

5 - 20 - 20 - 4 Stantec Consulting Corporation 12304 134th Court NE Suite 102 Seattle WA 98052 Tel: (425) 372-1600 Fax: (425) 372-1650

Well Installation Report Former ConocoPhillips Facility No. 255353 600 Westlake Avenue North Seattle, Washington

Prepared for: ConocoPhillips Company

Prepared by: Stantec Consulting Corporation 12034 134th Court Northeast, Suite 102 Redmond, Washington 98052 425-372-1600

Stantec Project No.: 01CP.01396.60.1222

March 27, 2009

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- Appendix B Field and Laboratory Procedures
- Appendix C Copies of Boring Logs and Well Construction Diagrams
- Appendix D Copy of Survey Data
- Appendix E Copy of Disposal Manifests for Investigation-Derived Waste
- Appendix F Copies of Laboratory Analytical Reports and Chain-of-Custody Documentation

1.0 INTRODUCTION

Stantec Consulting Corporation (Stantec) is submitting this report to ConocoPhillips Company (ConocoPhillips) describing installation of three groundwater monitoring wells (MW-209 through MW-211) at former ConocoPhillips facility number 255353 located at 600 Westlake Avenue North, in Seattle, Washington (the Site). Site location is illustrated on Figure 1. Principal site features and locations of the newly installed monitoring wells are shown on Figure 2.

Well installation activities were performed in accordance with Washington Administrative Code (WAC) 173-160, <u>Minimum Standards for Construction and Maintenance of Wells</u>. Wells were installed and developed by a Washington State licensed well driller employed by Cascade Drilling, Inc. of Woodinville, Washington. Installation, development, and surveying of the new wells are described in subsequent paragraphs of this report.

2.0 SITE DESCRIPTION

The Site is located on the northeast corner of the intersection of Mercer Street and Westlake Avenue north in Seattle, Washington (see Figure 1). The area surrounding the Site is used primarily by retail businesses. Adjacent properties owners are City Investors XI L.L.C. and West Marine. The Site is located in the southeast quarter of Section 30 in Township 25 North and Range 04 East. The Site is currently a vacant lot covered by cement, asphalt, and gravel. A site map of the facility, indicating the former locations of the above- and below-ground structures, is illustrated on Figure 2.

3.0 SCOPE OF WORK AND RESULTS

Stantec's scope of work included observing and documenting the installation, development and surveying of three groundwater monitoring wells (MW-209 through MW-211), and collecting soil samples from the associated borings during drilling. Stantec's scope of work included:

- Preparing a site-specific health and safety plan;
- Acquiring the required permits for well installation;
- Observing and documenting well installation, development and surveying activities;
- Collecting soil samples from each boring during drilling and submitting selected soil samples to an independent laboratory for chemical analysis;
- Collecting groundwater samples from each new well and submitting them to an independent laboratory for chemical analysis;
- Review analytical results for soil and groundwater samples and comparing the results to Model Toxics Control Act (MTCA) Method A cleanup levels; and,
- Preparing this written report describing the results of these activities.

These activities are described in subsequent sections of this report.

3.1 SITE HEALTH AND SAFETY PLAN

As required by the Occupational Safety and Health Administration (OSHA) Standard "Hazardous Waste Operations and Emergency Response" guidelines (29 CFR 1910.120), Stantec created an up-to-date site-specific Health and Safety Plan (HASP) prior to the commencement of fieldwork. The HASP was reviewed by field staff and contractors before beginning field operations, and was in the possession of Stantec personnel while conducting work activities at the Site.

3.2 PERMITTING

Prior to installing the three groundwater monitoring wells, Stantec obtained a utility permit (No. 77383) from Seattle Department of Transportation (SDOT) to perform well installation activities at the proposed well locations. A copy of the utility permit is included in Appendix A.

3.3 SUBSURFACE UTILITY CLEARANCE

Prior to initiating field activities, Stantec marked the boring locations, contacted Underground Service Alert a minimum of 48 hours prior to the initiation of field work, and contracted a private utility locator to determine that the proposed boring locations were clear of potential subsurface obstructions. In addition, the borings were air-knifed and/or hand cleared to 5 feet below ground surface (bgs) before machine drilling began. A Stantec borehole checklist was also completed to ensure that borehole locations were cleared of possible safety hazards.

3.4 MONITORING WELL INSTALLATION

Between October 10 and 14, 2008, groundwater monitoring wells MW-209 through MW-211 were installed at the Site (see Figure 2). The borings were drilled using 14-inch hollow-stem auger drilling equipment to a depth of approximately 20 feet bgs. Wells were constructed from 0 to 5 feet bgs using a 5-foot-long, 2-inch diameter, Schedule 40 polyvinyl chloride (PVC) casing, and from 5 to 20 feet bgs using a 15-foot-long section of 0.010-inch slotted PVC screen. RMC #2/12 sand was placed in the annular space across the entire screen interval, extending approximately 2 feet above the top of the screen. An approximately 2-foot-thick bentonite seal was placed above the sand pack. An approximate 1-foot-thick concrete seal was placed above the bentonite to secure the well vault in place and was finished flush to ground surface. Wellheads were completed at the ground surface with a lockable compression-type well cap and a flush-mounted 12-inch diameter traffic-rated well vault with bolt down lid. Well construction details are presented in Table 1 and field procedures are described in Appendix B. Boring logs and well construction diagrams are included in Appendix C.

3.5 SOIL SAMPLING

Borings were logged by Stantec under the direction of a Washington State Licensed Geologist. Subsurface geologic conditions encountered during drilling were recorded on boring logs. Soils encountered during drilling were classified using the Unified Soil Classification System (USCS).

Soil samples were collected at approximately five-foot intervals using a split-spoon sampler. The sampler was driven a maximum of 18 inches using a 300-pound hammer with a 30-inch drop. The subsurface is comprised of sands and silts with some clay and gravel from ground surface to the total depth explored. Non-native fill material was encountered throughout the total depth of the each boring. Groundwater was first encountered at approximately 8.5 to 9-feet bgs in each boring.

Soil samples collected from each boring were monitored using a photoionization detector (PID). The test procedure involved using an undisturbed soil sample, and placing this sample in a sealed container, typically a plastic Zip-Lock[™] bag. The container was sealed for approximately 20 minutes, and the probe of the PID inserted into the head-space above the soil sample to evaluate organic vapors in the headspace. The instrument was calibrated prior to use using a 100-ppm isobutylene standard (in air) and a sensitivity factor of 55 which relates the photo-ionization potential of benzene to that of isobutylene at 100 ppm. The PID results are noted on the boring logs.

Soil samples selected for laboratory analysis were placed into laboratory-supplied, unpreserved 4-ounce jars, and 40-milliliter VOA vials preserved with methanol and sodium bisulphate. Soil was placed into the VOA vials using a clean, plastic syringe. Care was taken to obtain representative soil samples, to place the soils directly and quickly into the sample container, and to fill the sample jar to capacity to minimize loss of volatile constituents.

The threads of the sample jar were wiped clean of soil particles that would interfere with an airtight seal, and a Teflon-lined screw lid was immediately placed on the jar. The sample jars were placed in an iced cooler to await transport. United States Environmental Protection Agency (EPA) recommended protocols for sample management, including chain-of-custody documentation, were observed during sampling activities.

3.6 WELL DEVELOPMENT AND SAMPLING

The newly installed groundwater monitoring wells were developed by continuous purging on October 21, 2008. Groundwater monitoring well MW-209 was purged of approximately 70-gallons of groundwater, groundwater monitoring well MW-210 was purged of approximately 45-gallons of groundwater, and groundwater monitoring well MW-211 was purged of approximately 75-gallons of groundwater.

3.7 WELL SURVEYING

Stantec contracted OTAK, Inc. (OTAK) to survey the top-of-casing of the new monitoring wells (MW-209 through MW-211). The wells were surveyed on October 30, 2008 to establish horizontal position with respect to North American Datum 1983 (NAD 83) coordinates, and to establish elevation of top of casing with respect to mean sea level (msl). A copy of the OTAK survey data is included in Appendix D.

3.8 INVESTIGATION DERIVED WASTE

Soil cuttings and waste water generated during drilling, well installation and development activities were stored in Department of Transportation (DOT)-approved, 55-gallon drums. The drums were labeled and temporarily stored on site pending receipt of analytical results for soil and groundwater samples. General Environmental Management of Kent, Washington transported the drums to a licensed facility for proper disposal. Copies of disposal manifests are included in Appendix E.

3.9 CHEMICAL ANALYSIS OF SOIL SAMPLES AND ANALYTICAL RESULTS

Samples were submitted to TestAmerica in Bothell, Washington for the following chemical analyses:

- Total petroleum hydrocarbons (TPH) as gasoline (TPH-g) using Ecology Method NWTHP-Gx;
- TPH as diesel (TPH-d), TPH as heavy oil (TPH-o) and kerosene using Ecology Method NWTPH-Dx with acid/silica gel cleanup;
- Benzene, toluene, ethyl-benzene, and xylenes (collectively referred to as BTEX) using United States Environmental Protection Agency (EPA) Method 8260B;
- Methyl tert butyl ether (MTBE) and naphthalene using EPA Method 8260B; and,
- Total lead using EPA 6000/7000 series methods;

Analytical results for the soil samples indicate that the samples did not contain concentrations of the above-referenced analytes at concentrations exceeding their respective MTCA Method A cleanup levels. Analytical results for soil samples are summarized in Table 2. A copy of the analytical report is included in Appendix F.

3.10 ANALYTICAL RESULTS FOR GROUNDWATER SAMPLES

Groundwater samples were submitted to TestAmerica in Bothell, Washington for the following chemical analyses:

- Total petroleum hydrocarbons (TPH) as gasoline (TPH-g) using Ecology Method NWTHP-Gx;
- TPH as diesel (TPH-d), TPH as heavy oil (TPH-o) and kerosene using Ecology Method NWTPH-Dx with acid/silica gel cleanup;
- Benzene, toluene, ethyl-benzene, and xylenes (collectively referred to as BTEX) using United States Environmental Protection Agency (EPA) Method 8260B;
- Methyl tert butyl ether (MTBE) and naphthalene using EPA Method 8260B; and,
- Dissolved lead using EPA 6000/7000 series methods;

Analytical results indicate the groundwater samples collected from the new wells (MW-209 through MW-211) contained concentrations of the above-referenced analytes that did not exceed their respective MTCA Method A cleanup levels. Analytical results for groundwater samples are summarized in Table 3. A copy of the analytical report is included in Appendix F.

4.0 CONCLUSIONS AND RECOMMENDATIONS

Three groundwater monitoring wells were installed at the site in October 2008 to approximately 20 feet bgs to further delineate potential concentrations of TPH and/or dissolved lead in groundwater. The wells were installed in accordance with WAC 173-160, Minimum Standards for Construction and Maintenance of Wells.

Based on analytical results for soil samples collected during drilling of monitoring wells MW-209 through MW-211, concentrations of TPH and total lead were not detected at concentrations exceeding their respective MTCA Method A cleanup levels.

Based on analytical results for groundwater samples collected from monitoring wells MW-209 through MW-211 during the fourth quarter 2008 groundwater sampling event at the site, TPH and dissolved lead concentrations were not detected at concentrations exceeding their respective MTCA Method A cleanup levels.

Stantec recommends continued sampling of groundwater monitoring wells MW-209 through MW-211 on a quarterly basis to provide consistent delineation between the source areas on the ConocoPhillips and City Investors properties and Lake Union.

5.0 LIMITATIONS AND CERTIFICATIONS

This report was prepared in accordance with the scope of work outlined in Stantec's contract and with generally accepted professional engineering and environmental consulting practices existing at the time this report was prepared and applicable to the location of the site. It was prepared for the exclusive use of ConocoPhillips Company for the express purpose stated above. Any re-use of this report for a different purpose or by others not identified above shall be at the user's sole risk without liability to Stantec. To the extent that this report is based on information provided to Stantec by third parties, Stantec may have made efforts to verify this third party information, but Stantec cannot guarantee the completeness or accuracy of this information. The opinions expressed and data collected are based on the conditions of the site existing at the time of the field investigation. No other warranties, expressed or implied are made by Stantec.

If you have any questions regarding this report, please feel free to contact the undersigned at (425) 372-1600 or at Jeff. Thompson @ Stantec.com.

Sincerely,

Stantec Consulting Corporation

Jeffrey S. Thompson, L.G., L.E.G. Principal Geologist



Distribution: Mr. Kipp Eckert, Shaw Environmental — Toriginal and 4 copies Mr. Roger Nye, Washington State Department of Ecology – 1 original Stantec Project File – 1 original

FIGURES





LEGEND:

MW-209
 NEWLY INSTALLED GROUNDWATER MONITORING WELL

MW-71 ③ COP GROUNDWATER MONITORING WELL

SMW-4 G CITY INVESTORS' GROUNDWATER MONITORING WELL

MW-24 🖉 ABANDONED OR DAMAGED WELL

MW-68 🕅 SOIL VAPOR EXTRACTION WELL LOCATION

MW-66 🛞 DUAL PHASE EXTRACTION WELL LOCATION



ANALYTES:

- TPHd TOTAL PETROLEUM HYDROCARBONS AS GASOLINE
- TPHg TOTAL PETROLEUM HYDROCARBONS AS DIESEL
- TPHO TOTAL PETROLEUM HYDROCARBONS AS MOTOR OIL
 - BENZENE
 - KEROSENE

No warranty is made by Stantac as to the accuracy, reliability, or completenees of these data. Original data were compiled from various sources. This information may not meet National Map Accuracy Standards. This product was developed electronically, and may be updated without notification. Any reproduction may result in a loss of scale and or information.

	Stantec 12034 134th COURT NE, SUITE 102	FACILITY WESTLAKE	Phillips NO. 255353 AND MERCER (ASHINGTON	NEW WELL LOCA ANALYTICA		FIGURE:
APPROXIMATE SCALE IN FEET	REDMOND, WASHINGTON	JOB NUMBER:	DRAWN BY:	CHECKED BY:	APPROVED BY:	DATE:
	PH (425) 372-1600/FAX (425) 372-1650	211301304	MDR/CM	SM	JY	01/30/09

FILEPATH:M:_00 OTHER OFFICES\01-REDMOND\CONOCOPHILLIPS\255353\FIG-2-NEW WELL LOCATIONS.dwg | Layout Tab: SITE MAP-FIG 1 | Drafter: cfmiller | Mar 27, 2009 at 15:00

TABLES

Table 1Well Construction DetailsFormer ConocoPhillips Facility No. 255353600 Westlake Avenue North, Seattle, Washington

Monitoring Well ID	Installation Date	TOC Elevation (feet)	Boring Depth (feet bgs)	Casing Diameter (inches)	Casing Type	Depth to Top of Screen (feet bgs)	Depth to Bottom of Screen (feet bgs)	Screen Length (feet)
MW-209	10/14/08	27.00	20	2	PVC	5	20	15
MW-210	10/17/08	26.70	20	2	PVC	5	20	15
MW-211	10/14/08	26.55	20	2	PVC	5	20	15

TOC = top of casing bgs = below ground surface PVC = poly vinyl chloride

Table 2Soil Analytical ResultsFormer ConocoPhillips Facility No. 255353600 Westlake Avenue North, Seattle, Washington

for Soil			100	2,000	2,000	2,000	0.03	7	6	9	0.1	5
MTCA Metho	d A Cleanu	ıp Level										
MW-211-7	7	10/14/08	<5.59	<11.6	<29.1	<11.6	<0.00102		<0.00272	<0.00681	<0.000681	<0.00681
MW-210-15	15	10/14/08	<5.71	19.8	73.4	<12.3	<0.00116	<0.00116	<0.00310	0.0112	<0.000776	<0.00776
MW-209-7	7	10/14/08	<6.19	<12.6	<31.5	<12.6	<0.000895	<0.000895	<0.00239	<0.00597	<0.000597	<0.00597
Sample ID	Sample Depth (feet)	Sample Date	TPH-g (mg/kg)	TPH-d (mg/kg)		Kerosene (mg/kg)	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Xylenes (mg/kg)	MTBE (mg/kg)	Naphthalene (mg/kg)

Notes:

TPH-g = total petroleum hydrcarbons as gasoline quantified using Northwest Method NWTPH-Gx

TPH-d = total petroleum hydrcarbons as diesel quantified using Northwest Method NWTPH-Dx with acid/silica gel cleanup

TPH-o = total petroleum hydrcarbons as oil quantified using Northwest Method NWTPH-Dx with acid/silica gel cleanup

Benzene, toluene, ethylbenzene, and xylenes quantified using EPA Method 8260B

MTBE (Methyl tert-Butyl Ether) and Naphthalene quantified using EPA Method 8260B

Total Lead quantified using EPA Method 6020

Values in BOLD indicate detectable concentrations exceeding the MTCA Method A soil cleanup level.

MTCA = Model Toxics Cotnrol Act regulation (WAC 173-340)

Groundwater Analytical Results Former ConocoPhillips Facility No. 255353 600 Westlake Avenue North, Seattle, Washington

Cleanup I Ground	Level for	1000/800a	500	500	500	5	1,000	700	1,000	20	160	15	15
MTCA M	ethod A		Fillen († 1997) 1970 - Frank († 1997) 1970 - Frank († 1997)			lus i statig	g o traditage		ka esto entre este				
MW-211	11/5/08	<50.0	<240	<481	<240	<0.500	<0.500	<0.500	<3.00	<1.00	<5.00	<1.00	<1.00
											na serie de la composition de la compo Esta poste de la composition de la compo		· · · · · · · · ·
MW-210	11/5/08	<50.0	<243	<485	<243	<0.500	<0.500	<0.500	<3.00	<1.00	<5.00	<1.00	<1.00
MW-209	11/5/08	<50.0	<238	<476	<238	<0.500	<0.500	<0.500	<3.00	<1.00	<5.00	<1.00	
	11/00	FO O	000	470	000	0.500	0 500	0.500		-1.00		.1.00	<1.00
Sample ID	Sample Date	TPH-g (µg/L)	TPH-d (µg/L)	TPH-o (µg/L)	Kerosene (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)	MTBE (µg/L)	Naphthalene (µg/L)	Total Lead (µg/L)	Dissolve Lead (µg/L)

Notes:

TPH-g = total petroleum hydrcarbons as gasoline quantified using Northwest Method NWTPH-Gx

TPH-d = total petroleum hydrcarbons as diesel quantified using Northwest Method NWTPH-Dx with acid/silica gel cleanup

TPH-o = total petroleum hydrcarbons as oil quantified using Northwest Method NWTPH-Dx with acid/silica gel cleanup

Benzene, toluene, ethylbenzene, and xylenes quantified using EPA Method 8260B

MTBE (Methyl tert-Butyl Ether) and Naphthalene quantified using EPA Method 8260B

Total Lead quantified using EPA Method 6020

Values in **BOLD** indicate detectable concentrations exceeding the MTCA Method A groundwater cleanup level.

