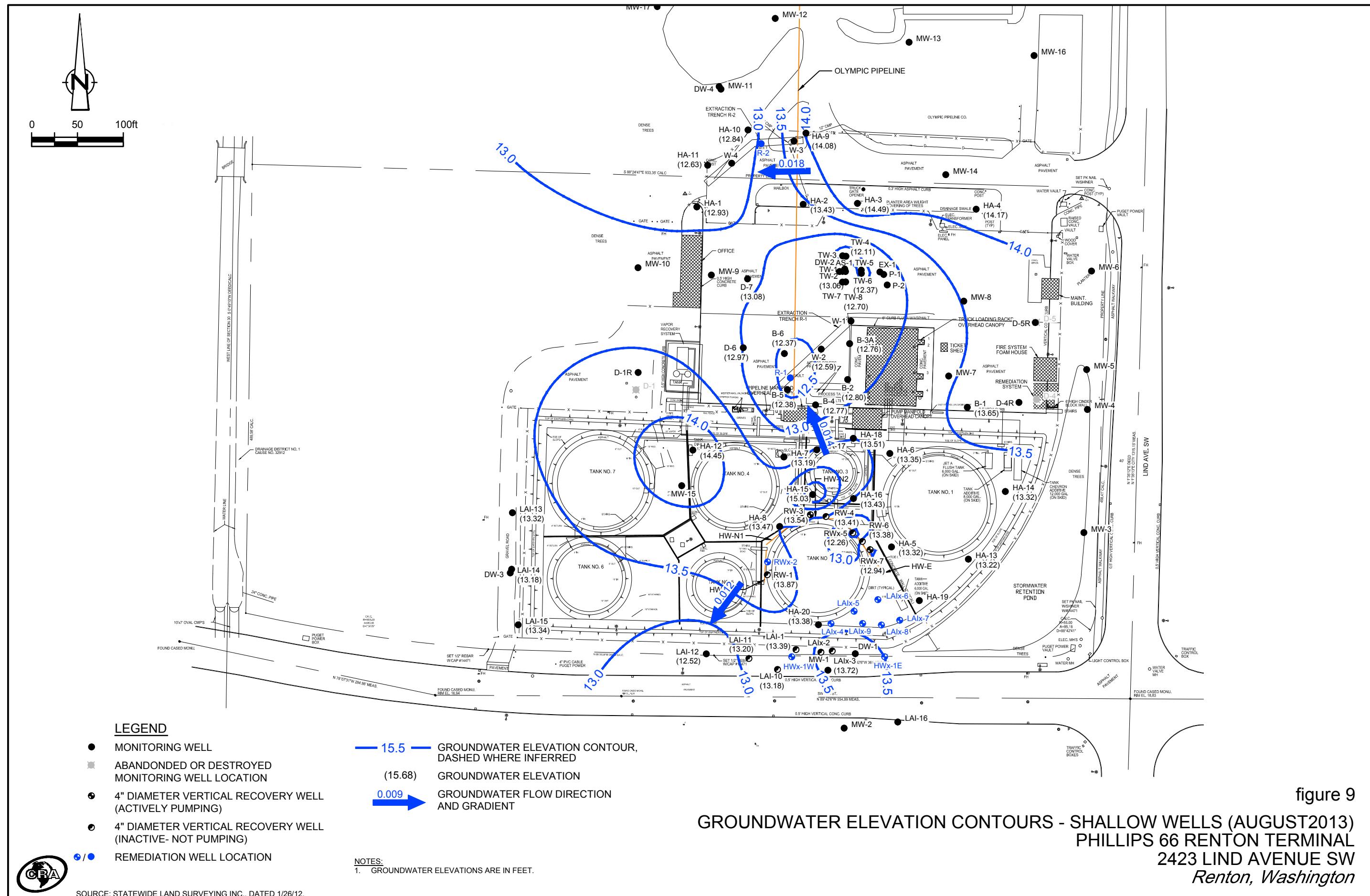


figure 8

EXXONMOBIL / BP SYSTEM - TPH MASS REMOVAL GRAPH  
PHILLIPS 66 RENTON TERMINAL  
*Renton Washington*





SOURCE: STATEWIDE LAND SURVEYING INC., DATED 1/26/12.

70496-2RM00(032)GN-WA004 JAN 2/2014

## Tables

TABLE 1

Page 1 of 6

**PHILLIPS 66 SYSTEM-SUMMARY OF OPERATIONAL PARAMETERS**  
**PHILLIPS 66 RENTON TERMINAL**  
**RENTON, WASHINGTON**

<b>Date</b>	<i>Soil Vapor Extraction System</i>								<i>Groundwater Extraction System</i>			<b>Cumulative Volume of Water Treated (gallons)</b>
	<b>Hour Meter (hours)</b>	<b>Total Vacuum (in. H<sub>2</sub>O)</b>	<b>Total Influent Temperature (°F)</b>	<b>Total Influent Flowrate (scfm)</b>	<b>Influent PID (ppmV)</b>	<b>C-1 PID (ppmV)</b>	<b>C-2 PID (ppmV)</b>	<b>Effluent PID (ppmV)</b>	<b>Hour Meter (hours)</b>	<b>Water Meter Reading (gallons)</b>		
12/09/10	1,389.3	25	100	210	1.8	1.8	0.2	3.3	20,913.8	711,224		3,215,544
12/17/10	1,393.4	35	100	210	--	--	--	--	20,914.8	711,445		3,215,765
12/20/10	1,397.4	35	100	210	--	--	--	--	20,918.7	712,485		3,216,805
12/21/10	1,419.7	36	100	210	22.8	1.9	0.3	2.3	20,941.0	718,185		3,222,505
12/29/10	1,529.5	40	75	210	33.7	0.0	0.0	0.0	21,050.7	752,260		3,256,580
12/30/10	1,556.3	40	100	210	--	--	--	--	21,076.1	760,809		3,265,129
01/05/11	1,559.0	35	100	210	--	--	--	--	--	760,940		3,265,260
01/06/11	1,583.4	35	100	210	23.3	1.7	0.5	2.8	21,102.1	768,341		3,272,661
01/10/11	1,678.4	35	100	210	0.0	0.0	0.0	0.0	21,196.2	790,309		3,294,629
01/12/11	1,632.1	35	95	210	--	--	--	--	21,200.0	792,260		3,296,580
01/18/11	1,821.5	35	105	210	14.7	1.6	1.0	4.1	21,339.1	830,160		3,334,480
01/19/11	1,849.4	35	105	210	--	--	--	--	21,336.8	837,044		3,341,364
01/25/11	1,907.0	37	100	210	20.3	0.0	0.0	0.0	21,424.6	849,720		3,354,040
01/27/11	1,955.3	35	105	210	17.4	1.1	0.5	3.3	21,471.1	863,494		3,367,814
02/01/11	1,969.5	35	105	210	--	--	--	--	21,484.8	866,299		3,370,619
02/03/11	2,011.5	35	100	210	--	--	--	--	21,527.2	877,830		3,382,150
02/11/11	2,023.0	35	105	210	--	--	--	--	21,538.4	881,910		3,386,230
02/14/11	2,034.6	40	100	210	86.1	1.5	0.0	1.3	21,549.6	886,823		3,391,143
02/16/11	2,064.0	40	100	210	57.6	2.0	0.8	1.8	21,577.0	897,988		3,402,308
02/23/11	2,231.7	30	100	210	17.6	1.4	0.9	2.1	21,746.4	925,254		3,429,574
03/01/11	2,233.7	35	100	210	78.6	3.5	0.4	0.0	21,747.6	925,872		3,430,192
03/08/11	2,339.9	35	105	210	61.9	5.6	6.0	1.0	21,852.3	951,757		3,456,077
03/09/11	2,342.3	35	105	210	60	0.1	0.0	0.0	21,854.7	952,363		3,456,683
03/14/11	2,371.4	35	105	210	50	0.4	0.0	0.0	21,883.5	959,647		3,463,967
03/22/11	2,557.2	35	105	210	48	0.8	0.2	0.3	22,069.2	1,006,270		3,510,590
03/24/11	2,609.7	35	100	210	--	--	--	--	22,121.6	1,015,100		3,519,420
03/29/11	2,676.9	35	100	210	63.5	0.8	0.0	0.0	22,228.8	1,038,117		3,542,437
04/05/11	2,858.4	35	100	210	53	0.4	0.0	0.0	22,369.3	1,066,420		3,570,740
04/13/11	2860.7	35	100	210	0.0	0.0	0.0	0.0	22,370.8	1,066,420		3,570,740
04/15/11	2864.4	35	100	210	--	--	--	--	22,373.3	1,068,338		3,572,658
04/18/11	2897.9	35	100	210	38.3	0.0	0.0	0.0	22,406.5	1,077,180		3,581,500
04/19/11	--	--	--	--	--	--	--	--	--	--		--

TABLE 1

Page 2 of 6

**PHILLIPS 66 SYSTEM-SUMMARY OF OPERATIONAL PARAMETERS**  
**PHILLIPS 66 RENTON TERMINAL**  
**RENTON, WASHINGTON**

<i>Soil Vapor Extraction System</i>									<i>Groundwater Extraction System</i>			<i>Cumulative Volume of Water Treated</i>
<i>Date</i>	<i>Hour Meter</i>	<i>Total Vacuum</i>	<i>Total Influent Temperature</i>	<i>Total Influent Flowrate</i>	<i>Influent PID</i>	<i>C-1 PID</i>	<i>C-2 PID</i>	<i>Effluent PID</i>	<i>Hour Meter</i>	<i>Water Meter Reading</i>		
04/26/11	3063.0	35	120	210	69.3	0.0	0.0	0.0	22,571.8	1,103,148		3,607,468
05/03/11	3147.3	35	120	210	70	0.0	0.0	0.0	22,655.8	1,117,500		3,621,820
05/13/11	3386.7	35	125	210	--	--	--	--	22,895.2	1,135,172		3,639,492
05/16/11	3389.3	35	112	210	15	0.4	0.1	0.1	22,898.0	1,135,792		3,640,112
05/17/11	3409.9	35	113	210	11.1	0.2	0.0	0.0	22,918.6	1,140,353		3,644,673
05/24/11	3580.8	35	115	196	8.3	0.3	0.1	0.0	23,089.5	1,170,742		3,675,062
06/02/11	3607.6	35	120	196	--	--	--	--	23,116.2	1,176,106		3,680,426
06/07/11	3726.8	30	105	210	7.8	0.1	0.0	0.0	23,235.4	1,181,785		3,686,105
06/14/11	3894.2	35	110	210	9.3	0.0	0.0	0.0	23,401.2	1,192,630		3,696,950
06/22/11	3973.9	35	120	210	--	--	--	--	23,484.0	1,198,593		3,702,913
06/28/11	3994.4	35	120	196	16.5	0.0	0.0	0.0	23,504.5	1,201,716		3,706,036
07/06/11	4000.1	33	140	210	15.1	--	--	--	23,510.2	1,202,600		3,706,920
07/12/11	4000.5	20	110	100	13.2	--	--	--	23,514.2	1,203,070		3,707,390
07/14/11	4008.3	20	95	100	--	--	--	--	23,514.3	1,203,109		3,707,429
07/19/11	4123.7	30	110	98	33	0.0	0.0	0.0	23,629.8	1,207,790		3,712,110
07/26/11	4224.5	27	70	100	--	--	--	--	23,730.4	1,211,680		3,716,000
08/03/11	4233.9	23	100	100	48.4	6.6	0.3	0.4	23,741.8	1,212,390		3,716,710
08/11/11	4431.7	35	120	100	--	--	--	--	23,939.8	1,217,794		3,722,114
08/17/11	4499.8	33	110	100	36.3	0.1	0.0	0.0	24,010.5	1,219,880		3,724,200
08/24/11	4667.8	30	110	100	30	0.0	0.0	0.0	24,178.3	1,222,796		3,727,116
08/30/11	4820.0	29	110	100	45.0	0.0	0.0	0.0	24322.3	1,224,480.0		3,728,800
09/07/11	5006.5	35	120	100	41.0	0.4	0.0	0.0	24517.0	1,226,561.0		3,730,881
09/15/11	5196.1	32	120	100	39.4	0.0	0.0	0.0	24706.8	1,228,430.0		3,732,750
09/21/11	5342.0	28	120	100	38.1	0.0	0.0	0.0	24862.5	1,229,880.0		3,734,200
09/28/11	5507.8	28	110	100	4.3	0.0	0.0	0.0	25018.9	1,231,530.0		3,735,850
10/03/11	5629.8	28	105	100	64	0.1	0.2	0.0	25141.0	1,232,740.0		3,737,060
10/14/11	5892.8	30	100	100	69.9	0.1	0.1	0.0	25404.0	1,235,348.0		3,739,668
10/17/11	5966.5	29	110	100	25.0	0.0	0.0	0.0	25477.6	1,236,020.0		3,740,340
10/25/11	6157.4	35	100	100	80.0	--	--	--	25668.6	1,238,147.0		3,742,467
11/02/11	6347.9	35	95	100	--	--	--	--	25859.2	1,247,837.0		3,752,157
11/08/11	6492.0	30	100	100	17.9	0.6	0.3	0.2	26003.4	1,252,432.0		3,756,752
11/16/11	6682.7	35	90	100	20.6	0.0	0.0	0.0	26194.0	1,259,230.0		3,763,550
11/23/11	6732.1	32	90	200	5.2	0.0	0.0	0.0	26243.1	1,261,060.0		3,765,380
11/29/11	6733.7	33	80	200	6.4	0.0	0.0	0.0	26244.1	1,261,275.0		3,765,595

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**PHILLIPS 66 SYSTEM-SUMMARY OF OPERATIONAL PARAMETERS**  
**PHILLIPS 66 RENTON TERMINAL**  
**RENTON, WASHINGTON**

<i>Soil Vapor Extraction System</i>								<i>Groundwater Extraction System</i>			<i>Cumulative Volume of Water Treated</i>
<i>Date</i>	<i>Hour Meter</i>	<i>Total Vacuum</i>	<i>Total Influent Temperature</i>	<i>Total Influent Flowrate</i>	<i>Influent PID</i>	<i>C-1 PID</i>	<i>Effluent PID</i>	<i>Hour Meter</i>	<i>Water Meter Reading</i>		
12/09/11	6974.6	29	90	200	2.6	0.0	0.0	26485.0	1,284,500.0		3,788,820
12/14/11	7083.8	26	75	190	1.2	0.0	0.0	26590.9	1,290,910.0		3,795,230
12/21/11	7174.6	38	85	200	5.0	0.0	0.0	26681.6	1,298,390.0		3,802,710
12/29/11	7177.3	30	90	200	--	--	--	26684.2	1,298,690.0		3,803,010
01/04/12	7209.3	45	100	190	2.6	0.0	0.0	26716.2	1,302,370.0		3,806,690
01/10/12	7271.1	28	50	210	1.1	0.0	0.0	26778.2	1,310,770.0		3,815,090
01/17/12	7373.9	41	90	200	1.8	0.0	0.0	26881.0	1,319,880.0		3,824,200
01/24/12	7398.9	28	90	210	5.8	0.0	0.0	26905.9	1,323,120.0		3,827,440
01/31/12	7502.2	34	90	200	9.3	0.0	0.0	27009.0	1,337,860.0		3,842,180
02/09/12	7718.1	35	95	200	3.3	0.0	0.0	27225.0	1,362,440.0		3,866,760
02/16/12	7885.1	30	85	200	--	--	--	27391.9	1,378,194.0		3,882,514
02/21/12	8007.5	45	95	200	0.6	0.0	0.0	27514.3	1,391,524.0		3,895,844
03/02/12	8229.4	31	80	200	4.1	0.0	0.0	27736.1	1,413,780.0		3,918,100
03/07/12	8285.0	40	90	200	0.7	0.0	0.0	27791.7	1,420,688.0		3,925,008
03/15/12	8285.0	--	--	--	--	--	--	27791.7	1,420,688.0		3,925,008
03/20/12	8485.8	38	90	190	0.4	0.0	0.0	27992.4	1,439,440.0		3,943,760
03/27/12	8653.2	44	110	190	0.0	0.0	0.0	28159.8	1,458,610.0		3,962,930
04/05/12	8866.9	48	100	190	0.0	0.0	0.0	28373.8	1,476,720.0		3,981,040
04/12/12	9039.6	40	95	190	4.7	0.0	0.0	28546.6	1,490,172.0		3,994,492
04/20/12	9226.3	38	100	190	0.5	0.0	0.0	28733.3	1,508,710.0		4,013,030
04/26/12	9373.9	37	105	190	2.2	0.0	0.0	28880.9	1,521,208.0		4,025,528
05/01/12	9476.8	40	95	200	4.7	0.0	0.0	28983.8	1,531,500.0		4,035,820
05/11/12	9715.4	38	90	200	0.4	0.0	0.0	29222.3	1,550,120.0		4,054,440
05/17/12	9767.1	35	90	200	0.5	0.0	0.0	29274.1	1,556,050.0		4,060,370
05/24/12	9911.9	35	100	210	1.4	0.0	0.0	29419.1	1,564,702.0		4,069,022
06/01/12	10105.6	40	100	200	1.1	0.0	0.0	29612.8	1,571,790.0		4,076,110
06/08/12	10273.5	30	100	200	10.0	0.0	0.0	29780.9	1,580,170.0		4,084,490
06/18/12	10511.4	35	105	210	--	--	--	30018.8	1,580,225.0		4,084,545
06/29/12	10683.7	33	100	200	17.1	0.0	0.0	30191.1	1,580,500.0		4,084,820
07/03/12	10778.7	35	100	210	23.5	0.0	0.0	30286.1	1,587,800.0		4,092,120
07/13/12	11016.9	39	100	200	0.4	0.0	0.0	30524.4	1,596,090.0		4,100,410
07/18/12	11073.3	35	100	200	0.8	0.0	0.0	30580.8	1,599,550		4,103,870
07/24/12	11217.2	30	100	210	--	--	--	30724.7	1,604,590		4,108,910
08/01/12	11406.3	30	120	210	3.1	0.2	0.1	30913.0	1,610,297		4,114,617

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**PHILLIPS 66 SYSTEM-SUMMARY OF OPERATIONAL PARAMETERS**  
**PHILLIPS 66 RENTON TERMINAL**  
**RENTON, WASHINGTON**

<i>Soil Vapor Extraction System</i>									<i>Groundwater Extraction System</i>			<i>Cumulative Volume of Water Treated</i>
<i>Date</i>	<i>Hour Meter</i>	<i>Total Vacuum</i>	<i>Total Influent Temperature</i>	<i>Total Influent Flowrate</i>	<i>Influent PID</i>	<i>C-1 PID</i>	<i>C-2 PID</i>	<i>Effluent PID</i>	<i>Hour Meter</i>	<i>Water Meter Reading</i>		
08/09/12	11406.3	30	120	210	3.1	0.2	0.1	0.0	30913.0	1,610,297		4,114,617
08/31/12	11574.9	30	100	210	0.1	0.0	0.0	0.0	31081.3	1,616,630		4,120,950
09/05/12	11700.3	30	100	200	0.1	0.0	0.0	0.0	31206.8	1,619,750		4,124,070
09/11/12	11842.5	30	100	200	4.9	0.0	0.0	0.0	31349.1	1,621,790		4,126,110
09/25/12	12174.8	30	110	210	26.3	2.8	0.8	0.3	31657.6	1,628,210		4,132,530
10/05/12	12414.7	30	100	200	18.8	3.3	0.2	0.6	31871.4	1,631,070		4,135,390
10/12/12	12581.4	25	100	200	37.7	3.8	0.6	0.4	32038.2	1,631,760		4,136,080
10/19/12	12746.5	30	110	210	25.5	6.1	0.1	0.1	32203.3	1,631,832		4,136,152
10/24/12	12868.7	--	--	210	21.4	0.3	0.3	0.0	32325.5	1,634,281		4,138,601
11/02/12	13082.2	30	100	210	4.4	2.4	1.4	0.0	32538.8	1,636,510		4,140,830
11/08/12	13226.7	28	115	200	3.5	3.6	1.1	0.0	32683.7	1,641,700		4,146,020
11/16/12	13352.1	25	75	210	2.9	2.6	1.4	0.0	32809.2	1,642,820		4,147,140
11/30/12	13353.6	40	105	210	1.3	0.0	0.0	0.0	32810.6	1,643,135		4,147,455
12/04/12	13448.9	35	100	200	--	--	--	--	32905.9	1,651,120		4,155,440
12/10/12	13595.7	35	100	200	--	--	--	--	33052.7	1,660,450		4,164,770
12/17/12	13706.1	33	90	200	0.6	1.6	0.0	0.0	33163.0	1,668,780		4,173,100
12/28/12	13969.2	35	95	210	2.1	0.0	0.0	0.0	33426.4	1,678,171		4,182,491
01/04/13	14084.2	35	90	210	8.1	0.0	0.0	0.0	33541.5	1,685,777		4,190,097
01/10/13	14229.2	35	100	200	12.3	0.0	0.0	0.0	33686.2	1,691,330		4,195,650
01/25/13	14234.0	35	105	210	0.2	0.0	0.0	0.0	33689.8	1,691,493		4,195,813
01/31/13	14376.5	40	90	210	0.2	0.0	0.0	0.0	33832.1	1,691,639		4,195,959
02/08/13	14567.6	28	100	200	12.4	0.0	0.0	0.0	34023.1	1,691,870		4,196,190
02/14/13	14611.9	30	100	210	1.9	0.0	0.0	0.0	34067.4	1,692,962		4,197,282
02/19/13	14641.3	30	100	210	0.6	0.0	0.0	0.0	34096.7	1,693,661		4,197,981
02/25/13	14773.7	38	100	200	0.4	0.0	0.0	0.0	34229.0	1,698,650		4,202,970
03/01/13	14867.0	36	100	200	--	--	--	--	34322.4	1,700,070		4,204,390
03/06/13	14986.6	35	100	210	0.4	0.0	0.0	0.0	34442.0	1,701,149		4,205,469
03/08/13	15035.2	35	100	210	1.5	0.0	0.0	0.0	34490.7	1,701,661		4,205,981
03/11/13	15106.1	35	100	210	0.8	0.0	0.0	0.0	34561.0	1,702,293		4,206,613
03/27/13	15489.7	35	105	200	1.3	0.0	0.0	0.0	34945.1	1,705,941		4,210,261
04/03/13	15517.7	35	105	210	--	--	--	--	34973.5	1,706,223		4,210,543
04/10/13	15595.0	42	100	200	1.4	0.6	0.0	0.0	35038.8	1,712,000		4,216,320
04/18/13	15767.0	--	--	--	7.0	0.0	0.0	0.0	35210.5	1,730,944		4,235,264
05/09/13	15865.4	35	115	210	14.3	0.00	0.00	0.00	35352.4	1,737,114		4,241,434

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**PHILLIPS 66 SYSTEM-SUMMARY OF OPERATIONAL PARAMETERS**  
**PHILLIPS 66 RENTON TERMINAL**  
**RENTON, WASHINGTON**

<i>Soil Vapor Extraction System</i>									<i>Groundwater Extraction System</i>			<i>Cumulative Volume of Water Treated</i>
<i>Date</i>	<i>Hour Meter</i>	<i>Total Vacuum</i>	<i>Total Influent Temperature</i>	<i>Total Influent Flowrate</i>	<i>Influent PID</i>	<i>C-1 PID</i>	<i>C-2 PID</i>	<i>Effluent PID</i>	<i>Hour Meter</i>	<i>Water Meter Reading</i>		
05/16/13	15869.2	35	105	210	0.4	0.00	0.00	0.00	35356.2	1,738,866		4,243,186
05/21/13	15984.2	35	100	210	5.3	0.10	0.00	0.00	35471.2	1,765,951		4,270,271
05/30/13	16141.6	30	95	210	1.4	0.00	0.00	0.00	35629.3	1,797,991		4,302,311
06/04/13	16144.0	35	105	210	8.7	0.00	0.00	0.00	35631.5	1,798,804		4,303,124
06/13/13	16274.1	35	105	210	1.8	0.00	0.10	0.00	35761.6	1,822,664		4,326,984
06/21/13	16447.4	22	100	220	1.5	0.00	0.00	0.00	35765.8	1,823,430		4,327,750
06/28/13	16615.8	50	120	210	--	--	--	--	35838.3	1,835,191		4,339,511
07/02/13	16644.5	40	120	210	--	--	--	--	35866.7	1,839,189		4,343,509
07/10/13	16673.1	40	120	210	--	--	--	--	35895.2	136 a		4,347,761
07/16/13	16796.8	40	125	155	7.6	0.00	0.00	0.00	36018.9	14,570		4,362,195
07/23/13	16851.2	30	125	150	4.6	0.00	0.00	0.00	36068.0	18,097		4,365,722
07/30/13	17014.4	60	110	140	6.0	0.00	0.30	0.00	36231.3	33,212		4,380,837
08/08/13	17015.6	30	100	175	11.0	0.00	0.00	0.00	36232.5	33,444		4,381,069
08/12/13	17017.9	18	100	170	17.1	0.00	0.00	0.00	36234.7	33,636		4,381,261
08/20/13	17209.3	45	110	175	12.9	0.00	0.00	0.00	36426.2	49,760		4,397,385
08/26/13	17352.6	10	110	150	10.0	0.00	0.00	0.00	36569.5	54,346		4,401,971
09/05/13	17593.9	30	120	100	33.8	0.00	0.00	0.00	36810.8	61,491		4,409,116
09/09/13	17604.4	45	100	150	--	--	--	--	--	61,613		4,409,238
09/19/13	17845.6	35	100	160	31.0	1.20	0.00	0.00	37062.7	82,138		4,429,763
09/26/13	17856.8	35	100	160	31.5	0.00	0.00	0.00	37073.8	95,372		4,442,997
10/03/13	17912.8	35	100	160	23.9	0.00	0.00	0.00	37129.5	97,902		4,445,527
10/11/13	18104.2	35	90	160	3.5	0.00	0.00	0.00	37320.0	135,200		4,482,825
10/17/13	18212.1	35	90	160	4.7	0.00	0.00	0.00	37428.3	152,090		4,499,715
10/24/13	18216.2	35	80	175	3.6	0.00	0.00	0.00	37432.2	153,328		4,500,953

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**PHILLIPS 66 SYSTEM-SUMMARY OF OPERATIONAL PARAMETERS**  
**PHILLIPS 66 RENTON TERMINAL**  
**RENTON, WASHINGTON**

<i>Date</i>	<i>Soil Vapor Extraction System</i>						<i>Groundwater Extraction System</i>			<i>Cumulative Volume of Water Treated</i>
	<i>Hour Meter</i>	<i>Total Vacuum</i>	<i>Total Influent Temperature</i>	<i>Total Influent Flowrate</i>	<i>Influent PID</i>	<i>C-1 PID</i>	<i>C-2 PID</i>	<i>Effluent PID</i>	<i>Hour Meter</i>	<i>Water Meter Reading</i>

## Notes:

scfm Standard cubic feet per minute

°F Degrees Fahrenheit

ppmV parts per million volume

-- Not collected

a Totalizer was not working and was replaced on 7/10/13. Final totalizer reading on old totalizer was 1,843,305 prior to replacement.

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**EXXONMOBIL/BP SYSTEM-SUMMARY OF OPERATIONAL PARAMETERS  
PHILLIPS 66 RENTON TERMINAL  
RENTON, WASHINGTON**

<b>Date</b>	<i><b>Groundwater Extraction Data</b></i>							<i><b>Air Stripper Operational Data</b></i>				
	<b>R1 Hour Meter (hours)</b>	<b>R2 Hour Meter (hours)</b>	<b>Total Hour Meter (hours)</b>	<b>Air Stripper Hour Meter (hours)</b>	<b>R1 Totalizer Reading (gallons)</b>	<b>R2 Totalizer Reading (gallons)</b>	<b>Effluent Totalizer Reading (cf)</b>	<b>Volume of Water Treated (gallons)</b>	<b>Air Stripper Velocity (fpm)</b>	<b>Air Stripper Pressure (in. H<sub>2</sub>O)</b>	<b>Air Stripper Flow Rate (scfm)</b>	<b>Effluent PID (ppmV)</b>
12/17/10	6,631.9	4,297.2	--	--	--	--	5,847	43,739	--	--	--	--
12/20/10	6,631.9	4,335.2	--	--	--	--	6,907	51,668	--	--	--	--
12/21/10	6,632.0	4,346.1	--	--	--	--	7,187	53,762	--	7.0	--	6.2
12/29/10	6,631.9	4,497.0	--	--	--	--	9,968	74,566	--	6.0	--	3.6
12/30/10	6,634.0	4,516.4	--	--	--	--	10,387	77,700	--	7.0	--	--
01/05/11	6,634.1	4,516.4	--	--	--	--	10,404	77,827	--	7.0	--	--
01/06/11	6,635.7	4,517.8	--	--	--	--	10,551	78,927	--	7.0	--	5.4
01/10/11	6,692.0	4,566.0	--	--	23,389	17,778	16,048	120,047	--	7.0	--	0.0
01/18/11	6,765.2	4,653.3	--	--	--	--	24,142	180,595	--	7.0	--	3.0
01/19/11	6,775.5	4,659.2	--	--	54,514	49,763	25,003	187,035	--	7.0	--	--
01/25/11	6,819.0	4,692.2	--	--	74,622	64,610	29,785	222,807	--	7.0	--	3.2
01/27/11	6,834.0	4,699.6	--	--	81,550	67,818	31,148	233,003	--	7.0	--	3.2
02/01/11	6,865.8	4,718.1	--	35.5	96,672	76,558	34,406	257,375	--	7.0	--	--
02/03/11	6,878.7	4,723.4	--	49.2	102,680	79,028	35,646	266,651	--	7.0	--	--
02/11/11	6,883.9	4,726.7	--	--	--	--	36,178	270,630	--	--	--	--
02/14/11	6,884.2	4,727.0	--	129.1	105,259	80,727	36,209	270,862	362	7.0	289.2	0.8
02/16/11	6,884.9	4,727.4	--	173.8	105,590	80,988	36,289	271,461	620	7.0	495.3	1.7
02/23/11	6,970.2	4,795.2	--	238.2	131,073	97,377	42,210	315,753	700	7.0	559.2	--
03/01/11	6,971.3	4,796.1	--	238.9	131,394	97,675	42,289	316,344	613	7.0	489.7	5
03/08/11	7,055.7	4,858.3	--	305.3	155,972	117,100	48,442	362,371	550	7.0	439.4	2
03/14/11	7,113.4	4,922.9	--	369.3	173,207	136,693	53,381	399,318	695	7.0	555.2	1
03/22/11	7,193.3	5,022.3	--	447.3	196,781	152,490	58,823	440,027	641	7.0	512.1	3
03/23/11	7,212.1	5,064.8	--	463.8	196,781	152,490	59,908	448,143	--	7.0	--	--
03/24/11	7,220.4	5,074.9	69.3	--	204,682	157,602	60,595	453,282	--	--	--	--
03/29/11	7,254.4	5,101.7	162.0	510.8	214,610	165,934	63,166	472,514	526	7.0	420.2	3
04/05/11	7,324.7	5,182.8	334.9	599.9	234,628	189,161	69,024	516,335	437	7.0	349.1	0.3
04/13/11	7,356.2	5,216.4	409.2	757.5	244,318	197,959	71,500	534,857	437	7	349.1	1.3
04/15/11	7,356.3	5,216.5	409.5	757.7	--	--	--	--	--	--	--	2.3
04/19/11	7,359.9	5,217.5	415.1	856.2	245,426	198,248	71,679	536,196	400	7	319.6	2.1
04/26/11	7,443.4	5,217.5	583.6	911.8	271,569	198,248	75,165	562,273	430	7	343.5	2.7
05/03/11	7,487.3	5,219.0	708.9	944.1	285,392	199,004	77,210	577,571	342	7	273.2	5.4

TABLE 2

**EXXONMOBIL/BP SYSTEM-SUMMARY OF OPERATIONAL PARAMETERS**  
**PHILLIPS 66 RENTON TERMINAL**  
**RENTON, WASHINGTON**

<b>Date</b>	<i>Groundwater Extraction Data</i>							<i>Air Stripper Operational Data</i>				
	<b>R1 Hour Meter</b>	<b>R2 Hour Meter</b>	<b>Total Hour Meter</b>	<b>Air Stripper Hour Meter</b>	<b>R1 Totalizer Reading</b>	<b>R2 Totalizer Reading</b>	<b>Effluent Totalizer</b>	<b>Volume of Water Treated</b>	<b>Air Stripper Velocity</b>	<b>Air Stripper Pressure</b>	<b>Air Stripper Flow Rate</b>	<b>Effluent PID</b>
05/13/11	7,546.1	5,169.5	947.7	985.5	20,863	221,163	83,756	626,538	--	--	--	--
05/16/11	7,562.7	5,302.2	1,019.4	1,004.6	28,276	235,588	86,668	648,322	470	7	375.5	8
05/17/11	7,567.6	5,305.3	1,040.8	1,007.8	30,462	236,932	87,125	651,740	350	7	279.6	15
05/24/11	7,586.6	5,314.1	1,124.5	1,108.1	38,872	240,924	88,832	664,510	500	7	399.5	5
06/02/11	7,640.9	5,347.6	1,246.8	1,222.4	54,849	251,261	92,437	691,477	66.9	7	53.4	--
06/07/11	7,691.1	5,372.2	1,368.6	1,244.3	69,034	258,511	95,438	713,926	430	7	343.5	6
06/14/11	7,751.0	5,407.6	1,493.0	1,262.8	81,812	263,491	98,017	733,218	430	7	343.5	4.1
06/22/11	7,753.7	5,409.2	1,499.2	1,263.5	82,361	263,645	98,104	733,869	--	7	--	--
06/28/11	7,817.9	5,442.3	1,607.4	1,283.0	95,781	269,517	100,763	753,760	340	7	271.6	0
07/06/11	7,849.4	5,442.5	1,668.5	1,289.9	102,293	269,544	101,699	760,761	420	8	336.4	2.2
07/12/11	7,870.7	5,442.5	1,698.1	1,411.1	106,745	269,544	102,349	765,624	612	6	487.8	--
07/14/11	7,900.1	5,444.0	1,743.8	1,417.5	112,782	269,992	103,240	772,289	--	8	--	--
07/19/11	7,933.1	5,459.4	1,860.7	1,431.7	122,656	274,092	105,179	786,794	488	8	390.8	5.5
07/26/11	7,964.4	5,466.4	2,027.7	1,446.8	134,993	276,019	107,161	801,620	--	7	--	--
08/03/11	8,035.6	5,471.7	2,215.8	1,461.0	147,652	277,422	109,136	816,394	643	2	507.5	1.4
08/11/11	8,075.4	5,475.5	2,412.7	1,473.0	159,224	278,440	110,865	829,328	--	2	--	--
08/17/11	8,087.8	5,476.4	2,458.8	1,476.5	163,038	278,677	111,385	833,218	--	1.5	--	2.2
08/24/11	8,119.9	5,479.0	2,626.3	1,486.0	172,309	279,611	112,822	843,967	--	1.0	--	0.3
08/30/11	8,145.1	5,480.4	2,772.1	1,492.9	179,751	279,769	113,904	852,061	2.68	1	2.1	0.4
09/07/11	8,175.8	5,480.4	2,966.6	1,501.0	188,612	279,783	115,244	862,085	570	1	448.8	1.4
09/15/11	8,203.0	5,480.5	3,155.3	1,508.2	196,485	279,789	116,471	871,264	2.71	2	2.1	0.0
09/21/11	8,203.4	5,493.0	3,297.5	1,511.2	196,549	283,013	117,067	875,722	664	2	524.1	0.0
09/28/11	8,233.3	5,509.9	3,467.1	1,522.7	204,931	286,691	118,849	889,052	2.58	1	2.0	0.0
10/03/11	8,251.1	5,517.4	3,588.5	1,528.8	209,947	288,254	119,837	896,443	675	2	532.7	0.7
10/14/11	8,291.6	5,567.6	3,851.5	1,551.9	221,269	10,441	123,359	922,789	600	2	473.6	4.5
10/17/11	8,303.6	5,569.5	3,924.6	1,555.6	224,688	10,862	123,937	927,113	--	2	--	0.0
10/25/11	8,336.1	5,596.1	4,116.9	1,570.7	233,896	17,416	126,269	944,558	540	2	426.2	--
11/02/11	8,338.1	5,596.5	4,128.1	1,571.3	23,446	17,524	126,523	946,458	500	2	394.6	--
11/08/11	8,374.1	5,620.2	4,271.0	1,586.4	244,724	23,206	128,798	963,476	550	2	434.1	2.9
11/16/11	8,415.0	5,640.4	4,462.6	1,603.4	265,429	28,488	131,284	982,073	560	2.5	442.5	2.3
11/23/11	8,441.4	5,699.9	4,609.0	1,626.7	266,244	41,195	134,483	1,006,003	630	2	497.2	1.3
11/29/11	8,495.1	5,711.8	4,775.1	1,659.2	279,244	58,257	138,756	1,037,967	540	2	426.2	1.8
12/09/11	8,532.4	5,787.0	4,898.4	1,793.7	289,930	61,608	--	1,045,990	664	2	524.1	0.5

TABLE 2

**EXXONMOBIL/BP SYSTEM-SUMMARY OF OPERATIONAL PARAMETERS**  
**PHILLIPS 66 RENTON TERMINAL**  
**RENTON, WASHINGTON**

<b>Date</b>	<b>Groundwater Extraction Data</b>							<b>Air Stripper Operational Data</b>				
	<b>R1 Hour Meter</b>	<b>R2 Hour Meter</b>	<b>Total Hour Meter</b>	<b>Air Stripper Hour Meter</b>	<b>R1 Totalizer Reading</b>	<b>R2 Totalizer Reading</b>	<b>Effluent Totalizer Reading</b>	<b>Volume of Water Treated</b>	<b>Air Stripper Velocity</b>	<b>Air Stripper Pressure</b>	<b>Air Stripper Flow Rate</b>	<b>Effluent PID</b>
12/13/11	--	--	--	1,886.2	--	--	140,901	1,054,013	--	--	--	--
12/14/11	8,533.5	5,878.8	4,899.7	1,909.6	290,266	62,682	141,007	1,054,806	955	2	753.7	1.3
12/21/11	8,597.7	5,901.2	5,066.1	1,911.8	17,735	66,055	144,083	1,077,816	813	2	641.7	0.0
12/29/11	8,598.6	5,901.5	5,068.6	1,915.4	18,031	66,160	144,256	1,079,110	--	--	--	--
01/04/12	8,604.5	5,907.4	5,074.5	2,015.4	19,809	67,680	144,808	1,083,239	808	2	637.7	0.8
01/10/12	8,630.4	5,945.1	5,113.3	2,060.1	27,786	77,963	147,414	1,102,733	627	2	494.9	0.1
01/17/12	8,637.0	5,960.5	5,152.5	2,171.1	29,872	81,955	148,323	1,109,533	647	2	510.7	0.7
01/24/12	8,637.0	5,966.0	5,157.3	2,172.6	29,876	83,436	148,626	1,111,800	670	2	528.8	1.2
01/31/12	8,637.0	6,097.9	5,321.5	2,336.1	29,876	116,974	153,114	1,145,372	459	3	363.2	0.2
02/09/12	8,660.2	6,193.4	5,539.5	2,363.8	37,246	136,440	156,727	1,172,399	690	2	544.6	1.7
02/16/12	8,746.5	6,250.7	5,705.8	2,408.5	64,850	151,008	162,364	1,214,567	--	--	--	--
02/21/12	8,799.1	6,304.9	5,828.9	2,446.4	81,652	167,569	166,691	1,246,935	560	2	442.0	1.2
03/02/12	8,894.5	6,374.0	6,066.2	2,508.3	111,763	186,746	172,710	1,291,961	894	1	703.9	0.0
03/07/12	8,937.5	6,495.2	6,187.9	2,535.4	125,523	193,002	175,430	1,312,308	600	2	473.6	0.8
03/15/12	8,998.0	6,621.6	6,360.2	2,583.5	144,033	211,767	180,159	1,347,683	657	2	518.5	0.0
03/20/12	9,018.1	6,643.6	6,382.3	2,693.1	150,304	214,881	181,383	1,356,839	580	2	457.8	0.0
03/27/12	9,097.0	6,722.4	6,551.0	2,751.0	174,680	235,691	186,672	1,396,404	591	2	466.5	0.0
04/05/12	9,185.1	6,842.1	6,767.6	2,820.6	201,599	259,885	192,771	1,442,027	989	2	780.6	0.2
04/12/12	9,216.0	6,869.4	6,849.3	2,838.9	211,013	263,769	194,707	1,456,510	518	2	408.8	1.2
04/20/12	9,299.7	6,927.9	7,038.5	3,031.6	236,119	282,423	200,460	1,499,545	747	2	589.6	0.7
04/26/12	9,352.7	6,970.9	7,186.3	3,063.6	251,147	7,083	204,370	1,528,794	550	2	434.1	1.2
05/01/12	9,392.2	6,993.5	7,303.2	3,085.4	262,267	15,135	206,921	1,547,877	560	2	442.0	1.8
05/11/12	9,471.1	7,035.4	7,541.0	3,129.9	284,330	29,414	211,240	1,580,185	796	2	628.2	0.0
05/17/12	9,516.7	7,048.6	7,686.9	3,150.8	6,493	33,785	213,537	1,597,368	769	2	606.9	0.9
05/24/12	9,531.9	7,052.9	7,738.4	3,273.7	10,700	35,113	214,361	1,603,532	600	2	473.6	1.2
06/08/12	9,596.0	7,093.0	7,931.4	3,305.0	28,629	47,340	214,773	1,606,614	894	2	705.6	1.7
06/18/12	9,597.0	7,094.1	7,932.5	3,541.3	28,881	47,690	214,960	1,608,012	550	2	434.1	--
06/29/12	9,699.5	7,158.5	8,197.9	3,593.6	58,299	67,604	221,798	1,659,164	705	2	556.4	0.0
07/03/12	9,727.3	7,170.3	8,291.6	3,667.2	66,474	71,381	223,473	1,671,694	687	2	542.2	0.0
07/13/12	9,793.1	7,183.1	8,532.8	3,694.0	85,806	75,467	226,837	1,696,859	874	2	689.8	0.0
07/18/12	9,824.0	7,303.4	8,653.3	3,705.3	94,741	75,524	228,373	1,708,230	880	2	694.5	0.0
07/24/12	9,834.6	7,305.5	8,679.2	3,709.3	97,815	76,078	228,418	1,708,567	967	2	763.2	--
08/01/12	9,888.2	7,322.2	8,889.6	3,729.8	113,325	80,766	231,346	1,730,468	530	2	418.3	1.2

