April 19, 2013

Mr. Washin Murakami
12424 83rd Avenue South
Seattle, Washington 98118

RE: First Quarter 2013 Groundwater Sampling Report
Morningside Acres Tracts
5001, 5015, and 5021 Rainier Avenue South
Seattle, Washington 98118
RGI Project No. 2013-079A

Dear Mr. Murakami:

The Riley Group, Inc. (RGI) is pleased to present our First Quarter 2013 Groundwater Sampling Report for the Morningside Acres Tracts property located at 5001, 5015, and 5021 Rainier Avenue South, Seattle, King County, Washington (hereafter referred to as the Site; Figure 1). This report also includes a summary of previous groundwater sampling events performed by other consultants (Table 1).

The Site consists of three adjacent tax parcels of land (parcel numbers 5649600130, 5649600133, and 5649600135), totaling approximately 0.61 acre (Figure 2). RGI investigated and sampled 17 of the 18 groundwater monitoring wells (MW-1 through MW-18) previously installed at the Site in 2006 and 2007. Well MW-5 could not be located.

BACKGROUND

There have been several previous investigations and environmental reports prepared for the Site, which we understand you have owned since the early 1970s. Wolfe Environmental Consulting, Inc. (Wolfe) completed a Phase I Environmental Site Assessment (ESA), dated September 9, 2005. Wolfe reported that in 2005 the three parcels were occupied by a fitness center, an automobile repair shop, a grocery market, and small parking lots. Wolfe identified several historic activities at the Site associated with the generation, use, storage, and potential presence of hazardous substances in soil and/or shallow groundwater at the Site, including:

- Three underground storage tanks (USTs), a sump, and an oil-water separator associated with the automobile repair shop.
- Buildings constructed on the Site between 1924 and 1926 associated with a lumber company, an automobile sales lot, and a plumbing supplies store. The current automobile repair shop reportedly also included a paint shop and an auto washing shop.
- A gasoline station built on the northeast portion of the Site in 1954 operated until the 1970s. USTs associated with the former service station were reportedly closed in place in the 1970s.
- A former dry cleaning business reportedly located southeast of the Site until at least the 1990s. Auto repair and sales facilities and a railway car barn were also reportedly located southeast of the Site.

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Based on their findings, Wolfe recommended that soil and groundwater samples be collected at the Site from the auto repair facility, former lumber company store, and former gasoline station locations.

A Geophysical Investigation, Limited Phase II ESA, and Supplemental Phase II ESA were reportedly completed at the Site by Kleinfelder, Inc. (Kleinfelder) in 2006. Copies of these reports were not made available to RGI for review. According to G-Logics, Inc. (GLI), which reviewed these reports for a potential buyer of the Site, Kleinfelder installed nine groundwater monitoring wells at the Site in 2006 using 2-inch-diameter Schedule 40 (SCH 40) polyvinyl chloride (PVC) well screen and casing. GLI summarized the following results from the Kleinfelder reports in a 2007 Phase II report:

- Four soil borings (SB-1 through SB-4) were advanced at the Site in May 2006 and completed as 2-inch-diameter SCH 40 PVC groundwater monitoring wells MW-1 through MW-4.
- Groundwater samples collected from MW-1 and MW-4 in May 2006 were analyzed for gasoline-range total petroleum hydrocarbons (TPH), diesel-range TPH, oil-range TPH, dissolved lead, and volatile organic compounds (VOCs). One VOC (vinyl chloride) was reported at a concentration exceeding the Washington State Department of Ecology (Ecology) Model Toxics Control Act (MTCA) Method A cleanup level in the groundwater sample collected from MW-4.
- Five test probes (GP-1 through GP-5) were advanced at the Site in June and August 2006. Three of the test probes were completed as ¾-inch-diameter PVC groundwater monitoring wells MW-5 through MW-7.
- Soil samples collected from the test probes were analyzed for VOCs. The soil samples collected from GP-1 and GP-3 through GP-5 were also analyzed for gasoline-range TPH, diesel-range TPH, and oil-range TPH; and for benzene, toluene, ethylbenzene, and total xylenes (BTEX). The soil sample collected from GP-3 at 8 feet below the ground surface (bgs) contained gasoline-range TPH and benzene at concentrations exceeding the MTCA Method A cleanup levels. Soil samples collected from probes GP-2 through GP-4 contained VOCs (vinyl chloride, trichloroethene [TCE], styrene, and/or 1,4-dichloroenzene) at concentrations exceeding MTCA Method A or B cleanup levels.
- Groundwater samples collected from MW-5 and MW-7 in June and August 2006 were analyzed for gasoline-range TPH, diesel-range TPH, oil-range TPH, and dissolved lead. In addition, groundwater samples collected from wells MW-3 through MW-7 in June and/or August 2006 were analyzed for VOCs. Several VOCs (vinyl chloride, 1,1-dichloroethene, cis-1,2-dichloroethene, 1,2-dichloroethane [EDC], TCE, and/or 1,2-dichloropropane) were reported at concentrations exceeding MTCA Method A or B cleanup levels in the groundwater samples collected from wells MW-3 through MW-5 and MW-7.