MTCA = Model Toxics Cotnrol Act regulation (WAC 173-340)

^a MTCA Method A Cleanup Level for TPH-Gasoline is 1,000 ug/L if benzene is not detectable in groundwater the groundwater sample. If benzene is detected, then

APPENDIX A COPY OF CITY OF SEATTLE DEPARTMENT OF TRANSPORTATION UTILITY PERMIT

Site Assessment Report Former ConocoPhillips Facility 255353 600 Westlake Avenue North, Seattle, Washington





Inspection District: SOUTH LAKE UNION

LOCATION	Inspection District:	SOUTH LAKE UNION
Address: 600 WESTLAKE AVE N	Application Date:	8/14/08 9:05 am
Details: DRILLING LOCATIONS WILL BE NORTH OF THE LITE-RAIL TRACKS THAT ARE LOCATED ON THE NORTH SIDE OF VALLEY STREET IN BETWEEN TERRY AVE N AND WESTLAKE AVE N.	Issue Date:	9/8/08 10:33 am

PARTIES (* Primary Applicant)

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 Role	Name	Address	Phone	From	То
*Bill-To	YOTZ, JENNIFER	12034 134TH COURT NE,,REDMOND,WA,98052	(425)372-1584		
Owner Agent	STANTEC	12034-134TH CT NE, SUITE 102,,REDMOND,WA,98052-	(425)372-1600		

PERMITTED USES

Right of N	ght of Way: ARTERIAL		DPD #:		To Be Restored By: PERMITTEE							
Use	Space	Start Date	Duration	Max Allowed Date	Sq. Ft,	Issued Date	Intended Vacate Date					
511	A	8/11/08	10	8/20/08	300	9/8/08	8/20/08					
511	A	10/6/08	10	10/15/08	300	9/8/08	10/15/08					
Use Space	Descriptio	on			Condition	1S	n an					
51I A Preparatory and exploratory w surveying, installing monitoring												

This line added to change start date:

CONDITIONS OF USE

A

511

ARTERIAL PERMIT: ARTERIAL STREETS shall be open to its full driving width between the hours of 7-9:00am and 4-6:00pm weekdays. At all other times it may be reduced to one lane in each direction. Permittee shall contact King County/METRO Transit (684-2732) five days prior to starting any work which may affect bus stop zones or other bus operations. Maintain a 4-foot wide walkway for pedestrians around the work area. Permittee shall contact all residents who may be affected by this work at least 72 hours before the start of work. A minimum of one week's advance notice shall be given by permittee to the affected businesses/residents when driveway or delivery access will be restricted. Access to all businesses shall be maintained during construction. All driveways will be cleared and accessible at the end of every work day. Permittee is responsible to have parking restriction easels up a minimum of 24 hours in advance of the need to clear parking within the construction zone. Parking restriction easels must show either the permittee's or contractor's name and phone number. Permittee shall coordinate this work with any other contractors working near its work zone to avoid conflicts. Tree roots 2" or more in diameter shall not be cut or damaged. Permittee shall contact the City Arborist Office (684-7649) a minimum of two working-days prior to digging within the "drip line" of any street trees.

No permanent restoration of street or alley pavement shall be done by permittee or its contractor until a City of Seattle/Seattle Transportation-Street Use inspector has marked the periphery of the pavement to be repaired and/or replaced.

METRO OVERHEAD POWER LINES: Care shall be taken to assure that METRO Transit trolleys can access their overhead power lines at all times to maintain uninterrupted service. Contact the METRO Transit (684-2732) five days prior to the start of work.

		Payment Me	thod: FEES PAID O	VER THE COUNTER
Date	Amount	Unpaid Amount	Paid Amount	Waived
9/8/08	\$101.00	. \$0	\$101.00	* \$0
9/8/08	\$30.00	\$0	\$30.00	\$0
9/8/08	\$30.00	\$0	\$0	\$30.00
	\$161.00	\$0.00	\$131.00	\$30.00
······································		D	Jenelle Troker	(206) 684-098
	9/8/08 9/8/08	9/8/08 \$101.00 9/8/08 \$30.00 9/8/08 \$30.00 \$161.00	Date Amount Unpaid Amount 9/8/08 \$101.00 \$0 9/8/08 \$30.00 \$0 9/8/08 \$30.00 \$0 9/8/08 \$30.00 \$0 9/8/08 \$30.00 \$0 9/8/08 \$161.00 \$0.00	9/8/08 \$101.00 \$0 \$101.00 9/8/08 \$30.00 \$0 \$30.00 9/8/08 \$30.00 \$0 \$30.00 9/8/08 \$30.00 \$0 \$0 \$161.00 \$0.00 \$131.00 Jenelle Trokey

Printed: 10:33:58AM

Preparatory and exploratory work for upcoming projects, including

surveying, installing monitoring wells, and soil sampling.



Seattle Dept of Transportation Street Use Permits, 23rd Floor 700 Fifth Ave, Suite 2300 P O Box 34996 Seattle, WA 98124-4996

UTILITY PERMIT

- I. Nature of permit. This permit is issued pursuant to the Seattle Municipal Code (SMC), Chapter 15.04, for use and/or occupancy of the public right-of-way consistent with the terms and conditions set forth herein. This permit is wholly of a temporary nature, vests no permanent rights whatsoever, and is revocable pursuant to SMC 15.04.070.
- 2. Acceptance of terms, conditions, and requirements. Permittee accepts the terms, conditions, and requirements of this permit and agrees to comply with them to the satisfaction of the Seattle Department of Transportation, Street Use Division, or such other agency as may be designated by the City of Seattle. Permittee further agrees to comply with all applicable city ordinances, including but not limited to Title 15 SMC, and all applicable requirements of state and federal law.
- 3. Expiration of permit. This permit shall remain valid until revoked pursuant to SMC 15.04.070; provided that, the permit shall expire automatically if the authorized work does not begin within six months from the date the permit is issued.
- 4. Superiority of street improvement contracts. Rights acquired under this permit are inferior to those acquired under existing or future street improvement contracts.
- 5. Compliance with technical requirements and standards. All work within the public right-of-way must be performed and completed in accordance with requirements set forth in the following technical documents published by the City of Seattle, as now or hereafter amended: Right-of-Way Improvements Manual; Standard Specifications for Road, Bridge, and Municipal Construction; Standard Plans for Municipal Construction; Street and Sidewalk Pavement Opening and Restoration Rule; and Traffic Control Manual for In-Street Work.

6. Notification prior to starting work.

- . <u>UTILITY PERMITS</u>: Permittee shall be responsible for notifying Street Use Job Start at (206) 684-5270 or
- SDOTJobStart@Seattle.gov twenty-four (24) to seventy-two (72) hours prior to the start of work and provide the following information:
 - Permit Number
 - · Job Site Address
 - Start Date
 - · Brief Work Description
 - · Job Site Contact Name and Phone Number
 - Failure to do so will result in a penalty of \$300, or such other amount as may be established pursuant to SMC 15.04.074.
- b. <u>ALL OTHER PERMITS</u>: Permittee shall be responsible for notifying the Street Use Inspector named on this permit twenty-four (24) to seventy-two (72) hours prior to starting work within the public right-of-way. Failure to do so will result in a penalty of \$300, or such other amount as may be established pursuant to SMC 15.04.074.
- 7. Coordination of work. In performing work authorized by this permit, the Permittee shall coordinate with other contractors working in the public right-of-way to avoid conflicts.
- 8. Hours of work. Work performed within the public right of way shall occur only during hours authorized under the City of Seattle Noise Control ordinance, codified at Chapter 25,08 SMC, and the Traffic Control Manual for In-Street Work, as now or hereafter amended.
- 9. Moratorium. Pursuant to SDOT Director's Rule 2004-02, no work in the public right-of-way shall be allowed in the following areas from Thanksgiving Day through January 1st:
 - a. The area bounded by Seneca Street, Interstate 5, Denny Way, Virginia Street, and 1st Avenue; and
 - b. The area bounded by Columbia Street, 2nd Avenue South, South King Street, and Elliott Bay.
- 10. Inspection fees. Permittee shall pay for city inspections of work authorized under this permit at a rate of \$150 per hour, or such other amount as may be established pursuant to SMC 15.04.074, and to cover all other associated costs.
- 11. Billing. All fees and costs billed pursuant to this permit shall be paid to the City of Seattle within thirty (30) days from the date of the invoice. Any invoice more than ninety (90) days past due will be forwarded for collection. All past due amounts will accrue interest at twelve (12) percent per annum. In the event suit is commenced to collect on unpaid invoices, the prevailing party will be entitled to reasonable attorney fees and costs of litigation.
- 12. Indemnification. The Permittee agrees to defend, indemnify, and hold harmless the City of Seattle, its officials, officers, employees, and agents against: (1) any liability, claims, causes of action, judgments, or expenses, including reasonable attorney fees, resulting directly or indirectly from any act or omission of the Permittee, its subcontractors, anyone directly or indirectly employed by them, and anyone for whose acts or omissions they may be liable, arising out of the Permittee's use or occupancy of the public right-of-way; and (2) all loss by the failure of the Permittee to fully or adequately perform, in any respect, all authorizations or obligations under this Permit.

EXISTING IMPROVEMENTS

- 1. Costs of damage to city property and improvements. Permittee shall be responsible for the costs of repairing any damage to city property or improvements resulting from work performed by or on behalf of the permittee within the public right-of-way.
- 2. Utility protection. Utility damage is costly! Permittee shall be responsible for checking locations and providing adequate protection for all utilities in the work area.
- 3. Utility relocation. Any necessary utility relocation shall be at the expense of the Permittee, who shall be responsible for notifying affected utilities and requesting the service relocation.
- 4. Notification prior to ground disturbance. Permittee shall call Utility Underground Locator Center (1-800-424-5555) 48 hours prior to ground disturbance.
- Survey monuments. Prior to removing, destroying, disturbing, or covering a survey monument, such that the survey point is no longer visible or readily accessible, Permittee shall obtain a permit from the Department of Natural Resources pursuant to Washington Administrative Code, Chapter 332-120.



Seattle Dept of Transportation Street Use Permits, 23rd Floor 700 Eifth Ave, Suite 2300 P O Box 34996 [™] Seattle, WA 98124-4996

UTILITY PERMIT

RESTORATION

- 1. Full and continuous restoration. The public right-of-way shall be left in original or better condition, continuous with job progress, pursuant to the Street and Sidewalk Pavement Opening and Restoration Rule, as now or hereafter amended.
- 2. Environmental protection,
 - 2.1 Best management practices required. The Permittee shall ensure the use of environmental best practices, as detailed in the Regional Road Maintenance Endangered Species Act (ESA) Program Guidelines. The Permittee shall be responsible for the control of surface runoff, erosion and sediment at the construction site, as required by: the Stormwater, Drainage and Grading Code, codified in Subtitle VIII SMC, the Standard Specifications for Road, Bridge, and Municipal Construction, and Department of Planning and Development Director's Rule 16-2000, as now or hereafter amended. The site and the surrounding area shall generally be kept clean and free of construction debris or other material, including but not limited to mud, dust, rock, asphalt, and concrete. Waste materials shall be collected and disposed of at an appropriate disposal site. These materials shall be prevented from entering any part of the public sewer and storm drain system, and any surface waters.
 - 2.2 <u>RESERVED</u>

TRAFFIC CONTROL REQUIREMENTS

- 1. Compliance with traffic control manual. In order to provide safe and effective work areas and to ward, control, protect, and expedite vehicular and pedestrian traffic, signage for all construction within the public right-of-way must comply with the City of Seattle Traffic Control Manual for In-Street Work, as now or hereafter amended, unless the construction is subject to a traffic control plan approved by the City Traffic Engineer or designee. A copy of the current City of Seattle Traffic Control Manual for In-Street Work, and approved traffic control plan for arterial streets, shall be kept at the work site.
- 2. Lanes to remain open during peak hours. No moving traffic lanes shall be closed during the following peak hours: 6-9:00 am and 3-7:00 pm in the central business district, and 7-9:00 am and 4-6:00 pm for arterials elsewhere.
- 3. Access to business. Access to all businesses shall be maintained during construction. At least one week prior to starting work within the public right-of-way, Permittee shall notify all potentially affected residents and businesses.
- 4. Width of temporary traffic lanes. Temporary traffic lanes created during this work shall be a minimum of eleven feet in width.
- 5. Meter hoods. When working in a metered zone, meter hoods must be obtained from SDOT Traffic Engineer's office (206) 684-5086.
- 6. No parking signs. "No parking" signs shall be placed 72 hours prior to the first day on which parking will be prohibited and shall clearly state the Permittee's name and telephone number. A copy of the "No parking sign" used by Permittee shall be faxed to Seattle Police Department, at (206) 684-5101, using the Notification of Temporary No parking Zone form.
- 7. Flashing lights. Four or more FLASHING AMBER LIGHTS of sufficient brilliance to be seen from 500 feet, must be maintained at all times during the hours of darkness at the points of obstruction or excavation of any public place.

APPENDIX B FIELD AND LABORATORY PROCEDURES

Site Assessment Report Former ConocoPhillips Facility 255353 600 Westlake Avenue North, Seattle, Washington

APPENDIX B FIELD AND LABORATORY PROCEDURES

STANTEC CONSULTING CORPORATION STANDARD PROCEDURE FOR HOLLOW STEM AUGER DRILLING

Prior to drilling, boring locations were marked with white paint and cleared for underground utilities through Underground Service Alert (USA). In addition, the first five feet of each borehole was air knifed or hand augered to evaluate the presence of underground structures or utilities.

Once pre-drilling efforts to identify subsurface structures was complete, pre-cleaned 8-inch hollow stem augers were advanced using a drill rig for the purpose of collecting samples and evaluating subsurface conditions. Upon completion of drilling and sampling, the augers were retracted, and the wells were constructed using concrete, bentonite grout, and hydrated bentonite chips or pellets as required by the regulatory agency. In areas where the borehole penetrated asphalt or concrete, the borehole was capped with an equivalent thickness of asphalt or concrete patch to match finished grade.

During the drilling process, a physical description of the encountered soil characteristics (i.e. moisture content, consistency, odor, color, etc.), drilling difficulty, and soil type as a function of depth was described on boring logs. The soil cuttings were classified in accordance with the Unified Soil Classification System (USCS).

Soil cuttings were temporarily stored on-site in 55-gallon DOT approved drums pending laboratory analysis, waste profiling, and proper disposal. Labels were affixed to the drums indicating the contents of the drums, date of drilling, and location of site.

STANDARD PROCEDURE FOR DUAL-COMPLETION MONITORING WELL CONSTRUCTION FOR WELLS SCREENED ABOVE THE PHREATIC SURFACE UNCONFINED AQUIFERS – HOLLOW STEM AUGER METHOD

Dual-completion monitoring wells were constructed by inserting well materials through the annulus of the hollow stem auger. In general, the deeper-screened wells were constructed with 5 feet of screen. Between the shallower- and deeper-screened well screens, approximately four feet of hydrated bentonite was emplaced to isolate the two well screens from each other. The shallower-screened wells were constructed with 10 feet of screen. The well screens consist of 2-inch diameter, flush-threaded, Schedule 40 polyvinyl chloride (PVC) casing with 0.010 or 0.020-inch machine-slotted screen.

Once the borehole was drilled to the desired depth, approximately six inches of filter sand was tremmied to the bottom of the boring. The well screen and blank well casing were then inserted through the annulus of the hollow stem augers. The well screen was sand packed by tremming the appropriate filter sand through the annulus between the casing and augers while slowly retracting the augers. During this operation, the depth of the sand pack in the auger was continuously sounded to make sure that the sand remained in the auger annulus during auger retraction to avoid shortcircuiting the well. The sand pack was tremmied to approximately two feet above the screen. Following construction of the sand pack, a

bentonite seal was emplaced to a depth of approximately 2 feet bgs, and hydrated in place. The well head was then capped with a locking cap and secured with a lock to protect the well from surface water intrusion and vandalism. The well head was further protected from damage with traffic rated well box in paved areas. The protective boxes or risers were set in concrete. The details of well construction were recorded on well construction logs.

STANDARD PROCEDURE FOR EQUIPMENT DECONTAMINATION

Equipment that could potentially contact subsurface media and compromise the integrity of the samples was carefully decontaminated prior to drilling and sampling. Drill augers and other large pieces of equipment were decontaminated using high pressure hot water spray. Samplers, groundwater pumps, liners and other equipment were decontaminated in an Alconox scrub solution and double rinsed in clean tap water rinse followed by a final distilled water rinse.

The rinsate and other wastewater were contained in 55-gallon DOT-approved drums, labeled (to identify the contents, generation date and project) and stored on-site pending waste profiling and disposal.