TABLE 2

**EXXONMOBIL/BP SYSTEM-SUMMARY OF OPERATIONAL PARAMETERS**  
**PHILLIPS 66 RENTON TERMINAL**  
**RENTON, WASHINGTON**

<b>Date</b>	<b>Groundwater Extraction Data</b>							<b>Air Stripper Operational Data</b>				
	<b>R1 Hour Meter</b>	<b>R2 Hour Meter</b>	<b>Total Hour Meter</b>	<b>Air Stripper Hour Meter</b>	<b>R1 Totalizer Reading</b>	<b>R2 Totalizer Reading</b>	<b>Effluent Totalizer Reading</b>	<b>Volume of Water Treated</b>	<b>Air Stripper Velocity</b>	<b>Air Stripper Pressure</b>	<b>Air Stripper Flow Rate</b>	<b>Effluent PID</b>
08/09/12	9,888.2	7,322.2	8,889.6	3,729.8	113,325	80,766	231,346	1,730,468	--	--	--	--
08/31/12	9,940.6	7,327.4	9,293.1	3,753.6	--	82,145	235,039	1,758,092	694	2	547.7	0.0
09/05/12	9,965.6	7,328.9	9,417.2	3,761.3	135,760	82,506	236,194	1,766,731	717	2	565.9	0.0
09/11/12	9,991.2	7,330.0	9,560.3	3,769.1	143,269	82,776	237,384	1,775,632	1042	2	822.4	0.2
09/25/12	10,041.9	7,330.4	9,895.6	3,784.4	158,051	82,888	239,742	1,793,270	622	2	490.9	0.0
10/05/12	10,005.2	7,330.4	9,971.0	3,787.2	151,101	82,890	240,290	1,797,369	784	2	618.8	0.0
10/12/12	10,061.6	7,330.4	10,017.9	3,909.3	163,846	82,894	240,867	1,801,685	944	2	745.1	19.8
10/19/12	10,076.4	7,371.8	10,110.6	3,919.1	168,169	88,780	242,320	1,812,554	550	2	434.1	3.3
10/24/12	10,096.8	7,373.0	10,232.0	3,925.5	174,126	89,038	243,285	1,819,772	580	2	457.8	3.4
11/2/12	10,135.6	7,373.0	10,445.0	3,937.8	186,174	89,058	244,471	1,828,643	575	2	453.8	1.5
11/8/12	10,149.9	7,412.5	10,501.7	3,973.6	190,730	98,736	246,946	1,847,156	826	2	651.9	0.8
11/16/12	10,198.1	7,412.4	10,652.5	4,032.6	205,855	98,768	249,122	1,863,433	878	2	693.0	0.6
11/30/12	10,199.0	7,412.4	10,653.5	4,033.0	206,159	98,787	249,376	1,865,332	600	2	473.6	1.8
12/4/12	10,270.1	7,412.5	10,748.3	4,056.4	228,989	98,799	252,510	1,888,775	964	2	760.8	--
12/10/12	10,270.6	7,412.9	10,749.0	4,056.6	229,074	98,878	252,643	1,889,770	729	2	575.4	--
12/17/12	10,386.2	7,579.9	10,919.5	4,121.9	265,921	123,537	260,627	1,949,490	783	2	618.0	0.0
12/28/12	10,388.1	7,582.3	10,921.9	4,122.9	266,422	123,992	260,865	1,951,270	615	2	485.4	0.8
1/4/13	10,513.1	7,687.6	11,088.4	4,171.1	2,865	141,740	266,508	1,993,480	550	2	434.1	1.1
1/10/13	10,638.5	7,810.2	11,233.3	4,218.5	28,493	160,776	272,294	2,036,759	865	2	682.7	0.2
1/25/13	10,639.4	7,811.3	11,235.0	4,219.0	28,702	--	272,522	2,038,465	650	2	513.0	1.2
1/31/13	10,639.7	7,811.6	11,377.9	4,219.1	28,721	160,989	272,541	2,038,607	550	2	434.1	--
2/8/13	10,808.3	7,928.7	11,569.3	4,273.5	63,335	184,755	280,135	2,095,410	733	2	578.5	1.7
2/14/13	10,898.7	7,963.8	11,712.5	4,298.8	81,610	191,547	283,410	2,119,907	600	2	473.6	1.6
2/19/13	10,967.0	7,989.2	11,831.9	4,318.1	94,704	196,083	285,856	2,138,203	585	2	461.7	0.3
2/25/13	11,041.5	8,037.5	11,978.0	4,342.7	108,695	204,307	288,302	2,156,499	580	3	458.9	1.4
3/1/13	11,085.2	8,090.1	12,070.7	--	117,037	208,877	290,549	2,173,307	--	3	--	--
3/6/13	11,144.0	8,187.9	12,190.8	4,380.7	12,954	216,868	292,846	2,190,488	600	3	474.7	2.7
3/8/13	11,167.4	8,234.7	12,239.7	4,389.4	132,316	219,220	293,746	2,197,220	660	3	522.2	0.9
3/11/13	11,203.2	8,253.0	12,310.3	4,404.2	138,410	225,140	295,097	2,207,326	550	3	435.2	1.8
3/27/13	11,342.3	8,328.9	12,607.0	4,468.8	163,975	247,408	300,955	2,251,143	521	3	412.2	3.0
4/3/13	11,441.0	8,353.0	12,778.0	4,501.0	181,465	253,598	304,054	2,274,324	550	3	435.2	--
4/10/13	11,525.8	8,448.5	12,943.9	4,547.6	196,546	276,232	308,417	2,306,959	567	3	448.6	3.4
4/18/13	11,648.2	8,528.5	13,138.8	4,596.2	218,990	1,119	313,150	2,342,362	580	3	458.9	3.0

TABLE 2

**EXXONMOBIL/BP SYSTEM-SUMMARY OF OPERATIONAL PARAMETERS  
PHILLIPS 66 RENTON TERMINAL  
RENTON, WASHINGTON**

Groundwater Extraction Data							Air Stripper Operational Data					
Date	R1 Hour Meter	R2 Hour Meter	Total Hour Meter	Air Stripper Hour Meter	R1 Totalizer Reading	R2 Totalizer Reading	Effluent Totalizer	Volume of Water Treated	Air Stripper Velocity	Air Stripper Pressure	Air Stripper Flow Rate	Effluent PID
5/9/13	11,849	8,630	13,412	4678.7	255,904	19,812	320,777	2,399,412	530	3	416.3	8.4
5/16/13	11,888	8,640	13,481	4791.6	263,982	22,022	322,238	2,410,340	650	3	510.5	1.6
5/21/13	11,948	8,671	13,598.3	4810.4	275,855	27,678	324,826	2,429,698	590	3	463.4	1.5
5/30/13	12,044	8,776	13,816.5	4850.6	4,181	45,098	329,917	2,467,779	--	3	--	1.6
6/4/13	12,093	8,791	13,933.9	4968.0	13,907	47,673	331,728	2,481,325	--	3	--	5.9
6/13/13	12,176	8,811	14,151.5	4990.0	30,558	51,206	334,672	2,503,347	--	3	--	2.9
6/21/13	12,241	8,826	14,340.8	5007.0	44,773	53,501	336,991	2,520,693	--	3	--	1.3
6/28/13	12,265	8,831	14,411.3	5111.3	49,755	54,369	337,765	2,526,482	--	3	--	--
7/2/13	12,309	8,865	14,508.5	5124.9	58,355	58,953	339,604	2,540,238	--	3	--	--
7/10/13	12,377	8,891	14,706.0	5141.6	71,882	61,260	341,886	2,557,307	--	3	450.0	--
7/16/13	12,421	8,904	14,847.8	5152.0	80,757	62,303	343,308	2,567,944	--	3	350.0	--
7/23/13	12,471	8,918	15,016.8	5163.2	90,569	63,201	344,930	2,580,076	--	3	400.0	1.9
7/30/13	12,515	8,931	15,180.3	5173.0	99,360	63,662	345,391	2,583,525	--	3	459	2.5
8/8/13	12,569	8,932	15,395.8	5184.7	110,207	64,062	345,330	2,583,068	--	3	382	6.4
8/12/13	12,579	8,932	15,440.6	5240.6	112,330	64,109	344,977	2,580,428	--	3	391	2.3
8/20/13	12,614	8,932	15,632.3	5251.1	121,330	64,159	344,980	2,580,450	--	3	402	9.9
8/26/13	12,635	8,932	15,775.5	5257.4	127,129	64,159	344,930	2,580,076	--	3	487	15.5
9/5/13	12,644	8,934	15,841.7	5438.0	129,747	65,489	346,260	2,590,025	--	3	383	14.2
9/9/13	12,649	8,937	15,854.2	5521.2	131,185	67,476	346,917	2,594,939	--	--	--	--
9/19/13	12,719	8,945	16,098.7	5542.7	146,421	72,720	350,174	2,619,302	--	4	401	4.4
9/26/13	12,755	8,954	16,236.0	5585.8	155,680	78,706	350,916	2,624,852	--	4	404	404
10/3/13	12,794	9,005	16,331.0	5677.9	165,304	87,370	353,594	2,644,883	--	4	--	0.0
10/11/13	12,800	9,019	16,345.1	5858.8	166,680	89,541	347,101	2,596,315	--	4	422	0.3
10/17/13	12,864	9,070	16,427.4	5942.9	180,933	96,710	352,099	2,633,701	--	4	394	1.6
10/24/13	12,887	9,078	16,474.2	6072.1	188,230	98,255	346,475	2,591,633	--	4	394	1.2

Notes:

scfm Standard cubic feet per minute

TABLE 2

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**EXXONMOBIL/BP SYSTEM-SUMMARY OF OPERATIONAL PARAMETERS**  
**PHILLIPS 66 RENTON TERMINAL**  
**RENTON, WASHINGTON**

<i>Date</i>	<i>Groundwater Extraction Data</i>							<i>Air Stripper Operational Data</i>				
	<i>R1 Hour Meter</i>	<i>R2 Hour Meter</i>	<i>Total Hour Meter</i>	<i>Air Stripper Hour Meter</i>	<i>R1 Totalizer Reading</i>	<i>R2 Totalizer Reading</i>	<i>Effluent Totalizer Reading</i>	<i>Volume of Water Treated</i>	<i>Air Stripper Velocity</i>	<i>Air Stripper Pressure</i>	<i>Air Stripper Flow Rate</i>	<i>Effluent PID</i>
°F	Degrees Fahrenheit											
ppmV	Parts per million volume											
--	Not collected											

TABLE 3

**PHILLIPS 66 SYSTEM-DISSOLVED PHASE ANALYTICAL DATA**  
**PHILLIPS 66 RENTON TERMINAL**  
**RENTON, WASHINGTON**

Date	Total Influent								Air Stripper Effluent								Carbon Midpoint								Total Effluent							
	Benzene ( $\mu\text{g/L}$ )	Toluene ( $\mu\text{g/L}$ )	Ethyl- benzene ( $\mu\text{g/L}$ )	Total Xylenes ( $\mu\text{g/L}$ )	TPHg ( $\mu\text{g/L}$ )	TPHd ( $\mu\text{g/L}$ )	TPHo ( $\mu\text{g/L}$ )	Benzene ( $\mu\text{g/L}$ )	Toluene ( $\mu\text{g/L}$ )	Ethyl- benzene ( $\mu\text{g/L}$ )	Total Xylenes ( $\mu\text{g/L}$ )	TPHg ( $\mu\text{g/L}$ )	TPHd ( $\mu\text{g/L}$ )	TPHo ( $\mu\text{g/L}$ )	Benzene ( $\mu\text{g/L}$ )	Toluene ( $\mu\text{g/L}$ )	Ethyl- benzene ( $\mu\text{g/L}$ )	Total Xylenes ( $\mu\text{g/L}$ )	TPHg ( $\mu\text{g/L}$ )	TPHd ( $\mu\text{g/L}$ )	TPHo ( $\mu\text{g/L}$ )	Benzene ( $\mu\text{g/L}$ )	Toluene ( $\mu\text{g/L}$ )	Ethyl- benzene ( $\mu\text{g/L}$ )	Total Xylenes ( $\mu\text{g/L}$ )	TPHg ( $\mu\text{g/L}$ )	TPHd ( $\mu\text{g/L}$ )	TPHo ( $\mu\text{g/L}$ )	pH (S.U.)	FOG ( $\mu\text{g/L}$ )		
12/21/10	4,000	6,500	330	6,100	45,000	<2500	240 J	67	120	5.2	101	730	350	36 J	0.64 J	0.8 J	0.044 J	1.28 J	33 J	110 J	66 J	<2.0	0.36 J	0.016 J	0.10 J	<50	92 J	64 J	7.68	--		
01/10/11	3,620	5,630	328	6,950	42,000	1,540	407	49.3	65.9	4	76.3	328	169	<385	<1.0	<1.0	<1.0	<3.0	<50.0	<76.9	<385	<1.0	<1.0	<1.0	<3.0	<50	<77.7	<388	7.8	--		
02/16/11	2,330	3,120	224	4,500	43,000	1,580	<385	325	548	26	431	5,240	337	<426	--	--	--	--	--	--	--	<1.0	<1.0	<1.0	<3.0	<50.0	<320	<381	7.5	--		
03/08/11	3,480	4,330	219	5,650	45,100	12,800	2,550	187	313	16.5	209	2,720	386	<379	--	--	--	--	--	--	--	<1.0	<1.0	<1.0	<3.0	<50.0	114	<388	7.7	--		
04/19/11	6,300	408	7,420	6,080	58,000	1,800	<380	111	9.5	177	145	1,510	320	<380	<1.0	<1.0	<1.0	<3.0	<50.0	<.77	<380	<1.0	<1.0	<1.0	<3.0	<50.0	<78	<390	--	--		
05/17/11	5,910	517	9,110	6,790	78,000	1,300	<380	78.6	8.1	142	119	993	270	<380	<1.0	<1.0	<1.0	<3.0	<50.0	<75	380	<1.0	<1.0	<1.0	<3.0	<50.0	180	<400	--	--		
06/14/11	6,870	586	10,100	6,780	66,700	1,400	<380	147	3.5	176	221	1,590	210	<380	<1.0	<1.0	<1.0	<3.0	<50.0	<75	<380	<1.0	<1.0	<1.0	<3.0	<50.0	<78	<390	7.1	--		
07/06/11	9,510	731	12,300	7,910	59,000	1,200	<380	<1.0	<1.0	<3.0	<50.0	<76	<380	<1.0	<1.0	<1.0	<3.0	<50.0	<76	<380	<1.0	<1.0	<1.0	<3.0	<50.0	<82	<410	--	--			
08/17/11	454	590	28.6	589	4,730	<390	170	<1.0	<1.0	<1.0	<3.0	<50.0	<380	<76	<1.0	<1.0	<1.0	<3.0	<50.0	<380	<77	<1.0	<1.0	<1.0	<3.0	<50.0	<380	<76	--	--		
09/07/11	130	173	9.8	159	1,530	240	<380	<1.0	<1.0	<1.0	<3.0	<50.0	<76	<380	<1.0	<1.0	<1.0	<3.0	<50.0	<76	<380	<1.0	<1.0	<1.0	<3.0	<50.0	<170	<400	8.3	--		
10/14/11	102	89.9	3.2	95.5	693	150	<380	<1.0	<1.0	<1.0	<3.0	<50.0	<77	<380	<1.0	<1.0	<1.0	<3.0	<50.0	<76	<380	<1.0	<1.0	<1.0	<3.0	<50.0	<78	<390	--	--		
11/23/11	1,440	1,930	118	1,500	12,700	200	<390	<1.0	<1.0	<1.0	<3.0	<50.0	<76	<380	<1.0	<1.0	<1.0	<3.0	<50.0	<76	<380	<1.0	<1.0	<1.0	<3.0	<50.0	<77	<380	--	--		
12/09/11	1,250	1,090	73.5	1,680	12,200	150	<380	11.3	7.4	1.0	31.6	291	<82	<1.0	<1.0	<1.0	<3.0	<50.0	<76	<380	<1.0	<1.0	<1.0	<3.0	<50.0	<76	<380	--	--			
01/10/12	3,150	4,130	263	3,360	26,700	290	<380	2.9	2.8	1.0	6.5	90	<76	<380	<1.0	<1.0	<1.0	<3.0	<50.0	<76	<380	<1.0	<1.0	<1.0	<3.0	<50.0	<76	<380	--	--		
02/09/12	837	886	102	1,480	18,300	590	<380	2.0	1.4	1.6	5.3	69.9	140	<380	<1.0	<1.0	<1.0	<3.0	<50.0	<76	<380	<1.0	<1.0	<1.0	<3.0	<50.0	<75	<380	--	--		
03/07/12	1,690	1,800	134	2,690	15,500	190	<380	10.7	9.5	1.0	42.6	235	<76	<380	<1.0	<1.0	<1.0	<3.0	<50.0	<75	<380	<1.0	<1.0	<1.0	<3.0	<50.0	<75	<380	--	--		
04/05/12	1,060	758	40.2	3,250	22,700	62	<380	<1.0	<1.0	<1.0	<3.0	<50.0	140	<390	<1.0	<1.0	<1.0	<3.0	<50.0	<76	<380	<1.0	<1.0	<1.0	<3.0	<50.0	<80	<400	--	--		
05/01/12	1,300	993	46.3	3,160	20,900	1,300	<380	11.8	8.7	1.0	32.9	279	150	<380	<1.0	<1.0	<1.0	<3.0	<50.0	<75	<380	<1.0	<1.0	<1.0	<3.0	<50.0	<77	<380	--	--		
06/01/12	554	420	<10.0	1,070	4,520	300	<380	<1.0	<1.0	<1.0	<3.0	<50.0	<76	<380	<1.0	<1.0	<1.0	<3.0	<50.0	<93	<470	<1.0	<1.0	<1.0	<3.0	<50.0	<75	<380	--	--		
07/13/12	752	892	32.6	671	5,270	120	<390	<1.0	1.8	1	3.0	<50.0	<77	<380	<1.0	<1.0	<1.0	<3.0	<50.0	<79	<400	<1.0	<1.0	<1.0	<3.0	<50.0	<78	<390	--	--		
08/09/12	118	176	13.8	305	2,050	120	<380	<1.0	<1.0	<1.0	<3.0	<50.0	120	<410	<1.0	<1.0	<1.0	<3.0	<50.0	<76	<380	<1.0	<1.0	<1.0	<3.0	<50.0	<77	<380	--	--		
09/11/12	86.8	77.7	4.9	90	710	<77	<380	<1.0	<1.0	<1.0	<3.0	<50.0	<76	<380	<1.0	<1.0	<1.0	<3.0	<50.0	<75	<380	<1.0	<1.0	<1.0	<3.0	<50.0	<76	<380	--	--		
10/24/12	459	320	9	888	5,590	430	<830	<1.0	<1.0	<1.0	<3.0	<50.0	<170	<830	<1.0	<1.0	<1.0	<3.0	<50.0	<170	<850	<1.0	<1.0	<1.0	<3.0	<50.0	<160	<820	7.2	--		
11/30/12	1,860	2,710	155	2,080	17,100	1,900	230	<1.0	<1.0	<1.0	<3.0	<100	<110	<110	<1.0	<1.0	<1.0	<3.0	<100	<100	<100	<1.0	<1.0	<1.0	<3.0	<100	<100	<400	--	--		
12/17/12	3,200	2,420	42	4,180	17,800	4,600	320	11.2	4.6	1.0	94.8	455	780	490	<1.0	<1.0	<1.0	<3.0	<100	<100	440	<1.0	<1.0	<1.0	<3.0	<100	<100	<400	--	--		
01/10/13	2,560	2,410	52	3,050	11,100	14,400	27,500	<1.0	<1.0	<1.0	<3.0	29.1	196	400	<100	<1.0	<1.0	<1.0	<3.0	<100	<100	<100	<1.0	<1.0	<1.0	<3.0	<100	<110	<400	--	--	
02/14/13	2,550	2,500	75	2,480	17,300	3,400	<410	100	77.2	1.6	137	944	1,800	<420	<1.0	<1.0	<1.0	<3.0	<100	<400	<400	<1.0	<1.0	<1.0	<3.0	<100	<400	<400	--	--		
03/08/13	408	342	<5.0	458	2,500	1,100	<430	<1.0	<1.0	<3.0	<100	<430	<430	<1.0	<1.0	<1.0	<3.0	<100	<410	<410	<1.0	<1.0	<1.0	<3.0	<100	<400	<400	--	--			
04/18/13	2,340	1,720	86	3,420	19,800	2,100	<400	155	75.2	2	311	1,510	1,900	<410	<1.0	<1.0	<1.0	<3.0	<100	<400	<400	<1.0	<1.0	<1.0	<3.0	<100	<400	<400	--	--		
05/16/13	1,930	2,460	252	2,220	14,900	<390	<390	12.8	10.1	<1.0	14.5	124	<380	<380	<1.0	<1.0	<1.0	<3.0	<100	<380	<380	<1.0	<1.0	<1.0	<3.0	<100	<400	<400	--	--		
06/13/13	2,500	1,970	107	3,090	15,200	640	<400	440	240	5.9	758	4,010	640	<390	<1.0	<1.0	<1.0	<3.0	<100	<390	<390	<1.0	<1.0	<1.0	<3.0	<100	<390	<390	7.1	<6200		
07/16/13	828	449	<10.0	1,730	8,040	690																										

TABLE 4

**PHILLIPS 66 SYSTEM-VAPOR PHASE ANALYTICAL DATA**  
**PHILLIPS 66 RENTON TERMINAL**  
**RENTON, WASHINGTON**

Soil Vapor Extraction Well Influent								Air Stripper Effluent								Total Influent								Carbon Midpoint 1								Carbon Midpoint 2								Total Effluent							
Date	Benzene (ppmV)	Toluene (ppmV)	Ethyl- benzene (ppmV)	Total Xylenes (ppmV)	TPHg (ppmV)	Benzene (ppmV)	Toluene (ppmV)	Ethyl- benzene (ppmV)	Total Xylenes (ppmV)	TPHg (ppmV)	Benzene (ppmV)	Toluene (ppmV)	Ethyl- benzene (ppmV)	Total Xylenes (ppmV)	TPHg (ppmV)	Benzene (ppmV)	Toluene (ppmV)	Ethyl- benzene (ppmV)	Total Xylenes (ppmV)	TPHg (ppmV)	Benzene (ppmV)	Toluene (ppmV)	Ethyl- benzene (ppmV)	Total Xylenes (ppmV)	TPHg (ppmV)	Benzene (ppmV)	Toluene (ppmV)	Ethyl- benzene (ppmV)	Total Xylenes (ppmV)	TPHg (ppmV)																	
11/15/10	3.1	6.1	0.18	1.18	33.6	3.8	5.2	<0.16	4.5	<11.2	0.13	0.41	0.02	0.242	2.6	0.018	0.033	<0.0015	0.0133	1.5	<0.017	<0.017	<0.017	<0.051	6.7	0.21	0.68	<0.017	<0.051	11.2																	
12/21/10	0.53	1.46	0.09	0.67	14.79	11.61	14.63	0.48	6.35	65.43	5.65	7.45	0.25	3.35	31.29	0.0056	0.06	0.004	0.03	2.53	<0.0527	0.07	0.01	0.01	3.70	0.13	0.56	0.01	0.08	11.66																	
01/10/11	0.21	0.56	0.023	0.212	2.6	4.6	6.7	<0.76	3.15	<53.10	5.7	7.7	0.24	2.89	18.0	0.064	0.096	<0.01	<0.042	2.4	<0.0014	0.039	<0.0014	<0.042	0.33	0.051	0.23	<0.018	<0.054	3.5																	
02/16/11	10.0	50.9	< 2.2	20.8	244	9.2	14.8	0.48	3.6	11.8	14.3	13.4	0.65	8.4	18.9	1.6	< 0.7	< 0.7	< 4.97	< 4.9	< 0.017	0.058	< 0.017	0.125	< 1.2	< 0.072	< 0.212	< 5.0																			
03/08/11	3.5	12.0	< 1.1	4.7	134	13.5	25.7	0.77	7.2	56.4	8.9	14.5	< 0.54	3.88	< 37.6	< 0.0034	< 0.0034	< 0.0034	< 0.0101	< 0.24	< 0.0084	0.0014	< 0.00084	< 0.0017	< 0.00254	< 0.0056	0.088	< 0.0056	< 0.166	< 0.4																	
04/13/11	0.60	4.1	0.43	4.4	18.7	--	--	--	--	--	<0.041	0.15	<0.041	0.051	9.9	0.0047	0.042	0.0018	0.0047	2.2	<0.0084	0.0088	<0.00084	<0.00084	0.88	<0.0084	<0.0084	<0.00084	<0.00084	1.1																	
05/17/11	7.9	27.2	1.1	12.9	287	25.7	49.7	< 4.5	12.7	< 312	7.9	27.2	1.1	12.9	287	0.0024	0.013	< 0.0015	0.0107	0.53	< 0.014	0.023	< 0.014	< 0.014	0.17	0.019	0.054	0.043	0.0304	0.26																	
06/07/11	4.6	20	0.68	8.6	172	83.8	152	6.2	56.5	330	0.40	1.4	0.052	0.40	14.0	< 0.0084	0.012	< 0.00084	< 0.00084	< 0.059	0.0029	0.11	0.012	0.018	< 0.059	< 0.0084	0.0057	< 0.00084	< 0.00084	0.026																	
07/06/11	33.1	141	3.5	54.1	1,210	29.2	40.7	0.76	27.4	152	0.32	1.3	< 0.28	0.47	14.8	< 0.0084	0.037	< 0.0084	< 0.00254	< 0.059	< 0.0084	0.015	< 0.0084	< 0.00254	< 0.059	< 0.014	< 0.014	< 0.028	< 0.099																		
08/17/11	6.9	29.8	1.7	67	1,000	< 0.0084	0.0011	< 0.00084	0.0017	0.16	1.3	9.9	0.33	10.2	186	< 0.0084	0.002	< 0.0084	0.029	0.2	0.000	0.007	0.035	0.0132	1.1	0.057	0.005	< 0.0084	0.0127	0.56																	
09/07/11	1.1	6.7	0.5	24.7	271	< 0.0013	0.021	< 0.0013	0.051	0.69	< 0.27	0.44	< 0.27	2.13	< 18.8	< 0.0014	0.016	< 0.0014	< 0.0041	0.1	< 0.0013	0.025	0.017	0.109	1.5	< 0.013	0.018	< 0.013	< 0.039	0.14																	
10/14/11	10.4	40.1	1.5	52.5	933	0.083	0.28	0.092	0.29	6.2	0.65	2.4	0.078	2.7	58.1	0.0061	0.028	< 0.0014	0.036	1.2	< 0.0087	0.0091	0.018	0.092	3.3	< 0.0084	0.046	< 0.0084	0.012	0.94																	
11/29/11	4.5	6.7	< 0.27	4.6	352	0.014	0.048	0.023	0.070	1.8	0.12	0.18	< 0.0067	0.112	9.2	< 0.0014	0.017	< 0.0014	< 0.0042	0.22	0.0091	0.047	< 0.0084	0.038	0.24	0.014	0.039	< 0.0084	0.035	0.21																	
12/09/11	1.3	2.8	< 0.28	< 0.84	111	0.61	0.47	0.025	0.66	4.1	0.065	0.12	< 0.017	< 0.015	4.7	< 0.0084	0.081	< 0.0084	< 0.0254	0.29	0.0063	0.074	< 0.0084	< 0.0254	0.38	< 0.0084	0.044	< 0.0084	< 0.0254	0.19																	
01/10/12	1.5	3.1	0.12	0.99	42.1	0.013	0.039	0.014	0.022	0.32	0.047	0.076	< 0.0039	0.027	1.1	< 0.0084	0.039	< 0.0084	< 0.0254	< 0.059	0.018	0.02	< 0.0084	< 0.0254	0.18	< 0.0084	0.021	< 0.0084	< 0.0254	0.28																	
02/09/12	0.11	0.22	< 0.017	0.15	1.2	3.1	2.1	< 0.12	3.6	< 9.4	0.87	0.64	0.035	1.24	2.5	< 0.0084	0.013	< 0.0084	0.005	0.33	< 0.0084	0.046	< 0.0084	< 0.0084	0.2	< 0.0084	0.012	< 0.0084	< 0.0084	0.23																	
03/07/12	0.90	1.9	0.051	0.323	9.7	5.1	4.6	0.19	5.2	19.7	0.90	1.9	0.051	0.323	9.7	< 0.0084	0.045	< 0.0084	< 0.00254	0.62	< 0.0084	0.033	< 0.0084	0.137	0.74	< 0.0084	0.038	< 0.0084	< 0.0254	0.26																	
04/05/12	0.019	0.066	< 0.0042	0.051	1.0	< 0.0067	0.014	< 0.0067	0.016	0.60	0.33	0.3	< 0.017	0.39	2.6	< 0.0084	0.011	< 0.0084	< 0.00254	0.17	< 0.00840	0.0089	0.012	< 0.010	0.41	< 0.0084	0.012	< 0.0084	< 0.0254	0.35																	
05/01/12	1.1	2.1	0.019	0.288	87.2	18.4	14.3	< 0.54	13.8	77.4	0.02	0.0	< 0.0042	< 0.0126	0.95	0.035	0.12	0.016	0.066	0.48	0.001	0.041	< 0.00840	0.0057	0.37	< 0.0084	0.047	< 0.0084	< 0.0254	0.53																	
06/08/12	2.7	5.4	< 0.27	1.41	124	0.0014	0.006	< 0.0084	0.003	0.84	0.02	0.0	0.002	0.052	1.5	< 0.0084	0.053	< 0.0084	< 0.0254	0.41	< 0.00840	0.005	< 0.0084	< 0.0254	0.40	< 0.0084	0.005	< 0.0084	< 0.0254	0.25																	
07/13/12	7.1	16.1	1	8.7	374	0.0029	0.016	0.021	0.0206	0.75	0.02	0.3	0.019	0.071	8.4	0.024	0.028	< 0.0084	< 0.0254	1.30	0.0013	0.034	< 0.0084	< 0.0254	1.00	0.001	0.034	< 0.0084	< 0.0254	0.93																	
08/09/12	10.8	24.3	1.8	20.6	753	0.0004	0.003	0.003	0.04	1.4	0.30	1.0	0.054	0.67	22.5	0.0042	0.073	0.0013	0.0055	1.40	0.0025	0.025	< 0.0084	< 0.0254	0.72	0.00092	0.015	< 0.0084	< 0.0254	0.33																	
09/11/12	7.5	57.5	1.4	37.2	588	< 0.0067	0.012	< 0.0067	0.0080	1.2	0.94	3.8	0.160	3.1	89.1	< 0.0084	0.018	< 0.0084	< 0.00254	1.50	< 0.0084	0.021	< 0.0084	< 0.0254	1.60	< 0.0084	0.037	< 0.0084	< 0.0254	0.71																	
10/24/12	3.4	34.2	1.6	36.2	615	< 0.045	0.09	< 0.045	0.305	< 3.2	0.1	0.68	0.051	0.61	17	0.0307	0.023	< 0.0037	< 0.0205	0.9	0.0094	0.009	0.0015	0.0164	0.76	< 0.0084	0.021	< 0.0084	< 0.0254	0.87																	
11/30/12	1.2	0.27	0.24	2.29	37.5	4.1	4.5	0.14	2.12	5.8	0.21	0.28	0.018	0.253	< 1.2	< 0.0042	< 0.0042	< 0.0042	< 0.0126	0.97	< 0.0084	< 0.0084	< 0.00254	0.071	< 0.0084	0.009	< 0.0084	< 0.0254	0.091																		
12/17/12	0.41	0.89	0.055	0.49	7.6	0.061	0.053	< 0.015	0.61	< 1.1	0.021	0.037	< 0.0050	0.035	0.49	0.032	0.056	0.0075	0.042	0.96	0.021	0.091	< 0.010	0.032	0.18	< 0.0084	0.012	< 0.0084	< 0.0254	0.11																	
01/10/13	0.042	0.15	< 0.017	0.29	7.1	< 0.017	< 0.017	< 0.017	< 0.051	< 1.2	< 0.017	< 0.017	< 0.051	< 1.2	< 0.0084	0.0051	< 0.0084	< 0.0254	< 0.059	< 0.017	< 0.017	< 0.051	< 1.2	< 0.0084	< 0.0084	< 0.0254	< 0.059																				
02/14/13	0.058	0.1	0.014	0.09	1.9	0.0085	0.012	0.0019	0.0164	0.14	0.035	0.040	0.0025	0.0270	0.25	< 0.0084	0.0084	< 0.0084	< 0.0254	0.21	0.0099	0.019	< 0.0094	< 0.0284	0.34	< 0.0084	0.017	< 0.0084	< 0.0254	< 0.059																	
03/08/13	< 0.017	0.2	< 0.017	0.223	81.3	1.4	0.85	< 0.023	1.03	5	0.70	0.41	< 0.023	0.35	5.0	< 0.0013	0.0013	< 0.0013	< 0.039	0.24	< 0.0084	0.014	< 0.0084	< 0.0254	0.27	< 0.0084	0.0																				

TABLE 5

**EXXONMOBIL/BP SYSTEM-DISSOLVED PHASE ANALYTICAL DATA**  
**PHILLIPS 66 RENTON TERMINAL**  
**RENTON, WASHINGTON**

R1 Influent												R2 Influent												Total Influent												Total Effluent											
Date	Benzene ( $\mu\text{g/L}$ )	Toluene ( $\mu\text{g/L}$ )	Ethyl-benzene ( $\mu\text{g/L}$ )	Total Xylenes ( $\mu\text{g/L}$ )	TPHg ( $\mu\text{g/L}$ )	TPHd ( $\mu\text{g/L}$ )	TPHo ( $\mu\text{g/L}$ )	Benzene ( $\mu\text{g/L}$ )	Toluene ( $\mu\text{g/L}$ )	Ethyl-benzene ( $\mu\text{g/L}$ )	Total Xylenes ( $\mu\text{g/L}$ )	TPHg ( $\mu\text{g/L}$ )	TPHd ( $\mu\text{g/L}$ )	TPHo ( $\mu\text{g/L}$ )	Benzene ( $\mu\text{g/L}$ )	Toluene ( $\mu\text{g/L}$ )	Ethyl-benzene ( $\mu\text{g/L}$ )	Total Xylenes ( $\mu\text{g/L}$ )	TPHg ( $\mu\text{g/L}$ )	TPHd ( $\mu\text{g/L}$ )	TPHo ( $\mu\text{g/L}$ )	Benzene ( $\mu\text{g/L}$ )	Toluene ( $\mu\text{g/L}$ )	Ethyl-benzene ( $\mu\text{g/L}$ )	Total Xylenes ( $\mu\text{g/L}$ )	TPHg ( $\mu\text{g/L}$ )	TPHd ( $\mu\text{g/L}$ )	TPHo ( $\mu\text{g/L}$ )	FOG ( $\mu\text{g/L}$ )	pH																	
12/21/10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	600	7.8	300	157	4,300	550	54 J	1.0 J	0.33 J	0.75 J	0.92 J	63	160	41 J	--	8.12															
01/10/11	1,750	37.2	547	138	4,750	871	<408	738	12.4	458	205	5,670	728	<388	1,380	26.5	475	186	5,340	832	<377	5.2	<1.0	2.1	<3.0	<50.0	118	<381	--	7.6																	
02/16/11	548	25.9	381	98.3	4,830	563	<379	30	<1.0	58.9	25.5	1,430	281	<379	446	11.9	99.5	58.2	2,280	436	<379	2.4	<1.0	<1.0	<3.0	53.8	159	<379	--	7.6																	
03/08/11	1,400	69.5	556	160	7,200	690	<377	500	4.8	247	145	4,820	331	<377	958	39.9	383	146	5,750	472	<377	3.2	<1.0	1.7	<3.0	62.1	<75.8	<379	--	7.9																	
4/19/2011	--	--	--	--	--	--	--	--	--	--	--	--	--	--	916	31.4	272	83.8	3,990	670	<380	5.1	<1.0	1.4	<3.0	134	290	<380	<4700	--																	
5/17/2011	1,940	191	811	214	7,620	940	<380	754	9.5	706	251	7,810	850	<380	1,370	116	662	189	6,870	840	<380	26.2	2.3	10.9	5	263	160	<380	--	--																	
6/14/2011	1,670	230	671	158	8,040	840	<380	1,080	9.8	752	167	9,450	730	<380	1,540	177	640	155	7,880	800	<380	25.2	2.9	9.5	4.1	252	120	<380	--	7.6																	
7/6/2011	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1,080	66.4	118	61.2	3,060	560	<380	21.8	<1.0	1.3	<3.0	163	80	<380	<4800	--																	
8/17/2011	1,920	36.2	465	66.8	6,110	1,600	<400	1,570	9	682	46	8,310	930	<400	1,830	26.8	141	51.7	4,730	480	<380	5.4	<1.0	<1.0	<3.0	<50.0	<76	<380	--	--																	
9/7/2011	2,300	30.6	574	47	6,520	770	<380	976	6.5	517	15	5,830	600	<380	1,560	13.4	6.4	35	3,380	510	<380	<1.0	<1.0	<1.0	<3.0	<50.0	<76	<380	--	8.4																	
10/14/2011	2,090	26.1	409	37.1	4,940	770	<390	221	2.3	272	6.7	3,520	400	<380	1,340	16.3	218	23.8	3,720	640	<380	3.5	<1.0	<1.0	<3.0	<50.0	100	<380	--	--																	
11/22/2011	1,610	22.6	341	34.0	4,890	0.5	<0.39	45.7	1.1	35.9	4.4	565	<0.075	<0.38	537	7.4	109	<15.0	1,670	190	<380	1.6	<1.0	<1.0	<3.0	<50.0	<75	<380	--	--																	
12/9/2011	1,220	19.9	338	26.6	4,180	0.41	<0.38	301	2.3	514	4.5	5,760	0.36	<0.38	132	1.8	435	5.7	4,290	190	<380	<1.0	<1.0	<1.0	<3.0	<50.0	<76	<380	--	--																	
1/10/2012	2,070	28.2	750	41.5	4,090	480	<400	372	<1.0	55.3	4.0	629	78	<390	968	20.2	374	33.0	3,270	260	<390	6.9	<1.0	3.3	<3.0	<50.0	<77	<380	<5000	7.7																	
2/9/2012	2,050	34.4	854	72.6	6,150	430	<380	342	2.6	263	42.3	4,510	390	<380	1,900	25.5	754	67.7	7,000	540	<380	16.8	<1.0	7.1	<3.0	75.7	120	<380	--	--																	
3/7/2012	1,520	31.7	647	118	5,790	860	<380	--	<1.0	--	--	--	--	--	1,520	31.7	647	118	5,790	860	<380	2.7	<1.0	1.4	<3.0	<50.0	<76	<380	--	--																	
4/5/2012	1,930	49.7	784	184	7,560	1,100	<380	631	3.9	408	52.7	5,320	630	<380	1,270	28	500	113	5,630	660	<380	1.3	<1.0	<1.0	<3.0	<50.0	<76	<380	--	--																	
5/1/2012	1,880	56.6	714	132	6,270	940	<380	720	6	508	77	6,230	830	<380	1,660	40.8	682	108	5,980	1,200	<380	<1.0	<1.0	<1.0	<3.0	<50.0	<76	<380	--	--																	
6/1/2012	1,960	67.2	901	121	4,970	740	<380	17	<1.0	10	<3.0	215	--	--	960	37.7	421	69.1	2,780	420	<380	<1.0	<1.0	<1.0	<3.0	<50.0	<76	<380	--	--																	
7/13/2012	1,670	36.8	704	73	6,110	660	<390	882	6	712	22	8,290	840	<380	1,860	32.5	547	67.1	6,410	780	<380	1.1	<1.0	<1.0	<3.0	<50.0	<76	<380	--	--																	
08/09/12	1,730	32.3	507	62.4	4,570	590	<390	745	5	632	15	6,010	590	<380	1,170	13.3	154	11.5	2,760	360	<400	<1.0	<1.0	<3.0	<50.0	<76	<380	--	--																		
09/11/12	2,220	25.7	566	35.7	4,580	830	<380	977	5	501	6	5,590	690	<380	1,750	15.8	123	26	3,920	590	<380	<1.0	<1.0	<1.0	<3.0	<50.0	<76	<380	--	--																	
10/24/12	1,570	18.8	361	27.3	5,320	860	<820	420	4.2	87.7	4.9	1,380	<160	<820	1,310	14.7	254	22.8	4,380	690	<820	<1.0	<1.0	<3.0	<50.0	<160	<820	<5200	7.60																		
11/30/12	855	20.0	406	<30.0	7,710	1800	410	11.7	<1.0	11.3	<3.0	660	210	<110	789	11.4	174	<30.0	5,510	1000	120	1.3	<1.0	<1.0	<3.0	<100	180	<110	--	--																	
12/28/12	1,670	24.1	668	83.7	10,900	1700	420	9.2	<1.0	9.6	<3.0	315	<110	130	909	14.0	315	47.0	4,970	<110	360	<1.0	<1.0	<1.0	<3.0	<100	960	310	--	--																	
01/10/13	2,180	35.3	717	112	8,240	2600	<110	11.4	<1.0	8.5	<3.0	182	<100	<100	1,200	19.8	392	63.7	4,880	1300	<110	<1.0	<1.0	<1.0	<3.0	<100	<100	<100	--	--																	
02/14/13	1,280	34.2	263	39.3	4,080	1,000	<410	660	<5.0	431	54.5	4,910	1,300	<420	1,660	45.9	508	80.4	4,790	1,800	<410	2.0	<1.0	<1.0	<3.0	<100	<410	<410	<5100	7.40																	
03/08/13	2,110	94.0	656	81.4	4,860	1,700	<420	1.7	<1.0	<1.0	<3.0	<100	<410	<410	1,360	58.0	400	51.8	2,940	940	<430	<1.0	<1.0	<3.0	<100	<400	<400	--	--																		
04/18/13	1,890	1,160	665	2,250	5,980	1,800	<420	858	3.8	483	18.4	4,950	1,300	<410	804	1670	270	1,060	18,100	4,900	<400	<1.0	<1.0	<1.0	<3.0	<100	<400	--	--																		
05/16/13	2,010	41.4	546	88.2	3,970	870	<390	924	<5.0	492	22.1	4,740	750	<420	1,580	148	232	1,500	11,900	1,500	<420	1.4	<1.0	3.4	<100	<420	<420	--	--																		
06/13/13	1,940	36.4	542	76.2	4,550	850	<400	1,070	6	627	<15.0	6,100	1,100	<420	1,580	26.1	129	112	4,160	1,100	<390	<1.0	<1.0	<1.0	<3.0	<100	<390	<390	7.4	<6300																	
07/16/13	2,190	24.6	482	51.2	4,520	1200	<410	1050	<5.0	458	<15.0	5430	990	<400	1,790	10	39.6	38.4	2,840	1100	410	<1.0	<1.0	<1.0	<3.0	<100	<400	<400	--	--																	
08/20/13	2,300	23.1	415	34.4	4,310	1,100	<420	<5.0 a	<5.0 a	<5.0 a	<15.0 a	<100 a	590 a	<420 a	1,790	<10	<10	<30	3,170	730	<410	<1.0	<1.0	<1.0	<3.0</td																						

TABLE 6

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**EXXONMOBIL/BP SYSTEM-VAPOR PHASE ANALYTICAL DATA**  
**PHILLIPS 66 RENTON TERMINAL**  
**RENTON, WASHINGTON**