Based on its February 2007 Phase II ESA for the Site, GLI determined that a sump in the basement of the closed auto repair facility associated with a former parts washing station likely resulted in releases of hazardous substances at the Site.

- A total of 18 test probes (GLP-01 through GLP-18) were advanced by GLI at the Site to depths ranging from 6 to 20 feet bgs. Eleven test probes were completed as ¾-inch-diameter PVC groundwater monitoring wells MW-8 through MW-18.
- Soil samples collected from the test probes and the sump were analyzed for gasoline-range TPH, diesel-range TPH, oil-range TPH, BTEX, and VOCs. Soil samples collected from GLP-05, GLP-13, and GLP-17 at depths ranging from 4 to 18 feet bgs

and a sediment sample collected from the sump contained gasoline-range TPH (identified as mineral spirits and/or kerosene), oil-range TPH, benzene, and/or VOCs (vinyl chloride, TCE, styrene, and/or 1,4-dichloroenzene) at concentrations exceeding MTCA Method A or B cleanup levels.

- Groundwater samples collected from wells MW-1 through MW-4, MW-6 through MW-8, and MW-10 through MW-18 and test probe GLP-07 in January/February 2007 were analyzed for gasoline-range TPH, diesel-range TPH, oil-range TPH, dissolved lead, and VOCs. Gasoline-range TPH (identified as mineral spirits), diesel-range TPH, and oil-range TPH were reported at concentrations exceeding MTCA Method A cleanup levels in the groundwater sample collected from well MW-10, and diesel-range TPH was reported at a concentration exceeding the MTCA Method A cleanup level in the groundwater sample collected from test probe GLP-07.
- VOCs (vinyl chloride, 1,1-dichloroethene, cis-1,2-dichloroethene, EDC, TCE, and/or 1,2-dichloropropane) were reported at concentrations exceeding MTCA Method A or B cleanup levels in the groundwater samples collected from wells MW-3, MW-4, MW-7, MW-11, MW-12, MW-16, and MW-17.
- Measured depth to groundwater in the wells ranged from about 0.5 to 16 feet below the top of the well casing (TOC). The reported groundwater flow direction was predominantly toward the north and northeast.

PROJECT OBJECTIVES

RGI prepared a Historical Documents Review Report for the northern parcel of the Site (tax parcel 5649600130) in April 2013. A review of historical Sanborn Fire Insurance Maps, occupancy directories, and tax assessor records indicate that two gasoline service stations were constructed on the northern parcel (Figure 2). The first generation gasoline service station was constructed about 1927 on the northern portion of the parcel and operated until about 1953. The second generation gasoline service station was constructed on the southern portion of the parcel in 1954 and operated until about 1973. Both gasoline service stations were leased/owned by Standard Oil of California and were branded as Standard or Chevron stations.

The 18 existing groundwater monitoring wells on the Site were last sampled in February 2007. RGI conducted groundwater monitoring to determine the current groundwater quality underlying the Site and to prepare a report of findings for submittal to Ecology.

FEBRUARY 2013 GROUNDWATER SAMPLING EVENT

RGI purged and sampled 17 of the 18 existing groundwater monitoring wells (MW-1 to MW-4 and MW-6 to MW-18) on February 12 and 13, 2013. Monitoring well MW-5 could be not located. Monitoring well locations are shown on Figures 2 to 4.

GROUNDWATER ELEVATIONS AND FLOW DIRECTION

Monitoring well top of casing (TOC) elevations, depth to groundwater measurements, and groundwater elevations and flow direction are summarized in Table 1 and on Figure 3, and are discussed below. TOC elevations used for this Site are those previously surveyed and reported by other consultants.

Depth to static groundwater was measured, prior to purging the monitoring wells, using an electronic water level meter. Depth to groundwater was measured at 0.53 feet (auto repair facility basement wells) to 10.52 feet below TOC. Corresponding groundwater elevations ranged from 104.43 feet (MW-18) to 107.94 feet (MW-11), based on the North American Vertical Datum of 1988 (NAVD88) reference monument identified by G-Logic at Rainier

Avenue South and South Hudson Street. A petroleum sheen was observed on the electronic water level meter probe when sounding well MW-10.

Groundwater flow direction was determined to be towards the north-northeast, with an average gradient ranging from about 0.011 to 0.035 feet per foot (Figure 3). This groundwater flow direction is approximately consistent with the groundwater flow directions reported by other consultants during sampling events conducted in January and February 2007.

GROUNDWATER SAMPLE COLLECTION

Well purging and sampling protocols for this project are discussed below.

Prior to sampling, the groundwater monitoring wells were purged using a peristaltic pump. Well purging continued until field parameters stabilized (water temperature, pH, conductivity, and dissolved oxygen), or were within 10 percent of consecutive measurements. Well MW-8 was purged dry on February 12, 2013, and was allowed to recover overnight before samples were collected. Purge water from each monitoring well was generally non-turbid. A slight to moderate petroleum sheen was observed on the purge water from well MW-10.

Groundwater recovery, startup time, and duration of the purging operations were recorded on field data sheets. These field documents are maintained in a permanent project file and are available upon written request.

