



January 3, 2017
Cardno 03137904.LQ164

Cardno

801 Second Avenue
Suite 700
Seattle, WA 98104
USA

Phone +1 206 269 0104
Toll-free +1 877 470 4334
Fax +1 206 269 0098

www.cardno.com

LUST Coordinator
Washington State Department of Ecology
Northwest Regional Office
3190 160th Avenue Southeast
Bellevue, Washington 98008-5452

SUBJECT **Groundwater Monitoring Report – Fourth Quarter 2016**
Former Mobil Station 99CHT
7323 Aurora Avenue North
Seattle, Washington

LUST Coordinator:

At the request of ExxonMobil Environmental Services Company (EMES), on behalf of ExxonMobil Oil Corporation, Cardno has prepared the enclosed *Groundwater Monitoring Report – Fourth Quarter 2016* presenting results of a groundwater sampling event conducted on November 21, 2016 at the subject site.

Please contact Mr. Bobby Thompson, Cardno Project Manager for this site, at 206 510 5855, or Ms. Marla Madden, EMES Project Manager for this site, at 714 964 4935, with any questions.

Sincerely,

Laina Cole
Office Manager
Cardno
Direct Line +1 206 394 7225
Email: laina.cole@cardno.com

Bobby Thompson
Assistant Project Manager
Cardno
Direct Line +1 206 510 5855
Email: robert.thompson@cardno.com

ENCLOSURE

Cardno's ExxonMobil Environmental Services Company *Groundwater Monitoring Report – Fourth Quarter 2016*, dated January 3, 2017

cc: w/ enclosure
 Mr. Chris Dalton, Property Owner (*Electronic copy via email*)
 Ms. Marla Madden, ExxonMobil Environmental Services Company (*Filed in project file*)

**EXXONMOBIL ENVIRONMENTAL SERVICES COMPANY
 GROUNDWATER MONITORING REPORT – FOURTH QUARTER 2016**

January 3, 2017
 Cardno 03137904.Q164

Cardno

801 Second Avenue
 Suite 700
 Seattle, WA 98104
 USA

Site No.: 99CHT Address: 7323 Aurora Avenue North
Seattle, Washington
 ExxonMobil Project Manager: Marla Madden
 Consultant/Contact Person: Cardno/Bobby Thompson
 Primary Agency/Regulatory ID No.: Washington State Department of Ecology

Phone +1 206 269 0104
 Toll-free +1 877 470 4334
 Fax +1 206 269 0098

www.cardno.com

WORK PERFORMED THIS QUARTER [Fourth - 2016]:

- Monitored 6, purged and sampled 5 groundwater monitoring wells using low-flow sampling methods.

WORK PROPOSED FOR NEXT QUARTER [First - 2017]:

- Monitor and sample 6 groundwater monitoring wells using low-flow sampling methods.

SUMMARY:

Frequency of Sampling Events:	<u>Quarterly</u>	(Quarterly, etc.)
Approximate Depth to Groundwater:	<u>5 to 8</u>	(Measured Feet)
Average Site Groundwater Gradient:	<u>Southwest</u>	(Direction)
	<u>Not Calculated</u>	(Magnitude)
Maximum TPHg/Benzene Concentrations:	<u>2,000/<1.0</u>	(µg/L)
Measurable NAPL Detected:	<u>No</u>	(Yes - ID well(s)/No)
Measurable NAPL Thickness:	<u>None</u>	(feet)
Bulk Soil Removed This Quarter:	<u>None</u>	(cubic yards)
Water Wells or Surface Waters w/in 2,000 ft:	<u>Green Lake</u>	
Radius and Respective Direction:	<u>635 feet southeast</u>	(Distance & Direction)
Current Remedial Action:	<u>None</u>	(SVE/AS/P&T, etc.)

DISCUSSION:

- Concentrations of dissolved hydrocarbons were less than the MTCA Method A Cleanup Levels in 4 of 5 wells sampled.
- Well MW6 was dry; therefore, was not sampled.

January 3, 2017

Cardno 03137904.Q164 Former Mobil Station 99CHT, Seattle, Washington

ENCLOSURES:

Plate 1	Site Location Map
Plate 2	Generalized Site Plan
Plate 3	Groundwater Sample Analyses Map – 11/21/16
Plate 4	Groundwater Elevation Contour Map – 11/21/16
Table 1	Groundwater Monitoring and Sampling Schedule and Well Construction Details
Table 2	Cumulative Groundwater Analytical Results
Table 3	Cumulative Groundwater Analytical Results – Additional VOCs
Table 4	Cumulative Groundwater Analytical Results – Carcinogenic PAHs
Table 5	Cumulative Groundwater Analytical Results – Polychlorinated Biphenyls

Laboratory Analytical Report and Chain of Custody Documentation
Field Data Records

Prepared By:



Bobby Thompson
Assistant Project Manager
Cardno
Direct Line +1 206 510 5855
Email: robert.thompson@cardno.com

Reviewed By:



Don Clabaugh, P.E. 30454
Senior Engineer
Cardno
Direct Line +1 206 832 4619
Email: don.clabaugh@cardno.com



FN 0313790001

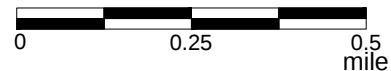
EXPLANATION



1/2-mile radius circle



APPROXIMATE SCALE



SOURCE:
Modified from a map
provided by
USGS



SITE LOCATION MAP

FORMER MOBIL STATION 99CHT
7323 Aurora Avenue North
Seattle, Washington

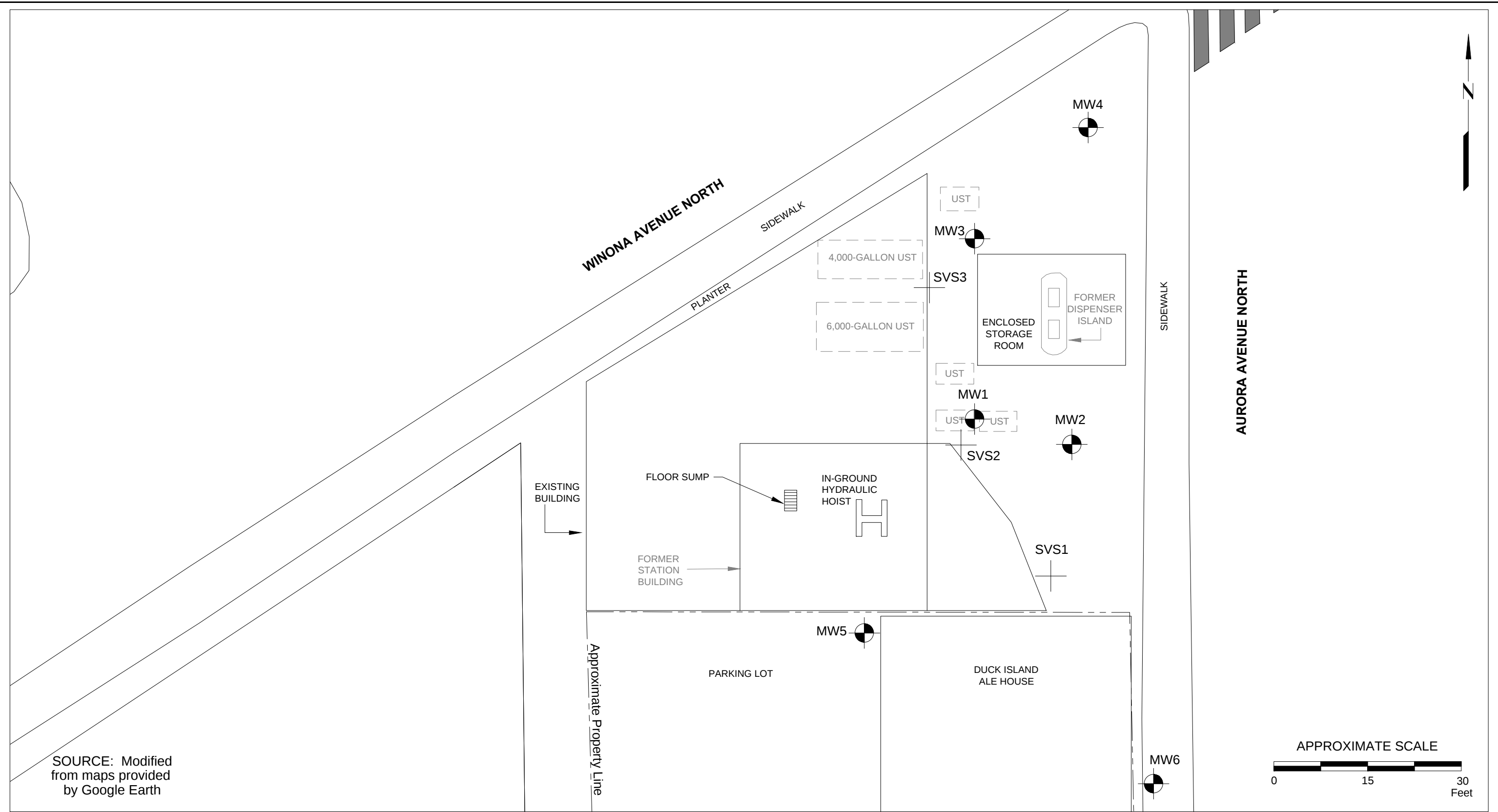
PROJECT NO.

031379

PLATE

1

LEC: 06/09/15



	GENERALIZED SITE PLAN FORMER MOBIL STATION 99CHT 7323 Aurora Avenue North Seattle, Washington	EXPLANATION MW6  Groundwater Monitoring Well SVS3  Soil Vapor Sampling Well --- Approximate Property Line	PROJECT NO. 031379 PLATE 2 LEC: 04/06/16
--	---	--	--

Laboratory Results in µg/L

MW3	Well ID
11/21/16	Sample Date
2,000	Total Petroleum Hydrocarbons as Gasoline
960	Total Petroleum Hydrocarbons as Diesel
<100	Total Petroleum Hydrocarbons as Motor Oil
<1.0	Benzene
<2.0	Toluene
17	Ethylbenzene
120	Total Xylenes
17J	Naphthalenes
<10.0	Total Lead
<10.0	Dissolved Lead

Numbers or Well Symbols in Red Indicate Dissolved Hydrocarbon Concentrations Which Exceed MTCA Method A Cleanup Levels

Numbers or Well Symbols in Blue Indicate Dissolved Hydrocarbon Concentrations Less Than MTCA Method A Cleanup Levels

No Data Available for Numbers and Well Symbols in Black

J = Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated.
b = Analyte positively detected, but quantification is an estimate.

MW1	
02/10/16	11/21/16
138	550
<95.2	270
<95.2	<94
<0.200	<0.50
<1.00	1.0
1.59	1.3
10.9	32
ND	ND
5.30	<10.0
<5.00	<10.0

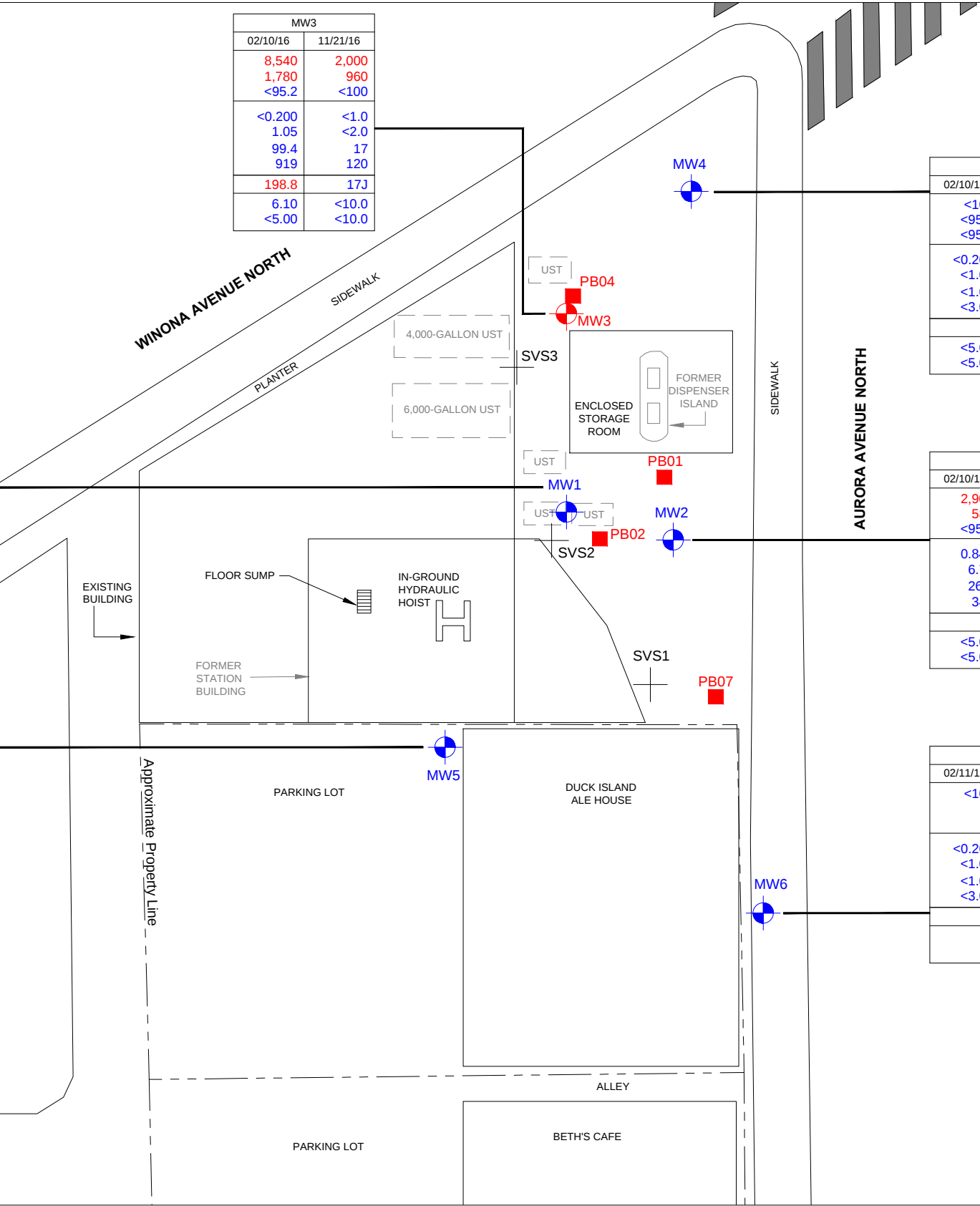
MW5	
02/10/16	11/21/16
<100	<100
<95.2	15J
<95.2	<94
<0.200	<0.50
<1.00	<1.0
<1.00	<1.0
<3.00	<1.0
--	--
<5.00	<10.0
<5.00	<10.0

MW3	
02/10/16	11/21/16
8,540	2,000
1,780	960
<95.2	<100
<0.200	<1.0
1.05	<2.0
99.4	17
919	120
198.8	17J
6.10	<10.0
<5.00	<10.0

MW4	
02/10/16	11/21/16
<100	<100
<95.2	<100
<95.2	<100
<0.200	<0.50
<1.00	<1.0
<1.00	<1.0
<3.00	<1.0
--	--
<5.00	<10.0
<5.00	<10.0

MW2	
02/10/16	11/21/16
2,900	<100
589	<94
<95.2	<94
0.844	<0.50
6.73	<1.0
26.1	<1.0
346	2.2b
--	ND
<5.00	<10.0
<5.00	<10.0

MW6	
02/11/16	11/21/16
<100	DRY
--	--
--	--
<0.200	--
<1.00	--
<1.00	--
<3.00	--
--	--
--	--
--	--



SOURCE: Modified from maps provided by Google Earth

FN 0313790002



GROUNDWATER SAMPLE ANALYSES MAP - 11/21/16
FORMER MOBIL STATION 99CHT
7323 Aurora Avenue North
Seattle, Washington

EXPLANATION

MW6	Groundwater Monitoring Well	SVS3	Soil Vapor Sampling Well
PB07	Grab Groundwater Sample		
---	Approximate Property Line		

PROJECT NO.

