January 10, 2019

Mr. Adam Brandenburg
McDonald's USA, LLC
12131 113th Avenue Northeast, Suite 103
Kirkland, Washington 98502

Re: 2018 Fourth Quarter Groundwater Monitoring Report
Olympia McDonald's 46-0220
715 Plum Street Southeast
Olympia, Washington 98501
RGI Project No. 2017-282C
Ecology VCP No. SW0074

Dear Mr. Brandenburg:

The Riley Group, Inc. (RGI) is pleased to present this 2018 Fourth Quarter Groundwater Monitoring Report (2018-Q4 GWM Report) for the Olympia McDonald's (46-0220) located at 715 Plum Street Southeast in Olympia, Washington (herein referred to as the Property). The general location of the Property is depicted on Figure 1. Figure 2 depicts the Property layout with groundwater analytical results.

The scope of work performed during this 2018-Q4 GWM Report is in general accordance with the *Well Installation and Quarterly Groundwater Monitoring Final Work Pl an (Work Plan);* prepared for McDonald's USA, LLC; dated May 31, 2018 (Project 2017-282A). The Work Plan was approved by Mr. Panjini Balaraju, the Ecology Site Manager, on May 18, 2018.

McDonald's USA, LLC (hereafter referred to as the Client) retained RGI to perform the groundwater sampling activities documented herein.

SCOPE OF SERVICES

This scope of work includes sampling the three existing groundwater monitoring wells (MWA, MWB, and MW6D) on the Property as follows:

- Measured depth to static water from well top of casing (TOC) using an electronic water level meter.
- All wells were purged using a peristaltic pump. Purged water was stored in one 25-gallon drum and left on the Property.
- During well purging, RGI utilized a Horiba U-50 meter with flow-through cell – which measured temperature, conductivity, and pH parameters in groundwater
- All wells were sampled under low-flow conditions.

- Groundwater samples were collected in laboratory-supplied sample containers. Sample containers were placed in an ice-chilled cooler and transported to the analytical laboratory under proper chain-of-custody documentation.
- Prepared this 2018-Q4 GWM Report presenting our findings, observations, conclusions, and recommendations.

REGULATORY ANALYSIS OF SITE CONDITIONS UNDER MTCA

Washington State's hazardous waste cleanup law, the Model Toxics Control Act (70.105D RCW), mandates the necessity for site cleanups to protect human health and the environment. MTCA Cleanup Regulations (173-340 WAC) define the approach for establishing cleanup requirements for individual sites, including the establishment of cleanup standards and selection of cleanup actions.

MTCA Cleanup Regulations provides three options for establishing generic and site-specific cleanup levels for soil and groundwater. Method A cleanup levels have been adopted for specific purposes and are intended to provide conservative cleanup levels for sites undergoing routine site characterization or cleanup actions or those sites with relatively few hazardous substances. Method B and C cleanup levels are set using a site risk assessment, which focus on the use of "reasonable maximum exposure" assumptions based on site-specific characteristics and toxicity of the contaminants of concern.

Groundwater Cleanup Levels

The selected groundwater cleanup levels for the Property are the MTCA Method A Cleanup Levels for Groundwater. RGI's evaluation of groundwater analytical data obtained during previous investigations indicate that these groundwater cleanup levels are sufficient to evaluate whether or not groundwater concentrations of the contaminants concern (COCs) on the Property are in compliance with MTCA regulations.

For this project, the identified COCs all had a corresponding MTCA Method A Cleanup Level (WAC 173-340-720, Table 720-1).

MTCA Method A Cleanup Levels for groundwater, are summarized in Table 1. Groundwater cleanup levels were obtained from the Ecology Cleanup Levels and Risk Calculation (CLARC) database.

2018 FOURTH QUARTER GROUNDWATER SAMPLING

Groundwater sampling activities were performed on December 6th, 2018, and included sampling wells MWA, MWB, and MW6D.