Purge water and equipment decontamination water (about 25 gallons) were placed in a labeled 55-gallon drum and left on the Site near the entrance to the auto repair facility building, pending profiling and disposal off the Site.

The wells were sampled using a peristaltic pump under lowflow conditions. Groundwater samples were collected in laboratory-supplied, 40-milliliter vials with Teflon caps (no headspace) and one-liter amber bottles, as required. Sample containers were placed in an ice-chilled cooler and transported to the analytical laboratory under proper chain-of-custody documentation.

LABORATORY ANALYSIS

Groundwater samples were submitted to Friedman & Bruya, Inc. of Seattle, Washington, and analyzed for the following:

- Gasoline-range TPH using the Northwest Test Method NWTPH-Gx
- VOCs using EPA Test Method 8260C
- Diesel- and oil-range TPH using the Northwest Test Method NWTPH-Dx.

The samples collected from wells MW-6 and MW-9 were also treated with a silica gel cleanup step and analyzed for diesel- and oil-range TPH using the Northwest Test Method NWTPH-Dx. As noted in the Phase I report, the Site was also previously operated as a lumber company with log and lumber storage and likely contains buried wood debris in the northern and central parcels. The silica gel cleanup step is designed to remove diesel-range interferences due to decaying wood debris.

A composite sample (Drum021313) was collected from the purge water drum on February 13, 2013, for waste profiling purposes, and analyzed for gasoline-, diesel-, and oil-range TPH, and VOCs as described above. Copies of the analytical laboratory reports and associated sample chain-of-custody documentation are included in Appendix A.

MTCA CLEANUP REGULATIONS

Groundwater analytical results are compared to the MTCA Method A or B cleanup levels.

FINDINGS

The analytical results for groundwater at the Site are summarized along with the respective MTCA Method A or B cleanup levels in Table 1, and are discussed below. In addition, Figure 4 illustrates the analytical results obtained during the February 2013 Groundwater Sampling Event and previous groundwater sampling events for comparison. A copy of the laboratory report and chain of custody are included in Appendix A.

The Site is comprised of a northern parcel (tax parcel 5649600135) formerly occupied by service station facilities and a log and lumber storage facility. The two southern parcels (tax parcels 5649600130 and 5649600133) are occupied by a closed auto repair facility and a grocery store. Findings are discussed separately for each area.

NORTHERN PARCEL - FORMER SERVICE STATIONS AREA

The northern parcel (tax parcel 5649600135) area contains wells MW-1, MW-2, MW-6, MW-9, MW-10, and MW-18 (Figures 2 to 4). Groundwater samples collected from wells MW-1, MW-2, MW-9, and MW-18 did not contain for gasoline-, diesel-, or oil-range TPH, or VOCs, at concentrations above the laboratory method detection limits (MDLs), or above the MTCA Method A or B cleanup levels. The samples collected from wells MW-6 and MW-9 were treated with a silica gel cleanup step and re-analyzed for diesel- and oil-range TPH using the Northwest Test Method NWTPH-Dx.

Monitoring Well MW-10

Monitoring well MW-10 is located in the area of a former auto repair building from circa 1950 and a former Standard Oil of California/Chevron service station building and pump island canopy built in about 1954.

The groundwater sample collected from well MW-10 during the February 2013 sampling event had a concentration of gasoline-range TPH at 1,700 micrograms/liter (µg/L), above the MTCA Method A Cleanup Level for Ground Water (WAC 173-340-900, Table 720-1) of 800 µg/L when benzene is present. The sample also had concentrations of diesel-range TPH (39,000 µg/L) and oil-range TPH (53,000 µg/L) above the MTCA Method A Cleanup Level for Ground Water of 500 µg/L.

VOCs were either below the laboratory MDLs, or below the MTCA Method A or B cleanup levels for groundwater in the sample collected from well MW-10.

Monitoring Well MW-6

Monitoring well MW-6 is located downgradient of the first generation and second generation gasoline service station facilities.

The groundwater sample collected from well MW-6 had a concentration of diesel-range TPH (600 µg/L) above the MTCA Method A Cleanup Level for Ground Water. However, the contract analytical laboratory indicated that the sample chromatographic pattern did not resemble the fuel standard used for quantization. According to historic Sanborn Fire Insurance Maps, the area near MW-6 was previously used for log storage prior to 1927. The MW-6 sample extract was subsequently treated using a silica gel cleanup step to remove polar carbon constituents and re-analyzed for diesel- and oil-range TPH using the Northwest Test Method NWTPH-Dx. The results were below the laboratory MDLs.

SOUTHERN PARCEL - CLOSED AUTO REPAIR FACILITY AREA

The southern parcels (tax parcels 5649600130 and 5649600133) occupied by the closed auto repair facility and active grocery store contain wells MW-3 through MW-5, MW-7, MW-8, and MW-11 through MW-17. Groundwater samples collected from wells MW-3, MW-8, MW-11,

and MW-13 through MW-15 did not contain gasoline-, diesel-, or oil-range TPH, or VOCs, at concentrations above the MDLs, or above the MTCA Method A or B cleanup levels for groundwater.