031379

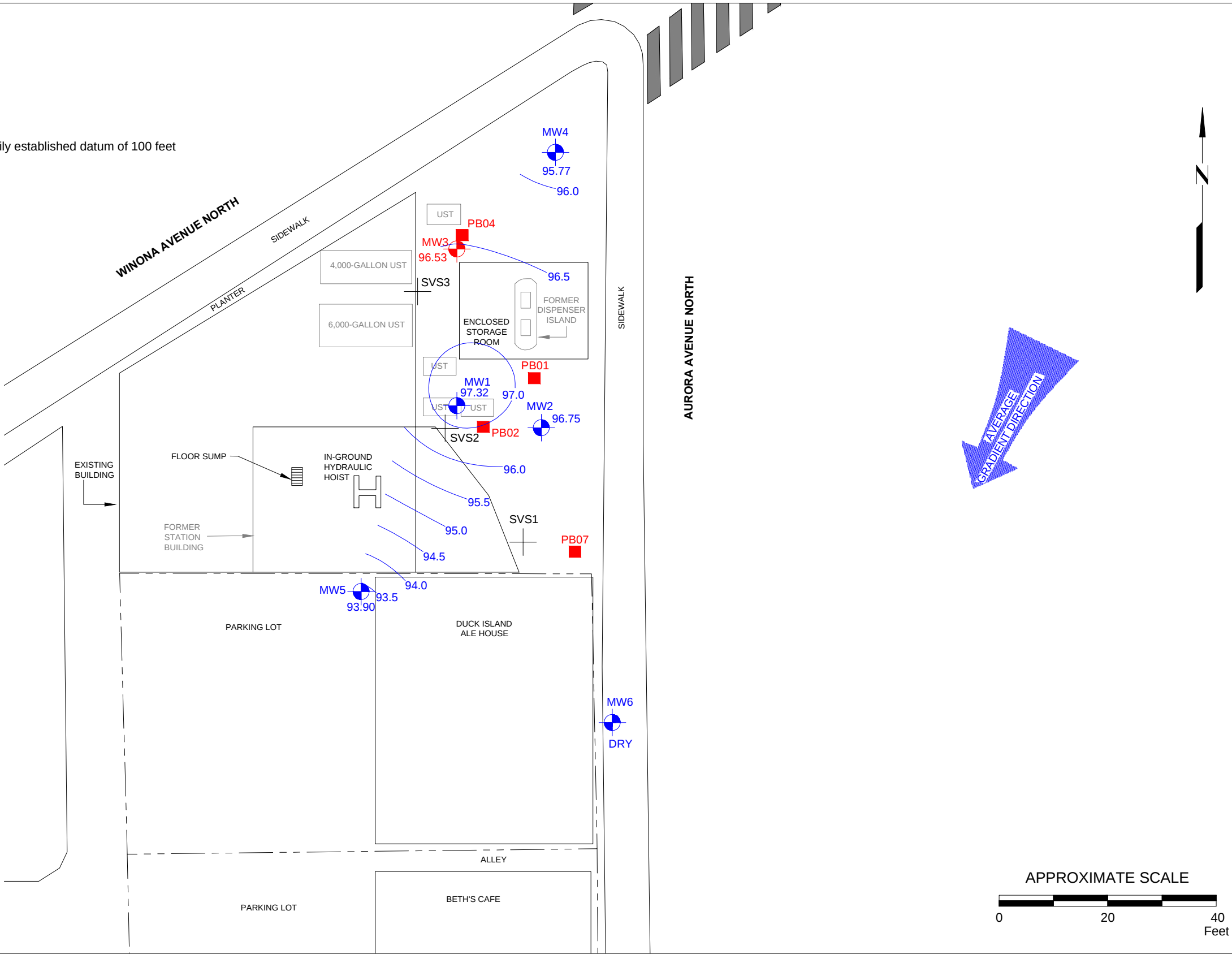
PLATE

3

RRT: 12/191/6

- Numbers or Well Symbols in Red Indicate Dissolved Hydrocarbon Concentrations Which Exceed MTCA Method A Cleanup Levels
- Numbers or Well Symbols in Blue Indicate Dissolved Hydrocarbon Concentrations Less Than MTCA Method A Cleanup Levels
- No Data Available for Numbers and Well Symbols in Black

Wellhead elevations were measured relative to MW6 which was assigned an arbitrarily established datum of 100 feet



SOURCE: Modified from maps provided by Google Earth

FN 0313790002



GROUNDWATER ELEVATION
CONTOUR MAP - 11/21/16

FORMER MOBIL STATION 99CHT

7323 Aurora Avenue North

Seattle, Washington

EXPLANATION

- MW6

Groundwater Monitoring Well
- DRY

Groundwater Elevation
- PB07

Grab Groundwater Sample
- Groundwater Elevation Contour Line
- B18/SVS3

Soil Vapor Sampling Well
- Approximate Property Line

PROJECT NO.

031379

PLATE

4

RRT: 12/19/16

TABLE 1
WELL CONSTRUCTION DETAILS

Former Mobil Station 99CHT
7323 Aurora Avenue North
Seattle, Washington
Page 1 of 1

Well ID	Date of Installation	Borehole/Casing Diameter (Inches)	Wellhead Elevation (feet)	Screened Interval (feet bgs)	Total Well Depth (feet bgs)	Slot Size (Inches)
MW1	12/15/15	8/4	102.13	5-13	13	0.010
MW2	12/15/15	8/4	101.63	5-13	13	0.010
MW3	12/16/15	8/4	103.38	5-15	15	0.010
MW4	12/17/15	6/2	104.10	5-15	15	0.010
MW5	12/15/15	6/2	100.93	5-15	15	0.010
MW6	12/14/15	3/1	100.00	3-8	8	0.010

EXPLANATION:

feet bgs = Feet below ground surface

Wellhead elevations were measured relative to MW6 which was assigned an arbitrarily established datum of 100 feet

TABLE 2
CUMULATIVE GROUNDWATER ANALYTICAL RESULTS
TPH / BTEX / LEAD

Former Mobil Station 99CHT
7323 Aurora Avenue North
Seattle, Washington
Page 1 of 2

Well ID	Sampling Date	Wellhead Elev (feet)	DTW (feet bgs)	GW Elev (feet)	TPHg (µg/L)	TPHd (µg/L)	TPHmo (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	Total Pb (µg/L)	Diss Pb (µg/L)
Screened Interval 5-13 feet bgs \ Total Depth 13 feet bgs													
MW1	02/10/16	102.13	4.64	97.49	138	<95.2	<95.2	<0.200	<1.00	1.59	10.9	5.30	<5.00
MW1	11/21/16	102.13	4.81	97.32	550	270	<94	<0.50	1.0	1.3	32	<10.0	<10.0
Screened Interval 5-13 feet bgs \ Total Depth 13 feet bgs													
MW2	02/10/16	101.63	4.37	97.26	2,900	589	<95.2	0.844	6.73	26.1	346	<5.00	<5.00
MW2	11/21/16	101.63	4.88	96.75	<100	<94	<94	<0.50	<1.0	<1.0	2.2	<10.0	<10.0
Screened Interval 5-15 feet bgs \ Total Depth 15 feet bgs													
MW3	02/10/16	103.38	6.13	97.25	8,540	1,780	<95.2	<0.200	1.05	99.4	919	6.10	<5.00
MW3	11/21/16	103.38	6.85	96.53	2,000	960	<100	<1.0	<2.0	17	120	<10.0	<10.0
Screened Interval 5-15 feet bgs \ Total Depth 15 feet bgs													
MW4	02/10/16	104.10	7.52	96.58	<100	<95.2	<95.2	<0.200	<1.00	<1.00	<3.00	<5.00	<5.00
MW4	11/21/16	104.10	8.33	95.77	<100	<100	<100	<0.50	<1.0	<1.0	<1.0	<10.0	<10.0
Screened Interval 5-15 feet bgs \ Total Depth 15 feet bgs													
MW5	02/10/16	100.93	6.49	94.44	<100	<95.2	<95.2	<0.200	<1.00	<1.00	<3.00	<5.00	<5.00
MW5	11/21/16	100.93	7.03	93.9	<100	15J	<94	<0.50	<1.0	<1.0	<1.0	<10.0	<10.0
Screened Interval 3-8 feet bgs \ Total Depth 8 feet bgs													
MW6	02/11/16	100.00	7.48	92.52	<100	--	--	<0.200	<1.00	<1.00	<3.00	--	--
MW6	11/21/16	100.00	DRY	--	--	--	--	--	--	--	--	--	--
MTCA Method A Cleanup Levels					800/1,000 ^a	500	500	5	1,000	700	1,000	15	15

Continued in Page 2

TABLE 2
CUMULATIVE GROUNDWATER ANALYTICAL RESULTS
TPH / BTEX / LEAD

Former Mobil Station 99CHT
7323 Aurora Avenue North
Seattle, Washington
Page 2 of 2

EXPLANATION:

µg/L = Micrograms per Liter

Wellhead Elev = Wellhead elevations were measured relative to MW6 which was assigned an arbitrarily established datum of 100 feet

DTW = Depth to water in feet below top of casing

GW Elev = Groundwater elevation relative to top of casing elevation

TPHg = Total Petroleum Hydrocarbons as Gasoline analyzed in accordance with Ecology Method NWTPH-Gx

TPHd and TPHmo = Total Petroleum Hydrocarbons as Diesel and Motor Oil analyzed in accordance with Ecology Method NWTPH-Dx

B = Benzene; T = Toluene; E = Ethylbenzene; X = Total Xylenes

BTEX = Aromatic compounds analyzed in accordance with EPA Method 8260B

Total Pb = Total Lead; Diss Pb = Dissolved Lead; Total and Dissolved Lead analyzed in accordance with EPA Method 6010C

< = Less than stated laboratory reporting limit

-- = Not analyzed; N/A = Not applicable

Shaded values equal or exceed MTCA Method A Cleanup Levels

a = TPHg cleanup level for groundwater is 800 µg/L if benzene is present, or 1,000 µg/L if benzene is not present

J = Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated.

TABLE 3
CUMULATIVE GROUNDWATER ANALYTICAL RESULTS
ADDITIONAL VOCs
Former Mobil Station 99CHT
7323 Aurora Avenue North
Seattle, Washington
Page 1 of 1

Well ID	Sample Date	EDC (µg/L)	EDB (µg/L)	TCE (µg/L)	VC (µg/L)	Naphthalenes Total ^a (µg/L)
MW1	02/10/16	<1.00	<1.00	<1.00	<0.200	ND
MW1	11/21/16	<0.50	<1.0	<1.0	<0.5	--
MW2	02/10/16	--	--	--	--	--
MW2	11/21/16	<0.50	<1.0	<1.0	<0.50	--
MW3	02/10/16	<1.00	<1.00	<1.00	<0.200	198.8
MW3	11/21/16	<2.0	<2.0	<2.0	<1.0	--
MTCA Method A Cleanup Levels		5	0.01	5	0.2	160

EXPLANATION:

µg/L = Micrograms per Liter

EDB = 1,2-Dibromoethane

EDC = 1,2-Dichloroethane

MTBE = Methyl tertiary butyl ether

1,1-DCE = 1,1-Dichloroethene

TCE = Trichloroethene

1-Methyl = 1-Methyl Naphthalene

2-Methyl = 2-Methyl Naphthalene

VOCs in accordance with EPA Method 8260C

-- = Not analyzed

N/A = Not applicable; ND = Not detected

< = Less than laboratory reporting limit

Shaded values equal or exceed MTCA Method A Cleanup Levels

a = Total naphthalenes is a sum of naphthalene, 1-methyl naphthalene, and 2-methyl naphthalene

b = Analyzed in accordance with EPA Method 8270D

J = Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated.

TABLE 4
CUMULATIVE GROUNDWATER ANALYTICAL RESULTS
CARCINOGENIC PAHs
Former Mobil Station 99CHT
7323 Aurora Avenue North
Seattle, Washington
Page 1 of 1

Well ID	Sampling Date	B(a)A (µg/L)	B(a)P (µg/L)	B(b)F (µg/L)	B(k)F (µg/L)	Chrysene (µg/L)	DB(a,h)A (µg/L)	IP (µg/L)
MW1	02/10/16	<0.0990	<0.0990	<0.0990	<0.0990	<0.0990	<0.0990	<0.0990
MW3	02/10/16	<0.0990	<0.0990	<0.0990	<0.0990	<0.0990	<0.0990	<0.0990
MTCA Method A Cleanup Levels		N/A	0.1	N/A	N/A	N/A	N/A	N/A

EXPLANATION:

µg/L = Micrograms per Liter

B(a)A = Benzo(a)anthracene

B(b)F = Benzo(b)fluoranthene

B(k)F = Benzo(k)fluoranthene

B(a)P = Benzo(a)pyrene

DB(a,h)A = Dibenzo(a,h)anthracene

IP = Indeno(1,2,3-cd)pyrene

Carcinogenic PAHs = Carcinogenic Polycyclic Aromatic Hydrocarbons in accordance with EPA Method 8270D

< = Less than stated laboratory reporting limit

-- = Not analyzed; N/A = Not applicable

Shaded values equal or exceed MTCA Method A Cleanup Levels

TABLE 5
CUMULATIVE GROUNDWATER ANALYTICAL RESULTS
POLYCHLORINATED BIPHENYLS

Former Mobil Station 99CHT
7323 Aurora Avenue North
Seattle, Washington
Page 1 of 1

Well ID	Sampling Date	PCB-1016 (µg/L)	PCB-1221 (µg/L)	PCB-1232 (µg/L)	PCB-1242 (µg/L)	PCB-1248 (µg/L)	PCB-1254 (µg/L)	PCB-1260 (µg/L)
MW1	02/10/16	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500
MW3	02/10/16	<0.481	<0.481	<0.481	<0.481	<0.481	<0.481	<0.481
MTCA Method A Cleanup Level					0.1 ^a			

EXPLANATION:

µg/L = Micrograms per liter

Polychlorinated Biphenyls = PCB-1016, -1221, -1232, -1242, -1248, -1254, and -1260 analyzed in accordance with EPA Method 8082A

< = Less than stated laboratory reporting limit

Shaded values equal or exceed MTCA Method A Cleanup Levels

a = MTCA Method A Cleanup Level is the cumulative value for all PCBs



Supplemental Report 1

The original report has been revised/corrected.

**WORK ORDER NUMBER: 16-11-1961***The difference is service*

AIR | SOIL | WATER | MARINE CHEMISTRY

Analytical Report For**Client:** Cardno**Client Project Name:** ExxonMobil 99CHT**Attention:** Bobby Thompson
801 Second Avenue
Suite 700
Seattle, WA 98104-1573*Cecile L. de Guia*Approved for release on 12/13/2016 by:
Cecile deGuia
Project Manager

ResultLink ▶

Email your PM ▶

Eurofins Calscience, Inc. (Calscience) certifies that the test results provided in this report meet all NELAC requirements for parameters for which accreditation is required or available. Any exceptions to NELAC requirements are noted in the case narrative. The original report of subcontracted analyses, if any, is attached to this report. The results in this report are limited to the sample(s) tested and any reproduction thereof must be made in its entirety. The client or recipient of this report is specifically prohibited from making material changes to said report and, to the extent that such changes are made, Calscience is not responsible, legally or otherwise. The client or recipient agrees to indemnify Calscience for any defense to any litigation which may arise.