Prior to groundwater purging or sample collection, the depth to groundwater was measured at all wells from the northernmost point of the top of each well casing using an electronic water level meter. Depth to water measurement for well MW6D was 1.73 feet below the top of well casing (TOC). Depth to water levels for both wells MWA and MWB were 0.0 feet below well TOC, indicating an artesian well where the subsurface pressure is great enough to push the groundwater in the wells upward toward the surface. Corresponding groundwater elevations for wells located on the Property ranged from 15.81 feet above mean sea level (AMSL) to 16.91 feet AMSL. The TOC elevations, depth to water measurements, and corresponding groundwater elevations are summarized in the attached Table 1. Based on this information, the apparent groundwater flow direction under the Property was to the south-southwest. Based on Emcon's 1992 report, an inferred groundwater flow direction to the south-southeast was reported.

After collection of groundwater level data, wells were purged using a peristaltic pump and dedicated tubing. Measurements of water quality parameters (including temperature, pH, conductivity) were recorded using a Horiba U-50 with flow through cell. RGI's completed groundwater sampling field forms are included in Appendix A for reference. Well purging continued until water quality parameters had stabilized. At that point, the Horiba U-50 meter and flow through cell was disconnected from the sample tubing and groundwater samples were collected.

The stabilized groundwater pH values ranged from 7.30 to 7.75, which indicate the groundwater is relatively neutral.

During sample collection, the flow rate of the pump was reduced to less than 100 milliliters per minute (mL/min) in accordance with standard low flow sampling techniques. Groundwater was pumped directly through dedicated tubing into laboratory-supplied containers appropriate for the intended analyses. A total of three groundwater samples were submitted for analyses.

Standard Sampling Protocols

All groundwater samples obtained during this project were collected in accordance with RGI's standard operating and decontamination procedures. Samples were placed in preconditioned, sterilized containers provided by an Ecology accredited analytical laboratory. All reusable equipment was decontaminated between sample locations.

All samples were appropriately labeled and stored in an iced cooler and transported to the analytical laboratory using standard chain-of-custody protocols.

Investigation Derived Waste

Investigation derived waste (IDW) consisted of purge water generated during sampling of wells. All purge water was placed in one 25-gallon steel drum, labeled non-hazardous waste, and temporarily stored with other drums north of the building on the Property. This drum will be utilized to store purge water during future groundwater sampling events.

ANALYTICAL LABORATORY ANALYSES

A total of three groundwater samples were collected during this project and submitted to Friedman and Bruya, Inc. in Seattle, Washington, for one or more of the following analyses:

- Gasoline-range TPH using Ecology Test Method NWTPH-Gx (three samples).
- Benzene, Toluene, Ethylbenzene, and Xylenes using EPA Method 8021B (three samples).
- Diesel- and oil-range TPH using Ecology Test Method NWTPH-Dx without silica gel cleanup (three samples).
- Total lead using EPA Method 200.8/6020A (three samples)

Groundwater analytical results are summarized in Table 1 and displayed graphically on Figure 2.

Copies of the analytical laboratory reports and associated sample chain-of-custody forms are included in Appendix B.

Groundwater Analytical Results

Gasoline-range TPH was not detected above the laboratory detection limit of 100 micrograms/liter (µg/L), in any of the wells. The MTCA Method A Cleanup Level for gasoline-range TPH is 1,000 µg/L.

Benzene, toluene, ethylbenzene, and xylenes were not detected in any of the wells above the laboratory detection limits of 1 µg/L, 1 µg/L, 1 µg/L, and 3 µg/L, respectively. These detection limits are well below their respective MTCA Method A Cleanup Levels of 5 µg/L, 1,000 µg/L, 700 µg/L, and 1,000 µg/L.

Diesel-range TPH and oil-range TPH were not detected in any of the wells above the laboratory detection limits of 50-60 µg/L, 250-300 µg/L respectively. The MTCA Method A Cleanup Level for both diesel-range TPH and oil-range TPH in Groundwater in 500 µg/L.

Total lead was not detected in any of the wells over the laboratory detection limit of 1 µg/L. The MTCA Method A Groundwater Cleanup Level for lead is 15 µg/L.

CONCLUSIONS AND RECOMMENDATIONS

Based on the data obtained during this 2018 fourth quarter groundwater monitoring event, RGI concludes the following:

- Inferred groundwater flow direction across the Property was to the south-southwest. This flow direction is similar to that previously reported by Emcon in 1992 (south-southeast).
- Concentrations of all COCs tested in the wells on the Property during this groundwater sampling event were below the applicable MTCA Method A Groundwater Cleanup Levels.