<b>Date</b>	<b>Air Stripper Effluent</b>				
	<b>Benzene</b> <b>(ppmV)</b>	<b>Toluene</b> <b>(ppmV)</b>	<b>Ethyl- benzene</b> <b>(ppmV)</b>	<b>Total Xylenes</b> <b>(ppmV)</b>	<b>TPHg</b> <b>(ppmV)</b>
12/21/10	0.47	0.09	0.16	0.01	<14
01/10/11	0.83	0.023	0.24	0.107	3.5
02/16/11	0.32	0.28	<0.067	<0.197	<4.7
03/08/11	0.69	<0.067	0.17	<0.197	<4.7
04/13/11	0.47	<0.041	<0.041	<0.041	7.8
05/17/11	3.2	<0.28	0.94	<0.28	<19.5
06/07/11	2.6	0.27	0.57	0.021	5.4
7/6/2011	0.27	0.11	0.013	0.051	2.0
8/24/2011	0.88	0.01	0.00089	0.0281	1.5
9/7/2011	0.46	<0.017	<0.017	<0.052	<1.2
10/14/2011	0.76	0.012	0.055	0.0275	2.4
11/29/2011	0.14	< 0.017	0.019	< 0.051	< 1.2
12/9/2011	< 0.0014	0.0075	< 0.0014	< 0.0042	0.27
1/10/2012	0.013	0.0053	0.0029	0.0035	0.17
2/9/2012	0.18	0.015	0.05	0.0077	0.83
3/7/2012	0.38	0.011	0.11	0.0273	1.8
4/5/2012	0.58	0.067	0.15	0.1970	4.7
5/1/2012	0.86	0.036	0.29	0.0680	3.6
6/1/2012	0.44	0.015	0.10	0.0067	0.7
7/13/2012	0.79	0.007	0.08	0.1970	6.0
8/9/2012	0.11	0.010	<0.0067	<0.0197	0.79
9/11/2012	0.56	0.021	<0.017	0.023	5.0
10/24/2012	<0.0450	0.090	<0.0450	0.305	< 3.2
11/30/2012	0.21	0.28	0.140	0.253	< 1.2
12/17/2012	<0.0042	<0.0042	<0.0042	<0.0126	<0.29
1/10/2013	0.054	0.0020	0.018	0.0102	0.16
2/14/2013	<0.0036	0.0048	<0.0036	<0.0109	<0.25
3/8/2013	<0.0084	0.030	<0.0084	<0.00254	0.15
4/18/2013	0.83	0.31	0.21	0.62	3.7
5/16/2013	0.51	<0.017	<0.017	0.30	2.2
6/13/2013	0.55	0.0066	0.012	0.031	2.5
7/16/2013	0.74	<0.017	<0.017	<0.051	4.1
8/26/2013	0.85	<0.045	<0.045	<0.135	<3.1
9/19/2013	0.85	<0.017	<0.017	<0.051	2.7
10/3/2013	0.23	<0.017	0.027	<0.051	<1.2

Notes:

BTEX Benzene, Toluene, Ethylbenzene, and Total Xylenes

analyzed by EPA method TO 14

TPHg Total petroleum hydrocarbons as gasoline analyzed by

**TABLE 6**

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**EXXONMOBIL/BP SYSTEM-VAPOR PHASE ANALYTICAL DATA  
PHILLIPS 66 RENTON TERMINAL  
RENTON, WASHINGTON**

*Air Stripper Effluent*

<i>Date</i>	<i>Benzene</i>	<i>Toluene</i>	<i>Ethyl- benzene</i>	<i>Total Xylenes</i>	<i>TPHg</i>
EPA method TO 14					
ppmV Parts per million by volume					
-- Not analyzed					
<X Not detected above reporting limit X					
J Estimated Value					

TABLE 7

**PHILLIPS 66 SYSTEM-MASS REMOVAL SUMMARY**  
**PHILLIPS 66 RENTON TERMINAL**  
**RENTON, WASHINGTON**

Date	Soil Vapor Extraction System								Groundwater Extraction System								Uncaptured Emissions			
	Hour Meter (hours)	Total Flowrate (scfm)	Total Influent TPHg Concentration (ppmV)	Total Influent Benzene Concentration (ppmV)	TPHg Removal Rate (lbs/day)	Benzene Removal Rate (lbs/day)	Hour Meter (hours)	Volume of Water Treated (gallons)	Total Influent TPH Concentration ( $\mu\text{g/L}$ )	Total Influent Benzene Concentration ( $\mu\text{g/L}$ )	TPH Removal Rate (lbs/day)	Benzene Removal Rate (lbs/day)	Total TPH Removal Rate (lbs/day)	Total Benzene Removal Rate (lbs/day)	Cumulative TPH Removed (lbs)	Cumulative Benzene Removed (lbs)	Effluent TPHg Concentration (ppmV)	Effluent Emissions Rate (lbs/day)	Cumulative Uncaptured Emissions (lbs)	
11/15/10	999.8	210	2.6	0.13	0.2	0.01	20,524.6	3,176,060	27,645	845	0.62	0.02	0.79	0.03	52,442.9	1,722.4	11.2	0.8		
12/21/10	1,419.7	210	31.14	5.62	2.1	0.3	20,941.0	3,222,505	45,000	4,000	2.55	0.23	4.65	0.57	52,456.7	1,722.8	11.7	0.8	13.7	
01/10/11	1,678.4	210	18.00	5.7	1.2	0.3	21,196.2	3,294,629	43,947	3,620	2.49	0.21	3.70	0.55	52,506.4	1,728.9	3.5	0.2	16.3	
02/16/11	2,064.0	210	18.9	14.3	1.3	0.9	21,577.0	3,402,308	44,580	2,330	1.74	0.09	3.02	0.97	52,565.4	1,737.8	< 5	0.0	16.3	
03/08/11	2,339.9	210	<37.6	8.9	2.5	0.5	21,852.3	3,456,077	60,450	3,480	2.68	0.15	5.21	0.70	52,600.1	1,748.9	< 0.4	0.0	16.3	
04/13/11	2,860.7	210	9.9	<0.041	0.7	0.003	22,370.8	3,570,740	59,800	6,300	1.62	0.17	2.28	0.17	52,712.9	1,764.0	1.1	0.1	17.9	
05/17/11	3,409.9	210	287	7.9	19.3	0.5	22,918.6	3,644,673	79,300	5,910	2.08	0.15	21.41	0.64	52,765.1	1,767.9	0.26	0.018	18.3	
06/07/11	3,726.8	210	14.0	0.40	0.9	0.02	23,235.4	3,686,105	68,100	6,870	1.03	0.10	1.98	0.13	53,047.8	1,776.4	0.12	0.008	18.4	
07/06/11	4,001.1	210	14.8	0.32	1.0	0.02	23,510.2	3,706,920	60,200	9,510	0.42	0.07	1.41	0.09	53,070.4	1,777.8	< 0.099	0.0	18.4	
08/17/11	4499.8	100	186	1.3	6.0	0.04	24,010.50	3,724,200	4,900	454	0.15	0.01	6.12	0.05	53,099.8	1,779.6	0.56	0.018	18.8	
09/07/11	5006.5	100	18.8	<0.27	0.6	0.01	24,517.00	3,730,881	1,770	130	0.05	0.004	0.66	0.01	53,229.0	1,780.7	0.14	0.004	18.9	
10/14/11	5892.8	100	58.1	0.65	1.9	0.02	25,404.00	3,739,668	843	102	0.02	0.003	1.89	0.02	53,253.3	1,781.1	0.94	0.030	20.0	
11/29/11	6733.7	200	9.2	0.12	0.6	0.01	26244.1	3,765,595	12,900	1,440	0.37	0.041	0.96	0.05	53,319.5	1,781.9	0.21	0.013	20.5	
12/09/11	6974.6	200	4.7	0.065	0.3	0.004	26485.0	3,788,820	12,350	1,250	0.35	0.036	0.66	0.04	53,329.1	1,782.4	0.19	0.012	20.6	
01/10/12	7271.1	210	1.1	0.047	0.1	0.003	26778.2	3,815,090	26,990	3,150	0.77	0.090	0.84	0.09	53,337.2	1,782.9	0.28	0.019	20.8	
02/09/12	7718.1	200	2.5	0.87	0.2	0.051	27,225.00	3,866,760	18,890	837	0.54	0.024	0.70	0.07	53,352.9	1,784.6	0.32	0.021	21.2	
03/07/12	8285.0	200	9.7	0.90	0.6	0.052	27,791.70	3,925,008	15,690	1,690	0.44	0.048	1.07	0.10	53,369.4	1,786.4	0.26	0.017	21.6	
04/05/12	8866.9	190	2.6	0.33	0.2	0.018	28,373.80	3,981,040	22,701	1,060	0.64	0.030	0.80	0.05	53,395.2	1,788.8	0.35	0.021	22.1	
05/01/12	9476.8	200	0.95	0.02	0.1	0.001	28,983.80	4,035,820	22,200	1,300	0.62	0.036	0.68	0.04	53,415.5	1,790.0	0.53	0.034	23.0	
06/01/12	10105.6	200	1.5	0.02	0.1	0.001	29,612.80	4,076,110	4,820	554	0.13	0.015	0.23	0.02	53,433.3	1,791.0	0.25	0.016	23.4	
07/13/12	11016.9	200	8.4	0.02	0.5	0.001	30,524.40	4,100,410	5,390	752	0.15	0.020	0.68	0.02	53,442.0	1,791.6	0.93	0.060	25.7	
08/09/12	11406.3	210	22.5	0.3	1.5	0.018	30913.00	4,114,617	2,170	118	0.06	0.003	1.57	0.02	53,453.1	1,792.0	0.33	0.022	26.0	
09/11/12	11842.5	200	89.1	0.9	5.7	0.055	31349.10	4,126,110	710	87	0.02	0.002	5.74	0.06	53,481.7	1,792.4	0.71	0.046	26.8	
10/24/12	12868.7	210	17.0	<0.1	1.15	0.0061	32325.50	4,138,601	6,020	459	0.15	0.012	1.30	0.02	53,726.9	1,794.8	0.087	0.006	27.1	
11/30/12	13353.6	210	<1.2	0.2	0.1	0.013	32810.60	4,147,455	19,230	1,860	0.49	0.047	0.57	0.06	53,753.2	1,795.2	0.091	0.006	27.2	
12/17/12	13706.1	200	0.5	0.03	0.001	33163.00	4,173,100	22,720	3,200	0.57	0.081	0.60	0.08	53,761.5	1,796.0	0.11	0.007	27.3		
01/10/13	14229.2	200	<1.2	<0.017	0.1	0.001	33686.20	4,195,650	53,000	2,560	1.32	0.064	1.40	0.06	53,774.7	1,797.8	<0.059	0.004	27.4	
02/14/13	14611.9	210	0.25	0.035	0.0	0.002	34067.40	4,197,282	20,700	2,550	0.51	0.063	0.53	0.07	53,796.9	1,798.9	<0.059	0.004	27.5	
03/08/13	15035.2	210	5	0.7	0.3	0.043	34490.70	4,205,981	3,600	408	0.09	0.010	0.42	0.05	53,806.2	1,800.0	0.15	0.010	27.7	
04/18/13	15767.0	210	<15.8	1.5	1.1	0.092	35210.50	4,235,264	21,900	2,340	0.53	0.056	1.59	0.15	53,819.2	1,801.6	0.52	0.035	28.7	
05/16/13	15869.2	210	<2.2	0.074	0.1	0.005	35356.20	4,243,186	14,900	1,930	0.36	0.046	0.51	0.05	53,826.9	1,802.3	<0.063	0.004	28.7	
06/13/13	16274.1	210	<8.6	0.079	0.6	0.005	35761.60	4,326,984	15,840	2,500	0.38	0.061	0.96	0.07	53,835.4	1,803.2	<0.059	0.004	28.8	
07/16/13	16796.8	155	<9.8	0.52	0.5	0.023	36018.90	4,362,195	8,730	828	0.21	0.020	0.70	0.04	53,852.2	1,804.0	<1.059	0.053	30.0	
08/20/13	17209.3	175	<19.4	0.13	1.1	0.007	36462.20	4,397,385	8,240	731	0.20	0.018	1.29	0.02	53,864.2	1,804.7	<2.059	0.116	31.9	
09/19/13	17845.6	160	<22	0.16	1.1	0.007	37062.70	4,429,763	2,370	396	0.06	0.009	1.19	0.02	53,898.3	1,805.4	<3.059	0.157	36.1	
10/03/13	17912.8	160	<7.9	0.55	0.4	0.026	37129.50	4,445,527	1,610	182	0.04	0.004	0.44	0.03	53,901.6	1,805.4	<4.059	0.208	36.7	

## Notes:

- Benzene, Toluene, Ethylbenzene, and Total Xylenes analyzed by EPA method TO 14
- TPHg Total petroleum hydrocarbons as gasoline
- TPH Total petroleum hydrocarbons as the sum of TPHg, TPHd, and TPHo
- scfm Standard cubic feet per minute
- ppmV Parts per million by volume
- lbs/day Pounds per day
- $\mu\text{g/L}$  Micrograms per liter
- Data not available
- <X Not detected above reporting limit X. Report limit used in mass removal calculations
- J Estimated Value
- Soil Vapor Removal rate = C (ppmv) x Q (cfm) x (1lb-mole/386ft<sup>3</sup>) x MW (lb/lb-mole) x 60 min/hr x 24 hr/day x 10<sup>-6</sup>  
Where: C = concentration, Q = flow, MW= molecular weight (86 lb/lb-mole for TPHg and 78 lb/lb-mole for benzene)
- Groundwater Removal Rate = C ( $\mu\text{g/L}$ ) x 2.204E-9  $\mu\text{g/L}$  x (1 liter/0.264 gallons) x V (gallons) x (1/T (days))  
Where: C = concentration, V = volume of water treated, T= time between sampling events

TABLE 8

**EXXONMOBIL/BP SYSTEM-MASS REMOVAL SUMMARY**  
**PHILLIPS 66 RENTON TERMINAL**  
**RENTON, WASHINGTON**

Date	Hour Meter (hours)	Volume of Water Treated (gallons)	Total Influent TPH Concentration ( $\mu\text{g/L}$ )	Total Influent Benzene Concentration ( $\mu\text{g/L}$ )	TPH Removal Rate (lbs/day)	Benzene Removal Rate (lbs/day)	Cumulative TPH Removed (lbs)	Cumulative Benzene Removed (lbs)
12/17/10	--	43,739	--	--	0.10	0.01	0.00	0.00
12/21/10	--	53,762	4,904	600	0.14	0.02	0.41	0.07
01/10/11	--	120,047	6,172	1,380	0.21	0.05	3.12	1.01
02/16/11	--	271,461	2,716	446	0.10	0.02	10.93	1.64
03/08/11	--	362,371	6,222	958	0.21	0.03	12.99	2.30
04/19/11	415.1	536,196	4,660	916	0.17	0.03	22.02	3.72
05/17/11	1,040.8	651,740	7,710	1,370	0.28	0.05	26.51	5.01
06/14/11	1,493.0	733,218	8,680	1,540	0.27	0.05	31.75	5.92
07/06/11	1,668.5	760,761	3,620	1,080	0.11	0.03	33.75	6.17
08/24/11	2,626.3	843,967	5,210	1,830	0.09	0.03	38.29	7.44
09/07/11	2,966.6	862,085	3,890	1,560	0.04	0.02	39.58	7.68
10/14/11	3,851.5	922,789	4,360	1,340	0.06	0.02	41.11	8.36
11/29/11	4,775.1	1,037,967	1,860	537	0.05	0.01	43.41	8.87
12/09/11	4,898.4	1,045,990	4,480	132	0.06	0.00	43.65	8.88
01/10/12	5,113.3	1,102,733	3,530	968	0.19	0.05	44.18	9.34
02/09/12	5,539.5	1,172,399	7,540	1,900	0.25	0.06	47.49	10.45
03/07/12	6,187.9	1,312,308	6,650	1,520	0.29	0.07	54.16	12.22
04/05/12	6,767.6	1,442,027	6,290	1,270	0.28	0.06	61.11	13.60
05/01/12	7,303.2	1,547,877	7,180	1,660	0.28	0.07	67.40	15.06
06/08/12	7,931.4	1,606,614	3,200	960	0.06	0.02	74.84	15.53
07/13/12	8,532.8	1,696,859	7,190	1,860	0.22	0.06	76.34	16.94
08/09/12	8,889.6	1,730,468	3,120	1,170	0.06	0.02	79.56	17.26
09/11/12	9,560.3	1,775,632	4,510	1,750	0.06	0.02	81.20	17.92
10/24/12	10,232.0	1,819,772	5,070	1,310	0.07	0.02	82.91	18.41
11/30/12	10,653.5	1,865,332	6,630	789	0.14	0.02	84.08	18.71
12/28/12	10,921.9	1,951,270	5,330	909	0.34	0.06	85.68	19.36
01/10/13	11,233.3	2,036,759	6,180	1,200	0.34	0.07	90.12	20.21
02/14/13	11,712.5	2,119,907	6,590	1,660	0.23	0.06	96.91	21.37
03/08/13	12,239.7	2,197,220	3,880	1,360	0.11	0.04	101.94	22.24
04/18/13	13,138.8	2,342,362	23,000	804	0.74	0.03	106.21	23.22
05/16/13	13,481.4	2,410,340	13,400	1,580	0.53	0.06	116.83	24.12
06/13/13	14,151.5	2,503,347	5,260	1,580	0.15	0.04	131.70	25.34
07/16/13	14,847.8	2,567,944	4,350	1,790	0.08	0.03	135.95	26.31
08/20/13	15,632.3	2,580,450	4,310	1,790	0.01	0.01	138.59	26.49
09/19/13	16,098.7	2,619,302	3,420	1,560	0.06	0.03	138.86	27.00
10/03/13	16,331.0	2,644,883	2,270	535	0.05	0.01	139.41	27.11

## Notes:

BTEX Benzene, Toluene, Ethylbenzene, and Total Xylenes analyzed by EPA method TO 14

TPHg Total petroleum hydrocarbons as gasoline

TPH Total petroleum hydrocarbons as the sum of TPHg, TPPh, and TPHo

scfm Standard cubic feet per minute

ppmV Parts per million by volume

lbs/day Pounds per day

 $\mu\text{g/L}$  Micrograms per liter

-- Data not available

&lt;X Not detected above reporting limit X. Report limit used in mass removal calculations

J Estimated Value

Soil Vapor Removal rate = C (ppmv) x Q (cfm) x (1lb-mole/386ft<sup>3</sup>) x MW (lb/lb-mole) x 60 min/hr x 24 hr/day x 10<sup>-6</sup>

Where: C = concentration, Q = flow, MW= molecular weight (86 lb/lb-mole for TPHg and 78 lb/lb-mole for benzene)

Groundwater Removal Rate = C ( $\mu\text{g/L}$ ) x 2.204E-9  $\mu\text{g/l}$  x (1 liter/0.264 gallons) x V (gallons) x (1/T (days))

Where: C = concentration, V = volume of water treated, T= time between sampling events

## Appendix A

### Laboratory Analytical Reports

August 01, 2013

Edwin Turner  
CRA\_Conoco Phillips  
20818 44th Ave. W  
Lynnwood, WA 98036

RE: Project: 070496 Tacoma  
Pace Project No.: 10235541

Dear Edwin Turner:

Enclosed are the analytical results for sample(s) received by the laboratory on July 17, 2013. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Jennifer Gross

jennifer.gross@pacelabs.com  
Project Manager

Enclosures

cc: Yu Chen, CRA\_Conoco Phillips  
Jeffrey Cloud, Conestoga-Rovers Association  
Matt Davis, CRA\_Conoco Phillips  
Kelsey Whittaker, CRA



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: 070496 Tacoma  
Pace Project No.: 10235541

### Minnesota Certification IDs

1700 Elm Street SE Suite 200, Minneapolis, MN 55414  
A2LA Certification #: 2926.01  
Alaska Certification #: UST-078  
Alaska Certification #MN00064  
Arizona Certification #: AZ-0014  
Arkansas Certification #: 88-0680  
California Certification #: 01155CA  
Colorado Certification #Pace  
Connecticut Certification #: PH-0256  
EPA Region 8 Certification #: Pace  
Florida/NELAP Certification #: E87605  
Georgia Certification #: 959  
Hawaii Certification #Pace  
Idaho Certification #: MN00064  
Illinois Certification #: 200011  
Kansas Certification #: E-10167  
Louisiana Certification #: 03086  
Louisiana Certification #: LA080009  
Maine Certification #: 2007029  
Maryland Certification #: 322  
Michigan DEQ Certification #: 9909  
Minnesota Certification #: 027-053-137

Mississippi Certification #: Pace  
Montana Certification #: MT CERT0092  
Nevada Certification #: MN\_00064  
Nebraska Certification #: Pace  
New Jersey Certification #: MN-002  
New York Certification #: 11647  
North Carolina Certification #: 530  
North Dakota Certification #: R-036  
Ohio VAP Certification #: CL101  
Oklahoma Certification #: 9507  
Oregon Certification #: MN200001  
Oregon Certification #: MN300001  
Pennsylvania Certification #: 68-00563  
Puerto Rico Certification  
Tennessee Certification #: 02818  
Texas Certification #: T104704192  
Utah Certification #: MN00064  
Virginia/DCLS Certification #: 002521  
Virginia/VELAP Certification #: 460163  
Washington Certification #: C754  
West Virginia Certification #: 382  
Wisconsin Certification #: 999407970

## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: 070496 Tacoma  
Pace Project No.: 10235541

Lab ID	Sample ID	Matrix	Date Collected	Date Received
10235541001	<b>GW-071613-MD-Total Inf</b>	Water	07/16/13 11:40	07/17/13 09:10
10235541002	<b>GW-071613-MD-AS Eff</b>	Water	07/16/13 11:50	07/17/13 09:10
10235541003	<b>GW-071613-MD-Mid Carbon</b>	Water	07/16/13 12:00	07/17/13 09:10
10235541004	<b>GW-071613-MD-Total Eff</b>	Water	07/16/13 12:10	07/17/13 09:10
10235541005	<b>GW-071613-MD-BP R1 Inf</b>	Water	07/16/13 13:15	07/17/13 09:10
10235541006	<b>GW-071613-MD-BP R2 Inf</b>	Water	07/16/13 13:25	07/17/13 09:10
10235541007	<b>GW-071613-MD-BP Total Inf</b>	Water	07/16/13 13:35	07/17/13 09:10
10235541008	<b>GW-071613-MD-BP Total Eff</b>	Water	07/16/13 13:45	07/17/13 09:10
10235541009	Trip Blank	Water	07/16/13 00:00	07/17/13 09:10
10235541010	<b>A-0701613-MD-SVE INF</b>	Air	07/16/13 12:10	07/17/13 09:10
10235541011	<b>A-0701613-MD-AS EFF</b>	Air	07/16/13 12:12	07/17/13 09:10
10235541012	<b>A-0701613-MD-Total INF</b>	Air	07/16/13 12:14	07/17/13 09:10
10235541013	<b>A-0701613-MD-Mid 1</b>	Air	07/16/13 12:16	07/17/13 09:10
10235541014	<b>A-0701613-MD-Mid 2</b>	Air	07/16/13 12:18	07/17/13 09:10
10235541015	<b>A-0701613-MD-Total EFF</b>	Air	07/16/13 12:20	07/17/13 09:10
10235541016	<b>A-0701613-MD-BP Total EFF</b>	Air	07/16/13 13:54	07/17/13 09:10

## REPORT OF LABORATORY ANALYSIS

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## SAMPLE ANALYTE COUNT

Project: 070496 Tacoma  
Pace Project No.: 10235541

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
10235541001	GW-071613-MD-Total Inf	NWTPH-Dx	MT	4	PASI-M
		NWTPH-Gx/8021	KT1	2	PASI-M
		EPA 8260	EB2	7	PASI-M
10235541002	GW-071613-MD-AS Eff	NWTPH-Dx	MT	4	PASI-M
		NWTPH-Gx/8021	KT1	2	PASI-M
		EPA 8260	EB2	7	PASI-M
10235541003	GW-071613-MD-Mid Carbon	NWTPH-Dx	MT	4	PASI-M
		NWTPH-Gx/8021	KT1	2	PASI-M
		EPA 8260	EB2	7	PASI-M
10235541004	GW-071613-MD-Total Eff	NWTPH-Dx	MT	4	PASI-M
		NWTPH-Gx/8021	KT1	2	PASI-M
		EPA 8260	EB2	7	PASI-M
10235541005	GW-071613-MD-BP R1 Inf	NWTPH-Dx	MT	4	PASI-M
		NWTPH-Gx/8021	KT1	2	PASI-M
		EPA 8260	EB2	7	PASI-M
10235541006	GW-071613-MD-BP R2 Inf	NWTPH-Dx	MT	4	PASI-M
		NWTPH-Gx/8021	KT1	2	PASI-M
		EPA 8260	EB2	7	PASI-M
10235541007	GW-071613-MD-BP Total Inf	NWTPH-Dx	MT	4	PASI-M
		NWTPH-Gx/8021	KT1	2	PASI-M
		EPA 8260	EB2	7	PASI-M
10235541008	GW-071613-MD-BP Total Eff	NWTPH-Dx	MT	4	PASI-M
		NWTPH-Gx/8021	KT1	2	PASI-M
		EPA 8260	EB2	7	PASI-M
10235541009	Trip Blank	NWTPH-Gx/8021	KT1	2	PASI-M
		EPA 8260	EB2	7	PASI-M
10235541010	A-0701613-MD-SVE INF	TO-14M Ambient Air	CJR	6	PASI-M
10235541011	A-0701613-MD-AS EFF	TO-14M Ambient Air	CJR, DR1	6	PASI-M
10235541012	A-0701613-MD-Total INF	TO-14M Ambient Air		6	PASI-M
10235541013	A-0701613-MD-Mid 1	TO-14M Ambient Air	CJR	6	PASI-M
10235541014	A-0701613-MD-Mid 2	TO-14M Ambient Air	CJR	6	PASI-M
10235541015	A-0701613-MD-Total EFF	TO-14M Ambient Air	CJR	6	PASI-M
10235541016	A-0701613-MD-BP Total EFF	TO-14M Ambient Air	CJR	6	PASI-M

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## ANALYTICAL RESULTS

Project: 070496 Tacoma  
Pace Project No.: 10235541

Sample: GW-071613-MD-Total Inf	Lab ID: 10235541001	Collected: 07/16/13 11:40	Received: 07/17/13 09:10	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>NWTPH-Dx GCS Silica Gel LV</b>	Analytical Method: NWTPH-Dx Preparation Method: EPA 3510							
Diesel Fuel Range SG	<b>0.69</b> mg/L		0.40	1	07/18/13 14:00	07/31/13 16:53	68334-30-5	
Motor Oil Range SG	ND mg/L		0.40	1	07/18/13 14:00	07/31/13 16:53	64742-65-0	
<b>Surrogates</b>								
o-Terphenyl (S)	80 %		30-125	1	07/18/13 14:00	07/31/13 16:53	84-15-1	
n-Triacontane (S)	90 %		30-125	1	07/18/13 14:00	07/31/13 16:53	638-68-6	
<b>NWTPH-Gx GCV</b>	Analytical Method: NWTPH-Gx/8021							
TPH as Gas	<b>8040</b> ug/L		500	5		07/19/13 00:38		
<b>Surrogates</b>								
a,a,a-Trifluorotoluene (S)	90 %		75-125	5		07/19/13 00:38	98-08-8	
<b>8260 MSV UST</b>	Analytical Method: EPA 8260							
Benzene	<b>828</b> ug/L		10.0	10		07/25/13 18:55	71-43-2	
Ethylbenzene	ND ug/L		10.0	10		07/25/13 18:55	100-41-4	
Toluene	<b>449</b> ug/L		10.0	10		07/25/13 18:55	108-88-3	
Xylene (Total)	<b>1730</b> ug/L		30.0	10		07/25/13 18:55	1330-20-7	
<b>Surrogates</b>								
1,2-Dichloroethane-d4 (S)	101 %		75-125	10		07/25/13 18:55	17060-07-0	
Toluene-d8 (S)	101 %		75-125	10		07/25/13 18:55	2037-26-5	
4-Bromofluorobenzene (S)	103 %		75-125	10		07/25/13 18:55	460-00-4	
<b>Sample: GW-071613-MD-AS Eff</b>	Lab ID: 10235541002	Collected: 07/16/13 11:50	Received: 07/17/13 09:10	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>NWTPH-Dx GCS Silica Gel LV</b>	Analytical Method: NWTPH-Dx Preparation Method: EPA 3510							
Diesel Fuel Range SG	<b>0.50</b> mg/L		0.40	1	07/18/13 14:00	07/31/13 17:15	68334-30-5	
Motor Oil Range SG	ND mg/L		0.40	1	07/18/13 14:00	07/31/13 17:15	64742-65-0	
<b>Surrogates</b>								
o-Terphenyl (S)	86 %		30-125	1	07/18/13 14:00	07/31/13 17:15	84-15-1	
n-Triacontane (S)	96 %		30-125	1	07/18/13 14:00	07/31/13 17:15	638-68-6	
<b>NWTPH-Gx GCV</b>	Analytical Method: NWTPH-Gx/8021							
TPH as Gas	<b>154</b> ug/L		100	1		07/18/13 23:17		
<b>Surrogates</b>								
a,a,a-Trifluorotoluene (S)	90 %		75-125	1		07/18/13 23:17	98-08-8	
<b>8260 MSV UST</b>	Analytical Method: EPA 8260							
Benzene	ND ug/L		1.0	1		07/20/13 17:40	71-43-2	
Ethylbenzene	ND ug/L		1.0	1		07/20/13 17:40	100-41-4	
Toluene	ND ug/L		1.0	1		07/20/13 17:40	108-88-3	
Xylene (Total)	<b>23.2</b> ug/L		3.0	1		07/20/13 17:40	1330-20-7	
<b>Surrogates</b>								
1,2-Dichloroethane-d4 (S)	100 %		75-125	1		07/20/13 17:40	17060-07-0	
Toluene-d8 (S)	100 %		75-125	1		07/20/13 17:40	2037-26-5	
4-Bromofluorobenzene (S)	102 %		75-125	1		07/20/13 17:40	460-00-4	

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## ANALYTICAL RESULTS

Project: 070496 Tacoma  
Pace Project No.: 10235541

Sample: GW-071613-MD-Mid Carbon	Lab ID: 10235541003	Collected: 07/16/13 12:00	Received: 07/17/13 09:10	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>NWTPH-Dx GCS Silica Gel LV</b>	Analytical Method: NWTPH-Dx Preparation Method: EPA 3510							
Diesel Fuel Range SG	ND mg/L		0.38	1	07/18/13 14:00	07/31/13 17:37	68334-30-5	
Motor Oil Range SG	ND mg/L		0.38	1	07/18/13 14:00	07/31/13 17:37	64742-65-0	
<b>Surrogates</b>								
o-Terphenyl (S)	84 %		30-125	1	07/18/13 14:00	07/31/13 17:37	84-15-1	
n-Triacontane (S)	94 %		30-125	1	07/18/13 14:00	07/31/13 17:37	638-68-6	
<b>NWTPH-Gx GCV</b>	Analytical Method: NWTPH-Gx/8021							
TPH as Gas	ND ug/L		100	1		07/18/13 20:54		
<b>Surrogates</b>								
a,a,a-Trifluorotoluene (S)	90 %		75-125	1		07/18/13 20:54	98-08-8	
<b>8260 MSV UST</b>	Analytical Method: EPA 8260							
Benzene	ND ug/L		1.0	1		07/20/13 17:55	71-43-2	
Ethylbenzene	ND ug/L		1.0	1		07/20/13 17:55	100-41-4	
Toluene	ND ug/L		1.0	1		07/20/13 17:55	108-88-3	
Xylene (Total)	ND ug/L		3.0	1		07/20/13 17:55	1330-20-7	
<b>Surrogates</b>								
1,2-Dichloroethane-d4 (S)	98 %		75-125	1		07/20/13 17:55	17060-07-0	
Toluene-d8 (S)	99 %		75-125	1		07/20/13 17:55	2037-26-5	
4-Bromofluorobenzene (S)	103 %		75-125	1		07/20/13 17:55	460-00-4	
<b>Sample: GW-071613-MD-Total Eff</b>	Lab ID: 10235541004	Collected: 07/16/13 12:10	Received: 07/17/13 09:10	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>NWTPH-Dx GCS Silica Gel LV</b>	Analytical Method: NWTPH-Dx Preparation Method: EPA 3510							
Diesel Fuel Range SG	ND mg/L		0.40	1	07/18/13 14:00	07/31/13 18:00	68334-30-5	
Motor Oil Range SG	ND mg/L		0.40	1	07/18/13 14:00	07/31/13 18:00	64742-65-0	
<b>Surrogates</b>								
o-Terphenyl (S)	87 %		30-125	1	07/18/13 14:00	07/31/13 18:00	84-15-1	
n-Triacontane (S)	98 %		30-125	1	07/18/13 14:00	07/31/13 18:00	638-68-6	
<b>NWTPH-Gx GCV</b>	Analytical Method: NWTPH-Gx/8021							
TPH as Gas	ND ug/L		100	1		07/18/13 21:15		
<b>Surrogates</b>								
a,a,a-Trifluorotoluene (S)	90 %		75-125	1		07/18/13 21:15	98-08-8	
<b>8260 MSV UST</b>	Analytical Method: EPA 8260							
Benzene	ND ug/L		1.0	1		07/20/13 18:11	71-43-2	
Ethylbenzene	ND ug/L		1.0	1		07/20/13 18:11	100-41-4	
Toluene	ND ug/L		1.0	1		07/20/13 18:11	108-88-3	
Xylene (Total)	ND ug/L		3.0	1		07/20/13 18:11	1330-20-7	
<b>Surrogates</b>								
1,2-Dichloroethane-d4 (S)	100 %		75-125	1		07/20/13 18:11	17060-07-0	
Toluene-d8 (S)	100 %		75-125	1		07/20/13 18:11	2037-26-5	

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## ANALYTICAL RESULTS

Project: 070496 Tacoma  
Pace Project No.: 10235541

Sample: GW-071613-MD-Total Eff	Lab ID: 10235541004	Collected: 07/16/13 12:10	Received: 07/17/13 09:10	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV UST</b>	Analytical Method: EPA 8260							
<b>Surrogates</b>								
4-Bromofluorobenzene (S)	102 %		75-125	1		07/20/13 18:11	460-00-4	
<b>Sample: GW-071613-MD-BP R1 Inf</b>								
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>NWTPH-Dx GCS Silica Gel LV</b>	Analytical Method: NWTPH-Dx Preparation Method: EPA 3510							
Diesel Fuel Range SG	1.2 mg/L		0.41	1	07/18/13 14:00	07/31/13 18:22	68334-30-5	
Motor Oil Range SG	ND mg/L		0.41	1	07/18/13 14:00	07/31/13 18:22	64742-65-0	
<b>Surrogates</b>								
o-Terphenyl (S)	88 %		30-125	1	07/18/13 14:00	07/31/13 18:22	84-15-1	
n-Triacontane (S)	98 %		30-125	1	07/18/13 14:00	07/31/13 18:22	638-68-6	
<b>NWTPH-Gx GCV</b>	Analytical Method: NWTPH-Gx/8021							
TPH as Gas	4520 ug/L		200	2		07/18/13 23:57		
<b>Surrogates</b>								
a,a,a-Trifluorotoluene (S)	119 %		75-125	2		07/18/13 23:57	98-08-8	
<b>8260 MSV UST</b>	Analytical Method: EPA 8260							
Benzene	2190 ug/L		20.0	20		07/24/13 15:46	71-43-2	
Ethylbenzene	482 ug/L		10.0	10		07/23/13 19:43	100-41-4	
Toluene	24.6 ug/L		10.0	10		07/23/13 19:43	108-88-3	
Xylene (Total)	51.2 ug/L		30.0	10		07/23/13 19:43	1330-20-7	
<b>Surrogates</b>								
1,2-Dichloroethane-d4 (S)	105 %		75-125	10		07/23/13 19:43	17060-07-0	
Toluene-d8 (S)	98 %		75-125	10		07/23/13 19:43	2037-26-5	
4-Bromofluorobenzene (S)	99 %		75-125	10		07/23/13 19:43	460-00-4	
<b>Sample: GW-071613-MD-BP R2 Inf</b>								
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>NWTPH-Dx GCS Silica Gel LV</b>	Analytical Method: NWTPH-Dx Preparation Method: EPA 3510							
Diesel Fuel Range SG	0.99 mg/L		0.40	1	07/18/13 14:00	07/31/13 18:44	68334-30-5	
Motor Oil Range SG	ND mg/L		0.40	1	07/18/13 14:00	07/31/13 18:44	64742-65-0	
<b>Surrogates</b>								
o-Terphenyl (S)	79 %		30-125	1	07/18/13 14:00	07/31/13 18:44	84-15-1	
n-Triacontane (S)	88 %		30-125	1	07/18/13 14:00	07/31/13 18:44	638-68-6	
<b>NWTPH-Gx GCV</b>	Analytical Method: NWTPH-Gx/8021							
TPH as Gas	5430 ug/L		500	5		07/19/13 00:59		
<b>Surrogates</b>								
a,a,a-Trifluorotoluene (S)	95 %		75-125	5		07/19/13 00:59	98-08-8	

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## ANALYTICAL RESULTS

Project: 070496 Tacoma  
Pace Project No.: 10235541

Sample: GW-071613-MD-BP R2 Inf	Lab ID: 10235541006	Collected: 07/16/13 13:25	Received: 07/17/13 09:10	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV UST</b>	Analytical Method: EPA 8260							
Benzene	1050	ug/L	5.0	5		07/23/13 20:05	71-43-2	
Ethylbenzene	458	ug/L	5.0	5		07/23/13 20:05	100-41-4	
Toluene	ND	ug/L	5.0	5		07/23/13 20:05	108-88-3	
Xylene (Total)	ND	ug/L	15.0	5		07/23/13 20:05	1330-20-7	
<b>Surrogates</b>								
1,2-Dichloroethane-d4 (S)	104 %		75-125	5		07/23/13 20:05	17060-07-0	
Toluene-d8 (S)	98 %		75-125	5		07/23/13 20:05	2037-26-5	
4-Bromofluorobenzene (S)	97 %		75-125	5		07/23/13 20:05	460-00-4	
<hr/>								
Sample: GW-071613-MD-BP Total Inf	Lab ID: 10235541007	Collected: 07/16/13 13:35	Received: 07/17/13 09:10	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>NWTPH-Dx GCS Silica Gel LV</b>	Analytical Method: NWTPH-Dx Preparation Method: EPA 3510							
Diesel Fuel Range SG	1.1	mg/L	0.40	1	07/18/13 14:00	07/31/13 19:06	68334-30-5	
Motor Oil Range SG	0.41	mg/L	0.40	1	07/18/13 14:00	07/31/13 19:06	64742-65-0	
<b>Surrogates</b>								
o-Terphenyl (S)	84 %		30-125	1	07/18/13 14:00	07/31/13 19:06	84-15-1	
n-Triacontane (S)	93 %		30-125	1	07/18/13 14:00	07/31/13 19:06	638-68-6	
<b>NWTPH-Gx GCV</b>	Analytical Method: NWTPH-Gx/8021							
TPH as Gas	2840	ug/L	200	2		07/19/13 00:18		
<b>Surrogates</b>								
a,a,a-Trifluorotoluene (S)	112 %		75-125	2		07/19/13 00:18	98-08-8	
<b>8260 MSV UST</b>	Analytical Method: EPA 8260							
Benzene	1790	ug/L	10.0	10		07/23/13 20:27	71-43-2	
Ethylbenzene	39.6	ug/L	10.0	10		07/23/13 20:27	100-41-4	
Toluene	10.0	ug/L	10.0	10		07/23/13 20:27	108-88-3	
Xylene (Total)	38.4	ug/L	30.0	10		07/23/13 20:27	1330-20-7	
<b>Surrogates</b>								
1,2-Dichloroethane-d4 (S)	112 %		75-125	10		07/23/13 20:27	17060-07-0	
Toluene-d8 (S)	95 %		75-125	10		07/23/13 20:27	2037-26-5	
4-Bromofluorobenzene (S)	98 %		75-125	10		07/23/13 20:27	460-00-4	
<hr/>								
Sample: GW-071613-MD-BP Total Eff	Lab ID: 10235541008	Collected: 07/16/13 13:45	Received: 07/17/13 09:10	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>NWTPH-Dx GCS Silica Gel LV</b>	Analytical Method: NWTPH-Dx Preparation Method: EPA 3510							
Diesel Fuel Range SG	ND	mg/L	0.40	1	07/18/13 14:00	08/01/13 10:50	68334-30-5	
Motor Oil Range SG	ND	mg/L	0.40	1	07/18/13 14:00	08/01/13 10:50	64742-65-0	

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## ANALYTICAL RESULTS

Project: 070496 Tacoma  
Pace Project No.: 10235541

Sample: GW-071613-MD-BP Total Eff	Lab ID: 10235541008	Collected: 07/16/13 13:45	Received: 07/17/13 09:10	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>NWTPH-Dx GCS Silica Gel LV</b>	Analytical Method: NWTPH-Dx Preparation Method: EPA 3510							
<b>Surrogates</b>								
o-Terphenyl (S)	87 %		30-125	1	07/18/13 14:00	08/01/13 10:50	84-15-1	
n-Triacontane (S)	96 %		30-125	1	07/18/13 14:00	08/01/13 10:50	638-68-6	
<b>NWTPH-Gx GCV</b>	Analytical Method: NWTPH-Gx/8021							
TPH as Gas	ND ug/L		100	1		07/18/13 22:56		
<b>Surrogates</b>								
a,a,a-Trifluorotoluene (S)	89 %		75-125	1		07/18/13 22:56	98-08-8	
<b>8260 MSV UST</b>	Analytical Method: EPA 8260							
Benzene	ND ug/L		1.0	1		07/23/13 15:18	71-43-2	
Ethylbenzene	ND ug/L		1.0	1		07/23/13 15:18	100-41-4	
Toluene	ND ug/L		1.0	1		07/23/13 15:18	108-88-3	
Xylene (Total)	ND ug/L		3.0	1		07/23/13 15:18	1330-20-7	
<b>Surrogates</b>								
1,2-Dichloroethane-d4 (S)	116 %		75-125	1		07/23/13 15:18	17060-07-0	
Toluene-d8 (S)	93 %		75-125	1		07/23/13 15:18	2037-26-5	
4-Bromofluorobenzene (S)	103 %		75-125	1		07/23/13 15:18	460-00-4	
<b>Sample: Trip Blank</b>	Lab ID: 10235541009	Collected: 07/16/13 00:00	Received: 07/17/13 09:10	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>NWTPH-Gx GCV</b>	Analytical Method: NWTPH-Gx/8021							
TPH as Gas	ND ug/L		100	1		07/18/13 19:53		
<b>Surrogates</b>								
a,a,a-Trifluorotoluene (S)	88 %		75-125	1		07/18/13 19:53	98-08-8	
<b>8260 MSV UST</b>	Analytical Method: EPA 8260							
Benzene	ND ug/L		1.0	1		07/23/13 13:28	71-43-2	
Ethylbenzene	ND ug/L		1.0	1		07/23/13 13:28	100-41-4	
Toluene	ND ug/L		1.0	1		07/23/13 13:28	108-88-3	
Xylene (Total)	ND ug/L		3.0	1		07/23/13 13:28	1330-20-7	
<b>Surrogates</b>								
1,2-Dichloroethane-d4 (S)	113 %		75-125	1		07/23/13 13:28	17060-07-0	
Toluene-d8 (S)	94 %		75-125	1		07/23/13 13:28	2037-26-5	
4-Bromofluorobenzene (S)	101 %		75-125	1		07/23/13 13:28	460-00-4	
<b>Sample: A-0701613-MD-SVE INF</b>	Lab ID: 10235541010	Collected: 07/16/13 12:10	Received: 07/17/13 09:10	Matrix: Air				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>TO-14M MSV AIR - Ambient</b>	Analytical Method: TO-14M Ambient Air							
Benzene	2.7 ppmv		0.27	537.6		07/25/13 21:57	71-43-2	