Monitoring Well MW-4

Monitoring well MW-4 is located in the gravel parking area downgradient (north) of the closed auto repair building. The groundwater sample collected from well MW-4 in February 2013 had a concentration of vinyl chloride at 7.0 µg/L, above the MTCA Method A Cleanup Level for Ground Water (0.2 µg/L).

Gasoline-, diesel-, and oil-range TPH, and all other VOCs, were either below the laboratory MDLs, or below the MTCA Method A or B cleanup levels for groundwater in the sample collected from well MW-4.

Monitoring Well MW-7

Monitoring well MW-7 is located adjacent to the sump in the basement level of the closed auto repair building.

The groundwater sample collected from well MW-7 in February 2013 had concentrations of four VOCs (vinyl chloride at 290 µg/L, TCE at 25 µg/L, EDC at 6.1 µg/L, and cis-1,2-dichloroethylene at 27.9 µg/L) above the MTCA Method A or B cleanup levels for groundwater (0.2 µg/L, 5 µg/L, 5 µg/L, and 16 µg/L, respectively).

Gasoline-, diesel-, and oil-range TPH, and all other VOCs, were either below the laboratory MDLs, or below the MTCA Method A or B cleanup levels for groundwater in the sample collected from well MW-7.

Monitoring Well MW-12

Monitoring well MW-12 is located upgradient (southeast) of the sump in the basement level of the closed auto repair building.

The groundwater sample collected from well MW-12 in February 2013 had concentrations of two VOCs (vinyl chloride at 0.26 µg/L and TCE at 8.3 µg/L) above the MTCA Method A Cleanup Levels for Ground Water (0.2 µg/L and 5 µg/L, respectively).

Gasoline-, diesel-, and oil-range TPH, and all other VOCs, were either below the laboratory MDLs, or below the MTCA Method A or B cleanup levels for groundwater in the sample collected from well MW-12.

Monitoring Well MW-16

Monitoring well MW-16 is downgradient (north) of the sump in the basement level of the closed auto repair building.

The groundwater sample collected from well MW-16 in February 2013 had concentrations of two VOCs (vinyl chloride at 6.6 µg/L and cis-1,2-dichloroethylene at 24 µg/L), above the MTCA Method A or B cleanup level for groundwater (0.2 µg/L and 16 µg/L, respectively).

Gasoline-, diesel-, and oil-range TPH, and all other VOCs, were either below the laboratory MDLs, or below the MTCA Method A or B cleanup levels for groundwater in the sample collected from well MW-16.

Monitoring Well MW-17

Monitoring well MW-17 is located in the gravel parking area downgradient (north) of the closed auto repair building, at the south wall of the grocery store.

The groundwater sample collected from well MW-17 in February 2013 had concentrations of three VOCs (vinyl chloride at 76 µg/L, TCE at 48 µg/L, and cis-1,2-dichloroethylene at 41 µg/L) above the MTCA Method A or B cleanup levels for groundwater (0.2 µg/L, 5 µg/L, and 16 µg/L, respectively).

Gasoline-, diesel-, and oil-range TPH, and all other VOCs, were either below the laboratory MDLs, or below the MTCA Method A or B cleanup levels for groundwater in the sample collected from well MW-17.

CONCLUSIONS

Groundwater samples were collected from 17 of the 18 groundwater monitoring wells at the Site by RGI on February 12 and 13, 2013, using peristaltic pumps and a lowflow sampling technique. Well MW-5 could not be located during the February 2013 groundwater sampling event and was not sampled. The groundwater monitoring wells were installed by other consultants in 2006 and 2007, and were previously sampled by other consultants in 2006 and early 2007.

Well MW-8 purged dry on February 12, was allowed to recover overnight, and was sampled on February 13, 2013. Approximately 25 gallons of well purge water and equipment decontamination water was placed in a properly labeled 55-gallon drum, pending characterization and profiling for disposal off the site. Measured depth to groundwater ranged from approximately 0.5 to 10.5 feet below TOC, with an inferred groundwater flow direction toward the north and northeast at approximately 0.01 to 0.03 feet per foot. The shallower depth to groundwater measurements were obtained from the wells installed in the closed auto repair facility basement. The February 2013 depth to groundwater measurements and inferred groundwater flow direction were generally consistent with those reported by others from 2006 and 2007.

The groundwater sample collected in February 2013 from monitoring well MW-10 (located on the northern parcel near a former Chevron gasoline service station) had gasoline-, diesel-, and oil-range TPH concentrations of 1,700 µg/L, 39,000 µg/L, and 53,000 µg/L, respectively, exceeding the MTCA Method A Cleanup Levels for Ground Water. These results are similar to those reported for the groundwater sample collected from well MW-10 by other consultants in January 2007. The approximate area of the TPH-contaminated groundwater plume is shown on Figure 4.