APPENDIX C COPIES OF BORING LOGS AND WELL CONSTRUCTION DIAGRAMS

Well Installation Report Former ConocoPhillips Facility 255353 600 Westlake Avenue North, Seattle, Washington

LOCATIO	N: 600) We	CP 5353 (1396) stlake Ave N., Seattle WA 01CP.01396.60		ELL / PROBEF			<u>1 OF</u>	1	Stantec
DRILLING	TION: COMF EQUIF METH	STAF PANY: PMEN OD: S	Cascade Drilling ⊤:HSA Split Spoon	LAT GRO INIT STA WEI	LL CASING D	8.5 1 Not E IAMETE	ncoun ER (in):	8 itered 2	LONGI TOC EI BOREH WELL I BOREH CHECH	NG (ft): TUDE: LEV (ft): HOLE DEPTH (ft): 20.0 DEPTH (ft): 20.0 HOLE DIAMETER (in): 14 <u>KED BY: DH</u>
Time & Depth (feet)	Graphic Log	nscs	Description	Sample	Time Sample ID	Measured Recov. (feet)	Blow Count	Headspace PID (units)	Depth (feet)	Well Construction
-			SAND; brown; fill material, concrete and gravel						*	Concrete
		ML	SILTY CLAY FINE GRAVEL; ML		in.			0		
· •		ML SM	SANDY CLAY WITH SILT SOME GRAVEL ; ML; gray SAND WITH CLAY SOME SILT; SM; gray; wet; fine gravel		940 MW-209-7		5 8 10	0	-	
- 10		ML	SANDY SILT; ML; gray; wet; sheen; gravel		-		5 8 11	0	10-	
- - 15 -		ML	SILT WITH FINE GRAVEL; ML; gray; wet; sheen		-		2 3 3	0	- 15 -	
- - 20-			Borehole terminated at 20 feet.		u		5 8 10	0	20-	
- - 25									- - 25	
- - - 30-									- - - 30	
-									_	
- 35- -									35	
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LOCATIO	N: 60	D We	CP 5353 (1396) stlake Ave N., Seattle WA 01CP.01396.60	WE	ILL / PROBER						Stante
ORILLING: NSTALLA ORILLING ORILLING	TION: COMF EQUIF METH	STAF STAF PANY: PMEN OD: S	RTED 10/10/08 COMPLETED: 10/10/08 RTED COMPLETED: Cascade Drilling T: HSA Split Spoon	LAT GRO INIT STA WEI	RTHING (ft): ITUDE: DUND ELEV (IAL DTW (ft): TIC DTW (ft): LL CASING D GGED BY: SN	ft): 9 10/ Not E: IAMETE	14/08 n coun ER (in):	tered 2	EASTI LONGI TOC E BOREI WELL BOREI <u>CHEC</u>	DEPTH (fi	METER (in): 1
Time & Depth (feet)	Graphic Log	nscs	Description	Sample	Time Sample ID Method	Measured Recov. (feet)	Blow Count	Headspace PID (units)	Depth (feet)		Well Construction
			SAND WITH GRAVEL; dark gray; fill material, concrete					uAu	-		 ←Concrete ←Bentonite
- - 5 -		ML	SAND SOME CLAY WITH ROOTS ML Wood debris		-			0.3 73.9			
			No recovery - wet		-		9 11 14	-	⊻ ~ 10- -		≪ -Sand
- 15- -		SM	SILTY SAND; SM; gray; wet		1155 MW-210-15		4 5 5	0	- 15-		
- 20 – -		SM	SILTY SAND; SM; gray; wet Borehole terminated at 20 feet.		-		5 8 11	0	20-		
25-									25-		
30-									30-		
35-									35-		
•	-										

PROJECT: Former CP 5353 (1396) LOCATION: 600 Westlake Ave N., Seattle WA PROJECT NUMBER: 01CP.01396.60					WELL / PROBEHOLE / BOREHOLE NO: MW-211 PAGE 1 OF 1					
DRILLING: INSTALLAT DRILLING C DRILLING E	ION: COMF EQUIF NETH	STAF STAF ANY: MEN OD: S	RTED 10/10/08 COMPLETED: 10/10/08 RTED COMPLETED: Cascade Drilling T: HSA Split Spoon	LAT GR(INIT STA WEI	RTHING (ft): TUDE: DUND ELEV (TAL DTW (ft): TIC DTW (ft): LL CASING D GGED BY: SN	ft): 9 10/ Not E IAMETI	14/08 ncoun ER (in):	tered 2	EASTIN LONGI TOC EI BOREH WELL I BOREH CHECK	
Time & Depth (feet)	Graphic Log	uscs	Description	Sample	Time Sample ID	Measured Recov. (feet)	Blow Count	Headspace PID (units)	Depth (feet)	Well Constructio
-			Sandy fill material, concrete & brick							Concrete - Bentonite
5-		ML ML	SILT SOME CLAY WITH GRAVEL; ML; gray; dry SILT SOME CLAY; ML; gray; dry		- 1252 MW-211-7		8 10 10	0	5	
		SM SM	SILTY SAND FINE GRAVEL; SM; gray; wet SAND WITH SILT FINE GRAVEL; SM; gray; wet	*****			1 2 2		⊻ _ 10− -	Sand
- 15— -		ML	SILT WITH CLAY FINE GRAVEL; ML; gray; wet		-		6 9 10	0		
- - 20		SM	SAND WITH SILT; SM; gray; wet; woody debris @ bottom Borehole terminated at 20 feet.		-		4 5 6	0	20-	
- - 25 -									- - 25— -	
- - 30-										
- - 35-										
-										

APPENDIX D COPY OF SURVEY DATA

i

Site Assessment Report Former ConocoPhillips Facility 255353 600 Westlake Avenue North, Seattle, Washington



Project Name Site Address	Former ConocoPhillips Facility No. 255353 600 Westlake Avenue North, Seattle, WA						
Horizontal Datum: Vertical Datum:	NAD 83 N.A.V.D. 88						
Units:	US survey feet						
Well ID	Northing	Easting	Elevation				
SMW-3	231957.62	1269332.53	27.40				
MW-209	231962.50	1269391.41	27.00				
MW-210	231959.85	1269463.96	26.70				
MW-211	231958.59	1269549.77	26.55				
MW-203	231924.19	1269640.16	25.94				

APPENDIX E COPIES OF DISPOSAL MANIFESTS FOR INVESTIGATION-DERIVED WASTE

Well Installation Report Former ConocoPhillips Facility 255353 600 Westlake Avenue North, Seattle, Washington

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Month Day Year 17. Transporter 1 Acknowledgement of Receipt of Materials Printed/Typed Name 18. Transporter 2 Acknowledgement of Receipt of Materials Printed/Typed Name 18. Transporter 2 Acknowledgement of Receipt of Materials Printed/Typed Name 19. Isophication Space F Defund 11, J, J, S Free I guid is grownd water, approval to sold Hy, drum #4 C Approval to add absorbeid to make 90 % full per Hork Foster / GEH Jm J-3.09 20. Facility Owner or Operator; Certification of receipt of the waste materials covered by this manifest, except as noted in item 19. Printed/Typed Name Printed/Typed N	SOR CONOCO F	chill, PJ				for the second sec	Date
17. Transporter 1 Acknowledgement of Receipt of Materials Date Printed/Typed Name Month Day 18. Transporter 2 Acknowledgement of Receipt of Materials Date Printed/Typed Name Month Day 18. Transporter 2 Acknowledgement of Receipt of Materials Date Printed/Typed Name Signature Month 18. Transporter 2 Acknowledgement of Receipt of Materials Date Printed/Typed Name Signature Month 19. Discrepancy Inflication Space For Materials Signature Porture 1/2, 3, 3 Free Liquid is grownd worder, approval to solidity, drum #4/ Cappround to add absorbed to make materials covered by this manifest, except as noted in item 19. Date 20. Facility Owner or Operator, Certification of receipt of the waste materials covered by this manifest, except as noted in item 19. Date Printed/Typed Name Signature Month V Month Day Year Printed/Typed Name Signature Month V Signature Month V Month Day Year V Signature Month Day V <td>Rinted/Typed Name</td> <td>11</td> <td>Signature</td> <td>SX .</td> <td>1</td> <td></td> <td>6 . A</td>	Rinted/Typed Name	11	Signature	SX .	1		6 . A
Printed/Typed Name Signature Month Day Year 18. Transporter 2 Acknowledgement of Receipt of Materials Date Date Printed/Typed Name Signature Month Day Year 19. Discrepancy Indication Space Free Liquid is grownd worder, approval to solidity, drum #44 Date 19. Discrepancy Indication Space Is grownd worder, approval to solidity, drum #44 Capproval to add absorbert to make 90% full per thark Foster / CELM Sm 2-3.09 20. Facility Owner or Operator; Certification of receipt of the waste materials covered by this manifest, except as noted in item 19. Printed/Typed Name Signature Month Day Year Month	T 17. Transporter 1 Acknowledgement of Rece	eipt of Materials	<u> </u>	<u>A Yos</u>	B ¹		
F Discrepancy indication space F Discrepancy indication space A proval to add absorbeth to make 90% full per Mark Foster / GEM Sm 2-3-09 20. Facility Owner or Operator; Certification of receipt of the waste materials covered by this manifest, except as noted in item 19. Printed/Typed Name Printed/Typed Name Month Day Year Month Day Year		~11	Signature	XLOA	led with den un a same and a same and a		Day Ye <u>a</u> r
F Discrepancy indication space F Discrepancy indication space A proval to add absorbeth to make 90% full per Mark Foster / GEM Sm 2-3-09 20. Facility Owner or Operator; Certification of receipt of the waste materials covered by this manifest, except as noted in item 19. Printed/Typed Name Printed/Typed Name Month Day Year Month Day Year	B 18. Transporter 2 Acknowledgement of Rece	eipt of Materials	the former	2	***	L Y	
20. Facility Owner or Operator; Certification of receipt of the waste materials covered by this manifest, except as noted in item 19. 20. Facility Owner or Operator; Certification of receipt of the waste materials covered by this manifest, except as noted in item 19. 20. Facility Owner or Operator; Certification of receipt of the waste materials covered by this manifest, except as noted in item 19. 20. Facility Owner or Operator; Certification of receipt of the waste materials covered by this manifest, except as noted in item 19. 20. Facility Owner or Operator; Certification of receipt of the waste materials covered by this manifest, except as noted in item 19. 20. Facility Owner or Operator; Certification of receipt of the waste materials covered by this manifest, except as noted in item 19. 20. Facility Owner or Operator; Certification of receipt of the waste materials covered by this manifest, except as noted in item 19. 20. Facility Owner or Operator; Certification of receipt of the waste materials covered by this manifest, except as noted in item 19. 20. Facility Owner or Operator; Certification of receipt of the waste materials covered by this manifest, except as noted in item 19. 20. Facility Owner or Operator; Certification of receipt of the waste materials covered by this manifest, except as noted in item 19. 20. Facility Owner or Operator; Certification of receipt of the waste materials covered by this manifest, except as noted in item 19. 20. Facility Owner or Operator; Certification of receipt of the waste materials covered by this manifest, except as noted in item 19. 20. Facility Owner or Operator; Certification of receipt of the waste materials covered by this manifest, except as noted in item 19. 20. Facility Owner or Operator; Certification of receipt of the waste materials covered by this manifest, except as noted in item 19. 20. Facility Owner or Operator; Certification of receipt of the waste materials covered by this manifest, except as noted in item 19. 20. Facility Owner or		s for Rhadlink	Signature	Q	10		Day 🖌 Year
20. Facility Owner or Operator; Certification of receipt of the waste materials covered by this manifest, except as noted in item 19. Date Image: Printed/Typed Name Month Day, Year Y Month Day, Year Y Month Day, Year		liquid is grown Joeh to make 90	dwater approva To full Des Mork	1-La 50 Foster 1	Ldify,	drum#4 fm-2-3-09	evinefinner-bonnersonerlinge
Printed/Typed Name Strand Signature Auch Stard Month Day Year	20. Facility Owner or Operator; Certification	of receipt of the waste materials cove	red by this manifest, except as noted in				
CF14 © 2002 LABELMASTER ® (800) 621-5808 www.labelmaster.com		Yund	Signature	<u> </u>	<i></i>		
	Jun med 1	TUKI	(MILLON		Tall		64 201

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	Ye	15500		
, I	NON-HAZARDOUS WASTE MANIFEST (Continuation Sheet)	20 Page 21. Waste	e Tracking Number 30771 c	
	22. Generator's Name CONOCO Phillips	1 -		
	23. Transporter_S Company Name UPRP		U.S. EPA ID Number NEDO12929LO U.S. EPA ID Number	
	24. Transporter_4_ Company Name Columbia Ridge Lc	2021 26. Containers	ORD 987173457	
	25. Waste Shipping Name and Description	No. Type	27. Total 28. Unit Quantity Wt./Vol.	
	5			
				_
	· · · · · · · · · · · · · · · · · · ·			
	29. Special Handling Instructions and Additional Information			
	30. Transporter Acknowledgment of Receipt of Materials Printed/Typed Name Signate		Month Day Yea	_
TDANEDODIED	31. Transporter 4 Acknowledgment of Receipt of Materials	8.90	1229	
_	32. Discrepancy	Ingela 1	uniperman 1270	2
DECICNATED EACULITY		0		
TED				_
DEGI				

APPENDIX F COPY OF ANALYTICAL REPORT AND CHAIN-OF-CUSTODY DOCUMENTATION

Well Installation Report Former ConocoPhillips Facility 255353 600 Westlake Avenue North, Seattle, Washington



October 22, 2008

Jennifer Yotz Stantec PO Box 230, 12034 - (134th Ct NE Ste 102, zip 98052) Redmond, WA/USA 98073

RE: ConocoPhillips Westlake & Mercer

Enclosed are the results of analyses for samples received by the laboratory on 10/15/08 10:30. The following list is a summary of the Work Orders contained in this report, generated on 10/22/08 16:52.

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

Work Order BRJ0225 <u>Project</u> ConocoPhillips Westlake & M ProjectNumber ConocoPhillips Westlake & M

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Curtis D. Armstrong For Kate Haney, Project Manager

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Stantee

PO Box 230, 12034 - (134th Ct NE Ste 102, zip 98052) Redmond, WA/USA 98073 Project Name: Project Number: Project Manager: ConocoPhillips Westlake & Mercer ConocoPhillips Westlake & Mercer Jennifer Yotz

Report Created: 10/22/08 16:52

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW-209-7	BRJ0225-01	Soil	10/14/08 09:40	10/15/08 10:30
MW-210-15	BRJ0225-02	Soil	10/14/08 11:55	10/15/08 10:30
MW-211-7	BRJ0225-03	Soil	10/14/08 12:52	10/15/08 10:30

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THE LEADER IN ENVIRONMENTAL TESTING

Stantec PO Box 230, 12034 - (134th Ct N Redmond, WA/USA 98073)	Project Name: Project Number: Project Manager:		ConocoPhillips Westlake & Mercer ConocoPhillips Westlake & Mercer Jennifer Yotz				Report Created: 10/22/08 16:52		
	Ve	olatile Petro	oleum P TestAm		•	TPH-	Gx			
Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BRJ0225-01 (MW-209-7)		Soil			Sampl	ed: 10/J	14/08 09:40			
Gasoline Range Hydrocarbons	NWTPH-Gx	ND		6,19	mg/kg dry	ix	8117011	10/17/08 11:02	10/17/08 15:34	
Surrogate(s): 4-BFB (FID)			133%		50 - 150 %	"			t.	
BRJ0225-02 (MW-210-15)		Soil			Sampl	ed: 10/1	14/08 11:55			
Gasoline Range Hydrocarbons	NWTPH-Gx	ND	kë sundë side dës	5,71	mg/kg dry	1x	8317011	10/17/08 11:02	10/17/08 16:41	
Surrogate(s): 4-BFB (FID)	Jiii		131%		50 - 150 %	п			rr	
BRJ0225-03 (MW-211-7)		Soil	I		Sampl	ed: 10/1	14/08 12:52			
Gasoline Range Hydrocarbons	NWTPH-Gx	ND		5.59	mg/kg dry	1x	8317011	10/17/08 11:02	10/17/08 17:45	
Surrogate(s): 4-BFB (FID)			120%		50 - 150 %	"			**	

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THE LEADER IN ENVIRONMENTAL TESTING

	Stantec	Project Name:	ConocoPhillips Westlake & Mercer	
D 1 1 1 11 1 10 1 000771 10/00 1 10/00 1 10/00 10 10/00 10 10/00 10 10/00 10 10/00 10 10/00 10 10/00 10 10/00 10 10/00 10 10/00 10 10/00 10 10/00 10 10/00 10 10/00 10 10/00 10 10/00 10 10/00	PO Box 230, 12034 - (134th Ct NE Ste 102, zip 98052)	Project Number:	ConocoPhillips Westlake & Mercer	Report Created:
Redmond, WA/USA 98073 Project Manager: Jenniter Yotz 10/22/06 P	Redmond, WA/USA 98073	Project Manager:	Jennifer Yotz	10/22/08 16:52

Identified Semivolatile Petroleum Products by NWTPH-Dx with Acid/Silica Gel Clean-up TestAmerica Seattle

· · · · · · · · · · · · · · · · · · ·										
Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BRJ0225-01 (MW-2	209-7)	Soi	ł		Samp	led: 10/1	4/08 09:40			
Lube Oil	NWTPH-Dx	ND		31.5	nig/kg dry	łx	8116033	10/16/08 12:01	10/16/08 23:02	
Kerosene	a	ND		12.6		1.	н	h	15	
Diesel Range Hydrocarbon	5	ND	4149-07	12.6	н	н	J4	н	n	
Surrogate(s): 2-FB	3		79.9%		54 - 148 %	н			п	
Octad	osane		90.0%		62 - 142 %	"			п	
BRJ0225-02 (MW-2	210-15)	Soi	1		Samp	led: 10/1	4/08 11:55			
Lube Oil	NWTPH-Dx	73.4		30.7	mg/kg dry	lx	8J16033	10/16/08 12:01	10/16/08 23:24	
Kerosene	r.	ND		12.3	14		п	v	н	
Diesel Range Hydrocarbo	ns	19.8		12.3	8	"		v	9	Q
Surrogate(s): 2-FB.	0		71.9%		54 - 148 %	n			"	
Octae	osane		81.8%		62 - 142 %	n			н	

	BRJ0225-03 (MW-211-7)			Soil			Sampl	ed: 10/1	4/08 12:52			
	Lube Oil		NWTPH-Dx	ND		29.1 r	mg/kg dry	1x	8116033	10/16/08 12:01	10/16/08 23:47	
	Kerosene		и	ND		11.6	\$1	μ	n	м	н	
ł	Diesel Range Hydro	ocarbons	и	ND		11.6	н	н	n	ч	h1	
	Surrogate(s):	2-FBP			85.6%		54 - 148 %	"			"	
		Octacosane			94.3%		62 - 142 %	"			n	

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Stantec	Project Name:	ConocoPhillips Westlake & Mercer	
PO Box 230, 12034 - (134th Ct NE Ste 102, zip 98052) Redmond, WA/USA 98073	Project Number: Project Manager:	ConocoPhillips Westlake & Mercer Jennifer Yotz	Report Created: 10/22/08 16:52
Total Meta	als by EPA 6000/7 TestAmerica Se	000 Series Methods	

		TestAm	erica se								
Analyte		Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Anaiyzed	Notes
BRJ0225-01	(MW-209-7)		Soil			Samp	led: 10/1	4/08 09:40			
Lead		EPA 6020	9.50		0.527	mg/kg dry	lx	8,116054	10/16/08 21:36	10/19/08 18:02	
BRJ0225-02	(MW-210-15)		Soil			Samp	led: 10/1	4/08 11:55			
Lead		EPA 6020	18.5	*****	0.591	mg/kg dry	ł x.	8116054	10/16/08 21:36	10/19/08 18:09	
BRJ0225-03 (MW-211-7)			Soil			Samp	led: 10/1	4/08 12:52			
Lead		EPA 6020	5.19		0.588	mg/kg dry	lx	8116054	10/16/08 21:36	10/19/08 18:15	

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Curtis D. Armstrong For Kate Haney, Project Manager

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Γ	Stantec	Project Name:	ConocoPhillips Westlake & Mercer	
	PO Box 230, 12034 - (134th Ct NE Ste 102, zip 98052)	Project Number:	ConocoPhillips Westlake & Mercer	Report Created:
	Redmond, WA/USA 98073	Project Manager:	Jennifer Yotz	10/22/08 16:52
L				

Volatile Organic Compounds (Special List) per EPA Method 8260B (Low Soil Method) TestA South