## REPORT OF LABORATORY ANALYSIS

## ANALYTICAL RESULTS

Project: 070496 Tacoma  
Pace Project No.: 10235541

Sample: A-0701613-MD-SVE INF	Lab ID: 10235541010	Collected: 07/16/13 12:10	Received: 07/17/13 09:10	Matrix: Air				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>TO-14M MSV AIR - Ambient</b>	Analytical Method: TO-14M Ambient Air							
Ethylbenzene	ND ppmv		0.27	537.6		07/25/13 21:57	100-41-4	
THC as Gas	<b>263</b> ppmv		18.8	537.6		07/25/13 21:57		
Toluene	<b>6.2</b> ppmv		0.27	537.6		07/25/13 21:57	108-88-3	
m&p-Xylene	<b>4.2</b> ppmv		0.54	537.6		07/25/13 21:57	179601-23-1	
o-Xylene	<b>2.9</b> ppmv		0.27	537.6		07/25/13 21:57	95-47-6	
<b>Sample: A-0701613-MD-AS EFF</b>	<b>Lab ID: 10235541011</b>	<b>Collected: 07/16/13 12:12</b>	<b>Received: 07/17/13 09:10</b>	<b>Matrix: Air</b>				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>TO-14M MSV AIR - Ambient</b>	Analytical Method: TO-14M Ambient Air							
Benzene	<b>2.6</b> ppmv		0.13	268.8		07/25/13 17:02	71-43-2	A3
Ethylbenzene	ND ppmv		0.017	33.6		07/24/13 18:15	100-41-4	
THC as Gas	<b>13.5</b> ppmv		1.2	33.6		07/24/13 18:15		CH
Toluene	<b>0.61</b> ppmv		0.017	33.6		07/24/13 18:15	108-88-3	
m&p-Xylene	<b>2.9</b> ppmv		0.27	268.8		07/25/13 17:02	179601-23-1	A3
o-Xylene	<b>1.0</b> ppmv		0.017	33.6		07/24/13 18:15	95-47-6	
<b>Sample: A-0701613-MD-Total INF</b>	<b>Lab ID: 10235541012</b>	<b>Collected: 07/16/13 12:14</b>	<b>Received: 07/17/13 09:10</b>	<b>Matrix: Air</b>				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>TO-14M MSV AIR - Ambient</b>	Analytical Method: TO-14M Ambient Air							
Benzene	<b>0.52</b> ppmv		0.017	33.6		07/24/13 17:26	71-43-2	
Ethylbenzene	ND ppmv		0.017	33.6		07/24/13 17:26	100-41-4	
THC as Gas	<b>9.8</b> ppmv		1.2	33.6		07/24/13 17:26		CH
Toluene	<b>0.32</b> ppmv		0.017	33.6		07/24/13 17:26	108-88-3	
m&p-Xylene	<b>0.53</b> ppmv		0.034	33.6		07/24/13 17:26	179601-23-1	
o-Xylene	<b>0.30</b> ppmv		0.017	33.6		07/24/13 17:26	95-47-6	
<b>Sample: A-0701613-MD-Mid 1</b>	<b>Lab ID: 10235541013</b>	<b>Collected: 07/16/13 12:16</b>	<b>Received: 07/17/13 09:10</b>	<b>Matrix: Air</b>				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>TO-14M MSV AIR - Ambient</b>	Analytical Method: TO-14M Ambient Air							
Benzene	ND ppmv		0.00084	1.68		07/24/13 16:03	71-43-2	
Ethylbenzene	ND ppmv		0.00084	1.68		07/24/13 16:03	100-41-4	
THC as Gas	<b>0.39</b> ppmv		0.059	1.68		07/24/13 16:03		CH
Toluene	<b>0.0014</b> ppmv		0.00084	1.68		07/24/13 16:03	108-88-3	
m&p-Xylene	ND ppmv		0.0017	1.68		07/24/13 16:03	179601-23-1	
o-Xylene	ND ppmv		0.00084	1.68		07/24/13 16:03	95-47-6	

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## ANALYTICAL RESULTS

Project: 070496 Tacoma  
Pace Project No.: 10235541

Sample: A-0701613-MD-Mid 2	Lab ID: 10235541014	Collected: 07/16/13 12:18	Received: 07/17/13 09:10	Matrix: Air				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>TO-14M MSV AIR - Ambient</b>	Analytical Method: TO-14M Ambient Air							
Benzene	ND ppmv		0.00084	1.68		07/24/13 17:01	71-43-2	
Ethylbenzene	ND ppmv		0.00084	1.68		07/24/13 17:01	100-41-4	
THC as Gas	<b>0.39</b> ppmv		0.059	1.68		07/24/13 17:01		CH
Toluene	<b>0.0014</b> ppmv		0.00084	1.68		07/24/13 17:01	108-88-3	
m&p-Xylene	ND ppmv		0.0017	1.68		07/24/13 17:01	179601-23-1	
o-Xylene	ND ppmv		0.00084	1.68		07/24/13 17:01	95-47-6	
<b>Sample: A-0701613-MD-Total EFF</b>	<b>Lab ID: 10235541015</b>	Collected: 07/16/13 12:20	Received: 07/17/13 09:10	Matrix: Air				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>TO-14M MSV AIR - Ambient</b>	Analytical Method: TO-14M Ambient Air							
Benzene	ND ppmv		0.00087	1.74		07/24/13 16:32	71-43-2	
Ethylbenzene	ND ppmv		0.00087	1.74		07/24/13 16:32	100-41-4	
THC as Gas	<b>0.40</b> ppmv		0.061	1.74		07/24/13 16:32		CH
Toluene	<b>0.0014</b> ppmv		0.00087	1.74		07/24/13 16:32	108-88-3	
m&p-Xylene	ND ppmv		0.0017	1.74		07/24/13 16:32	179601-23-1	
o-Xylene	ND ppmv		0.00087	1.74		07/24/13 16:32	95-47-6	
<b>Sample: A-0701613-MD-BP Total EFF</b>	<b>Lab ID: 10235541016</b>	Collected: 07/16/13 13:54	Received: 07/17/13 09:10	Matrix: Air				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>TO-14M MSV AIR - Ambient</b>	Analytical Method: TO-14M Ambient Air							
Benzene	<b>0.74</b> ppmv		0.017	33.6		07/24/13 19:04	71-43-2	
Ethylbenzene	ND ppmv		0.017	33.6		07/24/13 19:04	100-41-4	
THC as Gas	<b>4.1</b> ppmv		1.2	33.6		07/24/13 19:04		CH
Toluene	ND ppmv		0.017	33.6		07/24/13 19:04	108-88-3	
m&p-Xylene	ND ppmv		0.034	33.6		07/24/13 19:04	179601-23-1	
o-Xylene	ND ppmv		0.017	33.6		07/24/13 19:04	95-47-6	

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## QUALITY CONTROL DATA

Project: 070496 Tacoma

Pace Project No.: 10235541

QC Batch: AIR/17863 Analysis Method: TO-14M Ambient Air

QC Batch Method: TO-14M Ambient Air Analysis Description: TO14 MSV AIR - AMBIENT

Associated Lab Samples: 10235541011, 10235541012, 10235541013, 10235541014, 10235541015, 10235541016

METHOD BLANK: 1486305 Matrix: Air

Associated Lab Samples: 10235541011, 10235541012, 10235541013, 10235541014, 10235541015, 10235541016

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Benzene	ppmv	ND	0.00050	07/24/13 15:10	
Ethylbenzene	ppmv	ND	0.00050	07/24/13 15:10	
m&p-Xylene	ppmv	ND	0.0010	07/24/13 15:10	
o-Xylene	ppmv	ND	0.00050	07/24/13 15:10	
THC as Gas	ppmv	ND	0.035	07/24/13 15:10	
Toluene	ppmv	ND	0.00050	07/24/13 15:10	

LABORATORY CONTROL SAMPLE: 1486306

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Benzene	ppmv	.01	0.0090	90	72-136	
Ethylbenzene	ppmv	.01	0.011	105	74-136	
m&p-Xylene	ppmv	.01	0.010	102	72-135	
o-Xylene	ppmv	.01	0.011	105	74-135	
THC as Gas	ppmv	.78	1.0	133	63-141 CH	
Toluene	ppmv	.01	0.0099	99	71-134	

SAMPLE DUPLICATE: 1486846

Parameter	Units	10235541012 Result	Dup Result	RPD	Max RPD	Qualifiers
Benzene	ppmv	0.52	0.53	2	30	
Ethylbenzene	ppmv	ND	ND		30	
m&p-Xylene	ppmv	0.53	0.50	5	30	
o-Xylene	ppmv	0.30	0.28	6	30	
THC as Gas	ppmv	9.8	9.6	2	30 CH	
Toluene	ppmv	0.32	0.32	.8	30	

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## QUALITY CONTROL DATA

Project: 070496 Tacoma

Pace Project No.: 10235541

QC Batch: AIR/17872 Analysis Method: TO-14M Ambient Air

QC Batch Method: TO-14M Ambient Air Analysis Description: TO14 MSV AIR - AMBIENT

Associated Lab Samples: 10235541010

METHOD BLANK: 1487250 Matrix: Air

Associated Lab Samples: 10235541010

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Benzene	ppmv	ND	0.00050	07/25/13 21:33	
Ethylbenzene	ppmv	ND	0.00050	07/25/13 21:33	
m&p-Xylene	ppmv	ND	0.0010	07/25/13 21:33	
o-Xylene	ppmv	ND	0.00050	07/25/13 21:33	
THC as Gas	ppmv	ND	0.035	07/25/13 21:33	
Toluene	ppmv	ND	0.00050	07/25/13 21:33	

LABORATORY CONTROL SAMPLE: 1487251

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Benzene	ppmv	.01	0.011	108	72-136	
Ethylbenzene	ppmv	.01	0.012	117	74-136	
m&p-Xylene	ppmv	.01	0.012	120	72-135	
o-Xylene	ppmv	.01	0.012	119	74-135	
THC as Gas	ppmv	.78	0.81	104	63-141	
Toluene	ppmv	.01	0.012	116	71-134	

SAMPLE DUPLICATE: 1488045

Parameter	Units	10235541010 Result	Dup Result	RPD	Max RPD	Qualifiers
Benzene	ppmv	2.7	2.8	4	30	
Ethylbenzene	ppmv	ND	.25J		30	
m&p-Xylene	ppmv	4.2	4.2	.4	30	
o-Xylene	ppmv	2.9	2.9	.4	30	
THC as Gas	ppmv	263	256	3	30	
Toluene	ppmv	6.2	6.5	4	30	

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## QUALITY CONTROL DATA

Project: 070496 Tacoma  
Pace Project No.: 10235541

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QC Batch:	GCV/11078	Analysis Method:	NWTPH-Gx/8021
QC Batch Method:	NWTPH-Gx/8021	Analysis Description:	NWTPH-Gx/8021B Water
Associated Lab Samples:	10235541001, 10235541002, 10235541003, 10235541004, 10235541005, 10235541006, 10235541007, 10235541008, 10235541009		

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METHOD BLANK: 1482070 Matrix: Water

Associated Lab Samples: 10235541001, 10235541002, 10235541003, 10235541004, 10235541005, 10235541006, 10235541007,  
10235541008, 10235541009

Parameter	Units	Blank	Reporting		Qualifiers
		Result	Limit	Analyzed	
TPH as Gas	ug/L	ND	100	07/18/13 19:33	
a,a,a-Trifluorotoluene (S)	%	87	75-125	07/18/13 19:33	

LABORATORY CONTROL SAMPLE & LCSD: 1482071 1482072

Parameter	Units	Spike	LCS	LCSD	LCS	LCSD	% Rec	RPD	Max RPD	Qualifiers
		Conc.	Result	Result	% Rec	% Rec	Limits			
TPH as Gas	ug/L	1000	985	906	98	91	75-126	8	20	
a,a,a-Trifluorotoluene (S)	%			98	105	75-125				

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1482073 1482074

Parameter	Units	MS	MSD	MS	MSD	MS	MSD	% Rec	RPD	Max RPD	Qual
		10234559002	Spike	Spike	Result	Result	% Rec	% Rec			
TPH as Gas	ug/L	ND	1000	1000	888	889	86	86	75-137	.2	30
a,a,a-Trifluorotoluene (S)	%						105	105	75-125		

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## QUALITY CONTROL DATA

Project: 070496 Tacoma

Pace Project No.: 10235541

QC Batch:	MSV/24356	Analysis Method:	EPA 8260
QC Batch Method:	EPA 8260	Analysis Description:	8260 MSV UST-WATER
Associated Lab Samples:	10235541002, 10235541003, 10235541004		

METHOD BLANK: 1482756 Matrix: Water

Associated Lab Samples: 10235541002, 10235541003, 10235541004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Benzene	ug/L	ND	1.0	07/20/13 13:30	
Ethylbenzene	ug/L	ND	1.0	07/20/13 13:30	
Toluene	ug/L	ND	1.0	07/20/13 13:30	
Xylene (Total)	ug/L	ND	3.0	07/20/13 13:30	
1,2-Dichloroethane-d4 (S)	%	100	75-125	07/20/13 13:30	
4-Bromofluorobenzene (S)	%	102	75-125	07/20/13 13:30	
Toluene-d8 (S)	%	100	75-125	07/20/13 13:30	

LABORATORY CONTROL SAMPLE: 1482757

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Benzene	ug/L	20	16.9	84	75-125	
Ethylbenzene	ug/L	20	16.1	81	75-125	
Toluene	ug/L	20	16.5	82	75-125	
Xylene (Total)	ug/L	60	51.3	86	75-125	
1,2-Dichloroethane-d4 (S)	%			100	75-125	
4-Bromofluorobenzene (S)	%			101	75-125	
Toluene-d8 (S)	%			101	75-125	

MATRIX SPIKE SAMPLE: 1482758

Parameter	Units	10235697001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Benzene	ug/L	ND	20	20.5	103	70-135	
Ethylbenzene	ug/L	ND	20	20.1	100	75-125	
Toluene	ug/L	ND	20	20.5	102	75-125	
Xylene (Total)	ug/L	ND	60	63.0	105	75-125	
1,2-Dichloroethane-d4 (S)	%				100	75-125	
4-Bromofluorobenzene (S)	%				100	75-125	
Toluene-d8 (S)	%				101	75-125	

SAMPLE DUPLICATE: 1482759

Parameter	Units	10235697002 Result	Dup Result	Max RPD	RPD	Qualifiers
Benzene	ug/L	ND	ND			30
Ethylbenzene	ug/L	ND	ND			30
Toluene	ug/L	ND	ND			30
Xylene (Total)	ug/L	ND	ND			30
1,2-Dichloroethane-d4 (S)	%	99	99		.6	

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## QUALITY CONTROL DATA

Project: 070496 Tacoma  
Pace Project No.: 10235541

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SAMPLE DUPLICATE: 1482759

Parameter	Units	10235697002	Dup Result	RPD	Max RPD	Qualifiers
4-Bromofluorobenzene (S)	%	104	102	2		
Toluene-d8 (S)	%	100	101	.6		

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## QUALITY CONTROL DATA

Project: 070496 Tacoma  
Pace Project No.: 10235541

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QC Batch:	MSV/24368	Analysis Method:	EPA 8260
QC Batch Method:	EPA 8260	Analysis Description:	8260 MSV UST-WATER
Associated Lab Samples:	10235541005, 10235541006, 10235541007, 10235541008, 10235541009		

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METHOD BLANK: 1484366                          Matrix: Water

Associated Lab Samples: 10235541005, 10235541006, 10235541007, 10235541008, 10235541009

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Benzene	ug/L	ND	1.0	07/23/13 12:44	
Ethylbenzene	ug/L	ND	1.0	07/23/13 12:44	
Toluene	ug/L	ND	1.0	07/23/13 12:44	
Xylene (Total)	ug/L	ND	3.0	07/23/13 12:44	
1,2-Dichloroethane-d4 (S)	%	108	75-125	07/23/13 12:44	
4-Bromofluorobenzene (S)	%	102	75-125	07/23/13 12:44	
Toluene-d8 (S)	%	96	75-125	07/23/13 12:44	

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LABORATORY CONTROL SAMPLE: 1484367

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Benzene	ug/L	20	18.3	91	75-125	
Ethylbenzene	ug/L	20	16.4	82	75-125	
Toluene	ug/L	20	16.4	82	75-125	
Xylene (Total)	ug/L	60	52.8	88	75-125	
1,2-Dichloroethane-d4 (S)	%			105	75-125	
4-Bromofluorobenzene (S)	%			99	75-125	
Toluene-d8 (S)	%			98	75-125	

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MATRIX SPIKE SAMPLE: 1484368

Parameter	Units	10235929001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Benzene	ug/L	ND	20	19.4	97	70-135	
Ethylbenzene	ug/L	ND	20	17.6	88	75-125	
Toluene	ug/L	ND	20	19.0	95	75-125	
Xylene (Total)	ug/L	ND	60	55.8	93	75-125	
1,2-Dichloroethane-d4 (S)	%				101	75-125	
4-Bromofluorobenzene (S)	%				97	75-125	
Toluene-d8 (S)	%				101	75-125	

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SAMPLE DUPLICATE: 1484369

Parameter	Units	10235929002 Result	Dup Result	RPD	Max RPD	Qualifiers
Benzene	ug/L	2.0	2.0	.6	30	
Ethylbenzene	ug/L	9.3	9.0	3	30	
Toluene	ug/L	ND	.37J		30	
Xylene (Total)	ug/L	ND	.95J		30	
1,2-Dichloroethane-d4 (S)	%	101	105	3		

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## QUALITY CONTROL DATA

Project: 070496 Tacoma  
Pace Project No.: 10235541

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SAMPLE DUPLICATE: 1484369

Parameter	Units	10235929002	Dup Result	RPD	Max RPD	Qualifiers
4-Bromofluorobenzene (S)	%	99	100	1	1	
Toluene-d8 (S)	%	99	98	1	1	

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## QUALITY CONTROL DATA

Project: 070496 Tacoma

Pace Project No.: 10235541

QC Batch:	MSV/24416	Analysis Method:	EPA 8260
QC Batch Method:	EPA 8260	Analysis Description:	8260 MSV UST-WATER
Associated Lab Samples:	10235541001		

METHOD BLANK: 1487149 Matrix: Water

Associated Lab Samples: 10235541001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Benzene	ug/L	ND	1.0	07/25/13 17:37	
Ethylbenzene	ug/L	ND	1.0	07/25/13 17:37	
Toluene	ug/L	ND	1.0	07/25/13 17:37	
Xylene (Total)	ug/L	ND	3.0	07/25/13 17:37	
1,2-Dichloroethane-d4 (S)	%	102	75-125	07/25/13 17:37	
4-Bromofluorobenzene (S)	%	103	75-125	07/25/13 17:37	
Toluene-d8 (S)	%	101	75-125	07/25/13 17:37	

LABORATORY CONTROL SAMPLE: 1487150

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Benzene	ug/L	20	16.9	85	75-125	
Ethylbenzene	ug/L	20	17.1	85	75-125	
Toluene	ug/L	20	17.8	89	75-125	
Xylene (Total)	ug/L	60	53.2	89	75-125	
1,2-Dichloroethane-d4 (S)	%			100	75-125	
4-Bromofluorobenzene (S)	%			103	75-125	
Toluene-d8 (S)	%			103	75-125	

MATRIX SPIKE &amp; MATRIX SPIKE DUPLICATE: 1487151 1487152

Parameter	Units	10236270001 Result	MS Spike	MSD Spike	MS	MSD	MS	MSD	% Rec	Max	
			Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD
Benzene	ug/L	ND	20	20	18.9	18.6	94	93	70-135	2	30
Ethylbenzene	ug/L	ND	20	20	19.2	19.3	95	96	75-125	.4	30
Toluene	ug/L	ND	20	20	19.3	19.6	96	98	75-125	2	30
Xylene (Total)	ug/L	ND	60	60	58.9	58.7	98	98	75-125	.4	30
1,2-Dichloroethane-d4 (S)	%						102	101	75-125		
4-Bromofluorobenzene (S)	%						101	100	75-125		
Toluene-d8 (S)	%						101	102	75-125		

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## QUALITY CONTROL DATA

Project: 070496 Tacoma  
Pace Project No.: 10235541

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QC Batch:	OEXT/22351	Analysis Method:	NWTPH-Dx
QC Batch Method:	EPA 3510	Analysis Description:	NWTPH-Dx GCS LV SG
Associated Lab Samples:	10235541001, 10235541002, 10235541003, 10235541004, 10235541005, 10235541006, 10235541007, 10235541008		

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METHOD BLANK: 1481687 Matrix: Water

Associated Lab Samples: 10235541001, 10235541002, 10235541003, 10235541004, 10235541005, 10235541006, 10235541007, 10235541008

Parameter	Units	Blank Result	Reporting Limit		Analyzed	Qualifiers
			Limit	Analyzed		
Diesel Fuel Range SG	mg/L	ND	0.20	07/31/13 15:46		
Motor Oil Range SG	mg/L	ND	0.20	07/31/13 15:46		
n-Triacontane (S)	%	63	30-125	07/31/13 15:46		
o-Terphenyl (S)	%	59	30-125	07/31/13 15:46		

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LABORATORY CONTROL SAMPLE & LCSD: 1481688 1481689

Parameter	Units	Spike Conc.	LCS	LCSD	LCS	LCSD	% Rec	RPD	Max RPD	Qualifiers
			Result	Result	% Rec	% Rec				
Diesel Fuel Range SG	mg/L	1	0.94	0.95	94	95	50-150	.8	20	
Motor Oil Range SG	mg/L	1	1.1	1.1	113	112	50-150	.5	20	
n-Triacontane (S)	%				77	69	30-125			
o-Terphenyl (S)	%				96	95	30-125			

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## QUALIFIERS

Project: 070496 Tacoma  
Pace Project No.: 10235541

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### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PRL - Pace Reporting Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

### LABORATORIES

PASI-M Pace Analytical Services - Minneapolis

### SAMPLE QUALIFIERS

Sample: 10235541010

[1] This result is reported from a serial dilution

### ANALYTE QUALIFIERS

A3 The sample was analyzed by serial dilution.

CH The continuing calibration for this compound is outside of Pace Analytical acceptance limits. The results may be biased high.

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**QUALITY CONTROL DATA CROSS REFERENCE TABLE**

Project: 070496 Tacoma  
Pace Project No.: 10235541

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
10235541010	A-0701613-MD-SVE INF	TO-14M Ambient Air	AIR/17872		
10235541011	A-0701613-MD-AS EFF	TO-14M Ambient Air	AIR/17863		
10235541012	A-0701613-MD-Total INF	TO-14M Ambient Air	AIR/17863		
10235541013	A-0701613-MD-Mid 1	TO-14M Ambient Air	AIR/17863		
10235541014	A-0701613-MD-Mid 2	TO-14M Ambient Air	AIR/17863		
10235541015	A-0701613-MD-Total EFF	TO-14M Ambient Air	AIR/17863		
10235541016	A-0701613-MD-BP Total EFF	TO-14M Ambient Air	AIR/17863		
10235541001	GW-071613-MD-Total Inf	EPA 3510	OEXT/22351	NWTPH-Dx	GCSV/11761
10235541002	GW-071613-MD-AS Eff	EPA 3510	OEXT/22351	NWTPH-Dx	GCSV/11761
10235541003	GW-071613-MD-Mid Carbon	EPA 3510	OEXT/22351	NWTPH-Dx	GCSV/11761
10235541004	GW-071613-MD-Total Eff	EPA 3510	OEXT/22351	NWTPH-Dx	GCSV/11761
10235541005	GW-071613-MD-BP R1 Inf	EPA 3510	OEXT/22351	NWTPH-Dx	GCSV/11761
10235541006	GW-071613-MD-BP R2 Inf	EPA 3510	OEXT/22351	NWTPH-Dx	GCSV/11761
10235541007	GW-071613-MD-BP Total Inf	EPA 3510	OEXT/22351	NWTPH-Dx	GCSV/11761
10235541008	GW-071613-MD-BP Total Eff	EPA 3510	OEXT/22351	NWTPH-Dx	GCSV/11761
10235541009	GW-071613-MD-BP Total Eff	EPA 3510	OEXT/22351	NWTPH-Dx	GCSV/11761
10235541001	GW-071613-MD-Total Inf	NWTPH-Gx/8021	GCV/11078		
10235541002	GW-071613-MD-AS Eff	NWTPH-Gx/8021	GCV/11078		
10235541003	GW-071613-MD-Mid Carbon	NWTPH-Gx/8021	GCV/11078		
10235541004	GW-071613-MD-Total Eff	NWTPH-Gx/8021	GCV/11078		
10235541005	GW-071613-MD-BP R1 Inf	NWTPH-Gx/8021	GCV/11078		
10235541006	GW-071613-MD-BP R2 Inf	NWTPH-Gx/8021	GCV/11078		
10235541007	GW-071613-MD-BP Total Inf	NWTPH-Gx/8021	GCV/11078		
10235541008	GW-071613-MD-BP Total Eff	NWTPH-Gx/8021	GCV/11078		
10235541009	Trip Blank	NWTPH-Gx/8021	GCV/11078		
10235541001	GW-071613-MD-Total Inf	EPA 8260	MSV/24416		
10235541002	GW-071613-MD-AS Eff	EPA 8260	MSV/24356		
10235541003	GW-071613-MD-Mid Carbon	EPA 8260	MSV/24356		
10235541004	GW-071613-MD-Total Eff	EPA 8260	MSV/24356		
10235541005	GW-071613-MD-BP R1 Inf	EPA 8260	MSV/24368		
10235541006	GW-071613-MD-BP R2 Inf	EPA 8260	MSV/24368		
10235541007	GW-071613-MD-BP Total Inf	EPA 8260	MSV/24368		
10235541008	GW-071613-MD-BP Total Eff	EPA 8260	MSV/24368		
10235541009	Trip Blank	EPA 8260	MSV/24368		

**REPORT OF LABORATORY ANALYSIS**

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## CHAIN OF CUSTODY RECORD

1121 1159

10235541

CONESTOGA-ROVERS & ASSOCIATES TACOMA			SHIPPED TO (Laboratory Name): PACE			REFERENCE NUMBER: 070496		
SAMPLER'S SIGNATURE: <u>Matt Davis</u>			PRINTED NAME: MATT DAVIS					
SEQ. No.	DATE	TIME	SAMPLE No.	SAMPLE TYPE	No. of Containers	PARAMETERS TOC - TPH - BTEX - TPH - S	REMARKS	
1	7/16/13	11:10	GW - 07/16/13 - MD - Total I-NF	GW	1		001	
2		11:50	GW - 07/16/13 - MD - AS E-FF		1		002	
3		12:00	GW - 07/16/13 - MD - Mid Carbon		1		003	
4		12:10	GW - 07/16/13 - MD - Total E-FF		1		004	
5		13:15	GW - 07/16/13 - MD - BP R1 I-NF		1		005	
6		13:25	GW - 07/16/13 - MD - BP R2 I-NF		1		006	
7		13:35	GW - 07/16/13 - MD - BP total I-NF		1		007	
8		13:45	GW - 07/16/13 - MD - G0 Total E-FF		1		008	
9		12:10	A - 07/16/13 - MD - SVE I-NF	A	1		010	
10		12:12	A - 07/16/13 - MD - AS E-FF		1		011	
11		12:14	A - 07/16/13 - MD - Total I-NF		1		012	
12		12:16	A - 07/16/13 - MD - Mid 1		1		013	
13		12:18	A - 07/16/13 - MD - Mid 2		1		014	
14	✓	12:20	A - 07/16/13 - MD - Total E-FF		1		015	
15	✓	13:54	A - 07/16/13 - MD - BP Total E-FF		1		016	
TOTAL NUMBER OF CONTAINERS					HEALTH/CHEMICAL HAZARDS			
RELINQUISHED BY: <u>Matt Davis</u> ①			DATE: 7/16/13 TIME: 1324	RECEIVED BY: <u>PACE</u> ①			DATE: 7/16/13 TIME: 1524	
RELINQUISHED BY: ②			DATE:	RECEIVED BY: ② <u>Matt - PACE</u>			DATE: 7-17-13 TIME: 9:10	
RELINQUISHED BY: ③			DATE:	RECEIVED BY: ③			DATE: TIME:	
METHOD OF SHIPMENT:			WAY BILL NO.					
White	—Fully Executed Copy		SAMPLE TEAM: <u>Matt Davis</u>		RECEIVED FOR LABORATORY BY: Nº CRA 21087			
Yellow	—Receiving Laboratory Copy							
Pink	—Shipper Copy							
Goldenrod	—Sampler Copy							

Temp. #266

	Document Name: Air Sample Condition Upon Receipt	Document Revised: 28Jan2013 Page 1 of 1
	Document No.: F-MN-A-106-rev.07	Issuing Authority: Pace Minnesota Quality Office

Air Sample Condition  
Upon Receipt

Client Name:

Project #:

WO# : 10235541

Courier:  FedEx  UPS  USPS  Client  
 Commercial  Pace  Other: \_\_\_\_\_

Tracking Number: 5647 7475 0569



10235541

Custody Seal on Cooler/Box Present?  Yes  No Seals Intact?  Yes  No Optional: Proj. Due Date: Proj. Name:

Packing Material:  Bubble Wrap  Bubble Bags  Foam  None  Other: \_\_\_\_\_

Temp. (TO17 and TO13 samples only) (°C): 26 Corrected Temp (°C): \_\_\_\_\_ Thermom. Used:  B88A912167504  80512447  72337080  
Temp should be above freezing to 6°C Correction Factor: \_\_\_\_\_ Date & Initials of Person Examining Contents: JL 7/17/13

Comments:

Chain of Custody Present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	1.
Chain of Custody Filled Out?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	2.
Chain of Custody Relinquished?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	3.
Sampler Name and/or Signature on COC?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	4.
Samples Arrived within Hold Time?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	5.
Short Hold Time Analysis (<72 hr)?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/> N/A	6.
Rush Turn Around Time Requested?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/> N/A	7.
Sufficient Volume?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	8.
Correct Containers Used?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	9.
-Pace Containers Used?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	
Containers Intact?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	10.
Media: 8 cans 7 bag	11. bag attached to cans they were transferred into 1 can unused			
Sample Labels Match COC?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	12. transferred into 1 can unused

Samples Received:

Canisters		Flow Controllers		Stand Alone G	
Sample Number	Can ID	Sample Number	Can ID	Sample Number	Can ID
SUE INF	Pace 1463				
18 EFF	" 2449				
Total Inf	" 1027				
MIDL	" (30)				
" Z	" 1778				
TOTAL EFF	" 1348				
BP "	" 0766				
unused	" 0810				

CLIENT NOTIFICATION/RESOLUTION

Field Data Required?  Yes  No

Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Comments/Resolution: \_\_\_\_\_

Project Manager Review: JENN STAFF Date: 7/17/13  
Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. out of hold, incorrect preservative, out of temp, incorrect containers)



Document Name:  
Sample Condition Upon Receipt Form  
Document No.:  
F-MN-L-219-rev.06

Document Revised: 28Jan2013  
Page 1 of 1  
Issuing Authority:  
Pace Minnesota Quality Office

Sample Condition  
Upon Receipt

Client Name:

Conestoga - Powers & Assoc.

Project #:

WO# : 10235541

Courier:  Fed Ex  UPS  USPS  Client  
 Commercial  Pace  Other: \_\_\_\_\_

Tracking Number: 8L47 7475 0558



10235541

Custody Seal on Cooler/Box Present?  Yes  No Seals Intact?  Yes  No Optional: Proj. Due Date: Proj. Name:

Packing Material:  Bubble Wrap  Bubble Bags  None  Other: \_\_\_\_\_ Temp Blank?  Yes  No

Thermom. Used:  388A912167504  80512447  72337080 Type of Ice:  Wet  Blue  None  Samples on ice, cooling process has begun

Cooler Temp Read ('C): 0.6 Cooler Temp Corrected ('C): 0.6 Biological Tissue Frozen?  Yes  No  
Temp should be above freezing to 6°C Correction Factor: true Date and Initials of Person Examining Contents: 7/17/13 JHG

Comments:

Chain of Custody Present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	1.
Chain of Custody Filled Out?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	2.
Chain of Custody Relinquished?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	3.
Sampler Name and/or Signature on COC?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	4.
Samples Arrived within Hold Time?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	5.
Short Hold Time Analysis (<72 hr)?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/> N/A	6.
Rush Turn Around Time Requested?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/> N/A	7.
Sufficient Volume?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	8.
Correct Containers Used? -Pace Containers Used?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	9.
Containers Intact?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	10.
Filtered Volume Received for Dissolved Tests?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> N/A	11.
Sample Labels Match COC? -Includes Date/Time/ID/Analysis Matrix:	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	12.
All containers needing acid/base preservation have been checked? Noncompliances are noted in 13. All containers needing preservation are found to be in compliance with EPA recommendation? (HNO <sub>3</sub> , H <sub>2</sub> SO <sub>4</sub> , HCl<2; NaOH>12) Exceptions: VOA, Coliform, TOC, Oil and Grease, W1-DRO (water)	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> N/A	13. <input type="checkbox"/> HNO <sub>3</sub> <input type="checkbox"/> H <sub>2</sub> SO <sub>4</sub> <input type="checkbox"/> NaOH <input type="checkbox"/> HCl
	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> N/A	Sample #
	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	Initial when completed: <u>JHG</u> Lot # of added preservative: _____
Headspace in VOA Vials (>6mm)?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/> N/A	14.
Trip Blank Present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	15.
Trip Blank Custody Seals Present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	
Pace Trip Blank Lot # (if purchased): <u>052713-3</u>				

CLIENT NOTIFICATION/RESOLUTION

Field Data Required?  Yes  No

Person Contacted: \_\_\_\_\_

Date/Time: \_\_\_\_\_

Comments/Resolution: \_\_\_\_\_

Project Manager Review: JENN 7/17/13

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. out of hold, incorrect preservative, out-of-temp, incorrect containers)

Date: 7/17/13

September 05, 2013

Edwin Turner  
CRA\_Conoco Phillips  
20818 44th Ave. W  
Lynnwood, WA 98036

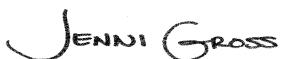
RE: Project: Aug 2013 O&M Compliance 070496  
Pace Project No.: 10239328

Dear Edwin Turner:

Enclosed are the analytical results for sample(s) received by the laboratory between August 20, 2013 and August 27, 2013. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Jennifer Gross

jennifer.gross@pacelabs.com  
Project Manager

Enclosures

cc: Yu Chen, CRA\_Conoco Phillips  
Jeffrey Cloud, Conestoga-Rovers Association  
Matt Davis, CRA\_Conoco Phillips  
Kelsey Whittaker, CRA



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: Aug 2013 O&M Compliance 070496  
Pace Project No.: 10239328

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### Minnesota Certification IDs

1700 Elm Street SE Suite 200, Minneapolis, MN 55414  
A2LA Certification #: 2926.01  
Alaska Certification #: UST-078  
Alaska Certification #MN00064  
Arizona Certification #: AZ-0014  
Arkansas Certification #: 88-0680  
California Certification #: 01155CA  
Colorado Certification #Pace  
Connecticut Certification #: PH-0256  
EPA Region 8 Certification #: Pace  
Florida/NELAP Certification #: E87605  
Georgia Certification #: 959  
Hawaii Certification #Pace  
Idaho Certification #: MN00064  
Illinois Certification #: 200011  
Kansas Certification #: E-10167  
Louisiana Certification #: 03086  
Louisiana Certification #: LA080009  
Maine Certification #: 2007029  
Maryland Certification #: 322  
Michigan DEQ Certification #: 9909  
Minnesota Certification #: 027-053-137

Mississippi Certification #: Pace  
Montana Certification #: MT CERT0092  
Nebraska Certification #: Pace  
Nevada Certification #: MN\_00064  
New Jersey Certification #: MN-002  
New York Certification #: 11647  
North Carolina Certification #: 530  
North Dakota Certification #: R-036  
Ohio VAP Certification #: CL101  
Oklahoma Certification #: 9507  
Oregon Certification #: MN200001  
Oregon Certification #: MN300001  
Pennsylvania Certification #: 68-00563  
Puerto Rico Certification  
Tennessee Certification #: 02818  
Texas Certification #: T104704192  
Utah Certification #: MN00064  
Virginia/DCLS Certification #: 002521  
Virginia/VELAP Certification #: 460163  
Washington Certification #: C754  
West Virginia Certification #: 382  
Wisconsin Certification #: 999407970

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## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: Aug 2013 O&M Compliance 070496  
Pace Project No.: 10239328

Lab ID	Sample ID	Matrix	Date Collected	Date Received
10239328001	<b>GW-082013-MD-Total Inf</b>	Water	08/20/13 09:05	08/20/13 14:00
10239328002	<b>GW-082013-MD-AS Eff</b>	Water	08/20/13 09:15	08/20/13 14:00
10239328003	<b>GW-082013-MD-Mid Carbon</b>	Water	08/20/13 09:25	08/20/13 14:00
10239328004	<b>GW-082013-MD-Total Eff</b>	Water	08/20/13 09:35	08/20/13 14:00
10239328005	<b>GW-082013-MD-BP R1 Inf</b>	Water	08/20/13 10:40	08/20/13 14:00
10239328006	<b>GW-082013-MD-BP R2 Inf</b>	Water	08/20/13 10:50	08/20/13 14:00
10239328007	<b>GW-082013-MD-BP Total Inf</b>	Water	08/20/13 11:00	08/20/13 14:00
10239328008	<b>GW-082013-MD-BP Total Eff</b>	Water	08/20/13 11:10	08/20/13 14:00
10239328009	<b>A-082013-MD-SVE INF</b>	Air	08/20/13 09:45	08/20/13 14:00
10239328010	<b>A-082013-MD-AS EFF</b>	Air	08/20/13 09:48	08/20/13 14:00
10239328011	<b>A-082013-MD-Total INF</b>	Air	08/20/13 09:51	08/20/13 14:00
10239328012	<b>A-082013-MD-Mid 1</b>	Air	08/20/13 09:54	08/20/13 14:00
10239328013	<b>A-082013-MD-Mid 2</b>	Air	08/20/13 09:57	08/20/13 14:00
10239328014	<b>A-082013-MD-Total EFF</b>	Air	08/20/13 10:00	08/20/13 14:00
10239328015	<b>A-082013-MD-BP Total EFF</b>	Air	08/20/13 11:15	08/20/13 14:00
10239328016	<b>RETURN PACE1350</b>	Air	08/20/13 00:00	08/20/13 14:00
10239328017	<b>A-082613-NH-BP Total Eff</b>	Air	08/26/13 10:30	08/27/13 09:15

## REPORT OF LABORATORY ANALYSIS

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## SAMPLE ANALYTE COUNT

Project: Aug 2013 O&M Compliance 070496  
Pace Project No.: 10239328

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
10239328001	<b>GW-082013-MD-Total Inf</b>	NWTPH-Dx	JRH	4	PASI-M
		NWTPH-Gx/8021	LLC	2	PASI-M
		EPA 8260	EB2	7	PASI-M
10239328002	<b>GW-082013-MD-AS Eff</b>	NWTPH-Dx	JRH	4	PASI-M
		NWTPH-Gx/8021	LLC	2	PASI-M
		EPA 8260	EB2	7	PASI-M
10239328003	<b>GW-082013-MD-Mid Carbon</b>	NWTPH-Dx	JRH	4	PASI-M
		NWTPH-Gx/8021	LLC	2	PASI-M
		EPA 8260	EB2	7	PASI-M
10239328004	<b>GW-082013-MD-Total Eff</b>	NWTPH-Dx	JRH	4	PASI-M
		NWTPH-Gx/8021	LLC	2	PASI-M
		EPA 8260	EB2	7	PASI-M
10239328005	<b>GW-082013-MD-BP R1 Inf</b>	NWTPH-Dx	JRH	4	PASI-M
		NWTPH-Gx/8021	LLC	2	PASI-M
		EPA 8260	EB2	7	PASI-M
10239328006	<b>GW-082013-MD-BP R2 Inf</b>	NWTPH-Dx	JRH	4	PASI-M
		NWTPH-Gx/8021	LLC	2	PASI-M
		EPA 8260	EB2	7	PASI-M
10239328007	<b>GW-082013-MD-BP Total Inf</b>	NWTPH-Dx	JRH	4	PASI-M
		NWTPH-Gx/8021	LLC	2	PASI-M
		EPA 8260	EB2	7	PASI-M
10239328008	<b>GW-082013-MD-BP Total Eff</b>	NWTPH-Dx	JRH	4	PASI-M
		NWTPH-Gx/8021	LLC	2	PASI-M
		EPA 8260	EB2	7	PASI-M
10239328009	<b>A-082013-MD-SVE INF</b>	TO-14M Ambient Air	DR1	6	PASI-M
10239328010	<b>A-082013-MD-AS EFF</b>	TO-14M Ambient Air	DR1	6	PASI-M
10239328011	<b>A-082013-MD-Total INF</b>	TO-14M Ambient Air	DR1	6	PASI-M
10239328012	<b>A-082013-MD-Mid 1</b>	TO-14M Ambient Air	DR1	6	PASI-M
10239328013	<b>A-082013-MD-Mid 2</b>	TO-14M Ambient Air	DR1	6	PASI-M
10239328014	<b>A-082013-MD-Total EFF</b>	TO-14M Ambient Air	DR1	6	PASI-M
10239328017	<b>A-082613-NH-BP Total Eff</b>	TO-14M Ambient Air	DR1	6	PASI-M

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: Aug 2013 O&amp;M Compliance 070496

