

April 24, 2014

Project No. 073-93368-06.09A

Harry Grant
Riddell Williams P.S.
1001 Fourth Avenue, Suite 4500
Seattle, WA 98154

**RE: SEA-TAC DEVELOPMENT SITE (MASTERPARK LOT C) PERFORMANCE GROUNDWATER
MONITORING REPORT – FIRST QUARTER 2014**

Dear Harry:

Golder Associates Inc. (Golder) completed the first performance groundwater monitoring event at the Sea-Tac Development Site (MasterPark Lot C) during February and March 2014. Groundwater sampling was conducted in accordance with the Compliance Monitoring Plan, Sea-Tac Development Site (Golder 2011¹). Groundwater samples were collected from monitoring wells MW-06, MW-07, MW-09, MW-12, MW-13, MW-17A, MW-18, MW-19, MW-20, MW-21, MW-22, and PORT-MW-B (Figure 1). Monitoring wells MW-07, MW-09, MW-12, MW-13, MW-17A, MW-18, and MW-22 are completed to monitor the approximate groundwater plume boundary. Monitoring wells MW-06, MW-19, MW-20, MW-21, and PORT-MW-B are completed to monitor background concentrations. Static water elevations were collected at all site wells, which also include MW-01, MW-05, MW-08A, MW-10, MW-11, MW-14, MW-15, and MW-16.

Groundwater sampling was conducted in accordance with the Compliance Monitoring Plan, Sea-Tac Development Site (Golder 2011¹), and included the following activities:

- Measurement of static water elevations at monitoring wells
- Well purging to insure sample representativeness with the newly installed dedicated submersible bladder pumping systems
- Measurement of field parameters including: pH, specific conductance, temperature, dissolved oxygen, and turbidity
- Collection of all purge water in appropriate containers for on-site storage prior to disposal
- Collection of representative and quality assurance/quality control (QA/QC) samples in appropriate containers
- Analyses of groundwater for volatile organic compounds (VOCs, EPA Method 8260C): ethylene dibromide (EDB), naphthalene, and n-hexane; diesel and motor oil range Northwest Total Petroleum Hydrocarbons (Method NWTPH-D); gasoline range Northwest Total Petroleum Hydrocarbons, benzene, toluene, ethylbenzene, and xylene (NWTPH-Gx/BTEX)

¹Golder Associates Inc. (Golder). 2011. Attachment E: Compliance Monitoring Plan Sea-Tac Development Site, SeaTac Washington. November, 2.



The attached Appendix A presents the laboratory analytical reports for all analyses. Sampling activities were documented on Sample Integrity Data Sheets (SIDS) and are provided in Appendix B. Appendix C presents the Data Validation Memo. Table 1 presents water depth measurements and elevations that were collected from wells prior to sampling activities.

Following sample collection, all bottles were sealed, labeled, and placed in an iced cooler until delivery to the laboratory. All groundwater samples from monitoring wells were transported under chain-of-custody procedures to Analytical Resources Incorporated (ARI), of Tukwila, Washington, for analysis. Upon receipt of laboratory data reports, data underwent a Data Validation Review. Results were compared to State of Washington Model Toxics Control Act (MTCA) Method A or B clean-up levels and Secondary Maximum Containment Levels (MCLs), whichever value is more protective.

The analytical results indicate that groundwater conditions have improved significantly from those observed during the historical groundwater monitoring during the remedial investigation and since the startup of the In-situ Air Sparging (IAS)-Soil Vapor Extraction (SVE) system. Table 2 presents the field parameter measurements and laboratory analytical results for each groundwater sample.

Results for NWTPH-Gasoline exceeded the MTCA Method A limit for groundwater when benzene is present (0.8 milligrams per liter [mg/L]) in wells MW-07, MW-09, MW-12, MW-13, MW-18, and MW-22. NWTPH-Gx was non-detect in wells MW-06, MW-17A, MW-19, MW-20, MW-21, and PORT-MW-B.

The MTCA standard for benzene (5 micrograms per liter [$\mu\text{g/L}$]) was exceeded in wells MW-07, MW-09, MW-12, MW-18, and MW-22. Benzene was detected in the field duplicate at MW-22, but was less than the MTCA standard. Benzene was non-detect in wells MW-06, MW-13, MW-17A, MW-19, MW-20, MW-21, and PORT-MW-B.

There were detections of toluene and ethylbenzene in wells MW-07, MW-09, MW-12, MW-13, MW-18, and MW-22, but the values did not exceed the MTCA standard (640 $\mu\text{g/L}$ for toluene and 700 $\mu\text{g/L}$ for ethylbenzene) except for ethylbenzene in MW-22. Toluene and ethylbenzene were non-detect in wells MW-06, MW-17A, MW-19, MW-20, MW-21, and PORT-MW-B.

Results for total xylenes exceeded the MTCA Method A standard (1000 $\mu\text{g/L}$) in wells MW-07, MW-13, and MW-22. Xylenes were detected, but below the standard in MW-09, MW-12, and MW-18 and were non-detect in wells MW-06, MW-17A, MW-19, MW-20, MW-21, and PORT-MW-B.

Ethylene dibromide (EDB) results were non-detect for all samples. The reporting limits were raised for samples from MW-07 and MW-12 due to high levels of BTEX. More information is provided in the Data Validation memorandum in Appendix C. The method detection limits (MDLs) for EDB for all samples were greater than the MTCA clean-up levels.

N-hexane was detected, and below the MTCA Method B level (480 $\mu\text{g/L}$) in wells MW-07, MW-09, MW-18, MW-19, and MW-22. N-hexane was non-detect in wells MW-06, MW-12, MW-13, MW-17A, MW-20, MW-21, and PORT-MW-B.

Naphthalene was detected above the MTCA limit (160 $\mu\text{g/L}$) in wells MW-07 and MW-22. Naphthalene was also detected, but below the MTCA limit in wells MW-09, MW-12, MW-13, MW-17A, and MW-18. Naphthalene was non-detect in wells MW-06, MW-19, MW-20, MW-21, and PORT-MW-B.

Results for NWTPH-Diesel were detected above the MTCA Method A limit (0.5 mg/L) in wells MW-07, MW-09, MW-12, MW-13, MW-18, and MW-22. NWTPH-Diesel was non-detect in MW-06, MW-17A, MW-19, MW-20, MW-21, and PORT-MW-B. The highest concentrations of diesel were detected in groundwater from monitoring well MW-07 at 11 mg/L, while all other diesel concentrations were less than 2 mg/L or non-detect. Results for NWTPH-Motor Oil were non-detect for all samples except for the field duplicate result for MW-22, which was detected above the MTCA Method A limit (0.5 mg/L). This detect

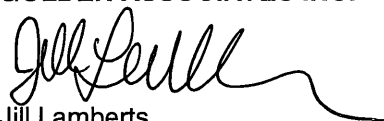
of NWTPH-Motor Oil is questionable because the other MW-22 groundwater sample analysis was non-detect for motor oil at less than 0.2 mg/L.

Data underwent a Data Validation review and is presented in detail in Appendix C. In general, the data were acceptable, with qualification as estimated (J) applied to the result for naphthalene in the initial analysis of the sample from MW-09 due to a surrogate being out of control high. The result was not reported since it was reanalyzed at a dilution. Naphthalene results for MW-22, MW-22-DUP, MW-20, and PORT-MW-B were qualified as estimated (J or UJ) due to CCALs (continuing calibrations) being out of control. Diesel results for samples MW-09, MW-13, MW-18, MW-08, MW-12, MW-22, and MW-22-DUP were also qualified as estimated (J) due to unidentifiable hydrocarbons. Sample PORT-MW-B was reanalyzed due to naphthalene carryover and only the reanalysis was reported. Samples MW-07, MW-09, MW-12, MW-13, MW-22, and MW-22-DUP had to be re-analyzed at a dilution due to high levels of analytes. The diluted results are reported and are detailed in Appendix C. Results for QA/QC samples (field blanks, trip blanks, and field duplicate) were acceptable except for poor relative percent differences (RPDs) between the sample and the field duplicate for MW-22 for toluene, ethylbenzene, m,p-xylene, diesel, and motor oil. No action was taken for the poor RPDs other than to note in the Data Validation memorandum. No other issues were noted.

If you have any questions or require any additional information, please contact Douglas Morell at (425) 883-0777.

Sincerely

GOLDER ASSOCIATES INC.



Jill Lamberts
Project Environmental Scientist



Douglas J. Morell, Ph.D., LHG
Principal

cc: Roger McCracken
Tamarah Knapp-Hancock
Kevin Collette
Doug Rigoni

Attachments:

Table 1	First Quarter 2014 Groundwater Elevation Data, Sea-Tac Development Site, Seatac, Washington
Table 2	First Quarter 2014 Groundwater Field Parameters and Analytical Data, Sea-Tac Development Site, Seatac, Washington
Figure 1	Groundwater Monitoring Locations
Appendix A	Laboratory Analytical Results
Appendix B	Sample Integrity Data Sheets (SIDS)
Appendix C	Data Validation Memo

JSL/DJM/tp

TABLES

Table 1: First Quarter 2014 Groundwater Elevation Data Sea-Tac Development Site, Seatac, Washington

Sample Location ID	Date/Time Sampled	Well Data			Water Levels		
		Total Well Depth (feet bgs)	Screened Interval (feet bgs)	Casing Diameter (inches)	TOC Elevation (feet msl)	Depth to Water (feet btoc)	Groundwater Elevation (feet msl)
MW-01 ^b	2/11/2014 9:56	51.0	41-51	2	361.38	49.05	312.33
MW-05	2/11/2014 9:27	58.0	48-58	2	364.26	53.94	310.32
MW-06	2/6/2014 9:13	60.0	50-60	2	369.68	59.03	310.65
MW-07	2/6/2014 13:10	53.5	43.5-53.5	2	358.69	47.72	310.97
MW-08A	2/11/2014 9:35	54.0	44-54	2	359.16	48.63	310.53
MW-09	2/6/2014 10:07	57.0	47.5-57	2	362.13	51.45	310.68
MW-10	2/11/2014 9:50	90.0	80-90	2	360.18	50.07	310.11
MW-11 ^b	2/11/2014 9:40	57.0	42-57	2	357.53	46.82	310.71
MW-12 ^b	2/6/2014 11:30	67.0	52-67	2	364.83	55.02	309.81
MW-13	2/6/2014 11:11	65.0	50-65	2	365.42	54.35	311.07
MW-14 ^b	2/11/2014 9:15	65.0	50-65	2	363.76	53.4	310.36
MW-15	3/20/2014 11:35	65.0	50-65	2	364.67	54.06	310.61
MW-16	2/6/2014 15:50	73.7	64-74	2	377.63	66.84	310.79
MW-17A ^a	2/6/2014 15:20	95.0	80-95	2	394.00	83.8	310.20
MW-18 ^b	2/6/2014 12:41	62.0	47-62	2	360.45	49.01	311.44
MW-19	2/6/2014 13:36	58.0	43-58	2	356.61	45.46	311.15
MW-20	2/6/2014 14:50	113.1	103-113	2	416.61	106.13	310.48
MW-21	2/6/2014 14:24	109.8	95-110	2	412.85	102.34	310.51
MW-22	3/20/2014 10:25	95.0	80-95	2	393.31	82.93	310.38
MW-23	3/20/2014 11:55	57.5	42.5-57.5	2	354.94	44.31	310.63
PORT-MW-B ^a	3/20/2014 12:28	99.0	79-99	2	400.00	89.7	310.30

Notes:

- Not measured or not available
- feet bgs Feet below ground surface
- feet bmp Feet below measuring point
- feet msl Feet above mean sea level
- TOC Top of casing inside PVC well
- ^a Well not surveyed, elevation estimated.
- ^b IAS/SVE in operation. Suction may be affecting WLs.

Table 2: First Quarter 2014 Groundwater Field Parameters and Analytical Data, Sea-Tac Development Site, Seatac, Washington

Sample Location ID	Date/Time Sampled ^c	Field Parameters								Analytical Data									
		TOC Elevation (feet msl)	Depth to Water (feet btoc)	Groundwater Elevation (feet msl)	pH (standard units)	Temperature (°C)	Conductivity (µmhos/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	NWTPH-Gasoline (mg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	EDB (ethylene dibromide) (µg/L) ^f	N-hexane (µg/L)	Naphthalene (µg/L)	NWTPH-Diesel (mg/L)	NWTPH-Motor Oil (mg/L)
MW-06	2/11/2014 11:05	369.7	59.0	310.7	6.13	12.1	139.0	0.91	16.4	<0.1	<0.25	<0.25	<0.25	<0.5	<0.08	<0.2	<0.5	<0.1	<0.2
MW-07	2/13/2014 9:50	358.7	47.7	311.0	6.56	14.3	131.3	0.35	3.87	29	25	110	180	2022	<3.8	190	220	11 J	<0.2
MW-09	2/12/2014 12:30	362.1	51.5	310.7	6.49	12.6	99.5	0.28	3.10	7.5	30	8.1	150	98.0	<0.08	16	120	1.6 J	<0.2
MW-12 ^j	2/13/2014 11:15	364.8	55.0	309.8	7.76	14.1	125.2	10.5	3.43	8.6	79	410	79	970	<3.8	<10	25	1.1 J	<0.2
MW-13	2/12/2014 13:40	365.4	54.4	311.1	6.57	13.2	73.3	1.41	4.28	14	<0.25	3.90	240	2070	<0.08	<0.2	33	1.4 J	<0.2
MW-17A ^a	2/11/2014 14:00	394.0	83.8	310.2	6.36	11.3	82.5	1.06	137	<0.1	<0.25	<0.25	<0.25	<0.5	<0.08	<0.2	0.74	<0.1	<0.2
MW-18 ^j	2/12/2014 15:15	360.5	49.0	311.4	7.62	13.8	174.6	8.11	2.89	1.0	27	13	17	91.3	<0.08	1.1	4	0.77 J	<0.2
MW-19	2/11/2014 15:40	356.6	45.5	311.2	6.98	12.7	105.2	0.15	3.20	<0.1	<0.25	<0.25	<0.25	<0.5	<0.08	4.3	<0.5	<0.1	<0.2
MW-20	3/20/2014 8:30	416.6	106.1	310.5	6.74	11.4	377.0	7.82	3.32	<0.1	<0.25	<0.25	<0.25	<0.5	<0.07	<0.2	<0.5 UJ	<0.1	<0.2
MW-21	2/11/2014 12:25	412.9	102.3	310.5	6.09	11.9	109.6	6.31	11.2	<0.1	<0.25	<0.25	<0.25	<0.5	<0.08	<0.2	<0.5	<0.1	<0.2
MW-22	3/20/2014 11:10	393.3	82.9	310.4	6.68	12.2	381.0	0.87	64.8	17	5.7	12	990	1503	<0.07	7.8	400 J	1.2 J	<0.2
MW-22 Duplicate	3/20/2014 11:15	-	-	-	-	-	-	-	-	14	4.7	9.4	720	1109	<0.07	7.6	400 J	1.7 J	0.71
PORT-MW-B ^a	3/20/2014 13:55	400.0	89.7	310.3	6.55	12.3	266.9	6.16	- ^b	<0.1	<0.25	<0.25	<0.25	<0.5	<0.07	<0.2	<0.5 UJ	<0.1	<0.2
Clean-up Level		MTCA Method A for Groundwater (unrestricted landuse)								0.8 ^d /1.0 ^e	5 ^g	1000 ^g	700 ^g	1000 ^h	0.01 ^h	NSA	160	0.5	0.5
		MTCA Method B for Groundwater (unrestricted landuse)								NSA	5 ⁱ	640	800	1600	0.022	480	160	NSA	NSA

Notes:

feet bgs

feet bmp

feet msl

a

b

c

d

e

f

g

h

i

j

Feet below ground surface

Feet below measuring point

Feet above mean sea level

Well not surveyed, elevation estimated.

Turbidity out of range. Well was purged using a bailer.

Water levels collected at various times prior to sampling (see Table 1). Date/time is sampling time.

When benzene is present.

When benzene is not present.

Reported at Method Detection Limit (MDL). The MDL is greater than the MTCA CULs.

Inclusive of 40 CFR 141.61 Federal Law for drinking water MCLs

Value is more protective than Federal MCLs.

MTCA 173-340-705(5): Adjustments to cleanup levels based on applicable laws.

IAS/SVE in operation. Suction may be affecting WLs.

-

mg/L

µg/L

NTU

µmhos/cm

<

MTCA

MCL

NSA

TOC

°C

J

UJ

Not measured or not available

Result exceeds Clean-up Level (CUL)

Milligrams per liter

Micrograms per liter

Nephelometric Turbidity Unit

Micromhos per centimeter

Analyte not detected above the reporting limit shown

Model Toxics Control Act

Maximum Containment Level

No Standard Available

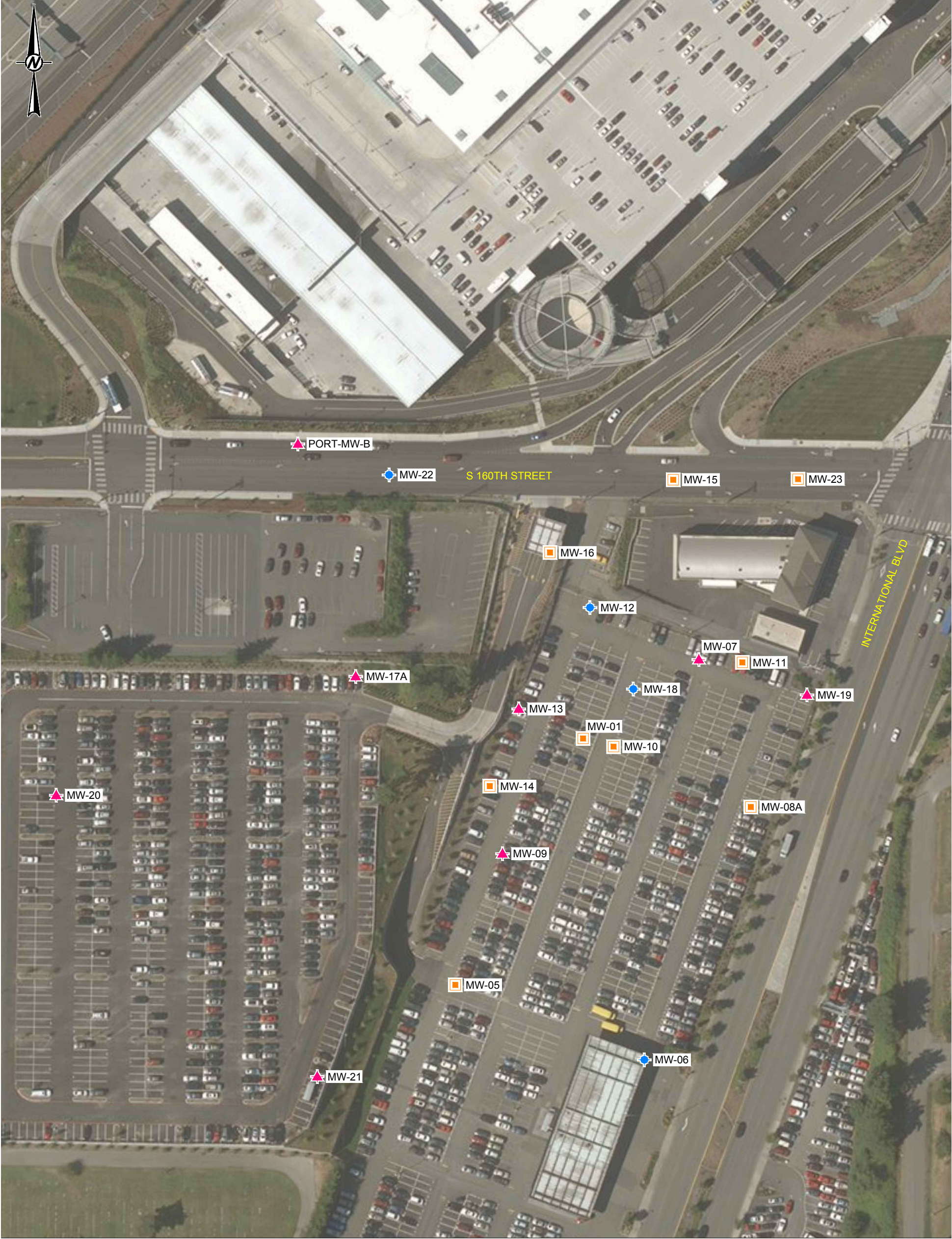
Top of casing inside PVC well

Degrees Celsius

The constituent was positively identified and detected; however, the concentration reported is an estimated value because the result is less than the quantitation limit or quality control criteria were not met.

The constituent was analyzed for, but was not detected above the reported sample quantitation limit; however, the value reported is an estimated value because the result is less than the quantitation limit or quality control criteria were not met.

FIGURES



LEGEND

MW-14

MW-09

MW-01

MONITORING WELL - GROUNDWATER ELEVATIONS MEASURED

MONITORING WELL - COMPLIANCE

MONITORING WELL - NATURAL ATTENUATION

NOTES

1. MONITORING WELL LOCATIONS ARE APPROXIMATE.

REFERENCE

IMAGE COURTESY OF USGS EARTHSTAR GEOGRAPHICS

CLIENT
RIDDELL-WILLIAMS

CONSULTANT



YYYY-MM-DD	2014-04-01
PREPARED	REDMOND
DESIGN	JL
REVIEW	DM
APPROVED	

PROJECT
SEATAC DEVELOPMENT SITE
MASTER PARK LOT C

TITLE
GROUNDWATER MONITORING LOCATIONS

PROJECT No.	U+0000	Rev.	FIGURE
073-93368x06.09A		B	1

NOT FOR CONSTRUCTION
DRAFT



APPENDIX A
LABORATORY ANALYTICAL RESULTS



Analytical Resources, Incorporated
Analytical Chemists and Consultants

February 28, 2014

Mr. Doug Morell
Golder Associates Inc.
18300 NE Union Hill Road
Suite 200
Redmond, WA 98052

Re: Project: MasterPark Lot C
ARI Job No.: XY90, XZ00 and XZ26

Dear Doug:

Please find enclosed Chain-of-Custody record (COC), sample receipt documentation, and the final results for the project referenced above. Analytical Resources, Inc. (ARI) accepted ten water samples and trip blanks between February 11, 2014 and February 13, 2014. For further details regarding sample receipt, please refer to the Cooler Receipt Form.

The samples were analyzed NWTPH-Dx, NWTPH-Gx/BETX, and VOCs, as requested on the COC. Quality control analyses have been included for your review.

The VOCs surrogate d4-1,2-Dichloroethane is out of control high in sample MPLOT-MW-9-021214. The sample was analyzed at a dilution with surrogate recoveries in control.

There were no other anomalies associated with the analyses.

An electronic copy of this report and all associated raw data will remain electronically on file at ARI. Please feel free to contact me if you have any questions or require any additional information.

Respectfully,
ANALYTICAL RESOURCES, INC.

Kelly Bottem
Client Services Manager
(206) 695-6211
kellyb@arilabs.com

Analytical Resources, Incorporated
Analytical Chemists and Consultants
4611 South 134th Place, Suite 100
Tukwila, WA 98168
206-695-6200 206-695-6201 (fax)

ARI Assigned Number:	X490	Turn-around Requested:	Standard	Page:	1	of	1
ARI Client Company	Golden Associates	Phone:	425 883-0777	Date:	2/11/2014	Ice Present?	
Client Contact:	Douglas Moeve			No. of Coolers:		Cooler Temps:	

Client Project Name:	<i>Master Park Lot C</i>					
Client Project #:	<i>073-93368-06-09A</i>	Samplers:	<i>Lambert</i>			
			<i>xg</i>	<i>+ *</i>	<i>ane</i>	<i>halene</i>
		Analysis Requested				
		<i>4-Dx</i>				

[illegible]

Limits of Liability: ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the Invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, not withstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Client.

please analyze per existing MSA btwn Golden + ARI

Sample Retention Policy: All samples submitted to ARI will be appropriately discarded no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer, unless alternate retention schedules have been established by work-order or contract.

XZ90:00002



Cooler Receipt Form

ARI Client Gold

COC No(s): _____ (NA)

Assigned ARI Job No. XY90

Project Name: Master Park Lot C

Delivered by: Fed-Ex UPS Courier (Hand Delivered Other: _____)

Tracking No. _____ (NA)

Preliminary Examination Phase:

Were intact, properly signed and dated custody seals attached to the outside of to cooler? YES (NO)

Were custody papers included with the cooler? YES (NO)

Were custody papers properly filled out (ink, signed, etc) YES (NO)

Temperature of Cooler(s) (°C) (recommended 2.0-6.0 °C for chemistry)

Time: 1625

If cooler temperature is out of compliance fill out form 00070F

Temp Gun ID#: 908 77952 3.6

Cooler Accepted by: _____ Date: 2/11/14 Time: 1620

Complete custody forms and attach all shipping documents

Log-In Phase:

Was a temperature blank included in the cooler? YES (NO)

What kind of packing material was used? Bubble Wrap Wet Ice Gel Packs Baggies Foam Block Paper Other: _____

Was sufficient ice used (if appropriate)? NA YES (NO)

Were all bottles sealed in individual plastic bags? YES (NO)

Did all bottles arrive in good condition (unbroken)? YES (NO)

Were all bottle labels complete and legible? YES (NO)

Did the number of containers listed on COC match with the number of containers received? YES (NO)

Did all bottle labels and tags agree with custody papers? YES (NO)

Were all bottles used correct for the requested analyses? YES (NO)

Do any of the analyses (bottles) require preservation? (attach preservation sheet, excluding VOCs) NA YES (NO)

Were all VOC vials free of air bubbles? NA YES (NO)

Was sufficient amount of sample sent in each bottle? YES (NO)

Date VOC Trip Blank was made at ARI: NA 2/7/14

Was Sample Split by ARI: (NA) YES Date/Time _____ Equipment: _____ Split by: _____

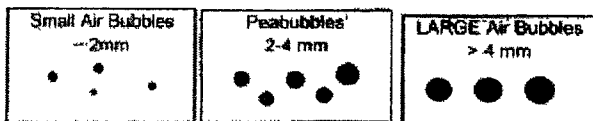
Samples Logged by AV Date: 2/12/14 Time: 1055

**** Notify Project Manager of discrepancies or concerns ****

Sample ID on Bottle	Sample ID on COC	Sample ID on Bottle	Sample ID on COC

Additional Notes, Discrepancies, & Resolutions:

By: _____ Date: _____



Small → "sm" (< 2 mm)

Peabubbles → "pb" (2 to < 4 mm)

Large → "lg" (4 to < 6 mm)

Headspace → "hs" (> 6 mm)

Sample ID Cross Reference Report



ARI Job No: XY90
Client: Golder Associates
Project Event: 073-93368-06-09A
Project Name: Master Park Lot C

Sample ID	ARI Lab ID	ARI LIMS ID	Matrix	Sample Date/Time	VTSR
1. MPLOT-MW-6-021114	XY90A	14-2273	Water	02/11/14 11:05	02/11/14 16:20
2. MPLOT-MW-21-021114	XY90B	14-2274	Water	02/11/14 12:25	02/11/14 16:20
3. MPLOT-MW-17A-021114	XY90C	14-2275	Water	02/11/14 14:00	02/11/14 16:20
4. MPLOT-MW-19-021114	XY90D	14-2276	Water	02/11/14 15:40	02/11/14 16:20
5. Trip Blanks	XY90E	14-2277	Water	02/11/14	02/11/14 16:20

Analytical Resources, Incorporated
Analytical Chemists and Consultants
4611 South 134th Place, Suite 100
Tukwila, WA 98168
206-695-6200. 206-695-6201 (fax)

Page: 1	of 1
Date: 2/12/2014	Ice Present? Y
No. of Coolers: 1	Cooler Temps: 59

ARI Assigned Number:	XZ00	Turn-around Requested:	standard
ARI Client Company:	Golden Associates	Phone:	425 883-0777
Client Contact:	Douglas Movell		
Client Project Name:	MasterPark Lot C		
Client Project #:	073-93368-06-09A	Samplers:	Lamberts

Client Project Name: Master Park Lot C						Analysis Requested:						
Client Project #: 073-93368-06-09A			Samplers: Lamberts									
Sample ID	Date	Time	Matrix	No Containers	NMTPH Gx	BTEX	EDS *Report to *MDL	n-hexane	Naphthalene	NMTPH-Dx		
Trip Blank	2/12/14	-	DZ	2	X							
MPLOT C-MW-9-021214		1230	W	7	X	X	X	X	X	X		
MPLOT C-MW-13-021214		1340	W	7	X	X	X	X	X	X		
MPLOT C-MW-18-021214	I	1515	W	7	X	X	X	X	X	X		
Comments/Special Instructions As cc dm-orville@golder.com jlamberts@golder.com	Received by (Signature) <i>[Signature]</i> Printed Name J. Lamberts	Relinquished by (Signature) <i>[Signature]</i> Printed Name Jennifer Milisog										
Ecology Elm EDD	Company: Golder	Company: ARLI										
	Date & Time 2/12/2014 1556	Date & Time 2/12/14 1530										

Limits of Liability: ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the Invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, not withstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Client. *Accepted by Client: [Signature] 1/1/2011*

Please analyze under existing USA born Golden + ARZ

Sample Retention Policy: All samples submitted to ARI will be appropriately discarded no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer, unless alternate retention schedules have been established by work-order or contract.

Sample ID Cross Reference Report



ARI Job No: XZ00
Client: Golder Associates
Project Event: 073-93368-06-09A
Project Name: Master Park Lot C

Sample ID	ARI Lab ID	ARI LIMS ID	Matrix	Sample Date/Time	VTSR
1. MPLOT-MW-9-021214	XZ00A	14-2376	Water	02/12/14 12:30	02/12/14 15:56
2. MPLOT-MW-13-021214	XZ00B	14-2377	Water	02/12/14 13:40	02/12/14 15:56
3. MPLOT-MW-18-021214	XZ00C	14-2378	Water	02/12/14 15:15	02/12/14 15:56
4. Trip Blank	XZ00D	14-2379	Water	02/12/14	02/12/14 15:56



Cooler Receipt Form

ARI Client Folder

COC No(s): _____ (NA)

Assigned ARI Job No: X200

Project Name: Master Park Lot C

Delivered by: Fed-Ex UPS Courier (Hand Delivered) Other _____

Tracking No: _____ (NA)

Preliminary Examination Phase:

Were intact, properly signed and dated custody seals attached to the outside of to cooler? YES (NO)

Were custody papers included with the cooler? YES (NO)

Were custody papers properly filled out (ink, signed, etc) YES (NO)

Temperature of Cooler(s) (°C) (recommended 2.0-6.0 °C for chemistry)

Time: 5.9

If cooler temperature is out of compliance fill out form 00070F

Temp Gun ID#: 9087752

Cooler Accepted by: JM Date: 2/12/14 Time: 1556

Complete custody forms and attach all shipping documents

Log-In Phase:

Was a temperature blank included in the cooler? YES (NO)

What kind of packing material was used? ... Bubble Wrap (Wet Ice) Gel Packs Baggies Foam Block Paper Other

Was sufficient ice used (if appropriate)? NA YES (NO)

Were all bottles sealed in individual plastic bags? YES (NO)

Did all bottles arrive in good condition (unbroken)? YES (NO)

Were all bottle labels complete and legible? YES (NO)

Did the number of containers listed on COC match with the number of containers received? YES (NO)

Did all bottle labels and tags agree with custody papers? YES (NO)

Were all bottles used correct for the requested analyses? YES (NO)

Do any of the analyses (bottles) require preservation? (attach preservation sheet, excluding VOCs)... NA YES (NO)

Were all VOC vials free of air bubbles? NA YES (NO)

Was sufficient amount of sample sent in each bottle? YES (NO)

Date VOC Trip Blank was made at ARI NA 2/7/14

Was Sample Split by ARI (NA) YES Date/Time: _____ Equipment: _____ Split by: _____

Samples Logged by JM Date: 2/12/14 Time: 1707

**** Notify Project Manager of discrepancies or concerns ****

Sample ID on Bottle	Sample ID on COC	Sample ID on Bottle	Sample ID on COC

Additional Notes, Discrepancies, & Resolutions:

By: _____ Date: _____

Small Air Bubbles ~2mm	Peabubbles 2-4 mm	LARGE Air Bubbles > 4 mm	Small → "sm" (< 2 mm)
			Peabubbles → "pb" (2 to < 4 mm)
			Large → "lg" (4 to < 6 mm)
			Headspace → "hs" (> 6 mm)

*** end of sampling for now, 3 more coming at a later date *



Analytical Resources, Incorporated
 Analytical Chemists and Consultants
 4611 South 134th Place, Suite 100
 Tukwila, WA 98168
 206-695-6200 206-695-6201 (fax)

Comments/Special Instructions	Relinquished by: (Signature)	Received by (Signature)	Relinquished by: (Signature)	Received by (Signature)
P/s cc slamberts@golder.com dmsorell@golder.com				
	Printed Name: Jennifer Millson	Printed Name: Jennifer Millson		
	Company: Golder	Company: AKI		
Ecology EIM EDD	Date & Time: 2/13/2014 1236	Date & Time: 2/13/14 1236		

Please analyze per existing NSA bton Golden + Arc 1

Sample Retention Policy: All samples submitted to ARI will be appropriately discarded no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer, unless alternate retention schedules have been established by work-order or contract.

X790: 00008



Analytical Resources, Incorporated
Analytical Chemists and Consultants

Cooler Receipt Form

ARI Client: Golder

Project Name: Master Park Lot C

COC No(s) NA

Delivered by: Fed-Ex UPS Courier Hand Delivered Other: _____

Assigned ARI Job No: XZ26

Tracking No: _____ NA

Preliminary Examination Phase:

Were intact, properly signed and dated custody seals attached to the outside of to cooler?

YES NO

Were custody papers included with the cooler?

YES NO

Were custody papers properly filled out (ink, signed, etc.)

YES NO

Temperature of Cooler(s) (°C) (recommended 2.0-6.0 °C for chemistry)

Time: _____

2.1

If cooler temperature is out of compliance fill out form 00070F

Temp Gun ID#: 90877952

Cooler Accepted by: JM

Date: 2/13/14

Time: 1236

Complete custody forms and attach all shipping documents

Log-In Phase:

Was a temperature blank included in the cooler?

YES NO

What kind of packing material was used? ... Bubble Wrap Wet Ice Gel Packs Baggies Foam Block Paper Other _____

Was sufficient ice used (if appropriate)?

NA YES NO

Were all bottles sealed in individual plastic bags?

YES NO

Did all bottles arrive in good condition (unbroken)?

YES NO

Were all bottle labels complete and legible?

YES NO

Did the number of containers listed on COC match with the number of containers received?

YES NO

Did all bottle labels and tags agree with custody papers?

YES NO

Were all bottles used correct for the requested analyses?

YES NO

Do any of the analyses (bottles) require preservation? (attach preservation sheet, excluding VOCs)

NA YES NO

Were all VOC vials free of air bubbles?

NA YES NO

Was sufficient amount of sample sent in each bottle?