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BRJ0225-01 (MW-209-7)		Soi	il		Sampl	ed: 10/1	4/08 09:40			
Benzene	EPA 8260B	ND		0.895	ug/kg dry	1x	8J15055	10/15/08 17:48	10/15/08 23:07	
Ethylbenzene	'n	ND		2.39	u	ŀ	к		•	
Methyl tert-butyl ether	6	ND		0.597	a	"	19	"	1+	
Naphthalene	P	ND		5.97	4	н	Þ		в	
Foluene	۲	ND		0.895	4	ч	μ		r	
Fotal Xylenes	н	ND		5,97	в		"	5	n	
Surrogate(s): 1,2-DCA-d4			131%		60 - 140 %	n			17	
Toluene-d8			100%		60 - 140 %	0			н	
4-BFB			110%		60 - 140 %	n			"	
BRJ0225-02 (MW-210-15)		So	il		Sampl	ed: 10/1	14/08 11:55			
Benzene	EPA 8260B	ND		1,16	ug/kg dry	lx	8J15055	10/15/08 17:48	10/15/08 23:33	
Ethylbenzene	н	ND		3.10	r,	4	н		н	
Aethyl tert-butyl ether	11	ND		0.776	۲	٣	п	4	"	
Naphthalene	*	ND		7.76	н		•		*	
Tohiene	0	ND		1,16	н		le.	н	5 .	
fotal Xylenes	¢	11.2		7.76	ч	h	p	8	ñ	
Surrogate(s): 1,2-DCA-d4			130%		60 - 140 %	"			n	
Toluene-d8			98.7%		60 - 140 %	11			р	
4-BFB			108%		60 - 140 %	11			<i>t</i> r	
BRJ0225-03 (MW-211-7)		Se	il		Sampl	ed: 10/	14/08 12:52			
Benzene	EPA \$260B	ND		1.02	ug/kg dry	łx	8J15055	10/15/08 17:48	10/15/08 23:58	
Ethylbenzene	4	ND		2.72	п	ч	۴			
Methyl tert-butyl ether	15	ND		0.681	*1	н	۲	٩	n.	
Naphthalene	и	ND	20107	6.81	4	н	п			
Toluene	и	ND		1.02	41	4	п	*	ġ	
Total Xylenes	н	ND		6.81	•	"	a	n	ę.	
Surrogate(s): 1,2-DCA-d4			128%		60 - 140 %	n			н	
Toluene-d8			102%		60 - 140 %	n			"	

60 - 140 %

"

TestAmerica Seattle

South

Curtis D. Armstrong For Kate Haney, Project Manager

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Mercer Report Created:
10/22/08 16:52
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Physical Parameters by APHA/ASTM/EPA Methods TestAmerica Seattle												
Analyte		Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes	
BRJ0225-01	(MW-209-7)		Soil			Sam	pled: 10/1	4/08 09:40				
Dry Weight		BSOPSPL003R0 8	78,5		1.00	%	łx	8J20036	10/20/08 13:14	10/21/08 00:00		
BRJ0225-02	(MW-210-15)		Soil			Sam	pled: 10/1	4/08 11:55				
Dry Weight		BSOPSPL003R0 8	81.4	****	1.00	%	łx	8J20036	10/20/08 13:14	10/21/08 00:00		
BRJ0225-03	(MW-211-7)		Soil			Sam	pled: 10/1	4/08 12:52				
Dry Weight		BSOPSPL003R0 8	85.0		1,00	%	1x	8,120036	10/20/08 13:14	10/21/08 00:00		

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Sugar Star

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Stantec PO Box 230, 12034 - (134th Ci	NE Ste 102 zir	98052)		Project Name: Project Number		coPhillips phillips V						Report Create	ed:
Redmond, WA/USA 98073	,,	,		Project Manage		er Yotz						10/22/08 16:	:52
	Volatile Po	etroleum I		NWTPH-G		ntory Qua	lity Con	trol	Results				
QC Batch: 8J17011	Soil Pre	paration M	lethod: EPA	A 5030B (P/T)									
Anaiyte	Method	Result	MDL*	MRL U	inits Di	l Source Result	Spike Amt	% REC	(Limits)	% RPÐ	(Limits)	Analyzed	Notes
Blank (8J17011-BLK1)							Extra	ected:	10/17/08 11	:02			
Gasoline Range Hydrocarbons	NWTPH-Gx	ND		5.00 mg/k	eg wet 🛛 🕸 🕹		••				~-	10/17/08 13:52	
Surrogate(s): 4-BFB (FID)		Recovery	102%	Limits:	50-150% "							10/17/08 13:52	
LCS (8J17011-BS1)							Extr:	acted:	10/17/08 11	:02			
Gasoline Range Hydrocarbons	NWTPH-Gx	\$0.9		5.00 mg/k	(g wet 1x		50.0	102%	(75-125)	·		10/17/08 14:25	
Surrogate(s): 4-BFB (FID)		Recovery:	109%	Límits:	50-150% "							10/17/08 14:25	
Duplicate (8J17011-DUP1)				QC Source: BF	RJ0225-01		Extra	acted:	10/17/08 11	1:02			
Gasoline Range Hydrocarbons	NWTPH-Gx	ND	1.54	6.19 mg/l	kg dry l x	ND			**	34.6%	(40)	10/17/08 16:08	
Surrogate(s): 4-BFB (FID)		Recovery:	13.2%	Limits:	50-150% "							10/17/08 16:08	
Duplicate (8J17011-DUP2)				QC Source: BI	CJ0225-02		Extr:	scted:	10/17/08 11	t:02			
Gasoline Range Hydrocarbons	NWTPH-Gx	ND		5.71 mg/l	kg dry Ix	ND				10.0%	(40)	10/17/08 17:13	
Surrogate(s): 4-BFB (FID)		Recovery:	130%	Limits:	50-150% "							10/17/08 17:13	
Matrix Spike (8J17011-MS1)				QC Source: BI	¢J0225-03		Extr	acted:	10/17/08 11	1:02			
Gasoline Range Hydrocarbons	NWTPH-Gx	57.0		5.59 mg/	kg dry 1x	ND	47.1	121%	(60-175)			10/17/08 19:23	
Surrogate(s): 4-BFB (FID)		Recovery:	125%	Lamits:	50-150% "							10/17/08 19:23	

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Stantec PO Box 230, 12034 - (134th C Redmond, WA/USA 98073	t NE Ste 102, zij	98052)		Project N Project N Project M	umber:		o Phillips Phillips W Yotz						Report Create 10/22/08 16:	
Identified Semivol	atile Petroleun	n Product	s by NV		ith Acid/Si erica Seattle	lica Ge	t Clean-	up - L	abora	atory Qı	iality (Contro	l Results	
QC Batch: 8J16033	Soil Pre	paration N	lethod:	EPA 3550B										
Analyte	Method	Result	м	IDL* MRI	L Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Blank (8J16033-BLK1)								Extr	acted:	10/16/08 12	:01			
Lube Oil	NWTPH-Dx	ND	-	25.0	mg/kg wet	lx				-			10/16/08 20:26	
Kerosene	а	ND	-	10.0	μ	"							r.	
Diesel Range Hydrocarbons	н	ND	-	10.0	н	٩							n	
Surrogate(s): 2-FBP		Recovery:	90.1%		Limits: 54-148	% "							10/16/08 20:26	
Octaeosane			99.1%		62-142	% "							"	
LCS (8J16033-BS1)								Extr	acted:	10/16/08 12	::01			
Diesel Range Hydrocarbons	NWTPH-Dx	61.7		10.0	mg/kg wet	ix		66.7	92.6%	(58-140)			10/16/08 20:48	
Surrogate(s): 2-FBP		Recovery:	101%		Limits: 54-148	% "							10/16/08 20:48	
Octaeosane		nocorory.	95.4%		62-142								n	
Duplicate (8J16033-DUP1)				OC Sour	ce: BRJ0244-	01		Extr	acted:	10/16/08 12	2:01			
Lube Oil	NWTPH-Dx]45	-	26.4		1x	184		**		23.5%	(50)	10/16/08 21:10	
Kerosene	le.	ND	-	10.6		P	ND				37.8%	μ		
Diesel Range Hydrocarbons	19	15.8	-	10.6		.*	21.3				29.7%	н	9	
Surrogate(s): 2-FBP		Recovery:	50.7%		Limits: 54-148	% "							10/16/08 21:10	
Octaeosane			55.9%		62-142								n	
Duplicate (8J16033-DUP2)				QC Sour	ce: BRJ0251-	01		Extr	acted:	10/16/08 12	2:01			
Lube Oil	NWTPH-Dx	ND		26.3	mg/kg dry	١x	ND	**			31.1%	(50)	10/16/08 21:33	
Kerosene	•	ND		10.5		н	ND				8.66%	۹	н	
Diesel Range Hydrocarbons	9	ND		10.5		•6	ND				NR	р	н	
Surrogate(s): 2-FBP	a a a a an tama ta da	Recovery:	77.7%	······	Limits: 54-148	% "							10/16/08 21:33	
Octacosane		-	88.8%		62-142	?% "							**	
Matrix Spike (8J16033-MS1)				QC Sour	ce: BRJ0244-	91		Extr	acted:	10/16/08 12	2;01			
Diesel Range Hydrocarbons	NWTPH-Dx	46.4		10.4	mg/kg dry	l x	21.3	69.7	36,1%	(46-155)		*-	10/16/08 21:55	
Surrogaue(s): 2-FBP		Recovery:	60.6%		Limits: 54-148	% "							10/16/08 21:55	
Octacosane		•	68.8%		62-142	10% "							"	

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Curtis D. Armstrong For Kate Haney, Project Manager

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	Stantec PO Box 230, 12034 - (134th Ct Redmond, WA/USA 98073	NE Ste 102, zip	98052)		Project Na Project Nu Project Ma	mber:		Phillips W	Westlake Vestlake & N		1.		Report Crea 10/22/08 16	
		Total Metal	s by EPA 60			e thods - ica Seattle		tory Qu	ality Cont	rol Result	ls			
	QC Batch: 8J16054	Soil Prep	paration Meth	nod: EPA	A 3050B									
	Analyte	Method	Result	MDL*	MRL	Units	Dâ	Source Result	Spike % Amt RI		"⁄~ RPD	(Limits)) Analyzed	Notes
	Blank (8J16054-BLK1)								Extracte	i: 10/16/08 2	1:36			
	Lead	EPA 6020	ND		0.521	mg/kg wet	tx.						10/17/08 13:17	
	LCS (8J16054-BS1)								Extracte	i; 10/16/08 2	1:36			
	Lead	EPA 6020	37.7	575	0.495	mg/kg wet	łx		39.6 95.	(80-120))		10/17/08 13:24	
ļ	Duplicate (8J16054-DUP1)				QC Sourc	e: BRJ0244	-01		Extracte	d; 10/16/08 2	1:36			
	Lead	EPA 6020	31,5		0.538	mg∕kg dry	1x	28.4			10.2%	% (20)	10/17/08 14:28	
	Matrix Spike (8J16054-MS1)				QC Sourc	e: BRJ0244	-01		Extracte	d: 10/16/08 2	1:36			
	Lead	EPA 6020	66.2		0.538	mg/kg dry	1x	28.4	43.1 87.	9% (75-125))		10/17/08 13:36	
	Post Spike (8J16054-PS1)				QC Source	e: BRJ0244	-01		Extracte	d: 10/16/08 2	1:36			
1	Lead	EPA 6020	0.140			ug/m}	łx	0.0516	0,100 88.	1% (80-120)) '		10/17/08 13:30	

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Stantec	Project Name:	ConocoPhillips Westlake & Mercer	
PO Box 230, 12034 - (134th Ct NE Ste 102, zip 98052)	Project Number:	ConocoPhillips Westlake & Mercer	Report Created:
Redmond, WA/USA 98073	Project Manager:	Jennifer Yotz	10/22/08 16:52

Volatile Organic Compounds (Special List) per EPA Method 8260B (Low Soil Method) - Laboratory Quality Control Results TestAmerica Seattle

QC Batch: 8J15055	Soil Pre	paration Met	hod: EPA	5035										
Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	⁰‰ REC	(Limits)	RPD	(Limits)	Analyzed	Notes
Blank (8J15055-BLK1)								Extra	icted:	10/15/08 17	:48			
Acetone	EPA 8260B	ND		30.0	ug/kg wet	1x						ł	0/15/08 20:34	
Benzene	и	ND		1.50	p								•	
Bromobenzene	и	ND		5.00	н	"			***					
Bromochloromethane		ND		5.00	a									
Bromodichloromethane	ч	ND		5.00	ы	ø							ъ	
Bromoform	м	ND	~~~	5.00	8	я							e	
Bromomethane	9	ND	20 MIG	10.0	к	n							"	
2-Butanone	44	ND		15.0	P	"							α	с,
n-Butylbenzene	12	ND	0.07	5.00	Р	н			**	-			я	
sec-Butylbenzene	n	ND		5,00	۲									
tert-Butylbenzene	н	ND		5.00	n	ч			***				ч	
Carbon disulfide	н	ND		3.00		•							я	
Carbon tetrachloride	в	ND		5.00		"				***			л	
Chlorobenzene	P.	ND		2.00	н								•	
Chloroethane		ND		5.00										
Chloroform	м	ND		2.50	Þ								я	
Chioromethane	и	ND		10.0	н									
2-Chlorotoluene	м	ND	***	5.00		•				-	~		۲	
4-Chlorotoluene	Р	ND		5.00									р	
Dibromochloromethane	P	ND		5.00	я	к							P	
1.2-Dibromo-3-chloropropane	н	ND		10.0	21	4	~~							
1,2-Dibromoethane (EDB)	м	ND		5,00	ৰ								R	
Dibromomethane	н	ND		5.00	к	P		**		-			н	
1,2-Dichlorobenzene	u	ND		5.00	н				***				-	
1,3-Dichlorobenzene	н	ND	***	5.00		н							н	
1,4-Dichlorobenzene		ND		5.00	P.	μ			-	_				
Dichlorodifluoromethane		ND		5.00	в	м								
1,1-Dichloroethane	ч	ND		2.00	μ								-	
1,2-Dichloroethane	"	ND		1.25		н	_						-	
1,1-Dichloroethene	4	ND		3.00		н							ч	
cis-1,2-Dichloroethene	-1	ND		3,00		6							з	
trans-1,2-Dichloroethene	al	ND		2,50	u	,		-	-					
	n			5.00		н								
1.2-Dichloropropane	p	ND ND		5.00	•1	μ		-	_					
1,3-Dichloropropane	<i>r</i>													
2,2-Dichloropropane		ND		10.0		н							5	
1,1-Dichloropropene		ND		5.00				•••					4	
cis-1,3-Dichloropropene		ND	a an	5.00									v	
trans-1,3-Dichloropropene	n	ND		1.25		n	~~			~~			_	
Ethylbenzene	Þ	ND		4,00	м	м	-						•	

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Stantec	Project Name:	ConocoPhillips Westlake & Mercer	
PO Box 230, 12034 - (134th Ct NE Ste 102, zip 98052)	Project Number:	ConocoPhillips Westlake & Mercer	Report Created:
Redmond, WA/USA 98073	Project Manager:	Jennifer Yotz	10/22/08 16:52

Volatile Organic Compounds (Special List) per EPA Method 8260B (Low Soil Method) - Laboratory Quality Control Results TestAmerica Seattle

QC Batch: 8J15055	Soil Pre	ethod: EPA	5035											
Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	%⊿ RPD	(Limits)	Analyzed	Not
Blank (8J15055-BLK1)								Extr:	acted:	10/15/08 17	:48			
Hexachlorobutadiene	EPA 8260B	ND		10.0	ug/kg wet	1x		-					10/15/08 20:34	
Methyl tert-butyl ether	*	ND		1.00	н	ы		**					n	
n-Hexane	"	ND		5.00	н	н	~~		**		~~		•	
2-Hexanone	ч	ND		20.0	н	н					~~		9	
Isopropylbenzene	11	ND		5.00	н	н							P.	
p-Isopropyltoluene	મ	ND		5.00	я	н			•				r	
4-Methyl-2-pentanone	В	ND		20.0	я	•		-					n	
Methylene chloride	в	ND		3.50	91.	*5								
Naphthalene	4	ND		10.0	Ir	15		••					ь	
n-Propylbenzene	14	ND		5.00	P.	P							n	
Styrene	P,	ND		1.00	Р	ŀ							р	
1,2,3-Trichlorobenzene	n	ND		10.0	н	ŀ							29	
1.2.4-Trichlorobenzene	н	ND		10.0	4	м		~~						
1,1,1.2-Tetrachloroethane	н	ND		5.00	н	ч								
1,1,2,2-Tetrachloroethane	н	ND		5.00	u	н								
Tetrachloroethene	ų	ND		2.00	н	н					··· .		5	
Toluene	*1	ND		1.50	н	el							ъ	
1,1,1-Trichloroethane		ND		2.50	н	ų							Р	
1,1,2-Trichloroethane	*1	ND		1.25	٠	n					**		р	
Trichloroethene	4	ND		2.50	4	4							р	
Trichlorofluoromethane		ND		5.00		a							к	
1,2,3-Trichloropropane	4	ND		5.00	4	q							r	
1,2.4-Trimethylbenzene	"	ND		5.00	2	ır							N	
1,3,5-Trimethylbenzene	0	ND		5.00		ır							14	
Vinyt chloride		NĎ		2.50	R	p							н	
o-Xylene		ND		5.00	P.	м							n	
m,p-Xylene		ND		5.00	۴	н						~*	м	
Total Xylenes	ir.	ND		10.0	·	n				**			u	
Surrogate(3): 1,2-DCA-d4		Recovery:	119%	1.1	mits: 60-140%	"							10/15/08 20:3-	4
Toluene-d8		100010191	98.7%	1.4	60-140%	n							п	
4-BFB			103%		60-140%								"	

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Curtis D. Armstrong For Kate Haney, Project Manager

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PO Box 230, 12034 - (134th Ct NE Ste 102, zip 98052) Project Number: ConocoPhillips Westlake & Mercer Report Created: Redmond. WA/USA 98073 Project Manager: Jennifer Yotz 10/22/08 16:52	Γ	Stantec	Project Name:	ConocoPhillips Westlake & Mercer	
Redmond, WA/USA 98073 Project Manager: Jennifer Yotz 10/22/08 16:52		PO Box 230, 12034 - (134th Ct NE Ste 102, zip 98052)	Project Number:	ConocoPhillips Westlake & Mercer	Report Created:
		Redmond, WA/USA 98073	Project Manager:	Jennifer Yotz	10/22/08 16:52

Volatile Organic Compounds (Special List) per EPA Method 8260B (Low Soil Method) - Laboratory Quality Control Results Toathe mian Canttl