Pace Project No.: 10239328

Sample: GW-082013-MD-Total Inf	Lab ID: 10239328001	Collected: 08/20/13 09:05	Received: 08/20/13 14:00	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>NWTPH-Dx GCS Silica Gel LV</b>	Analytical Method: NWTPH-Dx Preparation Method: EPA 3510							
Diesel Fuel Range SG	1.1 mg/L		0.40	1	08/28/13 07:28	08/30/13 20:11	68334-30-5	
Motor Oil Range SG	ND mg/L		0.40	1	08/28/13 07:28	08/30/13 20:11	64742-65-0	
<b>Surrogates</b>								
o-Terphenyl (S)	92 %		30-125	1	08/28/13 07:28	08/30/13 20:11	84-15-1	
n-Triacontane (S)	104 %		30-125	1	08/28/13 07:28	08/30/13 20:11	638-68-6	
<b>NWTPH-Gx GCV</b>	Analytical Method: NWTPH-Gx/8021							
TPH as Gas	7140 ug/L		1000	10		08/26/13 15:25		
<b>Surrogates</b>								
a,a,a-Trifluorotoluene (S)	97 %		75-125	10		08/26/13 15:25	98-08-8	
<b>8260 MSV UST</b>	Analytical Method: EPA 8260							
Benzene	731 ug/L		10.0	10		08/23/13 20:47	71-43-2	
Ethylbenzene	ND ug/L		10.0	10		08/23/13 20:47	100-41-4	
Toluene	204 ug/L		10.0	10		08/23/13 20:47	108-88-3	
Xylene (Total)	1630 ug/L		30.0	10		08/23/13 20:47	1330-20-7	
<b>Surrogates</b>								
1,2-Dichloroethane-d4 (S)	110 %		75-125	10		08/23/13 20:47	17060-07-0	
Toluene-d8 (S)	100 %		75-125	10		08/23/13 20:47	2037-26-5	
4-Bromofluorobenzene (S)	99 %		75-125	10		08/23/13 20:47	460-00-4	
<b>Sample: GW-082013-MD-AS Eff</b>	Lab ID: 10239328002	Collected: 08/20/13 09:15	Received: 08/20/13 14:00	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>NWTPH-Dx GCS Silica Gel LV</b>	Analytical Method: NWTPH-Dx Preparation Method: EPA 3510							
Diesel Fuel Range SG	0.41 mg/L		0.39	1	08/28/13 07:28	08/30/13 20:33	68334-30-5	
Motor Oil Range SG	ND mg/L		0.39	1	08/28/13 07:28	08/30/13 20:33	64742-65-0	
<b>Surrogates</b>								
o-Terphenyl (S)	90 %		30-125	1	08/28/13 07:28	08/30/13 20:33	84-15-1	
n-Triacontane (S)	111 %		30-125	1	08/28/13 07:28	08/30/13 20:33	638-68-6	
<b>NWTPH-Gx GCV</b>	Analytical Method: NWTPH-Gx/8021							
TPH as Gas	182 ug/L		100	1		08/28/13 03:05		
<b>Surrogates</b>								
a,a,a-Trifluorotoluene (S)	97 %		75-125	1		08/28/13 03:05	98-08-8	
<b>8260 MSV UST</b>	Analytical Method: EPA 8260							
Benzene	1.2 ug/L		1.0	1		08/23/13 21:59	71-43-2	C8
Ethylbenzene	ND ug/L		1.0	1		08/23/13 21:59	100-41-4	
Toluene	ND ug/L		1.0	1		08/23/13 21:59	108-88-3	
Xylene (Total)	15.8 ug/L		3.0	1		08/23/13 21:59	1330-20-7	
<b>Surrogates</b>								
1,2-Dichloroethane-d4 (S)	116 %		75-125	1		08/23/13 21:59	17060-07-0	P2
Toluene-d8 (S)	101 %		75-125	1		08/23/13 21:59	2037-26-5	
4-Bromofluorobenzene (S)	105 %		75-125	1		08/23/13 21:59	460-00-4	

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## ANALYTICAL RESULTS

Project: Aug 2013 O&amp;M Compliance 070496

Pace Project No.: 10239328

Sample: GW-082013-MD-Mid Carbon	Lab ID: 10239328003	Collected: 08/20/13 09:25	Received: 08/20/13 14:00	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>NWTPH-Dx GCS Silica Gel LV</b>	Analytical Method: NWTPH-Dx Preparation Method: EPA 3510							
Diesel Fuel Range SG	ND mg/L		0.38	1	08/28/13 07:28	08/30/13 23:11	68334-30-5	
Motor Oil Range SG	ND mg/L		0.38	1	08/28/13 07:28	08/30/13 23:11	64742-65-0	
<b>Surrogates</b>								
o-Terphenyl (S)	90 %		30-125	1	08/28/13 07:28	08/30/13 23:11	84-15-1	
n-Triacontane (S)	107 %		30-125	1	08/28/13 07:28	08/30/13 23:11	638-68-6	
<b>NWTPH-Gx GCV</b>	Analytical Method: NWTPH-Gx/8021							
TPH as Gas	ND ug/L		100	1		08/26/13 14:45		
<b>Surrogates</b>								
a,a,a-Trifluorotoluene (S)	98 %		75-125	1		08/26/13 14:45	98-08-8	
<b>8260 MSV UST</b>	Analytical Method: EPA 8260							
Benzene	ND ug/L		1.0	1		08/24/13 00:48	71-43-2	
Ethylbenzene	ND ug/L		1.0	1		08/24/13 00:48	100-41-4	
Toluene	ND ug/L		1.0	1		08/24/13 00:48	108-88-3	
Xylene (Total)	ND ug/L		3.0	1		08/24/13 00:48	1330-20-7	
<b>Surrogates</b>								
1,2-Dichloroethane-d4 (S)	121 %		75-125	1		08/24/13 00:48	17060-07-0	
Toluene-d8 (S)	101 %		75-125	1		08/24/13 00:48	2037-26-5	
4-Bromofluorobenzene (S)	108 %		75-125	1		08/24/13 00:48	460-00-4	

Sample: GW-082013-MD-Total Eff	Lab ID: 10239328004	Collected: 08/20/13 09:35	Received: 08/20/13 14:00	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>NWTPH-Dx GCS Silica Gel LV</b>	Analytical Method: NWTPH-Dx Preparation Method: EPA 3510							
Diesel Fuel Range SG	ND mg/L		0.39	1	08/28/13 07:28	08/30/13 22:48	68334-30-5	
Motor Oil Range SG	ND mg/L		0.39	1	08/28/13 07:28	08/30/13 22:48	64742-65-0	
<b>Surrogates</b>								
o-Terphenyl (S)	72 %		30-125	1	08/28/13 07:28	08/30/13 22:48	84-15-1	
n-Triacontane (S)	86 %		30-125	1	08/28/13 07:28	08/30/13 22:48	638-68-6	
<b>NWTPH-Gx GCV</b>	Analytical Method: NWTPH-Gx/8021							
TPH as Gas	ND ug/L		100	1		08/26/13 15:05		
<b>Surrogates</b>								
a,a,a-Trifluorotoluene (S)	98 %		75-125	1		08/26/13 15:05	98-08-8	
<b>8260 MSV UST</b>	Analytical Method: EPA 8260							
Benzene	ND ug/L		1.0	1		08/24/13 00:00	71-43-2	
Ethylbenzene	ND ug/L		1.0	1		08/24/13 00:00	100-41-4	
Toluene	ND ug/L		1.0	1		08/24/13 00:00	108-88-3	
Xylene (Total)	ND ug/L		3.0	1		08/24/13 00:00	1330-20-7	
<b>Surrogates</b>								
1,2-Dichloroethane-d4 (S)	119 %		75-125	1		08/24/13 00:00	17060-07-0	
Toluene-d8 (S)	101 %		75-125	1		08/24/13 00:00	2037-26-5	

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## ANALYTICAL RESULTS

Project: Aug 2013 O&amp;M Compliance 070496

Pace Project No.: 10239328

Sample: GW-082013-MD-Total Eff	Lab ID: 10239328004	Collected: 08/20/13 09:35	Received: 08/20/13 14:00	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV UST</b>	Analytical Method: EPA 8260							
<b>Surrogates</b>								
4-Bromofluorobenzene (S)	107 %		75-125	1		08/24/13 00:00	460-00-4	
<b>Sample: GW-082013-MD-BP R1 Inf</b>								
Lab ID: 10239328005	Collected: 08/20/13 10:40	Received: 08/20/13 14:00	Matrix: Water					
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>NWTPH-Dx GCS Silica Gel LV</b>	Analytical Method: NWTPH-Dx Preparation Method: EPA 3510							
Diesel Fuel Range SG	1.1 mg/L		0.42	1	08/28/13 07:28	08/30/13 17:56	68334-30-5	
Motor Oil Range SG	ND mg/L		0.42	1	08/28/13 07:28	08/30/13 17:56	64742-65-0	
<b>Surrogates</b>								
o-Terphenyl (S)	85 %		30-125	1	08/28/13 07:28	08/30/13 17:56	84-15-1	
n-Triacontane (S)	105 %		30-125	1	08/28/13 07:28	08/30/13 17:56	638-68-6	
<b>NWTPH-Gx GCV</b>	Analytical Method: NWTPH-Gx/8021							
TPH as Gas	4310 ug/L		500	5		09/01/13 01:04		
<b>Surrogates</b>								
a,a,a-Trifluorotoluene (S)	104 %		75-125	5		09/01/13 01:04	98-08-8	
<b>8260 MSV UST</b>	Analytical Method: EPA 8260							
Benzene	2300 ug/L		20.0	20		09/02/13 00:49	71-43-2	
Ethylbenzene	415 ug/L		10.0	10		08/23/13 21:11	100-41-4	
Toluene	23.1 ug/L		10.0	10		08/23/13 21:11	108-88-3	
Xylene (Total)	34.4 ug/L		30.0	10		08/23/13 21:11	1330-20-7	
<b>Surrogates</b>								
1,2-Dichloroethane-d4 (S)	112 %		75-125	10		08/23/13 21:11	17060-07-0	
Toluene-d8 (S)	101 %		75-125	10		08/23/13 21:11	2037-26-5	
4-Bromofluorobenzene (S)	106 %		75-125	10		08/23/13 21:11	460-00-4	

Sample: GW-082013-MD-BP R2 Inf	Lab ID: 10239328006	Collected: 08/20/13 10:50	Received: 08/20/13 14:00	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>NWTPH-Dx GCS Silica Gel LV</b>	Analytical Method: NWTPH-Dx Preparation Method: EPA 3510							
<b>Surrogates</b>								
Diesel Fuel Range SG	0.59 mg/L		0.42	1	08/28/13 07:28	08/30/13 18:18	68334-30-5	
Motor Oil Range SG	ND mg/L		0.42	1	08/28/13 07:28	08/30/13 18:18	64742-65-0	
o-Terphenyl (S)	80 %		30-125	1	08/28/13 07:28	08/30/13 18:18	84-15-1	
n-Triacontane (S)	102 %		30-125	1	08/28/13 07:28	08/30/13 18:18	638-68-6	
<b>NWTPH-Gx GCV</b>	Analytical Method: NWTPH-Gx/8021							
TPH as Gas	ND ug/L		100	1		08/28/13 02:45		
<b>Surrogates</b>								
a,a,a-Trifluorotoluene (S)	97 %		75-125	1		08/28/13 02:45	98-08-8	

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## ANALYTICAL RESULTS

Project: Aug 2013 O&amp;M Compliance 070496

Pace Project No.: 10239328

Sample: GW-082013-MD-BP R2 Inf	Lab ID: 10239328006	Collected: 08/20/13 10:50	Received: 08/20/13 14:00	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV UST</b>	Analytical Method: EPA 8260							
Benzene	ND ug/L		5.0	5		08/23/13 19:35	71-43-2	
Ethylbenzene	ND ug/L		5.0	5		08/23/13 19:35	100-41-4	
Toluene	ND ug/L		5.0	5		08/23/13 19:35	108-88-3	
Xylene (Total)	ND ug/L		15.0	5		08/23/13 19:35	1330-20-7	
<b>Surrogates</b>								
1,2-Dichloroethane-d4 (S)	98 %		75-125	5		08/23/13 19:35	17060-07-0	P2
Toluene-d8 (S)	98 %		75-125	5		08/23/13 19:35	2037-26-5	
4-Bromofluorobenzene (S)	96 %		75-125	5		08/23/13 19:35	460-00-4	
<hr/>								
Sample: GW-082013-MD-BP Total Inf	Lab ID: 10239328007	Collected: 08/20/13 11:00	Received: 08/20/13 14:00	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>NWTPH-Dx GCS Silica Gel LV</b>	Analytical Method: NWTPH-Dx Preparation Method: EPA 3510							
Diesel Fuel Range SG	0.73 mg/L		0.40	1	08/28/13 07:28	08/30/13 18:41	68334-30-5	
Motor Oil Range SG	ND mg/L		0.40	1	08/28/13 07:28	08/30/13 18:41	64742-65-0	
<b>Surrogates</b>								
o-Terphenyl (S)	71 %		30-125	1	08/28/13 07:28	08/30/13 18:41	84-15-1	
n-Triacontane (S)	96 %		30-125	1	08/28/13 07:28	08/30/13 18:41	638-68-6	
<b>NWTPH-Gx GCV</b>	Analytical Method: NWTPH-Gx/8021							
TPH as Gas	3170 ug/L		100	1		08/27/13 23:24		
<b>Surrogates</b>								
a,a,a-Trifluorotoluene (S)	131 %		75-125	1		08/27/13 23:24	98-08-8	1M
<b>8260 MSV UST</b>	Analytical Method: EPA 8260							
Benzene	1790 ug/L		10.0	10		08/23/13 21:35	71-43-2	
Ethylbenzene	ND ug/L		10.0	10		08/23/13 21:35	100-41-4	
Toluene	ND ug/L		10.0	10		08/23/13 21:35	108-88-3	
Xylene (Total)	ND ug/L		30.0	10		08/23/13 21:35	1330-20-7	
<b>Surrogates</b>								
1,2-Dichloroethane-d4 (S)	111 %		75-125	10		08/23/13 21:35	17060-07-0	
Toluene-d8 (S)	102 %		75-125	10		08/23/13 21:35	2037-26-5	
4-Bromofluorobenzene (S)	106 %		75-125	10		08/23/13 21:35	460-00-4	
<hr/>								
Sample: GW-082013-MD-BP Total Eff	Lab ID: 10239328008	Collected: 08/20/13 11:10	Received: 08/20/13 14:00	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>NWTPH-Dx GCS Silica Gel LV</b>	Analytical Method: NWTPH-Dx Preparation Method: EPA 3510							
Diesel Fuel Range SG	ND mg/L		0.40	1	08/28/13 07:28	08/30/13 19:03	68334-30-5	
Motor Oil Range SG	ND mg/L		0.40	1	08/28/13 07:28	08/30/13 19:03	64742-65-0	

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## ANALYTICAL RESULTS

Project: Aug 2013 O&amp;M Compliance 070496

Pace Project No.: 10239328

Sample: GW-082013-MD-BP Total Eff	Lab ID: 10239328008	Collected: 08/20/13 11:10	Received: 08/20/13 14:00	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>NWTPH-Dx GCS Silica Gel LV</b>		Analytical Method: NWTPH-Dx Preparation Method: EPA 3510						
<b>Surrogates</b>								
o-Terphenyl (S)	88 %		30-125	1	08/28/13 07:28	08/30/13 19:03	84-15-1	
n-Triacontane (S)	99 %		30-125	1	08/28/13 07:28	08/30/13 19:03	638-68-6	
<b>NWTPH-Gx GCV</b>		Analytical Method: NWTPH-Gx/8021						
TPH as Gas	ND ug/L		100	1		08/27/13 23:44		
<b>Surrogates</b>								
a,a,a-Trifluorotoluene (S)	83 %		75-125	1		08/27/13 23:44	98-08-8	
<b>8260 MSV UST</b>		Analytical Method: EPA 8260						
Benzene	ND ug/L		1.0	1		08/24/13 00:24	71-43-2	
Ethylbenzene	ND ug/L		1.0	1		08/24/13 00:24	100-41-4	
Toluene	ND ug/L		1.0	1		08/24/13 00:24	108-88-3	
Xylene (Total)	ND ug/L		3.0	1		08/24/13 00:24	1330-20-7	
<b>Surrogates</b>								
1,2-Dichloroethane-d4 (S)	119 %		75-125	1		08/24/13 00:24	17060-07-0	
Toluene-d8 (S)	101 %		75-125	1		08/24/13 00:24	2037-26-5	
4-Bromofluorobenzene (S)	109 %		75-125	1		08/24/13 00:24	460-00-4	
<b>Sample: A-082013-MD-SVE INF</b>		Lab ID: 10239328009	Collected: 08/20/13 09:45	Received: 08/20/13 14:00	Matrix: Air			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>TO-14M MSV AIR - Ambient</b>		Analytical Method: TO-14M Ambient Air						
Benzene	1.8 ppmv		0.27	537.6		09/05/13 00:42	71-43-2	
Ethylbenzene	ND ppmv		0.27	537.6		09/05/13 00:42	100-41-4	
THC as Gas	298 ppmv		18.8	537.6		09/05/13 00:42		
Toluene	4.7 ppmv		0.27	537.6		09/05/13 00:42	108-88-3	
m&p-Xylene	11.1 ppmv		0.54	537.6		09/05/13 00:42	179601-23-1	
o-Xylene	10.4 ppmv		0.27	537.6		09/05/13 00:42	95-47-6	
<b>Sample: A-082013-MD-AS EFF</b>		Lab ID: 10239328010	Collected: 08/20/13 09:48	Received: 08/20/13 14:00	Matrix: Air			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>TO-14M MSV AIR - Ambient</b>		Analytical Method: TO-14M Ambient Air						
Benzene	0.0024 ppmv		0.00087	1.74		08/31/13 00:27	71-43-2	
Ethylbenzene	0.0010 ppmv		0.00087	1.74		08/31/13 00:27	100-41-4	
THC as Gas	0.59 ppmv		0.061	1.74		08/31/13 00:27		
Toluene	0.0051 ppmv		0.00087	1.74		08/31/13 00:27	108-88-3	
m&p-Xylene	0.019 ppmv		0.0017	1.74		08/31/13 00:27	179601-23-1	
o-Xylene	0.020 ppmv		0.00087	1.74		08/31/13 00:27	95-47-6	

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## ANALYTICAL RESULTS

Project: Aug 2013 O&amp;M Compliance 070496

Pace Project No.: 10239328

Sample: A-082013-MD-Total INF	Lab ID: 10239328011	Collected: 08/20/13 09:51	Received: 08/20/13 14:00	Matrix: Air				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>TO-14M MSV AIR - Ambient</b>	Analytical Method: TO-14M Ambient Air							
Benzene	<b>0.13</b> ppmv		0.019	37.4		09/04/13 23:49	71-43-2	
Ethylbenzene	ND ppmv		0.019	37.4		09/04/13 23:49	100-41-4	
THC as Gas	<b>19.4</b> ppmv		1.3	37.4		09/04/13 23:49		
Toluene	<b>0.32</b> ppmv		0.019	37.4		09/04/13 23:49	108-88-3	
m&p-Xylene	<b>0.66</b> ppmv		0.037	37.4		09/04/13 23:49	179601-23-1	
o-Xylene	<b>0.61</b> ppmv		0.019	37.4		09/04/13 23:49	95-47-6	
<hr/>								
<b>Sample: A-082013-MD-Mid 1</b>	<b>Lab ID: 10239328012</b>	Collected: 08/20/13 09:54	Received: 08/20/13 14:00	Matrix: Air				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>TO-14M MSV AIR - Ambient</b>	Analytical Method: TO-14M Ambient Air							
Benzene	ND ppmv		0.00087	1.74		08/31/13 01:28	71-43-2	
Ethylbenzene	ND ppmv		0.00087	1.74		08/31/13 01:28	100-41-4	
THC as Gas	<b>1.3</b> ppmv		0.061	1.74		08/31/13 01:28		
Toluene	<b>0.017</b> ppmv		0.00087	1.74		08/31/13 01:28	108-88-3	
m&p-Xylene	ND ppmv		0.0017	1.74		08/31/13 01:28	179601-23-1	
o-Xylene	ND ppmv		0.00087	1.74		08/31/13 01:28	95-47-6	
<hr/>								
<b>Sample: A-082013-MD-Mid 2</b>	<b>Lab ID: 10239328013</b>	Collected: 08/20/13 09:57	Received: 08/20/13 14:00	Matrix: Air				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>TO-14M MSV AIR - Ambient</b>	Analytical Method: TO-14M Ambient Air							
Benzene	ND ppmv		0.00094	1.87		09/04/13 23:22	71-43-2	
Ethylbenzene	ND ppmv		0.00094	1.87		09/04/13 23:22	100-41-4	
THC as Gas	<b>0.60</b> ppmv		0.065	1.87		09/04/13 23:22		
Toluene	<b>0.0017</b> ppmv		0.00094	1.87		09/04/13 23:22	108-88-3	
m&p-Xylene	ND ppmv		0.0019	1.87		09/04/13 23:22	179601-23-1	
o-Xylene	ND ppmv		0.00094	1.87		09/04/13 23:22	95-47-6	
<hr/>								
<b>Sample: A-082013-MD-Total EFF</b>	<b>Lab ID: 10239328014</b>	Collected: 08/20/13 10:00	Received: 08/20/13 14:00	Matrix: Air				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>TO-14M MSV AIR - Ambient</b>	Analytical Method: TO-14M Ambient Air							
Benzene	ND ppmv		0.00084	1.68		08/31/13 00:57	71-43-2	
Ethylbenzene	ND ppmv		0.00084	1.68		08/31/13 00:57	100-41-4	
THC as Gas	<b>0.42</b> ppmv		0.059	1.68		08/31/13 00:57		
Toluene	<b>0.0032</b> ppmv		0.00084	1.68		08/31/13 00:57	108-88-3	
m&p-Xylene	ND ppmv		0.0017	1.68		08/31/13 00:57	179601-23-1	
o-Xylene	ND ppmv		0.00084	1.68		08/31/13 00:57	95-47-6	

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## ANALYTICAL RESULTS

Project: Aug 2013 O&M Compliance 070496

Pace Project No.: 10239328

Sample: A-082613-NH-BP Total Eff	Lab ID: 10239328017	Collected: 08/26/13 10:30	Received: 08/27/13 09:15	Matrix: Air				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>TO-14M MSV AIR - Ambient</b>	Analytical Method: TO-14M Ambient Air							
Benzene	<b>0.85</b> ppmv		0.045	89.8			09/05/13 00:16	71-43-2
Ethylbenzene	ND ppmv		0.045	89.8			09/05/13 00:16	100-41-4
THC as Gas	ND ppmv		3.1	89.8			09/05/13 00:16	
Toluene	ND ppmv		0.045	89.8			09/05/13 00:16	108-88-3
m&p-Xylene	ND ppmv		0.090	89.8			09/05/13 00:16	179601-23-1
o-Xylene	ND ppmv		0.045	89.8			09/05/13 00:16	95-47-6

## REPORT OF LABORATORY ANALYSIS

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## QUALITY CONTROL DATA

Project: Aug 2013 O&M Compliance 070496

Pace Project No.: 10239328

---

QC Batch:	AIR/18131	Analysis Method:	TO-14M Ambient Air
QC Batch Method:	TO-14M Ambient Air	Analysis Description:	TO14 MSV AIR - AMBIENT
Associated Lab Samples:	10239328010, 10239328012, 10239328014		

---

METHOD BLANK: 1514865 Matrix: Air

Associated Lab Samples: 10239328010, 10239328012, 10239328014

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Benzene	ppmv	ND	0.00050	08/30/13 09:54	
Ethylbenzene	ppmv	ND	0.00050	08/30/13 09:54	
m&p-Xylene	ppmv	ND	0.0010	08/30/13 09:54	
o-Xylene	ppmv	ND	0.00050	08/30/13 09:54	
THC as Gas	ppmv	ND	0.035	08/30/13 09:54	
Toluene	ppmv	ND	0.00050	08/30/13 09:54	

---

LABORATORY CONTROL SAMPLE: 1514866

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Benzene	ppmv	.01	0.012	115	72-136	
Ethylbenzene	ppmv	.01	0.012	119	74-136	
m&p-Xylene	ppmv	.01	0.011	114	72-135	
o-Xylene	ppmv	.01	0.012	115	74-135	
THC as Gas	ppmv	.78	0.66	85	63-141	
Toluene	ppmv	.01	0.0097	97	71-134	

## REPORT OF LABORATORY ANALYSIS

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## QUALITY CONTROL DATA

Project: Aug 2013 O&M Compliance 070496

Pace Project No.: 10239328

QC Batch:

AIR/18149

Analysis Method:

TO-14M Ambient Air

QC Batch Method: TO-14M Ambient Air

Analysis Description:

TO14 MSV AIR - AMBIENT

Associated Lab Samples: 10239328009, 10239328011, 10239328013, 10239328017

METHOD BLANK: 1516422

Matrix: Air

Associated Lab Samples: 10239328009, 10239328011, 10239328013, 10239328017

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Benzene	ppmv	ND	0.00050	09/04/13 13:14	
Ethylbenzene	ppmv	ND	0.00050	09/04/13 13:14	
m&p-Xylene	ppmv	ND	0.0010	09/04/13 13:14	
o-Xylene	ppmv	ND	0.00050	09/04/13 13:14	
THC as Gas	ppmv	ND	0.035	09/04/13 13:14	
Toluene	ppmv	ND	0.00050	09/04/13 13:14	

LABORATORY CONTROL SAMPLE: 1516423

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Benzene	ppmv	.01	0.011	112	72-136	
Ethylbenzene	ppmv	.01	0.012	121	74-136	
m&p-Xylene	ppmv	.01	0.012	118	72-135	
o-Xylene	ppmv	.01	0.012	121	74-135	
THC as Gas	ppmv	.78	0.72	92	63-141	
Toluene	ppmv	.01	0.012	115	71-134	

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## QUALITY CONTROL DATA

Project: Aug 2013 O&amp;M Compliance 070496

Pace Project No.: 10239328

QC Batch:	GCV/11227	Analysis Method:	NWTPH-Gx/8021
QC Batch Method:	NWTPH-Gx/8021	Analysis Description:	NWTPH-Gx/8021B Water
Associated Lab Samples:	10239328001, 10239328003, 10239328004		

METHOD BLANK: 1510111 Matrix: Water

Associated Lab Samples: 10239328001, 10239328003, 10239328004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
TPH as Gas	ug/L	ND	100	08/26/13 09:34	
a,a,a-Trifluorotoluene (S)	%	100	75-125	08/26/13 09:34	

LABORATORY CONTROL SAMPLE &amp; LCSD: 1510112 1510113

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
TPH as Gas	ug/L	1000	1100	1180	110	118	75-126	7	20	
a,a,a-Trifluorotoluene (S)	%				107	109	75-125			

MATRIX SPIKE &amp; MATRIX SPIKE DUPLICATE: 1510114 1510115

Parameter	Units	10238903010 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	RPD	Qual
TPH as Gas	ug/L	277	1000	1000	1500	1460	123	119	75-137	3	30	
a,a,a-Trifluorotoluene (S)	%						114	113	75-125			

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## QUALITY CONTROL DATA

Project: Aug 2013 O&amp;M Compliance 070496

Pace Project No.: 10239328

QC Batch:	GCV/11237	Analysis Method:	NWTPH-Gx/8021
QC Batch Method:	NWTPH-Gx/8021	Analysis Description:	NWTPH-Gx/8021B Water
Associated Lab Samples:	10239328002, 10239328006, 10239328007, 10239328008		

METHOD BLANK: 1511500 Matrix: Water

Associated Lab Samples: 10239328002, 10239328006, 10239328007, 10239328008

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
TPH as Gas	ug/L	ND	100	08/27/13 20:02	
a,a,a-Trifluorotoluene (S)	%	96	75-125	08/27/13 20:02	

LABORATORY CONTROL SAMPLE &amp; LCSD: 1511501 1511502

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
TPH as Gas	ug/L	1000	1100	992	110	99	75-126	10	20	
a,a,a-Trifluorotoluene (S)	%				101	90	75-125			

MATRIX SPIKE &amp; MATRIX SPIKE DUPLICATE: 1511503 1511504

Parameter	Units	10238751005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	RPD	Qual
TPH as Gas	ug/L	222	1000	1000	747	664	52	44	75-137	12	30	M1
a,a,a-Trifluorotoluene (S)	%						127	125	75-125			S0

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## QUALITY CONTROL DATA

Project: Aug 2013 O&amp;M Compliance 070496

Pace Project No.: 10239328

QC Batch:	GCV/11249	Analysis Method:	NWTPH-Gx/8021
QC Batch Method:	NWTPH-Gx/8021	Analysis Description:	NWTPH-Gx/8021B Water
Associated Lab Samples:	10239328005		

METHOD BLANK: 1513552 Matrix: Water

Associated Lab Samples: 10239328005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
TPH as Gas	ug/L	ND	100	08/31/13 18:18	
a,a,a-Trifluorotoluene (S)	%	100	75-125	08/31/13 18:18	

LABORATORY CONTROL SAMPLE &amp; LCSD: 1513553 1513554

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
TPH as Gas	ug/L	1000	1080	1130	108	113	75-126	4	20	
a,a,a-Trifluorotoluene (S)	%				109	110	75-125			

MATRIX SPIKE SAMPLE: 1515345

Parameter	Units	10240270001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
TPH as Gas	ug/L	ND	1000	1020	101	75-137	
a,a,a-Trifluorotoluene (S)	%				109	75-125	

SAMPLE DUPLICATE: 1515346

Parameter	Units	10240270002 Result	Dup Result	RPD	Max RPD	Qualifiers
TPH as Gas	ug/L	163	138	16	30	
a,a,a-Trifluorotoluene (S)	%	99	100	.8		

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## QUALITY CONTROL DATA

Project: Aug 2013 O&amp;M Compliance 070496

Pace Project No.: 10239328

QC Batch:	MSV/24708	Analysis Method:	EPA 8260
QC Batch Method:	EPA 8260	Analysis Description:	8260 MSV UST-WATER
Associated Lab Samples:	10239328001, 10239328002, 10239328003, 10239328004, 10239328005, 10239328006, 10239328007, 10239328008		

METHOD BLANK: 1508399 Matrix: Water

Associated Lab Samples: 10239328001, 10239328002, 10239328003, 10239328004, 10239328005, 10239328006, 10239328007, 10239328008

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Benzene	ug/L	ND	1.0	08/23/13 15:09	
Ethylbenzene	ug/L	ND	1.0	08/23/13 15:09	
Toluene	ug/L	ND	1.0	08/23/13 15:09	
Xylene (Total)	ug/L	ND	3.0	08/23/13 15:09	
1,2-Dichloroethane-d4 (S)	%	96	75-125	08/23/13 15:09	
4-Bromofluorobenzene (S)	%	99	75-125	08/23/13 15:09	
Toluene-d8 (S)	%	96	75-125	08/23/13 15:09	

LABORATORY CONTROL SAMPLE: 1508400

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Benzene	ug/L	20	16.2	81	75-125	
Ethylbenzene	ug/L	20	16.4	82	75-125	
Toluene	ug/L	20	16.5	82	75-125	
Xylene (Total)	ug/L	60	54.2	90	75-125	
1,2-Dichloroethane-d4 (S)	%			96	75-125	
4-Bromofluorobenzene (S)	%			100	75-125	
Toluene-d8 (S)	%			97	75-125	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1515838 1515839

Parameter	Units	10239328006 Result	MS	MSD	MS Result	MS % Rec	MSD % Rec	% Rec Limits	Max	RPD	RPD	Qual
			Spike Conc.	Spike Conc.					MSD % Rec			
Benzene	ug/L	ND	100	100	102	106	101	104	70-135	3	30	
Ethylbenzene	ug/L	ND	100	100	106	109	104	107	75-125	3	30	
Toluene	ug/L	ND	100	100	92.9	105	92	105	75-125	12	30	
Xylene (Total)	ug/L	ND	300	300	327	352	109	117	75-125	7	30	
1,2-Dichloroethane-d4 (S)	%						94	94	75-125			
4-Bromofluorobenzene (S)	%						96	103	75-125			
Toluene-d8 (S)	%						90	99	75-125			

## REPORT OF LABORATORY ANALYSIS

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## QUALITY CONTROL DATA

Project: Aug 2013 O&amp;M Compliance 070496

Pace Project No.: 10239328

QC Batch: OEXT/22816

Analysis Method: NWTPH-Dx

QC Batch Method: EPA 3510

Analysis Description: NWTPH-Dx GCS LV SG

Associated Lab Samples: 10239328001, 10239328002, 10239328003, 10239328004, 10239328005, 10239328006, 10239328007, 10239328008

METHOD BLANK: 1511842

Matrix: Water

Associated Lab Samples: 10239328001, 10239328002, 10239328003, 10239328004, 10239328005, 10239328006, 10239328007, 10239328008

Parameter	Units	Blank Result	Reporting		Qualifiers
			Limit	Analyzed	
Diesel Fuel Range SG	mg/L	ND	0.40	08/30/13 15:41	
Motor Oil Range SG	mg/L	ND	0.40	08/30/13 15:41	
n-Tricontane (S)	%	106	30-125	08/30/13 15:41	
o-Terphenyl (S)	%	84	30-125	08/30/13 15:41	

LABORATORY CONTROL SAMPLE: 1511843

Parameter	Units	Spike Conc.	LCS		% Rec		Qualifiers
			Result	% Rec	Limits		
Diesel Fuel Range SG	mg/L	2	1.8	88	50-150		
Motor Oil Range SG	mg/L	2	1.9	93	50-150		
n-Tricontane (S)	%			93	30-125		
o-Terphenyl (S)	%			93	30-125		

MATRIX SPIKE &amp; MATRIX SPIKE DUPLICATE: 1511844

1511845

Parameter	Units	10238750030	MS		MSD		MS % Rec	MSD % Rec	% Rec		Max RPD	RPD	Qual
			Spike Conc.	Result	Spike Conc.	MS Result			MSD Result	% Rec			
Diesel Fuel Range SG	mg/L	ND	2.2	2.1	2.2	1.8	89	71	50-150	23	30		
Motor Oil Range SG	mg/L	ND	2.2	2.1	2.2	1.8	103	86	50-150	22	30		
n-Tricontane (S)	%						98	74	30-125				
o-Terphenyl (S)	%						98	80	30-125				

SAMPLE DUPLICATE: 1511846

Parameter	Units	10238750036		Dup		Max		Qualifiers
		Result	RPD	Result	RPD	RPD		
Diesel Fuel Range SG	mg/L	2.0	2.4	19		30		
Motor Oil Range SG	mg/L	0.64	0.89	33		30 D6		
n-Tricontane (S)	%	90	92	6				
o-Terphenyl (S)	%	90	89	3				

## REPORT OF LABORATORY ANALYSIS

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## QUALIFIERS

Project: Aug 2013 O&M Compliance 070496  
Pace Project No.: 10239328

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### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PRL - Pace Reporting Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

### LABORATORIES

PASI-M Pace Analytical Services - Minneapolis

### SAMPLE QUALIFIERS

Sample: 10239328009

[1] This result is reported from a serial dilution

### ANALYTE QUALIFIERS

- 1M Surrogate recovery outside laboratory control limits due to matrix interferences.
- A4 Sample was transferred from a sampling bag into a Summa Canister within 48 hours of collection.
- C8 Result may be biased high due to carryover from previously analyzed sample.
- D6 The relative percent difference (RPD) between the sample and sample duplicate exceeded laboratory control limits.
- M1 Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
- P2 Re-extraction or re-analysis could not be performed due to insufficient sample amount.
- S0 Surrogate recovery outside laboratory control limits.

## REPORT OF LABORATORY ANALYSIS

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**QUALITY CONTROL DATA CROSS REFERENCE TABLE**

Project: Aug 2013 O&M Compliance 070496  
Pace Project No.: 10239328

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
10239328009	A-082013-MD-SVE INF	TO-14M Ambient Air	AIR/18149		
10239328010	A-082013-MD-AS EFF	TO-14M Ambient Air	AIR/18131		
10239328011	A-082013-MD-Total INF	TO-14M Ambient Air	AIR/18149		
10239328012	A-082013-MD-Mid 1	TO-14M Ambient Air	AIR/18131		
10239328013	A-082013-MD-Mid 2	TO-14M Ambient Air	AIR/18149		
10239328014	A-082013-MD-Total EFF	TO-14M Ambient Air	AIR/18131		
10239328017	A-082613-NH-BP Total Eff	TO-14M Ambient Air	AIR/18149		
10239328001	GW-082013-MD-Total Inf	EPA 3510	OEXT/22816	NWTPH-Dx	GCSV/11969
10239328002	GW-082013-MD-AS Eff	EPA 3510	OEXT/22816	NWTPH-Dx	GCSV/11969
10239328003	GW-082013-MD-Mid Carbon	EPA 3510	OEXT/22816	NWTPH-Dx	GCSV/11969
10239328004	GW-082013-MD-Total Eff	EPA 3510	OEXT/22816	NWTPH-Dx	GCSV/11969
10239328005	GW-082013-MD-BP R1 Inf	EPA 3510	OEXT/22816	NWTPH-Dx	GCSV/11969
10239328006	GW-082013-MD-BP R2 Inf	EPA 3510	OEXT/22816	NWTPH-Dx	GCSV/11969
10239328007	GW-082013-MD-BP Total Inf	EPA 3510	OEXT/22816	NWTPH-Dx	GCSV/11969
10239328008	GW-082013-MD-BP Total Eff	EPA 3510	OEXT/22816	NWTPH-Dx	GCSV/11969
10239328001	GW-082013-MD-Total Inf	NWTPH-Gx/8021	GCV/11227		
10239328002	GW-082013-MD-AS Eff	NWTPH-Gx/8021	GCV/11237		
10239328003	GW-082013-MD-Mid Carbon	NWTPH-Gx/8021	GCV/11227		
10239328004	GW-082013-MD-Total Eff	NWTPH-Gx/8021	GCV/11227		
10239328005	GW-082013-MD-BP R1 Inf	NWTPH-Gx/8021	GCV/11249		
10239328006	GW-082013-MD-BP R2 Inf	NWTPH-Gx/8021	GCV/11237		
10239328007	GW-082013-MD-BP Total Inf	NWTPH-Gx/8021	GCV/11237		
10239328008	GW-082013-MD-BP Total Eff	NWTPH-Gx/8021	GCV/11237		
10239328001	GW-082013-MD-Total Inf	EPA 8260	MSV/24708		
10239328002	GW-082013-MD-AS Eff	EPA 8260	MSV/24708		
10239328003	GW-082013-MD-Mid Carbon	EPA 8260	MSV/24708		
10239328004	GW-082013-MD-Total Eff	EPA 8260	MSV/24708		
10239328005	GW-082013-MD-BP R1 Inf	EPA 8260	MSV/24708		
10239328006	GW-082013-MD-BP R2 Inf	EPA 8260	MSV/24708		
10239328007	GW-082013-MD-BP Total Inf	EPA 8260	MSV/24708		
10239328008	GW-082013-MD-BP Total Eff	EPA 8260	MSV/24708		

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## CHAIN OF CUSTODY RECORD

1154

10239328

CONESTOGA-ROVERS & ASSOCIATES _____  Tacoma		SHIPPED TO (Laboratory Name): PACE		REFERENCE NUMBER: 070496 - Monthly 03' M SAMPLES					
SAMPLER'S SIGNATURE: <i>Matt Davis</i>	PRINTED NAME: <i>MATT DAVIS</i>	SEQ. No.	DATE	TIME	SAMPLE No.	SAMPLE TYPE	No. of Containers	PARAMETERS MONITORING TESTS	REMARKS
8/20/13	9:05	GW-a 082013-MD - Total T-NF	GW	5					001
	9:15	GW-082013-MD - AS EFF		1					002
	9:25	GW-082013-MD - Mid Carbon							003
	9:35	KW-082013-MD - TOTAL EFF							004
	10:45	GW-a 082013-MD - BP R1 INF							005
	10:50	GW-082013-MD - BPR2 INF							006
	11:00	GW-082013-MD - BP Total INF							007
	11:10	GW-082013-MD - BP total EFF							008
	9:45	A-082013-MD - SVE INF	A	1					009
	9:48	A-082013-MD - AS EFF							010
	9:51	A-082013-MD - Total T-NF							011
	9:54	A-082013-MD - MID 1							012
	9:57	A-082013-MD - MID 2							013
	10:00	A-082013-MD - Total EFF							014
	11:15	A-082013-MD - BP total EFF							015
TOTAL NUMBER OF CONTAINERS				HEALTH/CHEMICAL HAZARDS					
RELINQUISHED BY: ①	<i>Matt Davis</i>	DATE: 8/20/13 TIME: 1400	RECEIVED BY: ①	<i>PACE</i>	DATE: 8/20/13 TIME: 1400				
RELINQUISHED BY: ②		DATE:	RECEIVED BY: ②	<i>TN /Prae</i>	DATE: 8/21/13 TIME: 9:26				
RELINQUISHED BY: ③		DATE:	RECEIVED BY: ③		DATE: TIME:				
METHOD OF SHIPMENT:				WAY BILL No.					
White	Fully Executed Copy	SAMPLE TEAM: <i>MATT DAVIS</i>		RECEIVED FOR LABORATORY BY: _____ DATE: _____ TIME: _____			Nº CRA 21088		
Yellow	Receiving Laboratory Copy								
Pink	Shipper Copy								
Goldenrod	Sampler Copy								

T- P. G.