The groundwater samples collected from monitoring wells MW-4, MW-7, MW-12, MW-16, and MW-17 (located on the two southern parcels downgradient of the basement sump in the closed auto repair service building) by RGI in February 2013 had concentrations of four VOCs (vinyl chloride, TCE, EDC, and cis-1,2-dichloroethylene) exceeding the MTCA Method A or B cleanup levels for groundwater. In February 2013, the vinyl chloride concentrations ranged from 0.26 to 290 µg/L, the TCE concentrations ranged from 8.3 to 48 µg/L, the EDC concentration was 6.1 µg/L (MW-7), and the cis-1,2-dichloroethylene concentrations ranged from 24 to 220 µg/L. Other VOCs were detected in collected groundwater samples, but at concentrations below the applicable cleanup levels.

These results are similar to those reported by other consultants for groundwater samples collected from the southern parcel wells between May 2006 and February 2007. Wells MW-3 and MW-11 reportedly contained VOCs at concentrations above the MTCA Method A or B cleanup levels for groundwater in 2006 and/or 2007, but had reported results below the MTCA Method A or B cleanup levels for groundwater in February 2013.

PROJECT LIMITATIONS

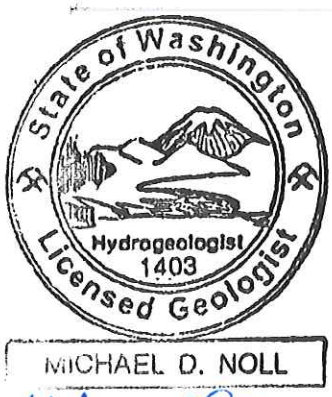
Work for this project was performed, and this report prepared, in accordance with generally accepted professional practices for the nature and conditions of work completed in same or similar locations at the present time. RGI's results and findings from the select area do not necessarily reflect soil or groundwater conditions underlying other areas of the Site not investigated. RGI reserves the right to modify its conclusions and/or recommendations as new data and information is made available. No legal or other warranty, expressed or implied, is made.

This report is the property of RGI, Mr. Washin Murakami, and his representatives, 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 property located at 5001, 5015, and 5021 Rainier Avenue South in Seattle, Washington. No other warranty, expressed or implied, is made.

If you have any questions or need additional information, please contact the undersigned at (425) 415-0551.

Respectfully submitted,

THE RILEY GROUP, INC.



Michael D. Noll, LG, LHG
Project Geologist

Paul D. Riley, LG, LHG
Principal

Attachments

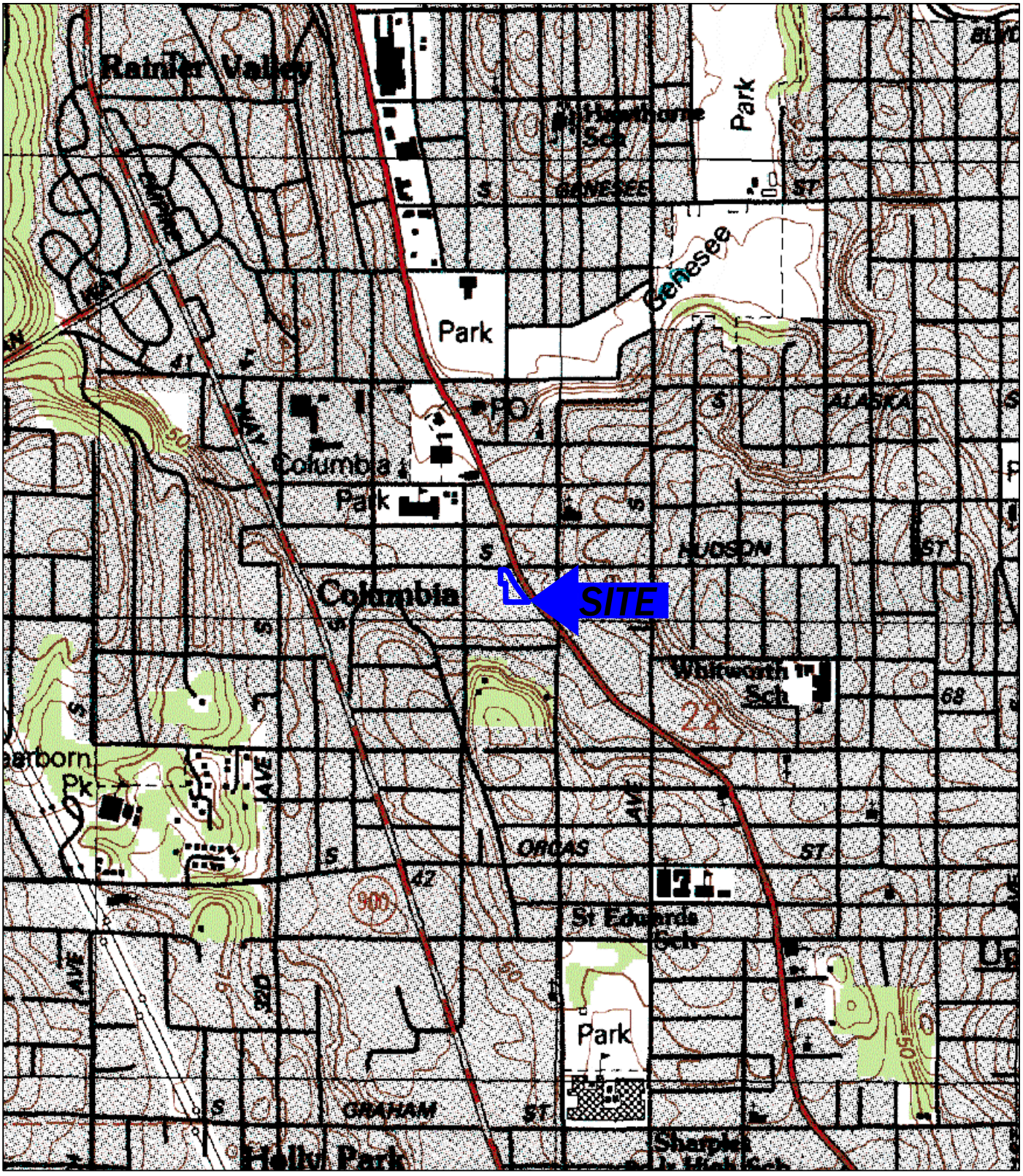
Figure 1. Site Vicinity Map
Figure 2. Base Map
Figure 3. Base Map with Groundwater Elevation Contours
Figure 4. Base Map with Groundwater Analytical Results