OC Pateb. 9315055	Cail Dua	naration M	iethod: EPA	5035										
QC Batch: 8J15055							Source	Spike	¢/a		4/6	ZT 1. 2. 3	t	N. T
Analyte	Method	Result	MDL*	MRL.	Units	Dil	Result	Amt	REC	(Limits)	RPÐ	(Limits)	Analyzed	Notes
LCS (8J15055-BS1)			***					Extr	acted:	10/15/08 17	:48			
Acetone	EPA 8260B	559		30.0	ug/kg wet	İx		500	112%	(70-130)			10/15/08 19:43	
Benzene	ŀ	47.2		1.50	h	н		50.0	94.3%	н			в	
2-Butanone	je.	640		15.0	a	н		500	128%	н			ĸ	
Carbon disulfide	*	51.4		3.00		н		50.0	103%	"			14	
Chlorobenzene	н	46.9		2.00				n	93.8%				ч	
1,1-Dichloroethane	51	49.5		2.00	łi.			в	98.9%	4			n	
1,1-Dichloroethene	e	50,1		3.00	4×			11	100%				п	
cis-1,2-Dichloroethene		50.8		3.00	r	۲		۰	102%	P			71	
Ethylbenzene		47.9		4.00	п	٠		n	95.8%	14			4	
Hexachlorobutadiene	a	45.5		10.0	н	*		н	91.0%			-	n	
4-Methyl-2-pentanone	4	577		20.0	н	н		500	115%	п			в	
Tetrachloroethene	IT.	48.1		2.00	н	н		50.0	96.2%		*-		٣	
Toluene		48.7		1.50	л	*1		•	97,4%	4				
1,1,1-Trichloroethane		48.5		2.50	ч	*1		'n	97.0%				м	
Trichloroethene	51	49.2		2.50	н				98.3%	в			н	
Surrogate(s): 1,2-DCA-d4		Recovery.	110%	Li	mits: 60-140%	"							10/15/08 19:43	
Toluene-d8			96.6%		60-140%	"							**	
4-BFB			102%		60-140%	"							n	
LCS Dup (8J15055-BSD1)								Extr	acted:	10/15/08 17	:48			
Acetone	EPA 8260B	580		30.0	ug/kg wet	lх		500	116%	(70-130)	3.78%	6 (30)	10/35/08 20:09	
Benzene	к	49.3		1.50	н	n		50.0	98.7%	ы	4.48%	, r	P.	
2-Butanone	R	672	***	15.0	μ	н		500	134%	ri	4.88%	, н Б	Р	
Carbon disulfide	ra L	53.7		3.00	.1	н		50.0	107%		4.40%	6 "	P.	
Chiorobenzene	r.	46.6		2.00	н	н			93.3%	ч	0,5779	<i>1</i> 6 н		
1,1-Dichloroethane	r	50.8		2.00	ч	٩		u	102%	u	2.69%	, H	н	
1,1-Dichloroethene		51.5		3.00	41		+-	12	103%	16	2.76%	6 ⁴	0	
cis-1,2-Dichloroethene	u	52.9		3.00	р	1		P	106%	I*	3.91%	0 "	н	
Ethylbenzene	n	47.6		4.00	ŀ	р			95.2%	n	0,6079	Vo *	7	
Hexachlorobutadiene	e e	46.4		10.0	в	к	~	р	92.7%		1.94%		n	
4-Methyl-2-pentanone		604		20.0	4			500	121%	н	4,52%		۹	
Tetrachloroethene		49.3		2.00	н	ъ		50.0	98.7%	н	2.50%		4	
Toluene	4	48.3		1.50	n	р		н	96.7%		0.783		r	
1,1,1-Trichloroethane	ų	40.5		2.50		н		a	99.0%		2.04%		P	
		51.3		2.50		n		4	103%		4.30%			
Trichloroathana														
Trichloroethene													10/15/08 20:00	
Trichloroethene Surrogate(s): 1.2-DCA-d4 Toluene-d8	••••••••••••••••••••••••••••••••••••••	Recovery:	106% 98.5%		mits: 60-140% 60-140%								10/15/08 20:09 "	

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Curtis D. Armstrong For Kate Haney, Project Manager



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Γ	Stantec	Project Name:	ConocoPhillips Westlake & Mercer	
	PO Box 230, 12034 - (134th Ct NE Ste 102, zip 98052) Redmond, WA/USA 98073	Project Number: Project Manager:	ConocoPhillips Westlake & Mercer Jennifer Yotz	Report Created: 10/22/08 16:52
Γ	Physical Parameters by APH	A/ASTM/EPA Metho	ls - Laboratory Quality Control Results	······································

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	QC Batch: 8J20036	Soil Prep	paration Met	hod: Dry V	Veight										
An	alyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	%∽ R₽D	(Limits)	Analyzed	Notes
B	ank (8J20036-BLK1)								Extr	acted:	10/20/08 13	3:14			AM-147-1
Dr	Weight	BSOPSPL00	99.8		1.00	%	lx							10/21/08 00:00	

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Curtis D. Annstrong For Kate Haney, Project Manager



Stantec	Project Name:	ConocoPhillips Westlake & Mercer	
PO Box 230, 12034 - (134th Ct NE Ste 102, zip 98052)	Project Number:	ConocoPhillips Westlake & Mercer	Report Created:
Redmond, WA/USA 98073	Project Manager:	Jennifer Yotz	10/22/08 16:52

CERTIFICATION SUMMARY

TestAmerica Seattle

Method	Matrix	Nelac	Washington	
BSOPSPL003R08	Soil			
EPA 6020	Soil	Х	Х	
EPA 8260B	Soil	Х	Х	
NWTPH-Dx	Soil		Х	
NWTPH-Gx	Soil		Х	

Any abnormalities or departures from sample acceptance policy shall be documented on the 'Sample Receipt and Temperature Log Form' and 'Sample Non-conformance Form' (if applicable) included with this report.

For information concerning certifications of this facility or another TestAmerica facility, please visit our website at www.TestAmericaInc.com

 $Samples\ collected\ by\ TestAmerica\ Field\ Services\ personnel\ are\ noted\ on\ the\ Chain\ of\ Custody\ (COC)\ .$

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Curtis D. Armstrong For Kate Haney, Project Manager

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Stantec			Project Name:	ConocoPhillips Westlake & Mercer	
PO Box 2	30, 1	2034 - (134th Ct NE Ste 102, zip 98052)	Project Number:	ConocoPhillips Westlake & Mercer	Report Created:
Redmond	, WA	/USA 98073	Project Manager:	Jennifer Yotz	10/22/08 16:52
		анананан алан талан талар т	······································		
			Notes and Definit	ions	
Report S	pecil	fic Notes:			
С	-	Calibration Verification recovery was above the	e method control limit for	this analyte. Analyte not detected, data not impacted	ed.
C8	-	Calibration Verification recovery was above the	e method control limit fo	this analyte. A high bias may be indicated.	
L	-	Laboratory Control Sample and/or Laboratory (detected, data not impacted.	Control Sample Duplicate	e recovery was above the acceptance limits. Analyte	not
L1	-	Laboratory Control Sample and/or Laboratory G	Control Sample Duplicate	e recovery was above acceptance limits.	
M2	-	The MS and/or MSD were below the acceptance	e limits due to sample m	atrix interference. See Blank Spike (LCS).	
Q6	-			• • •	
ZX	-	Due to sample matrix effects, the surrogate reco	overy was outside the acc	eptance limits.	
<u>Laborato</u> DET	<u>ry R</u> -	eporting Conventions: Analyte DETECTED at or above the Reporting L	imit. Qualitative Analys	es only.	
ND	-	Analyte NOT DETECTED at or above the report	ing limit (MDL or MRL,	as appropriate).	
NR/NA	-	Not Reported / Not Available			
dry	-	Sample results reported on a Dry Weight Basis. 1	Results and Reporting Li	mits have been corrected for Percent Dry Weight.	
wet	•	Sample results and reporting limits reported on a on a Wet Weight Basis.	Wet Weight Basis (as rec	peived). Results with neither 'wet' nor 'dry' are report	ted
RPD	-	RELATIVE PERCENT DIFFERENCE (RPDs c	alculated using Results, 1	not Percent Recoveries).	
MRL		METHOD REPORTING LIMIT. Reporting Lev	el at, or above, the lowes	t level standard of the Calibration Table.	
MDL*		METHOD DETECTION LIMIT. Reporting Lev *MDLs are listed on the report only if the data has as Estimated Results.	el at, or above, the statist is been evaluated below t	ically derived limit based on 40CFR, Part 136, Appe he MRL. Results between the MDL and MRL are re	endix B. oported
Dil	-	Dilutions are calculated based on deviations from found on the analytical raw data.	the standard dilution per	formed for an analysis, and may not represent the di	lution
Reporting Limits	-	Reporting limits (MDLs and MRLs) are adjusted percent solids, where applicable.	based on variations in sa	mple preparation amounts, analytical dilutions and	
Electronic Signature	; -	Electronic Signature added in accordance with Te Application of electronic signature indicates that Electronic signature is intended to be the legally	the report has been revie	wed and approved for release by the laboratory.	

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Curtis D. Armstrong For Kate Haney, Project Manager

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December 04, 2008

Jennifer Yotz Stantec PO Box 230, 12034 - (134th Ct NE Ste 102, zip 98052) Redmond, WA/USA 98073

RE: COP Westlake

Enclosed are the results of analyses for samples received by the laboratory on 11/05/08 16:15. The following list is a summary of the Work Orders contained in this report, generated on 12/04/08 09:22.

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

Work Order BRK0047 Project COP Westlake ProjectNumber 01CP.01396.44

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Curtis D. Armstrong For Kate Haney, Project Manager

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Stantec	Project Name:	COP Westlake	
PO Box 230, 12034 - (134th Ct NE Ste 102, zip 98052)	Project Number:	01CP.01396.44	Report Created:
Redmond, WA/USA 98073	Project Manager:	Jennifer Yotz	12/04/08 09:22

	ANALYTICAL	REPORT FOR	SAMPLES
--	------------	------------	---------

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
C1-1	BRK0047-01	Water	11/05/08 11:15	11/05/08 16:15
C1-2	BRK0047-02	Water	11/05/08 11:30	11/05/08 16:15
MW-32A	BRK0047-03	Water	11/05/08 09:56	11/05/08 16:15
MW-34	BRK0047-04	Water	11/05/08 08:26	11/05/08 16:15
MW-35	BRK0047-05	Water	11/05/08 12:27	11/05/08 16:15
MW-52	BRK0047-06	Water	11/05/08 10:45	11/05/08 16:15
MW-57	BRK0047-07	Water	11/05/08 11:27	11/05/08 16:15
MW-59	BRK0047-08	Water	11/05/08 09:09	11/05/08 16:15
MW-60	BRK0047-09	Water	11/05/08 13:06	11/05/08 16:15
MW-202	BRK0047-10	Water	11/05/08 12:30	11/05/08 16:15
MW-207	BRK0047-11	Water	11/05/08 13:05	11/05/08 16:15
MW-209	BRK0047-12	Water	11/05/08 08:35	11/05/08 16:15
MW-210	BRK0047-13	Water	11/05/08 09:15	11/05/08 16:15
MW-211	BRK0047-14	Water	11/05/08 10:00	11/05/08 16:15

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SEATTLE, WA 11720 NORTH CREEK PKWY N, SUITE 400 BOTHELL, WA 98011-8244 PH: (425) 420.9200 FAX: (425) 420.9210

Stantec	Project Name:	COP Westlake	
PO Box 230, 12034 - (134th Ct NE Ste 102, zip 98052)	Project Number:	01CP.01396.44	Report Created:
Redmond, WA/USA 98073	Project Manager:	Jennifer Yotz	12/04/08 09:22

Analytical Case Narrative TestAmerica - Seattle, WA

BRK0047

SAMPLE RECEIPT

The samples were received November 5th, 2008 by TestAmerica - Seattle. The temperature of the samples at the time of receipt was 9.2 degrees Celsius which is outside the recommended temperature range of 2-6 Degrees Celsius. The samples are considered acceptable as they were received on-ice within four hours of the collection of the last sampled time on the COC.

PREPARATIONS AND ANALYSIS

No additional anomalies, discrepancies, or issues were associated with sample preparation, analysis and quality control other than those already qualified in the data and described in the Notes and Definitions page at the end of the report.

TestAmerica Seattle

Curtis D. Armstrong For Kate Haney, Project Manager

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SEATTLE, WA 11720 NORTH CREEK PKWY N, SUITE 400 BOTHELL, WA 98011-8244 PH: (425) 420.9200 FAX: (425) 420.9210

Stantec PO Box 230, 12034 - (134th Ct NE Ste 102, zip 98052) Redmond, WA/USA 98073			Project Number:		COP We 01CP.013 Jennifer Y	96.44		Report Created 12/04/08 09:2			
		Vol	atile Petr	oleum P i TestAme		•	TPH-	Gx			
Analyte		Method	Result	MDĽ*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BRK0047-01	(C1-1)		W	ater		Sampl	ed: 11/0	5/08 11:15			
Gasoline Range H	ydrocarbons	NWTPH-Gx	ND		50,0	ug/l	lx	8K06007	11/06/08 07:30	11/07/08 01:30	
Surrogate(s):	4-BFB (FID)			102%		58 - 144 %	"			**	
BRK0047-02	(C1-2)		W	ater		Sampl	ed: 11/0	5/08 11:30			
Gasoline Range H	ydrocarbons	NWTPH-Gx	ND		50.0	ug/l	1x	8K06007	11/06/08 07:30	11/07/08 02:03	
Surrogate(s):	4-BFB (FID)			102%		58 - 144 %	"			FF	
BRK0047-03	(MW-32A)		W	ater		Sampl	ed: 11/0	5/08 09:56			
Gasoline Range H	lydrocarbons	NWTPH-Gx	528		50.0	ug/l	łx	8K06007	11/06/08 07:30	11/07/08 02:35	
Surrogate(s);	4-BFB (FID)			104%		58 - 144 %	n			п	
BRK0047-04	(MW-34)		W	ater		Sampi	ed: 11/0	5/08 08:26			
Gasoline Range H	lydrocarbons	NWTPH-Gx	1890		50.0	ug/l	lx	8K06007	11/06/08 07:30	11/07/08-07:59	
Surrogate(s):	4-BFB (FID)	99999-2-36		106%		58 - 144 %	"			п	
BRK0047-05	(MW-35)		W	ater		Sampl	ed: 11/0	5/08 12:27			
Gasoline Range H	lydrocarbons	NWTPH-Gx	94.8		50,0	ug/l	łx	8 K 06007	11/06/08 07:30	11/07/08 08:32	
Surrogate(s):	4-BFB (FID)			101%		58 - 144 %	"			н	
BRK0047-06	(MW-52)		W	ater		Sampl	ed: 11/0	5/08 10:45			
Gasoline Range H	ydrocarbons	NWTPH-Gx	ND	******	\$0.0	ug/i	lx	8K06007	[]/06/08-07:30	11/07/08 03:07	
Surrogate(s):	4-BFB (FID)			103%		58 - 144 %	н			и	
BRK0047-07	(MW-57)		W	ater		Sampl	ed: 11/0	5/08 11:27			
Gasoline Range H	lydrocarbons	NWTPH-Gx	76.2		50.0	ug/l	ìx	8K06007	11/06/08 07:30	11/07/08 03:40	
Surrogate(s);	4-BFB (FID)			100%		58 - 144 %	"			п	
BRK0047-08	(MW-59)		W	ater		Sampl	ed: 11/0	5/08 09:09			
Gasoline Range H	lydrocarbons	NWTPH-Gx	280		50.0	ug/l	İx	8K06007	1/06/08 07:30	11/07/08 09:04	
Surrogate(s):	4-BFB (FID)		~	109%		58 - 144 %	"			п	

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f	12034 - (134th Ct 1 /A/USA 98073	NE Ste 102, zip 98052)		Project Nai Project Nu Project Ma	mber:	COP We 01CP.0139 Jennifer Y	96.44			Report C 12/04/0	
		Vola	ntile Petr	oleum P TestAme		*	TPH-	Gx			1000404-112-111-112-211-112-211-11
Analyte		Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BRK0047-09	(MW-60)		Wa	iter		Sampl	ed: 11/0	5/08 13:06			
Gasoline Range H	ydrocarbons	NWTPH-Gx	23300		1000	ug/l	20x	8K06007	11/06/08 07:30	11/07/08 11:36	
Surrogate(s):	4-BFB (FID)			112%		58 - 144 %	Ix			tt.	
BRK0047-10	(MW-202)		Wa	ıter		Sampl	ed: 11/0	5/08 12:30			
Gasoline Range Hy	vdrocarbons	NWTPH-Gx	ND		50.0	ug/l	lx	8 K06007	11/06/08 07:30	11/07/08 04:12	
Surrogate(s):	4-BFB (FID)			102%		58 - 144 %	п			fr	
BRK0047-11	(MW-207)		Wa	ıter		Sampl	ed: 11/0	5/08 13:05			
Gasoline Range Hy	/drocarbons	NWTPH-Gx	ND		50.0	ug/l	ìx	8K06007	11/06/08 07:30	11/07/08 04:45	
Surrogate(s):	4-BFB (FID)			103%		58 - 144 %	n			t.	
BRK0047-12	(MW-209)		Wa	ıter		Sampl	ed: 11/0	5/08 08:35			
Gasoline Range Hy	vdrocarbons	NWTPH-Gx	ND		50.0	ug/l	lx	8K06007	31/06/08 07:30	11/07/08 05:17	
Surrogate(s):	4-BFB (FID)			104%		58 - 144 %	"			л	
BRK0047-13	(MW-210)		Wa	ıter		Sampl	ed: 11/0	5/08 09:15			
Gasoline Range Hy	drocarbons	NWTPH-Gx	ND		50.0	ug/l	ix	8K06007	11/06/08 07:30	11/07/08 06:54	
Surrogate(s):	4-BFB (FID)			102%		58 - 144 %	"			8	
BRK0047-14	(MW-211)		Wa	iter		Sampl	ed: 11/0	5/08 10:00			
Gasoline Range Hy	vdrocarbons	NWTPH-Gx	ND		50.0	ug/l	lx	8K06007	11/06/08 07:30	11/07/08 07:27	
Surrogate(s):	4-BFB (FID)			101%		58 - 144 %	п			H	

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Stantec	Project Name:	COP Westlake	
PO Box 230, 12034 - (134th Ct NE Ste 102, zip 98052)	Project Number:	01CP.01396.44	Report Created:
Redmond, WA/USA 98073	Project Manager:	Jennifer Yotz	12/04/08 09:22

Identified Semivolatile Petroleum Products by NWTPH-Dx with Acid/Silica Gel Clean-up

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Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BRK0047-01 (C1-1)		W	ater		Sampl	ed: 11/0	5/08 11:15			
Lube Oil	NWTPH-Dx	ND		0.481	mg/l	l x	8K06015	11/06/08 09:14	11/07/08 20:32	
Kerosene		ND		0.240	ы	м	м		к	
Diesel Range Hydrocarbons	le	ND		0.240	н	"	н	ır	P	
Surrogate(s): 2-FBP			80.0%		53 - 125 %	"			п	
Octacosane			91.4%		68 - 125 %				11	

BRK0047-02 (C1-2)		W٤	iter		Sampl	ed: 11/0	5/08 11:30			
Lube Oil	NWTPH-Dx	ND		0.481	mg/l	lx	8K06015	11/06/08 09:14	11/07/08 20:54	
Kerosene	P.	ND		0.240	н		P.	u	h	
Diesel Range Hydrocarbons	к	ND		0.240	n	*1	я		μ	
Surrogate(s): 2-FBP			66.7%		53 - 125 %	"			<u> </u>	
Octacosane			75.0%		68 - 125 %	"			"	

BRK0047-03	(MW-32A)		W	ater		Sample	ed: 11/0	5/08 09:56			
Lube Oil		NWTPH-Dx	ND		0.476	mg/l	lx	8K06015	11/06/08 09:14	11/07/08 21:17	
Kerosene		4	0.281		0.238	н	4	н	*1	lt.	
Diesel Range Hydro		IS.	ND	*****	0,238	ચ	*	ચ	e	h	
Surrogate(s):	2-FBP			72.9%		53 - 125 %	"			н	
	Octacosane			81.2%		68 - 125 %	"			и	