1001 (D) APR 28/97(NF) REV. 8/17/97

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	Document Name: Sample Condition Upon Receipt Form	Document Revised: 28Jan2013 Page 1 of 1
	Document No.: F-MN-L-213-rev.06	Issuing Authority: Pace Minnesota Quality Office

Sample Condition Upon Receipt	Client Name: <b>CRA</b>	Project #: <b>WO# : 10239328</b>
Courier:	<input checked="" type="checkbox"/> FedEx <input type="checkbox"/> UPS <input type="checkbox"/> USPS <input type="checkbox"/> Client <input type="checkbox"/> Commercial <input type="checkbox"/> Pace <input type="checkbox"/> Other: _____	 10239328
Tracking Number:	S647 7478 2491	
Custody Seal on Cooler/Box Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No      Seals Intact? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		Optional: Proj. Due Date: Proj. Name:
Packing Material:	<input type="checkbox"/> Bubble Wrap <input checked="" type="checkbox"/> Bubble Bags <input type="checkbox"/> None <input type="checkbox"/> Other: _____	Temp Blank? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Thermom. Used:	<input checked="" type="checkbox"/> 688A912167504 <input type="checkbox"/> 80512447 <input type="checkbox"/> 72337080	Type of Ice: <input checked="" type="checkbox"/> Wet <input type="checkbox"/> Blue <input type="checkbox"/> None <input type="checkbox"/> Samples on ice, cooling process has begun
Cooler Temp Read (°C): <b>0.3</b>	Cooler Temp Corrected (°C): <b>0.6</b>	Biological Tissue Frozen? <input type="checkbox"/> Yes <input type="checkbox"/> No
Temp should be above freezing to 6°C	Correction Factor: <b>-0.6/10.3</b>	Date and Initials of Person Examining Contents: <b>8/21/13 TN</b>
Comments:		
Chain of Custody Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Chain of Custody Filled Out?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Chain of Custody Relinquished?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.
Sampler Name and/or Signature on COC?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.
Samples Arrived within Hold Time?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Short Hold Time Analysis (<72 hr)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	6.
Rush Turn Around Time Requested?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	7.
Sufficient Volume?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	8.
Correct Containers Used?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
-Pace Containers Used?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Containers Intact?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.
Filtered Volume Received for Dissolved Tests?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Sample Labels Match COC?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	12. <i>Missing all samples beginning with A or 8/22/13</i>
-Includes Date/Time/ID/Analysis Matrix: <b>WT</b>		
All containers needing acid/base preservation have been checked? Noncompliances are noted in 13.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	13. <input type="checkbox"/> HNO <sub>3</sub> <input type="checkbox"/> H <sub>2</sub> SO <sub>4</sub> <input type="checkbox"/> NaOH <input type="checkbox"/> HCl
All containers needing preservation are found to be in compliance with EPA recommendation? (HNO <sub>3</sub> , H <sub>2</sub> SO <sub>4</sub> , HCl<2; NaOH>12)	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	Sample #
Exceptions: <input checked="" type="checkbox"/> VOA Coliform, TOC, Oil and Grease, WI-DRO (water)	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Initial when completed: <b>TN</b>
Headspace in VOA Vials (>6mm)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	Lot # of added preservative:
Trip Blank Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	
Trip Blank Custody Seals Present?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Pace Trip Blank Lot # (if purchased):		

**CLIENT NOTIFICATION/RESOLUTION**

Field Data Required?  Yes  No

Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Comments/Resolution: \_\_\_\_\_

Project Manager Review: JENNIFER GROSS

Date: **8/22/13**

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. out of hold, incorrect preservative, out of temp, incorrect containers)

<i>Pace Analytical</i>	Document Name: Air Sample Condition Upon Receipt	Document Revised: 28Jan2013 Page 1 of 1
	Document No.: F-MN-A-105-rev.07	Issuing Authority: Pace Minnesota Quality Office

Air Sample Condition  
Upon Receipt

Client Name:

*CRA*

Project #:

WO# : 10239328

Courier:  Fed Ex  UPS  USPS  Client  
 Commercial  Pace  Other: \_\_\_\_\_

Tracking Number:



10239328

Custody Seal on Cooler/Box Present?  Yes  No Seals Intact?  Yes  No Options: Proj. Due Date: Proj. Name:

Packing Material:  Bubble Wrap  Bubble Bags  Foam  None  Other: \_\_\_\_\_

Temp. (TO17 and TO18 samples only) (°C): \_\_\_\_\_ Corrected Temp (°C): *AMB* Thermom. Used:  888A912167504  80512447  2337080  
Temp should be above freezing to 6°C Correction Factor: *Clif 8/21/13*

Comments:

Chain of Custody Present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	1.
Chain of Custody Filled Out?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	2.
Chain of Custody Relinquished?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	3.
Sampler Name and/or Signature on COC?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	4.
Samples Arrived within Hold Time?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	5.
Short Hold Time Analysis (<72 hr)?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/> N/A	6.
Rush Turn Around Time Requested?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/> N/A	7.
Sufficient Volume?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	8.
Correct Containers Used?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	9.
-Pace Containers Used?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	
Containers Intact?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	10.
Media: <i>Air(Can)</i>				11.
Sample Labels Match COC?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	12.

Samples Received:

Canisters		Flow Controllers		Stand Alone G	
Sample Number	Can ID	Sample Number	Can ID	Sample Number	Can ID
SUE INF	<i>PACE 1317</i>				
AS-EFF	" 1439				
Total Inf	" 1366				
Mid 1	" 0810				
Mid 2	" 1426				
Total EFF	" 1777				
BP Total EFF	" 0758				
Unused	<i>PACE 1350</i>				

CLIENT NOTIFICATION/RESOLUTION

Field Data Required?  Yes  No

Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Comments/Resolution: \_\_\_\_\_

Project Manager Review: *Jenn Gross*

Date: *8/22/13*

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. out of hold, incorrect preservative, out-of-temp, incorrect containers)



## **CONESTOGA-ROVERS & ASSOCIATES**

**CHAIN OF CUSTODY RECORD**

**Address:** 1117 TACOMA AVE. SOUTH, TACOMA, WA  
**Phone:** 253-573-1428      **Fax:** 253-573-1663

Lazzini COC No.: 38659

DOC NO.: 38659  
PAGE 1 OF 1  
24 of 25  
(See Reverse Side for Instructions)

*Project No/ Phase/Task Code:*

*Project Name:* 070496-2RMS

Laboratory Name: **PAC E** Lab Location: **SEATTLE / MINNESOTA**  
Lab Contact: \_\_\_\_\_ Lab Quote No: \_\_\_\_\_

Gloss

Project / Definition

TRENTON, WA.

SAMPLE CONTAINER QUANTITY &  
DISPENSATION

196

Chemistry Contact

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Airbill No

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Jacob H. Davis

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104

**CLIENT NOTIFICATION/RESOLUTION**

Person Contacted: Matt Davis

Field Data Required?  Yes  No  
Date/Time: 8/23/13 - Emu

**Comments/Resolution:**

Client re-sample due to summa can malfunction on original.

## **Project Manager Review:**

Date: 8/27/13

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. out of hold, incorrect preservative, out-of-temp, incorrect containers)

October 14, 2013

Edwin Turner  
CRA\_Conoco Phillips  
20818 44th Ave. W  
Lynnwood, WA 98036

RE: Project: Sep 2013 O&M Compliance 070496  
Pace Project No.: 10242791

Dear Edwin Turner:

Enclosed are the analytical results for sample(s) received by the laboratory on September 19, 2013. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Jennifer Gross

jennifer.gross@pacelabs.com  
Project Manager

Enclosures

cc: Yu Chen, CRA\_Conoco Phillips  
Jeffrey Cloud, Conestoga-Rovers Association  
Matt Davis, CRA\_Conoco Phillips  
Kelsey Whittaker, CRA



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: Sep 2013 O&M Compliance 070496  
Pace Project No.: 10242791

### Minnesota Certification IDs

1700 Elm Street SE Suite 200, Minneapolis, MN 55414  
A2LA Certification #: 2926.01  
Alaska Certification #: UST-078  
Alaska Certification #MN00064  
Arizona Certification #: AZ-0014  
Arkansas Certification #: 88-0680  
California Certification #: 01155CA  
Colorado Certification #Pace  
Connecticut Certification #: PH-0256  
EPA Region 8 Certification #: Pace  
Florida/NELAP Certification #: E87605  
Georgia Certification #: 959  
Hawaii Certification #Pace  
Idaho Certification #: MN00064  
Illinois Certification #: 200011  
Kansas Certification #: E-10167  
Louisiana Certification #: 03086  
Louisiana Certification #: LA080009  
Maine Certification #: 2007029  
Maryland Certification #: 322  
Michigan DEQ Certification #: 9909  
Minnesota Certification #: 027-053-137

Mississippi Certification #: Pace  
Montana Certification #: MT CERT0092  
Nebraska Certification #: Pace  
Nevada Certification #: MN\_00064  
New Jersey Certification #: MN-002  
New York Certification #: 11647  
North Carolina Certification #: 530  
North Dakota Certification #: R-036  
Ohio VAP Certification #: CL101  
Oklahoma Certification #: 9507  
Oregon Certification #: MN200001  
Oregon Certification #: MN300001  
Pennsylvania Certification #: 68-00563  
Puerto Rico Certification  
Tennessee Certification #: 02818  
Texas Certification #: T104704192  
Utah Certification #: MN00064  
Virginia/DCLS Certification #: 002521  
Virginia/VELAP Certification #: 460163  
Washington Certification #: C754  
West Virginia Certification #: 382  
Wisconsin Certification #: 999407970

## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: Sep 2013 O&amp;M Compliance 070496

Pace Project No.: 10242791

Lab ID	Sample ID	Matrix	Date Collected	Date Received
10242791001	<b>GW-091913-MD-Total Inf</b>	Water	09/19/13 09:20	09/19/13 14:10
10242791002	<b>GW-091913-MD-AS Eff</b>	Water	09/19/13 09:50	09/19/13 14:10
10242791003	<b>GW-091913-MD-Mid Carbon</b>	Water	09/19/13 09:30	09/19/13 14:10
10242791004	<b>GW-091913-MD-Total Eff</b>	Water	09/19/13 09:40	09/19/13 14:10
10242791005	<b>A-091913-MD-SVE Inf</b>	Air	09/19/13 10:20	09/19/13 14:10
10242791006	<b>A-091913-MD-AS-Eff</b>	Air	09/19/13 10:22	09/19/13 14:10
10242791007	<b>A-091913-MD-Total Inf</b>	Air	09/19/13 10:24	09/19/13 14:10
10242791008	<b>A-091913-MD-Mid 1</b>	Air	09/19/13 10:26	09/19/13 14:10
10242791009	<b>A-091913-MD-Mid 2</b>	Air	09/19/13 10:28	09/19/13 14:10
10242791010	<b>A-091913-MD-Total Eff</b>	Air	09/19/13 10:30	09/19/13 14:10
10242791011	<b>GW-091913-MD-BP R1 Inf</b>	Water	09/19/13 12:00	09/19/13 14:10
10242791012	<b>GW-091913-MD-BP R2 Inf</b>	Water	09/19/13 12:10	09/19/13 14:10
10242791013	<b>GW-091913-MD-BP Total Inf</b>	Water	09/19/13 12:20	09/19/13 14:10
10242791014	<b>GW-091913-MD-BP Total Eff</b>	Water	09/19/13 12:30	09/19/13 14:10
10242791015	<b>A-091913-MD-BP Total Eff</b>	Air	09/19/13 12:40	09/19/13 14:10
10242791016	<b>Trip Blank</b>	Water	09/19/13 00:00	09/19/13 14:10

## REPORT OF LABORATORY ANALYSIS

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## SAMPLE ANALYTE COUNT

Project: Sep 2013 O&M Compliance 070496  
Pace Project No.: 10242791

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
10242791001	GW-091913-MD-Total Inf	NWTPH-Dx	MT	4	PASI-M
		NWTPH-Gx/8021	LLC	2	PASI-M
		EPA 8260	SH2	7	PASI-M
10242791002	GW-091913-MD-AS Eff	NWTPH-Dx	JRH	4	PASI-M
		NWTPH-Gx/8021	LLC	2	PASI-M
		EPA 8260	SH2	7	PASI-M
10242791003	GW-091913-MD-Mid Carbon	NWTPH-Dx	MT	4	PASI-M
		NWTPH-Gx/8021	LLC	2	PASI-M
		EPA 8260	SH2	7	PASI-M
10242791004	GW-091913-MD-Total Eff	NWTPH-Dx	MT	4	PASI-M
		NWTPH-Gx/8021	LLC	2	PASI-M
		EPA 8260	SH2	7	PASI-M
10242791005	A-091913-MD-SVE Inf	TO-14M Ambient Air	AH2	6	PASI-M
10242791006	A-091913-MD-AS-Eff	TO-14M Ambient Air	AH2	6	PASI-M
10242791007	A-091913-MD-Total Inf	TO-14M Ambient Air	AH2	6	PASI-M
10242791008	A-091913-MD-Mid 1	TO-14M Ambient Air	AH2	6	PASI-M
10242791009	A-091913-MD-Mid 2	TO-14M Ambient Air	AH2	6	PASI-M
10242791010	A-091913-MD-Total Eff	TO-14M Ambient Air	AH2	6	PASI-M
10242791011	GW-091913-MD-BP R1 Inf	NWTPH-Dx	MT	4	PASI-M
		NWTPH-Gx/8021	LLC	2	PASI-M
		EPA 8260	SH2	7	PASI-M
10242791012	GW-091913-MD-BP R2 Inf	NWTPH-Dx	JRH	4	PASI-M
		NWTPH-Gx/8021	LLC	2	PASI-M
		EPA 8260	SH2	7	PASI-M
10242791013	GW-091913-MD-BP Total Inf	NWTPH-Dx	MT	4	PASI-M
		NWTPH-Gx/8021	LLC	2	PASI-M
		EPA 8260	SH2	7	PASI-M
10242791014	GW-091913-MD-BP Total Eff	NWTPH-Dx	JRH	4	PASI-M
		NWTPH-Gx/8021	LLC	2	PASI-M
		EPA 8260	SH2	7	PASI-M
10242791015	A-091913-MD-BP Total Eff	TO-14M Ambient Air	AH2	6	PASI-M
10242791016	Trip Blank	NWTPH-Gx/8021	LLC	2	PASI-M
		EPA 8260	SH2	7	PASI-M

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: Sep 2013 O&amp;M Compliance 070496

Pace Project No.: 10242791

Sample: GW-091913-MD-Total Inf	Lab ID: 10242791001	Collected: 09/19/13 09:20	Received: 09/19/13 14:10	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>NWTPH-Dx GCS Silica Gel LV</b>	Analytical Method: NWTPH-Dx Preparation Method: EPA 3510							
Diesel Fuel Range SG	<b>0.49</b> mg/L		0.40	1	09/30/13 08:04	09/30/13 20:56	68334-30-5	
Motor Oil Range SG	ND mg/L		0.40	1	09/30/13 08:04	09/30/13 20:56	64742-65-0	
<b>Surrogates</b>								
o-Terphenyl (S)	78 %		30-125	1	09/30/13 08:04	09/30/13 20:56	84-15-1	
n-Triacontane (S)	98 %		30-125	1	09/30/13 08:04	09/30/13 20:56	638-68-6	
<b>NWTPH-Gx GCV</b>	Analytical Method: NWTPH-Gx/8021							
TPH as Gas	<b>1880</b> ug/L		100	1		09/26/13 08:00		
<b>Surrogates</b>								
a,a,a-Trifluorotoluene (S)	85 %		75-125	1		09/26/13 08:00	98-08-8	
<b>8260 MSV UST</b>	Analytical Method: EPA 8260							
Benzene	<b>396</b> ug/L		2.0	2		09/30/13 21:58	71-43-2	
Ethylbenzene	<b>13.0</b> ug/L		2.0	2		09/30/13 21:58	100-41-4	
Toluene	<b>274</b> ug/L		2.0	2		09/30/13 21:58	108-88-3	
Xylene (Total)	<b>296</b> ug/L		6.0	2		09/30/13 21:58	1330-20-7	
<b>Surrogates</b>								
1,2-Dichloroethane-d4 (S)	94 %		75-125	2		09/30/13 21:58	17060-07-0	
Toluene-d8 (S)	98 %		75-125	2		09/30/13 21:58	2037-26-5	
4-Bromofluorobenzene (S)	96 %		75-125	2		09/30/13 21:58	460-00-4	
<b>Sample: GW-091913-MD-AS Eff</b>	Lab ID: 10242791002	Collected: 09/19/13 09:50	Received: 09/19/13 14:10	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>NWTPH-Dx GCS Silica Gel LV</b>	Analytical Method: NWTPH-Dx Preparation Method: EPA 3510							
Diesel Fuel Range SG	ND mg/L		0.40	1	09/27/13 11:57	09/29/13 01:50	68334-30-5	
Motor Oil Range SG	ND mg/L		0.40	1	09/27/13 11:57	09/29/13 01:50	64742-65-0	
<b>Surrogates</b>								
o-Terphenyl (S)	38 %		30-125	1	09/27/13 11:57	09/29/13 01:50	84-15-1	
n-Triacontane (S)	47 %		30-125	1	09/27/13 11:57	09/29/13 01:50	638-68-6	
<b>NWTPH-Gx GCV</b>	Analytical Method: NWTPH-Gx/8021							
TPH as Gas	ND ug/L		100	1		09/26/13 07:00		
<b>Surrogates</b>								
a,a,a-Trifluorotoluene (S)	86 %		75-125	1		09/26/13 07:00	98-08-8	
<b>8260 MSV UST</b>	Analytical Method: EPA 8260							
Benzene	<b>3.6</b> ug/L		1.0	1		09/29/13 05:11	71-43-2	
Ethylbenzene	ND ug/L		1.0	1		09/29/13 05:11	100-41-4	
Toluene	<b>2.0</b> ug/L		1.0	1		09/29/13 05:11	108-88-3	
Xylene (Total)	ND ug/L		3.0	1		09/29/13 05:11	1330-20-7	
<b>Surrogates</b>								
1,2-Dichloroethane-d4 (S)	98 %		75-125	1		09/29/13 05:11	17060-07-0	
Toluene-d8 (S)	102 %		75-125	1		09/29/13 05:11	2037-26-5	
4-Bromofluorobenzene (S)	100 %		75-125	1		09/29/13 05:11	460-00-4	

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: Sep 2013 O&amp;M Compliance 070496

Pace Project No.: 10242791

Sample: GW-091913-MD-Mid Carbon	Lab ID: 10242791003	Collected: 09/19/13 09:30	Received: 09/19/13 14:10	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>NWTPH-Dx GCS Silica Gel LV</b>	Analytical Method: NWTPH-Dx Preparation Method: EPA 3510							
Diesel Fuel Range SG	ND mg/L		0.40	1	09/30/13 08:04	09/30/13 21:19	68334-30-5	
Motor Oil Range SG	ND mg/L		0.40	1	09/30/13 08:04	09/30/13 21:19	64742-65-0	
<b>Surrogates</b>								
o-Terphenyl (S)	58 %		30-125	1	09/30/13 08:04	09/30/13 21:19	84-15-1	
n-Triacontane (S)	73 %		30-125	1	09/30/13 08:04	09/30/13 21:19	638-68-6	
<b>NWTPH-Gx GCV</b>	Analytical Method: NWTPH-Gx/8021							
TPH as Gas	ND ug/L		100	1		09/26/13 07:20		
<b>Surrogates</b>								
a,a,a-Trifluorotoluene (S)	85 %		75-125	1		09/26/13 07:20	98-08-8	
<b>8260 MSV UST</b>	Analytical Method: EPA 8260							
Benzene	ND ug/L		1.0	1		09/29/13 05:33	71-43-2	
Ethylbenzene	ND ug/L		1.0	1		09/29/13 05:33	100-41-4	
Toluene	ND ug/L		1.0	1		09/29/13 05:33	108-88-3	
Xylene (Total)	ND ug/L		3.0	1		09/29/13 05:33	1330-20-7	
<b>Surrogates</b>								
1,2-Dichloroethane-d4 (S)	96 %		75-125	1		09/29/13 05:33	17060-07-0	
Toluene-d8 (S)	102 %		75-125	1		09/29/13 05:33	2037-26-5	
4-Bromofluorobenzene (S)	102 %		75-125	1		09/29/13 05:33	460-00-4	

Sample: GW-091913-MD-Total Eff	Lab ID: 10242791004	Collected: 09/19/13 09:40	Received: 09/19/13 14:10	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>NWTPH-Dx GCS Silica Gel LV</b>	Analytical Method: NWTPH-Dx Preparation Method: EPA 3510							
Diesel Fuel Range SG	ND mg/L		0.39	1	09/30/13 08:04	09/30/13 21:41	68334-30-5	
Motor Oil Range SG	ND mg/L		0.39	1	09/30/13 08:04	09/30/13 21:41	64742-65-0	
<b>Surrogates</b>								
o-Terphenyl (S)	53 %		30-125	1	09/30/13 08:04	09/30/13 21:41	84-15-1	
n-Triacontane (S)	66 %		30-125	1	09/30/13 08:04	09/30/13 21:41	638-68-6	
<b>NWTPH-Gx GCV</b>	Analytical Method: NWTPH-Gx/8021							
TPH as Gas	ND ug/L		100	1		09/26/13 08:20		
<b>Surrogates</b>								
a,a,a-Trifluorotoluene (S)	86 %		75-125	1		09/26/13 08:20	98-08-8	
<b>8260 MSV UST</b>	Analytical Method: EPA 8260							
Benzene	ND ug/L		1.0	1		09/29/13 05:54	71-43-2	
Ethylbenzene	ND ug/L		1.0	1		09/29/13 05:54	100-41-4	
Toluene	ND ug/L		1.0	1		09/29/13 05:54	108-88-3	
Xylene (Total)	ND ug/L		3.0	1		09/29/13 05:54	1330-20-7	
<b>Surrogates</b>								
1,2-Dichloroethane-d4 (S)	98 %		75-125	1		09/29/13 05:54	17060-07-0	
Toluene-d8 (S)	101 %		75-125	1		09/29/13 05:54	2037-26-5	

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: Sep 2013 O&amp;M Compliance 070496

Pace Project No.: 10242791

Sample: GW-091913-MD-Total Eff	Lab ID: 10242791004	Collected: 09/19/13 09:40	Received: 09/19/13 14:10	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV UST</b>	Analytical Method: EPA 8260							
<b>Surrogates</b>								
4-Bromofluorobenzene (S)	99 %		75-125	1		09/29/13 05:54	460-00-4	
<hr/>								
Sample: A-091913-MD-SVE Inf	Lab ID: 10242791005	Collected: 09/19/13 10:20	Received: 09/19/13 14:10	Matrix: Air				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>TO-14M MSV AIR - Ambient</b>	Analytical Method: TO-14M Ambient Air							
Benzene	2.6 ppmv		0.27	537.6		09/25/13 02:03	71-43-2	
Ethylbenzene	ND ppmv		0.27	537.6		09/25/13 02:03	100-41-4	
THC as Gas	365 ppmv		18.8	537.6		09/25/13 02:03		
Toluene	7.3 ppmv		0.27	537.6		09/25/13 02:03	108-88-3	
m&p-Xylene	3.9 ppmv		0.54	537.6		09/25/13 02:03	179601-23-1	
o-Xylene	2.7 ppmv		0.27	537.6		09/25/13 02:03	95-47-6	
<hr/>								
Sample: A-091913-MD-AS-Eff	Lab ID: 10242791006	Collected: 09/19/13 10:22	Received: 09/19/13 14:10	Matrix: Air				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>TO-14M MSV AIR - Ambient</b>	Analytical Method: TO-14M Ambient Air							
Benzene	0.0015 ppmv		0.00084	1.68		09/24/13 23:59	71-43-2	
Ethylbenzene	ND ppmv		0.00084	1.68		09/24/13 23:59	100-41-4	
THC as Gas	0.42 ppmv		0.059	1.68		09/24/13 23:59		
Toluene	0.0088 ppmv		0.00084	1.68		09/24/13 23:59	108-88-3	
m&p-Xylene	0.011 ppmv		0.0017	1.68		09/24/13 23:59	179601-23-1	
o-Xylene	0.0088 ppmv		0.00084	1.68		09/24/13 23:59	95-47-6	
<hr/>								
Sample: A-091913-MD-Total Inf	Lab ID: 10242791007	Collected: 09/19/13 10:24	Received: 09/19/13 14:10	Matrix: Air				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>TO-14M MSV AIR - Ambient</b>	Analytical Method: TO-14M Ambient Air							
Benzene	0.16 ppmv		0.017	33.6		09/25/13 01:13	71-43-2	
Ethylbenzene	ND ppmv		0.017	33.6		09/25/13 01:13	100-41-4	
THC as Gas	22.0 ppmv		1.2	33.6		09/25/13 01:13		
Toluene	0.45 ppmv		0.017	33.6		09/25/13 01:13	108-88-3	
m&p-Xylene	0.26 ppmv		0.034	33.6		09/25/13 01:13	179601-23-1	
o-Xylene	0.20 ppmv		0.017	33.6		09/25/13 01:13	95-47-6	

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## ANALYTICAL RESULTS

Project: Sep 2013 O&amp;M Compliance 070496

Pace Project No.: 10242791

<b>Sample: A-091913-MD-Mid 1</b>		<b>Lab ID: 10242791008</b>	Collected: 09/19/13 10:26	Received: 09/19/13 14:10	Matrix: Air			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>TO-14M MSV AIR - Ambient</b>	Analytical Method: TO-14M Ambient Air							
Benzene	ND ppmv		0.00084	1.68		09/24/13 22:31	71-43-2	
Ethylbenzene	ND ppmv		0.00084	1.68		09/24/13 22:31	100-41-4	
THC as Gas	<b>1.3</b> ppmv		0.059	1.68		09/24/13 22:31		
Toluene	ND ppmv		0.00084	1.68		09/24/13 22:31	108-88-3	
m&p-Xylene	ND ppmv		0.0017	1.68		09/24/13 22:31	179601-23-1	
o-Xylene	ND ppmv		0.00084	1.68		09/24/13 22:31	95-47-6	
<b>Sample: A-091913-MD-Mid 2</b>		<b>Lab ID: 10242791009</b>	Collected: 09/19/13 10:28	Received: 09/19/13 14:10	Matrix: Air			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>TO-14M MSV AIR - Ambient</b>	Analytical Method: TO-14M Ambient Air							
Benzene	ND ppmv		0.00084	1.68		09/24/13 23:30	71-43-2	
Ethylbenzene	ND ppmv		0.00084	1.68		09/24/13 23:30	100-41-4	
THC as Gas	<b>0.66</b> ppmv		0.059	1.68		09/24/13 23:30		
Toluene	ND ppmv		0.00084	1.68		09/24/13 23:30	108-88-3	
m&p-Xylene	ND ppmv		0.0017	1.68		09/24/13 23:30	179601-23-1	
o-Xylene	ND ppmv		0.00084	1.68		09/24/13 23:30	95-47-6	
<b>Sample: A-091913-MD-Total Eff</b>		<b>Lab ID: 10242791010</b>	Collected: 09/19/13 10:30	Received: 09/19/13 14:10	Matrix: Air			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>TO-14M MSV AIR - Ambient</b>	Analytical Method: TO-14M Ambient Air							
Benzene	ND ppmv		0.00084	1.68		09/24/13 23:01	71-43-2	
Ethylbenzene	ND ppmv		0.00084	1.68		09/24/13 23:01	100-41-4	
THC as Gas	<b>1.1</b> ppmv		0.059	1.68		09/24/13 23:01		
Toluene	ND ppmv		0.00084	1.68		09/24/13 23:01	108-88-3	
m&p-Xylene	ND ppmv		0.0017	1.68		09/24/13 23:01	179601-23-1	
o-Xylene	ND ppmv		0.00084	1.68		09/24/13 23:01	95-47-6	
<b>Sample: GW-091913-MD-BP R1 Inf</b>		<b>Lab ID: 10242791011</b>	Collected: 09/19/13 12:00	Received: 09/19/13 14:10	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>NWTPH-Dx GCS Silica Gel LV</b>	Analytical Method: NWTPH-Dx Preparation Method: EPA 3510							
Diesel Fuel Range SG	<b>0.96</b> mg/L		0.40	1	09/30/13 08:04	09/30/13 22:03	68334-30-5	
Motor Oil Range SG	ND mg/L		0.40	1	09/30/13 08:04	09/30/13 22:03	64742-65-0	
<b>Surrogates</b>								
o-Terphenyl (S)	78 %		30-125	1	09/30/13 08:04	09/30/13 22:03	84-15-1	
n-Triacontane (S)	99 %		30-125	1	09/30/13 08:04	09/30/13 22:03	638-68-6	

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: Sep 2013 O&amp;M Compliance 070496

Pace Project No.: 10242791

Sample: GW-091913-MD-BP R1 Inf	Lab ID: 10242791011	Collected: 09/19/13 12:00	Received: 09/19/13 14:10	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>NWTPH-Gx GCV</b>	Analytical Method: NWTPH-Gx/8021							
TPH as Gas	<b>4030</b> ug/L		100	1		09/26/13 09:40		
<b>Surrogates</b>								
a,a,a-Trifluorotoluene (S)	131 %		75-125	1		09/26/13 09:40	98-08-8	1M,S0
<b>8260 MSV UST</b>	Analytical Method: EPA 8260							
Benzene	<b>2210</b> ug/L		20.0	20		09/29/13 08:24	71-43-2	
Ethylbenzene	<b>384</b> ug/L		20.0	20		09/29/13 08:24	100-41-4	
Toluene	<b>21.0</b> ug/L		20.0	20		09/29/13 08:24	108-88-3	
Xylene (Total)	ND ug/L		60.0	20		09/29/13 08:24	1330-20-7	
<b>Surrogates</b>								
1,2-Dichloroethane-d4 (S)	96 %		75-125	20		09/29/13 08:24	17060-07-0	
Toluene-d8 (S)	102 %		75-125	20		09/29/13 08:24	2037-26-5	
4-Bromofluorobenzene (S)	101 %		75-125	20		09/29/13 08:24	460-00-4	

Sample: GW-091913-MD-BP R2 Inf	Lab ID: 10242791012	Collected: 09/19/13 12:10	Received: 09/19/13 14:10	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>NWTPH-Dx GCS Silica Gel LV</b>	Analytical Method: NWTPH-Dx Preparation Method: EPA 3510							
Diesel Fuel Range SG	<b>0.58</b> mg/L		0.40	1	09/27/13 11:57	09/29/13 04:05	68334-30-5	
Motor Oil Range SG	ND mg/L		0.40	1	09/27/13 11:57	09/29/13 04:05	64742-65-0	
<b>Surrogates</b>								
o-Terphenyl (S)	56 %		30-125	1	09/27/13 11:57	09/29/13 04:05	84-15-1	
n-Triacontane (S)	65 %		30-125	1	09/27/13 11:57	09/29/13 04:05	638-68-6	
<b>NWTPH-Gx GCV</b>	Analytical Method: NWTPH-Gx/8021							
TPH as Gas	<b>3220</b> ug/L		100	1		09/26/13 10:40		
<b>Surrogates</b>								
a,a,a-Trifluorotoluene (S)	106 %		75-125	1		09/26/13 10:40	98-08-8	
<b>8260 MSV UST</b>	Analytical Method: EPA 8260							
Benzene	<b>523</b> ug/L		5.0	5		10/01/13 12:38	71-43-2	
Ethylbenzene	<b>336</b> ug/L		5.0	5		10/01/13 12:38	100-41-4	
Toluene	<b>3.1</b> ug/L		1.0	1		09/29/13 06:15	108-88-3	
Xylene (Total)	ND ug/L		3.0	1		09/29/13 06:15	1330-20-7	
<b>Surrogates</b>								
1,2-Dichloroethane-d4 (S)	99 %		75-125	1		09/29/13 06:15	17060-07-0	
Toluene-d8 (S)	102 %		75-125	1		09/29/13 06:15	2037-26-5	
4-Bromofluorobenzene (S)	97 %		75-125	1		09/29/13 06:15	460-00-4	

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## ANALYTICAL RESULTS

Project: Sep 2013 O&amp;M Compliance 070496

Pace Project No.: 10242791

Sample: GW-091913-MD-BP Total Inf	Lab ID: 10242791013	Collected: 09/19/13 12:20	Received: 09/19/13 14:10	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>NWTPH-Dx GCS Silica Gel LV</b>	Analytical Method: NWTPH-Dx Preparation Method: EPA 3510							
Diesel Fuel Range SG	0.75 mg/L		0.39	1	09/30/13 08:04	09/30/13 23:11	68334-30-5	
Motor Oil Range SG	0.46 mg/L		0.39	1	09/30/13 08:04	09/30/13 23:11	64742-65-0	
<b>Surrogates</b>								
o-Terphenyl (S)	64 %		30-125	1	09/30/13 08:04	09/30/13 23:11	84-15-1	
n-Triacontane (S)	81 %		30-125	1	09/30/13 08:04	09/30/13 23:11	638-68-6	
<b>NWTPH-Gx GCV</b>	Analytical Method: NWTPH-Gx/8021							
TPH as Gas	2210 ug/L		100	1			09/26/13 10:00	
<b>Surrogates</b>								
a,a,a-Trifluorotoluene (S)	120 %		75-125	1			09/26/13 10:00	98-08-8
<b>8260 MSV UST</b>	Analytical Method: EPA 8260							
Benzene	1560 ug/L		10.0	10			09/29/13 08:45	71-43-2
Ethylbenzene	28.8 ug/L		10.0	10			09/29/13 08:45	100-41-4
Toluene	ND ug/L		10.0	10			09/29/13 08:45	108-88-3
Xylene (Total)	ND ug/L		30.0	10			09/29/13 08:45	1330-20-7
<b>Surrogates</b>								
1,2-Dichloroethane-d4 (S)	98 %		75-125	10			09/29/13 08:45	17060-07-0
Toluene-d8 (S)	102 %		75-125	10			09/29/13 08:45	2037-26-5
4-Bromofluorobenzene (S)	99 %		75-125	10			09/29/13 08:45	460-00-4

Sample: GW-091913-MD-BP Total Eff	Lab ID: 10242791014	Collected: 09/19/13 12:30	Received: 09/19/13 14:10	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>NWTPH-Dx GCS Silica Gel LV</b>	Analytical Method: NWTPH-Dx Preparation Method: EPA 3510							
Diesel Fuel Range SG	ND mg/L		0.40	1	09/27/13 11:57	09/29/13 04:50	68334-30-5	
Motor Oil Range SG	ND mg/L		0.40	1	09/27/13 11:57	09/29/13 04:50	64742-65-0	
<b>Surrogates</b>								
o-Terphenyl (S)	61 %		30-125	1	09/27/13 11:57	09/29/13 04:50	84-15-1	
n-Triacontane (S)	79 %		30-125	1	09/27/13 11:57	09/29/13 04:50	638-68-6	
<b>NWTPH-Gx GCV</b>	Analytical Method: NWTPH-Gx/8021							
TPH as Gas	ND ug/L		100	1			09/26/13 10:20	
<b>Surrogates</b>								
a,a,a-Trifluorotoluene (S)	88 %		75-125	1			09/26/13 10:20	98-08-8
<b>8260 MSV UST</b>	Analytical Method: EPA 8260							
Benzene	ND ug/L		1.0	1			09/29/13 06:37	71-43-2
Ethylbenzene	ND ug/L		1.0	1			09/29/13 06:37	100-41-4
Toluene	ND ug/L		1.0	1			09/29/13 06:37	108-88-3
Xylene (Total)	ND ug/L		3.0	1			09/29/13 06:37	1330-20-7
<b>Surrogates</b>								
1,2-Dichloroethane-d4 (S)	99 %		75-125	1			09/29/13 06:37	17060-07-0

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: Sep 2013 O&amp;M Compliance 070496

Pace Project No.: 10242791

Sample: GW-091913-MD-BP Total Eff	Lab ID: 10242791014	Collected: 09/19/13 12:30	Received: 09/19/13 14:10	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV UST</b>	Analytical Method: EPA 8260							
<b>Surrogates</b>								
Toluene-d8 (S)	101 %		75-125	1		09/29/13 06:37	2037-26-5	
4-Bromofluorobenzene (S)	100 %		75-125	1		09/29/13 06:37	460-00-4	
Sample: A-091913-MD-BP Total Eff	Lab ID: 10242791015	Collected: 09/19/13 12:40	Received: 09/19/13 14:10	Matrix: Air				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>TO-14M MSV AIR - Ambient</b>	Analytical Method: TO-14M Ambient Air							
Benzene	<b>0.85</b> ppmv		0.017	33.6		09/25/13 00:24	71-43-2	
Ethylbenzene	ND ppmv		0.017	33.6		09/25/13 00:24	100-41-4	
THC as Gas	<b>2.7</b> ppmv		1.2	33.6		09/25/13 00:24		
Toluene	ND ppmv		0.017	33.6		09/25/13 00:24	108-88-3	
m&p-Xylene	ND ppmv		0.034	33.6		09/25/13 00:24	179601-23-1	
o-Xylene	ND ppmv		0.017	33.6		09/25/13 00:24	95-47-6	
Sample: Trip Blank	Lab ID: 10242791016	Collected: 09/19/13 00:00	Received: 09/19/13 14:10	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>NWTPH-Gx GCV</b>	Analytical Method: NWTPH-Gx/8021							
TPH as Gas	ND ug/L		100	1		10/06/13 17:50		H1
<b>Surrogates</b>								
a,a,a-Trifluorotoluene (S)	102 %		75-125	1		10/06/13 17:50	98-08-8	
<b>8260 MSV UST</b>	Analytical Method: EPA 8260							
Benzene	ND ug/L		1.0	1		09/29/13 03:24	71-43-2	
Ethylbenzene	ND ug/L		1.0	1		09/29/13 03:24	100-41-4	
Toluene	ND ug/L		1.0	1		09/29/13 03:24	108-88-3	
Xylene (Total)	ND ug/L		3.0	1		09/29/13 03:24	1330-20-7	
<b>Surrogates</b>								
1,2-Dichloroethane-d4 (S)	100 %		75-125	1		09/29/13 03:24	17060-07-0	
Toluene-d8 (S)	103 %		75-125	1		09/29/13 03:24	2037-26-5	
4-Bromofluorobenzene (S)	99 %		75-125	1		09/29/13 03:24	460-00-4	

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## QUALITY CONTROL DATA

Project: Sep 2013 O&amp;M Compliance 070496

Pace Project No.: 10242791

QC Batch:	AIR/18318	Analysis Method:	TO-14M Ambient Air
QC Batch Method:	TO-14M Ambient Air	Analysis Description:	TO14 MSV AIR - AMBIENT
Associated Lab Samples:	10242791005, 10242791006, 10242791007, 10242791008, 10242791009, 10242791010, 10242791015		

METHOD BLANK: 1533338 Matrix: Air

Associated Lab Samples: 10242791005, 10242791006, 10242791007, 10242791008, 10242791009, 10242791010, 10242791015

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Benzene	ppmv	ND	0.00050	09/24/13 16:48	
Ethylbenzene	ppmv	ND	0.00050	09/24/13 16:48	
m&p-Xylene	ppmv	ND	0.0010	09/24/13 16:48	
o-Xylene	ppmv	ND	0.00050	09/24/13 16:48	
THC as Gas	ppmv	ND	0.035	09/24/13 16:48	
Toluene	ppmv	ND	0.00050	09/24/13 16:48	

LABORATORY CONTROL SAMPLE: 1533339

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Benzene	ppmv	.011	0.010	97	72-136	
Ethylbenzene	ppmv	.0099	0.0093	94	74-136	
m&p-Xylene	ppmv	.02	0.019	95	72-135	
o-Xylene	ppmv	.0093	0.0082	89	74-135	
THC as Gas	ppmv	.72	0.83	116	63-141	
Toluene	ppmv	.01	0.010	96	71-134	

SAMPLE DUPLICATE: 1534532

Parameter	Units	10242791015 Result	Dup Result	RPD	Max RPD	Qualifiers
Benzene	ppmv	0.85	0.89	5	30	
Ethylbenzene	ppmv	ND	ND		30	
m&p-Xylene	ppmv	ND	ND		30	
o-Xylene	ppmv	ND	ND		30	
THC as Gas	ppmv	2.7	2.7	.8	30	
Toluene	ppmv	ND	ND		30	

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## QUALITY CONTROL DATA

Project: Sep 2013 O&amp;M Compliance 070496

Pace Project No.: 10242791

QC Batch:	GCV/11311	Analysis Method:	NWTPH-Gx/8021
QC Batch Method:	NWTPH-Gx/8021	Analysis Description:	NWTPH-Gx/8021B Water
Associated Lab Samples: 10242791001, 10242791002, 10242791003, 10242791004, 10242791011, 10242791012, 10242791013, 10242791014			

METHOD BLANK:	1533254	Matrix:	Water
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Associated Lab Samples: 10242791001, 10242791002, 10242791003, 10242791004, 10242791011, 10242791012, 10242791013, 10242791014

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
TPH as Gas	ug/L	ND	100	09/26/13 06:00	
a,a,a-Trifluorotoluene (S)	%	87	75-125	09/26/13 06:00	

LABORATORY CONTROL SAMPLE & LCSD:	1533255	1533256									
Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers	
TPH as Gas	ug/L	1000	1020	900	102	90	75-126	12	20		
a,a,a-Trifluorotoluene (S)	%			90	87	75-125					

MATRIX SPIKE SAMPLE:	1536236										
Parameter	Units	10242791002 Result	Spike Conc.	MS Result	MS % Rec		% Rec Limits				
TPH as Gas	ug/L	ND	1000	1100	106	75-137					
a,a,a-Trifluorotoluene (S)	%				101	75-125					

SAMPLE DUPLICATE:	1536237										
Parameter	Units	10242791003 Result	Dup Result	MS Result	MS % Rec		% Rec Limits				
TPH as Gas	ug/L	ND	ND	1100	106	75-137					
a,a,a-Trifluorotoluene (S)	%	85	87	2	101	75-125					

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## QUALITY CONTROL DATA

Project: Sep 2013 O&amp;M Compliance 070496

Pace Project No.: 10242791

QC Batch:	GCV/11346	Analysis Method:	NWTPH-Gx/8021
QC Batch Method:	NWTPH-Gx/8021	Analysis Description:	NWTPH-Gx/8021B Water
Associated Lab Samples:	10242791016		

METHOD BLANK: 1540850                          Matrix: Water

Associated Lab Samples: 10242791016

Parameter	Units	Blank Result	Reporting Limit		Analyzed	Qualifiers
			100	75-125		
TPH as Gas	ug/L	ND			10/06/13 17:30	
a,a,a-Trifluorotoluene (S)	%	97	75-125		10/06/13 17:30	

LABORATORY CONTROL SAMPLE &amp; LCSD: 1540851                          1540852

Parameter	Units	Spike Conc.	LCS	LCSD	LCS	LCSD	% Rec	RPD	Max RPD	Qualifiers
			Result	Result	% Rec	% Rec				
TPH as Gas	ug/L	1000	940	823	94	82	75-126	13	20	
a,a,a-Trifluorotoluene (S)	%				105	83	75-125			

MATRIX SPIKE &amp; MATRIX SPIKE DUPLICATE: 1546222                          1546223

Parameter	Units	10242883002	MS Spike Conc.	MSD Spike Conc.	MS	MSD	MS	MSD	% Rec	Max		
		Result	Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual
TPH as Gas	ug/L	14300	20000	20000	31300	35200	85	104	75-137	12	30	H1
a,a,a-Trifluorotoluene (S)	%						116	95	75-125			

## REPORT OF LABORATORY ANALYSIS

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## QUALITY CONTROL DATA

Project: Sep 2013 O&amp;M Compliance 070496

Pace Project No.: 10242791

QC Batch:	MSV/25104	Analysis Method:	EPA 8260
QC Batch Method:	EPA 8260	Analysis Description:	8260 MSV UST-WATER
Associated Lab Samples:	10242791001		

METHOD BLANK: 1537253                          Matrix: Water

Associated Lab Samples: 10242791001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Benzene	ug/L	ND	1.0	09/30/13 17:19	
Ethylbenzene	ug/L	ND	1.0	09/30/13 17:19	
Toluene	ug/L	ND	1.0	09/30/13 17:19	
Xylene (Total)	ug/L	ND	3.0	09/30/13 17:19	
1,2-Dichloroethane-d4 (S)	%	94	75-125	09/30/13 17:19	
4-Bromofluorobenzene (S)	%	99	75-125	09/30/13 17:19	
Toluene-d8 (S)	%	98	75-125	09/30/13 17:19	

LABORATORY CONTROL SAMPLE: 1537254

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Benzene	ug/L	20	23.7	118	75-125	
Ethylbenzene	ug/L	20	23.4	117	75-125	
Toluene	ug/L	20	22.9	114	75-125	
Xylene (Total)	ug/L	60	71.5	119	75-125	
1,2-Dichloroethane-d4 (S)	%			94	75-125	
4-Bromofluorobenzene (S)	%			98	75-125	
Toluene-d8 (S)	%			100	75-125	