YES NO

Date VOC Trip Blank was made at ARI:

NA 2/12/14

Was Sample Split by ARI: NA

YES

Date/Time: _____

Equipment: _____

Split by: _____

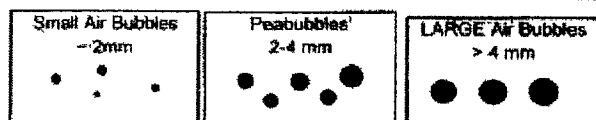
Samples Logged by: JM Date: 2/14/14 Time: 812

**** Notify Project Manager of discrepancies or concerns ****

Sample ID on Bottle	Sample ID on COC	Sample ID on Bottle	Sample ID on COC

Additional Notes, Discrepancies, & Resolutions:

By: _____ Date: _____



Small → "sm" (< 2 mm)

Peabubbles → "pb" (2 to < 4 mm)

Large → "lg" (4 to < 6 mm)

Headspace → "hs" (> 6 mm)

Sample ID Cross Reference Report



ARI Job No: XZ26
Client: Golder Associates
Project Event: 073-93368-06-09A
Project Name: Master Park Lot C

Sample ID	ARI Lab ID	ARI LIMS ID	Matrix	Sample Date/Time	VTSR
1. MPLOTB-FB-021314	XZ26A	14-2504	Water	02/13/14 09:00	02/13/14 12:36
2. MPLOTB-MW-7-021314	XZ26B	14-2505	Water	02/13/14 09:50	02/13/14 12:36
3. MPLOTB-MW-12-021314	XZ26C	14-2506	Water	02/13/14 11:15	02/13/14 12:36
4. Trip Blank	XZ26D	14-2507	Water	02/13/14	02/13/14 12:36

ORGANICS ANALYSIS DATA SHEET

Volatiles by Purge & Trap GC/MS-Method SW8260C
Page 1 of 1Sample ID: MPLOT-MW-6-021114
SAMPLEANALYTICAL
RESOURCES
INCORPORATED 

Lab Sample ID: XY90A

LIMS ID: 14-2273

Matrix: Water

Data Release Authorized: *MMW*

Reported: 02/27/14

QC Report No: XY90-Golder Associates

Project: Master Park Lot C

073-93368-06-09A

Date Sampled: 02/11/14

Date Received: 02/11/14

Instrument/Analyst: NT2/PAB

Date Analyzed: 02/19/14 17:21

Sample Amount: 10.0 mL

Purge Volume: 10.0 mL

CAS Number	Analyte	DL	LOQ	Result
106-93-4	1,2-Dibromoethane	0.08	0.20	< 0.20 U
91-20-3	Naphthalene	0.12	0.50	< 0.50 U
110-54-3	Hexane	0.10	0.20	< 0.20 U

Reported in µg/L (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	95.2%
d8-Toluene	100%
Bromofluorobenzene	96.0%
d4-1,2-Dichlorobenzene	98.4%

ORGANICS ANALYSIS DATA SHEET

Volatiles by Purge & Trap GC/MS-Method SW8260C
Page 1 of 1Sample ID: MPLOTG-MW-21-021114
SAMPLE

Lab Sample ID: XY90B

LIMS ID: 14-2274

Matrix: Water

Data Release Authorized: *MM*

Reported: 02/27/14

QC Report No: XY90-Golder Associates

Project: Master Park Lot C

073-93368-06-09A

Date Sampled: 02/11/14

Date Received: 02/11/14

Instrument/Analyst: NT2/PAB

Date Analyzed: 02/19/14 17:48

Sample Amount: 10.0 mL

Purge Volume: 10.0 mL

CAS Number	Analyte	DL	LOQ	Result
106-93-4	1,2-Dibromoethane	0.08	0.20	< 0.20 U
91-20-3	Naphthalene	0.12	0.50	< 0.50 U
110-54-3	Hexane	0.10	0.20	< 0.20 U

Reported in µg/L (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	98.5%
d8-Toluene	98.0%
Bromofluorobenzene	98.0%
d4-1,2-Dichlorobenzene	102%

ORGANICS ANALYSIS DATA SHEET

Volatiles by Purge & Trap GC/MS-Method SW8260C
Page 1 of 1ANALYTICAL
RESOURCES
INCORPORATED Sample ID: MPLOTG-MW-17A-021114
SAMPLE

Lab Sample ID: XY90C

LIMS ID: 14-2275

Matrix: Water

Data Release Authorized: *MW*

Reported: 02/27/14

QC Report No: XY90-Golder Associates

Project: Master Park Lot C

073-93368-06-09A

Date Sampled: 02/11/14

Date Received: 02/11/14

Instrument/Analyst: NT2/PAB

Date Analyzed: 02/19/14 18:14

Sample Amount: 10.0 mL

Purge Volume: 10.0 mL

CAS Number	Analyte	DL	LOQ	Result
106-93-4	1,2-Dibromoethane	0.08	0.20	< 0.20 U
91-20-3	Naphthalene	0.12	0.50	0.74
110-54-3	Hexane	0.10	0.20	< 0.20 U

Reported in µg/L (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	98.2%
d8-Toluene	94.0%
Bromofluorobenzene	96.3%
d4-1,2-Dichlorobenzene	101%

ORGANICS ANALYSIS DATA SHEET

Volatiles by Purge & Trap GC/MS-Method SW8260C

Sample ID: MPlotC-MW-17A-021114

Page 1 of 1

MATRIX SPIKE

Lab Sample ID: XY90C

QC Report No: XY90-Golder Associates

LIMS ID: 14-2275

Project: Master Park Lot C

Matrix: Water

073-93368-06-09A

Data Release Authorized: *MW*

Date Sampled: 02/11/14

Reported: 02/27/14

Date Received: 02/11/14

Instrument/Analyst: NT2/PAB

Sample Amount: 10.0 mL

Date Analyzed: 02/19/14 20:27

Purge Volume: 10.0 mL

CAS Number	Analyte	DL	LOQ	Result
106-93-4	1,2-Dibromoethane	0.08	0.20	---
91-20-3	Naphthalene	0.12	0.50	---
110-54-3	Hexane	0.10	0.20	---

Reported in µg/L (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	95.6%
d8-Toluene	94.5%
Bromofluorobenzene	102%
d4-1,2-Dichlorobenzene	96.8%

ORGANICS ANALYSIS DATA SHEET

Volatiles by Purge & Trap GC/MS-Method SW8260C

Page 1 of 1

ANALYTICAL
RESOURCES
INCORPORATED

Sample ID: MPL0TC-MW-17A-021114

MATRIX SPIKE DUPLICATE

Lab Sample ID: XY90C

LIMS ID: 14-2275

Matrix: Water

Data Release Authorized: *mw*

Reported: 02/27/14

QC Report No: XY90-Golder Associates

Project: Master Park Lot C

073-93368-06-09A

Date Sampled: 02/11/14

Date Received: 02/11/14

Instrument/Analyst: NT2/PAB

Date Analyzed: 02/19/14 20:53

Sample Amount: 10.0 mL

Purge Volume: 10.0 mL

CAS Number	Analyte	DL	LOQ	Result
106-93-4	1,2-Dibromoethane	0.08	0.20	---
91-20-3	Naphthalene	0.12	0.50	---
110-54-3	Hexane	0.10	0.20	---

Reported in µg/L (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	90.8%
d8-Toluene	98.6%
Bromofluorobenzene	95.8%
d4-1,2-Dichlorobenzene	103%

ORGANICS ANALYSIS DATA SHEET

Volatiles by Purge & Trap GC/MS-Method SW8260C

Page 1 of 1

Sample ID: MPL0TC-MW-19-021114

SAMPLE

ANALYTICAL
RESOURCES
INCORPORATED

Lab Sample ID: XY90D

LIMS ID: 14-2276

Matrix: Water

Data Release Authorized: *mw*

Reported: 02/27/14

QC Report No: XY90-Golder Associates

Project: Master Park Lot C

073-93368-06-09A

Date Sampled: 02/11/14

Date Received: 02/11/14

Instrument/Analyst: NT2/PAB

Date Analyzed: 02/19/14 18:40

Sample Amount: 10.0 mL

Purge Volume: 10.0 mL

CAS Number	Analyte	DL	LOQ	Result
106-93-4	1,2-Dibromoethane	0.08	0.20	< 0.20 U
91-20-3	Naphthalene	0.12	0.50	< 0.50 U
110-54-3	Hexane	0.10	0.20	4.3

Reported in µg/L (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	102%
d8-Toluene	95.5%
Bromofluorobenzene	93.1%
d4-1,2-Dichlorobenzene	97.5%

ORGANICS ANALYSIS DATA SHEET

Volatiles by Purge & Trap GC/MS-Method SW8260C

Page 1 of 1

Sample ID: Trip Blanks

SAMPLE

Lab Sample ID: XY90E

LIMS ID: 14-2277

Matrix: Water

Data Release Authorized: *MW*

Reported: 02/27/14

QC Report No: XY90-Golder Associates

Project: Master Park Lot C

073-93368-06-09A

Date Sampled: 02/11/14

Date Received: 02/11/14

Instrument/Analyst: NT2/PAB

Date Analyzed: 02/19/14 11:30

Sample Amount: 10.0 mL

Purge Volume: 10.0 mL

CAS Number	Analyte	DL	LOQ	Result
106-93-4	1,2-Dibromoethane	0.08	0.20	< 0.20 U
91-20-3	Naphthalene	0.12	0.50	< 0.50 U
110-54-3	Hexane	0.10	0.20	< 0.20 U

Reported in µg/L (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	101%
d8-Toluene	98.7%
Bromofluorobenzene	96.3%
d4-1,2-Dichlorobenzene	99.2%

ORGANICS ANALYSIS DATA SHEET

Volatiles by Purge & Trap GC/MS-Method SW8260C
Page 1 of 1Sample ID: MB-021914A
METHOD BLANK

Lab Sample ID: MB-021914A

LIMS ID: 14-2273

Matrix: Water

Data Release Authorized: *MW*

Reported: 02/27/14

QC Report No: XY90-Golder Associates

Project: Master Park Lot C

073-93368-06-09A

Date Sampled: NA

Date Received: NA

Instrument/Analyst: NT2/PAB

Date Analyzed: 02/19/14 10:34

Sample Amount: 10.0 mL

Purge Volume: 10.0 mL

CAS Number	Analyte	DL	LOQ	Result
106-93-4	1,2-Dibromoethane	0.08	0.20	< 0.20 U
91-20-3	Naphthalene	0.12	0.50	< 0.50 U
110-54-3	Hexane	0.10	0.20	< 0.20 U

Reported in µg/L (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	94.5%
d8-Toluene	99.5%
Bromofluorobenzene	99.5%
d4-1,2-Dichlorobenzene	98.1%

VOA SURROGATE RECOVERY SUMMARY

Matrix: Water

QC Report No: XY90-Golder Associates
Project: Master Park Lot C
073-93368-06-09A

ARI ID	Client ID	PV	DCE	TOL	BFB	DCB	TOT OUT
MB-021914A	Method Blank	10	94.5%	99.5%	99.5%	98.1%	0
LCS-021914A	Lab Control	10	96.6%	99.9%	103%	100%	0
LCSD-021914A	Lab Control Dup	10	96.2%	102%	102%	103%	0
XY90A	MPLOT-MW-6-021114	10	95.2%	100%	96.0%	98.4%	0
XY90B	MPLOT-MW-21-021114	10	98.5%	98.0%	98.0%	102%	0
XY90C	MPLOT-MW-17A-021114	10	98.2%	94.0%	96.3%	101%	0
XY90CMS	MPLOT-MW-17A-021114	10	95.6%	94.5%	102%	96.8%	0
XY90CMSD	MPLOT-MW-17A-021114	10	90.8%	98.6%	95.8%	103%	0
XY90D	MPLOT-MW-19-021114	10	102%	95.5%	93.1%	97.5%	0
XY90E	Trip Blanks	10	101%	98.7%	96.3%	99.2%	0

LCS/MB LIMITS

QC LIMITS

SW8260C

(DCE) = d4-1,2-Dichloroethane
(TOL) = d8-Toluene
(BFB) = Bromofluorobenzene
(DCB) = d4-1,2-Dichlorobenzene(80-120)
(80-120)
(80-120)
(80-120)(80-130)
(80-120)
(80-120)
(80-120)Prep Method: SW5030B
Log Number Range: 14-2273 to 14-2277

XY90: 00019

ORGANICS ANALYSIS DATA SHEET

Volatiles by Purge & Trap GC/MS-Method SW8260C

Page 1 of 1

Sample ID: MPlotC-MW-17A-021114

MATRIX SPIKE

Lab Sample ID: XY90C

LIMS ID: 14-2275

Matrix: Water

Data Release Authorized: *MW*

Reported: 02/27/14

QC Report No: XY90-Golder Associates

Project: Master Park Lot C

073-93368-06-09A

Date Sampled: 02/11/14

Date Received: 02/11/14

Instrument/Analyst MS: NT2/PAB

MSD: NT2/PAB

Date Analyzed MS: 02/19/14 20:27

MSD: 02/19/14 20:53

Sample Amount MS: 10.0 mL

MSD: 10.0 mL

Purge Volume MS: 10.0 mL

MSD: 10.0 mL

Analyte	Sample	MS	Spike Added-MS	MS Recovery	MSD	Spike Added-MSD	MSD Recovery	RPD
1,2-Dibromoethane	< 0.20 U	9.07	10.0	90.7%	9.06	10.0	90.6%	0.1%
Naphthalene	0.74	10.7	10.0	99.6%	11.2	10.0	105%	4.6%
Hexane	< 0.20 U	9.06	10.0	90.6%	9.34	10.0	93.4%	3.0%

Reported in µg/L (ppb)

RPD calculated using sample concentrations per SW846.

ORGANICS ANALYSIS DATA SHEET

Volatiles by Purge & Trap GC/MS-Method SW8260C
Page 1 of 1

Sample ID: LCS-021914A

LAB CONTROL SAMPLE

Lab Sample ID: LCS-021914A

LIMS ID: 14-2273

Matrix: Water

Data Release Authorized: *mw*

Reported: 02/27/14

QC Report No: XY90-Golder Associates

Project: Master Park Lot C

073-93368-06-09A

Date Sampled: NA

Date Received: NA

Instrument/Analyst LCS: NT2/PAB

LCSD: NT2/PAB

Date Analyzed LCS: 02/19/14 09:15

LCSD: 02/19/14 09:42

Sample Amount LCS: 10.0 mL

LCSD: 10.0 mL

Purge Volume LCS: 10.0 mL

LCSD: 10.0 mL

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
1,2-Dibromoethane	9.53	10.0	95.3%	9.28	10.0	92.8%	2.7%
Naphthalene	10.0	10.0	100%	10.9	10.0	109%	8.6%

Reported in µg/L (ppb)

RPD calculated using sample concentrations per SW846.

Volatile Surrogate Recovery

	LCS	LCSD
d4-1,2-Dichloroethane	96.6%	96.2%
d8-Toluene	99.9%	102%
Bromofluorobenzene	103%	102%
d4-1,2-Dichlorobenzene	100%	103%

ORGANICS ANALYSIS DATA SHEET

Volatiles by Purge & Trap GC/MS-Method SW8260C

Page 1 of 1

ANALYTICAL
RESOURCES
INCORPORATED

Sample ID: MPLOTG-MW-9-021214

SAMPLE

Lab Sample ID: XZ00A

LIMS ID: 14-2376

Matrix: Water

Data Release Authorized: *AS*

Reported: 02/27/14

QC Report No: XZ00-Golder Associates

Project: Master Park Lot C

073-93368-06-09A

Date Sampled: 02/12/14

Date Received: 02/12/14

Instrument/Analyst: NT2/PKC

Date Analyzed: 02/13/14 17:57

Sample Amount: 10.0 mL

Purge Volume: 10.0 mL

CAS Number	Analyte	DL	LOQ	Result
106-93-4	1,2-Dibromoethane	0.08	0.20	< 0.20 U
91-20-3	Naphthalene	0.12	0.50	100 E
110-54-3	Hexane	0.10	0.20	16

Reported in µg/L (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	143%
d8-Toluene	111%
Bromofluorobenzene	105%
d4-1,2-Dichlorobenzene	103%

ORGANICS ANALYSIS DATA SHEET

Volatiles by Purge & Trap GC/MS-Method SW8260C

Page 1 of 1

ANALYTICAL
RESOURCES
INCORPORATED

Sample ID: MPLOTG-MW-9-021214

DILUTION

Lab Sample ID: XZ00A

LIMS ID: 14-2376

Matrix: Water

Data Release Authorized: 

Reported: 02/27/14

QC Report No: XZ00-Golder Associates

Project: Master Park Lot C

073-93368-06-09A

Date Sampled: 02/12/14

Date Received: 02/12/14

Instrument/Analyst: NT2/PKC

Date Analyzed: 02/18/14 21:03

Sample Amount: 2.00 mL

Purge Volume: 10.0 mL

CAS Number	Analyte	DL	LOQ	Result
106-93-4	1,2-Dibromoethane	0.38	1.0	< 1.0 U
91-20-3	Naphthalene	0.59	2.5	120
110-54-3	Hexane	0.48	1.0	13

Reported in µg/L (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	98.8%
d8-Toluene	107%
Bromofluorobenzene	98.8%
d4-1,2-Dichlorobenzene	103%

ORGANICS ANALYSIS DATA SHEET

Volatiles by Purge & Trap GC/MS-Method SW8260C

Page 1 of 1

ANALYTICAL
RESOURCES
INCORPORATED

Sample ID: MPLOTG-MW-13-021214

SAMPLE

Lab Sample ID: XZ00B

LIMS ID: 14-2377

Matrix: Water

Data Release Authorized: *AB*

Reported: 02/27/14

QC Report No: XZ00-Golder Associates

Project: Master Park Lot C

073-93368-06-09A

Date Sampled: 02/12/14

Date Received: 02/12/14

Instrument/Analyst: NT2/PKC

Date Analyzed: 02/13/14 18:24

Sample Amount: 10.0 mL

Purge Volume: 10.0 mL

CAS Number	Analyte	DL	LOQ	Result
106-93-4	1,2-Dibromoethane	0.08	0.20	< 0.20 U
91-20-3	Naphthalene	0.12	0.50	33
110-54-3	Hexane	0.10	0.20	< 0.20 U

Reported in µg/L (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	123%
d8-Toluene	110%
Bromofluorobenzene	86.3%
d4-1,2-Dichlorobenzene	104%

ORGANICS ANALYSIS DATA SHEET

Volatiles by Purge & Trap GC/MS-Method SW8260C

Page 1 of 1

ANALYTICAL
RESOURCES
INCORPORATED

Sample ID: MPLOT-MW-18-021214

SAMPLE

Lab Sample ID: XZ00C

LIMS ID: 14-2378

Matrix: Water

Data Release Authorized: 

Reported: 02/27/14

QC Report No: XZ00-Golder Associates

Project: Master Park Lot C

073-93368-06-09A

Date Sampled: 02/12/14

Date Received: 02/12/14

Instrument/Analyst: NT2/PKC

Date Analyzed: 02/13/14 18:50

Sample Amount: 10.0 mL

Purge Volume: 10.0 mL

CAS Number	Analyte	DL	LOQ	Result
106-93-4	1,2-Dibromoethane	0.08	0.20	< 0.20 U
91-20-3	Naphthalene	0.12	0.50	4.0
110-54-3	Hexane	0.10	0.20	1.1

Reported in µg/L (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	97.0%
d8-Toluene	103%
Bromofluorobenzene	103%
d4-1,2-Dichlorobenzene	103%

ORGANICS ANALYSIS DATA SHEET

Volatiles by Purge & Trap GC/MS-Method SW8260C

Page 1 of 1

Sample ID: Trip Blank
SAMPLEANALYTICAL
RESOURCES
INCORPORATED 

Lab Sample ID: XZ00D

LIMS ID: 14-2379

Matrix: Water

Data Release Authorized: *JB*

Reported: 02/27/14

QC Report No: XZ00-Golder Associates

Project: Master Park Lot C

073-93368-06-09A

Date Sampled: 02/12/14

Date Received: 02/12/14

Instrument/Analyst: NT2/PKC

Date Analyzed: 02/13/14 17:10

Sample Amount: 10.0 mL

Purge Volume: 10.0 mL

CAS Number	Analyte	DL	LOQ	Result
106-93-4	1,2-Dibromoethane	0.08	0.20	< 0.20 U
91-20-3	Naphthalene	0.12	0.50	< 0.50 U
110-54-3	Hexane	0.10	0.20	< 0.20 U

Reported in µg/L (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	100%
d8-Toluene	96.4%
Bromofluorobenzene	102%
d4-1,2-Dichlorobenzene	98.8%

ORGANICS ANALYSIS DATA SHEET

Volatiles by Purge & Trap GC/MS-Method SW8260C

Page 1 of 1

Sample ID: MB-021314A

METHOD BLANK

Lab Sample ID: MB-021314A

LIMS ID: 14-2376

Matrix: Water

Data Release Authorized: 

Reported: 02/27/14

QC Report No: XZ00-Golder Associates

Project: Master Park Lot C

073-93368-06-09A

Date Sampled: NA

Date Received: NA

Instrument/Analyst: NT2/PKC

Date Analyzed: 02/13/14 16:17

Sample Amount: 10.0 mL

Purge Volume: 10.0 mL

CAS Number	Analyte	DL	LOQ	Result
106-93-4	1,2-Dibromoethane	0.08	0.20	< 0.20 U
91-20-3	Naphthalene	0.12	0.50	< 0.50 U
110-54-3	Hexane	0.10	0.20	< 0.20 U

Reported in µg/L (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	95.5%
d8-Toluene	102%
Bromofluorobenzene	100%
d4-1,2-Dichlorobenzene	100%

ORGANICS ANALYSIS DATA SHEET

Volatiles by Purge & Trap GC/MS-Method SW8260C

Page 1 of 1



Sample ID: MB-021814A

METHOD BLANK

Lab Sample ID: MB-021814A

LIMS ID: 14-2377

Matrix: Water

Data Release Authorized: 

Reported: 02/27/14

QC Report No: XZ00-Golder Associates

Project: Master Park Lot C

073-93368-06-09A

Date Sampled: NA

Date Received: NA

Instrument/Analyst: NT2/PKC

Date Analyzed: 02/18/14 11:42

Sample Amount: 10.0 mL

Purge Volume: 10.0 mL

CAS Number	Analyte	DL	LOQ	Result
106-93-4	1,2-Dibromoethane	0.08	0.20	< 0.20 U
91-20-3	Naphthalene	0.12	0.50	< 0.50 U
110-54-3	Hexane	0.10	0.20	< 0.20 U

Reported in µg/L (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	102%
d8-Toluene	96.0%
Bromofluorobenzene	100%
d4-1,2-Dichlorobenzene	102%

VOA SURROGATE RECOVERY SUMMARY



Matrix: Water

QC Report No: XZ00-Golder Associates
Project: Master Park Lot C
073-93368-06-09A

ARI ID	Client ID	PV	DCE	TOL	BFB	DCB	TOT OUT
MB-021314A	Method Blank	10	95.5%	102%	100%	100%	0
LCS-021314A	Lab Control	10	90.9%	98.2%	99.9%	101%	0
LCSD-021314A	Lab Control Dup	10	93.4%	97.4%	105%	98.8%	0
XZ00A	MPLOTC-MW-9-021214	10	143%*	111%	105%	103%	1
XZ00ADL	MPLOTC-MW-9-021214	10	98.8%	107%	98.8%	103%	0
MB-021814A	Method Blank	10	102%	96.0%	100%	102%	0
LCS-021814A	Lab Control	10	101%	102%	104%	99.2%	0
LCSD-021814A	Lab Control Dup	10	94.9%	96.3%	97.5%	96.4%	0
XZ00B	MPLOTC-MW-13-021214	10	123%	110%	86.3%	104%	0
XZ00C	MPLOTC-MW-18-021214	10	97.0%	103%	103%	103%	0
XZ00D	Trip Blank	10	100%	96.4%	102%	98.8%	0

LCS/MB LIMITS

QC LIMITS

SW8260C

(DCE) = d4-1,2-Dichloroethane
(TOL) = d8-Toluene
(BFB) = Bromofluorobenzene
(DCB) = d4-1,2-Dichlorobenzene

(80-120)
(80-120)
(80-120)
(80-120)

(80-130)
(80-120)
(80-120)
(80-120)

Prep Method: SW5030B
Log Number Range: 14-2376 to 14-2379

XZ90 : 00029

ORGANICS ANALYSIS DATA SHEET

Volatiles by Purge & Trap GC/MS-Method SW8260C

Page 1 of 1



Sample ID: LCS-021314A

LAB CONTROL SAMPLE

Lab Sample ID: LCS-021314A

LIMS ID: 14-2376

Matrix: Water

Data Release Authorized: *AB*

Reported: 02/27/14

QC Report No: XZ00-Golder Associates

Project: Master Park Lot C

073-93368-06-09A

Date Sampled: NA

Date Received: NA

Instrument/Analyst LCS: NT2/PKC

LCSD: NT2/PKC

Date Analyzed LCS: 02/13/14 14:30

LCSD: 02/13/14 15:23

Sample Amount LCS: 10.0 mL

LCSD: 10.0 mL

Purge Volume LCS: 10.0 mL

LCSD: 10.0 mL

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
1,2-Dibromoethane	9.48	10.0	94.8%	9.42	10.0	94.2%	0.6%
Naphthalene	9.79	10.0	97.9%	10.3	10.0	103%	5.1%
Hexane	10.3	10.0	103%	10.0	10.0	100%	3.0%

Reported in µg/L (ppb)

RPD calculated using sample concentrations per SW846.

Volatile Surrogate Recovery

	LCS	LCSD
d4-1,2-Dichloroethane	90.9%	93.4%
d8-Toluene	98.2%	97.4%
Bromofluorobenzene	99.9%	105%
d4-1,2-Dichlorobenzene	101%	98.8%

ORGANICS ANALYSIS DATA SHEET

Volatiles by Purge & Trap GC/MS-Method SW8260C

Page 1 of 1



Sample ID: LCS-021814A

LAB CONTROL SAMPLE

Lab Sample ID: LCS-021814A

LIMS ID: 14-2377

Matrix: Water

Data Release Authorized: *B*

Reported: 02/27/14

QC Report No: XZ00-Golder Associates

Project: Master Park Lot C

073-93368-06-09A

Date Sampled: NA

Date Received: NA

Instrument/Analyst LCS: NT2/PKC

LCSD: NT2/PKC

Date Analyzed LCS: 02/18/14 10:19

LCSD: 02/18/14 10:45

Sample Amount LCS: 10.0 mL

LCSD: 10.0 mL

Purge Volume LCS: 10.0 mL

LCSD: 10.0 mL

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
1,2-Dibromoethane	9.08	10.0	90.8%	8.39	10.0	83.9%	7.9%
Naphthalene	10.3	10.0	103%	9.41	10.0	94.1%	9.0%
Hexane	10.4	10.0	104%	10.9	10.0	109%	4.7%

Reported in µg/L (ppb)

RPD calculated using sample concentrations per SW846.

Volatile Surrogate Recovery

	LCS	LCSD
d4-1,2-Dichloroethane	101%	94.9%
d8-Toluene	102%	96.3%
Bromofluorobenzene	104%	97.5%
d4-1,2-Dichlorobenzene	99.2%	96.4%

ORGANICS ANALYSIS DATA SHEET

Volatiles by Purge & Trap GC/MS-Method SW8260C

Page 1 of 1

ANALYTICAL
RESOURCES
INCORPORATED

Sample ID: MPL0TC-FB-021314

SAMPLE

Lab Sample ID: XZ26A

LIMS ID: 14-2504

Matrix: Water

Data Release Authorized: *W*

Reported: 02/28/14

QC Report No: XZ26-Golder Associates

Project: Master Park Lot C

073-93368-06-09A

Date Sampled: 02/13/14

Date Received: 02/13/14

Instrument/Analyst: NT2/PAB

Date Analyzed: 02/21/14 15:04

Sample Amount: 10.0 mL

Purge Volume: 10.0 mL

CAS Number	Analyte	DL	LOQ	Result
106-93-4	1,2-Dibromoethane	0.08	0.20	< 0.20 U
91-20-3	Naphthalene	0.12	0.50	< 0.50 U
110-54-3	Hexane	0.10	0.20	0.18 J

Reported in µg/L (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	93.7%
d8-Toluene	94.8%
Bromofluorobenzene	95.4%
d4-1,2-Dichlorobenzene	102%

ORGANICS ANALYSIS DATA SHEET

Volatiles by Purge & Trap GC/MS-Method SW8260C
Page 1 of 1Sample ID: MPL0TC-MW-7-021314
SAMPLE

Lab Sample ID: XZ26B

LIMS ID: 14-2505

Matrix: Water

Data Release Authorized: *MW*

Reported: 02/28/14

QC Report No: XZ26-Golder Associates

Project: Master Park Lot C

073-93368-06-09A

Date Sampled: 02/13/14

Date Received: 02/13/14

Instrument/Analyst: NT2/PAB

Date Analyzed: 02/24/14 20:28

Sample Amount: 0.20 mL

Purge Volume: 10.0 mL

CAS Number	Analyte	DL	LOQ	Result
106-93-4	1,2-Dibromoethane	3.8	10	< 10 U
91-20-3	Naphthalene	5.9	25	220
110-54-3	Hexane	4.8	10	190

Reported in µg/L (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	88.1%
d8-Toluene	94.4%
Bromofluorobenzene	96.1%
d4-1,2-Dichlorobenzene	100%

ORGANICS ANALYSIS DATA SHEET

Volatiles by Purge & Trap GC/MS-Method SW8260C

Page 1 of 1

ANALYTICAL
RESOURCES
INCORPORATED

Sample ID: MPL0TC-MW-12-021314

SAMPLE

Lab Sample ID: XZ26C

LIMS ID: 14-2506

Matrix: Water

Data Release Authorized: *MW*

Reported: 02/28/14

QC Report No: XZ26-Golder Associates

Project: Master Park Lot C

073-93368-06-09A

Date Sampled: 02/13/14

Date Received: 02/13/14

Instrument/Analyst: NT2/PAB

Date Analyzed: 02/24/14 20:57

Sample Amount: 0.20 mL

Purge Volume: 10.0 mL

CAS Number	Analyte	DL	LOQ	Result
106-93-4	1,2-Dibromoethane	3.8	10	< 10 U
91-20-3	Naphthalene	5.9	25	25
110-54-3	Hexane	4.8	10	< 10 U

Reported in µg/L (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	93.3%
d8-Toluene	91.2%
Bromofluorobenzene	94.0%
d4-1,2-Dichlorobenzene	100%

ORGANICS ANALYSIS DATA SHEET

Volatiles by Purge & Trap GC/MS-Method SW8260C
Page 1 of 1Sample ID: Trip Blank
SAMPLE

Lab Sample ID: XZ26D

LIMS ID: 14-2507

Matrix: Water

Data Release Authorized: *mmw*

Reported: 02/28/14

QC Report No: XZ26-Golder Associates

Project: Master Park Lot C

073-93368-06-09A

Date Sampled: 02/13/14

Date Received: 02/13/14

Instrument/Analyst: NT2/PAB

Date Analyzed: 02/24/14 19:59

Sample Amount: 10.0 mL

Purge Volume: 10.0 mL

CAS Number	Analyte	DL	LOQ	Result
106-93-4	1,2-Dibromoethane	0.08	0.20	< 0.20 U
91-20-3	Naphthalene	0.12	0.50	< 0.50 U
110-54-3	Hexane	0.10	0.20	< 0.20 U

Reported in µg/L (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	98.3%
d8-Toluene	94.9%
Bromofluorobenzene	94.8%
d4-1,2-Dichlorobenzene	101%

ORGANICS ANALYSIS DATA SHEET

Volatiles by Purge & Trap GC/MS-Method SW8260C

Sample ID: MB-022414A

Page 1 of 1

METHOD BLANK

Lab Sample ID: MB-022414A

LIMS ID: 14-2505

Matrix: Water

Data Release Authorized: 

Reported: 02/28/14

QC Report No: XZ26-Golder Associates

Project: Master Park Lot C

073-93368-06-09A

Date Sampled: NA

Date Received: NA

Instrument/Analyst: NT2/PAB

Date Analyzed: 02/24/14 14:30

Sample Amount: 10.0 mL

Purge Volume: 10.0 mL

CAS Number	Analyte	DL	LOQ	Result
106-93-4	1,2-Dibromoethane	0.08	0.20	< 0.20 U
91-20-3	Naphthalene	0.12	0.50	< 0.50 U
110-54-3	Hexane	0.10	0.20	< 0.20 U

Reported in µg/L (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	98.2%
d8-Toluene	99.1%
Bromofluorobenzene	99.5%
d4-1,2-Dichlorobenzene	97.5%

ORGANICS ANALYSIS DATA SHEET

Volatiles by Purge & Trap GC/MS-Method SW8260C
Page 1 of 1Sample ID: MB-022114A
METHOD BLANK

Lab Sample ID: MB-022114A

LIMS ID: 14-2504

Matrix: Water

Data Release Authorized: *MW*

Reported: 02/28/14

QC Report No: XZ26-Golder Associates

Project: Master Park Lot C

073-93368-06-09A

Date Sampled: NA

Date Received: NA

Instrument/Analyst: NT2/PAB

Date Analyzed: 02/21/14 12:40

Sample Amount: 10.0 mL

Purge Volume: 10.0 mL

CAS Number	Analyte	DL	LOQ	Result
106-93-4	1,2-Dibromoethane	0.08	0.20	< 0.20 U
91-20-3	Naphthalene	0.12	0.50	< 0.50 U
110-54-3	Hexane	0.10	0.20	< 0.20 U

Reported in µg/L (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	93.5%
d8-Toluene	93.3%
Bromofluorobenzene	91.7%
d4-1,2-Dichlorobenzene	96.1%

VOA SURROGATE RECOVERY SUMMARY

Matrix: Water

QC Report No: XZ26-Golder Associates
Project: Master Park Lot C
073-93368-06-09A

ARI ID	Client ID	PV	DCE	TOL	BFB	DCB	TOT OUT
MB-022114A	Method Blank	10	93.5%	93.3%	91.7%	96.1%	0
LCS-022114A	Lab Control	10	92.4%	96.3%	91.5%	98.4%	0
LCSD-022114A	Lab Control Dup	10	90.0%	99.5%	90.5%	96.5%	0
XZ26A	MPLOT-FC-021314	10	93.7%	94.8%	95.4%	102%	0
MB-022414A	Method Blank	10	98.2%	99.1%	99.5%	97.5%	0
LCS-022414A	Lab Control	10	90.7%	100%	95.7%	100%	0
LCSD-022414A	Lab Control Dup	10	97.7%	97.1%	98.1%	103%	0
XZ26B	MPLOT-MW-7-021314	10	88.1%	94.4%	96.1%	100%	0
XZ26C	MPLOT-MW-12-021314	10	93.3%	91.2%	94.0%	100%	0
XZ26D	Trip Blank	10	98.3%	94.9%	94.8%	101%	0

LCS/MB LIMITS

QC LIMITS

SW8260C

(DCE) = d4-1,2-Dichloroethane
(TOL) = d8-Toluene
(BFB) = Bromofluorobenzene
(DCB) = d4-1,2-Dichlorobenzene(80-120)
(80-120)
(80-120)
(80-120)(80-130)
(80-120)
(80-120)
(80-120)Prep Method: SW5030B
Log Number Range: 14-2504 to 14-2507

ORGANICS ANALYSIS DATA SHEET

Volatiles by Purge & Trap GC/MS-Method SW8260C
Page 1 of 1

Sample ID: LCS-022114A

LAB CONTROL SAMPLE

Lab Sample ID: LCS-022114A

LIMS ID: 14-2504

Matrix: Water

Data Release Authorized: *mm*

Reported: 02/28/14

QC Report No: XZ26-Golder Associates

Project: Master Park Lot C

073-93368-06-09A

Date Sampled: NA

Date Received: NA

Instrument/Analyst LCS: NT2/PAB

LCSD: NT2/PAB

Date Analyzed LCS: 02/21/14 12:13

LCSD: 02/21/14 14:20

Sample Amount LCS: 10.0 mL

LCSD: 10.0 mL

Purge Volume LCS: 10.0 mL

LCSD: 10.0 mL

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
1,2-Dibromoethane	8.77	10.0	87.7%	8.20	10.0	82.0%	6.7%
Naphthalene	9.90	10.0	99.0%	9.01	10.0	90.1%	9.4%
Hexane	9.88	10.0	98.8%	10.4	10.0	104%	5.1%

Reported in µg/L (ppb)

RPD calculated using sample concentrations per SW846.

Volatile Surrogate Recovery

	LCS	LCSD
d4-1,2-Dichloroethane	92.4%	90.0%
d8-Toluene	96.3%	99.5%
Bromofluorobenzene	91.5%	90.5%
d4-1,2-Dichlorobenzene	98.4%	96.5%

ORGANICS ANALYSIS DATA SHEET

Volatiles by Purge & Trap GC/MS-Method SW8260C
Page 1 of 1

Sample ID: LCS-022414A

LAB CONTROL SAMPLE

Lab Sample ID: LCS-022414A

LIMS ID: 14-2505

Matrix: Water

Data Release Authorized: *mm*

Reported: 02/28/14

QC Report No: XZ26-Golder Associates

Project: Master Park Lot C

073-93368-06-09A

Date Sampled: NA

Date Received: NA

Instrument/Analyst LCS: NT2/PAB

LCSD: NT2/PAB

Date Analyzed LCS: 02/24/14 13:33

LCSD: 02/24/14 14:03

Sample Amount LCS: 10.0 mL

LCSD: 10.0 mL

Purge Volume LCS: 10.0 mL

LCSD: 10.0 mL

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
1,2-Dibromoethane	8.86	10.0	88.6%	9.03	10.0	90.3%	1.9%
Naphthalene	10.5	10.0	105%	10.8	10.0	108%	2.8%
Hexane	9.89	10.0	98.9%	9.94	10.0	99.4%	0.5%

Reported in µg/L (ppb)

RPD calculated using sample concentrations per SW846.

Volatile Surrogate Recovery

	LCS	LCSD
d4-1,2-Dichloroethane	90.7%	97.7%
d8-Toluene	100%	97.1%
Bromofluorobenzene	95.7%	98.1%
d4-1,2-Dichlorobenzene	100%	103%

**ORGANICS ANALYSIS DATA SHEET
TOTAL DIESEL RANGE HYDROCARBONS**

NWTPHD by GC/FID
Extraction Method: SW3510C
Page 1 of 1

QC Report No: XY90-Golder Associates
Project: Master Park Lot C
073-93368-06-09A

Matrix: Water

Date Received: 02/11/14

Data Release Authorized: *AB*
Reported: 02/20/14

ARI ID	Sample ID	Analysis Date	DF	Range	Result	RL	MDL
XY90A 14-2273	MPL0TC-MW-6-021114	02/14/14 FID3B	1.0	Diesel Motor Oil HC ID o-Terphenyl	< 0.10 U < 0.20 U --- 92.9%	0.10 0.20	0.02 0.04
XY90B 14-2274	MPL0TC-MW-21-021114	02/14/14 FID3B	1.0	Diesel Motor Oil HC ID o-Terphenyl	< 0.10 U < 0.20 U --- 95.4%	0.10 0.20	0.02 0.04
MB-021314 14-2275	Method Blank	02/14/14 FID3B	1.0	Diesel Range Motor Oil Range HC ID o-Terphenyl	< 0.10 U < 0.20 U --- 84.6%	0.10 0.20	0.02 0.04
XY90C 14-2275	MPL0TC-MW-17A-021114	02/14/14 FID3B	1.0	Diesel Motor Oil HC ID o-Terphenyl	< 0.10 U < 0.20 U --- 87.2%	0.10 0.20	0.02 0.04
XY90D 14-2276	MPL0TC-MW-19-021114	02/14/14 FID3B	1.0	Diesel Motor Oil HC ID o-Terphenyl	< 0.10 U < 0.20 U --- 81.4%	0.10 0.20	0.02 0.04

Reported in mg/L (ppm)

Diesel quantitation on total peaks in the range from C12 to C24.
Motor Oil quantitation on total peaks in the range from C24 to C38.
HC ID: DRO/RRO indicates results of organics or additional hydrocarbons in ranges are not identifiable.