Based on these findings, RGI recommends the following as outlined in the Ecology Work Plan:

- Continued quarterly groundwater monitoring, for a minimum one year. RGI recommends the next groundwater sampling event be performed in March 2019.
- Submit a copy of this report to the Ecology Southwest Regional Office located in Olympia, Washington. RGI can submit this report to Ecology on your behalf and as requested.

LIMITATIONS

This report is the property of RGI, McDonald's USA, LLC, and their authorized representatives or affiliates and was prepared in a manner consistent with the level of skill and care ordinarily exercised by members of the profession currently practicing in the same locality and under similar conditions.

This report is intended for specific application to the Olympia McDonald's (46-0220) property located at 715 Plum Street in Olympia, Washington. No other warranty, expressed or implied, is made.

The analyses and recommendations presented in this report are based upon data obtained from our review of available information at the time of preparing this report.

Conditional changes may occur through time by natural or human-made process on this or adjacent properties.

Additional changes may occur in legislative standards, which may or may not be applicable to this report. These changes, beyond RGI's control, may render this report invalid, partially or wholly. If variations appear evident, RGI should be requested to reevaluate the recommendations in this report.

Sincerely,

THE RILEY GROUP, INC.

Tait Russell, GIT
Staff Geologist

Stafford Larsen
Project Geologist

Audrey R. Heisey LHG
Senior Environmental Manager

Attachments

Figure 1, Property Vicinity Map

Figure 2, Property Representation with Groundwater Analytical Results

Table 1, Summary of Groundwater Analytical Laboratory Results

Appendix A, Groundwater Field Sampling Forms

Appendix B, Analytical Laboratory Reports and Chains of Custody

Distribution

Mr. Adam Brandenburg, McDonald's USA, LLC (electronic PDF)

Mr. Panjini Balaraju, Washington State Department of Ecology Southwest Region (two bound copies and one electronic PDF)

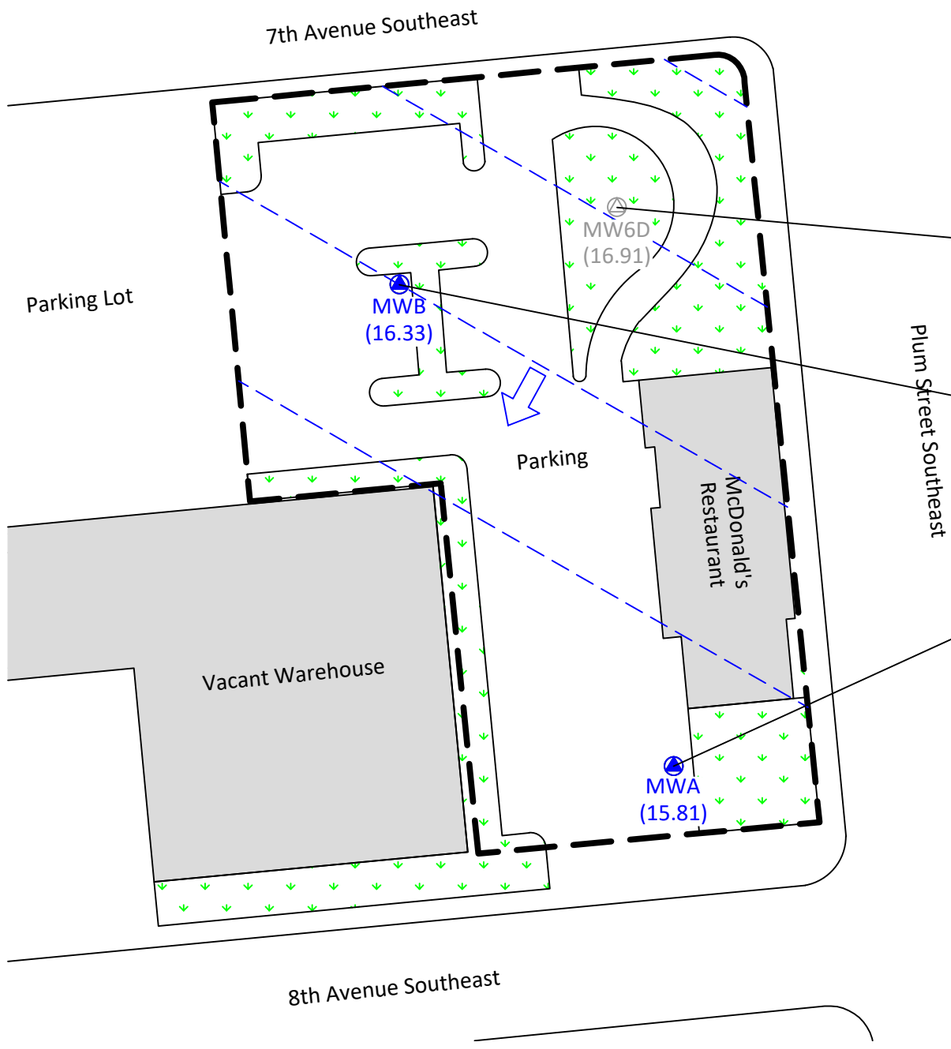
USGS, 2017, Tumwater, Washington
7.5-Minute Quadrangle