Table 1. Summary of Groundwater Sample Results

Appendix A. Analytical Laboratory Reports and Sample Chain-of-Custody

Report Distribution

Mr. Washin Murakami (two bound copies)
Mr. Allan Bakalian – Zeno Drake Bakalian, P.S. (three bound copies and three PDF copies on CDs)



USGS, 1983, Seattle South, Washington
7.5-Minute Quadrangle

Approximate Scale: 1"=1000'

0 500 1000 2000

N

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Murakami Morningside Acres		Figure 1
RGI Project Number 2013-079A	Site Vicinity Map	Date Drawn: 04/2013
Address: 5001, 5015, and 5021 Rainier Avenue South, Seattle, Washington 98118		

South Hudson Street

MW-2

Paved Parking Lot
5001 Rainier Avenue South
Parcel # 5649600135

MW-6

Gas Tanks

First Generation Former Service Station Circa 1929-1950

MW-1

Second Generation Former Canopy with Pump Islands Circa 1957

Current Catch Basin

Second Generation Former Service Station Circa 1957

MW-9

MW-18

MW-10

Storage Area

Lube Bays

Office

Former Auto Repair Building Circa 1950

Royal Esquire Club

Book Store

Rainier Avenue South

Bumblebee Grocery
5015 Rainier Avenue South
Parcel # 5649600133

MW-17

Gravel Parking Lot

MW-5

MW-13

MW-4

Groundwater Flow Direction

MW-3

MW-16

MW-8

Wash's Auto Repair (Closed)
5021 Rainier Avenue South
Parcel # 5649600130

St. Gobain Plastic Manufacturing

MW-7

Sump

MW-12

MW-11

Fuel Oil UST

MW-14

MW-15

Paved Parking

Retail Grocery Store

Approximate Scale: 1"=20'

0 10 20 40

N

= Monitoring Well Installed by Others in 2006 or 2007

= Site Boundary

= Parcel Boundary

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Murakami Morningside Acres		Figure 2
RGI Project Number 2013-079A	Base Map	Date Drawn: 04/2013
Address: 5001, 5015, and 5021 Rainier Avenue South, Seattle, Washington 98118		

South Hudson Street

104.6

MW-2
(104.95)

Paved Parking Lot
5001 Rainier Avenue South
Parcel # 5649600135

MW-6
(104.64)

Gas Tanks

First Generation Former Service Station Circa 1929-1950

MW-1
(104.47)

105

Second Generation Former Canopy with Pump Islands Circa 1957

Current Catch Basin

Second Generation Former Service Station Circa 1957

MW-9
(105.19)

MW-18
(104.43)

MW-10
(104.94)

Storage Area

Lube Bays

Office

Former Auto Repair Building Circa 1950

104.6

Royal Esquire Club

Book Store

Rainier Avenue South

Bumblebee Grocery
5015 Rainier Avenue South
Parcel # 5649600133

105

MW-17
(104.98)

105.4

MW-13
(105.33)

Gravel Parking Lot

105.4

MW-5

MW-4
(105.55)

MW-3
(105.49)

105.8

105.8

106.2

MW-8
(106.07)

106.2

107

106.6

MW-16
(107.03)

Wash's Auto Repair (Closed)
5021 Rainier Avenue South
Parcel # 5649600130

106.6

St. Gobain Plastic Manufacturing

MW-7
(107.22)

Sump

MW-11
(107.94)

MW-12
(107.21)

Fuel Oil UST

107

107.4

MW-14
(106.73)

MW-15
(106.45)

Retail Grocery Store

= Monitoring Well Installed by Others in 2006 or 2007

107.4 = Groundwater contours generated using Surfer Software (based on Kriging method). Contours based on February 12, 2013 water level measurements.