ORGANICS ANALYSIS DATA SHEET

NWTPHD by GC/FID

Page 1 of 1

**ANALYTICAL
RESOURCES
INCORPORATED**

Sample ID: MPLOTG-MW-17A-021114

MS/MSD

Lab Sample ID: XY90C

LIMS ID: 14-2275

Matrix: Water

Data Release Authorized: *[Signature]*

Reported: 02/20/14

QC Report No: XY90-Golder Associates

Project: Master Park Lot C

073-93368-06-09A

Date Sampled: 02/11/14

Date Received: 02/11/14

Date Extracted MS/MSD: 02/13/14

Sample Amount MS: 500 mL

MSD: 500 mL

Date Analyzed MS: 02/14/14 12:50

Final Extract Volume MS: 1.0 mL

MSD: 02/14/14 13:15

MSD: 1.0 mL

Instrument/Analyst MS: FID3B/JLW

Dilution Factor MS: 1.00

MSD: FID3B/JLW

MSD: 1.00

Range	Sample	MS	Spike Added-MS	MS Recovery	MSD	Spike Added-MSD	MSD Recovery	RPD
Diesel	< 0.10 U	2.83	3.00	94.3%	2.72	3.00	90.7%	4.0%

TPHD Surrogate Recovery

	MS	MSD
o-Terphenyl	77.6%	75.0%

Results reported in mg/L

RPD calculated using sample concentrations per SW846.

ORGANICS ANALYSIS DATA SHEET

NWTPHD by GC/FID

Page 1 of 1

Sample ID: LCS-021314

LCS/LCSD

Lab Sample ID: LCS-021314

LIMS ID: 14-2275

Matrix: Water

Data Release Authorized: *B*

Reported: 02/20/14

QC Report No: XY90-Golder Associates

Project: Master Park Lot C

073-93368-06-09A

Date Sampled: NA

Date Received: NA

Date Extracted LCS/LCSD: 02/13/14

Sample Amount LCS: 500 mL

LCSD: 500 mL

Date Analyzed LCS: 02/14/14 10:45

Final Extract Volume LCS: 1.0 mL

LCSD: 02/14/14 11:10

LCSD: 1.0 mL

Instrument/Analyst LCS: FID3B/JLW

Dilution Factor LCS: 1.00

LCSD: FID3B/JLW

LCSD: 1.00

Range	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Diesel	2.74	3.00	91.3%	2.76	3.00	92.0%	0.7%

TPHD Surrogate Recovery

	LCS	LCSD
o-Terphenyl	81.0%	80.2%

Results reported in mg/L

RPD calculated using sample concentrations per SW846.

TPHD SURROGATE RECOVERY SUMMARY

Matrix: Water

QC Report No: XY90-Golder Associates
Project: Master Park Lot C
073-93368-06-09A

<u>Client ID</u>	<u>OTER</u>	<u>TOT OUT</u>
MPLUTC-MW-6-021114	92.9%	0
MPLUTC-MW-21-021114	95.4%	0
MB-021314	84.6%	0
LCS-021314	81.0%	0
LCSD-021314	80.2%	0
MPLUTC-MW-17A-021114	87.2%	0
MPLUTC-MW-17A-021114 MS	77.6%	0
MPLUTC-MW-17A-021114 MSD	75.0%	0
MPLUTC-MW-19-021114	81.4%	0

	LCS/MB LIMITS	QC LIMITS
(OTER) = o-Terphenyl	(50-150)	(50-150)

Prep Method: SW3510C
Log Number Range: 14-2273 to 14-2276

TOTAL DIESEL RANGE HYDROCARBONS-EXTRACTION REPORT

Matrix: Water
 Date Received: 02/11/14
 ARI Job: XY90
 Project: Master Park Lot C
 073-93368-06-09A

ARI ID	Client ID	Samp Amt	Final Vol	Prep Date
14-2273-XY90A	MPLOT-MW-6-021114	500 mL	1.00 mL	02/13/14
14-2274-XY90B	MPLOT-MW-21-021114	500 mL	1.00 mL	02/13/14
14-2275-021314MB1	Method Blank	500 mL	1.00 mL	02/13/14
14-2275-021314LCS1	Lab Control	500 mL	1.00 mL	02/13/14
14-2275-021314LCSD1	Lab Control Dup	500 mL	1.00 mL	02/13/14
14-2275-XY90C	MPLOT-MW-17A-021114	500 mL	1.00 mL	02/13/14
14-2275-XY90CMS	MPLOT-MW-17A-021114	500 mL	1.00 mL	02/13/14
14-2275-XY90CMSD	MPLOT-MW-17A-021114	500 mL	1.00 mL	02/13/14
14-2276-XY90D	MPLOT-MW-19-021114	500 mL	1.00 mL	02/13/14

ORGANICS ANALYSIS DATA SHEET
 TOTAL DIESEL RANGE HYDROCARBONS
 NWTPHD by GC/FID
 Extraction Method: SW3510C
 Page 1 of 1



QC Report No: XZ00-Golder Associates
 Project: Master Park Lot C
 073-93368-06-09A

Matrix: Water

Date Received: 02/12/14

Data Release Authorized: *MMW*
 Reported: 02/24/14

ARI ID	Sample ID	Analysis Date	DF	Range	Result	RL	MDL
MB-021314 14-2376	Method Blank	02/14/14 FID3B	1.0	Diesel Range	< 0.10 U	0.10	0.02
				Motor Oil Range	< 0.20 U	0.20	0.04
				HC ID	---		
				o-Terphenyl	79.2%		
XZ00A 14-2376	MPL0TC-MW-9-021214	02/14/14 FID3B	1.0	Diesel	1.6	0.10	0.02
				Motor Oil	< 0.20 U	0.20	0.04
				HC ID	DRO		
				o-Terphenyl	73.4%		
XZ00B 14-2377	MPL0TC-MW-13-021214	02/14/14 FID3B	1.0	Diesel	1.4	0.10	0.02
				Motor Oil	< 0.20 U	0.20	0.04
				HC ID	DRO		
				o-Terphenyl	62.8%		
XZ00C 14-2378	MPL0TC-MW-18-021214	02/14/14 FID3B	1.0	Diesel	0.77	0.10	0.02
				Motor Oil	< 0.20 U	0.20	0.04
				HC ID	DRO		
				o-Terphenyl	65.4%		

Reported in mg/L (ppm)

Diesel quantitation on total peaks in the range from C12 to C24.
 Motor Oil quantitation on total peaks in the range from C24 to C38.
 HC ID: DRO/RRO indicates results of organics or additional hydrocarbons in ranges are not identifiable.

TPHD SURROGATE RECOVERY SUMMARY

Matrix: Water

QC Report No: XZ00-Golder Associates
Project: Master Park Lot C
073-93368-06-09A

<u>Client ID</u>	<u>OTER</u>	<u>TOT OUT</u>
MB-021314	79.2%	0
LCS-021314	68.5%	0
LCSD-021314	73.2%	0
MPLOTc-MW-9-021214	73.4%	0
MPLOTc-MW-13-021214	62.8%	0
MPLOTc-MW-18-021214	65.4%	0

	<u>LCS/MB LIMITS</u>	<u>QC LIMITS</u>
(OTER) = o-Terphenyl	(50-150)	(50-150)

Prep Method: SW3510C
Log Number Range: 14-2376 to 14-2378

ORGANICS ANALYSIS DATA SHEET

NWTPHD by GC/FID

Page 1 of 1

Sample ID: LCS-021314

LCS/LCSD

Lab Sample ID: LCS-021314

LIMS ID: 14-2376

Matrix: Water

Data Release Authorized: *mw*

Reported: 02/24/14

QC Report No: XZ00-Golder Associates

Project: Master Park Lot C

073-93368-06-09A

Date Sampled: NA

Date Received: NA

Date Extracted LCS/LCSD: 02/13/14

Sample Amount LCS: 500 mL

LCSD: 500 mL

Date Analyzed LCS: 02/14/14 15:45

Final Extract Volume LCS: 1.0 mL

LCSD: 02/14/14 16:10

LCSD: 1.0 mL

Instrument/Analyst LCS: FID3B/JLW

Dilution Factor LCS: 1.00

LCSD: FID3B/JLW

LCSD: 1.00

Range	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Diesel	2.65	3.00	88.3%	2.91	3.00	97.0%	9.4%

TPHD Surrogate Recovery

	LCS	LCSD
o-Terphenyl	68.5%	73.2%

Results reported in mg/L

RPD calculated using sample concentrations per SW846.

TOTAL DIESEL RANGE HYDROCARBONS-EXTRACTION REPORT

Matrix: Water
Date Received: 02/12/14

ARI Job: XZ00
Project: Master Park Lot C
073-93368-06-09A

ARI ID	Client ID	Samp Amt	Final Vol	Prep Date
14-2376-021314MB1	Method Blank	500 mL	1.00 mL	02/13/14
14-2376-021314LCS1	Lab Control	500 mL	1.00 mL	02/13/14
14-2376-021314LCSD1	Lab Control Dup	500 mL	1.00 mL	02/13/14
14-2376-XZ00A	MPLOT-MW-9-021214	500 mL	1.00 mL	02/13/14
14-2377-XZ00B	MPLOT-MW-13-021214	500 mL	1.00 mL	02/13/14
14-2378-XZ00C	MPLOT-MW-18-021214	500 mL	1.00 mL	02/13/14

ORGANICS ANALYSIS DATA SHEET
TOTAL DIESEL RANGE HYDROCARBONS
NWT PHD by GC/FID
Extraction Method: SW3510C
Page 1 of 1



QC Report No: XZ26-Golder Associates
Project: Master Park Lot C
073-93368-06-09A

Matrix: Water

Date Received: 02/13/14

Data Release Authorized: *MW*
Reported: 02/24/14

ARI ID	Sample ID	Analysis Date	DF	Range	Result	RL	MDL
MB-021714 14-2504	Method Blank	02/17/14 FID3B	1.0	Diesel Range	< 0.10 U	0.10	0.02
				Motor Oil Range	< 0.20 U	0.20	0.04
				HC ID	---		
				o-Terphenyl	90.4%		
XZ26A 14-2504	MPL0TC-FB-021314	02/17/14 FID3B	1.0	Diesel	< 0.10 U	0.10	0.02
				Motor Oil	< 0.20 U	0.20	0.04
				HC ID	---		
				o-Terphenyl	85.6%		
XZ26B 14-2505	MPL0TC-MW-7-021314	02/17/14 FID3B	1.0	Diesel	12 E	0.10	0.02
				Motor Oil	< 0.20 U	0.20	0.04
				HC ID	DRO		
				o-Terphenyl	54.0%		
XZ26B DL 14-2505	MPL0TC-MW-7-021314	02/18/14 FID3B	10	Diesel	11	1.0	0.22
				Motor Oil	< 2.0 U	2.0	0.44
				HC ID	DRO		
				o-Terphenyl	88.0%		
XZ26C 14-2506	MPL0TC-MW-12-021314	02/17/14 FID3B	1.0	Diesel	1.1	0.10	0.02
				Motor Oil	< 0.20 U	0.20	0.04
				HC ID	DRO		
				o-Terphenyl	77.4%		

Reported in mg/L (ppm)

Diesel quantitation on total peaks in the range from C12 to C24.
Motor Oil quantitation on total peaks in the range from C24 to C38.
HC ID: DRO/RRO indicates results of organics or additional hydrocarbons in ranges are not identifiable.

TPHD SURROGATE RECOVERY SUMMARY

Matrix: Water

QC Report No: XZ26-Golder Associates
Project: Master Park Lot C
073-93368-06-09A

Client ID	OTER	TOT OUT
MB-021714	90.4%	0
LCS-021714	78.1%	0
LCSD-021714	75.6%	0
MPLOTc-FB-021314	85.6%	0
MPLOTc-MW-7-021314	54.0%	0
MPLOTc-MW-7-021314 DL	88.0%	0
MPLOTc-MW-12-021314	77.4%	0

	LCS/MB LIMITS	QC LIMITS
(OTER) = o-Terphenyl	(50-150)	(50-150)

Prep Method: SW3510C
Log Number Range: 14-2504 to 14-2506

ORGANICS ANALYSIS DATA SHEET
NWTPHD by GC/FID
Page 1 of 1



Sample ID: LCS-021714
LCS/LCSD

Lab Sample ID: LCS-021714
LIMS ID: 14-2504
Matrix: Water
Data Release Authorized: *MW*
Reported: 02/24/14

QC Report No: XZ26-Golder Associates
Project: Master Park Lot C
073-93368-06-09A
Date Sampled: NA
Date Received: NA

Date Extracted LCS/LCSD: 02/17/14
Date Analyzed LCS: 02/17/14 17:34
LCSD: 02/17/14 17:58
Instrument/Analyst LCS: FID3B/JLW
LCSD: FID3B/JLW

Sample Amount LCS: 500 mL
LCSD: 500 mL
Final Extract Volume LCS: 1.0 mL
LCSD: 1.0 mL
Dilution Factor LCS: 1.00
LCSD: 1.00

Range	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Diesel	3.02	3.00	101%	2.93	3.00	97.7%	3.0%

TPHD Surrogate Recovery

	LCS	LCSD
o-Terphenyl	78.1%	75.6%

Results reported in mg/L
RPD calculated using sample concentrations per SW846.

TOTAL DIESEL RANGE HYDROCARBONS-EXTRACTION REPORT

Matrix: Water
Date Received: 02/13/14

ARI Job: XZ26
Project: Master Park Lot C
073-93368-06-09A

ARI ID	Client ID	Samp Amt	Final Vol	Prep Date
14-2504-021714MB1	Method Blank	500 mL	1.00 mL	02/17/14
14-2504-021714LCS1	Lab Control	500 mL	1.00 mL	02/17/14
14-2504-021714LCSD1	Lab Control Dup	500 mL	1.00 mL	02/17/14
14-2504-XZ26A	MPLOTFC-FB-021314	500 mL	1.00 mL	02/17/14
14-2505-XZ26B	MPLOTFC-MW-7-021314	500 mL	1.00 mL	02/17/14
14-2506-XZ26C	MPLOTFC-MW-12-021314	500 mL	1.00 mL	02/17/14

ORGANICS ANALYSIS DATA SHEET

BETX by Method SW8021BMod

TPHG by Method NWTPHG

Page 1 of 1

Sample ID: MPLOTG-MW-6-021114

SAMPLE

Lab Sample ID: XY90A

LIMS ID: 14-2273

Matrix: Water

Data Release Authorized: 

Reported: 02/21/14

QC Report No: XY90-Golder Associates

Project: Master Park Lot C

Event: 073-93368-06-09A

Date Sampled: 02/11/14

Date Received: 02/11/14

Date Analyzed: 02/17/14 18:15

Instrument/Analyst: PID1/PKC

Purge Volume: 5.0 mL

Dilution Factor: 1.00

CAS Number	Analyte	DL	LOQ	Result
71-43-2	Benzene	0.028	0.25	< 0.25 U
108-88-3	Toluene	0.014	0.25	< 0.25 U
100-41-4	Ethylbenzene	0.028	0.25	< 0.25 U
179601-23-1	m,p-Xylene	0.022	0.50	< 0.50 U
95-47-6	o-Xylene	0.027	0.25	< 0.25 U

Gasoline Range Hydrocarbons	0.057	0.10	< 0.10 U	GAS ID ---
-----------------------------	-------	------	----------	---------------

BETX Surrogate Recovery

Trifluorotoluene	89.0%
Bromobenzene	87.7%

Gasoline Surrogate Recovery

Trifluorotoluene	93.5%
Bromobenzene	91.7%

BETX values reported in µg/L (ppb)
Gasoline values reported in mg/L (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.

GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

ORGANICS ANALYSIS DATA SHEET
BETX by Method SW8021BMod
TPHG by Method NWTPHG
Page 1 of 1



Sample ID: MPLOT-MW-21-021114
SAMPLE

Lab Sample ID: XY90B
LIMS ID: 14-2274
Matrix: Water
Data Release Authorized: *[Signature]*
Reported: 02/21/14

QC Report No: XY90-Golder Associates
Project: Master Park Lot C
Event: 073-93368-06-09A
Date Sampled: 02/11/14
Date Received: 02/11/14

Date Analyzed: 02/17/14 18:45
Instrument/Analyst: PID1/PKC

Purge Volume: 5.0 mL
Dilution Factor: 1.00

CAS Number	Analyte	DL	LOQ	Result
71-43-2	Benzene	0.028	0.25	< 0.25 U
108-88-3	Toluene	0.014	0.25	< 0.25 U
100-41-4	Ethylbenzene	0.028	0.25	< 0.25 U
179601-23-1	m,p-Xylene	0.022	0.50	< 0.50 U
95-47-6	o-Xylene	0.027	0.25	< 0.25 U

Gasoline Range Hydrocarbons	0.057	0.10	< 0.10 U	GAS ID ---
-----------------------------	-------	------	----------	---------------

BETX Surrogate Recovery

Trifluorotoluene	88.7%
Bromobenzene	86.7%

Gasoline Surrogate Recovery

Trifluorotoluene	93.8%
Bromobenzene	90.9%

BETX values reported in µg/L (ppb)
Gasoline values reported in mg/L (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.
GRO: Positive result that does not match an identifiable gasoline pattern.
Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

ORGANICS ANALYSIS DATA SHEET
BETX by Method SW8021BMod
TPHG by Method NWTPHG
Page 1 of 1

ANALYTICAL
RESOURCES
INCORPORATED

Sample ID: MPLOTG-MW-17A-021114
SAMPLE

Lab Sample ID: XY90C

LIMS ID: 14-2275

Matrix: Water

Data Release Authorized: *AB*

Reported: 02/21/14

QC Report No: XY90-Golder Associates

Project: Master Park Lot C

Event: 073-93368-06-09A

Date Sampled: 02/11/14

Date Received: 02/11/14

Date Analyzed: 02/17/14 19:14

Instrument/Analyst: PID1/PKC

Purge Volume: 5.0 mL

Dilution Factor: 1.00

CAS Number	Analyte	DL	LOQ	Result
71-43-2	Benzene	0.028	0.25	< 0.25 U
108-88-3	Toluene	0.014	0.25	< 0.25 U
100-41-4	Ethylbenzene	0.028	0.25	< 0.25 U
179601-23-1	m,p-Xylene	0.022	0.50	< 0.50 U
95-47-6	o-Xylene	0.027	0.25	< 0.25 U

Gasoline Range Hydrocarbons	0.057	0.10	< 0.10 U	GAS ID ---
-----------------------------	-------	------	----------	---------------

BETX Surrogate Recovery

Trifluorotoluene	88.1%
Bromobenzene	87.3%

Gasoline Surrogate Recovery

Trifluorotoluene	93.8%
Bromobenzene	91.7%

BETX values reported in µg/L (ppb)
Gasoline values reported in mg/L (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.

GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

ORGANICS ANALYSIS DATA SHEET
BETX by Method SW8021BMod
TPHG by Method NWTPHG
Page 1 of 1



Sample ID: MPLOTG-MW-19-021114
SAMPLE

Lab Sample ID: XY90D
LIMS ID: 14-2276
Matrix: Water
Data Release Authorized: 
Reported: 02/21/14

QC Report No: XY90-Golder Associates
Project: Master Park Lot C
Event: 073-93368-06-09A
Date Sampled: 02/11/14
Date Received: 02/11/14

Date Analyzed: 02/17/14 20:41
Instrument/Analyst: PID1/PKC

Purge Volume: 5.0 mL
Dilution Factor: 1.00

CAS Number	Analyte	DL	LOQ	Result
71-43-2	Benzene	0.028	0.25	< 0.25 U
108-88-3	Toluene	0.014	0.25	< 0.25 U
100-41-4	Ethylbenzene	0.028	0.25	< 0.25 U
179601-23-1	m,p-Xylene	0.022	0.50	< 0.50 U
95-47-6	o-Xylene	0.027	0.25	< 0.25 U

Gasoline Range Hydrocarbons	0.057	0.10	< 0.10 U	GAS ID ---
-----------------------------	-------	------	----------	---------------

BETX Surrogate Recovery

Trifluorotoluene	89.2%
Bromobenzene	89.1%

Gasoline Surrogate Recovery

Trifluorotoluene	93.7%
Bromobenzene	93.6%

BETX values reported in µg/L (ppb)
Gasoline values reported in mg/L (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.
GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

Sample ID: Trip Blanks
SAMPLE

Lab Sample ID: XY90E
LIMS ID: 14-2277
Matrix: Water
Data Release Authorized: *AS*
Reported: 02/21/14

QC Report No: XY90-Golder Associates
Project: Master Park Lot C
Event: 073-93368-06-09A
Date Sampled: 02/11/14
Date Received: 02/11/14

Date Analyzed: 02/17/14 13:53
Instrument/Analyst: PID1/PKC

Purge Volume: 5.0 mL
Dilution Factor: 1.00

CAS Number	Analyte	DL	LOQ	Result
71-43-2	Benzene	0.028	0.25	< 0.25 U
108-88-3	Toluene	0.014	0.25	< 0.25 U
100-41-4	Ethylbenzene	0.028	0.25	< 0.25 U
179601-23-1	m,p-Xylene	0.022	0.50	< 0.50 U
95-47-6	o-Xylene	0.027	0.25	< 0.25 U

Gasoline Range Hydrocarbons	0.057	0.10	< 0.10 U	GAS ID ---
-----------------------------	-------	------	----------	---------------

BETX Surrogate Recovery

Trifluorotoluene	89.5%
Bromobenzene	83.4%

Gasoline Surrogate Recovery

Trifluorotoluene	94.9%
Bromobenzene	86.3%

BETX values reported in µg/L (ppb)
Gasoline values reported in mg/L (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.
GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

ORGANICS ANALYSIS DATA SHEET
BETX by Method SW8021BMod
TPHG by Method NWTPHG
Page 1 of 1



Sample ID: MB-021714
METHOD BLANK

Lab Sample ID: MB-021714
LIMS ID: 14-2273
Matrix: Water
Data Release Authorized: 
Reported: 02/21/14

QC Report No: XY90-Golder Associates
Project: Master Park Lot C
Event: 073-93368-06-09A
Date Sampled: NA
Date Received: NA

Date Analyzed: 02/17/14 11:34
Instrument/Analyst: PID1/PKC

Purge Volume: 5.0 mL
Dilution Factor: 1.00

CAS Number	Analyte	DL	LOQ	Result
71-43-2	Benzene	0.028	0.25	< 0.25 U
108-88-3	Toluene	0.014	0.25	< 0.25 U
100-41-4	Ethylbenzene	0.028	0.25	< 0.25 U
179601-23-1	m,p-Xylene	0.022	0.50	< 0.50 U
95-47-6	o-Xylene	0.027	0.25	< 0.25 U

Gasoline Range Hydrocarbons	0.057	0.10	< 0.10 U	GAS ID ---
-----------------------------	-------	------	----------	---------------

BETX Surrogate Recovery

Trifluorotoluene	86.7%
Bromobenzene	86.2%

Gasoline Surrogate Recovery

Trifluorotoluene	91.8%
Bromobenzene	88.8%

BETX values reported in µg/L (ppb)
Gasoline values reported in mg/L (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.
GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

BETX WATER SURROGATE RECOVERY SUMMARY

ARI Job: XY90
Matrix: Water

QC Report No: XY90-Golder Associates
Project: Master Park Lot C
Event: 073-93368-06-09A

Client ID	TFT	BBZ	TOT OUT
MB-021714	86.7%	86.2%	0
LCS-021714	97.6%	91.5%	0
LCSD-021714	94.2%	88.8%	0
MPLOT-MW-6-021114	89.0%	87.7%	0
MPLOT-MW-21-02111	88.7%	86.7%	0
MPLOT-MW-17A-0211	88.1%	87.3%	0
MPLOT-MW-17A-0211 MS	96.8%	91.9%	0
MPLOT-MW-17A-0211 MSD	96.9%	90.7%	0
MPLOT-MW-19-02111	89.2%	89.1%	0
Trip Blanks	89.5%	83.4%	0

		LCS/MB LIMITS	QC LIMITS
(TFT) = Trifluorotoluene	(5 mL PV)	(80-120)	(80-120)
(TFT) = Trifluorotoluene	(15 mL PV)	(79-120)	(80-120)
(BBZ) = Bromobenzene	(5 mL PV)	(80-120)	(77-120)
(BBZ) = Bromobenzene	(15 mL PV)	(79-120)	(80-120)

Log Number Range: 14-2273 to 14-2277

TPHG WATER SURROGATE RECOVERY SUMMARY

ARI Job: XY90
Matrix: Water

QC Report No: XY90-Golder Associates
Project: Master Park Lot C
Event: 073-93368-06-09A

Client ID	TFT	BBZ	TOT OUT
MB-021714	91.8%	88.8%	0
LCS-021714	109%	96.6%	0
LCSD-021714	106%	95.6%	0
MPLOT-C-MW-6-021114	93.5%	91.7%	0
MPLOT-C-MW-21-02111	93.8%	90.9%	0
MPLOT-C-MW-17A-0211	93.8%	91.7%	0
MPLOT-C-MW-17A-0211 MS	108%	98.3%	0
MPLOT-C-MW-17A-0211 MSD	108%	97.7%	0
MPLOT-C-MW-19-02111	93.7%	93.6%	0
Trip Blanks	94.9%	86.3%	0

	LCS/MB LIMITS	QC LIMITS
(TFT) = Trifluorotoluene	(80-120)	(80-120)
(BBZ) = Bromobenzene	(80-120)	(80-120)

Log Number Range: 14-2273 to 14-2277

ORGANICS ANALYSIS DATA SHEET
TPHG by Method NWTPHG
Page 1 of 1



Sample ID: MPLOTG-MW-17A-021114
MATRIX SPIKE

Lab Sample ID: XY90C
LIMS ID: 14-2275
Matrix: Water
Data Release Authorized: *AB*
Reported: 02/21/14

QC Report No: XY90-Golder Associates
Project: Master Park Lot C
Event: 073-93368-06-09A
Date Sampled: 02/11/14
Date Received: 02/11/14

Date Analyzed MS: 02/17/14 19:43
MSD: 02/17/14 20:12
Instrument/Analyst MS: PID1/PKC
MSD: PID1/PKC

Purge Volume: 5.0 mL
Dilution Factor MS: 1.0
MSD: 1.0

Analyte	Sample	MS	Spike Added-MS	MS Recovery	MSD	Spike Added-MSD	MSD Recovery	RPD
Gasoline Range Hydrocarbons < 0.10 U		2.32	2.50	92.8%	2.37	2.50	94.8%	2.1%

Reported in mg/L (ppm)

RPD calculated using sample concentrations per SW846.

TPHG Surrogate Recovery

	MS	MSD
Trifluorotoluene	108%	108%
Bromobenzene	98.3%	97.7%

ORGANICS ANALYSIS DATA SHEET
BETX by Method SW8021BMod
Page 1 of 1



Sample ID: MPLOT-MW-17A-021114
MATRIX SPIKE

Lab Sample ID: XY90C
LIMS ID: 14-2275
Matrix: Water
Data Release Authorized: *AS*
Reported: 02/21/14

QC Report No: XY90-Golder Associates
Project: Master Park Lot C
Event: 073-93368-06-09A
Date Sampled: 02/11/14
Date Received: 02/11/14

Date Analyzed MS: 02/17/14 19:43
MSD: 02/17/14 20:12
Instrument/Analyst MS: PID1/PKC
MSD: PID1/PKC

Purge Volume: 5.0 mL
Dilution Factor MS: 1.0
MSD: 1.0

Analyte	Sample	MS	Spike Added-MS	MS Recovery	MSD	Spike Added-MSD	MSD Recovery	RPD
Benzene	< 0.25 U	1.89	2.10	90.0%	1.84	2.10	87.6%	2.7%
Toluene	< 0.25 U	32.1	34.8	92.2%	31.9	34.8	91.7%	0.6%
Ethylbenzene	< 0.25 U	15.3	17.4	87.9%	15.4	17.4	88.5%	0.7%
m,p-Xylene	< 0.50 U	56.3	62.7	89.8%	55.9	62.7	89.2%	0.7%
o-Xylene	< 0.25 U	32.2	34.6	93.1%	32.0	34.6	92.5%	0.6%

Reported in µg/L (ppb)

RPD calculated using sample concentrations per SW846.

BETX Surrogate Recovery

	MS	MSD
Trifluorotoluene	96.8%	96.9%
Bromobenzene	91.9%	90.7%

ORGANICS ANALYSIS DATA SHEET
TPHG by Method NWTPHG
Page 1 of 1



Sample ID: LCS-021714
LAB CONTROL SAMPLE

Lab Sample ID: LCS-021714
LIMS ID: 14-2273
Matrix: Water
Data Release Authorized: *AB*
Reported: 02/21/14

QC Report No: XY90-Golder Associates
Project: Master Park Lot C
Event: 073-93368-06-09A
Date Sampled: NA
Date Received: NA

Date Analyzed LCS: 02/17/14 10:36
LCSD: 02/17/14 11:05
Instrument/Analyst LCS: PID1/PKC
LCSD: PID1/PKC

Purge Volume: 5.0 mL
Dilution Factor LCS: 1.0
LCSD: 1.0

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Gasoline Range Hydrocarbons	2.50	2.50	100%	2.50	2.50	100%	0.0%

Reported in mg/L (ppm)

RPD calculated using sample concentrations per SW846.

TPHG Surrogate Recovery

	LCS	LCSD
Trifluorotoluene	109%	106%
Bromobenzene	96.6%	95.6%

ORGANICS ANALYSIS DATA SHEET
BETX by Method SW8021BMod
Page 1 of 1



Sample ID: LCS-021714
LAB CONTROL SAMPLE

Lab Sample ID: LCS-021714
LIMS ID: 14-2273
Matrix: Water
Data Release Authorized: *B*
Reported: 02/21/14

QC Report No: XY90-Golder Associates
Project: Master Park Lot C
Event: 073-93368-06-09A
Date Sampled: NA
Date Received: NA

Date Analyzed LCS: 02/17/14 10:36
LCSD: 02/17/14 11:05
Instrument/Analyst LCS: PID1/PKC
LCSD: PID1/PKC

Purge Volume: 5.0 mL
Dilution Factor LCS: 1.0
LCSD: 1.0

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Benzene	1.80	2.10	85.7%	1.78	2.10	84.8%	1.1%
Toluene	31.8	34.8	91.4%	32.1	34.8	92.2%	0.9%
Ethylbenzene	15.4	17.4	88.5%	15.3	17.4	87.9%	0.7%
m,p-Xylene	55.9	62.7	89.2%	56.1	62.7	89.5%	0.4%
o-Xylene	31.6	34.6	91.3%	31.9	34.6	92.2%	0.9%

Reported in µg/L (ppb)

RPD calculated using sample concentrations per SW846.

BETX Surrogate Recovery

	LCS	LCSD
Trifluorotoluene	97.6%	94.2%
Bromobenzene	91.5%	88.8%

ORGANICS ANALYSIS DATA SHEET
BETX by Method SW8021BMod
TPHG by Method NWTPHG
Page 1 of 1



Sample ID: MPLOT-MW-9-021214
SAMPLE

Lab Sample ID: XZ00A
LIMS ID: 14-2376
Matrix: Water
Data Release Authorized: *AB*
Reported: 02/21/14

QC Report No: XZ00-Golder Associates
Project: Master Park Lot C
Event: 073-93368-06-09A
Date Sampled: 02/12/14
Date Received: 02/12/14

Date Analyzed: 02/17/14 21:11
Instrument/Analyst: PID1/PKC

Purge Volume: 5.0 mL
Dilution Factor: 1.00

CAS Number	Analyte	DL	LOQ	Result
71-43-2	Benzene	0.028	0.25	30
108-88-3	Toluene	0.014	0.25	8.1
100-41-4	Ethylbenzene	0.028	0.25	150
179601-23-1	m,p-Xylene	0.022	0.50	97
95-47-6	o-Xylene	0.027	0.25	1.0

Gasoline Range Hydrocarbons	0.057	0.10	7.5	GAS ID GAS
-----------------------------	-------	------	-----	---------------

BETX Surrogate Recovery

Trifluorotoluene	97.2%
Bromobenzene	97.3%

Gasoline Surrogate Recovery

Trifluorotoluene	98.1%
Bromobenzene	102%

BETX values reported in µg/L (ppb)
Gasoline values reported in mg/L (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.

GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

ORGANICS ANALYSIS DATA SHEET
BETX by Method SW8021BMod
TPHG by Method NWTPHG
Page 1 of 1

ANALYTICAL
RESOURCES
INCORPORATED

Sample ID: MPLOTG-MW-13-021214
SAMPLE

Lab Sample ID: XZ00B

LIMS ID: 14-2377

Matrix: Water

Data Release Authorized: *JS*

Reported: 02/21/14

QC Report No: XZ00-Golder Associates

Project: Master Park Lot C

Event: 073-93368-06-09A

Date Sampled: 02/12/14

Date Received: 02/12/14

Date Analyzed: 02/17/14 21:40

Instrument/Analyst: PID1/PKC

Purge Volume: 5.0 mL

Dilution Factor: 1.00

CAS Number	Analyte	DL	LOQ	Result
71-43-2	Benzene	0.028	0.25	< 0.25 U
108-88-3	Toluene	0.014	0.25	3.2
100-41-4	Ethylbenzene	0.028	0.25	230 E
179601-23-1	m,p-Xylene	0.022	0.50	1,500 ES
95-47-6	o-Xylene	0.027	0.25	260 E

Gasoline Range Hydrocarbons 0.057 0.10 13 E GAS ID

BETX Surrogate Recovery

Trifluorotoluene	90.9%
Bromobenzene	92.2%

Gasoline Surrogate Recovery

Trifluorotoluene	93.7%
Bromobenzene	93.2%

BETX values reported in µg/L (ppb)
Gasoline values reported in mg/L (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.

GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

ORGANICS ANALYSIS DATA SHEET
BETX by Method SW8021BMod
TPHG by Method NWTPHG
Page 1 of 1



Sample ID: MPLOT-MW-13-021214
DILUTION

Lab Sample ID: XZ00B
LIMS ID: 14-2377
Matrix: Water
Data Release Authorized: *[Signature]*
Reported: 02/21/14

QC Report No: XZ00-Golder Associates
Project: Master Park Lot C
Event: 073-93368-06-09A
Date Sampled: 02/12/14
Date Received: 02/12/14

Date Analyzed: 02/18/14 13:25
Instrument/Analyst: PID1/PKC

Purge Volume: 5.0 mL
Dilution Factor: 10.0

CAS Number	Analyte	DL	LOQ	Result
71-43-2	Benzene	0.28	2.5	< 2.5 U
108-88-3	Toluene	0.14	2.5	3.9
100-41-4	Ethylbenzene	0.28	2.5	240
179601-23-1	m,p-Xylene	0.22	5.0	1,800
95-47-6	o-Xylene	0.27	2.5	270

Gasoline Range Hydrocarbons	0.057	1.0	14	GAS ID GAS
-----------------------------	-------	-----	----	---------------

BETX Surrogate Recovery

Trifluorotoluene	92.8%
Bromobenzene	88.5%

Gasoline Surrogate Recovery

Trifluorotoluene	97.1%
Bromobenzene	89.8%

BETX values reported in µg/L (ppb)
Gasoline values reported in mg/L (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.

GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

ORGANICS ANALYSIS DATA SHEET
BETX by Method SW8021BMod
TPHG by Method NWTPHG
Page 1 of 1



Sample ID: MPLOT-MW-18-021214
SAMPLE

Lab Sample ID: XZ00C
LIMS ID: 14-2378
Matrix: Water
Data Release Authorized: *[Signature]*
Reported: 02/21/14

QC Report No: XZ00-Golder Associates
Project: Master Park Lot C
Event: 073-93368-06-09A
Date Sampled: 02/12/14
Date Received: 02/12/14

Date Analyzed: 02/17/14 22:09
Instrument/Analyst: PID1/PKC

Purge Volume: 5.0 mL
Dilution Factor: 1.00

CAS Number	Analyte	DL	LOQ	Result
71-43-2	Benzene	0.028	0.25	27
108-88-3	Toluene	0.014	0.25	13
100-41-4	Ethylbenzene	0.028	0.25	17
179601-23-1	m,p-Xylene	0.022	0.50	90
95-47-6	o-Xylene	0.027	0.25	1.3

Gasoline Range Hydrocarbons	0.057	0.10	1.0	GAS ID GAS
-----------------------------	-------	------	-----	---------------

BETX Surrogate Recovery

Trifluorotoluene	96.2%
Bromobenzene	89.6%

Gasoline Surrogate Recovery

Trifluorotoluene	96.4%
Bromobenzene	92.7%

BETX values reported in µg/L (ppb)
Gasoline values reported in mg/L (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.
GRO: Positive result that does not match an identifiable gasoline pattern.
Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

ORGANICS ANALYSIS DATA SHEET
BETX by Method SW8021BMod
TPHG by Method NWTPHG
Page 1 of 1



Sample ID: Trip Blank
SAMPLE

Lab Sample ID: XZ00D
LIMS ID: 14-2379
Matrix: Water
Data Release Authorized: *A*
Reported: 02/21/14

QC Report No: XZ00-Golder Associates
Project: Master Park Lot C
Event: 073-93368-06-09A
Date Sampled: 02/12/14
Date Received: 02/12/14

Date Analyzed: 02/17/14 14:22
Instrument/Analyst: PID1/PKC

Purge Volume: 5.0 mL
Dilution Factor: 1.00

CAS Number	Analyte	DL	LOQ	Result
71-43-2	Benzene	0.028	0.25	< 0.25 U
108-88-3	Toluene	0.014	0.25	< 0.25 U
100-41-4	Ethylbenzene	0.028	0.25	< 0.25 U
179601-23-1	m,p-Xylene	0.022	0.50	< 0.50 U
95-47-6	o-Xylene	0.027	0.25	< 0.25 U

Gasoline Range Hydrocarbons	0.057	0.10	< 0.10 U	GAS ID ---
-----------------------------	-------	------	----------	---------------

BETX Surrogate Recovery

Trifluorotoluene	88.6%
Bromobenzene	82.6%

Gasoline Surrogate Recovery

Trifluorotoluene	94.4%
Bromobenzene	84.6%

BETX values reported in µg/L (ppb)
Gasoline values reported in mg/L (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.

GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

ORGANICS ANALYSIS DATA SHEET
BETX by Method SW8021BMod
TPHG by Method NWTPHG
Page 1 of 1



Sample ID: MB-021714
METHOD BLANK

Lab Sample ID: MB-021714
LIMS ID: 14-2376
Matrix: Water
Data Release Authorized: *AB*
Reported: 02/21/14

QC Report No: XZ00-Golder Associates
Project: Master Park Lot C
Event: 073-93368-06-09A
Date Sampled: NA
Date Received: NA

Date Analyzed: 02/17/14 11:34
Instrument/Analyst: PID1/PKC

Purge Volume: 5.0 mL
Dilution Factor: 1.00

CAS Number	Analyte	DL	LOQ	Result
71-43-2	Benzene	0.028	0.25	< 0.25 U
108-88-3	Toluene	0.014	0.25	< 0.25 U
100-41-4	Ethylbenzene	0.028	0.25	< 0.25 U
179601-23-1	m,p-Xylene	0.022	0.50	< 0.50 U
95-47-6	o-Xylene	0.027	0.25	< 0.25 U

Gasoline Range Hydrocarbons	0.057	0.10	< 0.10 U	GAS ID ---
-----------------------------	-------	------	----------	---------------

BETX Surrogate Recovery

Trifluorotoluene	86.7%
Bromobenzene	86.2%

Gasoline Surrogate Recovery

Trifluorotoluene	91.8%
Bromobenzene	88.8%

BETX values reported in µg/L (ppb)
Gasoline values reported in mg/L (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.

GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

ORGANICS ANALYSIS DATA SHEET
BETX by Method SW8021BMod
TPHG by Method NWTPHG
Page 1 of 1



Sample ID: MB-021814
METHOD BLANK

Lab Sample ID: MB-021814
LIMS ID: 14-2377
Matrix: Water
Data Release Authorized: *[Signature]*
Reported: 02/21/14

QC Report No: XZ00-Golder Associates
Project: Master Park Lot C
Event: 073-93368-06-09A
Date Sampled: NA
Date Received: NA

Date Analyzed: 02/18/14 12:01
Instrument/Analyst: PID1/PKC

Purge Volume: 5.0 mL
Dilution Factor: 1.00

CAS Number	Analyte	DL	LOQ	Result
71-43-2	Benzene	0.028	0.25	< 0.25 U
108-88-3	Toluene	0.014	0.25	< 0.25 U
100-41-4	Ethylbenzene	0.028	0.25	< 0.25 U
179601-23-1	m,p-Xylene	0.022	0.50	< 0.50 U
95-47-6	o-Xylene	0.027	0.25	< 0.25 U

Gasoline Range Hydrocarbons	0.057	0.10	< 0.10 U	GAS ID ---
-----------------------------	-------	------	----------	---------------

BETX Surrogate Recovery

Trifluorotoluene	87.2%
Bromobenzene	87.4%

Gasoline Surrogate Recovery

Trifluorotoluene	94.3%
Bromobenzene	89.8%

BETX values reported in µg/L (ppb)
Gasoline values reported in mg/L (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.
GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

BETX WATER SURROGATE RECOVERY SUMMARY

ARI Job: XZ00
Matrix: Water

QC Report No: XZ00-Golder Associates
Project: Master Park Lot C
Event: 073-93368-06-09A

Client ID	TFT	BBZ	TOT OUT
MB-021714	86.7%	86.2%	0
LCS-021714	97.6%	91.5%	0
LCSD-021714	94.2%	88.8%	0
MPLOT-C-MW-9-021214	97.2%	97.3%	0
MB-021814	87.2%	87.4%	0
LCS-021814	95.3%	89.6%	0
LCSD-021814	93.9%	88.3%	0
MPLOT-C-MW-13-02121	90.9%	92.2%	0
MPLOT-C-MW-13-02121 DL	92.8%	88.5%	0
MPLOT-C-MW-18-02121	96.2%	89.6%	0
Trip Blank	88.6%	82.6%	0

		LCS/MB LIMITS	QC LIMITS
(TFT) = Trifluorotoluene	(5 mL PV)	(80-120)	(80-120)
(TFT) = Trifluorotoluene	(15 mL PV)	(79-120)	(80-120)
(BBZ) = Bromobenzene	(5 mL PV)	(80-120)	(77-120)
(BBZ) = Bromobenzene	(15 mL PV)	(79-120)	(80-120)

Log Number Range: 14-2376 to 14-2379

TPHG WATER SURROGATE RECOVERY SUMMARY

ARI Job: XZ00
Matrix: Water

QC Report No: XZ00-Golder Associates
Project: Master Park Lot C
Event: 073-93368-06-09A

Client ID	TFT	BBZ	TOT OUT
MB-021714	91.8%	88.8%	0
LCS-021714	109%	96.6%	0
LCSD-021714	106%	95.6%	0
MPLOTG-MW-9-021214	98.1%	102%	0
MB-021814	94.3%	89.8%	0
LCS-021814	108%	97.5%	0
LCSD-021814	107%	94.5%	0
MPLOTG-MW-13-02121	93.7%	93.2%	0
MPLOTG-MW-13-02121 DL	97.1%	89.8%	0
MPLOTG-MW-18-02121	96.4%	92.7%	0
Trip Blank	94.4%	84.6%	0

	LCS/MB LIMITS	QC LIMITS
(TFT) = Trifluorotoluene	(80-120)	(80-120)
(BBZ) = Bromobenzene	(80-120)	(80-120)

Log Number Range: 14-2376 to 14-2379

ORGANICS ANALYSIS DATA SHEET
TPHG by Method NWTPHG
Page 1 of 1



Sample ID: LCS-021714
LAB CONTROL SAMPLE

Lab Sample ID: LCS-021714
LIMS ID: 14-2376
Matrix: Water
Data Release Authorized: *[Signature]*
Reported: 02/21/14

QC Report No: XZ00-Golder Associates
Project: Master Park Lot C
Event: 073-93368-06-09A
Date Sampled: NA
Date Received: NA

Date Analyzed LCS: 02/17/14 10:36
LCSD: 02/17/14 11:05
Instrument/Analyst LCS: PID1/PKC
LCSD: PID1/PKC

Purge Volume: 5.0 mL
Dilution Factor LCS: 1.0
LCSD: 1.0

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Gasoline Range Hydrocarbons	2.50	2.50	100%	2.50	2.50	100%	0.0%

Reported in mg/L (ppm)

RPD calculated using sample concentrations per SW846.

TPHG Surrogate Recovery

	LCS	LCSD
Trifluorotoluene	109%	106%
Bromobenzene	96.6%	95.6%

ORGANICS ANALYSIS DATA SHEET
BETX by Method SW8021BMod
Page 1 of 1



Sample ID: LCS-021714
LAB CONTROL SAMPLE

Lab Sample ID: LCS-021714
LIMS ID: 14-2376
Matrix: Water
Data Release Authorized: *AB*
Reported: 02/21/14

QC Report No: XZ00-Golder Associates
Project: Master Park Lot C
Event: 073-93368-06-09A
Date Sampled: NA
Date Received: NA

Date Analyzed LCS: 02/17/14 10:36
LCSD: 02/17/14 11:05
Instrument/Analyst LCS: PID1/PKC
LCSD: PID1/PKC

Purge Volume: 5.0 mL
Dilution Factor LCS: 1.0
LCSD: 1.0

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Benzene	1.80	2.10	85.7%	1.78	2.10	84.8%	1.1%
Toluene	31.8	34.8	91.4%	32.1	34.8	92.2%	0.9%
Ethylbenzene	15.4	17.4	88.5%	15.3	17.4	87.9%	0.7%
m,p-Xylene	55.9	62.7	89.2%	56.1	62.7	89.5%	0.4%
o-Xylene	31.6	34.6	91.3%	31.9	34.6	92.2%	0.9%

Reported in µg/L (ppb)

RPD calculated using sample concentrations per SW846.

BETX Surrogate Recovery

	LCS	LCSD
Trifluorotoluene	97.6%	94.2%
Bromobenzene	91.5%	88.8%

ORGANICS ANALYSIS DATA SHEET

TPHG by Method NWTPHG

Page 1 of 1

Sample ID: LCS-021814

LAB CONTROL SAMPLE

Lab Sample ID: LCS-021814

LIMS ID: 14-2377

Matrix: Water

Data Release Authorized: *AB*

Reported: 02/21/14

QC Report No: XZ00-Golder Associates

Project: Master Park Lot C

Event: 073-93368-06-09A

Date Sampled: NA

Date Received: NA

Date Analyzed LCS: 02/18/14 11:02

Purge Volume: 5.0 mL

LCSD: 02/18/14 11:32

Instrument/Analyst LCS: PID1/PKC

Dilution Factor LCS: 1.0

LCSD: PID1/PKC

LCSD: 1.0

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Gasoline Range Hydrocarbons	2.60	2.50	104%	2.51	2.50	100%	3.5%

Reported in mg/L (ppm)

RPD calculated using sample concentrations per SW846.

TPHG Surrogate Recovery

	LCS	LCSD
Trifluorotoluene	108%	107%
Bromobenzene	97.5%	94.5%

ORGANICS ANALYSIS DATA SHEET
BETX by Method SW8021BMod
Page 1 of 1



Sample ID: LCS-021814
LAB CONTROL SAMPLE

Lab Sample ID: LCS-021814
LIMS ID: 14-2377
Matrix: Water
Data Release Authorized: *[Signature]*
Reported: 02/21/14

QC Report No: XZ00-Golder Associates
Project: Master Park Lot C
Event: 073-93368-06-09A
Date Sampled: NA
Date Received: NA

Date Analyzed LCS: 02/18/14 11:02
LCSD: 02/18/14 11:32
Instrument/Analyst LCS: PID1/PKC
LCSD: PID1/PKC

Purge Volume: 5.0 mL
Dilution Factor LCS: 1.0
LCSD: 1.0

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Benzene	1.74	2.10	82.9%	1.72	2.10	81.9%	1.2%
Toluene	31.1	34.8	89.4%	30.4	34.8	87.4%	2.3%
Ethylbenzene	14.9	17.4	85.6%	14.8	17.4	85.1%	0.7%
m,p-Xylene	54.6	62.7	87.1%	53.6	62.7	85.5%	1.8%
o-Xylene	31.2	34.6	90.2%	30.8	34.6	89.0%	1.3%

Reported in µg/L (ppb)

RPD calculated using sample concentrations per SW846.

BETX Surrogate Recovery

	LCS	LCSD
Trifluorotoluene	95.3%	93.9%
Bromobenzene	89.6%	88.3%

Sample ID: MPLOTG-FB-021314
SAMPLE

Lab Sample ID: XZ26A
LIMS ID: 14-2504
Matrix: Water
Data Release Authorized: *B*
Reported: 02/24/14

QC Report No: XZ26-Golder Associates
Project: Master Park Lot C
Event: 073-93368-06-09A
Date Sampled: 02/13/14
Date Received: 02/13/14

Date Analyzed: 02/17/14 23:37
Instrument/Analyst: PID1/PKC

Purge Volume: 5.0 mL
Dilution Factor: 1.00

CAS Number	Analyte	DL	LOQ	Result
71-43-2	Benzene	0.028	0.25	< 0.25 U
108-88-3	Toluene	0.014	0.25	< 0.25 U
100-41-4	Ethylbenzene	0.028	0.25	< 0.25 U
179601-23-1	m,p-Xylene	0.022	0.50	< 0.50 U
95-47-6	o-Xylene	0.027	0.25	< 0.25 U

Gasoline Range Hydrocarbons	0.057	0.10	< 0.10 U	GAS ID ---
-----------------------------	-------	------	----------	---------------

BETX Surrogate Recovery

Trifluorotoluene	87.2%
Bromobenzene	87.8%

Gasoline Surrogate Recovery

Trifluorotoluene	92.3%
Bromobenzene	91.2%

BETX values reported in µg/L (ppb)
Gasoline values reported in mg/L (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.
GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

Sample ID: MPlotC-MW-7-021314
SAMPLE

Lab Sample ID: XZ26B
LIMS ID: 14-2505
Matrix: Water
Data Release Authorized: *[Signature]*
Reported: 02/24/14

QC Report No: XZ26-Golder Associates
Project: Master Park Lot C
Event: 073-93368-06-09A
Date Sampled: 02/13/14
Date Received: 02/13/14

Date Analyzed: 02/18/14 13:54
Instrument/Analyst: PID1/PKC

Purge Volume: 5.0 mL
Dilution Factor: 10.0

CAS Number	Analyte	DL	LOQ	Result
71-43-2	Benzene	0.28	2.5	25
108-88-3	Toluene	0.14	2.5	110
100-41-4	Ethylbenzene	0.28	2.5	180
179601-23-1	m,p-Xylene	0.22	5.0	2,000
95-47-6	o-Xylene	0.27	2.5	22

Gasoline Range Hydrocarbons	0.57	1.0	29	GAS ID GAS
-----------------------------	------	-----	----	---------------

BETX Surrogate Recovery

Trifluorotoluene	93.1%
Bromobenzene	90.7%

Gasoline Surrogate Recovery

Trifluorotoluene	97.1%
Bromobenzene	92.5%

BETX values reported in µg/L (ppb)
Gasoline values reported in mg/L (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.

GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

ORGANICS ANALYSIS DATA SHEET

BETX by Method SW8021BMod

TPHG by Method NWTPHG

Page 1 of 1

ANALYTICAL
RESOURCES
INCORPORATED

Sample ID: MPLOT-MW-12-021314

SAMPLE

Lab Sample ID: XZ26C

LIMS ID: 14-2506

Matrix: Water

Data Release Authorized: *AB*

Reported: 02/24/14

QC Report No: XZ26-Golder Associates

Project: Master Park Lot C

Event: 073-93368-06-09A

Date Sampled: 02/13/14

Date Received: 02/13/14

Date Analyzed: 02/18/14 14:24

Instrument/Analyst: PID1/PKC

Purge Volume: 5.0 mL

Dilution Factor: 5.00

CAS Number	Analyte	DL	LOQ	Result
71-43-2	Benzene	0.14	1.2	79
108-88-3	Toluene	0.070	1.2	410
100-41-4	Ethylbenzene	0.14	1.2	79
179601-23-1	m,p-Xylene	0.11	2.5	700
95-47-6	o-Xylene	0.14	1.2	270

Gasoline Range Hydrocarbons

0.28

0.50

8.6

GAS ID

GAS

BETX Surrogate Recovery

Trifluorotoluene	88.1%
Bromobenzene	88.2%

Gasoline Surrogate Recovery

Trifluorotoluene	93.9%
Bromobenzene	90.2%

BETX values reported in µg/L (ppb)

Gasoline values reported in mg/L (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.

GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

ORGANICS ANALYSIS DATA SHEET
BETX by Method SW8021BMod
TPHG by Method NWTPHG
Page 1 of 1



Sample ID: Trip Blank
SAMPLE

Lab Sample ID: XZ26D

LIMS ID: 14-2507

Matrix: Water

Data Release Authorized: *AS*

Reported: 02/24/14

QC Report No: XZ26-Golder Associates

Project: Master Park Lot C

Event: 073-93368-06-09A

Date Sampled: 02/13/14

Date Received: 02/13/14

Date Analyzed: 02/17/14 14:51

Instrument/Analyst: PID1/PKC

Purge Volume: 5.0 mL

Dilution Factor: 1.00

CAS Number	Analyte	DL	LOQ	Result
71-43-2	Benzene	0.028	0.25	< 0.25 U
108-88-3	Toluene	0.014	0.25	< 0.25 U
100-41-4	Ethylbenzene	0.028	0.25	< 0.25 U
179601-23-1	m,p-Xylene	0.022	0.50	< 0.50 U
95-47-6	o-Xylene	0.027	0.25	< 0.25 U

Gasoline Range Hydrocarbons	0.057	0.10	< 0.10 U	GAS ID ---
-----------------------------	-------	------	----------	---------------

BETX Surrogate Recovery

Trifluorotoluene	89.1%
Bromobenzene	88.1%

Gasoline Surrogate Recovery

Trifluorotoluene	95.5%
Bromobenzene	89.8%

BETX values reported in µg/L (ppb)
Gasoline values reported in mg/L (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.

GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

Sample ID: MB-021714
METHOD BLANK

Lab Sample ID: MB-021714
LIMS ID: 14-2504
Matrix: Water
Data Release Authorized: *B*
Reported: 02/24/14

QC Report No: XZ26-Golder Associates
Project: Master Park Lot C
Event: 073-93368-06-09A
Date Sampled: NA
Date Received: NA

Date Analyzed: 02/17/14 11:34
Instrument/Analyst: PID1/PKC

Purge Volume: 5.0 mL
Dilution Factor: 1.00

CAS Number	Analyte	DL	LOQ	Result
71-43-2	Benzene	0.028	0.25	< 0.25 U
108-88-3	Toluene	0.014	0.25	< 0.25 U
100-41-4	Ethylbenzene	0.028	0.25	< 0.25 U
179601-23-1	m,p-Xylene	0.022	0.50	< 0.50 U
95-47-6	o-Xylene	0.027	0.25	< 0.25 U

Gasoline Range Hydrocarbons	0.057	0.10	< 0.10 U	GAS ID ---
-----------------------------	-------	------	----------	---------------

BETX Surrogate Recovery

Trifluorotoluene	86.7%
Bromobenzene	86.2%

Gasoline Surrogate Recovery

Trifluorotoluene	91.8%
Bromobenzene	88.8%

BETX values reported in µg/L (ppb)
Gasoline values reported in mg/L (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.
GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

ORGANICS ANALYSIS DATA SHEET

BETX by Method SW8021BMod

TPHG by Method NWTPHG

Page 1 of 1



Sample ID: MB-021814

METHOD BLANK

Lab Sample ID: MB-021814

LIMS ID: 14-2505

Matrix: Water

Data Release Authorized: 

Reported: 02/24/14

QC Report No: XZ26-Golder Associates

Project: Master Park Lot C

Event: 073-93368-06-09A

Date Sampled: NA

Date Received: NA

Date Analyzed: 02/18/14 12:01

Instrument/Analyst: PID1/PKC

Purge Volume: 5.0 mL

Dilution Factor: 1.00

CAS Number	Analyte	DL	LOQ	Result
71-43-2	Benzene	0.028	0.25	< 0.25 U
108-88-3	Toluene	0.014	0.25	< 0.25 U
100-41-4	Ethylbenzene	0.028	0.25	< 0.25 U
179601-23-1	m,p-Xylene	0.022	0.50	< 0.50 U
95-47-6	o-Xylene	0.027	0.25	< 0.25 U

Gasoline Range Hydrocarbons	0.57	0.10	< 0.10 U
-----------------------------	------	------	----------

GAS ID
---**BETX Surrogate Recovery**

Trifluorotoluene	87.2%
Bromobenzene	87.4%

Gasoline Surrogate Recovery

Trifluorotoluene	94.3%
Bromobenzene	89.8%

BETX values reported in µg/L (ppb)
Gasoline values reported in mg/L (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.

GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

BETX WATER SURROGATE RECOVERY SUMMARY

ARI Job: XZ26
Matrix: Water

QC Report No: XZ26-Golder Associates
Project: Master Park Lot C
Event: 073-93368-06-09A

Client ID	TFT	BBZ	TOT OUT
MB-021714	86.7%	86.2%	0
LCS-021714	97.6%	91.5%	0
LCSD-021714	94.2%	88.8%	0
MPLOTTC-FB-021314	87.2%	87.8%	0
MB-021814	87.2%	87.4%	0
LCS-021814	95.3%	89.6%	0
LCSD-021814	93.9%	88.3%	0
MPLOTTC-MW-7-021314	93.1%	90.7%	0
MPLOTTC-MW-12-02131	88.1%	88.2%	0
Trip Blank	89.1%	88.1%	0

		LCS/MB LIMITS	QC LIMITS
(TFT) = Trifluorotoluene	(5 mL PV)	(80-120)	(80-120)
(TFT) = Trifluorotoluene	(15 mL PV)	(79-120)	(80-120)
(BBZ) = Bromobenzene	(5 mL PV)	(80-120)	(77-120)
(BBZ) = Bromobenzene	(15 mL PV)	(79-120)	(80-120)

Log Number Range: 14-2504 to 14-2507

TPHG WATER SURROGATE RECOVERY SUMMARY

ARI Job: XZ26
Matrix: Water

QC Report No: XZ26-Golder Associates
Project: Master Park Lot C
Event: 073-93368-06-09A

Client ID	TFT	BBZ	TOT OUT
MB-021714	91.8%	88.8%	0
LCS-021714	109%	96.6%	0
LCSD-021714	106%	95.6%	0
MPLOTG-FB-021314	92.3%	91.2%	0
MB-021814	94.3%	89.8%	0
LCS-021814	108%	97.5%	0
LCSD-021814	107%	94.5%	0
MPLOTG-MW-7-021314	97.1%	92.5%	0
MPLOTG-MW-12-02131	93.9%	90.2%	0
Trip Blank	95.5%	89.8%	0

LCS/MB LIMITS QC LIMITS

(TFT) = Trifluorotoluene (80-120) (80-120)
(BBZ) = Bromobenzene (80-120) (80-120)

Log Number Range: 14-2504 to 14-2507

ORGANICS ANALYSIS DATA SHEET

TPHG by Method NWTPHG

Page 1 of 1

ANALYTICAL
RESOURCES
INCORPORATED

Sample ID: LCS-021714

LAB CONTROL SAMPLE

Lab Sample ID: LCS-021714

LIMS ID: 14-2504

Matrix: Water

Data Release Authorized: *B*

Reported: 02/24/14

QC Report No: XZ26-Golder Associates

Project: Master Park Lot C

Event: 073-93368-06-09A

Date Sampled: NA

Date Received: NA

Date Analyzed LCS: 02/17/14 10:36

LCSD: 02/17/14 11:05

Instrument/Analyst LCS: PID1/PKC

LCSD: PID1/PKC

Purge Volume: 5.0 mL

Dilution Factor LCS: 1.0

LCSD: 1.0

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Gasoline Range Hydrocarbons	2.50	2.50	100%	2.50	2.50	100%	0.0%

Reported in mg/L (ppm)

RPD calculated using sample concentrations per SW846.

TPHG Surrogate Recovery

	LCS	LCSD
Trifluorotoluene	109%	106%
Bromobenzene	96.6%	95.6%

ORGANICS ANALYSIS DATA SHEET
BETX by Method SW8021BMod
Page 1 of 1



Sample ID: LCS-021714
LAB CONTROL SAMPLE

Lab Sample ID: LCS-021714
LIMS ID: 14-2504
Matrix: Water
Data Release Authorized: *[Signature]*
Reported: 02/24/14

QC Report No: XZ26-Golder Associates
Project: Master Park Lot C
Event: 073-93368-06-09A
Date Sampled: NA
Date Received: NA

Date Analyzed LCS: 02/17/14 10:36
LCSD: 02/17/14 11:05
Instrument/Analyst LCS: PID1/PKC
LCSD: PID1/PKC

Purge Volume: 5.0 mL
Dilution Factor LCS: 1.0
LCSD: 1.0

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Benzene	1.80	2.10	85.7%	1.78	2.10	84.8%	1.1%
Toluene	31.8	34.8	91.4%	32.1	34.8	92.2%	0.9%
Ethylbenzene	15.4	17.4	88.5%	15.3	17.4	87.9%	0.7%
m,p-Xylene	55.9	62.7	89.2%	56.1	62.7	89.5%	0.4%
o-Xylene	31.6	34.6	91.3%	31.9	34.6	92.2%	0.9%

Reported in µg/L (ppb)

RPD calculated using sample concentrations per SW846.

BETX Surrogate Recovery

	LCS	LCSD
Trifluorotoluene	97.6%	94.2%
Bromobenzene	91.5%	88.8%

ORGANICS ANALYSIS DATA SHEET

TPHG by Method NWTPHG

Page 1 of 1

ANALYTICAL
RESOURCES
INCORPORATED 

Sample ID: LCS-021814

LAB CONTROL SAMPLE

Lab Sample ID: LCS-021814

LIMS ID: 14-2505

Matrix: Water

Data Release Authorized: *B*

Reported: 02/24/14

QC Report No: XZ26-Golder Associates

Project: Master Park Lot C

Event: 073-93368-06-09A

Date Sampled: NA

Date Received: NA

Date Analyzed LCS: 02/18/14 11:02

Purge Volume: 5.0 mL

LCSD: 02/18/14 11:32

Instrument/Analyst LCS: PID1/PKC

Dilution Factor LCS: 1.0

LCSD: PID1/PKC

LCSD: 1.0

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Gasoline Range Hydrocarbons	2.60	2.50	104%	2.51	2.50	100%	3.5%

Reported in mg/L (ppm)

RPD calculated using sample concentrations per SW846.

TPHG Surrogate Recovery

	LCS	LCSD
Trifluorotoluene	108%	107%
Bromobenzene	97.5%	94.5%

ORGANICS ANALYSIS DATA SHEET
BETX by Method SW8021BMod
Page 1 of 1



Sample ID: LCS-021814
LAB CONTROL SAMPLE

Lab Sample ID: LCS-021814
LIMS ID: 14-2505
Matrix: Water
Data Release Authorized: *AK*
Reported: 02/24/14

QC Report No: XZ26-Golder Associates
Project: Master Park Lot C
Event: 073-93368-06-09A
Date Sampled: NA
Date Received: NA

Date Analyzed LCS: 02/18/14 11:02
LCSD: 02/18/14 11:32
Instrument/Analyst LCS: PID1/PKC
LCSD: PID1/PKC

Purge Volume: 5.0 mL
Dilution Factor LCS: 1.0
LCSD: 1.0

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Benzene	1.74	2.10	82.9%	1.72	2.10	81.9%	1.2%
Toluene	31.1	34.8	89.4%	30.4	34.8	87.4%	2.3%
Ethylbenzene	14.9	17.4	85.6%	14.8	17.4	85.1%	0.7%
m,p-Xylene	54.6	62.7	87.1%	53.6	62.7	85.5%	1.8%
o-Xylene	31.2	34.6	90.2%	30.8	34.6	89.0%	1.3%

Reported in µg/L (ppb)

RPD calculated using sample concentrations per SW846.

BETX Surrogate Recovery

	LCS	LCSD
Trifluorotoluene	95.3%	93.9%
Bromobenzene	89.6%	88.3%



Analytical Resources, Incorporated
Analytical Chemists and Consultants

April 4, 2014

Mr. Doug Morell
Golder Associates Inc.
18300 NE Union Hill Road
Suite 200
Redmond, WA 98052

Re: Project: MasterPark Lot C
ARI Job No.: YD77

Dear Doug:

Please find enclosed Chain-of-Custody record (COC), sample receipt documentation, and the final results for the project referenced above. Analytical Resources, Inc. (ARI) accepted four water samples and trip blanks on March 20, 2014. For further details regarding sample receipt, please refer to the Cooler Receipt Form.

The samples were analyzed NWTPH-Dx, NWTPH-Gx/BETX, and VOCs, as requested on the COC. Quality control analyses have been included for your review.

The VOCs method blanks contained naphthalene. All associated samples that contain analyte have been flagged with a "B" qualifier.

The VOCs CCALs were out of control high for naphthalene. All associated samples that contain analyte have been flagged with a "Q" qualifier.

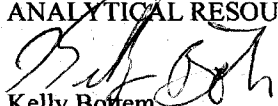
The VOCs 3/31/14 and 3/28/14 LCSs are out of control high for naphthalene. The LCSs are in control and no further corrective action was taken.

The VOCs sample PORT-MW-13-032014 was re-analyzed for possible naphthalene carry over. Data should be reported from the reanalysis.

There were no other anomalies associated with the analyses.

An electronic copy of this report and all associated raw data will remain electronically on file at ARI. Please feel free to contact me if you have any questions or require any additional information.

Respectfully,
ANALYTICAL RESOURCES, INC.


Kelly Bottem
Client Services Manager
(206) 695-6211
kellyb@arilabs.com

Analytical Resources, Incorporated
Analytical Chemists and Consultants
4611 South 134th Place, Suite 100
Tukwila, WA 98168
206-695-6200 206-695-6201 (fax)
www.arilabs.com

Page: 1	of 1
Date: 3/20/14	Ice Present? y
No. of Coolers: 1	Cooler Temps: 4, 4

ARI Assigned Number:	Y277	Turn-around Requested:	standard
ARI Client Company:	Golden Associates 425-883-0777		
Client Contact:	Douglas Morell		
Client Project Name:	Master Park Lot C		
Client Project #:	073-9336806-09A	Samplers:	Lamberts

[illegible]

Limits of Liability: ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, not withstanding any provision to the contrary in any contract, purchase order or signed agreement between ARI and the Client.

Pls analyse under existing USA b/wn Golden + ARF

Sample Retention Policy: All samples submitted to ARI will be appropriately discarded no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer, unless alternate retention schedules have been established by work-order or contract.

Sample ID Cross Reference Report



ARI Job No: YD77
Client: Golder Associates
Project Event: 073-93368-06-09A
Project Name: Master Park Lot C

Sample ID	ARI Lab ID	ARI LIMS ID	Matrix	Sample Date/Time	VTSR
1. MPLOT-MW-20-032014	YD77A	14-4989	Water	03/20/14 08:30	03/20/14 15:10
2. MPLOT-MW-22-032014	YD77B	14-4990	Water	03/20/14 11:10	03/20/14 15:10
3. MPLOT-MW-22-DUP-032014	YD77C	14-4991	Water	03/20/14 11:15	03/20/14 15:10
4. PORT-MW-13-032014	YD77D	14-4992	Water	03/20/14 13:55	03/20/14 15:10
5. Trip Blanks	YD77E	14-4993	Water	03/20/14	03/20/14 15:10



Cooler Receipt Form

ARI Client: Golder

Project Name: Master Park Lot C

COC No(s): _____ (NA)

Delivered by: Fed-Ex UPS Courier Hand Delivered Other: _____

Assigned ARI Job No: Y077

Tracking No: _____ (NA)

Preliminary Examination Phase:

Were intact, properly signed and dated custody seals attached to the outside of to cooler? _____

YES (YES) NO (NO)

Were custody papers included with the cooler? _____

YES (YES) NO (NO)

Were custody papers properly filled out (ink, signed, etc.) _____

YES (YES) NO (NO)

Temperature of Cooler(s) (°C) (recommended 2.0-6.0 °C for chemistry)

Time: _____

4.4

If cooler temperature is out of compliance fill out form 00070F

Temp Gun ID#: 90877952

Cooler Accepted by: JM

Date: 3/20/14

Time: 1510

Complete custody forms and attach all shipping documents

Log-In Phase:

Was a temperature blank included in the cooler? _____

YES _____ NO (NO)

What kind of packing material was used? ... Bubble Wrap Wet Ice Gel Packs Baggies Foam Block Paper Other: _____

Was sufficient ice used (if appropriate)? _____

NA (YES) NO (NO)

Were all bottles sealed in individual plastic bags? _____

YES (YES) NO (NO)

Did all bottles arrive in good condition (unbroken)? _____

YES (YES) NO (NO)

Were all bottle labels complete and legible? _____

YES (YES) NO (NO)

Did the number of containers listed on COC match with the number of containers received? _____

YES (YES) NO (NO)

Did all bottle labels and tags agree with custody papers? _____

YES (YES) NO (NO)

Were all bottles used correct for the requested analyses? _____

YES (YES) NO (NO)

Do any of the analyses (bottles) require preservation? (attach preservation sheet, excluding VOCs)...

NA (YES) NO (NO)

Were all VOC vials free of air bubbles? _____

NA (YES) NO (NO)

Was sufficient amount of sample sent in each bottle? _____

YES (YES) NO (NO)

Date VOC Trip Blank was made at ARI: _____

NA (YES) NO (NO)

Was Sample Split by ARI: (NA) YES _____ Date/Time: _____ Equipment: _____ Split by: _____

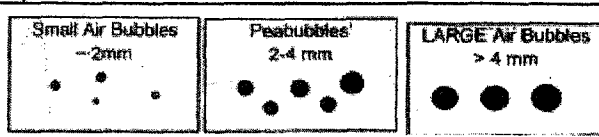
Samples Logged by: TS Date: 3-22-14 Time: 1655

**** Notify Project Manager of discrepancies or concerns ****

Sample ID on Bottle	Sample ID on COC	Sample ID on Bottle	Sample ID on COC

Additional Notes, Discrepancies, & Resolutions:

By: _____ Date: _____



Small → "sm" (< 2 mm)
Peabubbles → "pb" (2 to < 4 mm)
Large → "lg" (4 to < 6 mm)
Headspace → "hs" (> 6 mm)

ORGANICS ANALYSIS DATA SHEET

Volatiles by Purge & Trap GC/MS-Method SW8260C
Page 1 of 1Sample ID: MPLOT-C-MW-20-032014
SAMPLE

Lab Sample ID: YD77A

LIMS ID: 14-4989

Matrix: Water

Data Release Authorized: *YMW*

Reported: 04/03/14

QC Report No: YD77-Golder Associates

Project: Master Park Lot C

073-93368-06-09A

Date Sampled: 03/20/14

Date Received: 03/20/14

Instrument/Analyst: NT3/LH

Date Analyzed: 03/27/14 13:39

Sample Amount: 10.0 mL

Purge Volume: 10.0 mL

CAS Number	Analyte	DL	LOQ	Result
106-93-4	1,2-Dibromoethane	0.07	0.20	< 0.20 U
91-20-3	Naphthalene	0.12	0.50	< 0.50 U
110-54-3	Hexane	0.10	0.20	< 0.20 U

Reported in µg/L (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	103%
d8-Toluene	95.7%
Bromofluorobenzene	92.3%
d4-1,2-Dichlorobenzene	103%

ORGANICS ANALYSIS DATA SHEET

Volatiles by Purge & Trap GC/MS-Method SW8260C

Sample ID: MPLOT-MW-22-032014

Page 1 of 1

SAMPLE

Lab Sample ID: YD77B

QC Report No: YD77-Golder Associates

LIMS ID: 14-4990

Project: Master Park Lot C

Matrix: Water

073-93368-06-09A

Data Release Authorized: *WV*

Date Sampled: 03/20/14

Reported: 04/03/14

Date Received: 03/20/14

Instrument/Analyst: NT3/LH

Sample Amount: 10.0 mL

Date Analyzed: 03/27/14 14:08

Purge Volume: 10.0 mL

CAS Number	Analyte	DL	LOQ	Result
106-93-4	1,2-Dibromoethane	0.07	0.20	< 0.20 U
91-20-3	Naphthalene	0.12	0.50	92 QE
110-54-3	Hexane	0.10	0.20	7.8

Reported in µg/L (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	119%
d8-Toluene	100%
Bromofluorobenzene	99.6%
d4-1,2-Dichlorobenzene	98.9%

ORGANICS ANALYSIS DATA SHEET

Volatiles by Purge & Trap GC/MS-Method SW8260C
Page 1 of 1Sample ID: MPlotC-MW-22-032014
DILUTION

Lab Sample ID: YD77B

LIMS ID: 14-4990

Matrix: Water

Data Release Authorized: *MW*

Reported: 04/03/14

QC Report No: YD77-Golder Associates

Project: Master Park Lot C

073-93368-06-09A

Date Sampled: 03/20/14

Date Received: 03/20/14

Instrument/Analyst: NT3/LH

Date Analyzed: 03/28/14 18:29

Sample Amount: 0.50 mL

Purge Volume: 10.0 mL

CAS Number	Analyte	DL	LOQ	Result
106-93-4	1,2-Dibromoethane	1.5	4.0	< 4.0 U
91-20-3	Naphthalene	2.4	10	400 QB
110-54-3	Hexane	1.9	4.0	NA

Reported in µg/L (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	106%
d8-Toluene	96.3%
Bromofluorobenzene	93.0%
d4-1,2-Dichlorobenzene	102%

ORGANICS ANALYSIS DATA SHEET

Volatiles by Purge & Trap GC/MS-Method SW8260C
Page 1 of 1Sample ID: MPLOTG-MW-22-DUP-032014
SAMPLE

Lab Sample ID: YD77C

LIMS ID: 14-4991

Matrix: Water

Data Release Authorized: *MW*

Reported: 04/03/14

QC Report No: YD77-Golder Associates

Project: Master Park Lot C

073-93368-06-09A

Date Sampled: 03/20/14

Date Received: 03/20/14

Instrument/Analyst: NT3/LH

Date Analyzed: 03/27/14 14:37

Sample Amount: 10.0 mL

Purge Volume: 10.0 mL

CAS Number	Analyte	DL	LOQ	Result
106-93-4	1,2-Dibromoethane	0.07	0.20	< 0.20 U
91-20-3	Naphthalene	0.12	0.50	98 QE
110-54-3	Hexane	0.10	0.20	7.6

Reported in µg/L (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	119%
d8-Toluene	98.2%
Bromofluorobenzene	95.9%
d4-1,2-Dichlorobenzene	98.5%