Approximate Scale: 1"=1000'

0 500 1000 2000

N

Corporate Office 17522 Bothell Way Northeast Bothell, Washington 98011 Phone: 425.415.0551 Fax: 425.415.0311	Olympia McDonald's, 46-0220	Figure 1
	RGI Project Number 2017-282C	Property Vicinity Map Date Drawn: 01/2019
	Address: 715 Plum Street Southeast, Olympia, Washington 98501	



MW6D					
Date	Gas	BTEX	DSL	Oil	Total Lead
12/06/18	ND	ND	ND	ND	ND
09/27/18	ND	ND	ND	ND	**6.19**

MWB					
Date	Gas	BTEX	DSL	Oil	Total Lead
12/06/18	ND	ND	ND	ND	ND
09/27/18	ND	ND	ND	ND	ND

MWA					
Date	Gas	BTEX	DSL	Oil	Total Lead
12/06/18	ND	ND	ND	ND	ND
09/27/18	ND	ND	**72x**	**300**	ND

= Groundwater analytical results in ug/L;

Gas = Gasoline total petroleum hydrocarbons
BTEX = Benzene, toluene, ethylbenzene, xylenes
DSL/Oil = Diesel/oil total petroleum hydrocarbons
ND = Not detected above laboratory detection limits
x = The sample chromatographic pattern does not resemble the fuel standard used for quantitation
Bold results indicate concentrations above laboratory detection limits
Bold and yellow highlighted results (if any) indicate concentrations exceed MTCA Method A Groundwater cleanup levels

Approximate Scale: 1"=50'
0 25 50 100
N

= Apparent groundwater flow direction based on 12/06/18 measurements
(15.81) = Groundwater elevation (based on Nav88 data) measured on 12/06/18.
= Monitoring well location by RGI, 09/20/18
= Monitoring well location by EMCON Northwest, Inc., 12/21/91
= Property boundary

RILEYGROUP
Corporate Office
17522 Bothell Way Northeast
Bothell, Washington 98011
Phone: 425.415.0551
Fax: 425.415.0311

Olympia McDonald's, 46-0220 | Figure 2

RGI Project Number: 2017-282C

Property Representation with Groundwater Analytical Results

Date Drawn: 01/2019

Address: 715 Plum Street Southeast, Olympia, Washington 98501

Table 1. Summary of Groundwater Sample Analytical Laboratory Results
Olympia McDonald's, 46-0220
715 Plum Street Southeast, Olympia, Washington 98501
The Riley Group, Inc. Project No. 2017-282C