Contents

Client Project Name: ExxonMobil 99CHT
Work Order Number: 16-11-1961

1	Work Order Narrative.	3
2	Sample Summary.	4
3	Client Sample Data.	5
	3.1 NWTPH-Dx TPH Diesel Ranges (Aqueous).	5
	3.2 NWTPH-Dx TPH Motor Oil Ranges (Aqueous).	7
	3.3 NWTPH-Gx Gasoline (Aqueous).	9
	3.4 EPA 6010B ICP Metals (Aqueous).	11
	3.5 EPA 6010B ICP Metals (Aqueous).	12
	3.6 EPA 8260B Volatile Organics + Oxygenates (Aqueous).	13
	3.7 EPA 8260B BTEX/MTBE (Aqueous).	28
4	Quality Control Sample Data.	30
	4.1 MS/MSD.	30
	4.2 PDS/PDSD.	36
	4.3 LCS/LCSD.	37
5	Sample Analysis Summary.	44
6	Glossary of Terms and Qualifiers.	45
7	Chain-of-Custody/Sample Receipt Form.	46

Work Order Narrative

Work Order: 16-11-1961

Page 1 of 1

Condition Upon Receipt:

Samples were received under Chain-of-Custody (COC) on 11/22/16. They were assigned to Work Order 16-11-1961.

Unless otherwise noted on the Sample Receiving forms all samples were received in good condition and within the recommended EPA temperature criteria for the methods noted on the COC. The COC and Sample Receiving Documents are integral elements of the analytical report and are presented at the back of the report.

Holding Times:

All samples were analyzed within prescribed holding times (HT) and/or in accordance with the Calscience Sample Acceptance Policy unless otherwise noted in the analytical report and/or comprehensive case narrative, if required.

Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of ≤ 15 minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.

Quality Control:

All quality control parameters (QC) were within established control limits except where noted in the QC summary forms or described further within this report.

Subcontractor Information:

Unless otherwise noted below (or on the subcontract form), no samples were subcontracted.

Additional Comments:

Air - Sorbent-extracted air methods (EPA TO-4A, EPA TO-10, EPA TO-13A, EPA TO-17): Analytical results are converted from mass/sample basis to mass/volume basis using client-supplied air volumes.

Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are always reported on a wet weight basis.

EPA 8260B:

LCS Batch Number 161201L017: All target analytes were within acceptance criteria with the exception of Trichloroethene. The LCS recovery for this analyte was above the upper control limit of 120%, but was below the NELAC-defined upper marginal exceedance (ME) limit of 127%. (ME = ± 4 standard deviations.) Based upon the number of analytes spiked into the LCS, and per NELAC, the laboratory is allowed to report associated data when there is, in this case, one marginal exceedance in an LCS.

Please note that the report has been amended to reflect the corrected units per client's request that all parameters should be reported in ug/L.



Calscience

Sample Summary

Client: Cardno	Work Order:	16-11-1961
801 Second Avenue, Suite 700	Project Name:	ExxonMobil 99CHT
Seattle, WA 98104-1573	PO Number:	4410470191
	Date/Time Received:	11/22/16 07:40
	Number of Containers:	53

Attn: Bobby Thompson

Sample Identification	Lab Number	Collection Date and Time	Number of Containers	Matrix
W-5-MW1	16-11-1961-1	11/21/16 12:10	13	Aqueous
W-5-MW2	16-11-1961-2	11/21/16 12:40	10	Aqueous
W-7-MW3	16-11-1961-3	11/21/16 10:55	10	Aqueous
W-8-MW4	16-11-1961-4	11/21/16 11:25	10	Aqueous
W-7-MW5	16-11-1961-5	11/21/16 10:20	10	Aqueous


Return to Contents



Calscience

Analytical Report

Cardno 801 Second Avenue, Suite 700 Seattle, WA 98104-1573	Date Received: 11/22/16 Work Order: 16-11-1961 Preparation: EPA 3510C Method: NWTPH-Dx Units: ug/L
--	--

Project: ExxonMobil 99CHT

Page 1 of 2

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
W-5-MW1	16-11-1961-1-L	11/21/16 12:10	Aqueous	GC 45	11/23/16	11/30/16 01:52	161123B08

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
TPH as Diesel Range	270	94	11	1.00	SG,HD

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
n-Octacosane	88	68-140	

W-5-MW2	16-11-1961-2-J	11/21/16 12:40	Aqueous	GC 45	11/23/16	11/30/16 02:14	161123B08
---------	----------------	----------------	---------	-------	----------	----------------	-----------

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
TPH as Diesel Range	ND	94	11	1.00	SG

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
n-Octacosane	87	68-140	

W-7-MW3	16-11-1961-3-J	11/21/16 10:55	Aqueous	GC 45	11/23/16	11/30/16 02:35	161123B08
---------	----------------	----------------	---------	-------	----------	----------------	-----------

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
TPH as Diesel Range	960	100	12	1.00	SG,HD

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
n-Octacosane	89	68-140	

W-8-MW4	16-11-1961-4-J	11/21/16 11:25	Aqueous	GC 45	11/23/16	11/30/16 02:57	161123B08
---------	----------------	----------------	---------	-------	----------	----------------	-----------

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
TPH as Diesel Range	ND	100	12	1.00	SG

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
n-Octacosane	86	68-140	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



Calscience

Analytical Report

Cardno
801 Second Avenue, Suite 700
Seattle, WA 98104-1573

Date Received: 11/22/16
Work Order: 16-11-1961
Preparation: EPA 3510C
Method: NWTPH-Dx
Units: ug/L

Project: ExxonMobil 99CHT

Page 2 of 2

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
W-7-MW5	16-11-1961-5-J	11/21/16 10:20	Aqueous	GC 45	11/23/16	11/30/16 03:20	161123B08

Comment(s): - Results were evaluated to the MDL (DL), concentrations $\geq$ to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
TPH as Diesel Range	15	94	11	1.00	SG,HD,J

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	75	68-140	

Method Blank	099-15-560-148	N/A	Aqueous	GC 45	11/23/16	12/06/16 14:18	161123B08
--------------	----------------	-----	---------	-------	----------	-------------------	-----------

Comment(s): - Results were evaluated to the MDL (DL), concentrations $\geq$ to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
TPH as Diesel Range	ND	100	12	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	108	68-140	

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



Calscience

Analytical Report

Cardno
801 Second Avenue, Suite 700
Seattle, WA 98104-1573

Date Received: 11/22/16
Work Order: 16-11-1961
Preparation: EPA 3510C
Method: NWTPH-Dx
Units: ug/L

Project: ExxonMobil 99CHT

Page 1 of 2

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
W-5-MW1	16-11-1961-1-L	11/21/16 12:10	Aqueous	GC 45	11/23/16	11/30/16 01:52	161123B09

Comment(s): - Results were evaluated to the MDL (DL), concentrations $\geq$ to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
TPH as Motor Oil Range	ND	94	13	1.00	SG

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	88	68-140	

W-5-MW2	16-11-1961-2-J	11/21/16 12:40	Aqueous	GC 45	11/23/16	11/30/16 02:14	161123B09
---------	----------------	----------------	---------	-------	----------	----------------	-----------

Comment(s): - Results were evaluated to the MDL (DL), concentrations $\geq$ to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
TPH as Motor Oil Range	ND	94	13	1.00	SG

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	87	68-140	

W-7-MW3	16-11-1961-3-J	11/21/16 10:55	Aqueous	GC 45	11/23/16	11/30/16 02:35	161123B09
---------	----------------	----------------	---------	-------	----------	----------------	-----------

Comment(s): - Results were evaluated to the MDL (DL), concentrations $\geq$ to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
TPH as Motor Oil Range	ND	100	14	1.00	SG

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	89	68-140	

W-8-MW4	16-11-1961-4-J	11/21/16 11:25	Aqueous	GC 45	11/23/16	11/30/16 02:57	161123B09
---------	----------------	----------------	---------	-------	----------	----------------	-----------

Comment(s): - Results were evaluated to the MDL (DL), concentrations $\geq$ to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
TPH as Motor Oil Range	ND	100	14	1.00	SG

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	86	68-140	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



Calscience

Analytical Report

Cardno
801 Second Avenue, Suite 700
Seattle, WA 98104-1573

Date Received: 11/22/16
Work Order: 16-11-1961
Preparation: EPA 3510C
Method: NWTPH-Dx
Units: ug/L

Project: ExxonMobil 99CHT

Page 2 of 2

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
W-7-MW5	16-11-1961-5-J	11/21/16 10:20	Aqueous	GC 45	11/23/16	11/30/16 03:20	161123B09

Comment(s): - Results were evaluated to the MDL (DL), concentrations $\geq$ to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
TPH as Motor Oil Range	ND	94	13	1.00	SG

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	75	68-140	

Method Blank	099-15-562-76	N/A	Aqueous	GC 45	11/23/16	12/06/16 14:18	161123B09
--------------	---------------	-----	---------	-------	----------	----------------	-----------

Comment(s): - Results were evaluated to the MDL (DL), concentrations $\geq$ to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
TPH as Motor Oil Range	ND	100	14	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	108	68-140	

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



Calscience

Analytical Report

Cardno
801 Second Avenue, Suite 700
Seattle, WA 98104-1573

Date Received: 11/22/16
Work Order: 16-11-1961
Preparation: EPA 5030C
Method: NWTPH-Gx
Units: ug/L

Project: ExxonMobil 99CHT

Page 1 of 2

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
W-5-MW1	16-11-1961-1-F	11/21/16 12:10	Aqueous	GC 25	12/01/16	12/01/16 20:13	161201L048

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
TPH as Gasoline	550	100	48	1.00	HD

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	95	38-134	

W-5-MW2	16-11-1961-2-F	11/21/16 12:40	Aqueous	GC 25	12/01/16	12/01/16 21:53	161201L048
---------	----------------	----------------	---------	-------	----------	----------------	------------

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
TPH as Gasoline	ND	100	48	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	83	38-134	

W-7-MW3	16-11-1961-3-F	11/21/16 10:55	Aqueous	GC 25	12/01/16	12/01/16 22:27	161201L048
---------	----------------	----------------	---------	-------	----------	----------------	------------

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
TPH as Gasoline	2000	100	48	1.00	HD

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	110	38-134	

W-8-MW4	16-11-1961-4-F	11/21/16 11:25	Aqueous	GC 25	12/01/16	12/01/16 23:00	161201L048
---------	----------------	----------------	---------	-------	----------	----------------	------------

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
TPH as Gasoline	ND	100	48	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	80	38-134	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



Calscience

Analytical Report

Cardno
801 Second Avenue, Suite 700
Seattle, WA 98104-1573

Date Received: 11/22/16
Work Order: 16-11-1961
Preparation: EPA 5030C
Method: NWTPH-Gx
Units: ug/L

Project: ExxonMobil 99CHT

Page 2 of 2

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
W-7-MW5	16-11-1961-5-F	11/21/16 10:20	Aqueous	GC 25	12/01/16	12/01/16 23:34	161201L048

Comment(s): - Results were evaluated to the MDL (DL), concentrations $\geq$ to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
TPH as Gasoline	ND	100	48	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	81	38-134	

Method Blank	099-12-743-843	N/A	Aqueous	GC 25	12/01/16	12/01/16 16:19	161201L048
--------------	----------------	-----	---------	-------	----------	----------------	------------

Comment(s): - Results were evaluated to the MDL (DL), concentrations $\geq$ to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
TPH as Gasoline	ND	100	48	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	82	38-134	

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



Calscience

Analytical Report

Cardno	Date Received:	11/22/16
801 Second Avenue, Suite 700	Work Order:	16-11-1961
Seattle, WA 98104-1573	Preparation:	EPA 3010A Total
	Method:	EPA 6010B
	Units:	ug/L
Project: ExxonMobil 99CHT		Page 1 of 1

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
W-5-MW1	16-11-1961-1-I	11/21/16 12:10	Aqueous	ICP 7300	11/29/16	12/06/16 16:27	161129LA2

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Lead	ND	10.0	4.06	1.00	

W-5-MW2	16-11-1961-2-G	11/21/16 12:40	Aqueous	ICP 7300	11/29/16	12/06/16 16:30	161129LA2
---------	----------------	----------------	---------	----------	----------	----------------	-----------

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Lead	ND	10.0	4.06	1.00	

W-7-MW3	16-11-1961-3-G	11/21/16 10:55	Aqueous	ICP 7300	11/29/16	12/06/16 16:31	161129LA2
---------	----------------	----------------	---------	----------	----------	----------------	-----------

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Lead	ND	10.0	4.06	1.00	

W-8-MW4	16-11-1961-4-G	11/21/16 11:25	Aqueous	ICP 7300	11/29/16	12/06/16 16:32	161129LA2
---------	----------------	----------------	---------	----------	----------	----------------	-----------

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Lead	ND	10.0	4.06	1.00	

W-7-MW5	16-11-1961-5-G	11/21/16 10:20	Aqueous	ICP 7300	11/29/16	12/06/16 16:33	161129LA2
---------	----------------	----------------	---------	----------	----------	----------------	-----------

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Lead	ND	10.0	4.06	1.00	

Method Blank	097-01-003-16184	N/A	Aqueous	ICP 7300	11/29/16	12/06/16 13:50	161129LA2
--------------	------------------	-----	---------	----------	----------	----------------	-----------

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Lead	ND	10.0	4.06	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Cardno
801 Second Avenue, Suite 700
Seattle, WA 98104-1573

Date Received: 11/22/16
Work Order: 16-11-1961
Preparation: EPA 3005A Filt.
Method: EPA 6010B
Units: ug/L

Project: ExxonMobil 99CHT

Page 1 of 1

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
W-5-MW1	16-11-1961-1-K	11/21/16 12:10	Aqueous	ICP 7300	11/28/16	12/06/16 16:35	161128LA3

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Lead	ND	10.0	4.06	1.00	

W-5-MW2	16-11-1961-2-H	11/21/16 12:40	Aqueous	ICP 7300	11/28/16	12/06/16 16:36	161128LA3
---------	----------------	----------------	---------	----------	----------	----------------	-----------

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Lead	ND	10.0	4.06	1.00	

W-7-MW3	16-11-1961-3-H	11/21/16 10:55	Aqueous	ICP 7300	11/28/16	12/06/16 16:37	161128LA3
---------	----------------	----------------	---------	----------	----------	----------------	-----------

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Lead	ND	10.0	4.06	1.00	

W-8-MW4	16-11-1961-4-H	11/21/16 11:25	Aqueous	ICP 7300	11/28/16	12/06/16 16:40	161128LA3
---------	----------------	----------------	---------	----------	----------	----------------	-----------

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Lead	ND	10.0	4.06	1.00	

W-7-MW5	16-11-1961-5-H	11/21/16 10:20	Aqueous	ICP 7300	11/28/16	12/06/16 16:41	161128LA3
---------	----------------	----------------	---------	----------	----------	----------------	-----------

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Lead	ND	10.0	4.06	1.00	

Method Blank	099-15-683-1905	N/A	Aqueous	ICP 7300	11/28/16	12/01/16 15:51	161128LA3
--------------	-----------------	-----	---------	----------	----------	----------------	-----------

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Lead	ND	10.0	4.06	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



Calscience

Analytical Report

Cardno
801 Second Avenue, Suite 700
Seattle, WA 98104-1573

Date Received: 11/22/16
Work Order: 16-11-1961
Preparation: EPA 5030C
Method: EPA 8260B
Units: ug/L