BRK0047-04	(MW-34)		Wa	ater		Sample	ed: 11/(5/08 08:26			
 Lube Oil		NWTPH-Dx	ND		0,476	mg/i	ĺx.	8K06015	11/06/08 09:14	11/07/08 21:39	
Kerosene		в	1.06		0.238	п	41	4	12	સ	
Diesel Range Hydro		и	ND		0.238	R	ν	μ	н	H	
Surrogate(s):				73.9%		53 - 125 %	"			и	
	Octacosane			83.2%		68 - 125 %	<i>t</i> r			я	

BRK0047-05 (MW-35)		Water			Sampled: 11/05/08 12:27				
Lube Oil	NWTPH-Dx	ND		0.476	mg/l	lx	8K06015	11/06/08 09:14	11/07/08 22:01
Kerosene	ш	ND	******	0.238	۲		н	μ	и
Diesel Range Hydrocarbons	П	ND		0.238	P	1.	P	u	n
Surrogate(s): 2-FBP			67.0%		53 - 125 %	n			"
Octacosane			84.7%		68 - 125 %	"			"

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Stantec	Project Name:	COP Westlake	
PO Box 230, 12034 - (134th Ct NE Ste 102, zip 98052)	Project Number:	01CP.01396.44	Report Created:
Redmond, WA/USA 98073	Project Manager:	Jennifer Yotz	12/04/08 09:22

Identified Semivolatile Petroleum Products by NWTPH-Dx with Acid/Silica Gel Clean-up TestAmerica Seattle

Analyte		Method	Result	MÐL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BRK0047-06	(MW-52)		Wa	nter		Sampl	ed: 11/()5/08 10:45			
Lube Oil		NWTPH-Dx	ND		0.472	mg/1	İx	8K06015	11/06/08 09:14	11/07/08 22:23	
Kerosene		и	ND		0,236	6]	н	٣		"	
Diesel Range Hydro	ocarbons	м	ND		0.236	*	0	"	n	ч	
Surrogate(s):	2-FBP			61.1%		53 - 125 %	н			"	
	Octacosane			66.1%		68 - 125 %	"			**	Z
BRK0047-07	(MW-57)		Wa	ıter		Sampl	ed: 11/()5/08 11:27			
Lube Oil		NWTPH-Dx	ND		0.476	mg/l	lx	8K06015	11/06/08 09:14	11/08/08 00:15	
Kerosene		P	0.367		0.238	Þ	14	0	4	μ	
Diesel Range Hydro	ocarbous		ND		0.238	н	ŀ	н	р	p	
Surrogate(s):	2-FBP			72.5%		53 - 125 %	n			n	
	Octacosane			89.1%		68 - 125 %	n			8	

	BRK0047-08	(MW-59)		Wa	ter		Sampl	ed: 11/0	5/08 09:09			
	Lube Oil		NWTPH-Dx	ND		0.476	mg/l	łx	8K06015	11/06/08 09:14	11/08/08 00:38	
	Kerosene		R	ND		0.238	м	15	н	15	м	
1	Diesel Range Hydro	ocarbons	le.	ND		0.238	٣	4*	n	Þ	н	
	Surrogate(s):	2-FBP			77.8%		53 - 125 %	н			"	
1		Octacosane			84.8%		68 - 125 %	11			"	

÷	BRK0047-09	(MW-60)		Wa	ter		Sampl	ed: 11/0	5/08 13:06			
1	Lube Oil		NWTPH-Dx	ND		0.476	mg/l	lx	8K06015	11/06/08 09:14	11/08/08 01:00	
	Diesel Range Hydr	ocarbons	a	0.740		0.238	ta	н	n	n	н	Q5
Ì	Surrogate(s):	2-FBP			69.0%		53 - 125 %	"			rr	
		Octacosane			75. <i>1%</i>		68 - 125 %	"			n	

	BRK0047-09RE	(MW-60)		Wa	ter		Samp	oied: 11/0	5/08 13:06			
	Kerosene		NWTPH-Dx	8.17		0.476	mg/l	2x	8K06015	11/06/08 09:14	11/10/08 10:09	
	Surrogate(s):	2-FBP			69.0%		53 - 125 %	11			н	
1		Octacosane			74.6%		68 - 125 %	μ			ri	

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Stantec	Project Name:	COP Westlake	
PO Box 230, 12034 - (134th Ct NE Ste 102, zip 98052)	Project Number:	01CP.01396.44	Report Created:
Redmond, WA/USA 98073	Project Manager:	Jennifer Yotz	12/04/08 09:22

Identified Semivolatile Petroleum Products by NWTPH-Dx with Acid/Silica Gel Clean-up TestAmerica Seattle Units Analyzed MDL* MRL Dil Prepared Notes Analyte Method Result Batch Sampled: 11/05/08 12:30 BRK0047-10 (MW-202) Water 11/08/08 01:22 11/06/08 09:14 8K06015 Lube Oil NWTPH-Dx ND ----0.485 mg/l lx Ŀ. н 0.243 Kerosene ND ----Þ 0.243 4 15 в . ND Diesel Range Hydrocarbons 2-FBP 72.0% 53 - 125 % " Surrogate(s): Octacosane 85.0% 68 - 125 % BRK0047-11 Water Sampled: 11/05/08 13:05 (MW-207) 11/06/08 09:14 11/08/08 01:45 NWTPH-Dx 0.481 1x8K06015 Lube Oil ND ---mg/l n 0.240 ND -----Kerosene п . 15 Ŀ. н 0.240 ND Diesel Range Hydrocarbons -----74.7% 53 - 125 % " 77 2-FBP Surrogate(s): p 84.0% 68 - 125 % Octacosane Sampled: 11/05/08 08:35 BRK0047-12 (MAX 280) Water

	BKKU047-12 (19199-209)		112			onaipi	.u	00000000			
	Lube Oil	NWTPH-Dx	ND		0,476	mg/l	l x	8K06015	11/06/08 09:14	11/08/08 02:07	
	Kerosene	n	ND		0.238	۹	ır		н	и	
į.	Diesel Range Hydrocarbons	μ	ND		0.238		P	ŀ	п	н	
	Surrogate(s): 2-FBP			84.6%		53 - 125 %	"			. n	
	Octacosan	e		94.3%		68 - 125 %	"			0	

.4	BRK0047-13	(MW-210)		Wa	ter		Sampl	ed: 11/0	5/08 09:15			
1	Lube Oil		NWTPH-Dx	ND		0.485	mg/l	lx	8K06015	11/06/08 09:14	11/08/08 02:30	
	Kerosene			ND		0.243	4	н	þ	R	м	
, i	Diesel Range Hydro	ocarbons	м	ND		0.243		*	P	н	۴	
	Surrogate(s):	2-FBP			75.2%		53 - 125 %	"			13	
		Octacosane			85.2%		68 - 125 %	rr			u .	

	BRK0047-14	(MW-211)		Wa	ter		Sampl	ed: 11/(5/08 10:00			
1	Lube Oil		NWTPH-Dx	ND		0,481	mg/l	1x	8K06015	11/06/08 09:14	11/08/08 02:52	
	Kerosene		n	ND		0.240	ы	11	P	D.	н	
ļ	Diesel Range Hydro	ocarbons	n	ND		0.240	r1	μ	P	р	н	
	Surrogate(s):	2-FBP			76.5%		53 - 125 %	л			D	
		Octacosane			87.8%		68 - 125 %	"			11	

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-	0, 12034 - (134th C WA/USA 98073	t NE Ste 102, zip 98052)		Project N Project N Project M	umber:	COP W 01CP.01 Jennifer	396.44			-	Created: 08 09:22
		Total	Metals I	•	6000/70 erica Sea		es Metl	nods			
Analyte		Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Anaiyzed	Notes
BRK0047-01	(C1-1)		Wa	nter		Samp	oled: 11/0	5/08 11:15		·····	
Lead		EPA 6020	ND	* 0.07 M F	0.00100	mg/l	łx	8K07031	11/07/08 13:42	11/11/08 13:42	
BRK0047-02	(C1-2)		Wa	ater		Samp	oled: 11/0	5/08 11:30			
Lead		EPA 6020	ND		0.00100	nıg/ł	1 x	8K07031	11/07/08 13:42	11/11/08 13:48	
BRK0047-03	(MW-32A)		Wa	ater		Samp	oled: 11/0	5/08 09:56			
Lead		EPA 6020	0.00232		0.00100	mg/l	łx	8K07031	11/07/08 13:42	11/11/08 13:54	
BRK0047-04	(MW-34)		Wa	ater		Samp	oled: 11/0	5/08 08:26			
Lead	······	EPA 6020	0.00141		0.00100	mg/l	lx	8K07031	11/07/08 13:42	11/11/08 13:59	
BRK0047-05	(MW-35)		Wa	ater		Samı	oled: 11/0	5/08 12:27			
Lead		EPA 6020	0,229		0.00100	mg/l	lx	8K07031	11/07/08 13:42	11/11/08 14:05	
BRK0047-06	(MW-52)		Wa	ater		Sam	oled: 11/0	5/08 10:45			
Lead	(EPA 6020	0.0178		0.00100	mg/l	Łx	8K07031	11/07/08 13:42	11/11/08 14:17	<u></u>
BRK0047-07	(MW-57)		Wa	ater		Samt	oled: 11/0	5/08 11:27			
Lead		EPA 6020	0.0128		0.00100	mg/l	l x	8K07031	11/07/08 13:42	11/11/08 14:40	
BRK0047-08	(MW-59)		W	ater		Sam	oled: 11/0	5/08 09:09			
Lead	(1111 0))	EPA 6020	0.00229		0.00100	mg/l	lx	8K07031	11/07/08 13:42	11/11/08 14:46	
BRK0047-09	(MW-60)		W	ater		Samu	əled: 11/0	5/08 13:06			
Lead	(11471-00)	EPA 6020	0.00214		0.00100	mg/l) x	8K07031	11/07/08 13:42	11/11/08 14:52	
BRK0047-10	(MW-202)		W	ater		Same	uled: 11/0	5/08 12:30			
Lead	(1117-202)	EPA 6020	ND		0.00100	mg/l	łx	8K07031	13/07/08 13:42	11/11/08 14:57	i
BRK0047-11	(MW-207)		w	ater		Samu	led: 11/0	5/08 13:05			
Lead	(19199-207)	EPA 6020	0.00102	atci	0.00100	mg/J	lx	8K07031	11/07/08 13:42	11/11/08 15:03	
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Stantec	Project Name:	COP Westlake	
PO Box 230, 12034 - (134th Ct NE Ste 102, zip 98052)	Project Number:	01CP.01396.44	Report Created:
Redmond, WA/USA 98073	Project Manager:	Jennifer Yotz	12/04/08 09:22

				•	nerica Sea						
Analyte		Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BRK0047-12	(MW-209)		Wa	iter		Sam	pled: 11/()5/08 0 8:35			
Lead		EPA 6020	ND		0.00100	mg/l	lx	8K07031	11/07/08 13:42	11/11/08 15:09	
BRK0047-13	(MW-210)		Wa	iter		Sam	pled: 11/(05/08 09:15			
Lead		EPA 6020	ND	****	0.00100	mg/l	lx	8K07031	11/07/08 13:42	11/11/08 15:15	
BRK0047-14	(MW-211)		Wa	iter		Sam	pled: 11/()5/08 10:00			
Lead		EPA 6020	ND		0.00100	mg/l	1 x	8K07031	11/07/08 13:42	11/11/08 15:20	

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Stantec	Project Name:	COP Westlake						
PO Box 230, 12034 - (134th Ct NE Ste 102, zip 98052)	Project Number:	01CP.01396.44	01CP.01396.44					
Redmond, WA/USA 98073	Project Manager:	Jennifer Yotz			2/04/08 09:22			
Dissolved I	Vietals by EPA 6000	/7000 Series Method	ls					
	TestAmerica Se	attle						

Analyte		Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BRK0047-01	(C1-1)		W٤	iter		Sam	pled: 11/0	05/08 11:15			P7
Lead		EPA 6020 - Diss	ND		0.00100	mg/l	1x	8K10012	11/10/08 09:30	11/10/08 22:33	
BRK0047-02	(C1-2)		W٤	iter		Sam	pled: 11/0	05/08 11:30			P 7
Lead		EPA 6020 - Diss	ND		0.00100	mg/l	lx	8K10012	11/10/08 09:30	11/10/08 22:39	
BRK0047-03	(MW-32A)		Wa	iter		Sam	pled: 11/0	05/08 09:56			P7
Lead		EPA 6020 - Diss	ND		0.00100	mg/l	lx	8K10012	11/10/08 09:30	11/10/08 22:45	·····
BRK0047-04	(MW-34)		W٤	iter		Sam	pled: 11/0	05/08 08:26			P7
Lead		EPA 6020 - Diss	ND		0.00100	mg/l	lx	8K10012	11/10/08 09:30	11/10/08 22:50	
BRK0047-05	(MW-35)		W٤	ater		Sam	pled: 11/	05/08 12:27			P7
Lead		EPA 6020 - Diss	ND	*****	0.00100	mg/l	lx	8K10012	11/10/08 09:30	11/10/08 22:56	
BRK0047-06	(MW-52)		W٤	iter		Sam	pied: 11/	05/08 10:45			P 7
Lead		EPA 6020 - Diss	ND		0.00100	mg/l	lx	8K10012	11/10/08 09:30	1/10/08 23:02	
BRK0047-07	(MW-57)		Wa	ıter		Sam	pled: 11/	05/08 11:27			P7
Lead		EPA 6020 - Diss	ND	*****	0.00100	mg/l	lx	8K10012	11/10/08 09:30	[1/]0/08 23:08	
BRK0047-08	(MW-59)		Wa	iter		Sam	pled: 11/	05/08 09:09			P 7
Lead		EPA 6020 - Diss	ND		0.00100	mg/l	lx	\$K10012	11/10/08 09:30	11/10/08 23:14	
BRK0047-09	(MW-60)		Wa	ater		Sam	pled: 11/	05/08 13:06			P 7
Lead		EPA 6020 - Diss	ND		0.00100	mg/i	1 x	8K10012	11/10/08 09:30	11/10/08 23:19	
BRK0047-10	(MW-202)		Wa	iter		Sam	pied: 11/	05/08 12:30			P7
Lead		EPA 6020 - Diss	ND	19 - 19 - 19 - 19 - 19 - 19 - 19 - 19 -	0.00100	mg/l	łx	8K10012	11/10/08 09:30	1 1/10/08 23:43	
BRK0047-11	(MW-207)		Wa	ater		Sam	pled: 11/	05/08 13:05			P7
Lead		EPA 6020 - Diss	ŇD		0.00100	നുഗി	İx	8K10012	11/10/08 09:30	11/10/08 23:49	

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PO Box 230, 12034 - (134th Ct NE Ste 102, zip 98052) Project Number: 01CP,01396.44	Report Created:
Redmond, WA/USA 98073 Project Manager: Jennifer Yotz	12/04/08 09:22

		Disso	lved Metal	•	A 6000/ nerica Ser		eries M	ethods			
Analyte	······································	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BRK0047-12	(MW-209)		Wa	iter		Sam	pled: 11/(05/08 08:35			P7
Lead		EPA 6020 - Diss	ND		0.00100	mg/l	1 x	8K10012	11/10/08 09:30	11/10/08 23:54	
BRK0047-13	(MW-210)		Wa	iter		Sampled: 11/05/08 09:15					P 7
Lead		EPA 6020 - Diss	ND		0.00100	mg/l	lx	8K10012	11/10/08 09:30	11/11/08 00:00	
BRK0047-14	(MW-211)		Wa	lter		Sam	pled: 11/	05/08 10:00			P7
Lead		EPA 6020 - Diss	ND		0.00100	mg/l	lx	8K10012	11/10/08 09:30	11/11/08 00:06	

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Stantec	Project Name:	COP Westlake	
PO Box 230, 12034 - (134th Ct NE Ste 102, zip 98052)	Project Number:	01CP.01396.44	Report Created:
Redmond, WA/USA 98073	Project Manager:	Jennifer Yotz	12/04/08 09:22

	v diati	ile Organi	TestAm			UULAIUU	020019	<u></u>		
Anaiyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Note
BRK0047-01 (C1-1)		W	ater		Sampl	ed: 11/0	5/08 11:15			
Benzene	EPA 8260B	ND	*****	0,500	u <u>g</u> /l	ł×	8K06024	11/06/08 08:00	11/06/08 16:09	
Ethylbenzene	ч	ND		0.500	P		b	p	*	
Methyl tert-butyl ether	a	ND		1.00	н		н	ч		
Naphthalene	ų	ND		5.00	м		н	v	-	
Toluene	થ	ND		0.500	м	н	'n	łe.	и	
o-Xylene	ય	ND	10.00 A.M.	1.00	н	н	н	19		
m,p-Xylene	"	ND		2.00	şi	н	ч	r.	26	
Xylenes (total)	'n	ND		3.00	a	н	n	в	ą	
Surrogate(s): 1,2-DCA-d4			97.0%	v.v.	70 - 130 %	n			jr	
Toluene-d8			96.8%		75 - 125 %	н			"	
4-BFB			101%		75 - 125 %	"			**	
BRK0047-02 (C1-2)		w	ater		Sampl	ed: 11/0	5/08 11:30			
Benzene	EPA 8260B	ND		0,500	ug/l	1x	8K06024	11/06/08 08:00	11/06/08 16:37	
Ethylbenzene		ND		0.500		н	۴	٣	•	
Methyl tert-butyl ether	ч	ND		1.00		0	н	р	ч	
Naphthalene	ч	ND		5,00	н		н	e	4	
Toluene	м	ND		0.500	0		ħ	٣	ч	
o-Xylene	4	ND		1.00	'n	н		r		
m,p-Xylene	ч	ND		2.00	м		н	٣	м	
Xylenes (total)	n	ND		3,00		"	р	٢	4	
Surrogate(s): 1,2-DCA-d4			102%		70 - 130 %	n			"	
Toluene-d8			96.3%		75 - 125 %	"			**	
4-BFB			102%		75 - 125 %	н			t:	
BRK0047-03 (MW-32A)		w	ater		Sampl	ed: 11/0	5/08 09:56			
Benzene	EPA 8260B	ND	······	0.500	ug/i	lx	8K06024	11/06/08 08:00	11/06/08 17:06	
Ethylbenzene	н	0.650		0.500		b	In the	"	n	
Methyl tert-butyl ether	ii.	ND		1.00	u	n	ν			
Naphthalene	ii.	ND		5.00	μ	12	14	4		
Toluene	ш	ND		0.500	н	17	н	ч	U.	
o-Xylene	μ	ND		1.00	μ	ų.	μ	я	м	
m,p-Xylene	μ	ND		2.00	н	n	14		p	
Xylenes (total)	ш	ND	alore 19 ar	3.00	0	в	ν	۹	м	
Surrogate(s): 1,2-DCA-d4			104%		70 - 130 %	ff			ef	
Toluene-d8			97.2%		75 - 125 %	"			ţŕ	
4-BFB			99.2%		75 - 125 %	"			rr	