Sample Number	Sample Date	TOC Elevation	Depth to Water (bgs)	Groundwater Elevation	Gasoline TPH	BTEX				Diesel TPH	Oil TPH	Total Lead
						B	T	E	X			
MWA	Screened Interval 20-10 ft bgs, Total boring depth 20 ft bgs											
MWA	12/06/18	15.81	0.00	15.81	ND<100	ND<1	ND<1	ND<1	ND<3	ND<60	ND<300	ND<1
MWA	09/27/18	15.81	0.00	15.81	ND<100	ND<1	ND<1	ND<1	ND<3	**72 x**	**300**	ND<1
MWB	Screened Interval 20-12 ft bgs, Total boring depth 20 ft bgs											
MWB	12/06/18	16.33	0.00	16.33	ND<100	ND<1	ND<1	ND<1	ND<3	ND<60	ND<300	ND<1
MWB	09/27/18	16.33	0.00	16.33	ND<100	ND<1	ND<1	ND<1	ND<3	ND<50	ND<250	ND<1
MW6D	Screened Interval 20-15 ft bgs, Total boring depth 20 ft bgs											
MW6D	12/06/18	18.64	1.73	16.91	ND<100	ND<1	ND<1	ND<1	ND<3	ND<50	ND<250	ND<1
MW6D	09/27/18	18.64	1.69	16.95	ND<100	ND<1	ND<1	ND<1	ND<3	ND<60	ND<300	**6.19**
MTCA Method A Cleanup Levels for Ground Water					**800/1,000[1]**	**5**	**1,000**	**700**	**1,000**	**500**	**500**	**15**

Notes:

Samples collected by RGI field staff using a peristaltic pump under low-flow conditions.

Unless otherwise noted, all analytical results are given in micrograms per liter (ug/L), equivalent to parts per billion (ppb).

TOC = Top of casing elevation in feet

Gasoline TPH (total petroleum hydrocarbons) determined using Northwest Test Method NWTPH-Gx.

BTEX (benzene, toluene, ethylbenzene, and xylenes) determined using EPA Test Method 8021B.

Diesel and Oil TPH (total petroleum hydrocarbons) determined using Northwest Test Method NWTPH-Dx without silica gel cleanup.

Total lead determined using EPA Method 200.8.

ND = Not detected above the noted analytical detection limit.

---- = Not analyzed or not applicable.

x = The sample chromatographic pattern does not resemble the fuel standard used for quantitation.

Washington State Department of Ecology (Ecology) Model Toxics Control Act (MTCA) Method A Cleanup Levels for Ground Water (WAC 173-340-900, Table 720-1).

[1] The higher cleanup level is applicable if no benzene is detected in groundwater.

Bold results indicate concentrations (if any) above laboratory detection limits.

Bold and yellow highlighted results indicate concentrations (if any) that exceed MTCA Method A or B Cleanup Levels for Ground Water.

The Riley Group, Inc.

Groundwater Sampling Information

Well No./Location: MW4	Project No:	Sampling Date: 12/6/18
Depth to Water: 0.0	Time: 12:11 / 12:20	Water Volume In Casing: 3.0 Gal
Depth to Product:		
Total Depth: 18.99	Purged Time: 0:09	Volume Purged: 0.3 gal
Purging Method: Sub Pump	Purge Volume Measurement Method: Graduated bucket	
Project Location:	Parameter Monitoring	Sampled By: TR

Time	Cumulative Volume	pH SU	COND mS/cm	TEMP Degree C	DO mg/L	TURB NTU	ORP mV	SAL %	TDS g/L	Appearance	Odor
12:11	0.0	7.93	0.32	11.2						No	No
12:14	0.1	7.72	0.28	12.7						"	"
12:17	0.2	7.68	0.27	13.1						"	"
12:20	0.3	7.75	0.26	13.2							

Sampling Methods:

Sample Data

Waste Container:

Field Sample No.	Sample Container	Time	Sample Depth	Matrix Type	Sample Type	Preserved By

Chain of Custody (yes/no):

Duplicate Sample Numbers:

Analytical Lab	Lab Name:	Date Sent to Lab:
	Lab Address:	Shipment Method:
Analytical Lab/QC	Lab Name:	Date Sent to Lab:
	Lab Address:	Shipment Method:
Split	Name(s):	
	Organization(s):	

Matrix Types				Sample Types	
AA ambient air	GW groundwater	SD sediment	SW surface water	CS composite sample	FB field blank
BM building material	NS near-surface soil	SL soil	TI tissue	ER equipment rinsate	FD field duplicate
DR debris/rubble	SB subsurface soil	SU sludge	WR water	ES environmental sample	TB trip blank

Additional Comments: 3 w/in 10'. Artesian well - Self purging
OTW Sampling: 0.0

Recorder: Date:

Checker: Date:

The Riley Group, Inc.