Project: ExxonMobil 99CHT

Page 1 of 15

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
W-5-MW1	16-11-1961-1-B	11/21/16 12:10	Aqueous	GC/MS CC	12/01/16	12/01/16 11:53	161201L017

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Benzene	ND	0.50	0.14	1.00	
Toluene	1.0	1.0	0.24	1.00	
Ethylbenzene	1.3	1.0	0.14	1.00	
o-Xylene	12	1.0	0.23	1.00	
p/m-Xylene	20	1.0	0.24	1.00	
Xylenes (total)	32	1.0	0.23	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.0	0.31	1.00	
Tert-Butyl Alcohol (TBA)	ND	10	4.6	1.00	
Diisopropyl Ether (DIPE)	ND	2.0	0.33	1.00	
Ethyl-t-Butyl Ether (ETBE)	ND	2.0	0.44	1.00	
Tert-Amyl-Methyl Ether (TAME)	ND	2.0	0.22	1.00	
Ethanol	ND	100	50	1.00	
1,1,1,2-Tetrachloroethane	ND	1.0	0.40	1.00	
1,1,1-Trichloroethane	ND	1.0	0.30	1.00	
1,1,2,2-Tetrachloroethane	ND	1.0	0.41	1.00	
1,1,2-Trichloroethane	ND	1.0	0.38	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	0.78	1.00	
1,1-Dichloroethane	ND	1.0	0.28	1.00	
1,1-Dichloroethene	ND	1.0	0.43	1.00	
1,1-Dichloropropene	ND	1.0	0.46	1.00	
1,2,3-Trichlorobenzene	ND	1.0	0.51	1.00	
1,2,3-Trichloropropane	ND	5.0	0.64	1.00	
1,2,4-Trichlorobenzene	ND	1.0	0.50	1.00	
1,2,4-Trimethylbenzene	20	1.0	0.36	1.00	
1,3,5-Trimethylbenzene	5.3	1.0	0.28	1.00	
c-1,2-Dichloroethene	ND	1.0	0.48	1.00	
1,2-Dibromo-3-Chloropropane	ND	5.0	1.2	1.00	
1,2-Dibromoethane	ND	1.0	0.36	1.00	
1,2-Dichlorobenzene	ND	1.0	0.46	1.00	
1,2-Dichloroethane	ND	0.50	0.24	1.00	
1,2-Dichloropropane	ND	1.0	0.42	1.00	
t-1,2-Dichloroethene	ND	1.0	0.37	1.00	
c-1,3-Dichloropropene	ND	0.50	0.25	1.00	
1,3-Dichlorobenzene	ND	1.0	0.40	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



Calscience

Analytical Report

Cardno
801 Second Avenue, Suite 700
Seattle, WA 98104-1573

Date Received: 11/22/16
Work Order: 16-11-1961
Preparation: EPA 5030C
Method: EPA 8260B
Units: ug/L

Project: ExxonMobil 99CHT

Page 2 of 15

Parameter	Result	RL	MDL	DF	Qualifiers
1,3-Dichloropropane	ND	1.0	0.30	1.00	
t-1,3-Dichloropropene	ND	0.50	0.25	1.00	
1,4-Dichlorobenzene	ND	1.0	0.43	1.00	
2,2-Dichloropropane	ND	1.0	0.36	1.00	
2-Chlorotoluene	ND	1.0	0.24	1.00	
4-Chlorotoluene	ND	1.0	0.13	1.00	
4-Methyl-2-Pentanone	ND	10	4.4	1.00	
Acetone	ND	20	10	1.00	
Bromobenzene	ND	1.0	0.30	1.00	
Bromochloromethane	ND	1.0	0.48	1.00	
Bromoform	ND	1.0	0.50	1.00	
Bromomethane	ND	10	3.9	1.00	
Carbon Disulfide	ND	10	0.41	1.00	
Carbon Tetrachloride	ND	0.50	0.23	1.00	
Chlorobenzene	ND	1.0	0.17	1.00	
Dibromochloromethane	ND	1.0	0.25	1.00	
Chloroethane	ND	5.0	2.3	1.00	
Chloroform	ND	1.0	0.46	1.00	
Chloromethane	ND	10	1.8	1.00	
Dibromomethane	ND	1.0	0.46	1.00	
Bromodichloromethane	ND	1.0	0.21	1.00	
Dichlorodifluoromethane	ND	1.0	0.46	1.00	
Hexachloro-1,3-Butadiene	ND	20	0.32	1.00	
Isopropylbenzene	1.1	1.0	0.58	1.00	
2-Butanone	ND	10	2.2	1.00	
Methylene Chloride	ND	10	0.64	1.00	
2-Hexanone	ND	10	2.1	1.00	
Naphthalene	ND	10	2.5	1.00	
n-Butylbenzene	0.82	1.0	0.23	1.00	J
n-Propylbenzene	0.66	1.0	0.17	1.00	J
p-Isopropyltoluene	0.35	1.0	0.16	1.00	J
sec-Butylbenzene	1.2	1.0	0.25	1.00	
Styrene	ND	1.0	0.17	1.00	
tert-Butylbenzene	ND	1.0	0.28	1.00	
Tetrachloroethene	ND	1.0	0.39	1.00	
Trichloroethene	ND	1.0	0.37	1.00	
Trichlorofluoromethane	ND	10	1.7	1.00	
Vinyl Chloride	ND	0.50	0.30	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Cardno	Date Received:	11/22/16
801 Second Avenue, Suite 700	Work Order:	16-11-1961
Seattle, WA 98104-1573	Preparation:	EPA 5030C
	Method:	EPA 8260B
	Units:	ug/L
Project: ExxonMobil 99CHT		Page 3 of 15

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
1,4-Bromofluorobenzene	99	80-120	
Dibromofluoromethane	107	80-126	
1,2-Dichloroethane-d4	105	80-134	
Toluene-d8	104	80-120	



Calscience

Analytical Report

Cardno
801 Second Avenue, Suite 700
Seattle, WA 98104-1573

Date Received: 11/22/16
Work Order: 16-11-1961
Preparation: EPA 5030C
Method: EPA 8260B
Units: ug/L

Project: ExxonMobil 99CHT

Page 4 of 15

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
W-5-MW2	16-11-1961-2-A	11/21/16 12:40	Aqueous	GC/MS CC	11/30/16	11/30/16 16:05	161130L061

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Benzene	ND	0.50	0.14	1.00	
Toluene	ND	1.0	0.24	1.00	
Ethylbenzene	ND	1.0	0.14	1.00	
o-Xylene	1.7	1.0	0.23	1.00	
p/m-Xylene	0.59	1.0	0.24	1.00	J
Xylenes (total)	2.2	1.0	0.23	1.00	JA
Methyl-t-Butyl Ether (MTBE)	ND	1.0	0.31	1.00	
Tert-Butyl Alcohol (TBA)	ND	10	4.6	1.00	
Diisopropyl Ether (DIPE)	ND	2.0	0.33	1.00	
Ethyl-t-Butyl Ether (ETBE)	ND	2.0	0.44	1.00	
Tert-Amyl-Methyl Ether (TAME)	ND	2.0	0.22	1.00	
Ethanol	ND	100	50	1.00	
1,1,1,2-Tetrachloroethane	ND	1.0	0.40	1.00	
1,1,1-Trichloroethane	ND	1.0	0.30	1.00	
1,1,2,2-Tetrachloroethane	ND	1.0	0.41	1.00	
1,1,2-Trichloroethane	ND	1.0	0.38	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	0.78	1.00	
1,1-Dichloroethane	ND	1.0	0.28	1.00	
1,1-Dichloroethene	ND	1.0	0.43	1.00	
1,1-Dichloropropene	ND	1.0	0.46	1.00	
1,2,3-Trichlorobenzene	ND	1.0	0.51	1.00	
1,2,3-Trichloropropane	ND	5.0	0.64	1.00	
1,2,4-Trichlorobenzene	ND	1.0	0.50	1.00	
1,2,4-Trimethylbenzene	0.49	1.0	0.36	1.00	J
1,3,5-Trimethylbenzene	0.82	1.0	0.28	1.00	J
c-1,2-Dichloroethene	ND	1.0	0.48	1.00	
1,2-Dibromo-3-Chloropropane	ND	5.0	1.2	1.00	
1,2-Dibromoethane	ND	1.0	0.36	1.00	
1,2-Dichlorobenzene	ND	1.0	0.46	1.00	
1,2-Dichloroethane	ND	0.50	0.24	1.00	
1,2-Dichloropropane	ND	1.0	0.42	1.00	
t-1,2-Dichloroethene	ND	1.0	0.37	1.00	
c-1,3-Dichloropropene	ND	0.50	0.25	1.00	
1,3-Dichlorobenzene	ND	1.0	0.40	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



Calscience

Analytical Report

Cardno	Date Received:	11/22/16
801 Second Avenue, Suite 700	Work Order:	16-11-1961
Seattle, WA 98104-1573	Preparation:	EPA 5030C
	Method:	EPA 8260B
	Units:	ug/L
Project: ExxonMobil 99CHT		Page 5 of 15

Parameter	Result	RL	MDL	DF	Qualifiers
1,3-Dichloropropane	ND	1.0	0.30	1.00	
t-1,3-Dichloropropene	ND	0.50	0.25	1.00	
1,4-Dichlorobenzene	ND	1.0	0.43	1.00	
2,2-Dichloropropane	ND	1.0	0.36	1.00	
2-Chlorotoluene	ND	1.0	0.24	1.00	
4-Chlorotoluene	ND	1.0	0.13	1.00	
4-Methyl-2-Pentanone	ND	10	4.4	1.00	
Acetone	ND	20	10	1.00	
Bromobenzene	ND	1.0	0.30	1.00	
Bromochloromethane	ND	1.0	0.48	1.00	
Bromoform	ND	1.0	0.50	1.00	
Bromomethane	ND	10	3.9	1.00	
Carbon Disulfide	ND	10	0.41	1.00	
Carbon Tetrachloride	ND	0.50	0.23	1.00	
Chlorobenzene	ND	1.0	0.17	1.00	
Dibromochloromethane	ND	1.0	0.25	1.00	
Chloroethane	ND	5.0	2.3	1.00	
Chloroform	ND	1.0	0.46	1.00	
Chloromethane	ND	10	1.8	1.00	
Dibromomethane	ND	1.0	0.46	1.00	
Bromodichloromethane	ND	1.0	0.21	1.00	
Dichlorodifluoromethane	ND	1.0	0.46	1.00	
Hexachloro-1,3-Butadiene	ND	20	0.32	1.00	
Isopropylbenzene	ND	1.0	0.58	1.00	
2-Butanone	ND	10	2.2	1.00	
Methylene Chloride	ND	10	0.64	1.00	
2-Hexanone	ND	10	2.1	1.00	
Naphthalene	ND	10	2.5	1.00	
n-Butylbenzene	ND	1.0	0.23	1.00	
n-Propylbenzene	ND	1.0	0.17	1.00	
p-Isopropyltoluene	ND	1.0	0.16	1.00	
sec-Butylbenzene	ND	1.0	0.25	1.00	
Styrene	ND	1.0	0.17	1.00	
tert-Butylbenzene	ND	1.0	0.28	1.00	
Tetrachloroethene	ND	1.0	0.39	1.00	
Trichloroethene	ND	1.0	0.37	1.00	
Trichlorofluoromethane	ND	10	1.7	1.00	
Vinyl Chloride	ND	0.50	0.30	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Cardno	Date Received:	11/22/16
801 Second Avenue, Suite 700	Work Order:	16-11-1961
Seattle, WA 98104-1573	Preparation:	EPA 5030C
	Method:	EPA 8260B
	Units:	ug/L
Project: ExxonMobil 99CHT		Page 6 of 15

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
1,4-Bromofluorobenzene	93	80-120	
Dibromofluoromethane	104	80-126	
1,2-Dichloroethane-d4	108	80-134	
Toluene-d8	98	80-120	

Analytical Report

Cardno
801 Second Avenue, Suite 700
Seattle, WA 98104-1573

Date Received: 11/22/16
Work Order: 16-11-1961
Preparation: EPA 5030C
Method: EPA 8260B
Units: ug/L

Project: ExxonMobil 99CHT

Page 7 of 15

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
W-7-MW3	16-11-1961-3-B	11/21/16 10:55	Aqueous	GC/MS CC	12/01/16	12/01/16 17:25	161201L017

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Benzene	ND	1.0	0.28	2.00	
Toluene	ND	2.0	0.47	2.00	
Ethylbenzene	17	2.0	0.28	2.00	
o-Xylene	5.0	2.0	0.46	2.00	
p/m-Xylene	120	2.0	0.49	2.00	
Xylenes (total)	120	2.0	0.46	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	2.0	0.62	2.00	
Tert-Butyl Alcohol (TBA)	ND	20	9.1	2.00	
Diisopropyl Ether (DIPE)	ND	4.0	0.67	2.00	
Ethyl-t-Butyl Ether (ETBE)	ND	4.0	0.87	2.00	
Tert-Amyl-Methyl Ether (TAME)	ND	4.0	0.44	2.00	
Ethanol	ND	200	100	2.00	
1,1,1,2-Tetrachloroethane	ND	2.0	0.81	2.00	
1,1,1-Trichloroethane	ND	2.0	0.61	2.00	
1,1,2,2-Tetrachloroethane	ND	2.0	0.82	2.00	
1,1,2-Trichloroethane	ND	2.0	0.77	2.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	20	1.6	2.00	
1,1-Dichloroethane	ND	2.0	0.56	2.00	
1,1-Dichloroethene	ND	2.0	0.86	2.00	
1,1-Dichloropropene	ND	2.0	0.93	2.00	
1,2,3-Trichlorobenzene	ND	2.0	1.0	2.00	
1,2,3-Trichloropropane	ND	10	1.3	2.00	
1,2,4-Trichlorobenzene	ND	2.0	1.0	2.00	
1,2,4-Trimethylbenzene	280	2.0	0.72	2.00	
1,3,5-Trimethylbenzene	ND	2.0	0.57	2.00	
c-1,2-Dichloroethene	ND	2.0	0.95	2.00	
1,2-Dibromo-3-Chloropropane	ND	10	2.5	2.00	
1,2-Dibromoethane	ND	2.0	0.72	2.00	
1,2-Dichlorobenzene	ND	2.0	0.91	2.00	
1,2-Dichloroethane	ND	1.0	0.48	2.00	
1,2-Dichloropropane	ND	2.0	0.85	2.00	
t-1,2-Dichloroethene	ND	2.0	0.74	2.00	
c-1,3-Dichloropropene	ND	1.0	0.49	2.00	
1,3-Dichlorobenzene	ND	2.0	0.80	2.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



Calscience

Analytical Report

Cardno	Date Received:	11/22/16
801 Second Avenue, Suite 700	Work Order:	16-11-1961
Seattle, WA 98104-1573	Preparation:	EPA 5030C
	Method:	EPA 8260B
	Units:	ug/L
Project: ExxonMobil 99CHT		Page 8 of 15