ORGANICS ANALYSIS DATA SHEET

Volatiles by Purge & Trap GC/MS-Method SW8260C

Sample ID: MPlotC-MW-22-DUP-032014

Page 1 of 1

DILUTION

Lab Sample ID: YD77C

QC Report No: YD77-Golder Associates

LIMS ID: 14-4991

Project: Master Park Lot C

Matrix: Water

073-93368-06-09A

Data Release Authorized: *MM*

Date Sampled: 03/20/14

Reported: 04/03/14

Date Received: 03/20/14

Instrument/Analyst: NT3/LH

Sample Amount: 0.50 mL

Date Analyzed: 03/31/14 21:24

Purge Volume: 10.0 mL

CAS Number	Analyte	DL	LOQ	Result
106-93-4	1,2-Dibromoethane	1.5	4.0	< 4.0 U
91-20-3	Naphthalene	2.4	10	400 QB
110-54-3	Hexane	1.9	4.0	NA

Reported in µg/L (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	104%
d8-Toluene	96.0%
Bromofluorobenzene	93.9%
d4-1,2-Dichlorobenzene	102%

ORGANICS ANALYSIS DATA SHEET

Volatiles by Purge & Trap GC/MS-Method SW8260C

Sample ID: PORT-MW-13-032014

Page 1 of 1

SAMPLE

Lab Sample ID: YD77D

QC Report No: YD77-Golder Associates

LIMS ID: 14-4992

Project: Master Park Lot C

Matrix: Water

073-93368-06-09A

Data Release Authorized: *MW*

Date Sampled: 03/20/14

Reported: 04/03/14

Date Received: 03/20/14

Instrument/Analyst: NT3/LH

Sample Amount: 10.0 mL

Date Analyzed: 03/27/14 15:06

Purge Volume: 10.0 mL

CAS Number	Analyte	DL	LOQ	Result
106-93-4	1,2-Dibromoethane	0.07	0.20	< 0.20 U
91-20-3	Naphthalene	0.12	0.50	6.2 QB
110-54-3	Hexane	0.10	0.20	< 0.20 U

Reported in µg/L (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	104%
d8-Toluene	98.1%
Bromofluorobenzene	92.1%
d4-1,2-Dichlorobenzene	99.9%

ORGANICS ANALYSIS DATA SHEET

Volatiles by Purge & Trap GC/MS-Method SW8260C

Sample ID: PORT-MW-13-032014

Page 1 of 1

REANALYSIS

Lab Sample ID: YD77D

QC Report No: YD77-Golder Associates

LIMS ID: 14-4992

Project: Master Park Lot C

Matrix: Water

073-93368-06-09A

Data Release Authorized: *WW*

Date Sampled: 03/20/14

Reported: 04/03/14

Date Received: 03/20/14

Instrument/Analyst: NT3/LH

Sample Amount: 10.0 mL

Date Analyzed: 03/31/14 20:53

Purge Volume: 10.0 mL

CAS Number	Analyte	DL	LOQ	Result
106-93-4	1,2-Dibromoethane	0.07	0.20	< 0.20 U
91-20-3	Naphthalene	0.12	0.50	< 0.50 U
110-54-3	Hexane	0.10	0.20	NA

Reported in µg/L (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	104%
d8-Toluene	95.6%
Bromofluorobenzene	91.0%
d4-1,2-Dichlorobenzene	99.9%

ORGANICS ANALYSIS DATA SHEET

Volatiles by Purge & Trap GC/MS-Method SW8260C
Page 1 of 1Sample ID: Trip Blanks
SAMPLE

Lab Sample ID: YD77E

LIMS ID: 14-4993

Matrix: Water

Data Release Authorized: *MW*

Reported: 04/03/14

QC Report No: YD77-Golder Associates

Project: Master Park Lot C

073-93368-06-09A

Date Sampled: 03/20/14

Date Received: 03/20/14

Instrument/Analyst: NT3/LH

Date Analyzed: 03/27/14 13:10

Sample Amount: 10.0 mL

Purge Volume: 10.0 mL

CAS Number	Analyte	DL	LOQ	Result
106-93-4	1,2-Dibromoethane	0.07	0.20	< 0.20 U
91-20-3	Naphthalene	0.12	0.50	< 0.50 U
110-54-3	Hexane	0.10	0.20	< 0.20 U

Reported in µg/L (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	105%
d8-Toluene	94.9%
Bromofluorobenzene	89.6%
d4-1,2-Dichlorobenzene	99.1%

ORGANICS ANALYSIS DATA SHEET

Volatiles by Purge & Trap GC/MS-Method SW8260C

Sample ID: MB-032714A

Page 1 of 1

METHOD BLANK

Lab Sample ID: MB-032714A

QC Report No: YD77-Golder Associates

LIMS ID: 14-4989

Project: Master Park Lot C

Matrix: Water

073-93368-06-09A

Data Release Authorized: *MW*

Date Sampled: NA

Reported: 04/03/14

Date Received: NA

Instrument/Analyst: NT3/LH

Sample Amount: 10.0 mL

Date Analyzed: 03/27/14 12:41

Purge Volume: 10.0 mL

CAS Number	Analyte	DL	LOQ	Result
106-93-4	1,2-Dibromoethane	0.07	0.20	< 0.20 U
91-20-3	Naphthalene	0.12	0.50	0.32 J
110-54-3	Hexane	0.10	0.20	< 0.20 U

Reported in µg/L (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	106%
d8-Toluene	94.1%
Bromofluorobenzene	91.8%
d4-1,2-Dichlorobenzene	98.8%

ORGANICS ANALYSIS DATA SHEET

Volatiles by Purge & Trap GC/MS-Method SW8260C

Sample ID: MB-032814A

Page 1 of 1

METHOD BLANK

Lab Sample ID: MB-032814A

QC Report No: YD77-Golder Associates

LIMS ID: 14-4990

Project: Master Park Lot C

Matrix: Water

073-93368-06-09A

Data Release Authorized: *MW*

Date Sampled: NA

Reported: 04/03/14

Date Received: NA

Instrument/Analyst: NT3/LH

Sample Amount: 10.0 mL

Date Analyzed: 03/28/14 10:40

Purge Volume: 10.0 mL

CAS Number	Analyte	DL	LOQ	Result
106-93-4	1,2-Dibromoethane	0.07	0.20	< 0.20 U
91-20-3	Naphthalene	0.12	0.50	0.35 J
110-54-3	Hexane	0.10	0.20	NA

Reported in µg/L (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	104%
d8-Toluene	97.0%
Bromofluorobenzene	92.2%
d4-1,2-Dichlorobenzene	101%

ORGANICS ANALYSIS DATA SHEET

Volatiles by Purge & Trap GC/MS-Method SW8260C
Page 1 of 1Sample ID: MB-033114A
METHOD BLANK

Lab Sample ID: MB-033114A

LIMS ID: 14-4992

Matrix: Water

Data Release Authorized: *mw*

Reported: 04/03/14

QC Report No: YD77-Golder Associates

Project: Master Park Lot C

073-93368-06-09A

Date Sampled: NA

Date Received: NA

Instrument/Analyst: NT3/LH

Date Analyzed: 03/31/14 12:00

Sample Amount: 10.0 mL

Purge Volume: 10.0 mL

CAS Number	Analyte	DL	LOQ	Result
106-93-4	1,2-Dibromoethane	0.07	0.20	< 0.20 U
91-20-3	Naphthalene	0.12	0.50	0.38 J
110-54-3	Hexane	0.10	0.20	NA

Reported in µg/L (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	103%
d8-Toluene	94.6%
Bromofluorobenzene	92.6%
d4-1,2-Dichlorobenzene	101%

VOA SURROGATE RECOVERY SUMMARY

Matrix: Water

QC Report No: YD77-Golder Associates
Project: Master Park Lot C
073-93368-06-09A

ARI ID	Client ID	PV	DCE	TOL	BFB	DCB	TOT OUT
MB-032714A	Method Blank	10	106%	94.1%	91.8%	98.8%	0
LCS-032714A	Lab Control	10	104%	97.5%	94.1%	97.0%	0
LCSD-032714A	Lab Control Dup	10	103%	96.8%	94.3%	102%	0
YD77A	MPLOT-MW-20-032014	10	103%	95.7%	92.3%	103%	0
MB-032814A	Method Blank	10	104%	97.0%	92.2%	101%	0
LCS-032814A	Lab Control	10	103%	98.3%	92.9%	99.6%	0
LCSD-032814A	Lab Control Dup	10	103%	97.7%	94.2%	101%	0
YD77B	MPLOT-MW-22-032014	10	119%	100%	99.6%	98.9%	0
YD77BDL	MPLOT-MW-22-032014	10	106%	96.3%	93.0%	102%	0
YD77C	MPLOT-MW-22-DUP-032014	10	119%	98.2%	95.9%	98.5%	0
YD77CDL	MPLOT-MW-22-DUP-032014	10	104%	96.0%	93.9%	102%	0
MB-033114A	Method Blank	10	103%	94.6%	92.6%	101%	0
LCS-033114A	Lab Control	10	103%	97.2%	90.6%	99.8%	0
LCSD-033114A	Lab Control Dup	10	103%	94.6%	92.5%	101%	0
YD77D	PORT-MW-13-032014	10	104%	98.1%	92.1%	99.9%	0
YD77DRE	PORT-MW-13-032014	10	104%	95.6%	91.0%	99.9%	0
YD77E	Trip Blanks	10	105%	94.9%	89.6%	99.1%	0

LCS/MB LIMITS

QC LIMITS

SW8260C

(DCE) = d4-1,2-Dichloroethane
(TOL) = d8-Toluene
(BFB) = Bromofluorobenzene
(DCB) = d4-1,2-Dichlorobenzene(80-120)
(80-120)
(80-120)
(80-120)(80-130)
(80-120)
(80-120)
(80-120)Prep Method: SW5030B
Log Number Range: 14-4989 to 14-4993

YD77: 00016

ORGANICS ANALYSIS DATA SHEET

Volatiles by Purge & Trap GC/MS-Method SW8260C

Sample ID: LCS-032714A

Page 1 of 1

LAB CONTROL SAMPLE

Lab Sample ID: LCS-032714A

QC Report No: YD77-Golder Associates

LIMS ID: 14-4989

Project: Master Park Lot C

Matrix: Water

073-93368-06-09A

Data Release Authorized: *WW*

Date Sampled: NA

Reported: 04/03/14

Date Received: NA

Instrument/Analyst LCS: NT3/LH

Sample Amount LCS: 10.0 mL

LCSD: NT3/LH

LCSD: 10.0 mL

Date Analyzed LCS: 03/27/14 11:43

Purge Volume LCS: 10.0 mL

LCSD: 03/27/14 12:12

LCSD: 10.0 mL

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
1,2-Dibromoethane	10.1	10.0	101%	9.81	10.0	98.1%	2.9%
Naphthalene	12.6 QB	10.0	126%	12.6 QB	10.0	126%	0.0%
Hexane	7.75	10.0	77.5%	7.86	10.0	78.6%	1.4%

Reported in µg/L (ppb)

RPD calculated using sample concentrations per SW846.

Volatile Surrogate Recovery

	LCS	LCSD
d4-1,2-Dichloroethane	104%	103%
d8-Toluene	97.5%	96.8%
Bromofluorobenzene	94.1%	94.3%
d4-1,2-Dichlorobenzene	97.0%	102%

ORGANICS ANALYSIS DATA SHEET

Volatiles by Purge & Trap GC/MS-Method SW8260C

Sample ID: LCS-032814A

Page 1 of 1

LAB CONTROL SAMPLE

Lab Sample ID: LCS-032814A

QC Report No: YD77-Golder Associates

LIMS ID: 14-4990

Project: Master Park Lot C

Matrix: Water

073-93368-06-09A

Data Release Authorized: *WV*

Date Sampled: NA

Reported: 04/03/14

Date Received: NA

Instrument/Analyst LCS: NT3/LH

Sample Amount LCS: 10.0 mL

LCSD: NT3/LH

LCSD: 10.0 mL

Date Analyzed LCS: 03/28/14 09:42

Purge Volume LCS: 10.0 mL

LCSD: 03/28/14 10:11

LCSD: 10.0 mL

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
1,2-Dibromoethane	9.73	10.0	97.3%	10.2	10.0	102%	4.7%
Naphthalene	12.4 QB	10.0	124%	13.2 QB	10.0	132%	6.2%

Reported in µg/L (ppb)

RPD calculated using sample concentrations per SW846.

Volatile Surrogate Recovery

	LCS	LCSD
d4-1,2-Dichloroethane	103%	103%
d8-Toluene	98.3%	97.7%
Bromofluorobenzene	92.9%	94.2%
d4-1,2-Dichlorobenzene	99.6%	101%

ORGANICS ANALYSIS DATA SHEET

Volatiles by Purge & Trap GC/MS-Method SW8260C

Sample ID: LCS-033114A

Page 1 of 1

LAB CONTROL SAMPLE

Lab Sample ID: LCS-033114A

QC Report No: YD77-Golder Associates

LIMS ID: 14-4992

Project: Master Park Lot C

Matrix: Water

073-93368-06-09A

Data Release Authorized: *WW*

Date Sampled: NA

Reported: 04/03/14

Date Received: NA

Instrument/Analyst LCS: NT3/LH

Sample Amount LCS: 10.0 mL

LCSD: NT3/LH

LCSD: 10.0 mL

Date Analyzed LCS: 03/31/14 11:02

Purge Volume LCS: 10.0 mL

LCSD: 03/31/14 11:31

LCSD: 10.0 mL

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
1,2-Dibromoethane	9.80	10.0	98.0%	10.3	10.0	103%	5.0%
Naphthalene	12.8 QB	10.0	128%	13.6 QB	10.0	136%	6.1%

Reported in µg/L (ppb)

RPD calculated using sample concentrations per SW846.

Volatile Surrogate Recovery

	LCS	LCSD
d4-1,2-Dichloroethane	103%	103%
d8-Toluene	97.2%	94.6%
Bromofluorobenzene	90.6%	92.5%
d4-1,2-Dichlorobenzene	99.8%	101%

ORGANICS ANALYSIS DATA SHEET

BETX by Method SW8021BMod

TPHG by Method NWTPHG

Page 1 of 1

Sample ID: MPLOTG-MW-20-032014

SAMPLE

Lab Sample ID: YD77A

LIMS ID: 14-4989

Matrix: Water

Data Release Authorized: 

Reported: 04/02/14

QC Report No: YD77-Golder Associates

Project: Master Park Lot C

Event: 073-93368-06-09A

Date Sampled: 03/20/14

Date Received: 03/20/14

Date Analyzed: 04/01/14 00:47

Instrument/Analyst: PID1/LH

Purge Volume: 5.0 mL

Dilution Factor: 1.00

CAS Number	Analyte	DL	LOQ	Result
71-43-2	Benzene	0.028	0.25	< 0.25 U
108-88-3	Toluene	0.014	0.25	< 0.25 U
100-41-4	Ethylbenzene	0.028	0.25	< 0.25 U
179601-23-1	m,p-Xylene	0.022	0.50	< 0.50 U
95-47-6	o-Xylene	0.027	0.25	< 0.25 U

Gasoline Range Hydrocarbons	0.057	0.10	< 0.10 U
-----------------------------	-------	------	----------

GAS ID
---**BETX Surrogate Recovery**

Trifluorotoluene	105%
Bromobenzene	101%

Gasoline Surrogate Recovery

Trifluorotoluene	108%
Bromobenzene	103%

BETX values reported in µg/L (ppb)

Gasoline values reported in mg/L (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.

GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

ORGANICS ANALYSIS DATA SHEET
BETX by Method SW8021BMod
TPHG by Method NWTPHG
Page 1 of 1



Sample ID: MPLOTG-MW-22-032014
SAMPLE

Lab Sample ID: YD77B

LIMS ID: 14-4990

Matrix: Water

Data Release Authorized: 

Reported: 04/02/14

QC Report No: YD77-Golder Associates

Project: Master Park Lot C

Event: 073-93368-06-09A

Date Sampled: 03/20/14

Date Received: 03/20/14

Date Analyzed: 04/01/14 01:17

Instrument/Analyst: PID1/LH

Purge Volume: 5.0 mL

Dilution Factor: 1.00

CAS Number	Analyte	DL	LOQ	Result
71-43-2	Benzene	0.028	0.25	4.7
108-88-3	Toluene	0.014	0.25	9.8
100-41-4	Ethylbenzene	0.028	0.25	710 E
179601-23-1	m,p-Xylene	0.022	0.50	1,100 E
95-47-6	o-Xylene	0.027	0.25	2.6

Gasoline Range Hydrocarbons

0.057

0.10

12 E

GAS ID

GAS

BETX Surrogate Recovery

Trifluorotoluene	105%
Bromobenzene	113%

Gasoline Surrogate Recovery

Trifluorotoluene	109%
Bromobenzene	106%

BETX values reported in µg/L (ppb)
Gasoline values reported in mg/L (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.

GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

ORGANICS ANALYSIS DATA SHEET
BETX by Method SW8021BMod
TPHG by Method NWTPHG
Page 1 of 1



Sample ID: MPlotC-MW-22-032014
DILUTION

Lab Sample ID: YD77B
LIMS ID: 14-4990
Matrix: Water
Data Release Authorized: *[Signature]*
Reported: 04/02/14

QC Report No: YD77-Golder Associates
Project: Master Park Lot C
Event: 073-93368-06-09A
Date Sampled: 03/20/14
Date Received: 03/20/14

Date Analyzed: 04/01/14 11:58
Instrument/Analyst: PID1/LH

Purge Volume: 5.0 mL
Dilution Factor: 10.0

CAS Number	Analyte	DL	LOQ	Result
71-43-2	Benzene	0.28	2.5	5.7
108-88-3	Toluene	0.14	2.5	12
100-41-4	Ethylbenzene	0.28	2.5	990
179601-23-1	m,p-Xylene	0.22	5.0	1,500
95-47-6	o-Xylene	0.27	2.5	2.8

Gasoline Range Hydrocarbons	0.057	1.0	17	GAS ID GAS
-----------------------------	-------	-----	----	---------------

BETX Surrogate Recovery

Trifluorotoluene	110%
Bromobenzene	105%

Gasoline Surrogate Recovery

Trifluorotoluene	112%
Bromobenzene	105%

BETX values reported in µg/L (ppb)
Gasoline values reported in mg/L (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.

GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

ORGANICS ANALYSIS DATA SHEET
BETX by Method SW8021BMod
TPHG by Method NWTPHG
Page 1 of 1



Sample ID: MPLOTG-MW-22-DUP-032014
SAMPLE

Lab Sample ID: YD77C

LIMS ID: 14-4991

Matrix: Water

Data Release Authorized:

Reported: 04/02/14

QC Report No: YD77-Golder Associates

Project: Master Park Lot C

Event: 073-93368-06-09A

Date Sampled: 03/20/14

Date Received: 03/20/14

Date Analyzed: 04/01/14 12:27

Instrument/Analyst: PID1/LH

Purge Volume: 5.0 mL

Dilution Factor: 10.0

CAS Number	Analyte	DL	LOQ	Result
71-43-2	Benzene	0.28	2.5	4.7
108-88-3	Toluene	0.14	2.5	9.4
100-41-4	Ethylbenzene	0.28	2.5	720
179601-23-1	m,p-Xylene	0.22	5.0	1,100
95-47-6	o-Xylene	0.27	2.5	< 2.5 U

Gasoline Range Hydrocarbons

0.57

1.0

14

GAS ID
GAS

BETX Surrogate Recovery

Trifluorotoluene	110%
Bromobenzene	106%

Gasoline Surrogate Recovery

Trifluorotoluene	112%
Bromobenzene	106%

BETX values reported in µg/L (ppb)
Gasoline values reported in mg/L (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.

GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

ORGANICS ANALYSIS DATA SHEET
BETX by Method SW8021BMod
TPHG by Method NWTPHG
Page 1 of 1



Sample ID: PORT-MW-13-032014
SAMPLE

Lab Sample ID: YD77D

LIMS ID: 14-4992

Matrix: Water

Data Release Authorized: *[Signature]*

Reported: 04/02/14

QC Report No: YD77-Golder Associates

Project: Master Park Lot C

Event: 073-93368-06-09A

Date Sampled: 03/20/14

Date Received: 03/20/14

Date Analyzed: 04/01/14 12:57

Instrument/Analyst: PID1/LH

Purge Volume: 5.0 mL

Dilution Factor: 1.00

CAS Number	Analyte	DL	LOQ	Result
71-43-2	Benzene	0.028	0.25	< 0.25 U
108-88-3	Toluene	0.014	0.25	< 0.25 U
100-41-4	Ethylbenzene	0.028	0.25	< 0.25 U
179601-23-1	m,p-Xylene	0.022	0.50	< 0.50 U
95-47-6	o-Xylene	0.027	0.25	< 0.25 U

Gasoline Range Hydrocarbons	0.057	0.10	< 0.10 U	GAS ID ---
-----------------------------	-------	------	----------	---------------

BETX Surrogate Recovery

Trifluorotoluene	110%
Bromobenzene	102%

Gasoline Surrogate Recovery

Trifluorotoluene	112%
Bromobenzene	102%

BETX values reported in µg/L (ppb)
Gasoline values reported in mg/L (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.

GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

ORGANICS ANALYSIS DATA SHEET
BETX by Method SW8021BMod
TPHG by Method NWTPHG
Page 1 of 1

Sample ID: Trip Blanks
SAMPLE

Lab Sample ID: YD77E

LIMS ID: 14-4993

Matrix: Water

Data Release Authorized: *B*

Reported: 04/02/14

QC Report No: YD77-Golder Associates

Project: Master Park Lot C

Event: 073-93368-06-09A

Date Sampled: 03/20/14

Date Received: 03/20/14

Date Analyzed: 04/01/14 13:26

Instrument/Analyst: PID1/LH

Purge Volume: 5.0 mL

Dilution Factor: 1.00

CAS Number	Analyte	DL	LOQ	Result
71-43-2	Benzene	0.028	0.25	< 0.25 U
108-88-3	Toluene	0.014	0.25	< 0.25 U
100-41-4	Ethylbenzene	0.028	0.25	< 0.25 U
179601-23-1	m,p-Xylene	0.022	0.50	< 0.50 U
95-47-6	o-Xylene	0.027	0.25	< 0.25 U

Gasoline Range Hydrocarbons 0.057 0.10 < 0.10 U

GAS ID

BETX Surrogate Recovery

Trifluorotoluene	108%
Bromobenzene	101%

Gasoline Surrogate Recovery

Trifluorotoluene	111%
Bromobenzene	102%

BETX values reported in µg/L (ppb)
Gasoline values reported in mg/L (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.

GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

ORGANICS ANALYSIS DATA SHEET

BETX by Method SW8021BMod

TPHG by Method NWTPHG

Page 1 of 1

Sample ID: MB-033114

METHOD BLANK

Lab Sample ID: MB-033114

LIMS ID: 14-4989

Matrix: Water

Data Release Authorized:

Reported: 04/02/14

QC Report No: YD77-Golder Associates

Project: Master Park Lot C

Event: 073-93368-06-09A

Date Sampled: NA

Date Received: NA

Date Analyzed: 03/31/14 11:37

Instrument/Analyst: PID1/LH

Purge Volume: 5.0 mL

Dilution Factor: 1.00

CAS Number	Analyte	DL	LOQ	Result
71-43-2	Benzene	0.028	0.25	< 0.25 U
108-88-3	Toluene	0.014	0.25	< 0.25 U
100-41-4	Ethylbenzene	0.028	0.25	< 0.25 U
179601-23-1	m,p-Xylene	0.022	0.50	< 0.50 U
95-47-6	o-Xylene	0.027	0.25	< 0.25 U

Gasoline Range Hydrocarbons 0.057 0.10 < 0.10 U

GAS ID

BETX Surrogate Recovery

Trifluorotoluene	95.3%
Bromobenzene	97.9%

Gasoline Surrogate Recovery

Trifluorotoluene	97.9%
Bromobenzene	101%

BETX values reported in µg/L (ppb)
Gasoline values reported in mg/L (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.

GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

ORGANICS ANALYSIS DATA SHEET
BETX by Method SW8021BMod
TPHG by Method NWTPHG
Page 1 of 1

Sample ID: MB-040114
METHOD BLANK

Lab Sample ID: MB-040114
LIMS ID: 14-4991
Matrix: Water
Data Release Authorized:
Reported: 04/02/14

QC Report No: YD77-Golder Associates
Project: Master Park Lot C
Event: 073-93368-06-09A
Date Sampled: NA
Date Received: NA

Date Analyzed: 04/01/14 11:28
Instrument/Analyst: PID1/LH

Purge Volume: 5.0 mL
Dilution Factor: 1.00

CAS Number	Analyte	DL	LOQ	Result
71-43-2	Benzene	0.028	0.25	< 0.25 U
108-88-3	Toluene	0.014	0.25	< 0.25 U
100-41-4	Ethylbenzene	0.028	0.25	< 0.25 U
179601-23-1	m,p-Xylene	0.022	0.50	< 0.50 U
95-47-6	o-Xylene	0.027	0.25	< 0.25 U

Gasoline Range Hydrocarbons 0.57 0.10 < 0.10 U

GAS ID

BETX Surrogate Recovery

Trifluorotoluene	108%
Bromobenzene	103%

Gasoline Surrogate Recovery

Trifluorotoluene	110%
Bromobenzene	105%

BETX values reported in µg/L (ppb)
Gasoline values reported in mg/L (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.

GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

BETX WATER SURROGATE RECOVERY SUMMARY

ARI Job: YD77
Matrix: Water

QC Report No: YD77-Golder Associates
Project: Master Park Lot C
Event: 073-93368-06-09A

Client ID	TFT	BBZ	TOT OUT
MB-033114	95.3%	97.9%	0
LCS-033114	100%	99.5%	0
LCSD-033114	98.1%	99.5%	0
MPLOT-MW-20-03201	105%	101%	0
MPLOT-MW-22-03201	105%	113%	0
MPLOT-MW-22-03201 DL	110%	105%	0
MB-040114	108%	103%	0
LCS-040114	107%	102%	0
LCSD-040114	108%	104%	0
MPLOT-MW-22-DUP-0	110%	106%	0
PORT-MW-13-032014	110%	102%	0
Trip Blanks	108%	101%	0

		LCS/MB LIMITS	QC LIMITS
(TFT) = Trifluorotoluene	(5 mL PV)	(80-120)	(80-120)
(TFT) = Trifluorotoluene	(15 mL PV)	(79-120)	(80-120)
(BBZ) = Bromobenzene	(5 mL PV)	(80-120)	(77-120)
(BBZ) = Bromobenzene	(15 mL PV)	(79-120)	(80-120)

Log Number Range: 14-4989 to 14-4993

TPHG WATER SURROGATE RECOVERY SUMMARY

ARI Job: YD77
Matrix: Water

QC Report No: YD77-Golder Associates
Project: Master Park Lot C
Event: 073-93368-06-09A

Client ID	TFT	BBZ	TOT OUT
MB-033114	97.9%	101%	0
LCS-033114	102%	106%	0
LCSD-033114	100%	103%	0
MPLOT-MW-20-03201	108%	103%	0
MPLOT-MW-22-03201	109%	106%	0
MPLOT-MW-22-03201 DL	112%	105%	0
MB-040114	110%	105%	0
LCS-040114	110%	105%	0
LCSD-040114	111%	105%	0
MPLOT-MW-22-DUP-0	112%	106%	0
PORT-MW-13-032014	112%	102%	0
Trip Blanks	111%	102%	0

	LCS/MB LIMITS	QC LIMITS
(TFT) = Trifluorotoluene	(80-120)	(80-120)
(BBZ) = Bromobenzene	(80-120)	(80-120)

Log Number Range: 14-4989 to 14-4993

ORGANICS ANALYSIS DATA SHEET

TPHG by Method NWTPHG

Page 1 of 1

Sample ID: LCS-033114

LAB CONTROL SAMPLE

Lab Sample ID: LCS-033114

LIMS ID: 14-4989

Matrix: Water

Data Release Authorized: *[Signature]*

Reported: 04/02/14

QC Report No: YD77-Golder Associates

Project: Master Park Lot C

Event: 073-93368-06-09A

Date Sampled: NA

Date Received: NA

Date Analyzed LCS: 03/31/14 10:39

Purge Volume: 5.0 mL

LCSD: 03/31/14 11:08

Instrument/Analyst LCS: PID1/LH

Dilution Factor LCS: 1.0

LCSD: PID1/LH

LCSD: 1.0

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Gasoline Range Hydrocarbons	1.04	1.00	104%	1.04	1.00	104%	0.0%

Reported in mg/L (ppm)

RPD calculated using sample concentrations per SW846.

TPHG Surrogate Recovery

	LCS	LCSD
Trifluorotoluene	102%	100%
Bromobenzene	106%	103%

ORGANICS ANALYSIS DATA SHEET

BETX by Method SW8021BMod

Page 1 of 1

Sample ID: LCS-033114

LAB CONTROL SAMPLE

Lab Sample ID: LCS-033114

LIMS ID: 14-4989

Matrix: Water

Data Release Authorized:

Reported: 04/02/14

QC Report No: YD77-Golder Associates

Project: Master Park Lot C

Event: 073-93368-06-09A

Date Sampled: NA

Date Received: NA

Date Analyzed LCS: 03/31/14 10:39

LCSD: 03/31/14 11:08

Instrument/Analyst LCS: PID1/LH

LCSD: PID1/LH

Purge Volume: 5.0 mL

Dilution Factor LCS: 1.0

LCSD: 1.0

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Benzene	7.60	7.00	109%	7.73	7.00	110%	1.7%
Toluene	56.0	49.4	113%	56.5	49.4	114%	0.9%
Ethylbenzene	13.5	12.3	110%	13.5	12.3	110%	0.0%
m,p-Xylene	43.3	40.0	108%	43.9	40.0	110%	1.4%
o-Xylene	16.8	15.3	110%	17.0	15.3	111%	1.2%

Reported in µg/L (ppb)

RPD calculated using sample concentrations per SW846.

BETX Surrogate Recovery

	LCS	LCSD
Trifluorotoluene	100%	98.1%
Bromobenzene	99.5%	99.5%

ORGANICS ANALYSIS DATA SHEET

TPHG by Method NWTPHG

Page 1 of 1



Sample ID: LCS-040114

LAB CONTROL SAMPLE

Lab Sample ID: LCS-040114

LIMS ID: 1474991

Matrix: Water

Data Release Authorized: *[Signature]*

Reported: 04/02/14

QC Report No: YD77-Golder Associates

Project: Master Park Lot C

Event: 073-93368-06-09A

Date Sampled: NA

Date Received: NA

Date Analyzed LCS: 04/01/14 10:30

Purge Volume: 5.0 mL

LCSD: 04/01/14 10:59

Instrument/Analyst LCS: PID1/LH

Dilution Factor LCS: 1.0

LCSD: PID1/LH

LCSD: 1.0

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Gasoline Range Hydrocarbons	1.02	1.00	102%	0.96	1.00	96.0%	6.1%

Reported in mg/L (ppm)

RPD calculated using sample concentrations per SW846.

TPHG Surrogate Recovery

	LCS	LCSD
Trifluorotoluene	110%	111%
Bromobenzene	105%	105%

ORGANICS ANALYSIS DATA SHEET

BETX by Method SW8021BMod

Page 1 of 1

Sample ID: LCS-040114

LAB CONTROL SAMPLE

Lab Sample ID: LCS-040114

LIMS ID: 14-4991

Matrix: Water

Data Release Authorized: *[Signature]*

Reported: 04/02/14

QC Report No: YD77-Golder Associates

Project: Master Park Lot C

Event: 073-93368-06-09A

Date Sampled: NA

Date Received: NA

Date Analyzed LCS: 04/01/14 10:30

Purge Volume: 5.0 mL

LCSD: 04/01/14 10:59

Instrument/Analyst LCS: PID1/LH

Dilution Factor LCS: 1.0

LCSD: PID1/LH

LCSD: 1.0

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Benzene	7.03	7.00	100%	6.85	7.00	97.9%	2.6%
Toluene	51.8	49.4	105%	50.1	49.4	101%	3.3%
Ethylbenzene	12.6	12.3	102%	11.9	12.3	96.7%	5.7%
m,p-Xylene	40.5	40.0	101%	38.2	40.0	95.5%	5.8%
o-Xylene	15.8	15.3	103%	15.0	15.3	98.0%	5.2%

Reported in µg/L (ppb)

RPD calculated using sample concentrations per SW846.

BETX Surrogate Recovery

	LCS	LCSD
Trifluorotoluene	107%	108%
Bromobenzene	102%	104%

ORGANICS ANALYSIS DATA SHEET
TOTAL DIESEL RANGE HYDROCARBONSNWTPHD by GC/FID
Extraction Method: SW3510C
Page 1 of 1QC Report No: YD77-Golder Associates
Project: Master Park Lot C
073-93368-06-09A

Matrix: Water

Date Received: 03/20/14

Data Release Authorized: 
Reported: 03/31/14

ARI ID	Sample ID	Analysis Date	DF	Range	Result	RL	MDL
MB-032614 14-4989	Method Blank	03/28/14 FID9	1.0	Diesel Range Motor Oil Range HC ID o-Terphenyl	< 0.10 U < 0.20 U --- 99.2%	0.10 0.20	0.02 0.04
YD77A 14-4989	MPLOT-MW-20-032014	03/29/14 FID9	1.0	Diesel Motor Oil HC ID o-Terphenyl	< 0.10 U < 0.20 U --- 98.2%	0.10 0.20	0.02 0.04
YD77B 14-4990	MPLOT-MW-22-032014	03/29/14 FID9	1.0	Diesel Motor Oil HC ID o-Terphenyl	1.2 < 0.20 U DRO 82.5%	0.10 0.20	0.02 0.04
YD77C 14-4991	MPLOT-MW-22-DUP-032014	03/29/14 FID9	1.0	Diesel Motor Oil HC ID o-Terphenyl	1.7 0.71 DRO/MOTOR OIL 76.4%	0.10 0.20	0.02 0.04
YD77D 14-4992	PORT-MW-13-032014	03/29/14 FID9	1.0	Diesel Motor Oil HC ID o-Terphenyl	< 0.10 U < 0.20 U --- 81.1%	0.10 0.20	0.02 0.04

Reported in mg/L (ppm)

Diesel quantitation on total peaks in the range from C12 to C24.
Motor Oil quantitation on total peaks in the range from C24 to C38.
HC ID: DRO/RRO indicates results of organics or additional hydrocarbons in
ranges are not identifiable.

TPHD SURROGATE RECOVERY SUMMARY

Matrix: Water

QC Report No: YD77-Golder Associates
Project: Master Park Lot C
073-93368-06-09A

<u>Client ID</u>	<u>OTER</u>	<u>TOT OUT</u>
MB-032614	99.2%	0
LCS-032614	91.2%	0
LCSD-032614	90.4%	0
MPLOT-MW-20-032014	98.2%	0
MPLOT-MW-22-032014	82.5%	0
MPLOT-MW-22-DUP-032014	76.4%	0
PORT-MW-13-032014	81.1%	0

LCS/MB LIMITS QC LIMITS

(OTER) = o-Terphenyl

(50-150)

(50-150)

Prep Method: SW3510C
Log Number Range: 14-4989 to 14-4992

ORGANICS ANALYSIS DATA SHEET

NWTPHD by GC/FID

Page 1 of 1

Sample ID: LCS-032614

LCS/LCSD

Lab Sample ID: LCS-032614

LIMS ID: 14-4989

Matrix: Water

Data Release Authorized: 

Reported: 03/31/14

QC Report No: YD77-Golder Associates

Project: Master Park Lot C

073-93368-06-09A

Date Sampled: NA

Date Received: NA

Date Extracted LCS/LCSD: 03/26/14

Sample Amount LCS: 500 mL

LCSD: 500 mL

Date Analyzed LCS: 03/28/14 20:12

Final Extract Volume LCS: 1.0 mL

LCSD: 03/28/14 20:33

LCSD: 1.0 mL

Instrument/Analyst LCS: FID9/JLW

Dilution Factor LCS: 1.00

LCSD: FID9/JLW

LCSD: 1.00

Range	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Diesel	2.81	3.00	93.7%	2.72	3.00	90.7%	3.3%

TPHD Surrogate Recovery

	LCS	LCSD
o-Terphenyl	91.2%	90.4%

Results reported in mg/L

RPD calculated using sample concentrations per SW846.

TOTAL DIESEL RANGE HYDROCARBONS-EXTRACTION REPORT

Matrix: Water
Date Received: 03/20/14

ARI Job: YD77
Project: Master Park Lot C
073-93368-06-09A

ARI ID	Client ID	Samp Amt	Final Vol	Prep Date
14-4989-032614MB1	Method Blank	500 mL	1.00 mL	03/26/14
14-4989-032614LCS1	Lab Control	500 mL	1.00 mL	03/26/14
14-4989-032614LCSD1	Lab Control Dup	500 mL	1.00 mL	03/26/14
14-4989-YD77A	MPLOT-MW-20-032014	500 mL	1.00 mL	03/26/14
14-4990-YD77B	MPLOT-MW-22-032014	500 mL	1.00 mL	03/26/14
14-4991-YD77C	MPLOT-MW-22-DUP-032500	500 mL	1.00 mL	03/26/14
14-4992-YD77D	PORT-MW-13-032014	500 mL	1.00 mL	03/26/14

APPENDIX B
SAMPLE INTEGRITY DATA SHEETS (SIDS)

SAMPLE INTEGRITY DATA SHEET

Plant/Site Master Park Lot C

Project No. 073-93368-06.09A

Site Location SeaTac, WA

Sample ID MPL0TC-MW-6-021114

Sampling Location At end of sample tubing

Low Flow Sampling

Technical Procedure Reference(s) App E – Compliance Monitoring Plant Plan (Golder, Nov 2011)

Type of Sampler QED Controller and Bladder Pump – Dedicated Tubing

Date 2/11/2014

Time ~~2/11/2014~~ 1105

Media Water

Station MW-6

Sample Type: grab

time composite

space composite

Sample Acquisition Measurements (depth, volume of static well water and purged water, etc.)