Groundwater Sampling Information

Well No./Location : MW13	Project No:	Sampling Date: 12/6/18
Depth to Water: 0.0	Time: 12:50	Water Volume In Casing: 3.05 gal
Depth to Product:		
Total Depth: 19.09	Purged Time:	Volume Purged: 0.3 gal
Purging Method: Rest Pump	Purge Volume Measurement Method: Grad Bucket	
Project Location:		Sampled By: TR

Parameter Monitoring

Time	Cumulative Volume	pH	COND	TEMP	DO	TURB	ORP	SAL	TDS	Appearance	Odor
		SU	mS/cm	Degree C	mg/L	NTU	mV	%	g/L		
12:50	0.0	6.60	0.23	10.1						NO	NO
12:53	0.1	7.50	0.23	13.1						"	"
12:56	0.2	7.48	0.23	13.2						"	"
12:59	0.3	7.47	0.23	13.0						"	"

Sampling Methods:

Sample Data

Waste Container:

Field Sample No.	Sample Container	Time	Sample Depth	Matrix Type	Sample Type	Preserved By

Chain of Custody (yes/no):

Duplicate Sample Numbers:

Analytical Lab	Lab Name:	Date Sent to Lab:
	Lab Address:	Shipment Method:
Analytical Lab/QC	Lab Name:	Date Sent to Lab:
	Lab Address:	Shipment Method:
Split	Name(s):	
	Organization(s):	

Matrix Types				Sample Types	
AA ambient air	GW groundwater	SD sediment	SW surface water	CS composite sample	FB field blank
BM building material	NS near-surface soil	SL soil	TI tissue	ER equipment rinsate	FD field duplicate
DR debris/rubble	SB subsurface soil	SU sludge	WR water	ES environmental sample	TB trip blank

Additional Comments: 3 volm 10%
DTW sample/bag: 0.0
Artesian well - Self purging

Recorder: Date:

Checker: Date:

The Riley Group, Inc.

Groundwater Sampling Information

Well No./Location: MW6D	Project No:	Sampling Date: 12/6/18
Depth to Water: 1.73	Time: 14:03	Water Volume In Casing: 2.32 gal
Depth to Product:	14:14	
Total Depth: 16.21	Purged Time: 0:11	Volume Purged: 0.3 gal
Purging Method: Peri Pump	Purge Volume Measurement Method: Graduated bucket	
Project Location:	Parameter Monitoring	Sampled By: TR

Time	Cumulative Volume	pH	COND	TEMP	DO	TURB	ORP	SAL	TDS	Appearance	Odor
		SU	mS/cm	Degree C	mg/L	NTU	mV	%	g/L		
	Pumped w/o Water parameters (Sandy)										
14:08	0.1	7.62	0.22	12.2						No	No
14:11	0.2	7.33	0.22	12.4						"	"
14:14	0.3	7.30	0.22	12.6						"	"

Sampling Methods: | Sample Data | Waste Container:

Field Sample No.	Sample Container	Time	Sample Depth	Matrix Type	Sample Type	Preserved By

Chain of Custody (yes/no): | Duplicate Sample Numbers:

Analytical Lab	Lab Name:	Date Sent to Lab:
	Lab Address:	Shipment Method:
Analytical Lab/QC	Lab Name:	Date Sent to Lab:
	Lab Address:	Shipment Method:
Split	Name(s):	
	Organization(s):	

Matrix Types				Sample Types	
AA ambient air	GW groundwater	SD sediment	SW surface water	CS composite sample	FB field blank
BM building material	NS near-surface soil	SL soil	TI tissue	ER equipment rinsate	FD field duplicate
DR debris/rubble	SB subsurface soil	SU sludge	WR water	ES environmental sample	TB trip blank

Additional Comments: 3 w/10 10/. DTW sampling: 1.75

Recorder: | Date:

Checker: | Date:

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Yelena Aravkina, M.S.
Michael Erdahl, B.S.
Arina Podnozova, B.S.
Eric Young, B.S.