Parameter	Result	RL	MDL	DF	Qualifiers
1,3-Dichloropropane	ND	2.0	0.61	2.00	
t-1,3-Dichloropropene	ND	1.0	0.51	2.00	
1,4-Dichlorobenzene	ND	2.0	0.86	2.00	
2,2-Dichloropropane	ND	2.0	0.73	2.00	
2-Chlorotoluene	ND	2.0	0.48	2.00	
4-Chlorotoluene	ND	2.0	0.27	2.00	
4-Methyl-2-Pentanone	ND	20	8.8	2.00	
Acetone	ND	40	20	2.00	
Bromobenzene	ND	2.0	0.61	2.00	
Bromochloromethane	ND	2.0	0.95	2.00	
Bromoform	ND	2.0	1.0	2.00	
Bromomethane	ND	20	7.8	2.00	
Carbon Disulfide	ND	20	0.82	2.00	
Carbon Tetrachloride	ND	1.0	0.45	2.00	
Chlorobenzene	ND	2.0	0.34	2.00	
Dibromochloromethane	ND	2.0	0.50	2.00	
Chloroethane	ND	10	4.6	2.00	
Chloroform	4.2	2.0	0.92	2.00	
Chloromethane	ND	20	3.5	2.00	
Dibromomethane	ND	2.0	0.92	2.00	
Bromodichloromethane	ND	2.0	0.41	2.00	
Dichlorodifluoromethane	ND	2.0	0.91	2.00	
Hexachloro-1,3-Butadiene	ND	40	0.64	2.00	
Isopropylbenzene	12	2.0	1.2	2.00	
2-Butanone	4.4	20	4.4	2.00	J
Methylene Chloride	ND	20	1.3	2.00	
2-Hexanone	ND	20	4.2	2.00	
Naphthalene	17	20	5.0	2.00	J
n-Butylbenzene	8.6	2.0	0.46	2.00	
n-Propylbenzene	33	2.0	0.35	2.00	
p-Isopropyltoluene	0.99	2.0	0.32	2.00	J
sec-Butylbenzene	ND	2.0	0.49	2.00	
Styrene	ND	2.0	0.34	2.00	
tert-Butylbenzene	ND	2.0	0.55	2.00	
Tetrachloroethene	ND	2.0	0.77	2.00	
Trichloroethene	ND	2.0	0.74	2.00	
Trichlorofluoromethane	ND	20	3.3	2.00	
Vinyl Chloride	ND	1.0	0.60	2.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Cardno	Date Received:	11/22/16
801 Second Avenue, Suite 700	Work Order:	16-11-1961
Seattle, WA 98104-1573	Preparation:	EPA 5030C
	Method:	EPA 8260B
	Units:	ug/L
Project: ExxonMobil 99CHT		Page 9 of 15

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
1,4-Bromofluorobenzene	97	80-120	
Dibromofluoromethane	108	80-126	
1,2-Dichloroethane-d4	106	80-134	
Toluene-d8	99	80-120	



Calscience

Analytical Report

Cardno	Date Received:	11/22/16
801 Second Avenue, Suite 700	Work Order:	16-11-1961
Seattle, WA 98104-1573	Preparation:	EPA 5030C
	Method:	EPA 8260B
	Units:	ug/L
Project: ExxonMobil 99CHT		Page 10 of 15

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-12-874-2462	N/A	Aqueous	GC/MS CC	11/30/16	11/30/16 11:05	161130L061

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Benzene	ND	0.50	0.14	1.00	
Toluene	ND	1.0	0.24	1.00	
Ethylbenzene	ND	1.0	0.14	1.00	
o-Xylene	ND	1.0	0.23	1.00	
p/m-Xylene	ND	1.0	0.24	1.00	
Xylenes (total)	ND	1.0	0.23	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.0	0.31	1.00	
Tert-Butyl Alcohol (TBA)	ND	10	4.6	1.00	
Diisopropyl Ether (DIPE)	ND	2.0	0.33	1.00	
Ethyl-t-Butyl Ether (ETBE)	ND	2.0	0.44	1.00	
Tert-Amyl-Methyl Ether (TAME)	ND	2.0	0.22	1.00	
Ethanol	ND	100	50	1.00	
1,1,1,2-Tetrachloroethane	ND	1.0	0.40	1.00	
1,1,1-Trichloroethane	ND	1.0	0.30	1.00	
1,1,2,2-Tetrachloroethane	ND	1.0	0.41	1.00	
1,1,2-Trichloroethane	ND	1.0	0.38	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	0.78	1.00	
1,1-Dichloroethane	ND	1.0	0.28	1.00	
1,1-Dichloroethene	ND	1.0	0.43	1.00	
1,1-Dichloropropene	ND	1.0	0.46	1.00	
1,2,3-Trichlorobenzene	ND	1.0	0.51	1.00	
1,2,3-Trichloropropane	ND	5.0	0.64	1.00	
1,2,4-Trichlorobenzene	ND	1.0	0.50	1.00	
1,2,4-Trimethylbenzene	ND	1.0	0.36	1.00	
1,3,5-Trimethylbenzene	ND	1.0	0.28	1.00	
c-1,2-Dichloroethene	ND	1.0	0.48	1.00	
1,2-Dibromo-3-Chloropropane	ND	5.0	1.2	1.00	
1,2-Dibromoethane	ND	1.0	0.36	1.00	
1,2-Dichlorobenzene	ND	1.0	0.46	1.00	
1,2-Dichloroethane	ND	0.50	0.24	1.00	
1,2-Dichloropropane	ND	1.0	0.42	1.00	
t-1,2-Dichloroethene	ND	1.0	0.37	1.00	
c-1,3-Dichloropropene	ND	0.50	0.25	1.00	
1,3-Dichlorobenzene	ND	1.0	0.40	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



Calscience

Analytical Report

Cardno	Date Received:	11/22/16
801 Second Avenue, Suite 700	Work Order:	16-11-1961
Seattle, WA 98104-1573	Preparation:	EPA 5030C
	Method:	EPA 8260B
	Units:	ug/L
Project: ExxonMobil 99CHT		Page 11 of 15

Parameter	Result	RL	MDL	DF	Qualifiers
1,3-Dichloropropane	ND	1.0	0.30	1.00	
t-1,3-Dichloropropene	ND	0.50	0.25	1.00	
1,4-Dichlorobenzene	ND	1.0	0.43	1.00	
2,2-Dichloropropane	ND	1.0	0.36	1.00	
2-Chlorotoluene	ND	1.0	0.24	1.00	
4-Chlorotoluene	ND	1.0	0.13	1.00	
4-Methyl-2-Pentanone	ND	10	4.4	1.00	
Acetone	ND	20	10	1.00	
Bromobenzene	ND	1.0	0.30	1.00	
Bromochloromethane	ND	1.0	0.48	1.00	
Bromoform	ND	1.0	0.50	1.00	
Bromomethane	ND	10	3.9	1.00	
Carbon Disulfide	ND	10	0.41	1.00	
Carbon Tetrachloride	ND	0.50	0.23	1.00	
Chlorobenzene	ND	1.0	0.17	1.00	
Dibromochloromethane	ND	1.0	0.25	1.00	
Chloroethane	ND	5.0	2.3	1.00	
Chloroform	ND	1.0	0.46	1.00	
Chloromethane	ND	10	1.8	1.00	
Dibromomethane	ND	1.0	0.46	1.00	
Bromodichloromethane	ND	1.0	0.21	1.00	
Dichlorodifluoromethane	ND	1.0	0.46	1.00	
Hexachloro-1,3-Butadiene	ND	20	0.32	1.00	
Isopropylbenzene	ND	1.0	0.58	1.00	
2-Butanone	ND	10	2.2	1.00	
Methylene Chloride	ND	10	0.64	1.00	
2-Hexanone	ND	10	2.1	1.00	
Naphthalene	ND	10	2.5	1.00	
n-Butylbenzene	ND	1.0	0.23	1.00	
n-Propylbenzene	ND	1.0	0.17	1.00	
p-Isopropyltoluene	ND	1.0	0.16	1.00	
sec-Butylbenzene	ND	1.0	0.25	1.00	
Styrene	ND	1.0	0.17	1.00	
tert-Butylbenzene	ND	1.0	0.28	1.00	
Tetrachloroethene	ND	1.0	0.39	1.00	
Trichloroethene	ND	1.0	0.37	1.00	
Trichlorofluoromethane	ND	10	1.7	1.00	
Vinyl Chloride	ND	0.50	0.30	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Cardno	Date Received:	11/22/16
801 Second Avenue, Suite 700	Work Order:	16-11-1961
Seattle, WA 98104-1573	Preparation:	EPA 5030C
	Method:	EPA 8260B
	Units:	ug/L
Project: ExxonMobil 99CHT		Page 12 of 15

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
1,4-Bromofluorobenzene	97	80-120	
Dibromofluoromethane	105	80-126	
1,2-Dichloroethane-d4	104	80-134	
Toluene-d8	99	80-120	



Calscience

Analytical Report

Cardno
801 Second Avenue, Suite 700
Seattle, WA 98104-1573

Date Received: 11/22/16
Work Order: 16-11-1961
Preparation: EPA 5030C
Method: EPA 8260B
Units: ug/L

Project: ExxonMobil 99CHT

Page 13 of 15

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-12-874-2461	N/A	Aqueous	GC/MS CC	12/01/16	12/01/16 11:21	161201L017

Comment(s): - Results were evaluated to the MDL (DL), concentrations $\geq$ to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Benzene	ND	0.50	0.14	1.00	
Toluene	ND	1.0	0.24	1.00	
Ethylbenzene	ND	1.0	0.14	1.00	
o-Xylene	ND	1.0	0.23	1.00	
p/m-Xylene	ND	1.0	0.24	1.00	
Xylenes (total)	ND	1.0	0.23	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.0	0.31	1.00	
Tert-Butyl Alcohol (TBA)	ND	10	4.6	1.00	
Diisopropyl Ether (DIPE)	ND	2.0	0.33	1.00	
Ethyl-t-Butyl Ether (ETBE)	ND	2.0	0.44	1.00	
Tert-Amyl-Methyl Ether (TAME)	ND	2.0	0.22	1.00	
Ethanol	ND	100	50	1.00	
1,1,1,2-Tetrachloroethane	ND	1.0	0.40	1.00	
1,1,1-Trichloroethane	ND	1.0	0.30	1.00	
1,1,2,2-Tetrachloroethane	ND	1.0	0.41	1.00	
1,1,2-Trichloroethane	ND	1.0	0.38	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	0.78	1.00	
1,1-Dichloroethane	ND	1.0	0.28	1.00	
1,1-Dichloroethene	ND	1.0	0.43	1.00	
1,1-Dichloropropene	ND	1.0	0.46	1.00	
1,2,3-Trichlorobenzene	ND	1.0	0.51	1.00	
1,2,3-Trichloropropane	ND	5.0	0.64	1.00	
1,2,4-Trichlorobenzene	ND	1.0	0.50	1.00	
1,2,4-Trimethylbenzene	ND	1.0	0.36	1.00	
1,3,5-Trimethylbenzene	ND	1.0	0.28	1.00	
c-1,2-Dichloroethene	ND	1.0	0.48	1.00	
1,2-Dibromo-3-Chloropropane	ND	5.0	1.2	1.00	
1,2-Dibromoethane	ND	1.0	0.36	1.00	
1,2-Dichlorobenzene	ND	1.0	0.46	1.00	
1,2-Dichloroethane	ND	0.50	0.24	1.00	
1,2-Dichloropropane	ND	1.0	0.42	1.00	
t-1,2-Dichloroethene	ND	1.0	0.37	1.00	
c-1,3-Dichloropropene	ND	0.50	0.25	1.00	
1,3-Dichlorobenzene	ND	1.0	0.40	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



Calscience

Analytical Report

Cardno	Date Received:	11/22/16
801 Second Avenue, Suite 700	Work Order:	16-11-1961
Seattle, WA 98104-1573	Preparation:	EPA 5030C
	Method:	EPA 8260B
	Units:	ug/L
Project: ExxonMobil 99CHT		Page 14 of 15

Parameter	Result	RL	MDL	DF	Qualifiers
1,3-Dichloropropane	ND	1.0	0.30	1.00	
t-1,3-Dichloropropene	ND	0.50	0.25	1.00	
1,4-Dichlorobenzene	ND	1.0	0.43	1.00	
2,2-Dichloropropane	ND	1.0	0.36	1.00	
2-Chlorotoluene	ND	1.0	0.24	1.00	
4-Chlorotoluene	ND	1.0	0.13	1.00	
4-Methyl-2-Pentanone	ND	10	4.4	1.00	
Acetone	ND	20	10	1.00	
Bromobenzene	ND	1.0	0.30	1.00	
Bromochloromethane	ND	1.0	0.48	1.00	
Bromoform	ND	1.0	0.50	1.00	
Bromomethane	ND	10	3.9	1.00	
Carbon Disulfide	ND	10	0.41	1.00	
Carbon Tetrachloride	ND	0.50	0.23	1.00	
Chlorobenzene	ND	1.0	0.17	1.00	
Dibromochloromethane	ND	1.0	0.25	1.00	
Chloroethane	ND	5.0	2.3	1.00	
Chloroform	ND	1.0	0.46	1.00	
Chloromethane	ND	10	1.8	1.00	
Dibromomethane	ND	1.0	0.46	1.00	
Bromodichloromethane	ND	1.0	0.21	1.00	
Dichlorodifluoromethane	ND	1.0	0.46	1.00	
Hexachloro-1,3-Butadiene	ND	20	0.32	1.00	
Isopropylbenzene	ND	1.0	0.58	1.00	
2-Butanone	ND	10	2.2	1.00	
Methylene Chloride	ND	10	0.64	1.00	
2-Hexanone	ND	10	2.1	1.00	
Naphthalene	ND	10	2.5	1.00	
n-Butylbenzene	ND	1.0	0.23	1.00	
n-Propylbenzene	ND	1.0	0.17	1.00	
p-Isopropyltoluene	ND	1.0	0.16	1.00	
sec-Butylbenzene	ND	1.0	0.25	1.00	
Styrene	ND	1.0	0.17	1.00	
tert-Butylbenzene	ND	1.0	0.28	1.00	
Tetrachloroethene	ND	1.0	0.39	1.00	
Trichloroethene	ND	1.0	0.37	1.00	
Trichlorofluoromethane	ND	10	1.7	1.00	
Vinyl Chloride	ND	0.50	0.30	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Cardno	Date Received:	11/22/16
801 Second Avenue, Suite 700	Work Order:	16-11-1961
Seattle, WA 98104-1573	Preparation:	EPA 5030C
	Method:	EPA 8260B
	Units:	ug/L
Project: ExxonMobil 99CHT		Page 15 of 15

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
1,4-Bromofluorobenzene	94	80-120	
Dibromofluoromethane	91	80-126	
1,2-Dichloroethane-d4	102	80-134	
Toluene-d8	100	80-120	



Calscience

Analytical Report

Cardno
801 Second Avenue, Suite 700
Seattle, WA 98104-1573

Date Received: 11/22/16
Work Order: 16-11-1961
Preparation: EPA 5030C
Method: EPA 8260B
Units: ug/L

Project: ExxonMobil 99CHT

Page 1 of 2

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
W-8-MW4	16-11-1961-4-A	11/21/16 11:25	Aqueous	GC/MS CC	11/30/16	11/30/16 16:32	161130L061

Comment(s): - Results were evaluated to the MDL (DL), concentrations $\geq$ to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
Benzene	ND	0.50	0.14	1.00	
Toluene	ND	1.0	0.24	1.00	
Ethylbenzene	ND	1.0	0.14	1.00	
o-Xylene	ND	1.0	0.23	1.00	
p/m-Xylene	ND	1.0	0.24	1.00	
Xylenes (total)	ND	1.0	0.23	1.00	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
1,4-Bromofluorobenzene	94	80-120	
Dibromofluoromethane	105	80-126	
1,2-Dichloroethane-d4	106	80-134	
Toluene-d8	99	80-120	