MATRIX SPIKE SAMPLE: 1540421

Parameter	Units	10242970003 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Benzene	ug/L	ND	20	26.1	127	70-135	
Ethylbenzene	ug/L	ND	20	24.9	125	75-125	
Toluene	ug/L	ND	20	25.0	125	75-125	
Xylene (Total)	ug/L	ND	60	76.1	127	75-125	MS
1,2-Dichloroethane-d4 (S)	%				95	75-125	
4-Bromofluorobenzene (S)	%				97	75-125	
Toluene-d8 (S)	%				100	75-125	

SAMPLE DUPLICATE: 1540422

Parameter	Units	10242970005 Result	Dup Result	RPD	Max RPD	Qualifiers
Benzene	ug/L	6.7	6.3	6	30	
Ethylbenzene	ug/L	11.4	11.5	1	30	
Toluene	ug/L	1.7	1.7	3	30	
Xylene (Total)	ug/L	28.8	27.4	5	30	
1,2-Dichloroethane-d4 (S)	%	95	95	.9		

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## QUALITY CONTROL DATA

Project: Sep 2013 O&M Compliance 070496

Pace Project No.: 10242791

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SAMPLE DUPLICATE: 1540422

Parameter	Units	10242970005	Dup Result	RPD	Max RPD	Qualifiers
4-Bromofluorobenzene (S)	%	98	96	2		
Toluene-d8 (S)	%	99	99	.2		

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## QUALITY CONTROL DATA

Project: Sep 2013 O&amp;M Compliance 070496

Pace Project No.: 10242791

QC Batch:	MSV/25116	Analysis Method:	EPA 8260
QC Batch Method:	EPA 8260	Analysis Description:	8260 MSV UST-WATER
Associated Lab Samples:	10242791002, 10242791003, 10242791004, 10242791011, 10242791012, 10242791013, 10242791014, 10242791016		

METHOD BLANK: 1538029 Matrix: Water

Associated Lab Samples: 10242791002, 10242791003, 10242791004, 10242791011, 10242791012, 10242791013, 10242791014, 10242791016

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Benzene	ug/L	ND	1.0	09/29/13 02:20	
Ethylbenzene	ug/L	ND	1.0	09/29/13 02:20	
Toluene	ug/L	ND	1.0	09/29/13 02:20	
Xylene (Total)	ug/L	ND	3.0	09/29/13 02:20	
1,2-Dichloroethane-d4 (S)	%	99	75-125	09/29/13 02:20	
4-Bromofluorobenzene (S)	%	100	75-125	09/29/13 02:20	
Toluene-d8 (S)	%	102	75-125	09/29/13 02:20	

LABORATORY CONTROL SAMPLE: 1538030

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Benzene	ug/L	20	23.4	117	75-125	
Ethylbenzene	ug/L	20	23.0	115	75-125	
Toluene	ug/L	20	23.0	115	75-125	
Xylene (Total)	ug/L	60	71.5	119	75-125	
1,2-Dichloroethane-d4 (S)	%			96	75-125	
4-Bromofluorobenzene (S)	%			99	75-125	
Toluene-d8 (S)	%			103	75-125	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1538031 1538032

Parameter	Units	10242704003 Result	MS	MSD	MS Result	MS % Rec	MSD % Rec	% Rec Limits	Max	RPD	RPD	Qual
			Spike Conc.	Spike Conc.					MSD % Rec			
Benzene	ug/L	ND	20	20	22.8	23.6	113	118	70-135	4	30	
Ethylbenzene	ug/L	ND	20	20	20.8	21.0	104	105	75-125	.9	30	
Toluene	ug/L	ND	20	20	21.9	22.5	109	112	75-125	3	30	
Xylene (Total)	ug/L	ND	60	60	64.2	65.3	107	109	75-125	2	30	
1,2-Dichloroethane-d4 (S)	%						101	101	75-125			
4-Bromofluorobenzene (S)	%						101	102	75-125			
Toluene-d8 (S)	%						104	104	75-125			

## REPORT OF LABORATORY ANALYSIS

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**Pace Analytical Services, Inc.**  
1700 Elm Street - Suite 200  
Minneapolis, MN 55414  
(612)607-1700

## **QUALITY CONTROL DATA**

Project: Sep 2013 O&M Compliance 070496

Pace Project No.: 10242791

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QC Batch: OEXT/23152

Analysis Method: NWTPH-Dx

QC Batch Method: EPA 3510

Analysis Description: NWTPH-Dx GCS LV SG

Associated Lab Samples: 10242791002, 10242791012, 10242791014

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METHOD BLANK: 1536924

## Matrix: Water

Associated Lab Samples: 10242791002, 10242791012, 10242791014

Parameter	Units	Blank Result	Reporting Limit		Analyzed	Qualifiers
			Limit	Value		
Diesel Fuel Range SG	mg/L	ND	0.40	0.40	09/28/13 23:12	
Motor Oil Range SG	mg/L	0.42	0.40	0.40	09/28/13 23:12	
n-Triacontane (S)	%	62	30-125	30-125	09/28/13 23:12	
o-Terphenyl (S)	%	50	30-125	30-125	09/28/13 23:12	

LABORATORY CONTROL SAMPLE & LCSD: 1536925

1536986

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Diesel Fuel Range SG	mg/L	2	1.6	1.5	81	74	50-150	10	20	
Motor Oil Range SG	mg/L	2	2.1	1.8	106	90	50-150	16	20	
n-Triaccontane (S)	%				77	71	30-125			
o-Terphenyl (S)	%				72	63	30-125			

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SAMPLE DUPLICATE: 1536988

Parameter	Units	10243194005		RPD	Max RPD	Qualifiers
		Result	Dup Result			
Diesel Fuel Range SG	mg/L	ND	.29J		30	
Motor Oil Range SG	mg/L	0.51	0.59	15	30	B
n-Triaccontane (S)	%	80	86	15		
o-Terphenyl (S)	%	62	67	17		

## **REPORT OF LABORATORY ANALYSIS**

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## QUALITY CONTROL DATA

Project: Sep 2013 O&amp;M Compliance 070496

Pace Project No.: 10242791

QC Batch:	OEXT/23166	Analysis Method:	NWTPH-Dx
QC Batch Method:	EPA 3510	Analysis Description:	NWTPH-Dx GCS LV SG
Associated Lab Samples:	10242791001, 10242791003, 10242791004, 10242791011, 10242791013		

METHOD BLANK: 1538417                          Matrix: Water

Associated Lab Samples: 10242791001, 10242791003, 10242791004, 10242791011, 10242791013

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Diesel Fuel Range SG	mg/L	ND	0.40	09/30/13 18:42	
Motor Oil Range SG	mg/L	ND	0.40	09/30/13 18:42	
n-Tricontane (S)	%	87	30-125	09/30/13 18:42	
o-Terphenyl (S)	%	75	30-125	09/30/13 18:42	

LABORATORY CONTROL SAMPLE &amp; LCSD: 1538418                          1538419

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	Max RPD	Max RPD	Qualifiers
Diesel Fuel Range SG	mg/L	2	1.6	1.6	82	81	50-150	2	20	
Motor Oil Range SG	mg/L	2	2.0	1.9	98	96	50-150	2	20	
n-Tricontane (S)	%				92	91	30-125			
o-Terphenyl (S)	%				82	83	30-125			

SAMPLE DUPLICATE: 1538420

Parameter	Units	10242986001 Result	Dup Result	RPD	Max RPD	Qualifiers
Diesel Fuel Range SG	mg/L	ND	.29J		30	
Motor Oil Range SG	mg/L	0.42	0.41	3	30	
n-Tricontane (S)	%	93	83	13		
o-Terphenyl (S)	%	74	67	12		

## REPORT OF LABORATORY ANALYSIS

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## QUALIFIERS

Project: Sep 2013 O&M Compliance 070496  
Pace Project No.: 10242791

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### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PRL - Pace Reporting Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

### LABORATORIES

PASI-M Pace Analytical Services - Minneapolis

### SAMPLE QUALIFIERS

Sample: 10242791005

[1] This result is reported from a serial dilution

### ANALYTE QUALIFIERS

1M Surrogate recovery outside laboratory control limits due to matrix interferences.

B Analyte was detected in the associated method blank.

H1 Analysis conducted outside the recognized method holding time.

MS Analyte recovery in the matrix spike was outside QC limits for one or more of the constituent analytes used in the calculated result.

S0 Surrogate recovery outside laboratory control limits.

## REPORT OF LABORATORY ANALYSIS

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**QUALITY CONTROL DATA CROSS REFERENCE TABLE**

Project: Sep 2013 O&M Compliance 070496  
Pace Project No.: 10242791

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
10242791005	A-091913-MD-SVE Inf	TO-14M Ambient Air	AIR/18318		
10242791006	A-091913-MD-AS-Eff	TO-14M Ambient Air	AIR/18318		
10242791007	A-091913-MD-Total Inf	TO-14M Ambient Air	AIR/18318		
10242791008	A-091913-MD-Mid 1	TO-14M Ambient Air	AIR/18318		
10242791009	A-091913-MD-Mid 2	TO-14M Ambient Air	AIR/18318		
10242791010	A-091913-MD-Total Eff	TO-14M Ambient Air	AIR/18318		
10242791015	A-091913-MD-BP Total Eff	TO-14M Ambient Air	AIR/18318		
10242791001	GW-091913-MD-Total Inf	EPA 3510	OEXT/23166	NWTPH-Dx	GCSV/12138
10242791002	GW-091913-MD-AS Eff	EPA 3510	OEXT/23152	NWTPH-Dx	GCSV/12128
10242791003	GW-091913-MD-Mid Carbon	EPA 3510	OEXT/23166	NWTPH-Dx	GCSV/12138
10242791004	GW-091913-MD-Total Eff	EPA 3510	OEXT/23166	NWTPH-Dx	GCSV/12138
10242791011	GW-091913-MD-BP R1 Inf	EPA 3510	OEXT/23166	NWTPH-Dx	GCSV/12138
10242791012	GW-091913-MD-BP R2 Inf	EPA 3510	OEXT/23152	NWTPH-Dx	GCSV/12128
10242791013	GW-091913-MD-BP Total Inf	EPA 3510	OEXT/23166	NWTPH-Dx	GCSV/12138
10242791014	GW-091913-MD-BP Total Eff	EPA 3510	OEXT/23152	NWTPH-Dx	GCSV/12128
10242791001	GW-091913-MD-Total Inf	NWTPH-Gx/8021	GCV/11311		
10242791002	GW-091913-MD-AS Eff	NWTPH-Gx/8021	GCV/11311		
10242791003	GW-091913-MD-Mid Carbon	NWTPH-Gx/8021	GCV/11311		
10242791004	GW-091913-MD-Total Eff	NWTPH-Gx/8021	GCV/11311		
10242791011	GW-091913-MD-BP R1 Inf	NWTPH-Gx/8021	GCV/11311		
10242791012	GW-091913-MD-BP R2 Inf	NWTPH-Gx/8021	GCV/11311		
10242791013	GW-091913-MD-BP Total Inf	NWTPH-Gx/8021	GCV/11311		
10242791014	GW-091913-MD-BP Total Eff	NWTPH-Gx/8021	GCV/11311		
10242791016	Trip Blank	NWTPH-Gx/8021	GCV/11346		
10242791001	GW-091913-MD-Total Inf	EPA 8260	MSV/25104		
10242791002	GW-091913-MD-AS Eff	EPA 8260	MSV/25116		
10242791003	GW-091913-MD-Mid Carbon	EPA 8260	MSV/25116		
10242791004	GW-091913-MD-Total Eff	EPA 8260	MSV/25116		
10242791011	GW-091913-MD-BP R1 Inf	EPA 8260	MSV/25116		
10242791012	GW-091913-MD-BP R2 Inf	EPA 8260	MSV/25116		
10242791013	GW-091913-MD-BP Total Inf	EPA 8260	MSV/25116		
10242791014	GW-091913-MD-BP Total Eff	EPA 8260	MSV/25116		
10242791016	Trip Blank	EPA 8260	MSV/25116		

**REPORT OF LABORATORY ANALYSIS**

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## CHAIN OF CUSTODY RECORD

RUSH EX 9:00-13

CONESTOGA-ROVERS & ASSOCIATES CRRA TACOMA			SHIPPED TO (Laboratory Name): PACE			REFERENCE NUMBER: 070496 10242791		
SAMPLER'S SIGNATURE: <i>Matt Davis</i>		PRINTED NAME: <i>MATT DAVIS</i>		No. of Containers	PARAMETERS Nitrates BTEX Nitrates-DT	REMARKS		
SEQ. No.	DATE	TIME	SAMPLE No.	SAMPLE TYPE				
91913	920		GW-091913-MD - Total T <sub>1</sub> F	GW	8			001
	950		GW-091913-MD - AS EEF		1			002
	930		GW-091913-MD - Mid carbon		1			003
	940		GW-091913-MD - Total EEF	✓	1			004
	1020		A-091913-MD - SVE IAF	AIR	1			005
	1022		A-091913-MD - AS EEF		1			006
	1024		A-091913-MD - Total IAF					007
	1026		A-091913-MD - Mid I					008
	1028		A-091913-MD - Mid 2		✓			009
	1030		A-091913-MD - Total EEF	✓	1			010
	1200		GW-091913-MD - BP1 IAF	GW	8			011
	1210		GW-091913-MD - BP2 IAF		1			012
	1220		GW-091913-MD - BP Total IAF		1			013
	1230		GW-091913-MD - BP Total EEF	✓	1			014
	1240		A-091913-MD - BP Total EEF	✓	1			015
			TRIP Blank	AIR	1			016
TOTAL NUMBER OF CONTAINERS					HEALTH/CHEMICAL HAZARDS			
RELINQUISHED BY: <i>Matt Davis</i> ①			DATE: 9/19/13 TIME: 1410	RECEIVED BY: <i>Matt Davis PACE</i> ①			DATE: 9/19/13 TIME: 1410	
RELINQUISHED BY: ②			DATE:	RECEIVED BY: ②			DATE:	
RELINQUISHED BY: ③			DATE:	RECEIVED BY: ③			DATE:	
METHOD OF SHIPMENT:			WAY BILL No.					
White	—Fully Executed Copy		SAMPLE TEAM: <i>MATT DAVIS</i>		RECEIVED FOR LABORATORY BY: <i>IHK PACE</i>			Nº CR 21089
Yellow	—Receiving Laboratory Copy				DATE: 9-20-13 TIME: 8:38			
Pink	—Shipper Copy							
Goldenrod	—Sampler Copy							

	Document Name: <b>Sample Condition Upon Receipt Form</b>	Document Revised: 28Jan2013 Page 1 of 1
	Document No.: <b>F-MN-L-213-rev.06</b>	Issuing Authority: <b>Pace Minnesota Quality Office</b>

<b>Sample Condition Upon Receipt</b>	<b>Client Name:</b> <i>CRA</i>	<b>Project #:</b> <b>WO# : 10242791</b>
<b>Courier:</b>	<input checked="" type="checkbox"/> Fed Ex <input type="checkbox"/> UPS <input type="checkbox"/> USPS <input type="checkbox"/> Client <input type="checkbox"/> Commercial <input type="checkbox"/> Pace <input type="checkbox"/> Other: _____	 <b>10242791</b>
<b>Tracking Number:</b>	<i>57179 5330 4316</i>	
<b>Custody Seal on Cooler/Box Present?</b>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<b>Seals Intact?</b> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
<b>Packing Material:</b>	<input type="checkbox"/> Bubble Wrap <input checked="" type="checkbox"/> Bubble Bags <input type="checkbox"/> None <input type="checkbox"/> Other: _____	<b>Temp Blank?</b> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
<b>Thermom. Used:</b>	<input checked="" type="checkbox"/> B88A912167504 <input type="checkbox"/> 80512447 <input type="checkbox"/> 72337080	<b>Type of Ice:</b> <input checked="" type="checkbox"/> Wet <input type="checkbox"/> Blue <input type="checkbox"/> None <input type="checkbox"/> Samples on ice, cooling process has begun
<b>Cooler Temp Read (*C):</b> <i>0.7</i>	<b>Cooler Temp Corrected (*C):</b> <i>0.6</i>	<b>Biological Tissue Frozen?</b> <input type="checkbox"/> Yes <input type="checkbox"/> No
<b>Temp should be above freezing to 6°C</b>	<b>Correction Factor:</b> <i>-1.1</i>	<b>Date and Initials of Person Examining Contents:</b> <i>IH 9-20-13</i>
<b>Comments:</b>		
<b>Chain of Custody Present?</b>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
<b>Chain of Custody Filled Out?</b>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
<b>Chain of Custody Relinquished?</b>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.
<b>Sampler Name and/or Signature on COC?</b>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.
<b>Samples Arrived within Hold Time?</b>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
<b>Short Hold Time Analysis (&lt;72 hr)?</b>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	6.
<b>Rush Turn Around Time Requested?</b>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	7.
<b>Sufficient Volume?</b>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	8.
<b>Correct Containers Used?</b>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
<b>-Pace Containers Used?</b>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
<b>Containers Intact?</b>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.
<b>Filtered Volume Received for Dissolved Tests?</b>	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
<b>Sample Labels Match COC?</b>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	12.
<b>-Includes Date/Time/ID/Analysis Matrix:</b> <i>WT</i>		
All containers needing acid/base preservation have been checked? Noncompliances are noted in 13.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	13. <input type="checkbox"/> HNO <sub>3</sub> <input type="checkbox"/> H <sub>2</sub> SO <sub>4</sub> <input type="checkbox"/> NaOH <input type="checkbox"/> HCl
All containers needing preservation are found to be in compliance with EPA recommendation? (HNO <sub>3</sub> , H <sub>2</sub> SO <sub>4</sub> , HCl<2; NaOH>12)	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	<b>Sample #</b>
Exceptions (VOA Coliform, TOC Oil and Grease, WI-DRO (water))	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<b>Initial when completed:</b> <i>IH</i> <b>Lot # of added preservative:</b>
<b>Headspace in VOA Vials (&gt;6mm)?</b>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	14.
<b>Trip Blank Present?</b>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	15.
<b>Trip Blank Custody Seals Present?</b>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
<b>Pace Trip Blank Lot # (if purchased):</b>		

**CLIENT NOTIFICATION/RESOLUTION**
**Field Data Required?**  Yes  No

**Person Contacted:** \_\_\_\_\_

**Date/Time:** \_\_\_\_\_

**Comments/Resolution:** \_\_\_\_\_  


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**Project Manager Review:** *JENNIFER GROSS*
**Date:** *9/23/13*

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. out of hold, incorrect preservative, out of temp, incorrect containers)

	Document Name: Air Sample Condition Upon Receipt	Document Revised: 28Jan2013 Page 1 of 1
	Document No.: F-MN-A-106-rev.07	Issuing Authority: Pace Minnesota Quality Office

Air Sample Condition Upon Receipt	Client Name: <b>CRA</b>	Project #: <b>10242791</b>
Courier: <input checked="" type="checkbox"/> Fed Ex <input type="checkbox"/> UPS <input type="checkbox"/> USPS <input type="checkbox"/> Client <input type="checkbox"/> Commercial <input type="checkbox"/> Pace <input type="checkbox"/> Other: _____	Tracking Number: <b>5779 5330 4327</b>	

Custody Seal on Cooler/Box Present?  Yes     No    Seals Intact?  Yes     No    Optional: Proj. Due Date:    Proj. Name:

Packing Material:  Bubble Wrap     Bubble Bags     Foam     None     Other: \_\_\_\_\_

Temp. (TO17 and TO13 samples only) (°C): \_\_\_\_\_ Corrected Temp (°C): **4.13** Thermom. Used:  B88A912167504     80512447     72337080  
Temp should be above freezing to 6°C    Correction Factor: \_\_\_\_\_ Date & Initials of Person Examining Contents: **9/21/13 AE**

Comments:

Chain of Custody Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Chain of Custody Filled Out?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Chain of Custody Relinquished?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3. Air cans received separately
Sampler Name and/or Signature on COC?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4. on 9/20/13
Samples Arrived within Hold Time?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Short Hold Time Analysis (<72 hr)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	6.
Rush Turn Around Time Requested?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	7. 5 day
Sufficient Volume?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	8.
Correct Containers Used? -Pace Containers Used?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
Containers Intact?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.
Media: <b>Air</b>		11. But "A-071913-m0-BP Total EEE"
Sample Labels Match COC?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	12. is an air can, not G.W.

Samples Received: <b>7 cans</b>		There is no air can labeled "Trip Blank"			
Canisters		Flow Controllers		Stand Alone G	
Sample Number	Can ID	Sample Number	Can ID	Sample Number	Can ID
SVE INF	2482				
AS EEE	2070				
Total INF	1305				
Mid 1	1019				
Mid 2	2419				
Total EEE	919				
BP Total EEE	907				

CLIENT NOTIFICATION/RESOLUTION

Field Data Required?  Yes  No

Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Comments/Resolution: \_\_\_\_\_

Project Manager Review: **JENN GROSS** Date: **9/23/13**  
Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. out of hold, incorrect preservative, out of temp, incorrect containers)

October 28, 2013

Edwin Turner  
CRA\_Conoco Phillips  
20818 44th Ave. W  
Lynnwood, WA 98036

RE: Project: P66 Renton 070496-2RM00 REV-1  
Pace Project No.: 10244525

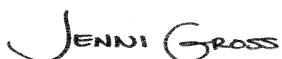
Dear Edwin Turner:

Enclosed are the analytical results for sample(s) received by the laboratory between October 03, 2013 and October 04, 2013. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

Revised Report, REV-1 10/28/13. Updated units for air results to ppmv. Updated 8260 list from Full list to BTEX only.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Jennifer Gross

jennifer.gross@pacelabs.com  
Project Manager

Enclosures

cc: Yu Chen, CRA\_Conoco Phillips  
Jeffrey Cloud, Conestoga-Rovers Association  
Matt Davis, CRA\_Conoco Phillips  
Kelsey Whittaker, CRA



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: P66 Renton 070496-2RM00 REV-1  
Pace Project No.: 10244525

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### Minnesota Certification IDs

1700 Elm Street SE Suite 200, Minneapolis, MN 55414  
A2LA Certification #: 2926.01  
Alaska Certification #: UST-078  
Alaska Certification #MN00064  
Arizona Certification #: AZ-0014  
Arkansas Certification #: 88-0680  
California Certification #: 01155CA  
Colorado Certification #Pace  
Connecticut Certification #: PH-0256  
EPA Region 8 Certification #: Pace  
Florida/NELAP Certification #: E87605  
Georgia Certification #: 959  
Hawaii Certification #Pace  
Idaho Certification #: MN00064  
Illinois Certification #: 200011  
Kansas Certification #: E-10167  
Louisiana Certification #: 03086  
Louisiana Certification #: LA080009  
Maine Certification #: 2007029  
Maryland Certification #: 322  
Michigan DEQ Certification #: 9909  
Minnesota Certification #: 027-053-137

Mississippi Certification #: Pace  
Montana Certification #: MT CERT0092  
Nevada Certification #: MN\_00064  
Nebraska Certification #: Pace  
New Jersey Certification #: MN-002  
New York Certification #: 11647  
North Carolina Certification #: 530  
North Dakota Certification #: R-036  
Ohio VAP Certification #: CL101  
Oklahoma Certification #: 9507  
Oregon Certification #: MN200001  
Oregon Certification #: MN300001  
Pennsylvania Certification #: 68-00563  
Puerto Rico Certification  
Tennessee Certification #: 02818  
Texas Certification #: T104704192  
Utah Certification #: MN00064  
Virginia/DCLS Certification #: 002521  
Virginia/VELAP Certification #: 460163  
Washington Certification #: C754  
West Virginia Certification #: 382  
Wisconsin Certification #: 999407970

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## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: P66 Renton 070496-2RM00 REV-1

Pace Project No.: 10244525

Lab ID	Sample ID	Matrix	Date Collected	Date Received
10244525001	GW-100313-NH-TOTAL INF	Water	10/03/13 08:30	10/03/13 13:30
10244525002	GW-100313-NH-AS EFF	Water	10/03/13 08:45	10/03/13 13:30
10244525003	GW-100313-NH-MID CARBON	Water	10/03/13 09:00	10/03/13 13:30
10244525004	GW-100313-NH-TOTAL EFF	Water	10/03/13 09:15	10/03/13 13:30
10244525005	GW-100313-NH-BP R1 INF	Water	10/03/13 10:00	10/03/13 13:30
10244525006	GW-100313-NH-BP R2 INF	Water	10/03/13 10:10	10/03/13 13:30
10244525007	GW-100313-NH-BP TOTAL INF	Water	10/03/13 10:20	10/03/13 13:30
10244525008	GW-100313-NH-BP TOTAL EFF	Water	10/03/13 10:30	10/03/13 13:30
10244525009	TRIP BLANK	Water	10/03/13 00:00	10/03/13 13:30
10244525010	a-100313-NH-SVE-INF	Air	10/03/13 09:25	10/04/13 08:49
10244525011	a-100313-NH-AS-EFF	Air	10/03/13 09:30	10/04/13 08:49
10244525012	a-100313-NH-TOTAL-INF	Air	10/03/13 09:35	10/04/13 08:49
10244525013	a-100313-NH-MID CARBON 1	Air	10/03/13 09:40	10/04/13 08:49
10244525014	a-100313-NH-MID CARBON 2	Air	10/03/13 09:45	10/04/13 08:49
10244525015	a-100313-NH-TOTAL EFF	Air	10/03/13 09:50	10/04/13 08:49
10244525016	a-100313-NH-BP AS EFF	Air	10/03/13 10:45	10/04/13 08:49

## REPORT OF LABORATORY ANALYSIS

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## SAMPLE ANALYTE COUNT

Project: P66 Renton 070496-2RM00 REV-1  
Pace Project No.: 10244525

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
10244525001	GW-100313-NH-TOTAL INF	NWTPH-Dx	JRH	4	PASI-M
		NWTPH-Gx/8021	LLC	2	PASI-M
		EPA 8260	LPM	7	PASI-M
10244525002	GW-100313-NH-AS EFF	NWTPH-Dx	JRH	4	PASI-M
		NWTPH-Gx/8021	LLC	2	PASI-M
		EPA 8260	EB2	7	PASI-M
10244525003	GW-100313-NH-MID CARBON	NWTPH-Dx	JRH	4	PASI-M
		NWTPH-Gx/8021	LLC	2	PASI-M
		EPA 8260	EB2	7	PASI-M
10244525004	GW-100313-NH-TOTAL EFF	NWTPH-Dx	JRH	4	PASI-M
		NWTPH-Gx/8021	LLC	2	PASI-M
		EPA 8260	SH2	7	PASI-M
10244525005	GW-100313-NH-BP R1 INF	NWTPH-Dx	JRH	4	PASI-M
		NWTPH-Gx/8021	LLC	2	PASI-M
		EPA 8260	SH2	7	PASI-M
10244525006	GW-100313-NH-BP R2 INF	NWTPH-Dx	JRH	4	PASI-M
		NWTPH-Gx/8021	LLC	2	PASI-M
		EPA 8260	SH2	7	PASI-M
10244525007	GW-100313-NH-BP TOTAL INF	NWTPH-Dx	JRH	4	PASI-M
		NWTPH-Gx/8021	LLC	2	PASI-M
		EPA 8260	LPM	7	PASI-M
10244525008	GW-100313-NH-BP TOTAL EFF	NWTPH-Dx	JRH	4	PASI-M
		NWTPH-Gx/8021	LLC	2	PASI-M
		EPA 8260	SH2	7	PASI-M
10244525009	TRIP BLANK	NWTPH-Gx/8021	MJH	2	PASI-M
		EPA 8260	SH2	7	PASI-M
10244525010	a-100313-NH-SVE-INF	TO-14M Ambient Air	CJR	6	PASI-M
10244525011	a-100313-NH-AS-EFF	TO-14M Ambient Air	CJR	6	PASI-M
10244525012	a-100313-NH-TOTAL-INF	TO-14M Ambient Air	CJR	6	PASI-M
10244525013	a-100313-NH-MID CARBON 1	TO-14M Ambient Air	CJR	6	PASI-M
10244525014	a-100313-NH-MID CARBON 2	TO-14M Ambient Air	CJR	6	PASI-M
10244525015	a-100313-NH-TOTAL EFF	TO-14M Ambient Air	CJR	6	PASI-M
10244525016	a-100313-NH-BP AS EFF	TO-14M Ambient Air	CJR	6	PASI-M

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: P66 Renton 070496-2RM00 REV-1

Pace Project No.: 10244525

Sample: GW-100313-NH-TOTAL INF	Lab ID: 10244525001	Collected: 10/03/13 08:30	Received: 10/03/13 13:30	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>NWTPH-Dx GCS Silica Gel LV</b>	Analytical Method: NWTPH-Dx Preparation Method: EPA 3510							
Diesel Fuel Range SG	<b>0.41</b> mg/L		0.40	1	10/16/13 13:09	10/18/13 09:13	68334-30-5	D6
Motor Oil Range SG	ND mg/L		0.40	1	10/16/13 13:09	10/18/13 09:13	64742-65-0	
<b>Surrogates</b>								
o-Terphenyl (S)	72 %		30-125	1	10/16/13 13:09	10/18/13 09:13	84-15-1	
n-Triacontane (S)	81 %		30-125	1	10/16/13 13:09	10/18/13 09:13	638-68-6	
<b>NWTPH-Gx GCV</b>	Analytical Method: NWTPH-Gx/8021							
TPH as Gas	<b>1200</b> ug/L		100	1		10/14/13 23:13		
<b>Surrogates</b>								
a,a,a-Trifluorotoluene (S)	95 %		75-125	1		10/14/13 23:13	98-08-8	
<b>8260 VOC</b>	Analytical Method: EPA 8260							
Benzene	<b>182</b> ug/L		1.0	1		10/17/13 21:15	71-43-2	
Ethylbenzene	<b>8.9</b> ug/L		1.0	1		10/17/13 21:15	100-41-4	
Toluene	<b>68.0</b> ug/L		1.0	1		10/17/13 21:15	108-88-3	
Xylene (Total)	<b>179</b> ug/L		3.0	1		10/17/13 21:15	1330-20-7	
<b>Surrogates</b>								
1,2-Dichloroethane-d4 (S)	111 %		75-125	1		10/17/13 21:15	17060-07-0	
Toluene-d8 (S)	102 %		75-125	1		10/17/13 21:15	2037-26-5	
4-Bromofluorobenzene (S)	104 %		75-125	1		10/17/13 21:15	460-00-4	
<b>Sample: GW-100313-NH-AS EFF</b>	Lab ID: 10244525002	Collected: 10/03/13 08:45	Received: 10/03/13 13:30	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>NWTPH-Dx GCS Silica Gel LV</b>	Analytical Method: NWTPH-Dx Preparation Method: EPA 3510							
Diesel Fuel Range SG	ND mg/L		0.42	1	10/16/13 13:09	10/18/13 09:58	68334-30-5	
Motor Oil Range SG	ND mg/L		0.42	1	10/16/13 13:09	10/18/13 09:58	64742-65-0	
<b>Surrogates</b>								
o-Terphenyl (S)	74 %		30-125	1	10/16/13 13:09	10/18/13 09:58	84-15-1	
n-Triacontane (S)	85 %		30-125	1	10/16/13 13:09	10/18/13 09:58	638-68-6	
<b>NWTPH-Gx GCV</b>	Analytical Method: NWTPH-Gx/8021							
TPH as Gas	<b>209</b> ug/L		100	1		10/14/13 16:52		
<b>Surrogates</b>								
a,a,a-Trifluorotoluene (S)	94 %		75-125	1		10/14/13 16:52	98-08-8	
<b>8260 VOC</b>	Analytical Method: EPA 8260							
Benzene	<b>17.7</b> ug/L		1.0	1		10/15/13 18:01	71-43-2	
Ethylbenzene	ND ug/L		1.0	1		10/15/13 18:01	100-41-4	
Toluene	<b>5.3</b> ug/L		1.0	1		10/15/13 18:01	108-88-3	
Xylene (Total)	<b>29.9</b> ug/L		3.0	1		10/15/13 18:01	1330-20-7	
<b>Surrogates</b>								
1,2-Dichloroethane-d4 (S)	106 %		75-125	1		10/15/13 18:01	17060-07-0	
Toluene-d8 (S)	101 %		75-125	1		10/15/13 18:01	2037-26-5	
4-Bromofluorobenzene (S)	101 %		75-125	1		10/15/13 18:01	460-00-4	

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: P66 Renton 070496-2RM00 REV-1

Pace Project No.: 10244525

Sample: GW-100313-NH-MID CARBON	Lab ID: 10244525003	Collected: 10/03/13 09:00	Received: 10/03/13 13:30	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>NWTPH-Dx GCS Silica Gel LV</b>	Analytical Method: NWTPH-Dx Preparation Method: EPA 3510							
Diesel Fuel Range SG	ND mg/L		0.40	1	10/16/13 13:09	10/18/13 10:20	68334-30-5	
Motor Oil Range SG	ND mg/L		0.40	1	10/16/13 13:09	10/18/13 10:20	64742-65-0	
<b>Surrogates</b>								
o-Terphenyl (S)	73 %		30-125	1	10/16/13 13:09	10/18/13 10:20	84-15-1	
n-Triacontane (S)	84 %		30-125	1	10/16/13 13:09	10/18/13 10:20	638-68-6	
<b>NWTPH-Gx GCV</b>	Analytical Method: NWTPH-Gx/8021							
TPH as Gas	ND ug/L		100	1		10/14/13 17:12		
<b>Surrogates</b>								
a,a,a-Trifluorotoluene (S)	94 %		75-125	1		10/14/13 17:12	98-08-8	
<b>8260 VOC</b>	Analytical Method: EPA 8260							
Benzene	ND ug/L		1.0	1		10/15/13 17:46	71-43-2	
Ethylbenzene	ND ug/L		1.0	1		10/15/13 17:46	100-41-4	
Toluene	ND ug/L		1.0	1		10/15/13 17:46	108-88-3	
Xylene (Total)	ND ug/L		3.0	1		10/15/13 17:46	1330-20-7	
<b>Surrogates</b>								
1,2-Dichloroethane-d4 (S)	105 %		75-125	1		10/15/13 17:46	17060-07-0	
Toluene-d8 (S)	102 %		75-125	1		10/15/13 17:46	2037-26-5	
4-Bromofluorobenzene (S)	102 %		75-125	1		10/15/13 17:46	460-00-4	
<b>Sample: GW-100313-NH-TOTAL EFF</b>	<b>Lab ID: 10244525004</b>	Collected: 10/03/13 09:15	Received: 10/03/13 13:30	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>NWTPH-Dx GCS Silica Gel LV</b>	Analytical Method: NWTPH-Dx Preparation Method: EPA 3510							
Diesel Fuel Range SG	ND mg/L		0.43	1	10/16/13 13:09	10/18/13 10:43	68334-30-5	
Motor Oil Range SG	ND mg/L		0.43	1	10/16/13 13:09	10/18/13 10:43	64742-65-0	
<b>Surrogates</b>								
o-Terphenyl (S)	67 %		30-125	1	10/16/13 13:09	10/18/13 10:43	84-15-1	
n-Triacontane (S)	70 %		30-125	1	10/16/13 13:09	10/18/13 10:43	638-68-6	
<b>NWTPH-Gx GCV</b>	Analytical Method: NWTPH-Gx/8021							
TPH as Gas	ND ug/L		100	1		10/14/13 17:32		
<b>Surrogates</b>								
a,a,a-Trifluorotoluene (S)	95 %		75-125	1		10/14/13 17:32	98-08-8	
<b>8260 VOC</b>	Analytical Method: EPA 8260							
Benzene	ND ug/L		1.0	1		10/15/13 22:50	71-43-2	
Ethylbenzene	ND ug/L		1.0	1		10/15/13 22:50	100-41-4	
Toluene	ND ug/L		1.0	1		10/15/13 22:50	108-88-3	
Xylene (Total)	ND ug/L		3.0	1		10/15/13 22:50	1330-20-7	
<b>Surrogates</b>								
1,2-Dichloroethane-d4 (S)	107 %		75-125	1		10/15/13 22:50	17060-07-0	
Toluene-d8 (S)	101 %		75-125	1		10/15/13 22:50	2037-26-5	

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: P66 Renton 070496-2RM00 REV-1

Pace Project No.: 10244525

Sample: GW-100313-NH-TOTAL EFF	Lab ID: 10244525004	Collected: 10/03/13 09:15	Received: 10/03/13 13:30	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 VOC</b>	Analytical Method: EPA 8260							
<b>Surrogates</b>								
4-Bromofluorobenzene (S)	103 %		75-125	1		10/15/13 22:50	460-00-4	
<b>Sample: GW-100313-NH-BP R1 INF</b> <b>Lab ID: 10244525005</b> <b>Collected: 10/03/13 10:00</b> <b>Received: 10/03/13 13:30</b> <b>Matrix: Water</b>								
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>NWTPH-Dx GCS Silica Gel LV</b>	Analytical Method: NWTPH-Dx Preparation Method: EPA 3510							
Diesel Fuel Range SG	0.96 mg/L		0.42	1	10/16/13 13:09	10/18/13 11:05	68334-30-5	
Motor Oil Range SG	ND mg/L		0.42	1	10/16/13 13:09	10/18/13 11:05	64742-65-0	
<b>Surrogates</b>								
o-Terphenyl (S)	73 %		30-125	1	10/16/13 13:09	10/18/13 11:05	84-15-1	
n-Triacontane (S)	83 %		30-125	1	10/16/13 13:09	10/18/13 11:05	638-68-6	
<b>NWTPH-Gx GCV</b>	Analytical Method: NWTPH-Gx/8021							
TPH as Gas	3810 ug/L		100	1		10/14/13 17:52		
<b>Surrogates</b>								
a,a,a-Trifluorotoluene (S)	138 %		75-125	1		10/14/13 17:52	98-08-8	2M,S0
<b>8260 VOC</b>	Analytical Method: EPA 8260							
Benzene	1520 ug/L		10.0	10		10/16/13 01:52	71-43-2	
Ethylbenzene	354 ug/L		10.0	10		10/16/13 01:52	100-41-4	
Toluene	14.6 ug/L		10.0	10		10/16/13 01:52	108-88-3	
Xylene (Total)	ND ug/L		30.0	10		10/16/13 01:52	1330-20-7	
<b>Surrogates</b>								
1,2-Dichloroethane-d4 (S)	105 %		75-125	10		10/16/13 01:52	17060-07-0	
Toluene-d8 (S)	102 %		75-125	10		10/16/13 01:52	2037-26-5	
4-Bromofluorobenzene (S)	102 %		75-125	10		10/16/13 01:52	460-00-4	
<b>Sample: GW-100313-NH-BP R2 INF</b> <b>Lab ID: 10244525006</b> <b>Collected: 10/03/13 10:10</b> <b>Received: 10/03/13 13:30</b> <b>Matrix: Water</b>								
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>NWTPH-Dx GCS Silica Gel LV</b>	Analytical Method: NWTPH-Dx Preparation Method: EPA 3510							
Diesel Fuel Range SG	ND mg/L		0.42	1	10/16/13 13:09	10/18/13 11:27	68334-30-5	
Motor Oil Range SG	ND mg/L		0.42	1	10/16/13 13:09	10/18/13 11:27	64742-65-0	
<b>Surrogates</b>								
o-Terphenyl (S)	68 %		30-125	1	10/16/13 13:09	10/18/13 11:27	84-15-1	
n-Triacontane (S)	78 %		30-125	1	10/16/13 13:09	10/18/13 11:27	638-68-6	
<b>NWTPH-Gx GCV</b>	Analytical Method: NWTPH-Gx/8021							
TPH as Gas	ND ug/L		100	1		10/14/13 18:13		
<b>Surrogates</b>								
a,a,a-Trifluorotoluene (S)	97 %		75-125	1		10/14/13 18:13	98-08-8	

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: P66 Renton 070496-2RM00 REV-1

Pace Project No.: 10244525

Sample: GW-100313-NH-BP R2 INF	Lab ID: 10244525006	Collected: 10/03/13 10:10	Received: 10/03/13 13:30	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 VOC</b>	Analytical Method: EPA 8260							
Benzene	5.9	ug/L	1.0	1		10/15/13 23:05	71-43-2	
Ethylbenzene	1.7	ug/L	1.0	1		10/15/13 23:05	100-41-4	
Toluene	ND	ug/L	1.0	1		10/15/13 23:05	108-88-3	
Xylene (Total)	ND	ug/L	3.0	1		10/15/13 23:05	1330-20-7	
<b>Surrogates</b>								
1,2-Dichloroethane-d4 (S)	108 %		75-125	1		10/15/13 23:05	17060-07-0	
Toluene-d8 (S)	101 %		75-125	1		10/15/13 23:05	2037-26-5	
4-Bromofluorobenzene (S)	102 %		75-125	1		10/15/13 23:05	460-00-4	
<hr/>								
Sample: GW-100313-NH-BP TOTAL INF	Lab ID: 10244525007	Collected: 10/03/13 10:20	Received: 10/03/13 13:30	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>NWTPH-Dx GCS Silica Gel LV</b>	Analytical Method: NWTPH-Dx Preparation Method: EPA 3510							
Diesel Fuel Range SG	0.44	mg/L	0.40	1	10/16/13 13:09	10/18/13 12:34	68334-30-5	
Motor Oil Range SG	ND	mg/L	0.40	1	10/16/13 13:09	10/18/13 12:34	64742-65-0	
<b>Surrogates</b>								
o-Terphenyl (S)	72 %		30-125	1	10/16/13 13:09	10/18/13 12:34	84-15-1	
n-Triacontane (S)	83 %		30-125	1	10/16/13 13:09	10/18/13 12:34	638-68-6	
<b>NWTPH-Gx GCV</b>	Analytical Method: NWTPH-Gx/8021							
TPH as Gas	1430	ug/L	100	1		10/14/13 18:33		
<b>Surrogates</b>								
a,a,a-Trifluorotoluene (S)	109 %		75-125	1		10/14/13 18:33	98-08-8	
<b>8260 VOC</b>	Analytical Method: EPA 8260							
Benzene	535	ug/L	5.0	5		10/16/13 22:07	71-43-2	
Ethylbenzene	113	ug/L	5.0	5		10/16/13 22:07	100-41-4	
Toluene	5.5	ug/L	5.0	5		10/16/13 22:07	108-88-3	
Xylene (Total)	ND	ug/L	15.0	5		10/16/13 22:07	1330-20-7	
<b>Surrogates</b>								
1,2-Dichloroethane-d4 (S)	95 %		75-125	5		10/16/13 22:07	17060-07-0	
Toluene-d8 (S)	98 %		75-125	5		10/16/13 22:07	2037-26-5	
4-Bromofluorobenzene (S)	98 %		75-125	5		10/16/13 22:07	460-00-4	
<hr/>								
Sample: GW-100313-NH-BP TOTAL EFF	Lab ID: 10244525008	Collected: 10/03/13 10:30	Received: 10/03/13 13:30	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>NWTPH-Dx GCS Silica Gel LV</b>	Analytical Method: NWTPH-Dx Preparation Method: EPA 3510							
Diesel Fuel Range SG	ND	mg/L	0.40	1	10/16/13 13:09	10/18/13 12:56	68334-30-5	
Motor Oil Range SG	ND	mg/L	0.40	1	10/16/13 13:09	10/18/13 12:56	64742-65-0	