= Groundwater Flow Direction

= Site Boundary

= Parcel Boundary

Approximate Scale: 1"=20'

0 10 20 40

N

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Murakami Morningside Acres		Figure 3
RGI Project Number 2013-079A	Base Map with Groundwater Elevation Contours	Date Drawn: 04/2013
Address: 5001, 5015, and 5021 Rainier Avenue South, Seattle, Washington 98118		

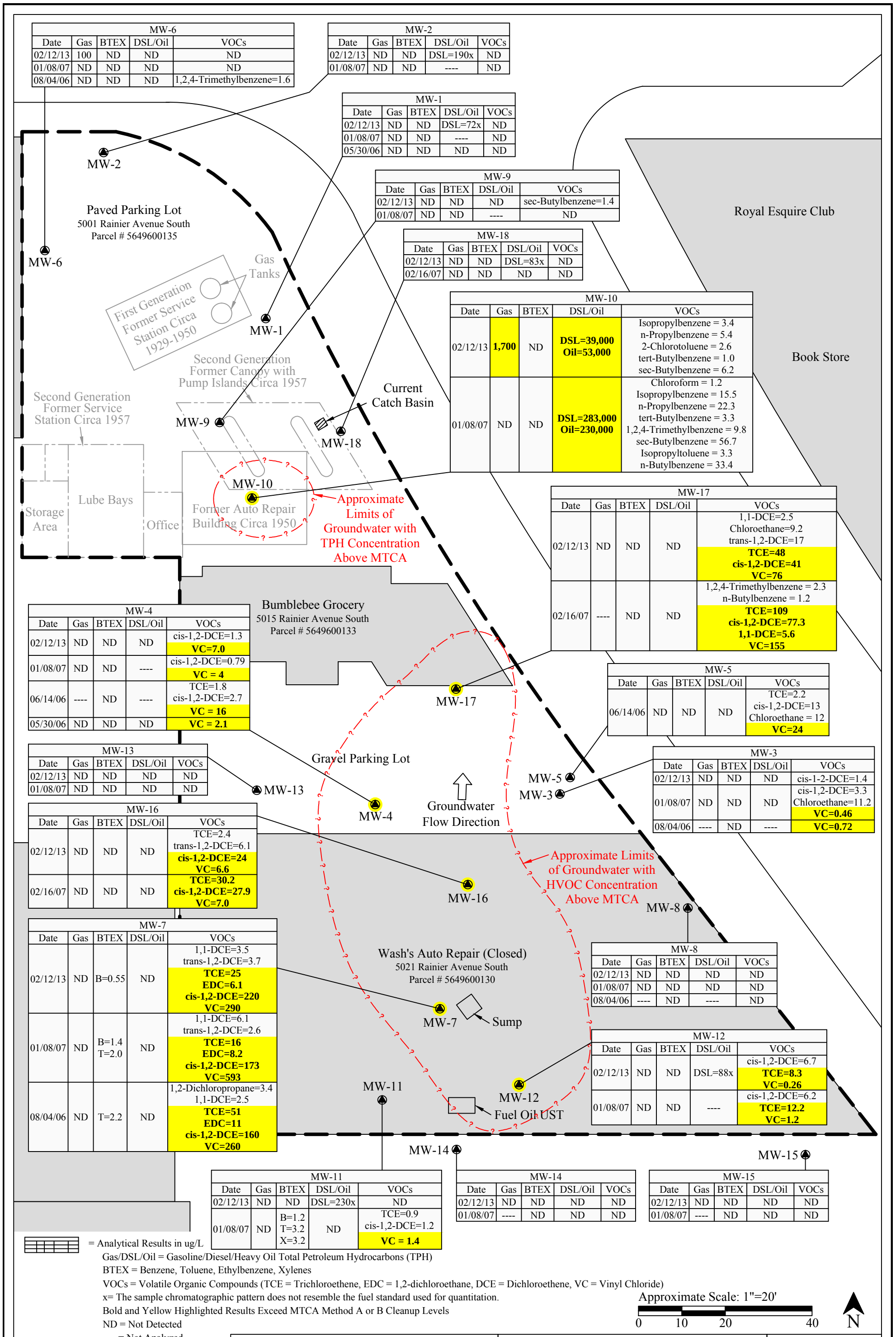
MW-6
Date | Gas | BTEX | DSL/Oil | VOCs
02/12/13 | 100 | ND | ND | ND
01/08/07 | ND | ND | ND | ND
08/04/06 | ND | ND | ND | 1,2,4-Trimethylbenzene=1.6
MW-2
Date | Gas | BTEX | DSL/Oil | VOCs
02/12/13 | ND | ND | DSL=190x | ND
01/08/07 | ND | ND | ---- | ND
MW-1
Date | Gas | BTEX | DSL/Oil | VOCs
02/12/13 | ND | ND | DSL=72x | ND
01/08/07 | ND | ND | ---- | ND
05/30/06 | ND | ND | ND | ND
MW-9
Date | Gas | BTEX | DSL/Oil | VOCs
02/12/13 | ND | ND | ND | sec-Butylbenzene=1.4
01/08/07 | ND | ND | ---- | ND
MW-18
Date | Gas | BTEX | DSL/Oil | VOCs
02/12/13 | ND | ND | DSL=83x | ND
02/16/07 | ND | ND | ND | ND
MW-10
Date | Gas | BTEX | DSL/Oil | VOCs
02/12/13 | 1,700 | ND | DSL=39,000 Oil=53,000 | Isopropylbenzene = 3.4 n-Propylbenzene = 5.4 2-Chlorotoluene = 2.6 tert-Butylbenzene = 1.0 sec-Butylbenzene = 6.2
01/08/07 | ND | ND | DSL=283,000 Oil=230,000 | Chloroform = 1.2 Isopropylbenzene = 15.5 n-Propylbenzene = 22.3 tert-Butylbenzene = 3.3 1,2,4-Trimethylbenzene = 9.8 sec-Butylbenzene = 56.7 Isopropyltoluene = 3.3 n-Butylbenzene = 33.4
MW-17
Date | Gas | BTEX | DSL/Oil | VOCs
02/12/13 | ND | ND | ND | 1,1-DCE=2.5 Chloroethane=9.2 trans-1,2-DCE=17 TCE=48 cis-1,2-DCE=41 VC=76
02/16/07 | ---- | ND | ND | 1,2,4-Trimethylbenzene = 2.3 n-Butylbenzene = 1.2 TCE=109 cis-1,2-DCE=77.3 1,1-DCE=5.6 VC=155
MW-4
Date | Gas | BTEX | DSL/Oil | VOCs
02/12/13 | ND | ND | ND | cis-1,2-DCE=1.3 VC=7.0
01/08/07 | ND | ND | ---- | cis-1,2-DCE=0.79 VC = 4
06/14/06 | ---- | ND | ---- | TCE=1.8 cis-1,2-DCE=2.7 VC = 16
05/30/06 | ND | ND | ND | VC = 2.1
MW-5
Date | Gas | BTEX | DSL/Oil | VOCs