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December 18, 2018

Tait Russell, Project Manager
The Riley Group, Inc.
17522 Bothell Way NE
Bothell, WA 98011

Dear Mr Russell:

Included are the results from the testing of material submitted on December 7, 2018 from the Olympia McDonalds 2017-282, F&BI 812109 project. There are 11 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

We appreciate this opportunity to be of service to you and hope you will call if you have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.

Michael Erdahl
Project Manager

Enclosures
TRG1218R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on December 7, 2018 by Friedman & Bruya, Inc. from the The Riley Group Olympia McDonalds 2017-282, F&BI 812109 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	The Riley Group
812109 -01	MWA
812109 -02	MWB
812109 -03	MW6D

All quality control requirements were acceptable.

Date of Report: 12/18/18
Date Received: 12/07/18
Project: Olympia McDonalds 2017-282, F&BI 812109
Date Extracted: 12/10/18
Date Analyzed: 12/10/18

RESULTS FROM THE ANALYSIS OF WATER SAMPLES FOR BENZENE, TOLUENE, ETHYLBENZENE, XYLENES AND TPH AS GASOLINE USING METHODS 8021B AND NWTPH-Gx

Results Reported as ug/L (ppb)

Sample ID Laboratory ID	Benzene	Toluene	Ethyl Benzene	Total Xylenes	Gasoline Range	Surrogate (% Recovery) (Limit 52-124)
MWA 812109-01	<1	<1	<1	<3	<100	88
MWB 812109-02	<1	<1	<1	<3	<100	94
MW6D 812109-03	<1	<1	<1	<3	<100	91
Method Blank 08-2552 MB	<1	<1	<1	<3	<100	86

Date of Report: 12/18/18
Date Received: 12/07/18
Project: Olympia McDonalds 2017-282, F&BI 812109
Date Extracted: 12/12/18
Date Analyzed: 12/12/18

RESULTS FROM THE ANALYSIS OF WATER SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL AND MOTOR OIL USING METHOD NWTPH-Dx

Results Reported as ug/L (ppb)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 47-140)
MWA 812109-01 1/1.2	<60	<300	92
MWB 812109-02 1/1.2	<60	<300	95
MW6D 812109-03	<50	<250	105
Method Blank 08-2784 MB	<50	<250	100

Analysis For Total Metals By EPA Method 6020B

Client ID:	MWA	Client:	The Riley Group
Date Received:	12/07/18	Project:	Olympia McDonalds 2017-282
Date Extracted:	12/13/18	Lab ID:	812109-01
Date Analyzed:	12/13/18	Data File:	812109-01.047
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
Lead	<1

Analysis For Total Metals By EPA Method 6020B

Client ID:	MWB	Client:	The Riley Group
Date Received:	12/07/18	Project:	Olympia McDonalds 2017-282
Date Extracted:	12/13/18	Lab ID:	812109-02
Date Analyzed:	12/13/18	Data File:	812109-02.048
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
Lead	<1

Analysis For Total Metals By EPA Method 6020B

Client ID:	MW6D	Client:	The Riley Group
Date Received:	12/07/18	Project:	Olympia McDonalds 2017-282
Date Extracted:	12/13/18	Lab ID:	812109-03
Date Analyzed:	12/13/18	Data File:	812109-03.049
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
Lead	<1

Analysis For Total Metals By EPA Method 6020B

Client ID:	Method Blank	Client:	The Riley Group
Date Received:	NA	Project:	Olympia McDonalds 2017-282
Date Extracted:	12/13/18	Lab ID:	I8-855 mb
Date Analyzed:	12/13/18	Data File:	I8-855 mb.045
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
Lead	<1

Date of Report: 12/18/18
Date Received: 12/07/18
Project: Olympia McDonalds 2017-282, F&BI 812109

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR BENZENE, TOLUENE, ETHYLBENZENE, XYLENES, AND TPH AS GASOLINE USING EPA METHOD 8021B AND NWTPH-Gx