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## ANALYTICAL RESULTS

Project: P66 Renton 070496-2RM00 REV-1

Pace Project No.: 10244525

Sample: GW-100313-NH-BP TOTAL EFF	Lab ID: 10244525008	Collected: 10/03/13 10:30	Received: 10/03/13 13:30	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>NWTPH-Dx GCS Silica Gel LV</b>		Analytical Method: NWTPH-Dx Preparation Method: EPA 3510						
<b>Surrogates</b>								
o-Terphenyl (S)	71 %		30-125	1	10/16/13 13:09	10/18/13 12:56	84-15-1	
n-Triacontane (S)	82 %		30-125	1	10/16/13 13:09	10/18/13 12:56	638-68-6	
<b>NWTPH-Gx GCV</b>		Analytical Method: NWTPH-Gx/8021						
TPH as Gas	ND ug/L		100	1		10/14/13 18:53		
<b>Surrogates</b>								
a,a,a-Trifluorotoluene (S)	95 %		75-125	1		10/14/13 18:53	98-08-8	
<b>8260 VOC</b>		Analytical Method: EPA 8260						
Benzene	ND ug/L		1.0	1		10/15/13 23:20	71-43-2	
Ethylbenzene	ND ug/L		1.0	1		10/15/13 23:20	100-41-4	
Toluene	ND ug/L		1.0	1		10/15/13 23:20	108-88-3	
Xylene (Total)	ND ug/L		3.0	1		10/15/13 23:20	1330-20-7	
<b>Surrogates</b>								
1,2-Dichloroethane-d4 (S)	108 %		75-125	1		10/15/13 23:20	17060-07-0	
Toluene-d8 (S)	102 %		75-125	1		10/15/13 23:20	2037-26-5	
4-Bromofluorobenzene (S)	104 %		75-125	1		10/15/13 23:20	460-00-4	
<b>Sample: TRIP BLANK</b>		Lab ID: 10244525009 Collected: 10/03/13 00:00 Received: 10/03/13 13:30 Matrix: Water						
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>NWTPH-Gx GCV</b>		Analytical Method: NWTPH-Gx/8021						
TPH as Gas	ND ug/L		100	1		10/09/13 21:24		
<b>Surrogates</b>								
a,a,a-Trifluorotoluene (S)	100 %		75-125	1		10/09/13 21:24	98-08-8	
<b>8260 VOC</b>		Analytical Method: EPA 8260						
Benzene	ND ug/L		1.0	1		10/15/13 21:04	71-43-2	
Ethylbenzene	ND ug/L		1.0	1		10/15/13 21:04	100-41-4	
Toluene	ND ug/L		1.0	1		10/15/13 21:04	108-88-3	
Xylene (Total)	ND ug/L		3.0	1		10/15/13 21:04	1330-20-7	
<b>Surrogates</b>								
1,2-Dichloroethane-d4 (S)	108 %		75-125	1		10/15/13 21:04	17060-07-0	
Toluene-d8 (S)	102 %		75-125	1		10/15/13 21:04	2037-26-5	
4-Bromofluorobenzene (S)	103 %		75-125	1		10/15/13 21:04	460-00-4	
<b>Sample: a-100313-NH-SVE-INF</b>		Lab ID: 10244525010 Collected: 10/03/13 09:25 Received: 10/04/13 08:49 Matrix: Air						
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>TO-14M MSV AIR - Ambient</b>		Analytical Method: TO-14M Ambient Air						
Benzene	24.6 ppmv		1.1 2150.4			10/17/13 10:48	71-43-2	

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## ANALYTICAL RESULTS

Project: P66 Renton 070496-2RM00 REV-1

Pace Project No.: 10244525

Sample: a-100313-NH-SVE-INF	Lab ID: 10244525010	Collected: 10/03/13 09:25	Received: 10/04/13 08:49	Matrix: Air				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>TO-14M MSV AIR - Ambient</b>	Analytical Method: TO-14M Ambient Air							
Ethylbenzene	2.1	ppmv	1.1	2150.4		10/17/13 10:48	100-41-4	
THC as Gas	917	ppmv	75.3	2150.4		10/17/13 10:48		
Toluene	56.4	ppmv	1.1	2150.4		10/17/13 10:48	108-88-3	
m&p-Xylene	14.7	ppmv	2.2	2150.4		10/17/13 10:48	179601-23-1	
o-Xylene	7.0	ppmv	1.1	2150.4		10/17/13 10:48	95-47-6	
<b>Sample: a-100313-NH-AS-EFF</b>	<b>Lab ID: 10244525011</b>	Collected: 10/03/13 09:30	Received: 10/04/13 08:49	Matrix: Air				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>TO-14M MSV AIR - Ambient</b>	Analytical Method: TO-14M Ambient Air							
Benzene	6.0	ppmv	0.13	268.8		10/17/13 10:24	71-43-2	
Ethylbenzene	0.21	ppmv	0.13	268.8		10/17/13 10:24	100-41-4	
THC as Gas	12.3	ppmv	9.4	268.8		10/17/13 10:24		
Toluene	3.1	ppmv	0.13	268.8		10/17/13 10:24	108-88-3	
m&p-Xylene	2.6	ppmv	0.27	268.8		10/17/13 10:24	179601-23-1	
o-Xylene	1.1	ppmv	0.13	268.8		10/17/13 10:24	95-47-6	
<b>Sample: a-100313-NH-TOTAL-INF</b>	<b>Lab ID: 10244525012</b>	Collected: 10/03/13 09:35	Received: 10/04/13 08:49	Matrix: Air				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>TO-14M MSV AIR - Ambient</b>	Analytical Method: TO-14M Ambient Air							
Benzene	0.55	ppmv	0.016	31.4		10/17/13 09:59	71-43-2	
Ethylbenzene	0.023	ppmv	0.016	31.4		10/17/13 09:59	100-41-4	
THC as Gas	7.9	ppmv	1.1	31.4		10/17/13 09:59		
Toluene	0.45	ppmv	0.016	31.4		10/17/13 09:59	108-88-3	
m&p-Xylene	0.21	ppmv	0.031	31.4		10/17/13 09:59	179601-23-1	
o-Xylene	0.093	ppmv	0.016	31.4		10/17/13 09:59	95-47-6	
<b>Sample: a-100313-NH-MID CARBON 1</b>	<b>Lab ID: 10244525013</b>	Collected: 10/03/13 09:40	Received: 10/04/13 08:49	Matrix: Air				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>TO-14M MSV AIR - Ambient</b>	Analytical Method: TO-14M Ambient Air							
Benzene	0.015	ppmv	0.00094	1.87		10/16/13 23:27	71-43-2	
Ethylbenzene	ND	ppmv	0.00094	1.87		10/16/13 23:27	100-41-4	
THC as Gas	0.57	ppmv	0.065	1.87		10/16/13 23:27		
Toluene	0.0095	ppmv	0.00094	1.87		10/16/13 23:27	108-88-3	
m&p-Xylene	0.0064	ppmv	0.0019	1.87		10/16/13 23:27	179601-23-1	
o-Xylene	0.0026	ppmv	0.00094	1.87		10/16/13 23:27	95-47-6	

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## ANALYTICAL RESULTS

Project: P66 Renton 070496-2RM00 REV-1

Pace Project No.: 10244525

Sample: a-100313-NH-MID CARBON 2	Lab ID: 10244525014	Collected: 10/03/13 09:45	Received: 10/04/13 08:49	Matrix: Air				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>TO-14M MSV AIR - Ambient</b>	Analytical Method: TO-14M Ambient Air							
Benzene	0.0011 ppmv		0.00084	1.68		10/17/13 00:55	71-43-2	
Ethylbenzene	ND ppmv		0.00084	1.68		10/17/13 00:55	100-41-4	
THC as Gas	0.49 ppmv		0.059	1.68		10/17/13 00:55		
Toluene	ND ppmv		0.00084	1.68		10/17/13 00:55	108-88-3	
m&p-Xylene	ND ppmv		0.0017	1.68		10/17/13 00:55	179601-23-1	
o-Xylene	ND ppmv		0.00084	1.68		10/17/13 00:55	95-47-6	
<hr/>								
<b>Sample: a-100313-NH-TOTAL EFF</b>	<b>Lab ID: 10244525015</b>	Collected: 10/03/13 09:50	Received: 10/04/13 08:49	Matrix: Air				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>TO-14M MSV AIR - Ambient</b>	Analytical Method: TO-14M Ambient Air							
Benzene	ND ppmv		0.00078	1.57		10/17/13 00:25	71-43-2	
Ethylbenzene	ND ppmv		0.00078	1.57		10/17/13 00:25	100-41-4	
THC as Gas	0.21 ppmv		0.055	1.57		10/17/13 00:25		
Toluene	ND ppmv		0.00078	1.57		10/17/13 00:25	108-88-3	
m&p-Xylene	ND ppmv		0.0016	1.57		10/17/13 00:25	179601-23-1	
o-Xylene	ND ppmv		0.00078	1.57		10/17/13 00:25	95-47-6	
<hr/>								
<b>Sample: a-100313-NH-BP AS EFF</b>	<b>Lab ID: 10244525016</b>	Collected: 10/03/13 10:45	Received: 10/04/13 08:49	Matrix: Air				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>TO-14M MSV AIR - Ambient</b>	Analytical Method: TO-14M Ambient Air							
Benzene	0.23 ppmv		0.017	33.6		10/16/13 22:28	71-43-2	
Ethylbenzene	0.027 ppmv		0.017	33.6		10/16/13 22:28	100-41-4	
THC as Gas	ND ppmv		1.2	33.6		10/16/13 22:28		
Toluene	ND ppmv		0.017	33.6		10/16/13 22:28	108-88-3	
m&p-Xylene	ND ppmv		0.034	33.6		10/16/13 22:28	179601-23-1	
o-Xylene	ND ppmv		0.017	33.6		10/16/13 22:28	95-47-6	

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## **QUALITY CONTROL DATA**

Project: P66 Renton 070496-2RM00 REV-1  
Pace Project No.: 10244525

QC Batch: AIR/18491 Analysis Method: TO-14M Ambient Air  
QC Batch Method: TO-14M Ambient Air Analysis Description: TO14 MSV AIR - AMBIENT  
Associated Lab Samples: 10244525010, 10244525011, 10244525012, 10244525013, 10244525014, 10244525015, 10244525016

METHOD BLANK: 1553854 Matrix: Air

Associated Lab Samples: 10244525010, 10244525011, 10244525012, 10244525013, 10244525014, 10244525015, 10244525016

Parameter	Units	Blank	Reporting	Analyzed	Qualifiers
		Result	Limit		
Benzene	ppmv	ND	0.00050	10/16/13 16:42	
Ethylbenzene	ppmv	ND	0.00050	10/16/13 16:42	
m&p-Xylene	ppmv	ND	0.0010	10/16/13 16:42	
<i>o</i> -Xylene	ppmv	ND	0.00050	10/16/13 16:42	
THC as Gas	ppmv	ND	0.035	10/16/13 16:42	
Toluene	ppmv	ND	0.00050	10/16/13 16:42	

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LABORATORY CONTROL SAMPLE: 1553855

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Benzene	ppmv	.01	0.0099	99	72-136	
Ethylbenzene	ppmv	.01	0.010	102	74-136	
m&p-Xylene	ppmv	.01	0.010	104	72-135	
o-Xylene	ppmv	.01	0.010	101	74-135	
THC as Gas	ppmv	.72	0.74	103	63-141	
Toluene	ppmv	.01	0.0098	98	71-134	

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## QUALITY CONTROL DATA

Project: P66 Renton 070496-2RM00 REV-1

Pace Project No.: 10244525

QC Batch:	GCV/11364	Analysis Method:	NWTPH-Gx/8021
QC Batch Method:	NWTPH-Gx/8021	Analysis Description:	NWTPH-Gx/8021B Water
Associated Lab Samples:	10244525009		

METHOD BLANK: 1547874                          Matrix: Water

Associated Lab Samples: 10244525009

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
TPH as Gas	ug/L	ND	100	10/09/13 21:04	
a,a,a-Trifluorotoluene (S)	%	100	75-125	10/09/13 21:04	

LABORATORY CONTROL SAMPLE &amp; LCSD: 1547875                          1547876

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
TPH as Gas	ug/L	1000	1070	1040	107	104	75-126	3	20	
a,a,a-Trifluorotoluene (S)	%				108	106	75-125			

MATRIX SPIKE &amp; MATRIX SPIKE DUPLICATE: 1547877                          1547878

Parameter	Units	10244556003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	RPD	Qual
TPH as Gas	ug/L	ND	1000	1000	990	1020	96	99	75-137	3	30	
a,a,a-Trifluorotoluene (S)	%						122	102	75-125			

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## QUALITY CONTROL DATA

Project: P66 Renton 070496-2RM00 REV-1

Pace Project No.: 10244525

QC Batch:	GCV/11372	Analysis Method:	NWTPH-Gx/8021	
QC Batch Method:	NWTPH-Gx/8021	Analysis Description:	NWTPH-Gx/8021B Water	
Associated Lab Samples:	10244525001, 10244525002, 10244525003, 10244525004, 10244525005, 10244525006, 10244525007, 10244525008			

METHOD BLANK:	1550731	Matrix:	Water	
Associated Lab Samples:	10244525001, 10244525002, 10244525003, 10244525004, 10244525005, 10244525006, 10244525007, 10244525008			

Parameter	Units	Blank Result	Reporting Limit	Analyzed		Qualifiers
TPH as Gas	ug/L	ND	100	10/14/13 12:51		
a,a,a-Trifluorotoluene (S)	%	95	75-125	10/14/13 12:51		

LABORATORY CONTROL SAMPLE & LCSD:	1550732	1550733									
Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers	
TPH as Gas	ug/L	1000	1060	1060	106	106	75-126	.08	20		
a,a,a-Trifluorotoluene (S)	%				102	102	75-125				

MATRIX SPIKE SAMPLE:	1552375										
Parameter	Units	10244493004 Result	Spike Conc.	MS Result	MS % Rec		% Rec Limits			Qualifiers	
TPH as Gas	ug/L	ND	1000	1030	100		75-137				
a,a,a-Trifluorotoluene (S)	%				110		75-125				

SAMPLE DUPLICATE:	1552376										
Parameter	Units	10244493005 Result	Dup Result	RPD	Max RPD					Qualifiers	
TPH as Gas	ug/L	ND	ND	.8	30						
a,a,a-Trifluorotoluene (S)	%	94	94								

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## QUALITY CONTROL DATA

Project: P66 Renton 070496-2RM00 REV-1

Pace Project No.: 10244525

QC Batch:	MSV/25290	Analysis Method:	EPA 8260
QC Batch Method:	EPA 8260	Analysis Description:	8260 MSV 465 W
Associated Lab Samples:	10244525002, 10244525003		

METHOD BLANK: 1552189                          Matrix: Water

Associated Lab Samples: 10244525002, 10244525003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Benzene	ug/L	ND	1.0	10/15/13 13:28	
Ethylbenzene	ug/L	ND	1.0	10/15/13 13:28	
Toluene	ug/L	ND	1.0	10/15/13 13:28	
Xylene (Total)	ug/L	ND	3.0	10/15/13 13:28	
1,2-Dichloroethane-d4 (S)	%	104	75-125	10/15/13 13:28	
4-Bromofluorobenzene (S)	%	103	75-125	10/15/13 13:28	
Toluene-d8 (S)	%	101	75-125	10/15/13 13:28	

LABORATORY CONTROL SAMPLE: 1552190

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Benzene	ug/L	20	18.2	91	75-125	
Ethylbenzene	ug/L	20	18.2	91	75-125	
Toluene	ug/L	20	17.3	87	75-125	
Xylene (Total)	ug/L	60	54.7	91	75-125	
1,2-Dichloroethane-d4 (S)	%			107	75-125	
4-Bromofluorobenzene (S)	%			104	75-125	
Toluene-d8 (S)	%			103	75-125	

MATRIX SPIKE &amp; MATRIX SPIKE DUPLICATE: 1552191                          1552192

Parameter	Units	MS		MSD		MS		MSD		% Rec Limits	RPD	RPD	Max Qual
		10244415007	Result	Spike Conc.	Spike Conc.	MS Result	MSD Result	% Rec	MSD % Rec				
Benzene	ug/L	636	20	20	620	628	-79	-42	70-135	1	30	E,M1	
Ethylbenzene	ug/L	78.7	20	20	85.8	86.9	36	41	75-125	1	30	M1	
Toluene	ug/L	1.2	20	20	20.6	21.4	97	101	75-125	4	30		
Xylene (Total)	ug/L	56.0	60	60	108	110	87	90	75-125	2	30		
1,2-Dichloroethane-d4 (S)	%						108	108	75-125				
4-Bromofluorobenzene (S)	%						103	104	75-125				
Toluene-d8 (S)	%						101	103	75-125				

## REPORT OF LABORATORY ANALYSIS

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## QUALITY CONTROL DATA

Project: P66 Renton 070496-2RM00 REV-1

Pace Project No.: 10244525

QC Batch:	MSV/25303	Analysis Method:	EPA 8260
QC Batch Method:	EPA 8260	Analysis Description:	8260 MSV 465 W
Associated Lab Samples:	10244525004, 10244525005, 10244525006, 10244525008, 10244525009		

METHOD BLANK: 1552649                          Matrix: Water

Associated Lab Samples: 10244525004, 10244525005, 10244525006, 10244525008, 10244525009

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Benzene	ug/L	ND	1.0	10/15/13 20:49	
Ethylbenzene	ug/L	ND	1.0	10/15/13 20:49	
Toluene	ug/L	ND	1.0	10/15/13 20:49	
Xylene (Total)	ug/L	ND	3.0	10/15/13 20:49	
1,2-Dichloroethane-d4 (S)	%	107	75-125	10/15/13 20:49	
4-Bromofluorobenzene (S)	%	105	75-125	10/15/13 20:49	
Toluene-d8 (S)	%	101	75-125	10/15/13 20:49	

LABORATORY CONTROL SAMPLE: 1552650

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Benzene	ug/L	20	19.7	99	75-125	
Ethylbenzene	ug/L	20	20.0	100	75-125	
Toluene	ug/L	20	19.0	95	75-125	
Xylene (Total)	ug/L	60	60.1	100	75-125	
1,2-Dichloroethane-d4 (S)	%			108	75-125	
4-Bromofluorobenzene (S)	%			103	75-125	
Toluene-d8 (S)	%			104	75-125	

MATRIX SPIKE SAMPLE: 1552972

Parameter	Units	10244697005 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Benzene	ug/L	ND	20	20.2	101	70-135	
Ethylbenzene	ug/L	ND	20	20.5	102	75-125	
Toluene	ug/L	ND	20	19.2	96	75-125	
Xylene (Total)	ug/L	ND	60	60.5	101	75-125	
1,2-Dichloroethane-d4 (S)	%				107	75-125	
4-Bromofluorobenzene (S)	%				104	75-125	
Toluene-d8 (S)	%				104	75-125	

SAMPLE DUPLICATE: 1552973

Parameter	Units	10244697006 Result	Dup Result	Max RPD	RPD	Qualifiers
Benzene	ug/L	ND	ND			30
Ethylbenzene	ug/L	ND	ND			30
Toluene	ug/L	ND	ND			30
Xylene (Total)	ug/L	ND	ND			30
1,2-Dichloroethane-d4 (S)	%	107	105		2	

## REPORT OF LABORATORY ANALYSIS

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## QUALITY CONTROL DATA

Project: P66 Renton 070496-2RM00 REV-1

Pace Project No.: 10244525

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SAMPLE DUPLICATE: 1552973

Parameter	Units	10244697006	Dup Result	RPD	Max RPD	Qualifiers
4-Bromofluorobenzene (S)	%	103	105	2		
Toluene-d8 (S)	%	101	102	.6		

## REPORT OF LABORATORY ANALYSIS

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## QUALITY CONTROL DATA

Project: P66 Renton 070496-2RM00 REV-1

Pace Project No.: 10244525

QC Batch:	MSV/25309	Analysis Method:	EPA 8260
QC Batch Method:	EPA 8260	Analysis Description:	8260 MSV 465 W
Associated Lab Samples: 10244525007			

METHOD BLANK: 1553530 Matrix: Water

Associated Lab Samples: 10244525007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Benzene	ug/L	ND	1.0	10/16/13 14:58	
Ethylbenzene	ug/L	ND	1.0	10/16/13 14:58	
Toluene	ug/L	ND	1.0	10/16/13 14:58	
Xylene (Total)	ug/L	ND	3.0	10/16/13 14:58	
1,2-Dichloroethane-d4 (S)	%	96	75-125	10/16/13 14:58	
4-Bromofluorobenzene (S)	%	100	75-125	10/16/13 14:58	
Toluene-d8 (S)	%	98	75-125	10/16/13 14:58	

LABORATORY CONTROL SAMPLE: 1553531

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Benzene	ug/L	20	19.4	97	75-125	
Ethylbenzene	ug/L	20	18.8	94	75-125	
Toluene	ug/L	20	19.9	99	75-125	
Xylene (Total)	ug/L	60	59.8	100	75-125	
1,2-Dichloroethane-d4 (S)	%			96	75-125	
4-Bromofluorobenzene (S)	%			100	75-125	
Toluene-d8 (S)	%			99	75-125	

MATRIX SPIKE SAMPLE: 1554765

Parameter	Units	10244925001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Benzene	ug/L	ND	20	20.3	101	70-135	
Ethylbenzene	ug/L	ND	20	20.1	100	75-125	
Toluene	ug/L	ND	20	20.5	102	75-125	
Xylene (Total)	ug/L	ND	60	63.5	106	75-125	
1,2-Dichloroethane-d4 (S)	%				98	75-125	
4-Bromofluorobenzene (S)	%				98	75-125	
Toluene-d8 (S)	%				99	75-125	

SAMPLE DUPLICATE: 1554769

Parameter	Units	10244916004 Result	Dup Result	Max RPD	RPD	Qualifiers
Benzene	ug/L	ND	.87J			30
Ethylbenzene	ug/L	ND	ND			30
Toluene	ug/L	ND	ND			30
Xylene (Total)	ug/L	ND	ND			30
1,2-Dichloroethane-d4 (S)	%	98	96	2		

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## QUALITY CONTROL DATA

Project: P66 Renton 070496-2RM00 REV-1

Pace Project No.: 10244525

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SAMPLE DUPLICATE: 1554769

Parameter	Units	10244916004	Dup Result	RPD	Max RPD	Qualifiers
4-Bromofluorobenzene (S)	%	98	99	.7		
Toluene-d8 (S)	%	98	97	1		

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## QUALITY CONTROL DATA

Project: P66 Renton 070496-2RM00 REV-1

Pace Project No.: 10244525

QC Batch:	MSV/25331	Analysis Method:	EPA 8260
QC Batch Method:	EPA 8260	Analysis Description:	8260 MSV 465 W
Associated Lab Samples:	10244525001		

METHOD BLANK: 1554799                          Matrix: Water

Associated Lab Samples: 10244525001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Benzene	ug/L	ND	1.0	10/17/13 18:28	
Ethylbenzene	ug/L	ND	1.0	10/17/13 18:28	
Toluene	ug/L	ND	1.0	10/17/13 18:28	
Xylene (Total)	ug/L	ND	3.0	10/17/13 18:28	
1,2-Dichloroethane-d4 (S)	%	111	75-125	10/17/13 18:28	
4-Bromofluorobenzene (S)	%	103	75-125	10/17/13 18:28	
Toluene-d8 (S)	%	102	75-125	10/17/13 18:28	

LABORATORY CONTROL SAMPLE: 1554800

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Benzene	ug/L	20	20.8	104	75-125	
Ethylbenzene	ug/L	20	20.1	100	75-125	
Toluene	ug/L	20	19.4	97	75-125	
Xylene (Total)	ug/L	60	59.9	100	75-125	
1,2-Dichloroethane-d4 (S)	%			113	75-125	
4-Bromofluorobenzene (S)	%			104	75-125	
Toluene-d8 (S)	%			103	75-125	

MATRIX SPIKE SAMPLE: 1555945

Parameter	Units	10244926001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Benzene	ug/L	8.2	20	33.7	128	70-135	
Ethylbenzene	ug/L	8.8	20	32.8	120	75-125	
Toluene	ug/L	ND	20	24.3	118	75-125	
Xylene (Total)	ug/L	ND	60	74.8	121	75-125	
1,2-Dichloroethane-d4 (S)	%				113	75-125	1M
4-Bromofluorobenzene (S)	%				105	75-125	
Toluene-d8 (S)	%				104	75-125	

SAMPLE DUPLICATE: 1555946

Parameter	Units	10244926002 Result	Dup Result	RPD	Max RPD	Qualifiers
Benzene	ug/L	1.9	2.0	.5	30	
Ethylbenzene	ug/L	1.2	1.0	12	30	
Toluene	ug/L	ND	.44J		30	
Xylene (Total)	ug/L	ND	ND		30	
1,2-Dichloroethane-d4 (S)	%	113	112	.6		1M

## REPORT OF LABORATORY ANALYSIS

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## QUALITY CONTROL DATA

Project: P66 Renton 070496-2RM00 REV-1

Pace Project No.: 10244525

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SAMPLE DUPLICATE: 1555946

Parameter	Units	10244926002	Dup Result	RPD	Max RPD	Qualifiers
4-Bromofluorobenzene (S)	%	104	105	.5		
Toluene-d8 (S)	%	101	102	.6		

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## QUALITY CONTROL DATA

Project: P66 Renton 070496-2RM00 REV-1

Pace Project No.: 10244525

QC Batch:	OEXT/23350	Analysis Method:	NWTPH-Dx
QC Batch Method:	EPA 3510	Analysis Description:	NWTPH-Dx GCS LV SG
Associated Lab Samples:	10244525001, 10244525002, 10244525003, 10244525004, 10244525005, 10244525006, 10244525007, 10244525008		

METHOD BLANK: 1553816                          Matrix: Water

Associated Lab Samples: 10244525001, 10244525002, 10244525003, 10244525004, 10244525005, 10244525006, 10244525007, 10244525008

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Diesel Fuel Range SG	mg/L	ND	0.40	10/18/13 08:06	
Motor Oil Range SG	mg/L	ND	0.40	10/18/13 08:06	
n-Tricontane (S)	%	78	30-125	10/18/13 08:06	
o-Terphenyl (S)	%	62	30-125	10/18/13 08:06	

LABORATORY CONTROL SAMPLE & LCSD: 1553817                          1553818

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Diesel Fuel Range SG	mg/L	2	1.5	1.6	77	79	50-150	1	20	
Motor Oil Range SG	mg/L	2	1.6	1.6	78	79	50-150	2	20	
n-Tricontane (S)	%				82	78	30-125			
o-Terphenyl (S)	%				78	78	30-125			

SAMPLE DUPLICATE: 1553446

Parameter	Units	10245389002 Result	Dup Result	RPD	Max RPD	Qualifiers
Diesel Fuel Range SG	mg/L	ND	.15J		30	
Motor Oil Range SG	mg/L	ND	ND		30	
n-Tricontane (S)	%	82	71	15		
o-Terphenyl (S)	%	72	67	6		

SAMPLE DUPLICATE: 1553819

Parameter	Units	10244525001 Result	Dup Result	RPD	Max RPD	Qualifiers
Diesel Fuel Range SG	mg/L	0.41	0.77	60	30	D6
Motor Oil Range SG	mg/L	ND	.12J		30	
n-Tricontane (S)	%	81	90	16		
o-Terphenyl (S)	%	72	76	12		

## REPORT OF LABORATORY ANALYSIS

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## QUALIFIERS

Project: P66 Renton 070496-2RM00 REV-1

Pace Project No.: 10244525

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### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PRL - Pace Reporting Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

### LABORATORIES

PASI-M Pace Analytical Services - Minneapolis

### SAMPLE QUALIFIERS

Sample: 10244525010

[1] This result is reported from a serial dilution

Sample: 10244525011

[1] This result is reported from a serial dilution

### ANALYTE QUALIFIERS

- 1M Post-analysis pH measurement indicates insufficient VOA sample preservation. Therefore, analysis was conducted outside the recognized method holding time.
- 2M Surrogate recovery outside laboratory control limits due to matrix interferences.
- D6 The relative percent difference (RPD) between the sample and sample duplicate exceeded laboratory control limits.
- E Analyte concentration exceeded the calibration range. The reported result is estimated.
- M1 Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
- S0 Surrogate recovery outside laboratory control limits.

## REPORT OF LABORATORY ANALYSIS

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### METHOD CROSS REFERENCE TABLE

Project: P66 Renton 070496-2RM00 REV-1

Pace Project No.: 10244525

Parameter	Matrix	Analytical Method	Preparation Method
8260 VOC	Water	SW-846 8260B/5030B	N/A

### REPORT OF LABORATORY ANALYSIS

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**QUALITY CONTROL DATA CROSS REFERENCE TABLE**

Project: P66 Renton 070496-2RM00 REV-1

Pace Project No.: 10244525

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
10244525010	a-100313-NH-SVE-INF	TO-14M Ambient Air	AIR/18491		
10244525011	a-100313-NH-AS-EFF	TO-14M Ambient Air	AIR/18491		
10244525012	a-100313-NH-TOTAL-INF	TO-14M Ambient Air	AIR/18491		
10244525013	a-100313-NH-MID CARBON 1	TO-14M Ambient Air	AIR/18491		
10244525014	a-100313-NH-MID CARBON 2	TO-14M Ambient Air	AIR/18491		
10244525015	a-100313-NH-TOTAL EFF	TO-14M Ambient Air	AIR/18491		
10244525016	a-100313-NH-BP AS EFF	TO-14M Ambient Air	AIR/18491		
10244525001	<b>GW-100313-NH-TOTAL INF</b>	EPA 3510	OEXT/23350	NWTPH-Dx	GCSV/12249
10244525002	<b>GW-100313-NH-AS EFF</b>	EPA 3510	OEXT/23350	NWTPH-Dx	GCSV/12249
10244525003	<b>GW-100313-NH-MID CARBON</b>	EPA 3510	OEXT/23350	NWTPH-Dx	GCSV/12249
10244525004	<b>GW-100313-NH-TOTAL EFF</b>	EPA 3510	OEXT/23350	NWTPH-Dx	GCSV/12249
10244525005	<b>GW-100313-NH-BP R1 INF</b>	EPA 3510	OEXT/23350	NWTPH-Dx	GCSV/12249
10244525006	<b>GW-100313-NH-BP R2 INF</b>	EPA 3510	OEXT/23350	NWTPH-Dx	GCSV/12249
10244525007	<b>GW-100313-NH-BP TOTAL INF</b>	EPA 3510	OEXT/23350	NWTPH-Dx	GCSV/12249
10244525008	<b>GW-100313-NH-BP TOTAL EFF</b>	EPA 3510	OEXT/23350	NWTPH-Dx	GCSV/12249
10244525001	<b>GW-100313-NH-TOTAL INF</b>	NWTPH-Gx/8021	GCV/11372		
10244525002	<b>GW-100313-NH-AS EFF</b>	NWTPH-Gx/8021	GCV/11372		
10244525003	<b>GW-100313-NH-MID CARBON</b>	NWTPH-Gx/8021	GCV/11372		
10244525004	<b>GW-100313-NH-TOTAL EFF</b>	NWTPH-Gx/8021	GCV/11372		
10244525005	<b>GW-100313-NH-BP R1 INF</b>	NWTPH-Gx/8021	GCV/11372		
10244525006	<b>GW-100313-NH-BP R2 INF</b>	NWTPH-Gx/8021	GCV/11372		
10244525007	<b>GW-100313-NH-BP TOTAL INF</b>	NWTPH-Gx/8021	GCV/11372		
10244525008	<b>GW-100313-NH-BP TOTAL EFF</b>	NWTPH-Gx/8021	GCV/11372		
10244525009	<b>TRIP BLANK</b>	NWTPH-Gx/8021	GCV/11364		
10244525001	<b>GW-100313-NH-TOTAL INF</b>	EPA 8260	MSV/25331		
10244525002	<b>GW-100313-NH-AS EFF</b>	EPA 8260	MSV/25290		
10244525003	<b>GW-100313-NH-MID CARBON</b>	EPA 8260	MSV/25290		
10244525004	<b>GW-100313-NH-TOTAL EFF</b>	EPA 8260	MSV/25303		
10244525005	<b>GW-100313-NH-BP R1 INF</b>	EPA 8260	MSV/25303		
10244525006	<b>GW-100313-NH-BP R2 INF</b>	EPA 8260	MSV/25303		
10244525007	<b>GW-100313-NH-BP TOTAL INF</b>	EPA 8260	MSV/25309		
10244525008	<b>GW-100313-NH-BP TOTAL EFF</b>	EPA 8260	MSV/25303		
10244525009	<b>TRIP BLANK</b>	EPA 8260	MSV/25303		

**REPORT OF LABORATORY ANALYSIS**

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**CONESTOGA-ROVERS  
& ASSOCIATES**

# CHAIN OF CUSTODY RECORD

Address: 1117 TACOMA AVE. SOUTH TACOMA, WA. 98402

Phone: 253.573.1218 Fax: 253.573.1663

COO NO.: 38703

PAGE 1 OF 1

10244525 (See Reverse Side for Instructions)

Project No/Phase/Task Code: <b>070496 - 212M00</b>		Laboratory Name: <b>PACE</b>						Lab Location: <b>SEATTLE</b>		SSOW ID:			
Project Name: <b>P66 - RENTON TERMINAL</b>		Lab Contact: <b>J. GROSS</b>						Lab Quote No:		Cooler No:			
Project Location: <b>RENTON, WA</b>		SAMPLE TYPE	CONTAINER QUANTITY & PRESERVATION				ANALYSIS REQUESTED (See Back of COC for Definitions)		Carrier:				
Chemistry Contact: <b>M. DAVIS / J. CLOUD</b>		Matrix Code (see back of COC)	Grab (G) or Comp (C)	Unpreserved	Hydrochloric Acid (HCl)	Nitric Acid (HNO <sub>3</sub> )	Sulfuric Acid (H <sub>2</sub> SO <sub>4</sub> )	Sodium Hydroxide (NaOH)	Methanol/Water (Soil VOC)	EnvCorra 156-g, 1025-g	Other:	Total Containers/Sample	Airbill No:
Sampler(s): <b>N. H. WISPERGEIC</b>												Date Shipped:	
SAMPLE IDENTIFICATION (Container for each sample may be combined on one line.)		DATE (mm/dd/yy)	TIME (hh:mm)									MSMSD Request	
1	GW-100313-NH-TOTAL INF	10/03/13	8:30							X	8	X X X X	001
2	GW-100313-NH-AS EFF		8:45							X	8	X X X X	002
3	GW-100313-NH-MID CARBON		9:00							X	8	X X X X	003
4	GW-100313-NH-TOTAL EFF		9:15							X	8	X X X X	004
5	G-100313-NH-SVG INF		9:25							I		XX	010
6	G-100313-NH-AS EFF		9:30							I		XX	011
7	G-100313-NH-TOTAL INF		9:35							I		XX	012
8	G-100313-NH-MID CARBON		9:40							I		XX	013
9	G-100313-NH-MID CARBON 2		9:45							I		XX	014
10	G-100313-NH-TOTAL-EFF		9:50							I		XX	015
11	GW-100313-NH-BP R1 INF		10:00							X	8	X X X X	005
12	GW-100313-NH-BP R2 INF		10:10							X	8	X X X X	006
13	GW-100313-NH-BP TOTAL INF		10:20							X	8	X X X X	007
14	GW-100313-NH-BP TOTAL EFF		10:30							X	8	X X X X	008
15	G-100313-NH-BP AS EFF	✓	10:45							I		XX	016
TAT Required in business days (use separate COCs for different TATs):										Total Number of Containers: <b>71</b>	Notes/ Special Requirements:		
<input type="checkbox"/> 1 Day <input type="checkbox"/> 2 Days <input type="checkbox"/> 3 Days <input type="checkbox"/> 1 Week <input type="checkbox"/> 2 Week <input checked="" type="checkbox"/> Other: <b>STANDARD</b>													
All Samples in Cooler must be on COC													
RELINQUISHED BY	COMPANY	DATE	TIME	RECEIVED BY				COMPANY	DATE	TIME			
1. <b>MD</b>	CRN	10/03/13	12:00	1. <b>MD</b> PACE				10-3-13 10	10-3-13	13:30			
2.				2. <b>MD</b> PACE				10-4-13		04:49			
3.				3. <b>MD</b> PACE				10-4-13		04:49			

THE CHAIN OF CUSTODY IS A LEGAL DOCUMENT - ALL FIELDS MUST BE COMPLETED ACCURATELY

Distribution:

WHITE - Fully Executed Copy (CRA)

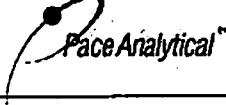
YELLOW - Receiving Laboratory Copy

PINK - Shipper

GOLDENROD - Sampling Crew

CRA Form. COC page 26 of 28

10-3-13 10

	Document Name: <b>Sample Condition Upon Receipt Form</b>	Document Revised: 19Sep2013 Page 1 of 1
	Document No.: <b>F-MN-L-213-rev.07</b>	Issuing Authority: <b>Pace Minnesota Quality Office</b>

Sample Condition Upon Receipt	Client Name: <i>CRA</i>	Project #:	<b>WO# : 10244525</b>
Courier:	<input checked="" type="checkbox"/> Fed Ex <input type="checkbox"/> UPS <input type="checkbox"/> USPS <input type="checkbox"/> Client <input type="checkbox"/> Commercial <input type="checkbox"/> Pace <input type="checkbox"/> Other: _____	 <b>10244525</b>	
Tracking Number:	<b>5779 5330 4967 4978</b>	Optional: Proj. Due Date: Proj. Name:	
Custody Seal on Cooler/Box Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Seals Intact?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Packing Material:	<input type="checkbox"/> Bubble Wrap <input checked="" type="checkbox"/> Bubble Bags <input type="checkbox"/> None <input type="checkbox"/> Other: _____	Temp Blank? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Thermom. Used:	<input type="checkbox"/> 80512447 <input checked="" type="checkbox"/> 888A912167504 <input type="checkbox"/> 72337080 <input type="checkbox"/> 888A9132521491	Type of Ice:	<input checked="" type="checkbox"/> Wet <input type="checkbox"/> Blue <input type="checkbox"/> None <input type="checkbox"/> Samples on ice, cooling process has begun
Cooler Temp Read (°C):	<b>24.6</b>	Cooler Temp Corrected (°C):	<b>23.59</b>
Temp should be above freezing to 6°C	Correction Factor: <b>-</b>	Biological Tissue Frozen? <input type="checkbox"/> Yes <input type="checkbox"/> No	
Comments: _____			
Chain of Custody Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.	
Chain of Custody Filled Out?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.	
Chain of Custody Relinquished?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.	
Sampler Name and/or Signature on COC?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.	
Samples Arrived within Hold Time?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.	
Short Hold Time Analysis (<72 hr)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	6.	
Rush Turn Around Time Requested?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	7.	
Sufficient Volume?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	8.	
Correct Containers Used?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.	
-Pace Containers Used?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		
Containers Intact?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.	
Filtered Volume Received for Dissolved Tests?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	11.	
Sample Labels Match COC?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	12. <i>missing Sample 5-10 &amp; 15</i>	
-Includes Date/Time/ID/Analysis Matrix:	<i>Wet</i>		
All containers needing acid/base preservation have been checked? Noncompliances are noted in 13.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	13. <input type="checkbox"/> HNO <sub>3</sub> <input type="checkbox"/> H <sub>2</sub> SO <sub>4</sub> <input type="checkbox"/> NaOH <input type="checkbox"/> HCl	
All containers needing preservation are found to be in compliance with EPA recommendation? (HNO <sub>3</sub> , H <sub>2</sub> SO <sub>4</sub> , HCl<2; NaOH>12)	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	Sample #	
Exceptions: VOA, Coliform, TOC, Oil and Grease, WI-DRO (water)	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Initial when completed: <i>DK</i> Lot # of added preservative: _____	
Headspace in VOA Vials (>6mm)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	14.	
Trip Blank Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	15.	
Trip Blank Custody Seals Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A		
Pace Trip Blank Lot # (if purchased):	<i>082413-3</i>		

**CLIENT NOTIFICATION/RESOLUTION**

Field Data Required?  Yes  No

Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Comments/Resolution: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Project Manager Review: *Deanna L. Davis* Date: *10-4-13*  
Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. out of hold, incorrect preservative, out of temp, incorrect containers)

	Document Name: Air Sample Condition Upon Receipt	Document Revised: 19Sep2013 Page 1 of 1
	Document No.: F-MN-A-106-rev.08	Issuing Authority: Pace Minnesota Quality Office

Air Sample Condition Upon Receipt	Client Name:	Project #:
	Pace - WA	WO# : 10244525
Courier:	<input checked="" type="checkbox"/> Fed Ex <input type="checkbox"/> UPS <input type="checkbox"/> USPS <input type="checkbox"/> Client <input type="checkbox"/> Commercial <input type="checkbox"/> Pace <input type="checkbox"/> Other: _____	 10244525
Tracking Number:	J779 5330 4489	

Custody Seal on Cooler/Box Present?  Yes     No    Seals Intact?  Yes     No    Optional: Proj. Due Date:    Proj. Name:

Packing Material:  Bubble Wrap     Bubble Bags     Foam     None     Other: \_\_\_\_\_

Temp. (TO17 and TO13 samples only) (°C): \_\_\_\_\_ Corrected Temp (°C): *AmB* Thermom. Used:  888A912167504     72337080  
 888A9132521491     80512447

Temp should be above freezing to 6°C    Correction Factor: \_\_\_\_\_ Date & Initials of Person Examining Contents: *10/6/13 AF*

Comments:

Chain of Custody Present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	1.
Chain of Custody Filled Out?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	2.
Chain of Custody Relinquished?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	3.
Sampler Name and/or Signature on COC?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	4.
Samples Arrived within Hold Time?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	5.
Short Hold Time Analysis (<72 hr)?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/> N/A	6.
Rush Turn Around Time Requested?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/> N/A	7.
Sufficient Volume?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	8.
Correct Containers Used?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	9.
-Pace Containers Used?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	
Containers Intact?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	10.
Media:				11.
Sample Labels Match COC?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	12.

Samples Received: <i>7 CANS</i>					
Canisters		Flow Controllers		Stand Alone G	
Sample Number	Can ID	Sample Number	Can ID	Sample Number	Can ID
BP A SS EFF	2419				
SVE INF	1369				
AS EFF	919				
TOTAL INF	1173				
MID CARBON 1	1471				
MID CARBON 2	1317				
TOTAL EFF	907				

CLIENT NOTIFICATION/RESOLUTION

Field Data Required?  Yes  No

Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_  
Comments/Resolution: \_\_\_\_\_

Project Manager Review: *JENNIFER SNIERS* Date: *10/10/13*  
Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. out of hold, incorrect preservative, out of temp, incorrect containers)