W-7-MW5	16-11-1961-5-A	11/21/16 10:20	Aqueous	GC/MS CC	11/30/16	11/30/16 16:59	161130L061
---------	----------------	----------------	---------	----------	----------	----------------	------------

Comment(s): - Results were evaluated to the MDL (DL), concentrations $\geq$ to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
Benzene	ND	0.50	0.14	1.00	
Toluene	ND	1.0	0.24	1.00	
Ethylbenzene	ND	1.0	0.14	1.00	
o-Xylene	ND	1.0	0.23	1.00	
p/m-Xylene	ND	1.0	0.24	1.00	
Xylenes (total)	ND	1.0	0.23	1.00	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
1,4-Bromofluorobenzene	93	80-120	
Dibromofluoromethane	105	80-126	
1,2-Dichloroethane-d4	105	80-134	
Toluene-d8	100	80-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



Calscience

Analytical Report

Cardno
801 Second Avenue, Suite 700
Seattle, WA 98104-1573

Date Received: 11/22/16
Work Order: 16-11-1961
Preparation: EPA 5030C
Method: EPA 8260B
Units: ug/L

Project: ExxonMobil 99CHT

Page 2 of 2

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-12-874-2462	N/A	Aqueous	GC/MS CC	11/30/16	11/30/16 11:05	161130L061

Comment(s): - Results were evaluated to the MDL (DL), concentrations $\geq$ to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
Benzene	ND	0.50	0.14	1.00	
Toluene	ND	1.0	0.24	1.00	
Ethylbenzene	ND	1.0	0.14	1.00	
o-Xylene	ND	1.0	0.23	1.00	
p/m-Xylene	ND	1.0	0.24	1.00	
Xylenes (total)	ND	1.0	0.23	1.00	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
1,4-Bromofluorobenzene	97	80-120	
Dibromofluoromethane	105	80-126	
1,2-Dichloroethane-d4	104	80-134	
Toluene-d8	99	80-120	

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



Calscience

Quality Control - Spike/Spike Duplicate

Cardno
801 Second Avenue, Suite 700
Seattle, WA 98104-1573

Date Received: 11/22/16
Work Order: 16-11-1961
Preparation: EPA 5030C
Method: NWTPH-Gx

Project: ExxonMobil 99CHT

Page 1 of 6

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
W-5-MW1	Sample	Aqueous	GC 25	12/01/16	12/01/16 20:13	161201S028
W-5-MW1	Matrix Spike	Aqueous	GC 25	12/01/16	12/01/16 20:46	161201S028
W-5-MW1	Matrix Spike Duplicate	Aqueous	GC 25	12/01/16	12/01/16 21:20	161201S028

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
TPH as Gasoline	551.3	2000	2389	92	2191	82	68-122	9	0-18	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



Calscience

Quality Control - Spike/Spike Duplicate

Cardno
801 Second Avenue, Suite 700
Seattle, WA 98104-1573

Date Received: 11/22/16
Work Order: 16-11-1961
Preparation: EPA 3010A Total
Method: EPA 6010B

Project: ExxonMobil 99CHT

Page 2 of 6

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
W-7-MW5	Sample	Aqueous	ICP 7300	11/29/16	12/06/16 16:33	161129SA2
W-7-MW5	Matrix Spike	Aqueous	ICP 7300	11/29/16	12/06/16 16:28	161129SA2
W-7-MW5	Matrix Spike Duplicate	Aqueous	ICP 7300	11/29/16	12/06/16 16:29	161129SA2

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Lead	ND	500.0	493.6	99	489.7	98	84-120	1	0-7	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



Calscience

Quality Control - Spike/Spike Duplicate

Cardno
801 Second Avenue, Suite 700
Seattle, WA 98104-1573

Date Received: 11/22/16
Work Order: 16-11-1961
Preparation: EPA 3005A Filt.
Method: EPA 6010B

Project: ExxonMobil 99CHT

Page 3 of 6

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
16-11-2058-8	Sample	Aqueous	ICP 7300	11/28/16	12/01/16 17:27	161128SA3
16-11-2058-8	Matrix Spike	Aqueous	ICP 7300	11/28/16	12/01/16 17:24	161128SA3
16-11-2058-8	Matrix Spike Duplicate	Aqueous	ICP 7300	11/28/16	12/01/16 17:25	161128SA3

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Lead	ND	500.0	562.7	113	513.0	103	84-120	9	0-7	BA

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



Calscience

Quality Control - Spike/Spike Duplicate

Cardno
801 Second Avenue, Suite 700
Seattle, WA 98104-1573

Date Received: 11/22/16
Work Order: 16-11-1961
Preparation: EPA 5030C
Method: EPA 8260B

Project: ExxonMobil 99CHT

Page 4 of 6

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
16-11-2492-5	Sample	Aqueous	GC/MS CC	11/30/16	11/30/16 11:34	161130S004
16-11-2492-5	Matrix Spike	Aqueous	GC/MS CC	11/30/16	11/30/16 12:03	161130S004
16-11-2492-5	Matrix Spike Duplicate	Aqueous	GC/MS CC	11/30/16	11/30/16 12:30	161130S004

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Benzene	ND	50.00	50.69	101	49.73	99	75-125	2	0-20	
Toluene	ND	50.00	50.49	101	49.71	99	75-125	2	0-20	
Ethylbenzene	ND	50.00	52.02	104	51.80	104	75-129	0	0-20	
o-Xylene	ND	50.00	55.00	110	53.97	108	75-134	2	0-20	
p/m-Xylene	ND	100.0	107.5	108	105.8	106	75-133	2	0-20	
Methyl-t-Butyl Ether (MTBE)	ND	50.00	48.78	98	50.27	101	64-136	3	0-20	
Tert-Butyl Alcohol (TBA)	ND	250.0	271.4	109	275.4	110	75-136	1	0-20	
Diisopropyl Ether (DIPE)	ND	50.00	54.49	109	53.73	107	73-139	1	0-20	
Ethyl-t-Butyl Ether (ETBE)	ND	50.00	50.30	101	50.48	101	69-135	0	0-20	
Tert-Amyl-Methyl Ether (TAME)	ND	50.00	50.33	101	50.95	102	69-135	1	0-20	
Ethanol	ND	500.0	685.4	137	613.7	123	29-179	11	0-25	
1,1,1,2-Tetrachloroethane	ND	50.00	53.28	107	52.56	105	75-139	1	0-20	
1,1,1-Trichloroethane	ND	50.00	47.98	96	48.05	96	75-136	0	0-20	
1,1,2,2-Tetrachloroethane	ND	50.00	51.61	103	56.06	112	61-145	8	0-20	
1,1,2-Trichloroethane	ND	50.00	51.21	102	52.61	105	75-125	3	0-20	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	50.00	49.65	99	50.12	100	42-168	1	0-22	
1,1-Dichloroethane	ND	50.00	50.19	100	49.69	99	73-139	1	0-20	
1,1-Dichloroethene	ND	50.00	44.06	88	44.23	88	61-145	0	0-20	
1,1-Dichloropropene	ND	50.00	46.12	92	46.98	94	75-135	2	0-20	
1,2,3-Trichlorobenzene	ND	50.00	50.05	100	51.83	104	73-133	3	0-20	
1,2,3-Trichloropropane	ND	50.00	49.59	99	51.89	104	75-127	5	0-20	
1,2,4-Trichlorobenzene	ND	50.00	51.51	103	52.94	106	71-137	3	0-20	
1,2,4-Trimethylbenzene	ND	50.00	53.09	106	52.84	106	75-133	0	0-20	
1,3,5-Trimethylbenzene	ND	50.00	54.36	109	54.25	108	75-135	0	0-20	
c-1,2-Dichloroethene	ND	50.00	50.68	101	49.69	99	75-125	2	0-20	
1,2-Dibromo-3-Chloropropane	ND	50.00	47.04	94	50.52	101	64-142	7	0-20	
1,2-Dibromoethane	ND	50.00	49.18	98	51.09	102	75-129	4	0-20	
1,2-Dichlorobenzene	ND	50.00	53.64	107	53.30	107	75-125	1	0-20	
1,2-Dichloroethane	ND	50.00	52.06	104	52.09	104	75-125	0	0-20	
1,2-Dichloropropane	ND	50.00	52.39	105	51.79	104	75-127	1	0-20	
t-1,2-Dichloroethene	ND	50.00	46.61	93	46.27	93	64-142	1	0-20	
c-1,3-Dichloropropene	ND	50.00	50.54	101	51.03	102	75-137	1	0-20	
1,3-Dichlorobenzene	ND	50.00	53.01	106	52.49	105	75-125	1	0-20	
1,3-Dichloropropane	ND	50.00	50.84	102	52.01	104	75-125	2	0-20	
t-1,3-Dichloropropene	ND	50.00	50.77	102	51.14	102	74-146	1	0-20	

RPD: Relative Percent Difference. CL: Control Limits



Calscience

Quality Control - Spike/Spike Duplicate

Cardno
801 Second Avenue, Suite 700
Seattle, WA 98104-1573

Date Received: 11/22/16
Work Order: 16-11-1961
Preparation: EPA 5030C
Method: EPA 8260B

Project: ExxonMobil 99CHT

Page 5 of 6

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
1,4-Dichlorobenzene	ND	50.00	51.97	104	51.81	104	75-125	0	0-20	
2,2-Dichloropropane	ND	50.00	51.54	103	51.11	102	24-180	1	0-20	
2-Chlorotoluene	ND	50.00	53.67	107	53.37	107	75-128	1	0-20	
4-Chlorotoluene	ND	50.00	52.99	106	53.09	106	75-125	0	0-20	
4-Methyl-2-Pentanone	ND	50.00	46.63	93	51.93	104	66-138	11	0-20	
Acetone	ND	50.00	45.76	92	51.34	103	34-166	12	0-33	
Bromobenzene	ND	50.00	53.85	108	53.23	106	75-125	1	0-20	
Bromochloromethane	ND	50.00	49.12	98	49.06	98	75-125	0	0-20	
Bromoform	ND	50.00	44.52	89	49.11	98	74-134	10	0-20	
Bromomethane	ND	50.00	42.40	85	41.36	83	20-168	2	0-40	
Carbon Disulfide	ND	50.00	34.86	70	33.97	68	50-152	3	0-27	
Carbon Tetrachloride	ND	50.00	40.20	80	40.85	82	70-154	2	0-20	
Chlorobenzene	ND	50.00	52.09	104	51.23	102	75-125	2	0-20	
Dibromochloromethane	ND	50.00	43.93	88	45.33	91	75-131	3	0-20	
Chloroethane	ND	50.00	59.64	119	58.96	118	41-167	1	0-26	
Chloroform	ND	50.00	51.86	104	50.85	102	75-127	2	0-20	
Chloromethane	ND	50.00	56.17	112	56.96	114	41-149	1	0-20	
Dibromomethane	ND	50.00	49.45	99	49.83	100	75-125	1	0-20	
Bromodichloromethane	ND	50.00	52.50	105	52.90	106	75-134	1	0-20	
Dichlorodifluoromethane	ND	50.00	50.06	100	46.97	94	25-157	6	0-26	
Isopropylbenzene	ND	50.00	53.96	108	53.94	108	75-135	0	0-20	
2-Butanone	ND	50.00	50.42	101	54.09	108	37-157	7	0-20	
Methylene Chloride	ND	50.00	48.17	96	46.83	94	63-141	3	0-20	
2-Hexanone	ND	50.00	46.21	92	51.63	103	47-161	11	0-20	
Naphthalene	ND	50.00	46.86	94	50.20	100	59-143	7	0-20	
n-Butylbenzene	ND	50.00	52.30	105	53.42	107	73-145	2	0-20	
n-Propylbenzene	ND	50.00	53.32	107	53.00	106	75-133	1	0-20	
p-Isopropyltoluene	ND	50.00	53.45	107	54.55	109	75-136	2	0-20	
sec-Butylbenzene	ND	50.00	53.15	106	54.68	109	75-135	3	0-20	
Styrene	ND	50.00	54.75	109	54.14	108	70-142	1	0-28	
tert-Butylbenzene	ND	50.00	54.41	109	54.43	109	75-136	0	0-20	
Tetrachloroethene	ND	50.00	43.63	87	43.25	86	47-143	1	0-20	
Trichloroethene	ND	50.00	49.50	99	48.92	98	67-139	1	0-20	
Trichlorofluoromethane	ND	50.00	61.58	123	59.20	118	59-155	4	0-20	
Vinyl Chloride	ND	50.00	60.85	122	59.89	120	51-153	2	0-20	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



Calscience

Quality Control - Spike/Spike Duplicate

Cardno
801 Second Avenue, Suite 700
Seattle, WA 98104-1573

Date Received: 11/22/16
Work Order: 16-11-1961
Preparation: EPA 5030C
Method: EPA 8260B

Project: ExxonMobil 99CHT

Page 6 of 6

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
W-5-MW1	Sample	Aqueous	GC/MS CC	12/01/16	12/01/16 11:53	161201S007
W-5-MW1	Matrix Spike	Aqueous	GC/MS CC	12/01/16	12/01/16 12:25	161201S007
W-5-MW1	Matrix Spike Duplicate	Aqueous	GC/MS CC	12/01/16	12/01/16 12:52	161201S007

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Benzene	ND	50.00	58.13	116	57.29	115	78-120	1	0-20	
Toluene	1.015	50.00	57.69	113	57.72	113	72-126	0	0-20	
Ethylbenzene	1.338	50.00	58.06	113	58.66	115	73-127	1	0-20	
o-Xylene	12.42	50.00	74.71	125	76.10	127	70-130	2	0-30	
p/m-Xylene	19.81	100.0	143.0	123	146.7	127	70-130	3	0-30	
Methyl-t-Butyl Ether (MTBE)	ND	50.00	50.73	101	54.03	108	69-123	6	0-20	
Tert-Butyl Alcohol (TBA)	ND	250.0	277.9	111	299.4	120	65-131	7	0-22	
Diisopropyl Ether (DIPE)	ND	50.00	57.38	115	57.17	114	68-128	0	0-22	
Ethyl-t-Butyl Ether (ETBE)	ND	50.00	52.44	105	53.91	108	69-123	3	0-21	
Tert-Amyl-Methyl Ether (TAME)	ND	50.00	50.76	102	52.17	104	70-124	3	0-20	
Ethanol	ND	500.0	693.5	139	642.2	128	41-155	8	0-35	
1,1-Dichloroethene	ND	50.00	59.94	120	61.08	122	70-130	2	0-27	
1,2-Dibromoethane	ND	50.00	53.25	106	55.52	111	80-123	4	0-20	
1,2-Dichlorobenzene	ND	50.00	52.58	105	55.59	111	76-120	6	0-20	
1,2-Dichloroethane	ND	50.00	55.52	111	57.31	115	76-130	3	0-20	
Carbon Tetrachloride	ND	50.00	48.88	98	50.01	100	67-139	2	0-20	
Chlorobenzene	ND	50.00	55.83	112	55.92	112	80-120	0	0-20	
Trichloroethene	ND	50.00	57.93	116	58.70	117	74-122	1	0-20	
Vinyl Chloride	ND	50.00	59.68	119	57.92	116	65-131	3	0-24	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



Calscience

Quality Control - PDS/PDSD

Cardno 801 Second Avenue, Suite 700 Seattle, WA 98104-1573 Project: ExxonMobil 99CHT	Date Received: 11/22/16 Work Order: 16-11-1961 Preparation: EPA 3005A Filt. Method: EPA 6010B Page 1 of 1
---	---