Static Water Level: 59.03' Free Product Thickness: none

Date & Time of Measurement: 2/6/2014 @ 9:13

- No WL taken on 2/11/14.
Metr sat on top of pump?

Measurements are in feet below top of well casing.

Sample Intake Point: 60 ft below top of well casing

Sample Description clear, no odor

Field Measurements on Sample (pH, conductivity, etc.)

See Field Parameters Sheet

<u>Aliquot Amount</u>	<u>Analysis</u>	<u>Container</u>	<u>Preservative</u>
(5) 40 mL	NWTPH-gasoline & BTEX	VOA vial	HCl
	EDB (ethylene dibromide)		
	N-hexane		
	Naphthalene		
(2) 500mL	NWTPH-Dx	Amber glass	none

Sampler (signature) [Signature]

Date 2/11/2014

Supervisor (signature) [Signature]

Date 2/14/2014

FIELD PARAMETERS SHEET

Well ID MW-6
Date 2/11/2014
Time Begin Purge 1017
Time Collect Sample 1105

(рН)

[illegible]**Comments:**

Nitrogen Tank: 110 psi
Throttle: 50 psi
Cycle ID: 50
CPM: 2
Purge Rate: ~100 mL/min
PID: 0.0 ppm

- cloudy at start of purge, clearing
- No WLs. Meter sits on top of pump?

* 1.5 L for 1 well volume

Water level fluctuation with pump cycle: *NA*

Sampler's Initials ppm jsl

SAMPLE INTEGRITY DATA SHEET

Plant/Site Master Park Lot C

Project No. 073-96668-06.09A

Site Location SeaTac, WA

Sample ID MPLOT-C-MW-7-021314

Sampling Location At end of sample tubing

MPLOT-C-FB-021314

Low Flow Sampling

Technical Procedure Reference(s) App E - Compliance Monitoring Plant Plan (Golder, Nov 2011)

Type of Sampler QED Controller and Bladder Pump - Dedicated Tubing

Date 2/13/14

Time 0950

Media Water

Station MW-7

Sample Type: grab

time composite

space composite

Sample Acquisition Measurements (depth, volume of static well water and purged water, etc.)

Static Water Level: 47.72' Free Product Thickness: none

Date & Time of Measurement: 2/6/2014 @ 13:10

Measurements are in feet below top of well casing.

Sample Intake Point: 52 ft below top of well casing

Sample Description clear, slight TPH odor

Field Measurements on Sample (pH, conductivity, etc.)

See Field Parameters Sheet

<u>Aliquot Amount</u>	<u>Analysis</u>	<u>Container</u>	<u>Preservative</u>
(5) 40 mL	NWTPH-gasoline & BTEX	VOA vial	HCl
	EDB (ethylene dibromide)		
	N-hexane		
	Naphthalene		
(2) 500mL	NWTPH-DX	Amber Glass	none

Sampler (signature) Jill Jensen

Date 2/13/2014

Supervisor (signature) [Signature]

Date 2/14/2014

FIELD PARAMETERS SHEET

Well ID MW-7
 Date 02/13/2014
 Time Begin Purge 0856
 Time Collect Sample 0950

(pH)

Water Level feet bmp	Time	Volume Purged	pH	Conductivity (uS/cm)	Temp. (°C)	DO (mg/L)	Turbidity (NTU)
48.03	0850		6.51 ↓	131.1 ↓	14.2 ↓	0.32 ↓	6.33 ↓
48.15	0910						
	0915		6.54	131.0	14.2	0.32	5.75
	0920		6.55	131.2	14.2	0.34	4.26
	0925		6.56	131.2	14.2	0.33	4.03
	0930		6.55	131.0	14.2	0.34	4.21
	0935		6.56	131.2	14.2	0.34	4.11
	0940		6.56	131.0	14.2	0.36	3.36
	0945		6.56	131.3	14.3	0.35	3.87

Comments:

Nitrogen Tank: 100 psi
 Throttle: 40 psi
 Cycle ID: 50
 CPM: 2 (20s/10s)
 Purge Rate: 260 mL/min
 PID: 30

slight TPA odor

* Collected Field Blank near MW-7
 @ 0900 by pouring lab-provided
 DI water into bottle set.
 MPLWTC-FB-021314

Water level fluctuation with pump cycle: 48.12 - 48.25' btoc

Sampler's Initials jsl

SAMPLE INTEGRITY DATA SHEET

Plant/Site Master Park Lot C

Project No. 073-96668-06.09A

Site Location SeaTac, WA

Sample ID MPLOT-C-MW-9-021214

Sampling Location At end of sample tubing

Low Flow Sampling

Technical Procedure Reference(s) App E – Compliance Monitoring Plant Plan (Golder, Nov 2011)

Type of Sampler QED Controller and Bladder Pump – Dedicated Tubing

Date 2/12/2014

Time 12:30

Media Water

Station MW-9

Sample Type: grab

time composite

space composite

Sample Acquisition Measurements (depth, volume of static well water and purged water, etc.)

Static Water Level: 51.45 Free Product Thickness: none

Date & Time of Measurement: 2/6/2014 @ 10:07

Measurements are in feet below top of well casing.

Sample Intake Point: 54 ft below top of well casing

Sample Description clear, no od slight TH odor

Field Measurements on Sample (pH, conductivity, etc.)

See Field Parameters Sheet

<u>Aliquot Amount</u>	<u>Analysis</u>	<u>Container</u>	<u>Preservative</u>
(5) 40 mL	NWTPH-gasoline & BTEX	VOA vial	HCl
	EDB (ethylene dibromide)		
	N-hexane		
	Naphthalene		
(2) 500mL	NWTPH-DX	Amber Glass	none

Sampler (signature)

[Signature]

Date

2/12/2014

Supervisor (signature)

[Signature]

Date

2/14/2014

FIELD PARAMETERS SHEET

Well ID MW-9
 Date 2/12/2014
 Time Begin Purge 1133
 Time Collect Sample 12:30

(pH)

Water Level feet bmp	Time	Volume Purged	pH	Conductivity (uS/cm)	Temp. (°C)	DO (mg/L)	Turbidity (NTU)
57.70	1130						
	1150		6.51	98.4	10.0	0.85	7.15
	1155		6.50	98.7	12.5	0.50	7.93
	1200		6.50	99.0	12.5	0.42	4.17
	1205		6.50	99.2	12.6	0.38	3.25
	1210		6.50	99.2	12.6	0.33	3.12
	1215		6.49	99.3	12.6	0.29	2.77
	1220		6.49	99.4	12.6	0.29	3.55
	1225		6.49	99.5	12.6	0.28	3.10

Comments:

Nitrogen Tank: 110 psi
 Throttle: 60 psi
 Cycle ID: 103
 CPM: 4 (10s/5s)
 Purge Rate: 300 mL/min
 PID: 0.0 ppm

Water level fluctuation with pump cycle: NA - meter hits top of pump

Sampler's Initials JS

SAMPLE INTEGRITY DATA SHEET

Plant/Site Master Park Lot C

Project No. 073-96668-06.09A

Site Location SeaTac, WA

Sample ID MPLOT-C-MW-12-021314

Sampling Location At end of sample tubing

Low Flow Sampling

Technical Procedure Reference(s) App E - Compliance Monitoring Plant Plan (Golder, Nov 2011)

Type of Sampler QED Controller and Bladder Pump - Dedicated Tubing

Date 2/13/14

Time 1115

Media Water

Station MW-12

Sample Type: grab

time composite

space composite

Sample Acquisition Measurements (depth, volume of static well water and purged water, etc.)

Static Water Level: _____ Free Product Thickness: none

Date & Time of Measurement: _____

Measurements are in feet below top of well casing. _____

Sample Intake Point: 59 ft below top of well casing

Sample Description clear, slight TPH odor

Field Measurements on Sample (pH, conductivity, etc.) _____

See Field Parameters Sheet

<u>Aliquot Amount</u>	<u>Analysis</u>	<u>Container</u>	<u>Preservative</u>
(5) 40 mL	NWTPH-gasoline & BTEX	VOA vial	HCl
	EDB (ethylene dibromide)		
	N-hexane		
	Naphthalene		
(2) 500 mL	NWTPH-DX	Amber Glass	none

Sampler (signature) [Signature]

Date 2/13/14

Supervisor (signature) [Signature]

Date 2/14/2014

FIELD PARAMETERS SHEET

Well ID MW-12
Date 2/13/2014
Time Begin Purge 1017
Time Collect Sample 1115

[illegible]**Comments:**

Nitrogen Tank: 110 psi

Throttle: 40 psi

Cycle ID: 50

CPM: 2 (20s/10s)

Purge Rate: 240 mL/min

PID: 198 ppm (peak) avg 4.2 ppm

- WL reading not possible. WL is fluctuating in well

- lots of bubbling in tubing. Did some troubleshooting and couldn't fix. Continued w/ purge. Highly due to 4.2 ppm WL fluctuation in well.

~~X~~ ^{bubbling reduced} improved over course of purge.
DO is likely biased high.

Water level fluctuation with pump cycle: n/a

Sampler's Initials jsl

SAMPLE INTEGRITY DATA SHEET

Plant/Site Master Park Lot C Project No. 073-96668-06.09A
 Site Location SeaTac, WA Sample ID MPL0TC-MW-13- 021214

Sampling Location At end of sample tubing
Low Flow Sampling

Technical Procedure Reference(s) App E – Compliance Monitoring Plant Plan (Golder, Nov 2011)

Type of Sampler QED Controller and Bladder Pump – Dedicated Tubing

Date 2/12/2014 Time 1340

Media Water Station MW-13

Sample Type: grab time composite space composite

Sample Acquisition Measurements (depth, volume of static well water and purged water, etc.)

Static Water Level: 54.35' Free Product Thickness: none

Date & Time of Measurement: 2/6/2014 @ 11:11

Measurements are in feet below top of well casing.

Sample Intake Point: 60 ft below top of well casing

Sample Description clear, no odor

Field Measurements on Sample (pH, conductivity, etc.)

See Field Parameters Sheet

<u>Aliquot Amount</u>	<u>Analysis</u>	<u>Container</u>	<u>Preservative</u>
(5) 40 mL	NWTPH-gasoline & BTEX	VOA vial	HCl
	EDB (ethylene dibromide)		
	N-hexane		
	Naphthalene		
(2) 500 mL	NWTPH-DX	Amber Glass	none

Sampler (signature) [Signature] Date 2/12/2014

Supervisor (signature) [Signature] Date 2/17/2014

FIELD PARAMETERS SHEET

Well ID MW-13
Date 2/12/2014
Time Begin Purge 1249
Time Collect Sample 1340

mS/cm (pH)

[illegible]**Comments:**

White flecks @ start of purge, clearing.

Nitrogen Tank: 110 psi

Throttle: 50 psi

Cycle ID: 70-3

CPM: 4 (~~105~~ ~~155~~) ~~801~~ 2 (20/10)

Purge Rate: ~~440~~ mL/min 220

PID: 8,3 ppm

Water level fluctuation with pump cycle: 55.30 - 55.38' btoe

Sampler's Initials JSL

SAMPLE INTEGRITY DATA SHEET

Plant/Site Master Park Lot C Project No. 073-96668-06.09A
 Site Location SeaTac, WA Sample ID MPLOT-C-MW-17A-021114
 Sampling Location At end of sample tubing +MS/MSD Vol

Low Flow Sampling

Technical Procedure Reference(s) App E - Compliance Monitoring Plant Plan (Golder, Nov 2011)

Type of Sampler QED Controller and Bladder Pump - Dedicated Tubing

Date 2/11/2014 Time 1400

Media Water Station MW-17A

Sample Type: grab time composite space composite

Sample Acquisition Measurements (depth, volume of static well water and purged water, etc.)

Static Water Level: 83.80' Free Product Thickness: none

Date & Time of Measurement: 2/6/2014 @ 15:20

Measurements are in feet below top of well casing.

Sample Intake Point: 90 ft below top of well casing

Sample Description turbid, no odor

Field Measurements on Sample (pH, conductivity, etc.)

See Field Parameters Sheet

Aliquot Amount	Analysis	Container	Preservative
(5) 40 mL	NWTPH-gasoline & BTEX	VOA vial	HCl
	EDB (ethylene dibromide)		
	N-hexane		
	Naphthalene		
(2) 500mL	NWTPH-Dx	Amber Glass	none

x3
MS/MSD
vol

x3
MS/MSD
vol

Sampler (signature) Jill Lamm

Date 2/11/2014

Supervisor (signature) [Signature]

Date 2/24/2014

FIELD PARAMETERS SHEET

Well ID MW-17A
 Date 2/11/2014
 Time Begin Purge 1250
 Time Collect Sample 1400

(pH)

Water Level feet bmp	Time	Volume Purged	pH	Conductivity (uS/cm)	Temp. (°C)	DO (mg/L)	Turbidity (NTU)
84.13	1302		6.32	76.8	11.3	3.07	936
	1307		6.30	77.1	11.3	2.20	677
	1312		6.27	75.7	11.3	2.19	453
	1317		6.28	76.3	11.3	1.98	313
	1322		6.30	77.2	11.3	1.73	248
	1327		6.32	78.0	11.3	1.57	189
	1332		6.32	78.4	11.3	1.48	152
	1337		6.35	80.7	11.3	1.26	279
	1342		6.36	81.2	11.3	1.18	325
	1347		6.35	81.5	11.3	1.13	263
	1352		6.35	82.0	11.3	1.06	194
	1357		6.36	82.5	11.3	1.06	137

Comments:

Nitrogen Tank: 110 psi
 Throttle: 60 psi
 Cycle ID: 20
 CPM: 1 (40s/20s)
 Purge Rate: ~120 mL/min
 PID: 0.0 ppm

- turbid @ start of purge, clearing, but
 not to <10ntu
 - MS/MSD Vol

Water level fluctuation with pump cycle: 84.12 - 84.17' bta

Sampler's Initials pl

SAMPLE INTEGRITY DATA SHEET

Plant/Site Master Park Lot C Project No. 073-96668-06.09A

Site Location SeaTac, WA Sample ID MPL0TC-MW-18-021214

Sampling Location At end of sample tubing

Low Flow Sampling

Technical Procedure Reference(s) App E - Compliance Monitoring Plant Plan (Golder, Nov 2011)

Type of Sampler QED Controller and Bladder Pump - Dedicated Tubing

Date 2/12/2014 Time 1515

Media Water Station MW-18

Sample Type: grab time composite space composite

Sample Acquisition Measurements (depth, volume of static well water and purged water, etc.)

Static Water Level: 42.00' Free Product Thickness: none

Date & Time of Measurement: 4/6/2014 12:41

Measurements are in feet below top of well casing.

Sample Intake Point: 54 ft below top of well casing

Sample Description clear, slight TPH odor

Field Measurements on Sample (pH, conductivity, etc.)

See Field Parameters Sheet

<u>Aliquot Amount</u>	<u>Analysis</u>	<u>Container</u>	<u>Preservative</u>
(5) 40 mL	NWTPH-gasoline & BTEX	VOA vial	HCl
	EDB (ethylene dibromide)		
	N-hexane		
	Naphthalene		
(2) 500mL	NWTPH-Dx	Amber Glass	none

Sampler (signature) [Signature] Date 2/12/2014

Supervisor (signature) [Signature] Date 2/14/2014

FIELD PARAMETERS SHEET

Well ID MW-18
 Date 2/12/2014
 Time Begin Purge 1426
 Time Collect Sample 1515

Water Level feet bmp	Time	Volume Purged	pH	Conductivity (uS/cm)	Temp. (°C)	DO (mg/L)	Turbidity (NTU)
	1436		7.80	172.5	14.0	8.31	3.81
	1441		7.80	173.5	14.0	8.42	3.77
	1446		7.72	173.7	14.0	8.39	3.12
	1451		7.73	174.0	14.0	8.44	3.10
	1456		7.70	174.3	14.0	8.39	3.43
	1501		7.68	174.4	13.9	8.36	3.28
	1506		7.66	174.7	13.9	8.31	3.15
	1511		7.62	174.6	13.8	8.11	2.89

Comments:

Nitrogen Tank: 110 psi
 Throttle: 40 psi
 Cycle ID: 2 50
 CPM: 2 (20/10)
 Purge Rate: 260 mL/min
 PID: 150 ppm

Water level fluctuation with pump cycle: 50.03 - 50.24 'btoc

Sampler's Initials jd

SAMPLE INTEGRITY DATA SHEET

Plant/Site Master Park Lot C Project No. 073-96668-06.09A

Site Location SeaTac, WA Sample ID MPLOT-C-MW-19-021114

Sampling Location At end of sample tubing

Low Flow Sampling

Technical Procedure Reference(s) App E – Compliance Monitoring Plant Plan (Golder, Nov 2011)

Type of Sampler QED Controller and Bladder Pump – Dedicated Tubing

Date 2/11/2014 Time 1540

Media Water Station MW-19

Sample Type: grab time composite space composite

Sample Acquisition Measurements (depth, volume of static well water and purged water, etc.)

Static Water Level: 45.46' Free Product Thickness: none

Date & Time of Measurement: 2/6/2014 @ 13:36

Measurements are in feet below top of well casing.

Sample Intake Point: 50 ft below top of well casing

Sample Description clear, no odor

Field Measurements on Sample (pH, conductivity, etc.)

See Field Parameters Sheet

<u>Aliquot Amount</u>	<u>Analysis</u>	<u>Container</u>	<u>Preservative</u>
(5) 40 mL	NWTPH-gasoline & BTEX	VOA vial	HCl
	EDB (ethylene dibromide)		
	N-hexane		
	Naphthalene		
(2) 500mL	NWTPH-Dx	Amber Gr Glass	None

Sampler (signature) [Signature] Date 2/11/2014

Supervisor (signature) [Signature] Date 2/14/2014

FIELD PARAMETERS SHEET

Well ID MW-19
 Date 2/11/2014
 Time Begin Purge 1450
 Time Collect Sample 1540

(pH)

Water Level feet bmp	Time	Volume Purged	pH	Conductivity (uS/cm)	Temp. (°C)	DO (mg/L)	Turbidity (NTU)
45.78	1500		6.99	104.9	12.8	0.53	7.56
	1505		6.98	105.1	12.8	0.36	4.83
	1510		6.97	105.1	12.8	0.28	2.92
	1515		6.98	105.2	12.8	0.23	3.18
	1520		6.97	105.3	12.7	0.19	6.31
	1525		6.98	105.2	12.7	0.17	4.77
	1530		6.98	105.1	12.7	0.16	3.41
	1535		6.98	105.2	12.7	0.15	3.20

Comments:

-black specks

Nitrogen Tank: 110 psi
 Throttle: 50 psi
 Cycle ID: 20
 CPM: 1 (40s/20s)
 Purge Rate: ~120 mL/min
 PID: 68 ppm

Water level fluctuation with pump cycle: 45.77 - 45.86' btoe

Sampler's Initials jsl

SAMPLE INTEGRITY DATA SHEET

Plant/Site Master Park Lot C Project No. 073-96668-06.09A
 Site Location SeaTac, WA Sample ID MPLOT-C-MW-20-032014

Sampling Location At end of sample tubing

Low Flow Sampling

Technical Procedure Reference(s) App E - Compliance Monitoring Plant Plan (Golder, Nov 2011)

Type of Sampler QED Controller and Bladder Pump - Dedicated Tubing

Date 3/20/2014

Time 0830

Media Water

Station MW-20

Sample Type: grab time composite space composite

Sample Acquisition Measurements (depth, volume of static well water and purged water, etc.)

Static Water Level: 106.80' Free Product Thickness: none

Date & Time of Measurement: 3/20/14 @ 0735

Measurements are in feet below top of well casing.

Sample Intake Point: 111 ft below top of well casing

Sample Description clear, no odor

Field Measurements on Sample (pH, conductivity, etc.)

See Field Parameters Sheet

<u>Aliquot Amount</u>	<u>Analysis</u>	<u>Container</u>	<u>Preservative</u>
(5) 40 mL	NWTPH-gasoline & BTEX	VOA vial	HCl
	EDB (ethylene dibromide)		
	N-hexane		
	Naphthalene		
(2) 500mL	NWTPH-D ₂ O	Ambu Glass	none

Sampler (signature) [Signature]

Date 3/20/2014

Supervisor (signature) [Signature]

Date 3/24/2014

FIELD PARAMETERS SHEET

Well ID MW-20
 Date 3/20/2014
 Time Begin Purge 0732
 Time Collect Sample 0830

(pH)

Water Level feet bmp	Time	Volume Purged	pH	Conductivity (uS/cm)	Temp. (°C)	DO (mg/L)	Turbidity (NTU)
106.80	0750		7.27	385	11.1	8.00	27.3
106.80	0755		6.81	385	10.0	7.97	15.8
106.80	0800		6.76	383	10.0	7.94	10.3
106.81	0805		6.75	380	10.0	7.88	7.67
106.82	0810		6.74	379	11.3	7.87	6.53
106.82	0815		6.74	378	11.3	7.86	4.95
106.82	0820		6.74	377	11.4	7.82	4.22
106.82	0825		6.74	377	11.4	7.82	3.32

Comments:

Nitrogen Tank: 110 psi
 Throttle: 70 psi
 Cycle ID: 50 (20/10)
 CPM: 2
 Purge Rate: ~300 mL/min
 PID: 0.0 ppm

Water level fluctuation with pump cycle: 106.80 - 106.82' bblc

Sampler's Initials jd

SAMPLE INTEGRITY DATA SHEET

Plant/Site Master Park Lot C Project No. 073-96668-06.09A

Site Location SeaTac, WA Sample ID MPLOTTC-MW-21- 021114

Sampling Location At end of sample tubing

Low Flow Sampling

Technical Procedure Reference(s) App E – Compliance Monitoring Plant Plan (Golder, Nov 2011)

Type of Sampler QED Controller and Bladder Pump – Dedicated Tubing

Date 2/11/2014 Time 1225

Media Water Station MW-21

Sample Type: grab time composite space composite

Sample Acquisition Measurements (depth, volume of static well water and purged water, etc.)

Static Water Level: 102.34' Free Product Thickness: none

Date & Time of Measurement: 2/6/2014 @ 14:24

Measurements are in feet below top of well casing.

Sample Intake Point: 107 ft below top of well casing

Sample Description clear, no odor

Field Measurements on Sample (pH, conductivity, etc.)

See Field Parameters Sheet

<u>Aliquot Amount</u>	<u>Analysis</u>	<u>Container</u>	<u>Preservative</u>
(5) 40 mL	NWTPH-gasoline & BTEX	VOA vial	HCl
	EDB (ethylene dibromide)		
	N-hexane		
	Naphthalene		
(2) 500mL	NWTPH-Dx	Amber Glass	none

Sampler (signature) [Signature] Date 2/11/2014

Supervisor (signature) [Signature] Date 2/14/2014

FIELD PARAMETERS SHEET

Well ID MW-21
 Date 2/11/2014
 Time Begin Purge 1135
 Time Collect Sample 1225

(pH)

Water Level feet bmp	Time	Volume Purged	pH	Conductivity (uS/cm)	Temp. (°C)	DO (mg/L)	Turbidity (NTU)
102.73	1145		6.02	106.9	11.7	8.10	16.4
102.73	1150		6.00	106.5	11.7	7.23	38.4
	1155		6.02	107.3	11.8	6.87	35.3
	1200		6.04	107.3	11.8	6.72	48.9
	1205		6.06	108.0	11.9	6.54	35.5
	1210		6.06	108.6	11.9	6.48	26.5
	1215		6.08	109.3	11.9	6.40	19.6
	1220		6.09	109.6	11.9	6.31	11.2
	12						

Comments:

Nitrogen Tank: 110 psi
 Throttle: 70 psi
 Cycle ID: 20
 CPM: 1 (40s/20s)
 Purge Rate: 120 mL/min
 PID: 0.0 ppm

Water level fluctuation with pump cycle: 102.72 - 102.78' btoe

Sampler's Initials jsl

SAMPLE INTEGRITY DATA SHEET

Plant/Site Master Park Lot C Project No. 073-96668-06.09A
 Site Location SeaTac, WA Sample ID MPLOT-C-MW-22-032014
 Sampling Location At end of sample tubing MPLOT-C-MW-22-DUP-032014

Low Flow Sampling

Technical Procedure Reference(s) App E – Compliance Monitoring Plant Plan (Golder, Nov 2011)

Type of Sampler QED Controller and Bladder Pump – Dedicated Tubing

Date 3/20/14

Time 1110, 1115 (dup)

Media Water

Station MW-22

Sample Type: grab time composite space composite

Sample Acquisition Measurements (depth, volume of static well water and purged water, etc.)

Static Water Level: 82.93' Free Product Thickness: none

Date & Time of Measurement: 3/20/14 @ 1025

Measurements are in feet below top of well casing.

Sample Intake Point: 89 ft below top of well casing

Sample Description slightly turbid, no odor

Field Measurements on Sample (pH, conductivity, etc.)

See Field Parameters Sheet

<u>Aliquot Amount</u>	<u>Analysis</u>	<u>Container</u>	<u>Preservative</u>
(5 x 2) 40 mL	NWTPH-gasoline & BTEX	VOA vial	HCl
	EDB (ethylene dibromide)		
	N-hexane		
	Naphthalene		
(2x2) 50mL	NWTPH-DX	Amber Glass	none

Sampler (signature) [Signature]

Date 3/20/2014

Supervisor (signature) [Signature]

Date 3/24/2014

FIELD PARAMETERS SHEET

Well ID MW-22

Date 3/20/14

Time Begin Purge 1033

Time Collect Sample 1110, 1115 (dup)

(pH)

[illegible]

64.8

Comments:

Nitrogen Tank: 110 psi

Throttle: 55 psi

Cycle ID: 50 (20s/10s)

CPM: 2

Purge Rate: 260 mL/min

PID: 0.0 ppm

Conductivity meter was re-calibrated after 1st reading.

Well lid was buried w/ hydrated bentonite when well was 1st opened.

Water level fluctuation with pump cycle: 82.96 - 82.98'

Sampler's Initials JS

1015
82.94

SAMPLE INTEGRITY DATA SHEET

Plant/Site Master Park Lot C Project No. 073-96668-06.09A

Site Location SeaTac, WA Sample ID PORT-MW-B- 032014

Sampling Location At end of sample tubing

Low Flow Sampling

Technical Procedure Reference(s) App E – Compliance Monitoring Plant Plan (Golder, Nov 2011)

Type of Sampler QED Controller and Bladder Pump – Dedicated Tubing

Date 3/20/2014 Time 1355

Media Water Station PORT-MW-B

Sample Type: grab time composite space composite

Sample Acquisition Measurements (depth, volume of static well water and purged water, etc.)

Static Water Level: 89.70' Free Product Thickness:

Date & Time of Measurement: 3/20/2014 @ 1228

Measurements are in feet below top of well casing.

Sample Intake Point: 89 ft below top of well casing

Sample Description Very turbid, no odor

Field Measurements on Sample (pH, conductivity, etc.)

See Field Parameters Sheet

<u>Aliquot Amount</u>	<u>Analysis</u>	<u>Container</u>	<u>Preservative</u>
(5) 40 mL	NWTPH-gasoline & BTEX	VOA vial	HCl
	EDB (ethylene dibromide)		
	N-hexane		
	Naphthalene		
(2) 500mL	NWTPH-DX	Amber Glass	none

Sampler (signature) [Signature] Date 3/20/2014

Supervisor (signature) [Signature] Date 3/24/2014

FIELD PARAMETERS SHEET

Well ID PORT-MW-6
Date 3/20/14
Time Begin Purge 1240
Time Collect Sample 1355

(pH)

[illegible]**Comments:**

Nitrogen Tank: 110 psi
Throttle: 55 psi
Cycle ID: 50 (20/10)
CPM: 2
Purge Rate: — mL/min
PID: 0.0 ppm

Bottom @ 99.40'

89.70'

9.70' water = 116.4 inches

$$\text{Volume} = \pi r^2 h$$
$$= \pi \cdot 1^2 \times 116.4''$$

$= 365$ cutcher

$= 1.6 \text{ gal / well vol.}$

4.8 gal total.

Water level fluctuation with pump cycle:

Sampler's Initials JS

* * Pump intake is @ 89'. Water Level is 89.70'. Tubing is too short. No supplies to splice, so we had to bail. Bailed 3 well volumes & collected WLS as we went along. Water is very turbid.

APPENDIX C
DATA VALIDATION MEMO

DATA VALIDATION CHECKLIST

Project Name:	Masterpark Lot C – Seatac Development Site
Project Number:	073-93368.06.09A
Sample Identification(s):	Trip Blank-021114, MPLOT-MW-06-021114, MPLOT-MW-21-021114, MPLOT-MW-17A-021114, MPLOT-MW-19-021114, Trip Blank-021214, MPLOT-MW-09-021214, MPLOT-MW-13-021214, MPLOT-MW-18-021214, Trip Blank-021314, MPLOT-FB-021314, MPLOT-MW-07-021314, MPLOT-MW-12-021314, Trip Blank-032014, MPLOT-MW-20-032014, MPLOT-MW-22-032014, MPLOT-MW-22-DUP-032014, PORT-MW-B-032014
Sample Date(s):	2/11/2014, 2/12/2013, 2/13/2014, and 03/20/2014
Sample Team:	Jill Lamberts, David Erickson, Golder Associates
Sample Matrix:	Aqueous
Analyzing Laboratory:	Analytical Resources Inc (ARI) – Tukwila WA
Analyses:	NWTPH-Gx/BTEX, EPA 8260C (EDB, N-hexane, Naphthalene) NWPTH-Dx
Laboratory Report No.:	XY90, XZ00, XZ26, and YD77

FIELD DATA PACKAGE DOCUMENTATION

Field Sampling Logs:	Reported		Performance Acceptable		Not Required
	NO	YES	NO	YES	
1. Sampling dates noted		X		X	
2. Sampling team indicated		X		X	
3. Sampling identification traceable to location collected		X	X		
4. Sample location		X		X	
5. Collection technique (bailer, pump, etc.)		X		X	
6. Sample container type		X		X	
7. Preservation methods		X		X	
8. Chain-of-custody form completed		X	X		
9. Required analytical methods requested		X		X	
10. Field sample logs completed properly and signed		X		X	
11. Number and type of field QC samples collected		X		X	
12. Field equipment calibration		X		X	
13. Field equipment decontamination		X		X	

QC – quality control

COMMENTS:

Performance was acceptable, with the following exceptions and/or notes:

- For Trip Blank-021114 (SDG XY90), no analysis was listed on the chain-of-custody (COC). The lab was contacted by the field staff to have NWTPH-Gx/BTEX, EDB, N-hexane, and Naphthalene added to the analysis for the sample. No further action required.
- For Trip Blank-021214 (SDG XZ00), no analysis was listed on the chain-of-custody (COC) except for NWTPH-Gx/BTEX. The lab was contacted by the field staff to have EDB, N-hexane, and Naphthalene added to the analysis for the sample. No further action required.
- Lab logged in sample PORT-MW-B-032014 as PORT-MW-13-032014. The lab was contacted to have the ID corrected.

ANALYTICAL DATA PACKAGE DOCUMENTATION
GENERAL INFORMATION

	Reported		Performance Acceptable		Not Required
	NO	YES	NO	YES	
1. Sample results		X		X	
2. Parameters analyzed		X		X	
3. Method of analysis		X		X	
4. Reporting limits of analysis		X		X	
5. Sample collection date		X		X	
6. Laboratory sample received date		X		X	
7. Sample preparation/extraction date		X		X	
8. Sample analysis date		X		X	
9. Copy of chain-of-custody form signed by lab sample custodian		X		X	
10. Narrative summary of QA or sample problems provided		X		X	

QA – quality assurance

COMMENTS:

Performance was acceptable, with the following exceptions and/or notes:

- Cooler temperatures were all $4 \pm 2^{\circ}\text{C}$.
- 4 Trip Blanks, 13 samples, 1 field duplicate submitted per work plan.

ORGANIC ANALYSES

EDB, N-hexane, Naphthalene (EPA 8260C)	Reported		Performance Acceptable		Not Required
	NO	YES	NO	YES	
1. Holding times		X		X	
2. Reporting limits		X	X		
3. Blanks					
a. Method blanks		X	X		
b. Field blanks and Trip Blanks		X	X		
4. Laboratory control sample (LCS) %R		X		X	
5. Matrix spike (MS) %R		X		X	
6. LCS duplicate (LCSD) %R		X	X		
7. MS duplicate (MSD) %R		X		X	
8. MS / MSD RPD		X		X	
9. LCS / LCSD RPD		X		X	
10. Surrogate %R		X	X		
11. Laboratory Duplicate RPD	X				X
12. Field duplicate comparison		X		X	

%R – percent recovery

RPD – relative percent difference

COMMENTS:

Performance was acceptable, with the following exceptions and/or notes:

- Surrogate d4-1,2-Dichloroethane (DCE) out of control high for MPLOT-MW-09-021214 initial analysis. No qualification necessary for results that are non-detects. Detects are qualified as estimated (J). EDB is non-detect so no qualification was necessary. Naphthalene is detected and is qualified as estimated (J). No qualification is necessary for hexane as the analyte is not associated with the surrogate.
- Naphthalene for MPLOT-MW-09-021214 had to be analyzed at a dilution because initial analysis was qualified E by the lab (Estimated concentration calculated for an analyte response above the valid instrument calibration range. A dilution is required to obtain an accurate quantification of the analyte). The reanalysis was within the instrument calibration range and is the result that should be reported. The initial result is qualified as **DNR** (do not report). Also, note that the RPD between the initial results and the diluted results are < 20% showing good repeatability of the analysis.
- Naphthalene for MPLOT-MW-22-032014 and MPLOT-MW-22-DUP-032014 had to be analyzed at a dilution because initial analysis was qualified E by the lab (Estimated concentration calculated for an analyte response above the valid instrument calibration range. A dilution is required to obtain an accurate quantification of the analyte). The reanalysis was within the instrument calibration range and is the result that should be reported. The initial result is qualified as **DNR** (do not report).
- MPLOT-FB-021314 field blank (FB) contained n-hexane at 0.18 J µg/L, which is below the Limit of Quantitation (LOQ) of 0.20 µg/L but above the Detection Limit (DL) of 0.10 µg/L. National Functional Guidelines (USEPA 2008) require qualification of associated results as follows:
 - FB < DL and Sample Result < LOQ: Qualify as non-detect (U)
 - FB < LOQ and Sample Result ≥ LOQ and < 2x the LOQ (0.20 µg/L to 0.40 µg/L): Qualify as estimated with a possible high bias (J+)
 - FB < LOQ and Sample Result ≥ 2X the LOQ (≥ 0.40 µg/L): No qualification

No qualifications were applied to associated samples since all n-hexane results were either < LOQ (0.20 µg/L) or greater than 2X the LOQ (0.40 µg/L).

- Reporting limits were raised for EDB in samples MPLOT-MW-07-021314 and MPLOT-MW-12-021314. Lab was contacted for more information and reported that the samples were analyzed at a dilution due to the presence of other non-target compounds. High levels of BTEX (benzene, toluene, ethylbenzene and xylenes) made a 50X dilution necessary to prevent instrument damage. No further action was taken other than to note.
- For SDG YD77 (sample MPLOT-MW-20-032014, MPLOT-MW-22-032014, MPLOT-MW-22-DUP-032014, and PORT-MW-B-032014):
 - VOCs method blanks contained naphthalene. The lab qualified associated samples containing naphthalene as "B" (blank contamination). No further action was taken as associated sample results were either non-detect or greater than 2X the blank contamination. The Trip Blank was non-detect for naphthalene.
 - VOCs CCALs were out of control high for naphthalene. The lab qualified detections of naphthalene with a "Q" qualifier. Validation requires qualification of naphthalene in associated samples as J or UJ (estimated).
 - VOCs LCSD out of control high for LCSDs analyzed on 3/28/2014 and 3/31/2014. The LCSs were in control. No further action was taken.
 - Sample PORT-MW-B-032014 was re-analyzed for possible naphthalene carry over. The lab states that data should be reported from the reanalysis. The initial result is qualified as **DNR** (do not report).
- A field duplicate was collected and sample IDs were MPLOT-MW-22-032014 and MPLOT-MW-22-DUP-032014. Relative percent differences were <20% for all analytes.

ORGANIC ANALYSES

NWTPH-Dx (Diesel and Motor Oil)	Reported		Performance Acceptable		Not Required
	NO	YES	NO	YES	
1. Holding times		X		X	
2. Reporting limits		X		X	
3. Blanks					
a. Method blanks		X		X	
b. Field blanks		X		X	
4. Laboratory control sample (LCS) %R		X		X	
5. Matrix spike (MS) %R		X		X	
6. LCS duplicate (LCSD) %R		X		X	
7. MS duplicate (MSD) %R		X		X	
8. MS / MSD RPD		X		X	
9. LCS / LCSD RPD		X		X	
10. Surrogate %R		X		X	
11. Laboratory Duplicate RPD	X				X
12. Field duplicate comparison		X	X		

%R – percent recovery

RPD – relative percent difference

COMMENTS:

Performance was acceptable, with the following exceptions and/or notes:

- Diesel for MPLOT-MW-07-021314 had to be analyzed at a dilution because initial analysis was qualified E by the lab (Estimated concentration calculated for an analyte response above the valid instrument calibration range. A dilution is required to obtain an accurate quantification of the analyte). The reanalysis was within the instrument calibration range and is the result that should be reported. The initial result is qualified as **DNR** (do not report).
- The diesel result for samples MPLOT-MW-09-021214, MPLOT-MW-13-021214, MPLOT-MW-18-021214, MPLOT-MW-07-021314, MPLOT-MW-12-021314, MPLOT-MW-22-032014, and MPLOT-MW-22-DUP-032014 was qualified by the lab as DRO (indicates results of organics or additional hydrocarbons in ranges are not identifiable). Qualify diesel results as estimated (**J**).
- A field duplicate was collected and sample IDs were MPLOT-MW-22-032014 and MPLOT-MW-22-DUP-032014. Relative percent differences (RPDs) were <20% for all analytes except for diesel and motor oil at 34% and 112% RPD, respectively. Data validation rules do not require qualification; no further action was taken other than to note.