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Stantec	Project Name:	COP Westiake	
PO Box 230, 12034 - (134th Ct NE Ste 102, zip 98052)	Project Number:	01CP.01396.44	Report Created:
Redmond, WA/USA 98073	Project Manager:	Jennifer Yotz	12/04/08 09:22

Volatile Organic Compounds by EPA Method 8260B TestAmerica Seattle											
Analyte		Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BRK0047-04	(MW-34)		Water			Sampl	ed: 11/0	5/08 08:26			
Benzene		EPA 8260B	23.2		0,500	ug/l	lx	8K06024	11/06/08 08:00	1 //06/08 17:35	
Ethylbenzene		n	10.4		0.500	w	b	н	a	а	
Methyl tert-butyl et	her	μ	ND		1,00		n	u.	υ	л	
Naphthalene		<i>n</i>	8.55		5.00	n	н	н	н		
Toluene		п	1.20		0.500	"	н	ч	15		
o-Xylene		tr	ND		1.00	4	۲	ч	н	P.	
m,p-Xylene		a	ND		2,00	P	v	R	ie.	*	
Xylenes (total)		"	ND		3.00	м	R	и	ie.	ч	
Surrogate(s):	1,2-DCA-d4			99.6%		70 - 130 %	"			P	
0.7	Toluene-d8			95.9%		75 - 125 %	n			0	
	4-BFB			96.4%		75 - 125 %	"			н	
BRK0047-05	(MW-35)		Wa	iter		Sampl	ed: 11/0	5/08 12:27			
Benzene		EPA 8260B	ND		0.500	ug/J	l x	8K06024	13/06/08 08:00	11/06/08 18:04	
Ethylbenzene		4	ND	-	0.500	я	н	н	н	4	
Methyl tert-butyl et	her	n	ND	******	1.00		h	u	ы		
Naphthalene		33	ND	-	5.00	*	ч	п	н		
Toluene		н	1.35	- الله موجا الله	0,500		۲	ы	в	٠	
o-Xylene		н	ND		1.00	ч	"	ν	ta La	ч	
m,p-Xylene		н	ND		2.00	н		в	н	м	
Xylenes (total)		U	ND		3.00	P	P		ki	ч	
Surrogate(s):	1,2-DCA-d4			94.3%		70 - 130 %	"			"	
	Toluene-d8			94.2%		75 - 125 %	"			"	
	4-BFB			99.0%		75 - 125 %	"			71	

BRK0947-06 (MW-52)		Water			Sampl	ed: 11/0	5/08 10:45			
Benzene	EPA 8260B	ND		0,500	ug/l	lx	8K96024	11/06/08 08:00	11/06/08 18:32	
Ethylbenzene	n	ND		0,500	h	8	n	P	9	
Methyl tert-butyl ether	h	ND		1.00	ч	P	н	P	p	
Naphthalene	ø	ND		5,00	P	ų	р	4	11	
Toluene	P	ND		0.500	н	•	р	41	M	
o-Xylene	P	ND		1.00	٧	"	μ	41	μ	
m,p-Xylene	"	ND		2.00	٧		μ	н	ti ti	
Xylenes (total)	12	ND		3.00	r	ч	4	ţĸ	н	
Surrogate(s): 1,2-DCA-d4			97.0%		70 - 130 %	"			ef	
Toluene-d8			96.6%		75 - 125 %	"			μ	
4-BFB			101%		75 - 125 %	"			н	

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Stantec	Project Name:	COP Westlake	
PO Box 230, 12034 - (134th Ct NE Ste 102, zip 98052)	Project Number:	01CP.01396.44	Report Created:
Redmond, WA/USA 98073	Project Manager:	Jennifer Yotz	12/04/08 09:22

Volatile Organic Compounds by EPA Method 8260B	
TestAmerica Seattle	

Analyte	Method	Result	MDL*	MRL	Units	Dit	Batch	Prepared	Analyzed	Notes
BRK0047-07 (MW-57)		Wa	Water		Sampled: 11/05/08 11:27					
Benzene	EPA 8260B	ND		0.500	ug/l	İx	8K06024	11/06/08 08:00	11/06/08 19:01	
Ethylbenzene	v	ND		0.500	4	н	н	p.	н	
Methyl tert-butyl ether	**	ND		1.00	ŧ	4	н	je	2	
Naphthalene	q	ND		5.00	н	P.	u.	11	μ	
Toluene	n	ND		0.500	н	н	н	л	н	
o-Xylene	N	ND		1.00	٣		и	18	"	
m,p-Xylene	4	ND		2.00		۲	μ.	در	"	
Xylenes (total)	Ð	ND		3.00	-1	•	ų	۲	q	
Surrogate(s): 1,2-DCA-d4			99.7%		70 - 130 %	"			м	
Toluene-d8			96.9%		75 - 125 %	п			п	
4-BFB			98.2%		75 - 125 %	"			υ	

	BRK0047-08 (MW-59)		Wa	ıter		Sampl	ed: 11/()5/08 09:09			
	Benzene	EPA 8260B	ND		0.500	ug/l	lx	8K06024	11/06/08-08:00	11/06/08 19:30	
	Ethylbenzene	н	ND		0.500	P	h	μ	*		
	Methyl tert-butyl ether	ii.	ND		1.00	м	h	P		1	
	Naphthalene	ч	ND		5.00	н	н	4	ч	μ	
ł	Toluene	н	ND		0,500	н	м	н		н	
	o-Xylene	W	ND		1.00	n	н	п	45	a	
;	m,p-Xylene		ND		2.00	4	ч	•	12	ei .	
	Xylenes (total)	li.	ND		3.00	ы	14	Þ	51	ч	11 11 11 11 11 11 11 11 11 11 11 11 11
	Surrogate(s): 1,2-DCA-d4			98.8%		70 - 130 %	"			et	
	Toluene-d8			96.7%		75 - 125 %	"			(r	
	4-BFB			99.0%		75 - 125 %	"			rr	

. '	BRK0047-09	(MW-60)		Wa	ter		Sampl	ed: 11/0	5/08 13:06			
į	Methyl tert-butyl et	her	EPA 8260B	ND		1.00	ug/l	1 x	8K06024	11/06/08 08:00	11/06/08 19:59	
	Toluene		н	24.6		0,500	n	•	φ	•	•	
	Surrogate(s):	1,2-DCA-d4			112%		70 - 130 %	u.			**	
		Toluene-d8			92.9%		75 - 125 %	"			**	
-		4-BFB			102%		75 - 125 %	"			"	

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Stantee	Project Name:	COP Westlake	
PO Box 230, 12034 - (134th Ct NE Ste 102, zip 98052)	Project Number:	01CP.01396.44	Report Created:
Redmond, WA/USA 98073	Project Manager:	Jennifer Yotz	12/04/08 09:22

	v olat.	ile Organic	TestAm			CINU	040010			
Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
3RK0047-09RE1 (MW-60)		W	ater		Sampl	ed: 11/0	5/08 13:06			
thylbenzene	EPA 8260B	1760	*	10.0	ug/l	20x	8K07015	11/07/08 11:21	11/07/08 17:39	
Vaphthalene	D	267		100		μ	*1		11	
-Xylene	1)	48.6		20.0		н	*1			
n,p-Xylene	n	2390		40.0	n	н	n	et.	n	
vlenes (total)	u.	2440		60,0	н	н	и	r		
Surrogate(s): 1,2-DCA-d4	**************************************		102%		70 - 130 %	İx			n	
Toluene-d8			99.6%		75 - 125 %	"			к	
4-BFB			99.7%		75 - 125 %	"			**	
BRK0047-09RE2 (MW-60)		Wa	ater		Sampl	ed: 11/0	5/08 13:06			
lenzene	EPA 8260B	2200		40.0	ug/l	80x	8K10052	11/10/08 17:31	11/10/08 21:25	
Surrogate(s): 1,2-DCA-d4		-2.1/129	101%		70 - 130 %	Ix			p	
Toluene-d8			94.2%		75 - 125 %	"			р	
4-BFB			95 .7%		75 - 125 %	"			н	
RK0047-10RE1 (MW-202)		W:	ater		Sampl	ed: 11/0	5/08 12:30			
enzene	EPA 8260B	ND		0.500	ug/l	1 x	8K07015	11/07/08 11:21	11/07/08 18:04	
thylbenzene	р	ND		0,500		н	•	e	D.	
Methyl tert-butyl ether	l.	ND		1.00		n	•		4	
Vaphthalene	в	ND		5.00		21	4	24	n 	
oluene	4	ND		0,500	,		*		н	
-Xylene	1	ND		1.00 2.00		2	a	-	n	
n,p-Xylene (ylenes (total)	л	ND ND		3,00	P	n		И		
Surrogate(s): 1,2-DCA-d4			103%		711 - 130 %				0	
Toluene-d8			98.6%		75 - 125 %	n			n	
4-BFB			101%		75 - 125 %	"			N	
RK0047-11 (MW-207)		W	ater		Sampl	ed: 11/0	5/08 13:05			
Benzene	EPA 8260B	ND		0.500	ug/l	İx	81606024	11/06/08-08:00	11/06/08 20:56	
thylbenzene	n	ND		0.500	6	11	ų	μ	r	
Aethyl tert-butyl ether	n	ND		1,00	Р	n	11	11	P	
laphthalene	*1	ND		5.00		t:	н	н	р	
oluene	ų	ND		0.500	6	μ	п	н		
-Xylene a,p-Xylene	<i>n</i>	ND		1.00		H		м 	•	
	н	ND		2.00			н	м	P	

1,2-DCA-d4 Surrogate(s): Toluene-d8

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95.1%



Stantec	Project Name:	COP Westlake	
PO Box 230, 12034 - (134th Ct NE Ste 102, zip 98052)	Project Number:	01CP.01396.44	Report Created:
Redmond, WA/USA 98073	Project Manager:	Jennifer Yotz	12/04/08 09:22

	Volatile	e Organic	Compo TestAm			ethod	8260B			
Analyte	Method	Result	MÐL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BRK0047-11 (MW-207)		W	ater		Sampl	ed: 11/0	5/08 13:05			
4-BFB			100%		75 - 125 %	Ix			11/06/08 20:56	
BRK0047-12 (MW-209)		W	ater		Sampl	ed: 11/0	5/08 08:35			
Benzene	EPA 8260B	ND		0.500	ug/l	1 x	8K06024	11/06/08 08:00	11/06/08 21:25	
Ethylbenzene	n	ND		0.500	м	*	r	"		
Methyl tert-butyl ether	n	ND		1.00	*	*		-	P	
Naphthalene	н	ND		5.00	2	•	9	4	P	
Toluene	n	ND		0.500	*		н	4		
o-Xylene	n	ND		1.00	ч	P	"	1		
m,p-Xylene	*1	ND		2.00	я	r.	"	4	μ	
Xylenes (total)	-1	ND		3.00	я	۳	ч	n	e	
Surrogate(s): 1,2-DCA-d4	,		95.2%		70 - 130 %	"			μ	
Toluene-d8			97.3%		75 - 125 %	"			, <i>p</i>	
4-BFB			102%		75 - 125 %	"			п	
BRK0047-13 (MW-210)		W	ater		Sampl	ed: 11/(5/08 09:15			
Benzene	EPA 8260B	ND		0.500	ug/l	lx	8K06024	11/06/08 08:00	11/06/08 21:54	
Ethylbenzene	л	ND		0,500				•	н	
Methyl tert-butyl ether	4	ND		1.00	٣		12	14		
Naphthalene	•	··· · ND		5.00	· •	н	н	м	н	

	Toluene		4	ND		0,500	ŀ	0	p	14	Þ	
	o-Xylene		n	ND		1.00	Р	0	P	ls.	h.	
	m,p-Xylene		Ш	ND		2.00	e.	н	le.	Įs.		
1	Xylenes (total)		u	ND		3.00	ŀ	n	μ	и	"	
1	Surrogate(s):	1,2-DCA-d4			98.6%		70 - 130 %	"			п	
		Toluene-d8			94.6%		75 - 125 %	"			i.	
		4-BFB			98.0%		75 - 125 %	"			D	

ļ,	BRK0047-14	(MW-211)		Wa	ter		Sampl	ed: 11/0	5/08 10:00			
	Benzene		EPA 8260B	ND		0.500	ug/l	ix	8K06024	11/06/08 08:00	11/06/08 22:23 .	
	Ethylbenzene		4	ND		0.500	P.		н		н	
	Methyl tert-butyl eth	ıer	41	ND		1.00	м		n	н	μ	
	Naphthalene		11	ND		5.00	н		is .	н	н	
	Toluene		n	ND		0,500	5	u	н	н	ы	
1	o-Xylene		þ	ND		1.00	P			н	μ	
j.	m,p-Xylene		4	ND	****	2.00	м	н	P	н	н	
	Xylenes (total)		1	ND		3.00		U.	н	и	н	
1	Surrogate(s):	1,2-DCA-d4			101%		70 - 130 %	n			lt.	
		Toluene-d8			96.0%		75 - 125 %	"			7	
ż		4-BFB			99.8%		75 - 125 %	"			ri	

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Stantee	Project Name:	COP Westlake	
PO Box 230, 12034 - (134th Ct NE Ste 102, zip 98052)	Project Number:	01CP.01396.44	Report Created:
Redmond, WA/USA 98073	Project Manager:	Jennifer Yotz	12/04/08 09:22
			······································

		Volatil	e Organic	Compou	inds by	EPA	Method	8260B			1
				TestAme	erica Seat	ttle					
ì								,			
	Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes

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Stantec				Project Nam	e: (COPW	vestlake							
PO Box 230, 12034 - (134th Ct	NE Ste 102, zi	p 98052)		Project Num	ber: (1CP.01	396.44						Report Creat	ed:
Redmond, WA/USA 98073				Project Man	ager: J	ennifer	Yotz						12/04/08 09	:22
	Volatile P	etröleum I	Products by	NWTPH- TestAmeric		iborati	ory Qual	ity Co	ntrol	Results				
QC Batch: 8K06007	Water 1	Preparation	Method: I	EPA 5030B	(P/T)									
Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt		(Limits)	% RPD	(Limits)	Analyzed	Notes
Blank (8K06007-BLK1)								Esti	acted:	11/06/08 01	7:30			
Gasoline Range Hydrocarbons	NWTPH-Gx	ND		50.0	ug/l	ix							11/06/08 17:57	
Surrogate(s): 4-BFB (FID)	*****************	Recovery	98.8%	Lim	ius: 58-144%	"							11/06/08 17:57	
LCS (8K06007-BS1)								Ext	acted:	11/06/08 01	7:30			
Gasoline Range Hydrocarbons	NWTPH-Gx	921		50.0	ug/l	i x		1000	92.1%	(80-120)		**	11/06/08 18:29	
Surrogate(s): 4-BFB (FID)		Recovery:	105%	Lim	its: 58-144%	, "							11/06/08 18:29	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
Duplicate (8K06007-DUP1)				QC Source:	BRK0042-0	+t		Exti	acted:	11/06/08 07	7:30			
Gasoline Range Hydrocarbons	NWTPH-Gx	ND		50.0	ug/l	İx	ND				NR	(25)	11/06/08 19:34	
Surrogate(s): 4-BFB (FID)		Recovery:	99.9%	Lim	its: 58-144%	"							11/06/08 19:34	
Duplicate (8K06007-DUP2)				QC Source:	BRK0042-0	12		Exte	acted:	11/06/08 05	7:30			
Gasoline Range Hydrocarbons	NWTPH-Gx	ND		50.0	ug/l	١x	ND				NR	(25)	11/06/08 20:39	
Surrogate(s): 4-BFB (FID)		Recovery:	100%	Lim	its: 58-144%	"							11/06/08 20:39	
Matrix Spike (8K06007-MS1)				QC Source:	BRK0042-0	1		Exti	acted:	11/06/08 03	7:30			
Gasoline Range Hydrocarbons	NWTPH-Gx	1010		50.0	ug/ł	1x	16.9	1000	99.3%	(75-131)			1/06/08 22:16	
Surrogate(s): 4-BFB (F1D)		Recovery:	104%	Lim	its: 58-144%	"							11/06/08 22:16	
Matrix Spike Dup_(8K06007-MS	D1)			QC Source:	BRK0042-0	1		Ext	racted:	11/06/08 07	7:30			
Gasoline Range Hydrocarbons	NWTPH-Gx	999		50.0	ug/l	İx	16.9	1006	98.2%	(75-131)	1.06%	6 (25)	11/06/08 22:48	
Surrogate(s): 4-BFB (FID)		Recovery:	105%	Lim	its: 58-144%	"							11/06/08 22:48	

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Curtis D. Armstrong For Kate Haney, Project Manager



Stantec	Project Name:	COP Westlake	
PO Box 230, 12034 - (134th Ct NE Ste 102, zip 98052)	Project Number:	01CP.01396.44	Report Created:
Redmond, WA/USA 98073	Project Manager:	Jennifer Yotz	12/04/08 09:22

OC Batch: 8K06015	Water I	Preparation	Method:	EPA 3520C	1									
Anałyte	Method	Result	MDL		Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Blank (8K06015-BLK1)								Extr	acted:	11/06/08 09	14			
Lube Oil	NWTPH-Dx	ND		0.500	mg/l	tx							11/07/08 19:02	
Kerosene	и	ND		0.250	ıl.									
Diesel Range Hydrocarbons	"	ND		0.250	в	۴			**				н	
Surrogate(s): 2-FBP		Recovery:	79.6%	Lin	nits: 53-125%	n							11/07/08 19:02	
Octacosane			85.2%		68-125%	n							μ	
LCS_(8K06015-BS1)								Exte	acted:	11/06/08 09	1:14			
Diesel Range Hydrocarbons	NWTPH-Dx	1.78		0.250	mg/l	lx		2.00	88.8%	(61-132)			11/07/08 19:24	
Surrogate(s): 2-FBP		Recovery:	84.6%	Lii	nits: 53-125%	"							11/07/08 19:24	
Octacosane			89.6%		68-125%	"							"	
LCS Dup (8K06015-BSD1)								Ext	acted:	11/06/08 09	14			
Diesel Range Hydrocarbons	NWTPH-Dx	1.79		0.250	mg/l	1x		2.00	89.5%	(61-132)	0,715%	6 (35)	11/07/08 19:46	
Surrogate(s): 2-FBP		Recovery:	84.6%	Liı	nits: 53-125%	"							11/07/08 19:46	
Octaeosane			92.5%		68-125%								"	