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	PDS/PDSD Batch Number				
16-11-2058-8	Sample	Aqueous	ICP 7300	11/28/16 00:00	12/01/16 17:27	161128SA3				
16-11-2058-8	PDS	Aqueous	ICP 7300	11/28/16 00:00	12/09/16 13:27	161128SA3				
16-11-2058-8	PDSD	Aqueous	ICP 7300	11/28/16 00:00	12/09/16 13:28	161128SA3				
Parameter	Sample Conc.	Spike Added	PDS Conc.	PDS %Rec.	PDSD Conc.	PDSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Lead	ND	500.0	460.1	92	461.2	92	75-125	0	0-20	

[Return to Contents](#)

RPD: Relative Percent Difference. CL: Control Limits



Calscience

Quality Control - LCS/LCSD

Cardno
801 Second Avenue, Suite 700
Seattle, WA 98104-1573

Date Received: 11/22/16
Work Order: 16-11-1961
Preparation: EPA 3510C
Method: NWTPH-Dx

Project: ExxonMobil 99CHT

Page 1 of 7

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number			
099-15-560-148	LCS	Aqueous	GC 45	11/23/16	11/30/16 00:26	161123B08			
099-15-560-148	LCSD	Aqueous	GC 45	11/23/16	11/30/16 00:48	161123B08			
Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
TPH as Diesel Range	800.0	880.7	110	918.5	115	75-117	4	0-13	

[Return to Contents](#)

RPD: Relative Percent Difference. CL: Control Limits



Calscience

Quality Control - LCS/LCSD

Cardno
801 Second Avenue, Suite 700
Seattle, WA 98104-1573

Date Received: 11/22/16
Work Order: 16-11-1961
Preparation: EPA 3510C
Method: NWTPH-Dx

Project: ExxonMobil 99CHT

Page 2 of 7

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number			
099-15-562-76	LCS	Aqueous	GC 45	11/23/16	11/30/16 01:10	161123B09			
099-15-562-76	LCSD	Aqueous	GC 45	11/23/16	11/30/16 01:31	161123B09			
Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
TPH as Motor Oil Range	800.0	687.8	86	729.3	91	75-117	6	0-13	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



Calscience

Quality Control - LCS

Cardno 801 Second Avenue, Suite 700 Seattle, WA 98104-1573 Project: ExxonMobil 99CHT	Date Received: 11/22/16 Work Order: 16-11-1961 Preparation: EPA 5030C Method: NWTPH-Gx Page 3 of 7
---	--

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number
099-12-743-843	LCS	Aqueous	GC 25	12/01/16	12/01/16 15:10	161201L048
<u>Parameter</u>		<u>Spike Added</u>	<u>Conc. Recovered</u>	<u>LCS %Rec.</u>	<u>%Rec. CL</u>	<u>Qualifiers</u>
TPH as Gasoline		2000	2007	100	78-120	

[Return to Contents](#)

Quality Control - LCS

Cardno 801 Second Avenue, Suite 700 Seattle, WA 98104-1573 Project: ExxonMobil 99CHT	Date Received: 11/22/16 Work Order: 16-11-1961 Preparation: EPA 3010A Total Method: EPA 6010B Page 4 of 7
---	---

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number
097-01-003-16184	LCS	Aqueous	ICP 7300	11/29/16	12/06/16 13:52	161129LA2
<u>Parameter</u>		<u>Spike Added</u>	<u>Conc. Recovered</u>	<u>LCS %Rec.</u>	<u>%Rec. CL</u>	<u>Qualifiers</u>
Lead		500.0	504.5	101	80-120	

Quality Control - LCS

Cardno 801 Second Avenue, Suite 700 Seattle, WA 98104-1573 Project: ExxonMobil 99CHT	Date Received: 11/22/16 Work Order: 16-11-1961 Preparation: EPA 3005A Filt. Method: EPA 6010B Page 5 of 7
---	---

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number
099-15-683-1905	LCS	Aqueous	ICP 7300	11/28/16	12/01/16 15:52	161128LA3
<u>Parameter</u>		<u>Spike Added</u>	<u>Conc. Recovered</u>	<u>LCS %Rec.</u>	<u>%Rec. CL</u>	<u>Qualifiers</u>
Lead		500.0	542.4	108	80-120	



Calscience

Quality Control - LCS

Cardno
801 Second Avenue, Suite 700
Seattle, WA 98104-1573

Date Received: 11/22/16
Work Order: 16-11-1961
Preparation: EPA 5030C
Method: EPA 8260B

Project: ExxonMobil 99CHT

Page 6 of 7

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number
099-12-874-2462	LCS	Aqueous	GC/MS CC	11/30/16	11/30/16 09:36	161130L061
Parameter	Spike Added	Conc. Recovered	LCS %Rec.	%Rec. CL	ME CL	Qualifiers
Benzene	50.00	48.29	97	80-120	73-127	
Toluene	50.00	48.13	96	79-121	72-128	
Ethylbenzene	50.00	50.27	101	80-123	73-130	
o-Xylene	50.00	52.80	106	75-125	67-133	
p/m-Xylene	100.0	103.4	103	75-125	67-133	
Methyl-t-Butyl Ether (MTBE)	50.00	48.96	98	72-126	63-135	
Tert-Butyl Alcohol (TBA)	250.0	268.6	107	71-125	62-134	
Diisopropyl Ether (DIPE)	50.00	52.42	105	69-129	59-139	
Ethyl-t-Butyl Ether (ETBE)	50.00	49.59	99	69-129	59-139	
Tert-Amyl-Methyl Ether (TAME)	50.00	49.77	100	67-133	56-144	
Ethanol	500.0	597.4	119	47-155	29-173	
1,1-Dichloroethene	50.00	44.38	89	71-131	61-141	
1,2-Dibromoethane	50.00	49.05	98	80-120	73-127	
1,2-Dichlorobenzene	50.00	51.28	103	80-120	73-127	
1,2-Dichloroethane	50.00	50.90	102	80-129	72-137	
Carbon Tetrachloride	50.00	40.32	81	66-138	54-150	
Chlorobenzene	50.00	50.21	100	80-120	73-127	
Trichloroethene	50.00	47.57	95	80-120	73-127	
Vinyl Chloride	50.00	59.55	119	70-136	59-147	

Total number of LCS compounds: 19

Total number of ME compounds: 0

Total number of ME compounds allowed: 1

LCS ME CL validation result: Pass

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



Calscience

Quality Control - LCS

Cardno
801 Second Avenue, Suite 700
Seattle, WA 98104-1573

Date Received: 11/22/16
Work Order: 16-11-1961
Preparation: EPA 5030C
Method: EPA 8260B

Project: ExxonMobil 99CHT

Page 7 of 7

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number
099-12-874-2461	LCS	Aqueous	GC/MS CC	12/01/16	12/01/16 09:50	161201L017
Parameter	Spike Added	Conc. Recovered	LCS %Rec.	%Rec. CL	ME CL	Qualifiers
Benzene	50.00	56.70	113	80-120	73-127	
Toluene	50.00	56.09	112	79-121	72-128	
Ethylbenzene	50.00	56.20	112	80-123	73-130	
o-Xylene	50.00	58.25	117	75-125	67-133	
p/m-Xylene	100.0	116.6	117	75-125	67-133	
Methyl-t-Butyl Ether (MTBE)	50.00	51.88	104	72-126	63-135	
Tert-Butyl Alcohol (TBA)	250.0	284.1	114	71-125	62-134	
Diisopropyl Ether (DIPE)	50.00	55.68	111	69-129	59-139	
Ethyl-t-Butyl Ether (ETBE)	50.00	52.13	104	69-129	59-139	
Tert-Amyl-Methyl Ether (TAME)	50.00	52.01	104	67-133	56-144	
Ethanol	500.0	602.8	121	47-155	29-173	
1,1-Dichloroethene	50.00	59.92	120	71-131	61-141	
1,2-Dibromoethane	50.00	54.45	109	80-120	73-127	
1,2-Dichlorobenzene	50.00	54.18	108	80-120	73-127	
1,2-Dichloroethane	50.00	56.19	112	80-129	72-137	
Carbon Tetrachloride	50.00	52.61	105	66-138	54-150	
Chlorobenzene	50.00	55.17	110	80-120	73-127	
Trichloroethene	50.00	60.25	121	80-120	73-127	LQ,RU
Vinyl Chloride	50.00	59.80	120	70-136	59-147	

Total number of LCS compounds: 19

Total number of ME compounds: 1

Total number of ME compounds allowed: 1

LCS ME CL validation result: Pass

Return to Contents

Sample Analysis Summary Report

Work Order: 16-11-1961

Page 1 of 1

<u>Method</u>	<u>Extraction</u>	<u>Chemist ID</u>	<u>Instrument</u>	<u>Analytical Location</u>
EPA 6010B	EPA 3005A Filt.	935	ICP 7300	1
EPA 6010B	EPA 3010A Total	935	ICP 7300	1
EPA 8260B	EPA 5030C	1055	GC/MS CC	2
NWTPH-Dx	EPA 3510C	682	GC 45	1
NWTPH-Dx	EPA 3510C	1027	GC 45	1
NWTPH-Gx	EPA 5030C	1063	GC 25	2


Return to Contents

Location 1: 7440 Lincoln Way, Garden Grove, CA 92841

Location 2: 7445 Lampson Avenue, Garden Grove, CA 92841

Glossary of Terms and Qualifiers

Work Order: 16-11-1961

Page 1 of 1

<u>Qualifiers</u>	<u>Definition</u>
AZ	Surrogate compound recovery was out of control due to matrix interference. The associated method blank surrogate spike compound was in control and, therefore, the sample data was reported without further clarification.
B	Analyte was present in the associated method blank.
BA	The MS/MSD RPD was out of control due to suspected matrix interference.
BB	Spike recovery and RPD control limits do not apply resulting from the parameter concentration in the sample exceeding the spike concentration by a factor of four or greater.
BU	Sample analyzed after holding time expired.
BV	Sample received after holding time expired.
CI	See case narrative.
DF	Reporting limits elevated due to matrix interferences.
E	Concentration exceeds the calibration range.
ET	Sample was extracted past end of recommended max. holding time.
GE	The PDS/PDS or PES/PESD associated with this batch of samples was out of control due to suspected matrix interference.
HD	Chromat. profile inconsistent with pattern(s) of ref. fuel stds.
HO	High concentration matrix spike recovery out of limits
HT	Analytical value calculated using results from associated tests.
HX	Recovery of the Matrix Spike (MS) or Matrix Spike Duplicate (MSD) compound was out of control due to matrix interference. The associated LCS was in control.
IL	Relative percent difference out of control.
J	Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated.
JA	Analyte positively identified but quantitation is an estimate.
LD	Analyte presence was not confirmed by second column or GC/MS analysis.
LP	The LCS and/or LCSD recoveries for this analyte were above the upper control limit. The associated sample was non-detected. Therefore, the sample data was reported without further clarification.
LQ	LCS recovery above method control limits.
LR	LCS recovery below method control limits.
ND	Parameter not detected at the indicated reporting limit.
QO	Compound did not meet method-described identification guidelines. Identification was based on additional GC/MS characteristics.
RU	LCS Recovery Percentage is within Marginal Exceedance (ME) Control Limit range (+/- 4 SD from the mean).
SG	A silica gel cleanup procedure was performed.
SN	See applicable analysis comment.
X	% Recovery and/or RPD out-of-range.

Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are reported on a wet weight basis.

Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of ≤ 15 minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.

A calculated total result (Example: Total Pesticides) is the summation of each component concentration and/or, if "J" flags are reported, estimated concentration. Component concentrations showing not detected (ND) are summed into the calculated total result as zero concentrations.

Jonathan Diaz

From: Laina Cole <laina.cole@cardno.com>
Sent: Tuesday, December 13, 2016 11:35 AM
To: Jonathan Diaz
Cc: Bobby Thompson; Andrew Yonkofski
Subject: RE: ExxonMobil 99CHT / ECI 16-11-1961

Follow Up Flag: Follow up
Flag Status: Flagged

Hi Jonathan,

Would it be possible to have this lab reissued with all units in µg/L? This should apply to all Cardno Seattle groundwater samples. Can you note in our account, or should we list this on the COC?

Thanks,

Laina
Laina Cole
 OFFICE ADMINISTRATIVE MANAGER
 ENGINEERING & ENVIRONMENTAL SERVICES DIVISION
 CARDNO

Direct +1 206 394 7225 **Mobile** +1 206 795 7094 **Fax** +1 206 269 0098
Address 801 Second Avenue Suite 700, Seattle, WA 98104
Email laina.cole@cardno.com **Web** www.cardno.com

This email and its attachments may contain confidential and/or privileged information for the sole use of the intended recipient(s). All electronically supplied data must be checked against an applicable hardcopy version which shall be the only document which Cardno warrants accuracy. If you are not the intended recipient, any use, distribution or copying of the information contained in this email and its attachments is strictly prohibited. If you have received this email in error, please email the sender by replying to this message and immediately delete and destroy any copies of this email and any attachments. The views or opinions expressed are the author's own and may not reflect the views or opinions of Cardno.

From: Jonathan Diaz [<mailto:JonathanDiaz@eurofinsUS.com>]
Sent: Friday, December 09, 2016 3:15 PM
To: Bobby Thompson <robert.thompson@cardno.com>; Laina Cole <laina.cole@cardno.com>; Andrew Yonkofski <Andrew.Yonkofski@cardno.com>
Subject: RE: ExxonMobil 99CHT / ECI 16-11-1961

EIM EDD is now attached. Analytical report was sent yesterday 12/8, attached for your convenience.

Thanks,
 Jonathan

(714) 895-5494

From: Bobby Thompson [<mailto:robert.thompson@cardno.com>]
Sent: Friday, December 09, 2016 1:05 PM

To: Jonathan Diaz; Laina Cole; Andrew Yonkofski
Subject: RE: ExxonMobil 99CHT / ECI 16-11-1961

Hello Jonathan,

I am not sure I understand or how to answer your question below.

Thanks,

Bobby

Robert Thompson

ASSISTANT PROJECT MANAGER
 ENGINEERING & ENVIRONMENTAL SERVICES DIVISION
 CARDNO

Direct +1 208 272 9180 **Mobile** +1 206 510 5855 **Fax** +1 206 575 9504
Address 250 Bobwhite Court, Suite 250, Boise, Idaho 83706
Email robert.thompson@cardno.com **Web** www.cardno.com

This email and its attachments may contain confidential and/or privileged information for the sole use of the intended recipient(s). All electronically supplied data must be checked against an applicable hardcopy version which shall be the only document which Cardno warrants accuracy. If you are not the intended recipient, any use, distribution or copying of the information contained in this email and its attachments is strictly prohibited. If you have received this email in error, please email the sender by replying to this message and immediately delete and destroy any copies of this email and any attachments. The views or opinions expressed are the author's own and may not reflect the views or opinions of Cardno.

From: Jonathan Diaz [<mailto:JonathanDiaz@eurofinsUS.com>]
Sent: Friday, December 09, 2016 10:46 AM
To: Laina Cole <laina.cole@cardno.com>; bobby.thompson@cardno.com; Andrew Yonkofski <Andrew.Yonkofski@cardno.com>
Cc: Bobby Thompson <robert.thompson@cardno.com>
Subject: RE: ExxonMobil 99CHT / ECI 16-11-1961

Thanks Laina.

-Jonathan

(714) 895-5494

From: Laina Cole [<mailto:laina.cole@cardno.com>]
Sent: Thursday, December 08, 2016 7:28 PM
To: Jonathan Diaz; bobby.thompson@cardno.com; Andrew Yonkofski
Cc: Bobby Thompson
Subject: RE: ExxonMobil 99CHT / ECI 16-11-1961

Hi Jonathan,

Email: robert.thompson@cardno.com. I will review the compound list tomorrow.