ORGANIC ANALYSES

NWTPH-Gx/BTEX (Gasoline, Benzene, Toluene, Ethylbenzene, m,p-Xylene, and o-Xylene)	Reported		Performance Acceptable		Not Required
	NO	YES	NO	YES	
1. Holding times		X		X	
2. Reporting limits		X		X	
3. Blanks					
a. Method blanks		X		X	
b. Field blanks and Trip Blanks		X		X	
4. Laboratory control sample (LCS) %R		X		X	
5. Matrix spike (MS) %R		X		X	
6. LCS duplicate (LCSD) %R		X		X	
7. MS duplicate (MSD) %R		X		X	
8. MS / MSD RPD		X		X	
9. LCS / LCSD RPD		X		X	
10. Surrogate %R		X		X	
11. Laboratory Duplicate RPD	X				X
12. Field duplicate comparison		X	X		

%R – percent recovery

RPD – relative percent difference

COMMENTS:

Performance was acceptable, with the following exceptions and/or notes:

- Ethylbenzene, m,p-Xylene, o-Xylene, and Gasoline for MPLOT-MW-13-021214 had to be re-analyzed at a dilution because initial analysis was qualified E by the lab (Estimated concentration calculated for an analyte response above the valid instrument calibration range. A dilution is required to obtain an accurate quantification of the analyte). The result for m,p-Xylene was also qualified S by the lab (Indicates an analyte response that has saturated the detector. The calculated concentration is not valid; a dilution is required to obtain valid quantification of the analyte). The reanalysis was within the instrument calibration range and is the result that should be reported. The initial result is qualified as **DNR** (do not report). Also, note that the RPD between the initial results and the diluted results are < 20% showing good repeatability of the analysis.
- Ethylbenzene, m,p-Xylene, and Gasoline for MPLOT-MW-22-032014 had to be re-analyzed at a dilution because initial analysis was qualified E by the lab (Estimated concentration calculated for an analyte response above the valid instrument calibration range. A dilution is required to obtain an accurate quantification of the analyte). The reanalysis was within the instrument calibration range and is the result that should be reported. The initial result is qualified as **DNR** (do not report). Also, note that the RPD between the initial results and the diluted results are < 20% showing good repeatability of the analysis.
- Sample result for Gasoline for samples MPLOT-MW-09-021214, MPLOT-MW-13-021214, MPLOT-MW-18-021214, MPLOT-MW-07-021314, MPLOT-MW-12-021314, MPLOT-MW-22-032014, and MPLOT-MW-22-DUP-032014 was qualified by lab as GAS (indicates the presences of gasoline or weathered gasoline). No further action was taken other than to note.
- A field duplicate was collected and sample IDs were MPLOT-MW-22-032014 and MPLOT-MW-22-DUP-032014. Relative percent differences (RPDs) were <20% for all analytes except for toluene, ethylbenzene and m,p-xylene at 24%, 32% and 31% RPD, respectively. Data validation rules do not require qualification; no further action was taken other than to note.

DATA VALIDATION CHECKLIST

SUMMARY AND DATA QUALIFIER CODES

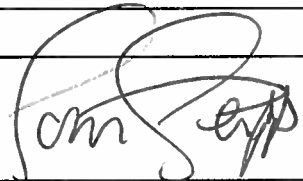
Project Name:	Masterpark Lot C – Seatac Development Site
Project Number:	073-93368.06.09A
Sample Identification(s):	Trip Blank-021114, MPLOT-MW-06-021114, MPLOT-MW-21-021114, MPLOT-MW-17A-021114, MPLOT-MW-19-021114, Trip Blank-021214, MPLOT-MW-09-021214, MPLOT-MW-13-021214, MPLOT-MW-18-021214, Trip Blank-021314, MPLOT-FB-021314, MPLOT-MW-07-021314, MPLOT-MW-12-021314, Trip Blank-032014, MPLOT-MW-20-032014, MPLOT-MW-22-032014, MPLOT-MW-22-DUP-032014, PORT-MW-B-032014
Sample Date(s):	2/11/2014, 2/12/2013, 2/13/2014, and 03/20/2014
Sample Team:	Jill Lamberts, David Erickson, Golder Associates
Sample Matrix:	Aqueous
Analyzing Laboratory:	Analytical Resources Inc (ARI) – Tukwila WA
Analyses:	NWTPH-Gx/BTEX, EPA 8260C (EDB, N-hexane, Naphthalene) NWPTH-Dx
Laboratory Report No.:	XY90, XZ00, XZ26, and YD77

Reference

USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods
Data Review, EPA-540-R-08-01, June 2008

Sample ID	Analyte(s)	Result	Qualifier	Reason(s)
MPLOT-MW-09-021214	Naphthalene	100 E µg/L	J, DNR	Surrogate out of control high. Sample reanalyzed at a dilution and diluted result is reported instead.
MPLOT-MW-09-021214 DL	1,2-Dibromomethane Hexane	< 1.0 U µg/L 13 µg/L	DNR	Report initial analysis for these analytes.
MPLOT-MW-22-032014 MPLOT-MW-22-DUP-032014	Naphthalene	92 QE µg/L 98 QE µg/L	J, DNR J, DNR	CCAL out of control high. Sample reanalyzed at a dilution and diluted result is reported instead.
MPLOT-MW-22-032014 DL MPLOT-MW-22-DUP-032014 DL	1,2-Dibromomethane	<4.0 µg/L <4.0 µg/L	DNR DNR	Report initial analysis for this analyte.
MPLOT-MW-20-032014 MPLOT-MW-22-032014 DL MPLOT-MW-22-DUP-032014 DL PORT-MW-B-032014 RE Trip Blanks-YD77	Naphthalene	< 0.50 U µg/L 400 QB µg/L 400 QB µg/L < 0.50 U µg/L < 0.50 U µg/L	UJ J J UJ UJ	CCAL out of control high for naphthalene.
PORT-MW-B-032014	Naphthalene	6.2 QB µg/L	J, DNR	Report reanalysis due to naphthalene carryover. CCAL out of control high for naphthalene.
PORT-MW-B-032014 DNR	1,2-Dibromomethane	<0.20 U µg/L	DNR	Report initial analysis for this analyte.
MPLOT-MW-09-021214 MPLOT-MW-13-021214 MPLOT-MW-18-021214 MPLOT-MW-07-021314 MPLOT-MW-07-021314 DL MPLOT-MW-12-021314 MPLOT-MW-22-032014 MPLOT-MW-22-DUP-032014	Diesel	1.6 mg/L 1.4 mg/L 0.77 mg/L 12 E mg/L 11 mg/L 1.1 mg/L 1.2 mg/L 1.7 mg/L	J J J J J J J J	Organics or additional hydrocarbons in ranges that are not identifiable.

Sample ID	Analyte(s)	Result	Qualifier	Reason(s)
MPLOT-MW-07-021314	Diesel	12 E mg/L	DNR	Sample reanalyzed at a dilution and diluted result is reported instead.
MPLOT-MW-13-021214	Toluene Ethylbenzene m,p-Xylene o-Xylene Gasoline	3.2 µg/L 230 E µg/L 1,500 ES µg/L 260 E µg/L 13 E mg/L	DNR DNR DNR DNR DNR	Sample reanalyzed at a dilution and diluted result is reported instead.
MPLOT-MW-13-021214	Benzene	< 2.5 U µg/L	DNR	Report initial analysis for this analyte.
MPLOT-MW-22-032014	Benzene Toluene Ethylbenzene m,p-Xylene o-Xylene Gasoline	4.7 µg/L 9.8 µg/L 710 E µg/L 1,100 E µg/L 2.6 µg/L 12 E mg/L	DNR DNR DNR DNR DNR DNR	Sample reanalyzed at a dilution and diluted result is reported instead.

VALIDATION PERFORMED BY:	Jill Lamberts, Golder Associates
VALIDATOR'S SIGNATURE:	
DATE:	April 7, 2014
REVIEWED BY:	
REVIEWER'S SIGNATURE	
DATE:	4-14-2014

Analytical Resources, Incorporated
Analytical Chemists and Consultants
4611 South 134th Place, Suite 100
Tukwila, WA 98168
206-695-6200 206-695-6201 (fax)

ARI Assigned Number:	X490	Turn-around Requested:	Standard	Page:	1	of	1
ARI Client Company:	Golden Associates	Phone:	425 883-0777	Date:	2/11/2014	Ice Present?	
Client Contact:	Douglas Moeve			No. of Coolers:		Cooler Temps:	

Sample ID	Date	Time	Matrix	No Containers
Trip Blank	2/11/14	-	DI	2
MPL0TC-MW-6-φ21114		1105	W	7
MPL0TC-MW-21-φ21114		1225	W	7
MPL0TC-MW-17A-φ21114		1400	W	21
MPL0 TC-MW-T9-φ21114		1540	W	7

Nephht MWTPH Nhexx EDB X Report xto MDP BTE X KMTRPH

Comments/Special Instructions	Relinquished by: (Signature)	Received by: (Signature)
Pls cc dmorell@golder.com jlamberts@golder.com	[Signature]	[Signature]
Ecology Elm EDD	J. Lamberts Printed Name Company Golder	Rich Hudson Printed Name Company ARI
	Date & Time 2/11/2014 1620	Date & Time 2/11/14 1620

Limits of Liability: ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the Invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, not withstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Client.

please analyze per existing MSA btwn Golden + ARI

Sample Retention Policy: All samples submitted to ARI will be appropriately discarded no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer, unless alternate retention schedules have been established by work-order or contract.

XZ90:00002

Analytical Resources, Incorporated
Analytical Chemists and Consultants
4611 South 134th Place, Suite 100
Tukwila, WA 98168
206-695-6200. 206-695-6201 (fax)

ARI Assigned Number: XZ00						Turn-around Requested: standard					
ARI Client Company: Golden Associates						Phone: 425 883-0777					
Client Contact: Douglas Movell											
Client Project Name: MasterPark Lot C											
Client Project #: 073-93368-06-09A						Samplers: Lamberts					
Sample ID	Date	Time	Matrix	No Containers							
Trip Blank	2/12/14	-	DI	2							
MPLOT C-MW-9-021214		1230	W	7							
MPLOT C-MW-13-021214		1340	W	7							
MPLOT C-MW-18-021214		1515	W	7							
Comments/Special Instructions As cc dmovell@golder.com jlamberts@golder.com					Relinquished by (Signature) [Signature] Printed Name J. Lamberts		Received by (Signature) [Signature] Printed Name Jennifer Millsap		Relinquished by (Signature) [Signature] Printed Name		
Company: Golder					Company:		Company		Company		
Ecology Elm EDD					Date & Time 2/12/2014 1556		Date & Time 2/12/14 1530		Date & Time		

Limits of Liability: ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, not withstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Client.

Please analyze under existing MSA between Golden + ARZ

Sample Retention Policy: All samples submitted to ARI will be appropriately discarded no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer, unless alternate retention schedules have been established by work-order or contract.

*** end of sampling for now, 3 more coming at a later date *

Analytical Resources, Incorporated
Analytical Chemists and Consultants
4611 South 134th Place, Suite 100
Tukwila, WA 98168
206-695-6200 206-695-6201 (fax)

Received by _____
(Signature)
Printed Name _____
Jennifer Millsap

Please analyze per existing MSA between Giddula + ARE /

Sample Retention Policy: All samples submitted to ARI will be appropriately discarded no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer, unless alternate retention schedules have been established by work-order or contract.

X790 : 00008

ORGANICS ANALYSIS DATA SHEET

Volatiles by Purge & Trap GC/MS-Method SW8260C
Page 1 of 1Sample ID: MPLOT-MW-6-021114
SAMPLE

Lab Sample ID: XY90A

LIMS ID: 14-2273

Matrix: Water

Data Release Authorized: *[Signature]*

Reported: 02/27/14

QC Report No: XY90-Golder Associates

Project: Master Park Lot C

073-93368-06-09A

Date Sampled: 02/11/14

Date Received: 02/11/14

Instrument/Analyst: NT2/PAB

Date Analyzed: 02/19/14 17:21

Sample Amount: 10.0 mL

Purge Volume: 10.0 mL

CAS Number	Analyte	DL	LOQ	Result
106-93-4	1,2-Dibromoethane	0.08	0.20	< 0.20 U
91-20-3	Naphthalene	0.12	0.50	< 0.50 U
110-54-3	Hexane	0.10	0.20	< 0.20 U

Reported in µg/L (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	95.2%
d8-Toluene	100%
Bromofluorobenzene	96.0%
d4-1,2-Dichlorobenzene	98.4%

jsl 4/7/2014

ORGANICS ANALYSIS DATA SHEET

Volatiles by Purge & Trap GC/MS-Method SW8260C
Page 1 of 1Sample ID: MPLOT-MW-21-021114
SAMPLE

Lab Sample ID: XY90B

LIMS ID: 14-2274

Matrix: Water

Data Release Authorized: *MM*

Reported: 02/27/14

QC Report No: XY90-Golder Associates

Project: Master Park Lot C

073-93368-06-09A

Date Sampled: 02/11/14

Date Received: 02/11/14

Instrument/Analyst: NT2/PAB

Date Analyzed: 02/19/14 17:48

Sample Amount: 10.0 mL

Purge Volume: 10.0 mL

CAS Number	Analyte	DL	LOQ	Result
106-93-4	1,2-Dibromoethane	0.08	0.20	< 0.20 U
91-20-3	Naphthalene	0.12	0.50	< 0.50 U
110-54-3	Hexane	0.10	0.20	< 0.20 U

Reported in µg/L (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	98.5%
d8-Toluene	98.0%
Bromofluorobenzene	98.0%
d4-1,2-Dichlorobenzene	102%

jsl 4/7/2014

ORGANICS ANALYSIS DATA SHEET

Volatiles by Purge & Trap GC/MS-Method SW8260C
Page 1 of 1Sample ID: MPLOTG-MW-17A-021114
SAMPLEANALYTICAL
RESOURCES
INCORPORATED 

Lab Sample ID: XY90C

LIMS ID: 14-2275

Matrix: Water

Data Release Authorized: *MW*

Reported: 02/27/14

QC Report No: XY90-Golder Associates

Project: Master Park Lot C

073-93368-06-09A

Date Sampled: 02/11/14

Date Received: 02/11/14

Instrument/Analyst: NT2/PAB

Date Analyzed: 02/19/14 18:14

Sample Amount: 10.0 mL

Purge Volume: 10.0 mL

CAS Number	Analyte	DL	LOQ	Result
106-93-4	1,2-Dibromoethane	0.08	0.20	< 0.20 U
91-20-3	Naphthalene	0.12	0.50	0.74
110-54-3	Hexane	0.10	0.20	< 0.20 U

Reported in µg/L (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	98.2%
d8-Toluene	94.0%
Bromofluorobenzene	96.3%
d4-1,2-Dichlorobenzene	101%

jsl 4/7/2014

ORGANICS ANALYSIS DATA SHEET

Volatiles by Purge & Trap GC/MS-Method SW8260C

Page 1 of 1

Sample ID: MPL0TC-MW-19-021114

SAMPLE

ANALYTICAL
RESOURCES
INCORPORATED

Lab Sample ID: XY90D

LIMS ID: 14-2276

Matrix: Water

Data Release Authorized: *mw*

Reported: 02/27/14

QC Report No: XY90-Golder Associates

Project: Master Park Lot C

073-93368-06-09A

Date Sampled: 02/11/14

Date Received: 02/11/14

Instrument/Analyst: NT2/PAB

Date Analyzed: 02/19/14 18:40

Sample Amount: 10.0 mL

Purge Volume: 10.0 mL

CAS Number	Analyte	DL	LOQ	Result
106-93-4	1,2-Dibromoethane	0.08	0.20	< 0.20 U
91-20-3	Naphthalene	0.12	0.50	< 0.50 U
110-54-3	Hexane	0.10	0.20	4.3

Reported in µg/L (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	102%
d8-Toluene	95.5%
Bromofluorobenzene	93.1%
d4-1,2-Dichlorobenzene	97.5%

jsl 4/7/2014

ORGANICS ANALYSIS DATA SHEET

Volatiles by Purge & Trap GC/MS-Method SW8260C

Sample ID: Trip Blanks

Page 1 of 1

SAMPLE

Lab Sample ID: XY90E

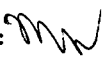
QC Report No: XY90-Golder Associates

LIMS ID: 14-2277

Project: Master Park Lot C

Matrix: Water

073-93368-06-09A

Data Release Authorized: 

Date Sampled: 02/11/14

Reported: 02/27/14

Date Received: 02/11/14

Instrument/Analyst: NT2/PAB

Sample Amount: 10.0 mL

Date Analyzed: 02/19/14 11:30

Purge Volume: 10.0 mL

CAS Number	Analyte	DL	LOQ	Result
106-93-4	1,2-Dibromoethane	0.08	0.20	< 0.20 U
91-20-3	Naphthalene	0.12	0.50	< 0.50 U
110-54-3	Hexane	0.10	0.20	< 0.20 U

Reported in µg/L (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	101%
d8-Toluene	98.7%
Bromofluorobenzene	96.3%
d4-1,2-Dichlorobenzene	99.2%

jsl 4/7/2014

ORGANICS ANALYSIS DATA SHEET

Volatiles by Purge & Trap GC/MS-Method SW8260C

Page 1 of 1

ANALYTICAL
RESOURCES
INCORPORATED

Sample ID: MPLOTG-MW-9-021214

SAMPLE

Lab Sample ID: XZ00A

LIMS ID: 14-2376

Matrix: Water

Data Release Authorized: *JS*

Reported: 02/27/14

QC Report No: XZ00-Golder Associates

Project: Master Park Lot C

073-93368-06-09A

Date Sampled: 02/12/14

Date Received: 02/12/14

Instrument/Analyst: NT2/PKC

Date Analyzed: 02/13/14 17:57

Sample Amount: 10.0 mL

Purge Volume: 10.0 mL

CAS Number	Analyte	DL	LOQ	Result
106-93-4	1,2-Dibromoethane	0.08	0.20	< 0.20 U
91-20-3	Naphthalene	0.12	0.50	100 E J DNR
110-54-3	Hexane	0.10	0.20	16

Reported in µg/L (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	143%
d8-Toluene	111%
Bromofluorobenzene	105%
d4-1,2-Dichlorobenzene	103%

jsl 4/7/2014

ORGANICS ANALYSIS DATA SHEET

Volatiles by Purge & Trap GC/MS-Method SW8260C

Page 1 of 1

ANALYTICAL
RESOURCES
INCORPORATED

Sample ID: MPLOT-MW-9-021214

DILUTION

Lab Sample ID: XZ00A

LIMS ID: 14-2376

Matrix: Water

Data Release Authorized: 

Reported: 02/27/14

QC Report No: XZ00-Golder Associates

Project: Master Park Lot C

073-93368-06-09A

Date Sampled: 02/12/14

Date Received: 02/12/14

Instrument/Analyst: NT2/PKC

Date Analyzed: 02/18/14 21:03

Sample Amount: 2.00 mL

Purge Volume: 10.0 mL

CAS Number	Analyte	DL	LOQ	Result	
106-93-4	1,2-Dibromoethane	0.38	1.0	< 1.0 U	DNR
91-20-3	Naphthalene	0.59	2.5	120	
110-54-3	Hexane	0.48	1.0	13	DNR

Reported in µg/L (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	98.8%
d8-Toluene	107%
Bromofluorobenzene	98.8%
d4-1,2-Dichlorobenzene	103%

jsl 4/7/2014

ORGANICS ANALYSIS DATA SHEET

Volatiles by Purge & Trap GC/MS-Method SW8260C

Page 1 of 1

ANALYTICAL
RESOURCES
INCORPORATED

Sample ID: MPLOTG-MW-13-021214

SAMPLE

Lab Sample ID: XZ00B

LIMS ID: 14-2377

Matrix: Water

Data Release Authorized: *JS*

Reported: 02/27/14

QC Report No: XZ00-Golder Associates

Project: Master Park Lot C

073-93368-06-09A

Date Sampled: 02/12/14

Date Received: 02/12/14

Instrument/Analyst: NT2/PKC

Date Analyzed: 02/13/14 18:24

Sample Amount: 10.0 mL

Purge Volume: 10.0 mL

CAS Number	Analyte	DL	LOQ	Result
106-93-4	1,2-Dibromoethane	0.08	0.20	< 0.20 U
91-20-3	Naphthalene	0.12	0.50	33
110-54-3	Hexane	0.10	0.20	< 0.20 U

Reported in µg/L (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	123%
d8-Toluene	110%
Bromofluorobenzene	86.3%
d4-1,2-Dichlorobenzene	104%

jsl 4/7/2014

ORGANICS ANALYSIS DATA SHEET

Volatiles by Purge & Trap GC/MS-Method SW8260C

Page 1 of 1

ANALYTICAL
RESOURCES
INCORPORATED

Sample ID: MPLOT-MW-18-021214

SAMPLE

Lab Sample ID: XZ00C

LIMS ID: 14-2378

Matrix: Water

Data Release Authorized: 

Reported: 02/27/14

QC Report No: XZ00-Golder Associates

Project: Master Park Lot C

073-93368-06-09A

Date Sampled: 02/12/14

Date Received: 02/12/14

Instrument/Analyst: NT2/PKC

Date Analyzed: 02/13/14 18:50

Sample Amount: 10.0 mL

Purge Volume: 10.0 mL

CAS Number	Analyte	DL	LOQ	Result
106-93-4	1,2-Dibromoethane	0.08	0.20	< 0.20 U
91-20-3	Naphthalene	0.12	0.50	4.0
110-54-3	Hexane	0.10	0.20	1.1

Reported in µg/L (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	97.0%
d8-Toluene	103%
Bromofluorobenzene	103%
d4-1,2-Dichlorobenzene	103%

jsl 4/7/2014

ORGANICS ANALYSIS DATA SHEET

Volatiles by Purge & Trap GC/MS-Method SW8260C

Page 1 of 1

Sample ID: Trip Blank
SAMPLE

Lab Sample ID: XZ00D

LIMS ID: 14-2379

Matrix: Water

Data Release Authorized: *[Signature]*

Reported: 02/27/14

QC Report No: XZ00-Golder Associates

Project: Master Park Lot C

073-93368-06-09A

Date Sampled: 02/12/14

Date Received: 02/12/14

Instrument/Analyst: NT2/PKC

Date Analyzed: 02/13/14 17:10

Sample Amount: 10.0 mL

Purge Volume: 10.0 mL

CAS Number	Analyte	DL	LOQ	Result
106-93-4	1,2-Dibromoethane	0.08	0.20	< 0.20 U
91-20-3	Naphthalene	0.12	0.50	< 0.50 U
110-54-3	Hexane	0.10	0.20	< 0.20 U

Reported in µg/L (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	100%
d8-Toluene	96.4%
Bromofluorobenzene	102%
d4-1,2-Dichlorobenzene	98.8%

jsl 4/7/2014

ORGANICS ANALYSIS DATA SHEET

Volatiles by Purge & Trap GC/MS-Method SW8260C
Page 1 of 1

Sample ID: MPL0TC-FB-021314
SAMPLE

ANALYTICAL
RESOURCES
INCORPORATED



Lab Sample ID: XZ26A

LIMS ID: 14-2504

Matrix: Water

Data Release Authorized: *W*

Reported: 02/28/14

QC Report No: XZ26-Golder Associates

Project: Master Park Lot C

073-93368-06-09A

Date Sampled: 02/13/14

Date Received: 02/13/14

Instrument/Analyst: NT2/PAB

Date Analyzed: 02/21/14 15:04

Sample Amount: 10.0 mL

Purge Volume: 10.0 mL

CAS Number	Analyte	DL	LOQ	Result
106-93-4	1,2-Dibromoethane	0.08	0.20	< 0.20 U
91-20-3	Naphthalene	0.12	0.50	< 0.50 U
110-54-3	Hexane	0.10	0.20	0.18 J

Reported in µg/L (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	93.7%
d8-Toluene	94.8%
Bromofluorobenzene	95.4%
d4-1,2-Dichlorobenzene	102%

jsl 4/7/2014

ORGANICS ANALYSIS DATA SHEET

Volatiles by Purge & Trap GC/MS-Method SW8260C
Page 1 of 1Sample ID: MPL0TC-MW-7-021314
SAMPLE

Lab Sample ID: XZ26B

LIMS ID: 14-2505

Matrix: Water

Data Release Authorized: *MW*

Reported: 02/28/14

QC Report No: XZ26-Golder Associates

Project: Master Park Lot C

073-93368-06-09A

Date Sampled: 02/13/14

Date Received: 02/13/14

Instrument/Analyst: NT2/PAB

Date Analyzed: 02/24/14 20:28

Sample Amount: 0.20 mL

Purge Volume: 10.0 mL

CAS Number	Analyte	DL	LOQ	Result
106-93-4	1,2-Dibromoethane	3.8	10	< 10 U
91-20-3	Naphthalene	5.9	25	220
110-54-3	Hexane	4.8	10	190

Reported in µg/L (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	88.1%
d8-Toluene	94.4%
Bromofluorobenzene	96.1%
d4-1,2-Dichlorobenzene	100%

jsl 4/7/2014

ORGANICS ANALYSIS DATA SHEET

Volatiles by Purge & Trap GC/MS-Method SW8260C

Page 1 of 1

ANALYTICAL
RESOURCES
INCORPORATED

Sample ID: MPL0TC-MW-12-021314

SAMPLE

Lab Sample ID: XZ26C

LIMS ID: 14-2506

Matrix: Water

Data Release Authorized: *MW*

Reported: 02/28/14

QC Report No: XZ26-Golder Associates

Project: Master Park Lot C

073-93368-06-09A

Date Sampled: 02/13/14

Date Received: 02/13/14

Instrument/Analyst: NT2/PAB

Date Analyzed: 02/24/14 20:57

Sample Amount: 0.20 mL

Purge Volume: 10.0 mL

CAS Number	Analyte	DL	LOQ	Result
106-93-4	1,2-Dibromoethane	3.8	10	< 10 U
91-20-3	Naphthalene	5.9	25	25
110-54-3	Hexane	4.8	10	< 10 U

Reported in µg/L (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	93.3%
d8-Toluene	91.2%
Bromofluorobenzene	94.0%
d4-1,2-Dichlorobenzene	100%

jsl 4/7/2014

ORGANICS ANALYSIS DATA SHEET

Volatiles by Purge & Trap GC/MS-Method SW8260C
Page 1 of 1Sample ID: Trip Blank
SAMPLE

Lab Sample ID: XZ26D

LIMS ID: 14-2507

Matrix: Water

Data Release Authorized: *mmw*

Reported: 02/28/14

QC Report No: XZ26-Golder Associates

Project: Master Park Lot C

073-93368-06-09A

Date Sampled: 02/13/14

Date Received: 02/13/14

Instrument/Analyst: NT2/PAB

Date Analyzed: 02/24/14 19:59

Sample Amount: 10.0 mL

Purge Volume: 10.0 mL

CAS Number	Analyte	DL	LOQ	Result
106-93-4	1,2-Dibromoethane	0.08	0.20	< 0.20 U
91-20-3	Naphthalene	0.12	0.50	< 0.50 U
110-54-3	Hexane	0.10	0.20	< 0.20 U

Reported in µg/L (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	98.3%
d8-Toluene	94.9%
Bromofluorobenzene	94.8%
d4-1,2-Dichlorobenzene	101%

jsl 4/7/2014

**ORGANICS ANALYSIS DATA SHEET
TOTAL DIESEL RANGE HYDROCARBONS**

 NWTPHD by GC/FID
 Extraction Method: SW3510C
 Page 1 of 1

 QC Report No: XY90-Golder Associates
 Project: Master Park Lot C
 073-93368-06-09A

Matrix: Water

Date Received: 02/11/14

 Data Release Authorized: 
 Reported: 02/20/14

ARI ID	Sample ID	Analysis Date	DF	Range	Result	RL	MDL
XY90A 14-2273	MPLOT-MW-6-021114	02/14/14 FID3B	1.0	Diesel	< 0.10 U	0.10	0.02
				Motor Oil	< 0.20 U	0.20	0.04
				HC ID	---		
				o-Terphenyl	92.9%		
XY90B 14-2274	MPLOT-MW-21-021114	02/14/14 FID3B	1.0	Diesel	< 0.10 U	0.10	0.02
				Motor Oil	< 0.20 U	0.20	0.04
				HC ID	---		
				o-Terphenyl	95.4%		
MB-021314 14-2275	Method Blank	02/14/14 FID3B	1.0	Diesel Range	< 0.10 U	0.10	0.02
				Motor Oil Range	< 0.20 U	0.20	0.04
				HC ID	---		
				o-Terphenyl	84.6%		
XY90C 14-2275	MPLOT-MW-17A-021114	02/14/14 FID3B	1.0	Diesel	< 0.10 U	0.10	0.02
				Motor Oil	< 0.20 U	0.20	0.04
				HC ID	---		
				o-Terphenyl	87.2%		
XY90D 14-2276	MPLOT-MW-19-021114	02/14/14 FID3B	1.0	Diesel	< 0.10 U	0.10	0.02
				Motor Oil	< 0.20 U	0.20	0.04
				HC ID	---		
				o-Terphenyl	81.4%		

Reported in mg/L (ppm)

Diesel quantitation on total peaks in the range from C12 to C24.
 Motor Oil quantitation on total peaks in the range from C24 to C38.
 HC ID: DRO/RRO indicates results of organics or additional hydrocarbons in ranges are not identifiable.

jsl 4/7/2014

ORGANICS ANALYSIS DATA SHEET
TOTAL DIESEL RANGE HYDROCARBONS
NWTPHD by GC/FID
Extraction Method: SW3510C
Page 1 of 1



QC Report No: XZ00-Golder Associates
Project: Master Park Lot C
073-93368-06-09A

Matrix: Water

Date Received: 02/12/14

Data Release Authorized: *MW*
Reported: 02/24/14

ARI ID	Sample ID	Analysis Date	DF	Range	Result	RL	MDL
MB-021314 14-2376	Method Blank	02/14/14 FID3B	1.0	Diesel Range Motor Oil Range HC ID o-Terphenyl	< 0.10 U < 0.20 U --- 79.2%	0.10 0.20	0.02 0.04
XZ00A 14-2376	MPL0TC-MW-9-021214	02/14/14 FID3B	1.0	Diesel Motor Oil HC ID o-Terphenyl	1.6 J < 0.20 U DRO 73.4%	0.10 0.20	0.02 0.04
XZ00B 14-2377	MPL0TC-MW-13-021214	02/14/14 FID3B	1.0	Diesel Motor Oil HC ID o-Terphenyl	1.4 J < 0.20 U DRO 62.8%	0.10 0.20	0.02 0.04
XZ00C 14-2378	MPL0TC-MW-18-021214	02/14/14 FID3B	1.0	Diesel Motor Oil HC ID o-Terphenyl	0.77 J < 0.20 U DRO 65.4%	0.10 0.20	0.02 0.04

Reported in mg/L (ppm)

Diesel quantitation on total peaks in the range from C12 to C24.
Motor Oil quantitation on total peaks in the range from C24 to C38.
HC ID: DRO/RRO indicates results of organics or additional hydrocarbons in ranges are not identifiable.

jsl 4/7/2014

ORGANICS ANALYSIS DATA SHEET
 TOTAL DIESEL RANGE HYDROCARBONS
 NWT PHD by GC/FID
 Extraction Method: SW3510C
 Page 1 of 1



QC Report No: XZ26-Golder Associates
 Project: Master Park Lot C
 073-93368-06-09A

Matrix: Water

Date Received: 02/13/14

Data Release Authorized: *MW*
 Reported: 02/24/14

ARI ID	Sample ID	Analysis Date	DF	Range	Result	RL	MDL
MB-021714 14-2504	Method Blank	02/17/14 FID3B	1.0	Diesel Range Motor Oil Range HC ID o-Terphenyl	< 0.10 U < 0.20 U --- 90.4%	0.10 0.20	0.02 0.04
XZ26A 14-2504	MPL0TC-FB-021314	02/17/14 FID3B	1.0	Diesel Motor Oil HC ID o-Terphenyl	< 0.10 U < 0.20 U --- 85.6%	0.10 0.20	0.02 0.04
XZ26B 14-2505	MPL0TC-MW-7-021314	02/17/14 FID3B	1.0	Diesel Motor Oil HC ID o-Terphenyl	12 E J DNR < 0.20 U DRO 54.0%	0.10 0.20	0.02 0.04
XZ26B DL 14-2505	MPL0TC-MW-7-021314	02/18/14 FID3B	10	Diesel Motor Oil HC ID o-Terphenyl	11 J < 2.0 U DRO 88.0%	1.0 2.0	0.22 0.44
XZ26C 14-2506	MPL0TC-MW-12-021314	02/17/14 FID3B	1.0	Diesel Motor Oil HC ID o-Terphenyl	1.1 J < 0.20 U DRO 77.4%	0.10 0.20	0.02 0.04

Reported in mg/L (ppm)

Diesel quantitation on total peaks in the range from C12 to C24.
 Motor Oil quantitation on total peaks in the range from C24 to C38.
 HC ID: DRO/RRO indicates results of organics or additional hydrocarbons in
 ranges are not identifiable.

jsl 4/7/2014

ORGANICS ANALYSIS DATA SHEET

BETX by Method SW8021BMod

TPHG by Method NWTPHG

Page 1 of 1

Sample ID: MPLOTG-MW-6-021114

SAMPLE

Lab Sample ID: XY90A

LIMS ID: 14-2273

Matrix: Water

Data Release Authorized: 

Reported: 02/21/14

QC Report No: XY90-Golder Associates

Project: Master Park Lot C

Event: 073-93368-06-09A

Date Sampled: 02/11/14

Date Received: 02/11/14

Date Analyzed: 02/17/14 18:15

Instrument/Analyst: PID1/PKC

Purge Volume: 5.0 mL

Dilution Factor: 1.00

CAS Number	Analyte	DL	LOQ	Result
71-43-2	Benzene	0.028	0.25	< 0.25 U
108-88-3	Toluene	0.014	0.25	< 0.25 U
100-41-4	Ethylbenzene	0.028	0.25	< 0.25 U
179601-23-1	m,p-Xylene	0.022	0.50	< 0.50 U
95-47-6	o-Xylene	0.027	0.25	< 0.25 U

Gasoline Range Hydrocarbons	0.057	0.10	< 0.10 U	GAS ID ---
-----------------------------	-------	------	----------	---------------

BETX Surrogate Recovery

Trifluorotoluene	89.0%
Bromobenzene	87.7%

Gasoline Surrogate Recovery

Trifluorotoluene	93.5%
Bromobenzene	91.7%

BETX values reported in µg/L (ppb)
Gasoline values reported in mg/L (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.

GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

jsl 4/7/2014

Sample ID: MPLOT-MW-21-021114
SAMPLE

Lab Sample ID: XY90B

LIMS ID: 14-2274

Matrix: Water

Data Release Authorized: *JS*

Reported: 02/21/14

QC Report No: XY90-Golder Associates

Project: Master Park Lot C

Event: 073-93368-06-09A

Date Sampled: 02/11/14

Date Received: 02/11/14

Date Analyzed: 02/17/14 18:45

Instrument/Analyst: PID1/PKC

Purge Volume: 5.0 mL

Dilution Factor: 1.00

CAS Number	Analyte	DL	LOQ	Result
71-43-2	Benzene	0.028	0.25	< 0.25 U
108-88-3	Toluene	0.014	0.25	< 0.25 U
100-41-4	Ethylbenzene	0.028	0.25	< 0.25 U
179601-23-1	m,p-Xylene	0.022	0.50	< 0.50 U
95-47-6	o-Xylene	0.027	0.25	< 0.25 U

Gasoline Range Hydrocarbons	0.057	0.10	< 0.10 U	GAS ID ---
-----------------------------	-------	------	----------	---------------

BETX Surrogate Recovery

Trifluorotoluene	88.7%
Bromobenzene	86.7%

Gasoline Surrogate Recovery

Trifluorotoluene	93.8%
Bromobenzene	90.9%

BETX values reported in µg/L (ppb)
Gasoline values reported in mg/L (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.

GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

jsl 4/7/2014

Sample ID: MPLOTG-MW-17A-021114
SAMPLE

Lab Sample ID: XY90C

LIMS ID: 14-2275

Matrix: Water

Data Release Authorized: *AB*

Reported: 02/21/14

QC Report No: XY90-Golder Associates

Project: Master Park Lot C

Event: 073-93368-06-09A

Date Sampled: 02/11/14

Date Received: 02/11/14

Date Analyzed: 02/17/14 19:14

Instrument/Analyst: PID1/PKC

Purge Volume: 5.0 mL

Dilution Factor: 1.00

CAS Number	Analyte	DL	LOQ	Result
71-43-2	Benzene	0.028	0.25	< 0.25 U
108-88-3	Toluene	0.014	0.25	< 0.25 U
100-41-4	Ethylbenzene	0.028	0.25	< 0.25 U
179601-23-1	m,p-Xylene	0.022	0.50	< 0.50 U
95-47-6	o-Xylene	0.027	0.25	< 0.25 U

Gasoline Range Hydrocarbons	0.057	0.10	< 0.10 U	GAS ID ---
-----------------------------	-------	------	----------	---------------

BETX Surrogate Recovery

Trifluorotoluene	88.1%
Bromobenzene	87.3%

Gasoline Surrogate Recovery

Trifluorotoluene	93.8%
Bromobenzene	91.7%

BETX values reported in µg/L (ppb)
Gasoline values reported in mg/L (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.

GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

jsl 4/7/2014

Sample ID: MPLOTG-MW-19-021114
SAMPLE

Lab Sample ID: XY90D

LIMS ID: 14-2276

Matrix: Water

Data Release Authorized:

Reported: 02/21/14

QC Report No: XY90-Golder Associates

Project: Master Park Lot C

Event: 073-93368-06-09A

Date Sampled: 02/11/14

Date Received: 02/11/14

Date Analyzed: 02/17/14 20:41

Instrument/Analyst: PID1/PKC

Purge Volume: 5.0 mL

Dilution Factor: 1.00

CAS Number	Analyte	DL	LOQ	Result
71-43-2	Benzene	0.028	0.25	< 0.25 U
108-88-3	Toluene	0.014	0.25	< 0.25 U
100-41-4	Ethylbenzene	0.028	0.25	< 0.25 U
179601-23-1	m,p-Xylene	0.022	0.50	< 0.50 U
95-47-6	o-Xylene	0.027	0.25	< 0.25 U

Gasoline Range Hydrocarbons	0.057	0.10	< 0.10 U	GAS ID ---
-----------------------------	-------	------	----------	---------------

BETX Surrogate Recovery

Trifluorotoluene	89.2%
Bromobenzene	89.1%

Gasoline Surrogate Recovery

Trifluorotoluene	93.7%
Bromobenzene	93.6%

BETX values reported in µg/L (ppb)
Gasoline values reported in mg/L (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.

GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

jsl 4/7/2014

Sample ID: Trip Blanks
SAMPLE

Lab Sample ID: XY90E
LIMS ID: 14-2277
Matrix: Water
Data Release Authorized:
Reported: 02/21/14

QC Report No: XY90-Golder Associates
Project: Master Park Lot C
Event: 073-93368-06-09A
Date Sampled: 02/11/14
Date Received: 02/11/14

Date Analyzed: 02/17/14 13:53
Instrument/Analyst: PID1/PKC

Purge Volume: 5.0 mL
Dilution Factor: 1.00

CAS Number	Analyte	DL	LOQ	Result
71-43-2	Benzene	0.028	0.25	< 0.25 U
108-88-3	Toluene	0.014	0.25	< 0.25 U
100-41-4	Ethylbenzene	0.028	0.25	< 0.25 U
179601-23-1	m,p-Xylene	0.022	0.50	< 0.50 U
95-47-6	o-Xylene	0.027	0.25	< 0.25 U

Gasoline Range Hydrocarbons	0.057	0.10	< 0.10 U	GAS ID ---
-----------------------------	-------	------	----------	---------------

BETX Surrogate Recovery

Trifluorotoluene	89.5%
Bromobenzene	83.4%

Gasoline Surrogate Recovery

Trifluorotoluene	94.9%
Bromobenzene	86.3%

BETX values reported in µg/L (ppb)
Gasoline values reported in mg/L (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.
GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

jsl 4/7/2014

ORGANICS ANALYSIS DATA SHEET
BETX by Method SW8021BMod
TPHG by Method NWTPHG
Page 1 of 1



Sample ID: MPLOT-MW-9-021214
SAMPLE

Lab Sample ID: XZ00A
LIMS ID: 14-2376
Matrix: Water
Data Release Authorized: *AB*
Reported: 02/21/14

QC Report No: XZ00-Golder Associates
Project: Master Park Lot C
Event: 073-93368-06-09A
Date Sampled: 02/12/14
Date Received: 02/12/14

Date Analyzed: 02/17/14 21:11
Instrument/Analyst: PID1/PKC

Purge Volume: 5.0 mL
Dilution Factor: 1.00

CAS Number	Analyte	DL	LOQ	Result
71-43-2	Benzene	0.028	0.25	30
108-88-3	Toluene	0.014	0.25	8.1
100-41-4	Ethylbenzene	0.028	0.25	150
179601-23-1	m,p-Xylene	0.022	0.50	97
95-47-6	o-Xylene	0.027	0.25	1.0

Gasoline Range Hydrocarbons	0.057	0.10	7.5	GAS ID GAS
-----------------------------	-------	------	-----	---------------

BETX Surrogate Recovery

Trifluorotoluene	97.2%
Bromobenzene	97.3%

Gasoline Surrogate Recovery

Trifluorotoluene	98.1%
Bromobenzene	102%

BETX values reported in µg/L (ppb)
Gasoline values reported in mg/L (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.

GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

jsl 4/7/2014

ORGANICS ANALYSIS DATA SHEET
 BETX by Method SW8021BMod
 TPHG by Method NWTPHG
 Page 1 of 1



Sample ID: MPLOTG-MW-13-021214
 SAMPLE

Lab Sample ID: XZ00B
 LIMS ID: 14-2377
 Matrix: Water
 Data Release Authorized: *[Signature]*
 Reported: 02/21/14

QC Report No: XZ00-Golder Associates
 Project: Master Park Lot C
 Event: 073-93368-06-09A
 Date Sampled: 02/12/14
 Date Received: 02/12/14

Date Analyzed: 02/17/14 21:40
 Instrument/Analyst: PID1/PKC

Purge Volume: 5.0 mL
 Dilution Factor: 1.00

CAS Number	Analyte	DL	LOQ	Result	
71-43-2	Benzene	0.028	0.25	< 0.25 U	
108-88-3	Toluene	0.014	0.25	3.2	DNR
100-41-4	Ethylbenzene	0.028	0.25	230 E	DNR
179601-23-1	m,p-Xylene	0.022	0.50	1,500 ES	DNR
95-47-6	o-Xylene	0.027	0.25	260 E	DNR
Gasoline Range Hydrocarbons		0.057	0.10	13 E	GAS ID GAS DNR

BETX Surrogate Recovery

Trifluorotoluene	90.9%
Bromobenzene	92.2%

Gasoline Surrogate Recovery

Trifluorotoluene	93.7%
Bromobenzene	93.2%

BETX values reported in µg/L (ppb)
 Gasoline values reported in mg/L (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.
 GRO: Positive result that does not match an identifiable gasoline pattern.
 Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

jsl 4/7/2014

ORGANICS ANALYSIS DATA SHEET
BETX by Method SW8021BMod
TPHG by Method NWTPHG
Page 1 of 1



Sample ID: MPLOT-MW-13-021214
DILUTION

Lab Sample ID: XZ00B
LIMS ID: 14-2377
Matrix: Water
Data Release Authorized: 
Reported: 02/21/14

QC Report No: XZ00-Golder Associates
Project: Master Park Lot C
Event: 073-93368-06-09A
Date Sampled: 02/12/14
Date Received: 02/12/14

Date Analyzed: 02/18/14 13:25
Instrument/Analyst: PID1/PKC

Purge Volume: 5.0 mL
Dilution Factor: 10.0

CAS Number	Analyte	DL	LOQ	Result	
71-43-2	Benzene	0.28	2.5	< 2.5 U	DNR
108-88-3	Toluene	0.14	2.5	3.9	
100-41-4	Ethylbenzene	0.28	2.5	240	
179601-23-1	m,p-Xylene	0.22	5.0	1,800	
95-47-6	o-Xylene	0.27	2.5	270	
Gasoline Range Hydrocarbons		0.057	1.0	14	GAS ID GAS

BETX Surrogate Recovery

Trifluorotoluene	92.8%
Bromobenzene	88.5%

Gasoline Surrogate Recovery

Trifluorotoluene	97.1%
Bromobenzene	89.8%

BETX values reported in µg/L (ppb)
Gasoline values reported in mg/L (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.

GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

jsl 4/7/2014

ORGANICS ANALYSIS DATA SHEET
BETX by Method SW8021BMod
TPHG by Method NWTPHG
Page 1 of 1

Sample ID: MPLOT-MW-18-021214
SAMPLE

Lab Sample ID: XZ00C
LIMS ID: 14-2378
Matrix: Water
Data Release Authorized: *[Signature]*
Reported: 02/21/14

QC Report No: XZ00-Golder Associates
Project: Master Park Lot C
Event: 073-93368-06-09A
Date Sampled: 02/12/14
Date Received: 02/12/14

Date Analyzed: 02/17/14 22:09
Instrument/Analyst: PID1/PKC

Purge Volume: 5.0 mL
Dilution Factor: 1.00

CAS Number	Analyte	DL	LOQ	Result
71-43-2	Benzene	0.028	0.25	27
108-88-3	Toluene	0.014	0.25	13
100-41-4	Ethylbenzene	0.028	0.25	17
179601-23-1	m,p-Xylene	0.022	0.50	90
95-47-6	o-Xylene	0.027	0.25	1.3

Gasoline Range Hydrocarbons	0.057	0.10	1.0	GAS ID GAS
-----------------------------	-------	------	-----	---------------

BETX Surrogate Recovery

Trifluorotoluene	96.2%
Bromobenzene	89.6%

Gasoline Surrogate Recovery

Trifluorotoluene	96.4%
Bromobenzene	92.7%

BETX values reported in µg/L (ppb)
Gasoline values reported in mg/L (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.
GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

jsl 4/7/2014

ORGANICS ANALYSIS DATA SHEET
BETX by Method SW8021BMod
TPHG by Method NWTPHG
Page 1 of 1



Sample ID: Trip Blank
SAMPLE

Lab Sample ID: XZ00D
LIMS ID: 14-2379
Matrix: Water
Data Release Authorized: *A*
Reported: 02/21/14

QC Report No: XZ00-Golder Associates
Project: Master Park Lot C
Event: 073-93368-06-09A
Date Sampled: 02/12/14
Date Received: 02/12/14

Date Analyzed: 02/17/14 14:22
Instrument/Analyst: PID1/PKC

Purge Volume: 5.0 mL
Dilution Factor: 1.00

CAS Number	Analyte	DL	LOQ	Result
71-43-2	Benzene	0.028	0.25	< 0.25 U
108-88-3	Toluene	0.014	0.25	< 0.25 U
100-41-4	Ethylbenzene	0.028	0.25	< 0.25 U
179601-23-1	m,p-Xylene	0.022	0.50	< 0.50 U
95-47-6	o-Xylene	0.027	0.25	< 0.25 U

Gasoline Range Hydrocarbons	0.057	0.10	< 0.10 U	GAS ID ---
-----------------------------	-------	------	----------	---------------

BETX Surrogate Recovery

Trifluorotoluene	88.6%
Bromobenzene	82.6%

Gasoline Surrogate Recovery

Trifluorotoluene	94.4%
Bromobenzene	84.6%

BETX values reported in µg/L (ppb)
Gasoline values reported in mg/L (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.
GRO: Positive result that does not match an identifiable gasoline pattern.
Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

jsl 4/7/2014

Sample ID: MPlotC-FB-021314
SAMPLE

Lab Sample ID: XZ26A
LIMS ID: 14-2504
Matrix: Water
Data Release Authorized: *B*
Reported: 02/24/14

QC Report No: XZ26-Golder Associates
Project: Master Park Lot C
Event: 073-93368-06-09A
Date Sampled: 02/13/14
Date Received: 02/13/14

Date Analyzed: 02/17/14 23:37
Instrument/Analyst: PID1/PKC

Purge Volume: 5.0 mL
Dilution Factor: 1.00

CAS Number	Analyte	DL	LOQ	Result
71-43-2	Benzene	0.028	0.25	< 0.25 U
108-88-3	Toluene	0.014	0.25	< 0.25 U
100-41-4	Ethylbenzene	0.028	0.25	< 0.25 U
179601-23-1	m,p-Xylene	0.022	0.50	< 0.50 U
95-47-6	o-Xylene	0.027	0.25	< 0.25 U

Gasoline Range Hydrocarbons	0.057	0.10	< 0.10 U	GAS ID ---
-----------------------------	-------	------	----------	---------------

BETX Surrogate Recovery

Trifluorotoluene	87.2%
Bromobenzene	87.8%

Gasoline Surrogate Recovery

Trifluorotoluene	92.3%
Bromobenzene	91.2%

BETX values reported in µg/L (ppb)
Gasoline values reported in mg/L (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.
GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

jsl 4/7/2014

Sample ID: MPlotC-MW-7-021314
SAMPLE

Lab Sample ID: XZ26B
LIMS ID: 14-2505
Matrix: Water
Data Release Authorized: *[Signature]*
Reported: 02/24/14

QC Report No: XZ26-Golder Associates
Project: Master Park Lot C
Event: 073-93368-06-09A
Date Sampled: 02/13/14
Date Received: 02/13/14

Date Analyzed: 02/18/14 13:54
Instrument/Analyst: PID1/PKC

Purge Volume: 5.0 mL
Dilution Factor: 10.0

CAS Number	Analyte	DL	LOQ	Result
71-43-2	Benzene	0.28	2.5	25
108-88-3	Toluene	0.14	2.5	110
100-41-4	Ethylbenzene	0.28	2.5	180
179601-23-1	m,p-Xylene	0.22	5.0	2,000
95-47-6	o-Xylene	0.27	2.5	22

Gasoline Range Hydrocarbons	0.57	1.0	29	GAS ID GAS
-----------------------------	------	-----	----	---------------

BETX Surrogate Recovery

Trifluorotoluene	93.1%
Bromobenzene	90.7%

Gasoline Surrogate Recovery

Trifluorotoluene	97.1%
Bromobenzene	92.5%

BETX values reported in µg/L (ppb)
Gasoline values reported in mg/L (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.
GRO: Positive result that does not match an identifiable gasoline pattern.
Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

jsl 4/7/2014

ORGANICS ANALYSIS DATA SHEET

BETX by Method SW8021BMod

TPHG by Method NWTPHG

Page 1 of 1

ANALYTICAL
RESOURCES
INCORPORATED

Sample ID: MPL0TC-MW-12-021314

SAMPLE

Lab Sample ID: XZ26C

LIMS ID: 14-2506

Matrix: Water

Data Release Authorized: *AB*

Reported: 02/24/14

QC Report No: XZ26-Golder Associates

Project: Master Park Lot C

Event: 073-93368-06-09A

Date Sampled: 02/13/14

Date Received: 02/13/14

Date Analyzed: 02/18/14 14:24

Instrument/Analyst: PID1/PKC

Purge Volume: 5.0 mL

Dilution Factor: 5.00

CAS Number	Analyte	DL	LOQ	Result
71-43-2	Benzene	0.14	1.2	79
108-88-3	Toluene	0.070	1.2	410
100-41-4	Ethylbenzene	0.14	1.2	79
179601-23-1	m,p-Xylene	0.11	2.5	700
95-47-6	o-Xylene	0.14	1.2	270

Gasoline Range Hydrocarbons

0.28

0.50

8.6

GAS ID

GAS

BETX Surrogate Recovery

Trifluorotoluene	88.1%
Bromobenzene	88.2%

Gasoline Surrogate Recovery

Trifluorotoluene	93.9%
Bromobenzene	90.2%

BETX values reported in µg/L (ppb)

Gasoline values reported in mg/L (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.

GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

jsl 4/7/2014

ORGANICS ANALYSIS DATA SHEET
BETX by Method SW8021BMod
TPHG by Method NWTPHG
Page 1 of 1



Sample ID: Trip Blank
SAMPLE

Lab Sample ID: XZ26D

LIMS ID: 14-2507

Matrix: Water

Data Release Authorized: *AS*

Reported: 02/24/14

QC Report No: XZ26-Golder Associates

Project: Master Park Lot C

Event: 073-93368-06-09A

Date Sampled: 02/13/14

Date Received: 02/13/14

Date Analyzed: 02/17/14 14:51

Instrument/Analyst: PID1/PKC

Purge Volume: 5.0 mL

Dilution Factor: 1.00

CAS Number	Analyte	DL	LOQ	Result
71-43-2	Benzene	0.028	0.25	< 0.25 U
108-88-3	Toluene	0.014	0.25	< 0.25 U
100-41-4	Ethylbenzene	0.028	0.25	< 0.25 U
179601-23-1	m,p-Xylene	0.022	0.50	< 0.50 U
95-47-6	o-Xylene	0.027	0.25	< 0.25 U

Gasoline Range Hydrocarbons	0.057	0.10	< 0.10 U	GAS ID ---
-----------------------------	-------	------	----------	---------------

BETX Surrogate Recovery

Trifluorotoluene	89.1%
Bromobenzene	88.1%

Gasoline Surrogate Recovery

Trifluorotoluene	95.5%
Bromobenzene	89.8%

BETX values reported in µg/L (ppb)
Gasoline values reported in mg/L (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.

GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

jsl 4/7/2014

Analytical Resources, Incorporated
Analytical Chemists and Consultants
4611 South 134th Place, Suite 100
Tukwila, WA 98168
206-695-6200 206-695-6201 (fax)
www.arilabs.com

Page: 1	of 1
Date: 3/20/14	Ice Present? y
No. of Coolers: 1	Cooler Temps: 4, 4

ARI Assigned Number:	Y277	Turn-around Requested:	standard
ARI Client Company:	Golden Associates 425-883-0777		
Client Contact:	Douglas Morell		
Client Project Name:	Master Park Lot C		
Client Project #:	073-9336806-09A	Samplers:	Lamberts

[illegible]

Limits of Liability: ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, not withstanding any provision to the contrary in any contract, purchase order or signed agreement between ARI and the Client.

Pls analyse under existing USA btm Golden + ARF

Sample Retention Policy: All samples submitted to ARI will be appropriately discarded no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer, unless alternate retention schedules have been established by work-order or contract.

ORGANICS ANALYSIS DATA SHEET

Volatiles by Purge & Trap GC/MS-Method SW8260C
Page 1 of 1Sample ID: MPLOT-MW-20-032014
SAMPLE

Lab Sample ID: YD77A

LIMS ID: 14-4989

Matrix: Water

Data Release Authorized: *YWW*

Reported: 04/03/14

QC Report No: YD77-Golder Associates

Project: Master Park Lot C

073-93368-06-09A

Date Sampled: 03/20/14

Date Received: 03/20/14

Instrument/Analyst: NT3/LH

Date Analyzed: 03/27/14 13:39

Sample Amount: 10.0 mL

Purge Volume: 10.0 mL

CAS Number	Analyte	DL	LOQ	Result	
106-93-4	1,2-Dibromoethane	0.07	0.20	< 0.20 U	UJ
91-20-3	Naphthalene	0.12	0.50	< 0.50 U	
110-54-3	Hexane	0.10	0.20	< 0.20 U	

Reported in µg/L (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	103%
d8-Toluene	95.7%
Bromofluorobenzene	92.3%
d4-1,2-Dichlorobenzene	103%

jsl 4/7/2014

ORGANICS ANALYSIS DATA SHEET

Volatiles by Purge & Trap GC/MS-Method SW8260C

Sample ID: MPLOT-MW-22-032014

Page 1 of 1

SAMPLE

Lab Sample ID: YD77B

QC Report No: YD77-Golder Associates

LIMS ID: 14-4990

Project: Master Park Lot C

Matrix: Water

073-93368-06-09A

Data Release Authorized: *WV*

Date Sampled: 03/20/14

Reported: 04/03/14

Date Received: 03/20/14

Instrument/Analyst: NT3/LH

Sample Amount: 10.0 mL

Date Analyzed: 03/27/14 14:08

Purge Volume: 10.0 mL

CAS Number	Analyte	DL	LOQ	Result
106-93-4	1,2-Dibromoethane	0.07	0.20	< 0.20 U
91-20-3	Naphthalene	0.12	0.50	92 QE
110-54-3	Hexane	0.10	0.20	7.8

J DNR

Reported in µg/L (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	119%
d8-Toluene	100%
Bromofluorobenzene	99.6%
d4-1,2-Dichlorobenzene	98.9%

jsl 4/7/2014

ORGANICS ANALYSIS DATA SHEET

Volatiles by Purge & Trap GC/MS-Method SW8260C
Page 1 of 1Sample ID: MPLOT-MW-22-032014
DILUTION

Lab Sample ID: YD77B

LIMS ID: 14-4990

Matrix: Water

Data Release Authorized: *MW*

Reported: 04/03/14

QC Report No: YD77-Golder Associates

Project: Master Park Lot C

073-93368-06-09A

Date Sampled: 03/20/14

Date Received: 03/20/14

Instrument/Analyst: NT3/LH

Date Analyzed: 03/28/14 18:29

Sample Amount: 0.50 mL

Purge Volume: 10.0 mL

CAS Number	Analyte	DL	LOQ	Result	
106-93-4	1,2-Dibromoethane	1.5	4.0	< 4.0 U	DNR
91-20-3	Naphthalene	2.4	10	400 QB	J
110-54-3	Hexane	1.9	4.0	NA	

Reported in µg/L (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	106%
d8-Toluene	96.3%
Bromofluorobenzene	93.0%
d4-1,2-Dichlorobenzene	102%

jsl 4/7/2014

ORGANICS ANALYSIS DATA SHEET

Volatiles by Purge & Trap GC/MS-Method SW8260C

Sample ID: MPLOTG-MW-22-DUP-032014

Page 1 of 1

SAMPLE

Lab Sample ID: YD77C

QC Report No: YD77-Golder Associates

LIMS ID: 14-4991

Project: Master Park Lot C

Matrix: Water

073-93368-06-09A

Data Release Authorized: *MW*

Date Sampled: 03/20/14

Reported: 04/03/14

Date Received: 03/20/14

Instrument/Analyst: NT3/LH

Sample Amount: 10.0 mL

Date Analyzed: 03/27/14 14:37

Purge Volume: 10.0 mL

CAS Number	Analyte	DL	LOQ	Result
106-93-4	1,2-Dibromoethane	0.07	0.20	< 0.20 U
91-20-3	Naphthalene	0.12	0.50	98 QE J DNR
110-54-3	Hexane	0.10	0.20	7.6

Reported in µg/L (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	119%
d8-Toluene	98.2%
Bromofluorobenzene	95.9%
d4-1,2-Dichlorobenzene	98.5%

jsl 4/7/2014

ORGANICS ANALYSIS DATA SHEET

Volatiles by Purge & Trap GC/MS-Method SW8260C

Sample ID: MPlotC-MW-22-DUP-032014

Page 1 of 1

DILUTION

Lab Sample ID: YD77C

QC Report No: YD77-Golder Associates

LIMS ID: 14-4991

Project: Master Park Lot C

Matrix: Water

073-93368-06-09A

Data Release Authorized: *MM*

Date Sampled: 03/20/14

Reported: 04/03/14

Date Received: 03/20/14

Instrument/Analyst: NT3/LH

Sample Amount: 0.50 mL

Date Analyzed: 03/31/14 21:24

Purge Volume: 10.0 mL

CAS Number	Analyte	DL	LOQ	Result	
106-93-4	1,2-Dibromoethane	1.5	4.0	< 4.0 U	DNR
91-20-3	Naphthalene	2.4	10	400 QB	J
110-54-3	Hexane	1.9	4.0	NA	

Reported in µg/L (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	104%
d8-Toluene	96.0%
Bromofluorobenzene	93.9%
d4-1,2-Dichlorobenzene	102%

jsl 4/7/2014

PORT-MW-B-032014

ANALYTICAL
RESOURCES
INCORPORATED



ORGANICS ANALYSIS DATA SHEET

Volatiles by Purge & Trap GC/MS-Method SW8260C

Sample ID: ~~PORT-MW-13-032014~~
SAMPLE

Page 1 of 1

Lab Sample ID: YD77D

LIMS ID: 14-4992

Matrix: Water

Data Release Authorized: *MW*

Reported: 04/03/14

QC Report No: YD77-Golder Associates

Project: Master Park Lot C

073-93368-06-09A

Date Sampled: 03/20/14

Date Received: 03/20/14

Instrument/Analyst: NT3/LH

Date Analyzed: 03/27/14 15:06

Sample Amount: 10.0 mL

Purge Volume: 10.0 mL

CAS Number	Analyte	DL	LOQ	Result
106-93-4	1,2-Dibromoethane	0.07	0.20	< 0.20 U
91-20-3	Naphthalene	0.12	0.50	6.2 QB
110-54-3	Hexane	0.10	0.20	< 0.20 U

J DNR

Reported in µg/L (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	104%
d8-Toluene	98.1%
Bromofluorobenzene	92.1%
d4-1,2-Dichlorobenzene	99.9%

jsl 4/7/2014

ORGANICS ANALYSIS DATA SHEET

Volatiles by Purge & Trap GC/MS-Method SW8260C

Page 1 of 1

Sample ID: ~~PORT-MW-13-032014~~
REANALYSIS

Lab Sample ID: YD77D

LIMS ID: 14-4992

Matrix: Water

Data Release Authorized: *WW*

Reported: 04/03/14

QC Report No: YD77-Golder Associates

Project: Master Park Lot C

073-93368-06-09A

Date Sampled: 03/20/14

Date Received: 03/20/14

Instrument/Analyst: NT3/LH

Date Analyzed: 03/31/14 20:53

Sample Amount: 10.0 mL

Purge Volume: 10.0 mL

CAS Number	Analyte	DL	LOQ	Result
106-93-4	1,2-Dibromoethane	0.07	0.20	< 0.20 U
91-20-3	Naphthalene	0.12	0.50	< 0.50 U
110-54-3	Hexane	0.10	0.20	NA

DNR

UJ

Reported in µg/L (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	104%
d8-Toluene	95.6%
Bromofluorobenzene	91.0%
d4-1,2-Dichlorobenzene	99.9%

jsl 4/7/2014

ORGANICS ANALYSIS DATA SHEET

Volatiles by Purge & Trap GC/MS-Method SW8260C
Page 1 of 1Sample ID: Trip Blanks
SAMPLE

Lab Sample ID: YD77E

LIMS ID: 14-4993

Matrix: Water

Data Release Authorized: *MW*

Reported: 04/03/14

QC Report No: YD77-Golder Associates

Project: Master Park Lot C

073-93368-06-09A

Date Sampled: 03/20/14

Date Received: 03/20/14

Instrument/Analyst: NT3/LH

Date Analyzed: 03/27/14 13:10

Sample Amount: 10.0 mL

Purge Volume: 10.0 mL

CAS Number	Analyte	DL	LOQ	Result
106-93-4	1,2-Dibromoethane	0.07	0.20	< 0.20 U
91-20-3	Naphthalene	0.12	0.50	< 0.50 U
110-54-3	Hexane	0.10	0.20	< 0.20 U

UJ

Reported in µg/L (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	105%
d8-Toluene	94.9%
Bromofluorobenzene	89.6%
d4-1,2-Dichlorobenzene	99.1%

jsl 4/7/2014

ORGANICS ANALYSIS DATA SHEET
BETX by Method SW8021BMod
TPHG by Method NWTPHG
 Page 1 of 1

Sample ID: MPLOTG-MW-20-032014
SAMPLE

Lab Sample ID: YD77A
 LIMS ID: 14-4989
 Matrix: Water
 Data Release Authorized: 
 Reported: 04/02/14

QC Report No: YD77-Golder Associates
 Project: Master Park Lot C
 Event: 073-93368-06-09A
 Date Sampled: 03/20/14
 Date Received: 03/20/14

Date Analyzed: 04/01/14 00:47
 Instrument/Analyst: PID1/LH

Purge Volume: 5.0 mL
 Dilution Factor: 1.00

CAS Number	Analyte	DL	LOQ	Result
71-43-2	Benzene	0.028	0.25	< 0.25 U
108-88-3	Toluene	0.014	0.25	< 0.25 U
100-41-4	Ethylbenzene	0.028	0.25	< 0.25 U
179601-23-1	m,p-Xylene	0.022	0.50	< 0.50 U
95-47-6	o-Xylene	0.027	0.25	< 0.25 U

Gasoline Range Hydrocarbons	0.057	0.10	< 0.10 U	GAS ID ---
-----------------------------	-------	------	----------	---------------

BETX Surrogate Recovery

Trifluorotoluene	105%
Bromobenzene	101%

Gasoline Surrogate Recovery

Trifluorotoluene	108%
Bromobenzene	103%

BETX values reported in µg/L (ppb)
 Gasoline values reported in mg/L (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.
 GRO: Positive result that does not match an identifiable gasoline pattern.
 Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

jsl 4/7/2014

ORGANICS ANALYSIS DATA SHEET
BETX by Method SW8021BMod
TPHG by Method NWTPHG
Page 1 of 1



Sample ID: MPLOTG-MW-22-032014
SAMPLE

Lab Sample ID: YD77B

LIMS ID: 14-4990

Matrix: Water

Data Release Authorized: 

Reported: 04/02/14

QC Report No: YD77-Golder Associates

Project: Master Park Lot C

Event: 073-93368-06-09A

Date Sampled: 03/20/14

Date Received: 03/20/14

Date Analyzed: 04/01/14 01:17

Instrument/Analyst: PID1/LH

Purge Volume: 5.0 mL

Dilution Factor: 1.00

CAS Number	Analyte	DL	LOQ	Result	
71-43-2	Benzene	0.028	0.25	4.7	DNR
108-88-3	Toluene	0.014	0.25	9.8	DNR
100-41-4	Ethylbenzene	0.028	0.25	710 E	DNR
179601-23-1	m,p-Xylene	0.022	0.50	1,100 E	DNR
95-47-6	o-Xylene	0.027	0.25	2.6	DNR

Gasoline Range Hydrocarbons	0.057	0.10	12 E	GAS ID GAS DNR
-----------------------------	-------	------	------	-------------------

BETX Surrogate Recovery

Trifluorotoluene	105%
Bromobenzene	113%

Gasoline Surrogate Recovery

Trifluorotoluene	109%
Bromobenzene	106%

BETX values reported in µg/L (ppb)
Gasoline values reported in mg/L (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.

GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

jsl 4/7/2014

ORGANICS ANALYSIS DATA SHEET
BETX by Method SW8021BMod
TPHG by Method NWTPHG
Page 1 of 1



Sample ID: MPlotC-MW-22-032014
DILUTION

Lab Sample ID: YD77B
LIMS ID: 14-4990
Matrix: Water
Data Release Authorized: *[Signature]*
Reported: 04/02/14

QC Report No: YD77-Golder Associates
Project: Master Park Lot C
Event: 073-93368-06-09A
Date Sampled: 03/20/14
Date Received: 03/20/14

Date Analyzed: 04/01/14 11:58
Instrument/Analyst: PID1/LH

Purge Volume: 5.0 mL
Dilution Factor: 10.0

CAS Number	Analyte	DL	LOQ	Result
71-43-2	Benzene	0.28	2.5	5.7
108-88-3	Toluene	0.14	2.5	12
100-41-4	Ethylbenzene	0.28	2.5	990
179601-23-1	m,p-Xylene	0.22	5.0	1,500
95-47-6	o-Xylene	0.27	2.5	2.8

Gasoline Range Hydrocarbons	0.057	1.0	17	GAS ID GAS
-----------------------------	-------	-----	----	---------------

BETX Surrogate Recovery

Trifluorotoluene	110%
Bromobenzene	105%

Gasoline Surrogate Recovery

Trifluorotoluene	112%
Bromobenzene	105%

BETX values reported in µg/L (ppb)
Gasoline values reported in mg/L (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.
GRO: Positive result that does not match an identifiable gasoline pattern.
Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

jsl 4/7/2014

ORGANICS ANALYSIS DATA SHEET
BETX by Method SW8021BMod
TPHG by Method NWTPHG
Page 1 of 1



Sample ID: MPLOTG-MW-22-DUP-032014
SAMPLE

Lab Sample ID: YD77C

LIMS ID: 14-4991

Matrix: Water

Data Release Authorized:

Reported: 04/02/14

QC Report No: YD77-Golder Associates

Project: Master Park Lot C

Event: 073-93368-06-09A

Date Sampled: 03/20/14

Date Received: 03/20/14

Date Analyzed: 04/01/14 12:27

Instrument/Analyst: PID1/LH

Purge Volume: 5.0 mL

Dilution Factor: 10.0

CAS Number	Analyte	DL	LOQ	Result
71-43-2	Benzene	0.28	2.5	4.7
108-88-3	Toluene	0.14	2.5	9.4
100-41-4	Ethylbenzene	0.28	2.5	720
179601-23-1	m,p-Xylene	0.22	5.0	1,100
95-47-6	o-Xylene	0.27	2.5	< 2.5 U

Gasoline Range Hydrocarbons

0.57

1.0

14

GAS ID
GAS

BETX Surrogate Recovery

Trifluorotoluene	110%
Bromobenzene	106%

Gasoline Surrogate Recovery

Trifluorotoluene	112%
Bromobenzene	106%

BETX values reported in µg/L (ppb)
Gasoline values reported in mg/L (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.

GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

jsl 4/7/2014

PORT-MW-B-032014

ANALYTICAL
RESOURCES
INCORPORATED

ORGANICS ANALYSIS DATA SHEET

BETX by Method SW8021BMod

TPHG by Method NWTPHG

Page 1 of 1

Sample ID: ~~PORT-MW-13-032014~~
SAMPLE

Lab Sample ID: YD77D

LIMS ID: 14-4992

Matrix: Water

Data Release Authorized: *[Signature]*

Reported: 04/02/14

QC Report No: YD77-Golder Associates

Project: Master Park Lot C

Event: 073-93368-06-09A

Date Sampled: 03/20/14

Date Received: 03/20/14

Date Analyzed: 04/01/14 12:57

Instrument/Analyst: PID1/LH

Purge Volume: 5.0 mL

Dilution Factor: 1.00

CAS Number	Analyte	DL	LOQ	Result
71-43-2	Benzene	0.028	0.25	< 0.25 U
108-88-3	Toluene	0.014	0.25	< 0.25 U
100-41-4	Ethylbenzene	0.028	0.25	< 0.25 U
179601-23-1	m,p-Xylene	0.022	0.50	< 0.50 U
95-47-6	o-Xylene	0.027	0.25	< 0.25 U

Gasoline Range Hydrocarbons 0.057 0.10 < 0.10 U GAS ID ---

BETX Surrogate Recovery

Trifluorotoluene	110%
Bromobenzene	102%

Gasoline Surrogate Recovery

Trifluorotoluene	112%
Bromobenzene	102%

BETX values reported in µg/L (ppb)
Gasoline values reported in mg/L (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.

GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

jsl 4/7/2014

ORGANICS ANALYSIS DATA SHEET
BETX by Method SW8021BMod
TPHG by Method NWTPHG
Page 1 of 1

Sample ID: Trip Blanks
SAMPLE

Lab Sample ID: YD77E

LIMS ID: 14-4993

Matrix: Water

Data Release Authorized: *AB*

Reported: 04/02/14

QC Report No: YD77-Golder Associates

Project: Master Park Lot C

Event: 073-93368-06-09A

Date Sampled: 03/20/14

Date Received: 03/20/14

Date Analyzed: 04/01/14 13:26

Instrument/Analyst: PID1/LH

Purge Volume: 5.0 mL

Dilution Factor: 1.00

CAS Number	Analyte	DL	LOQ	Result
71-43-2	Benzene	0.028	0.25	< 0.25 U
108-88-3	Toluene	0.014	0.25	< 0.25 U
100-41-4	Ethylbenzene	0.028	0.25	< 0.25 U
179601-23-1	m,p-Xylene	0.022	0.50	< 0.50 U
95-47-6	o-Xylene	0.027	0.25	< 0.25 U

Gasoline Range Hydrocarbons 0.057 0.10 < 0.10 U

GAS ID

BETX Surrogate Recovery

Trifluorotoluene	108%
Bromobenzene	101%

Gasoline Surrogate Recovery

Trifluorotoluene	111%
Bromobenzene	102%

BETX values reported in µg/L (ppb)
Gasoline values reported in mg/L (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.

GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

jsl 4/7/2014

ORGANICS ANALYSIS DATA SHEET
TOTAL DIESEL RANGE HYDROCARBONSNWTPHD by GC/FID
Extraction Method: SW3510C
Page 1 of 1QC Report No: YD77-Golder Associates
Project: Master Park Lot C
073-93368-06-09A

Matrix: Water

Date Received: 03/20/14

Data Release Authorized: 
Reported: 03/31/14

ARI ID	Sample ID	Analysis Date	DF	Range	Result	RL	MDL
MB-032614 14-4989	Method Blank	03/28/14 FID9	1.0	Diesel Range Motor Oil Range HC ID o-Terphenyl	< 0.10 U < 0.20 U --- 99.2%	0.10 0.20	0.02 0.04
YD77A 14-4989	MPLOT-C-MW-20-032014	03/29/14 FID9	1.0	Diesel Motor Oil HC ID o-Terphenyl	< 0.10 U < 0.20 U --- 98.2%	0.10 0.20	0.02 0.04
YD77B 14-4990	MPLOT-C-MW-22-032014	03/29/14 FID9	1.0	Diesel Motor Oil HC ID o-Terphenyl	1.2 J < 0.20 U DRO 82.5%	0.10 0.20	0.02 0.04
YD77C 14-4991	MPLOT-C-MW-22-DUP-032014	03/29/14 FID9	1.0	Diesel Motor Oil HC ID o-Terphenyl	1.7 J 0.71 DRO/MOTOR OIL 76.4%	0.10 0.20	0.02 0.04
YD77D 14-4992	PORT-MW-13-032014	03/29/14 FID9	1.0	Diesel Motor Oil HC ID o-Terphenyl	< 0.10 U < 0.20 U --- 81.1%	0.10 0.20	0.02 0.04

PORT-MW-B-032014

Reported in mg/L (ppm)

Diesel quantitation on total peaks in the range from C12 to C24.
Motor Oil quantitation on total peaks in the range from C24 to C38.
HC ID: DRO/RRO indicates results of organics or additional hydrocarbons in ranges are not identifiable.

jsl 4/7/2014