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COP Westlake Stantec Project Name: Report Created: PO Box 230, 12034 - (134th Ct NE Ste 102, zip 98052) Project Number: 01CP.01396.44 12/04/08 09:22 Project Manager: Redmond, WA/USA 98073 Jennifer Yotz Total Metals by EPA 6000/7000 Series Methods - Laboratory Quality Control Results TestAmerica Seattle QC Batch: 8K07031 EPA 3020A Water Preparation Method: Spike % (Limits) % Amt REC Source MDL* MRL Units Dil (Limits) Analyzed Notes Analyte Method Result Result Extracted: 11/07/08 13:42 Blank (8K07031-BLK1) EPA 6020 ND 0.00100 łx ---11/11/08 12:38 mg/l --Lead ---Extracted: 11/07/08 13:42 (8K07031-BS1) LCS 0.0800 99.4% (80-120) 11/11/08 12:44 EPA 6020 0.0795 0.00100 lx Lead --mg/l ... -Duplicate (8K07031-DUP1) QC Source: BRK0047-01 Extracted: 11/07/08 13:42 EPA 6020 ND 1xND 2.47% (20) 11/11/08 13:02 0.00100 mg/l --Lead ---------Extracted: 11/07/08 13:42 Matrix Spike (8K07031-MS1) QC Source: BRK0047-01 11/11/08 12:56 0.000410 0.0800 100% (75-125) Lead EPA 6020 0.0807 0.00100 mg/l 1x ** Post Spike (8K07031-PS1) QC Source: BRK0047-01 Extracted: 11/07/08 13:42 11/11/08 12:50 (80 - 120)Lead EPA 6020 0.103 --ug/mi lx 0,000410 0,100 102% ------

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Γ	Stantec				Project Nam	e:	COP W	estlake							
	PO Box 230, 12034 - (134th Ci	t NE Ste 102, zip	98052)		Project Num	iber:	01CP.01	396.44						Report Creat	ted:
	Redmond, WA/USA 98073				Project Man	ager:	Jennifer	Yotz						12/04/08 09	9:22
		Dissolved Met	als by EPA		0 Series M TestAmeric			ratory Q	uality	Cont	rol Resu	lts			
	QC Batch: 8K10012	Watar P	reparation M				-								:
Ar	alyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Anaiyzed	Notes
B	ank (8K10012-BLK1)								Extr	acted:	11/10/08 09	:30			
Le	ಕರ	EPA 6020 - Diss	ND		0.00100	mg/l	łx							11/10/08 21:52	
L	CS (8K10012-BS1)								Extr	acted:	11/10/08 09	:30			
Le	ad	EPA 6020 - Diss	0,200		0.00100	mg/l	lx		0,200	100%	(80-120)			11/10/08 21:58	
D	uplicate (8K10012-DUP1)				QC Source:	BRK004	7-01		Extr	acted:	11/10/08 09	;30			
Le	ad	EPA 6020 - Diss	ND		0.00100	mg/l	1x	ND				NR	(20)	11/10/08 22:27	
_ <u>M</u>	latrix Spike (8K10012-MS1)				QC Source:	BRK004	7-01		Extr	acted:	11/10/08 09	:30			
Le	ad	EPA 6020 - Diss	0.0926		0.00100	mg/l	1x	ND	0.100	92.2%	(75-125)		-	11/10/08 22:04	

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Γ	Stantec	Project Name:	COP Westlake	
	PO Box 230, 12034 - (134th Ct NE Ste 102, zip 98052)	Project Number:	01CP.01396.44	Report Created:
	Redmond, WA/USA 98073	Project Manager:	Jennifer Yotz	12/04/08 09:22
L				

· · · · · ·	Volatile Organ	air comht	аниз лу Б	TestAmeri		الالتهرية.	ir aros y C	zuairty	Cont		***13			
QC Batch: 8K06024	Water I	reparation	Method:	EPA 5030B										
Analyte	Method	Result	MÐL	* MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Anałyzed	Note
Blank (8K06024-BLK1)								Extr	acted:	11/06/08 08	:00			
Benzene	EPA \$260B	ND		0.590	ug/l	1 x							1/06/08 12:47	
Ethylbenzene	R	ND		0.500	п	4							ы	
Methyl tert-butyl ether	м	ND		1,00	и	6			~				l:	
Naphthalene	*1	ND		5.00		v								
Foluene	н	ND	•••	0,500	٣	н								
o-Xylene	79	ND		1.00	н	н	**	~~					ы	
m,p-Xylene	н	ND		2.00	4	ы							e	
Xylenes (total)	м	ND		3.00	P	U								
Surrogate(s): 1,2-DCA-d4		Recovery:	93.9%	<i>l ii</i>	nits: 70-130%	в							11/06/08 12:47	
Toluene-do		theory.	97.2%	254	75-125%	"							11	
4-BFB			100%		73-125%	п							<i>tt</i> .	
LCS (8K06024-BS1)								Extr	acted:	11/06/08 08	:00			
Benzene	EPA \$260B	33.6		0.500	ug/l	łx		40,0	84.0%	(80-120)		*-	11/06/08 11:47	
Sthylbenzene	n	35.8		0.500	٣	н			89.6%	(75-125)				
Methyl tert-butyl ether	в	34.9		1.00	м	٣		н	87.2%	(75-126)			10	
Naphthalene		34.8		5.00	л	μ			87,1%	. (65-144)			11	
Toluene	n	32,7		0.500		l*		и	81.8%	(75-125)			h	
o-Xylene	н	35.3		1.00	р	۳.		н	88.3%	(75-130)	**		r	
m,p-Xylene	н	69.6		2.00	n	r		80.0	87.0%	(75-125)				
Xylenes (total)	a	105		3,00	4	л		120	87.5%	,,				
Surrogate(s): 1,2-DCA-d4		Recovery:	95.2%	Li	nits: 70-130%	"			· · · · · ·				1]/06/08 11:47	
Toluenc-d8			94.7%		75-125%	"							μ	
4-BFB			97.5%		75-125%	"							"	
LCS Dup (8K06024-BSD1)								Exti	acted:	11/06/08 08	:00			
Benzene	EPA 8260B	34.7	70.0	0.500	ug/l	1x		40.0	86.8%	(80-120)	3.37%	6 (20)	11/06/08 12:16	
Ethylbenzene	"	36,8		0.500	н			0	92.0%	(75-125)	2.67%	ó "		
- Methyl tert-butyl ether	21	36.3		1.00	*1			н	90.7%	(75-126)	3.96%	ío •	4	
Naphthaicne	н	36.1		5.00		н		*	90.3%	(65-144)	3.66%	é °	n	
Toluone	D.	34.0		0.500		н			85.1%	(75-125)	4.02%	6 "	"	
o-Xylene		35.4		1.00		•			88.5%	(75-130)	0.2265	% "		
m,p-Xylene	ш	71.4		2.00		8		80.0	89.2%	(75-125)	2.45%	6 F	"	
Xylenes (total)	ų	107		3.00	н	a		120	89.0%		1.719	6 ¹⁰	٩	

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Toluene-d8

4-BFB

93.7%

98.2%

75-125% "

75-125% "



Stantec	Project Name:	COP Westlake	
PO Box 230, 12034 - (134th Ct NE Ste 102, zip 98052)	Project Number:	01CP.01396.44	Report Created:
Redmond, WA/USA 98073	Project Manager:	Jennifer Yotz	12/04/08 09:22
Volatile Organic Compounds	by EPA Method 826f	B - Laboratory Quality Control I	Results

QC Batch: 8K07015	Water I	reparation	Method: El	PA 5030B										
Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	RPD	(Limits)	Analyzed	Note
Blank (8K07015-BLK1)								Extr	acted:	11/07/08 11	:21			
Benzene	EPA 8260B	ND		0.500	ug/l	İx							1/07/08 13:20	
Ethylbenzene	je.	ND		0.500	n	н								
Methyl tert-butyl ether	μ	ND		1.00	н	*				×			D.	
Vaphthalene	м	ND	7	5.00	н	в							н	
Foluene	ą	ND		0.500		*							н	
-Xylene	н	ND		1.00	4			-					R	
m,p-Xylene		ND		2.00	н								υ	
Xylenes (total)	P	ND		3.00	н	•				***			н	
Surrogate(s): 1,2-DCA-d4		Recovery:	104%	Lii	nits: 70-130%	н							11/07/08 13:20	
Toluene-d8			98.6%		75-125%	n							"	
<i>4-BFB</i>			101%		75-125%								4)	
LCS (8K07015-BS1)								Exte	acted:	11/07/08 11	:21			
Benzene	EPA 8260B	39.2		0.500	ug/l	1x		40.0	97.9%	(80-120)			11/07/08 12:16	
Ethylbenzene	"	41.7		0,500	, ,	p		1	104%	(75-125)			-1	
Methyl tert-butyl ether	н	43.7		1.00	a	м			109%	(75-126)			-1	
Naphthalene	न	36.8		5.00	٣	8		u	92.0%	(65-144)			٣	
Toluene	р	36.6		0.500	N			મ	91.6%	(75-125)				
o-Xylene	IK	36.1		1.00	n	a.			90.2%	(75-130)				
	м	74.6		2.00		r.		80.0	93.3%	(75-125)				
m,p-Xylene Xylenes (total)	μ	111		3,00		ŀ		120	92.3%	(-	
			103%		mits: 70-130%	,							11/07/08 12:16	
Surrogate(s): 1.2-DCA-d4 Toluene-d8		Recovery:	103% 94.5%	LA	75-125%	"							n	
4-BFB			101%		75-125%								rr	
LCS Dup (8K07015-BSD1)										11/07/08 11				
Benzene	EPA 8260B	37.9	***	0.500	ug/l	İx		40.0	94.8%	(80-120)			11/07/08 12:42	
Ethylbenzene	IS.	39.8		0.500	đ	n		м	99.4%	(75-125)	4.69%		-	
Methyl tert-butyl ether	n	45.2		1.00	h	P		4	113%	(75-126)	3.33%		r	
Naphthalene	л	34.5		5.00	r.	e.			86.2%	(65-144)	6.519		н	
Toluene	ų	35.3		0.500	r,	м	***	μ	88.3%	(75-125)	3.67%	é "	٩	
o-Xylene	te.	34.9		1.00					87.2%	(75-130)	3.41%	ó "	4	
m,p-Xylene	ч	72.1		2.00	4	۲		80.0	90.2%	(75-125)	3.43%	6 "	*	

10.00 - martine file 6 سار **میلاد. منان**د Surger State

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Toluene-d8

4-BFB

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93.6%

98.8%

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75-125% 75-125% "



10 Box 250, 12054 (154) (164) B B (102, 24) (10022) 100522 100500 10000 10000 10000 100000 1000000 1000000	Stantee	Project Name:	COP Westlake	
Redmond, WA/USA 98073 Project Manager: Jennifer Yotz 12/04/08 09:2:	PO Box 230, 12034 - (134th Ct NE Ste 102, zip 98052)	Project Number:	01CP.01396.44	Report Created:
	Redmond, WA/USA 98073	Project Manager:	Jennifer Yotz	12/04/08 09:22

	Volatile Orga	nic Compo	-	A Metho TestAmeri		- Lab	oratory (Quality	Con	trol Resu	ults			
QC Batch: 8K10052	Water 1	reparation	Method: H	EPA 5030B			-							
Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	₩ REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Blank (8K10052-BLK1)								Extr	acted:	11/10/08 17	:31			
Benzene	EPA 8260B	ND		0.500	ug/l	lx							11/10/08 19:21	
Ethylbenzene	h	ND		0.500		"							н	
Methyl tert-buryl ether	ч	ND		1,00	n	"							n	
Naphthalene	n	ND		5.00	*1	2							P	
Toluene	11	ND		0.500	P.	н	~						w	
o-Xylene	н	ND		1.00	þ.	р	-							
m,p-Xylene	12	ND		2.00	м	ħ							P	
Xylenes (total)	'n	ND		3.00	μ	μ							r	
Surrogate(s): 1,2-DCA-d4		Recovery:	88.8%	Lin	nits: 70-130%								11/10/08 19:21 "	
Toluene-d8			94.0%		75-1259									
4-BFB			102%		75-1259	6 "								
LCS (8K10052-BS1)								Exti	acted:	11/10/08 17	:31			
Benzene	EPA 8260B	34.2		0.500	ug/l	İx		40.0	85.6%	(80-120)			11/10/08 17:46	
Ethylbenzene	19	34.9		0.500		۲			87,2%	(75-125)			4	
Methyl tert-butyl ether	P	36.6	***	1.00	н	н		8	91.4%	(75-126)	***			
Naphthalene	н	38.9	a an.	5.00				n	97.2%	(65-144)			н	
Toluene	n	32.9		0.500	4	٠		"	82.3%	(75-125)			*1	
o-Xylene	ч	35,4		1.00	Р	,		υ	88.6%	(75-130)			Pr.	
m,p-Xylene	•	70.6	*-*	2.00	Р	P		80.0	88.3%	(75-125)				
Xylenes (total)	rt	106	207	3.00	в	P.	•	120	88.4%	a		-	р	
Surrogate(s): 1,2-DCA-d4		Recovery:	97.6%	Lit	nits: 70-130%	, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,							11/10/08 17:46	
Toluene-d8			93.6%		75-1259								n	
4-BFB			100%		75-1259	6 "							n	
Matrix Spike (8K10052-MS1)				QC Source:	BRK0071-(15		Exti	acted:	11/10/08 17	:31			
Benzene	EPA 8260B	34.3		0,500	ug/l	lx	ND	40,0	85.7%	(80-124)	~~		11/10/08 18:15	
Ethylbenzene	п	34.9		0.500	*1	4	0.320	к	86.4%	(62-151)			н	
Methyl tert-butyl ether		35.5	200	1.00	۲	n	ND	я	88.7%	(75-126)			a	
Naphthaiene	л	38.1	***	5.00	в	r	1.38	,	91.8%	(59-182)			51	
Toluene	н	33.5		0.500		н	ND	n	83.8%	(75-125)				
o-Xylene		34.8		1,00		н	ND	,	87,1%	(75-130)				
2.1.1										/				

87.2% (60-140) Xylenes (total) 105 3.00 ND 120Limits: 70-130% Surrogate(s); 1.2-DCA-d4 Recovery: 94.3% " Toluene-d8 92.4% 75-125% D ,, 4-BFB97.2% 75-125%

69.8

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m,p-Xylene

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80.0 87.2% (75-135)

ND

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11/10/08 18:15



2.00



Stantec	Project Name:	COP Westlake	
PO Box 230, 12034 - (134th Ct NE Ste 102, zip 98052)	Project Number:	01CP.01396.44	Report Created:
Redmond, WA/USA 98073	Project Manager:	Jennifer Yotz	12/04/08 09:22

	Volatile Orga	nie Compo	ounds by E	PA Method TestAmerica		Lab	oratory (Quality	Cont	rol Res	ults			
QC Batch: 8K10052	Water 1	Preparation	n Method:	EPA 5030B										
Analyte	Method	Result	MDL	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits) Analyzed	Notes
Matrix Spike Dup (8K10052-M	(SD1)			QC Source; 1	BRK0071-05			Exti	acted:	11/10/08 17	:31			
Benzene	EPA 8260B	33.4		0.500	ug/l	lx	ND	40.0	83.4%	(80-124)	2.72%	(30)	11/10/08 18:44	
Ethylbenzene	ţı.	34.5		0.500	11	٩	0.320	n	85.4%	(62-151)	1.04%	•		
Methyl tert-butyl ether	"	34.8		1.00	н	,	ND	н	86.9%	(75-126)	2.05%			
Naphthalene	"	36.5		5,00	н	н	1.38	н	87.9%	(59-182)	4,15%		м	
Toluene	14	32.7		0,500	15	4	ND	n	81.8%	(75-125)	2.54%		۳	
o-Xylene	м	34.5		1.00	k	4	ND	6	86.3%	(75-130)	0.865%	6 "		
m,p-Xylene	м	68,3		2.00	н	ч	ND	80.0	85.3%	(75-135)	2.20%		P.	
Xylenes (total)		103		3.00	н	•	ND	120	85.7%	(60-140)	1.75%	, "	н	
Surrogate(s): 1,2-DCA-d4		Recovery:	93.8%	Lintit	s: 70-130%	"							11/10/08 18:44	
Toluene-d8			94.0%		75-125%	"							n	
4-BFB			98.8%		75-125%	н							0	

¢ Sugar.

Curtis D. Armstrong For Kate Haney, Project Manager

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Stantec	Project Name:	COP Westlake	
PO Box 230, 12034 - (134th Ct NE Ste 102, zip 98052)	Project Number:	01CP.01396.44	Report Created:
Redmond, WA/USA 98073	Project Manager:	Jennifer Yotz	12/04/08 09:22

CERTIFICATION SUMMARY

TestAmerica Seattle

Method	Matrix	Nelac	Washington	
EPA 6020 - Diss	Water	X	Х	
EPA 6020	Water	Х	Х	
EPA 8260B	Water	х	Х	
NWTPH-Dx	Water		Х	
NWTPH-Gx	Water		Х	

Any abnormalities or departures from sample acceptance policy shall be documented on the 'Sample Receipt and Temperature Log Form' and 'Sample Non-conformance Form' (if applicable) included with this report.

For information concerning certifications of this facility or another TestAmerica facility, please visit our website at www.TestAmericaInc.com

Samples collected by TestAmerica Field Services personnel are noted on the Chain of Custody (COC).

TestAmerica Seattle

5.00

Curtis D. Armstrong For Kate Haney, Project Manager

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Stantec			Project Name:	COP Westlake	<u></u>	
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Redmond, WA/USA 98073			Project Manager:	Jennifer Yotz	12/04/08 09:22	
Notes and Definitions						
Report Specific Notes:						
P7	-	Sample filtered in lab.				
Q5	-	- Results in the diesel organics range are primarily due to overlap from a gasoline range product.				
Z	-	- Due to sample matrix effects, the surrogate recovery was below the acceptance limits.				
Laborato	<u>ry R</u>	eporting Conventions:				
DET	-	Analyte DETECTED at or above the Reporting Limit. Qualitative Analyses only.				
ND	-	Analyte NOT DETECTED at or above the reporting limit (MDL or MRL, as appropriate).				
NR/NA	-	Not Reported / Not Available				
dry	-	Sample results reported on a Dry Weight Basis. Results and Reporting Limits have been corrected for Percent Dry Weight.				
wet	-	Sample results and reporting limits reported on a Wet Weight Basis (as received). Results with neither 'wet' nor 'dry' are reported on a Wet Weight Basis.				
RPD	-	RELATIVE PERCENT DIFFERENCE (RPDs calculated using Results, not Percent Recoveries).				
MRL	-	METHOD REPORTING LIMIT. Reporting Level at, or above, the lowest level standard of the Calibration Table.				
MDL*	-	METHOD DETECTION LIMIT. Reporting Level at, or above, the statistically derived limit based on 40CFR, Part 136, Appendix B. *MDLs are listed on the report only if the data has been evaluated below the MRL. Results between the MDL and MRL are reported as Estimated Results.				
Dil	-	Dilutions are calculated based on deviations from the standard dilution performed for an analysis, and may not represent the dilution found on the analytical raw data.				
Reporting Limits		 Reporting limits (MDLs and MRLs) are adjusted based on variations in sample preparation amounts, analytical dilutions and percent solids, where applicable. 				
Electronic Signature		Electronic Signature added in accordance with Te Application of electronic signature indicates that t Electronic signature is intended to be the legally b	he report has been revie	wed and approved for release by the laboratory.		

TestAmerica Seattle

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