Thank you,

Laina Cole
Direct 206 394 7225
Cell 206 795 7094

----- Original message -----

From: Jonathan Diaz <JonathanDiaz@eurofinsUS.com>
Date: 12/8/16 21:07 (GMT-06:00)
To: bobby.thompson@cardno.com, Laina Cole <laina.cole@cardno.com>, Andrew Yonkofski <Andrew.Yonkofski@cardno.com>
Cc: Bobby Thompson <robert.thompson@cardno.com>
Subject: RE: ExxonMobil 99CHT / ECI 16-11-1961

I got a bounce back from bobby.thompson@cardno.com could you please forward report and provide and updated email so I can save it.

Thanks,
Jonathan

(714) 895-5494

From: Jonathan Diaz
Sent: Thursday, December 08, 2016 6:59 PM
To: 'bobby.thompson@cardno.com'; 'laina.cole@cardno.com'; 'andrew.yonkofski@cardno.com'
Cc: 'robert.thompson@cardno.com'
Subject: ExxonMobil 99CHT / ECI 16-11-1961

****EIM EDD will not be available due to missing compound name not in our Valid Value List if you could please provide them for the attached compound list. We will have our IT group look into it and follow up tomorrow.**

Analytical report for the above project is attached.

Thanks,
Jonathan

(714) 895-5494

Notify us [here](#) to report this email as spam.



CalScience GARDEN GROVE, CA 92841-1432

Site Name	
<i>Provide MRN for retail or AFE for major projects</i>	
Retail Project (MRN)	
Major Project (AFE)	
Project Name	ExxonMobil 99CHT

DATE: 11/21/2016
PAGE: 1 OF 1

ExxonMobil Engr:	Maria Madden
------------------	--------------

[illegible]

1961

FedEx Express **NEW Package**
US Airbill
FedEx
Tracking
Number

8077 7380 7372

Form
ID No.

0200

Recipient's Copy

1 From

Date 11/21/16

Sender's Name Cardno

Phone 206 305 2167

Company Cardno

Address 801 Second Ave, Suite 700

City Seattle

State WA ZIP 98104

2 Your Internal Billing Reference

3 To

Recipient's Name SAMPLE CONTROL

Phone 714 895-5494

Company ECI

Address 7440 LINCOLN WAY

We cannot deliver to P.O. boxes or P.O. ZIP codes.

Dept./Floor/Suite/Room

Address

Use this line for the HOLD location address or for continuation of your shipping address.

City GARDEN GROVE

State CA ZIP 92841

☐ HOLD Weekday
 FedEx location address
 REQUIRED. NOT available for
 FedEx First Overnight.

☐ HOLD Saturday
 FedEx location address
 REQUIRED. Available ONLY for
 FedEx Priority Overnight and
 FedEx 2Day to select locations.

4 Express Package Service

* To most locations.

NOTE: Service order has changed. Please select carefully.

Packages up to 150 lbs.

For packages over 150 lbs., use the new
FedEx Express Freight US Airbill.

Next Business Day

☒ FedEx First Overnight
 Earliest next business morning delivery to select
 locations. Friday shipments will be delivered on
 Monday unless SATURDAY Delivery is selected.

☐ FedEx Priority Overnight
 Next business morning. * Friday shipments will be
 delivered on Monday unless SATURDAY Delivery
 is selected.

☐ FedEx Standard Overnight
 Next business afternoon. *
 Saturday Delivery NOT available.

2 or 3 Business Days

☐ FedEx 2Day A.M.
 Second business morning. *
 Saturday Delivery NOT available.

☐ FedEx 2Day
 Second business afternoon. * Thursday shipments
 will be delivered on Monday unless SATURDAY
 Delivery is selected.

☐ FedEx Express Saver
 Third business day. *
 Saturday Delivery NOT available.

5 Packaging

* Declared value limit \$500.

☐ FedEx Envelope*

☐ FedEx Pak*

☐ FedEx
Box

☐ FedEx
Tube

☒ Other

6 Special Handling and Delivery Signature Options

☐ SATURDAY Delivery

NOT available for FedEx Standard Overnight, FedEx 2Day A.M., or FedEx Express Saver.

☐ No Signature Required
 Package may be left without
 obtaining a signature for delivery.

☐ Direct Signature
 Someone at recipient's address
 may sign for delivery. Fee applies.

☐ Indirect Signature
 If no one is available at recipient's
 address, someone at a neighboring
 address may sign for delivery. For
 residential deliveries only. Fee applies.

Does this shipment contain dangerous goods?

☒ No

☐ Yes
As per attached
Shipper's Declaration.
☐ Yes
 Shipper's Declaration
 not required.

☐ Dry Ice

Dry Ice, 9 UN 1845

x kg

☐ Cargo Aircraft Only

7 Payment Bill to:

☐ Sender

☒ Recipient

☐ Third Party

☐ Credit Card

☐ Cash/Check

☐ Sender
 Acct. No. in Section
 I will be billed.

☒ Recipient

☐ Third Party

☐ Credit Card

☐ Cash/Check

Total Packages

Total Weight

66 lbs.

Credit Card Auth.

Your liability is limited to US\$100 unless you declare a higher value. See the current FedEx Service Guide for details.



8077 7380 7372

644

SAMPLE RECEIPT CHECKLIST

COOLER 1 OF 1

CLIENT: CAYNO

DATE: 11 / 22 / 2016

TEMPERATURE: (Criteria: 0.0°C – 6.0°C, not frozen except sediment/tissue)

Thermometer ID: SC3A (CF: 0.0°C); Temperature (w/o CF): 2.3 °C (w/ CF): 2.3 °C; ☒ Blank ☐ Sample

☐ Sample(s) outside temperature criteria (PM/APM contacted by: _____)

☐ Sample(s) outside temperature criteria but received on ice/chilled on same day of sampling

☐ Sample(s) received at ambient temperature; placed on ice for transport by courier

Ambient Temperature: ☐ Air ☐ Filter

Checked by: 426

CUSTODY SEAL:

Cooler ☒ Present and Intact ☐ Present but Not Intact ☐ Not Present ☐ N/A

Checked by: 426

Sample(s) ☐ Present and Intact ☐ Present but Not Intact ☒ Not Present ☐ N/A

Checked by: 426

SAMPLE CONDITION:

Chain-of-Custody (COC) document(s) received with samples ☒ Yes ☐ No ☐ N/A

COC document(s) received complete ☒ Yes ☐ No ☐ N/A

☐ Sampling date ☐ Sampling time ☐ Matrix ☐ Number of containers

☐ No analysis requested ☐ Not relinquished ☐ No relinquished date ☐ No relinquished time

Sampler's name indicated on COC ☒ Yes ☐ No ☐ N/A

Sample container label(s) consistent with COC ☒ Yes ☐ No ☐ N/A

Sample container(s) intact and in good condition ☒ Yes ☐ No ☐ N/A

Proper containers for analyses requested ☒ Yes ☐ No ☐ N/A

Sufficient volume/mass for analyses requested ☒ Yes ☐ No ☐ N/A

Samples received within holding time ☒ Yes ☐ No ☐ N/A

Aqueous samples for certain analyses received within 15-minute holding time

☐ pH ☐ Residual Chlorine ☐ Dissolved Sulfide ☐ Dissolved Oxygen ☐ Yes ☐ No ☒ N/A

Proper preservation chemical(s) noted on COC and/or sample container ☒ Yes ☐ No ☐ N/A

Unpreserved aqueous sample(s) received for certain analyses

☐ Volatile Organics ☐ Total Metals ☒ Dissolved Metals

Container(s) for certain analysis free of headspace ☒ Yes ☐ No ☐ N/A

☒ Volatile Organics ☐ Dissolved Gases (RSK-175) ☐ Dissolved Oxygen (SM 4500)

☐ Carbon Dioxide (SM 4500) ☐ Ferrous Iron (SM 3500) ☐ Hydrogen Sulfide (Hach)

Tedlar™ bag(s) free of condensation ☐ Yes ☐ No ☒ N/A

CONTAINER TYPE:

(Trip Blank Lot Number: _____)

Aqueous: ☐ VOA ☒ VOA_h ☐ VOA_{na2} ☐ 100PJ ☐ 100PJ_{na2} ☐ 125AGB ☐ 125AGB_h ☐ 125AGB_p ☐ 125PB

☐ 125PB_{znna} ☐ 250AGB ☐ 250CGB ☐ 250CGB_s ☒ 250PB ☒ 250PB_n ☐ 500AGB ☒ 500AGJ ☐ 500AGJ_s
☐ 500PB ☐ 1AGB ☐ 1AGB_{na2} ☐ 1AGB_s ☐ 1PB ☐ 1PB_{na} ☐ _____ ☐ _____ ☐ _____ ☐ _____

Solid: ☐ 4ozCGJ ☐ 8ozCGJ ☐ 16ozCGJ ☐ Sleeve (_____) ☐ EnCores® (_____) ☐ TerraCores® (_____) ☐ _____

Air: ☐ Tedlar™ ☐ Canister ☐ Sorbent Tube ☐ PUF ☐ _____ Other Matrix (_____) : ☐ _____ ☐ _____

Container: A = Amber, B = Bottle, C = Clear, E = Envelope, G = Glass, J = Jar, P = Plastic, and Z = Ziploc/Resealable Bag

Preservative: b = buffered, f = filtered, h = HCl, n = HNO₃, na = NaOH, na₂ = Na₂S₂O₃, p = H₃PO₄, Labeled/Checked by: 426

s = H₂SO₄, u = ultra-pure, x = Na₂SO₃+NaHSO₄.H₂O, znna = Zn (CH₃CO₂)₂ + NaOH

Reviewed by: 836

**FIELD LOG
DEPTH TO WATER RECORD**

CLIENT NAME: ExxonMobil 99CHT

CARDNO #: 031379

SITE LOCATION: 7323 Aurora Avenue North, Seattle, WA

FIELD CREW: AJRY, CC

DATE: 11/21/16

Well #	Time	DTW (ft)	DOW (ft)	Comments/Repairs
MW1	10:45	4.81	12.7	Gauged and sampled 11/21/16.
MW2	10:48	4.88	12.8	Gauged and sampled 11/21/16.
MW3	10:33	6.85	15.1	Gauged and sampled 11/21/16.
MW4	10:56	8.33	14.5	Gauged and sampled 11/21/16.
MW5	09:52	7.03	14.6	Gauged and sampled 11/21/16.
MW6	09:45	DRY	7.8	Gauged 11/21/16.

FIELD LOG
PURGING & SAMPLING RECORD AND WELL EQUIPMENT STATUS

SITE: ExxonMobil 99CHT **CARDNO#:** 031379
LOCATION: 7323 Aurora Avenue North, Seattle WA
FIELD CREW: CC, AJRY **DATE:** 11/21/16 Low-Flow Sampling

WELL # MW1							
TIME	DTW	PURGE VOLUME	Pump Rate (Q)	Temp	COND	pH	DO
hr:min	ft	mL	mL/min	deg C	μS/cm	unit	mg/L
				1 deg	3%	0.1	0.3
11:52	4.81						
11:55	4.81	750	250	15.01	0.431	6.92	4.08
11:58	4.81	1,500	250	15.48	0.432	6.88	2.20
12:01	4.82	2,250	250	15.77	0.429	6.66	1.86
12:04	4.82	3,000	250	15.78	0.429	6.64	1.84
12:07	4.82	3,750	250	15.79	0.427	6.59	1.78
12:10	4.82	4,500	250	15.83	0.428	6.56	1.74
Comments:							
SW	12:10	1 gal = 3.79L					
Total Purge Volume		4,500 mL	1.19 gal				

WELL # MW2							
TIME	DTW	PURGE VOLUME	Pump Rate (Q)	Temp	COND	pH	DO
hr:min	ft	mL	mL/min	deg C	μS/cm	unit	mg/L
				1 deg	3%	0.1	0.3
12:22	4.88						
12:25	4.88	750	250	14.98	0.537	6.60	3.55
12:28	4.88	1,500	250	16.35	0.534	6.76	2.13
12:31	4.88	2,250	250	16.44	0.533	6.50	1.91
12:34	4.88	3,000	250	16.50	0.533	6.44	1.81
12:37	4.88	3,750	250	16.55	0.535	6.38	1.80
12:40	4.88	4,500	250	16.53	0.535	6.37	1.78
Comments:							
SW	12:40	1 gal = 3.79L					
Total Purge Volume		4,500 mL	1.19 gal				

FIELD LOG
PURGING & SAMPLING RECORD AND WELL EQUIPMENT STATUS

SITE: ExxonMobil 99CHT **CARDNO#:** 031379
LOCATION: 7323 Aurora Avenue North, Seattle WA
FIELD CREW: CC, AJRY **DATE:** 11/21/16 Low-Flow Sampling

WELL # MW3							
TIME	DTW	PURGE VOLUME	Pump Rate (Q)	Temp	COND	pH	DO
hr:min	ft	mL	mL/min	deg C	μS/cm	unit	mg/L
				1 deg	3%	0.1	0.3
10:35	6.85						
10:38	6.85	750	250	15.07	0.286	7.26	3.33
10:41	6.85	1,500	250	16.06	0.273	7.07	2.02
10:44	6.85	2,250	250	16.12	0.268	6.90	1.92
10:47	6.85	3,000	250	16.09	0.264	6.87	1.89
10:50	6.85	3,000	250	16.12	0.264	6.85	1.88
10:53	6.85	3,750	250	16.15	0.265	6.82	1.87
Comments:							
SW	10:55	1 gal = 3.79L					
Total Purge Volume		3,750 mL	0.99 gal				

WELL # MW4							
TIME	DTW	PURGE VOLUME	Pump Rate (Q)	Temp	COND	pH	DO
hr:min	ft	mL	mL/min	deg C	μS/cm	unit	mg/L
				1 deg	3%	0.1	0.3
11:03	8.33						
11:06	8.37	450	150	14.99	0.198	7.17	4.39
11:09	8.41	900	150	15.11	1.970	7.15	3.33
11:12	8.43	1,350	150	15.33	0.216	7.04	3.24
11:15	8.45	1,800	150	15.41	0.226	7.03	3.20
11:18	8.46	1,800	150	15.47	0.228	7.04	3.18
11:21	8.47	2,250	150	15.51	0.228	7.05	3.16
Comments:							
SW	11:25	1 gal = 3.79L					
Total Purge Volume		2,250 mL	0.59 gal				

FIELD LOG
PURGING & SAMPLING RECORD AND WELL EQUIPMENT STATUS

SITE: ExxonMobil 99CHT	CARDNO#: 031379
LOCATION: 7323 Aurora Avenue North, Seattle WA	
FIELD CREW: CC, AJRY	DATE: 11/21/16 Low-Flow Sampling

WELL # MW5							
TIME	DTW	PURGE VOLUME	Pump Rate (Q)	Temp	COND	pH	DO
hr:min	ft	mL	mL/min	deg C	μS/cm	unit	mg/L
				1 deg	3%	0.1	0.3
09:58	7.03						
10:01	7.04	600	200	15.62	0.282	8.01	3.97
10:04	7.05	1,200	200	15.65	0.281	7.94	3.48
10:07	7.07	1,800	200	15.70	0.279	7.65	3.26
10:10	7.08	2,400	200	15.84	0.277	7.34	3.22
10:13	7.10	2,400	200	15.88	0.277	7.29	3.20
10:16	7.11	3,000	200	15.89	0.276	7.24	3.21
Comments:							
SW	10:20	1 gal = 3.79L					
Total Purge Volume		3,000 mL	0.79 gal				