Laboratory Code: 812105-31 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	RPD (Limit 20)
Benzene	ug/L (ppb)	2.9	2.7	5
Toluene	ug/L (ppb)	2.6	2.8	5
Ethylbenzene	ug/L (ppb)	10	12	11
Xylenes	ug/L (ppb)	3.8	4.7	21 a
Gasoline	ug/L (ppb)	360	430	18

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Benzene	ug/L (ppb)	50	106	65-118
Toluene	ug/L (ppb)	50	103	72-122
Ethylbenzene	ug/L (ppb)	50	100	73-126
Xylenes	ug/L (ppb)	150	96	74-118
Gasoline	ug/L (ppb)	1,000	97	69-134

Date of Report: 12/18/18
Date Received: 12/07/18
Project: Olympia McDonalds 2017-282, F&BI 812109

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL EXTENDED USING METHOD NWTPH-Dx

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	ug/L (ppb)	2,500	108	104	61-133	4

Date of Report: 12/18/18
Date Received: 12/07/18
Project: Olympia McDonalds 2017-282, F&BI 812109

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR TOTAL METALS USING EPA METHOD 6020B

Laboratory Code: 812149-08 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Lead	ug/L (ppb)	10	<1	88	82	75-125	7

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Lead	ug/L (ppb)	10	100	80-120

Data Qualifiers & Definitions

a - The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.

b - The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.

ca - The calibration results for the analyte were outside of acceptance criteria. The value reported is an estimate.

c - The presence of the analyte may be due to carryover from previous sample injections.

cf - The sample was centrifuged prior to analysis.

d - The sample was diluted. Detection limits were raised and surrogate recoveries may not be meaningful.

dv - Insufficient sample volume was available to achieve normal reporting limits.

f - The sample was laboratory filtered prior to analysis.

fb - The analyte was detected in the method blank.

fc - The compound is a common laboratory and field contaminant.

hr - The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. Variability is attributed to sample inhomogeneity.

hs - Headspace was present in the container used for analysis.

ht – The analysis was performed outside the method or client-specified holding time requirement.

ip - Recovery fell outside of control limits. Compounds in the sample matrix interfered with the quantitation of the analyte.

j - The analyte concentration is reported below the lowest calibration standard. The value reported is an estimate.

J - The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.

jl - The laboratory control sample(s) percent recovery and/or RPD were out of control limits. The reported concentration should be considered an estimate.

js - The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

lc - The presence of the analyte is likely due to laboratory contamination.

L - The reported concentration was generated from a library search.

nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

pc - The sample was received with incorrect preservation or in a container not approved by the method. The value reported should be considered an estimate.

ve - The analyte response exceeded the valid instrument calibration range. The value reported is an estimate.

vo - The value reported fell outside the control limits established for this analyte.

x - The sample chromatographic pattern does not resemble the fuel standard used for quantitation.

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SAMPLE CHAIN OF CUSTODY

ME 12/7/18 | VW1/AT2/DO4

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SAMPLERS (*signature*)

PROJECT NAME: Olympia McDonalds | PO #: 2017-282

REMARKS: cc: slarsen@rileygroup.com | INVOICE TO

TURNAROUND TIME
- [X] Standard Turnaround
- [ ] RUSH
- Rush charges authorized by:

SAMPLE DISPOSAL
- [X] Dispose after 30 days
- [ ] Archive Samples
- [ ] Other

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	ANALYSES REQUESTED: TPH-HCID	TPH-Diesel +O	TPH-Gasoline	BTEX by 8021B	VOCs by 8260C	SVOCs by 8270D	PAHs 8270D SIM	Total Lead				Notes
MW4	01 A-E	12/6	1220	water	5		X	X	⊗				X				⊗ - per SL
MW5	02	↓	1310	↓	↓		X	X	⊗				X				12/12/18 ME
MW6D	03	↓	1420	↓	↓		X	X	⊗				X				
													Samples received at				5 °C

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Tait Russell	RGI	12/7	1130
Received by:	Wes Herring-Sales	F&BI	12/7	2:45 pm
Relinquished by:	Liz Webber-Bruya	F&BI	12/7/18	1530
Received by:				

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