06/14/06 | ND | ND | ND | TCE=2.2 cis-1,2-DCE=13 Chloroethane = 12 VC=24
MW-13
Date | Gas | BTEX | DSL/Oil | VOCs
02/12/13 | ND | ND | ND | ND
01/08/07 | ND | ND | ND | ND
MW-3
Date | Gas | BTEX | DSL/Oil | VOCs
02/12/13 | ND | ND | ND | cis-1-2-DCE=1.4
01/08/07 | ND | ND | ND | cis-1,2-DCE=3.3 Chloroethane=11.2 VC=0.46
08/04/06 | ---- | ND | ---- | VC=0.72
MW-16
Date | Gas | BTEX | DSL/Oil | VOCs
02/12/13 | ND | ND | ND | TCE=2.4 trans-1,2-DCE=6.1 cis-1,2-DCE=24 VC=6.6
02/16/07 | ND | ND | ND | TCE=30.2 cis-1,2-DCE=27.9 VC=7.0
MW-8
Date | Gas | BTEX | DSL/Oil | VOCs
02/12/13 | ND | ND | ND | ND
01/08/07 | ND | ND | ND | ND
08/04/06 | ---- | ND | ---- | ND
MW-7
Date | Gas | BTEX | DSL/Oil | VOCs
02/12/13 | ND | B=0.55 | ND | 1,1-DCE=3.5 trans-1,2-DCE=3.7 TCE=25 EDC=6.1 cis-1,2-DCE=220 VC=290
01/08/07 | ND | B=1.4 T=2.0 | ND | 1,1-DCE=6.1 trans-1,2-DCE=2.6 TCE=16 EDC=8.2 cis-1,2-DCE=173 VC=593
08/04/06 | ND | T=2.2 | ND | 1,2-Dichloropropane=3.4 1,1-DCE=2.5 TCE=51 EDC=11 cis-1,2-DCE=160 VC=260
MW-12
Date | Gas | BTEX | DSL/Oil | VOCs
02/12/13 | ND | ND | DSL=88x | cis-1,2-DCE=6.7 TCE=8.3 VC=0.26
01/08/07 | ND | ND | ---- | cis-1,2-DCE=6.2 TCE=12.2 VC=1.2
MW-11
Date | Gas | BTEX | DSL/Oil | VOCs
02/12/13 | ND | ND | DSL=230x | ND
01/08/07 | ND | B=1.2 T=3.2 X=3.2 | ND | TCE=0.9 cis-1,2-DCE=1.2 VC = 1.4
MW-14
Date | Gas | BTEX | DSL/Oil | VOCs
02/12/13 | ND | ND | ND | ND
01/08/07 | ---- | ND | ND | ND
MW-15
Date | Gas | BTEX | DSL/Oil | VOCs
02/12/13 | ND | ND | ND | ND
01/08/07 | ---- | ND | ND | ND
Paved Parking Lot
5001 Rainier Avenue South
Parcel # 5649600135
Royal Esquire Club
Book Store
Gas Tanks
First Generation Former Service Station Circa 1929-1950
Second Generation Former Canopy with Pump Islands Circa 1957
Second Generation Former Service Station Circa 1957
Current Catch Basin
Storage Area
Lube Bays
Office
Former Auto Repair Building Circa 1950
Approximate Limits of Groundwater with TPH Concentration Above MTCA
Bumblebee Grocery
5015 Rainier Avenue South
Parcel # 5649600133
Gravel Parking Lot
Groundwater Flow Direction
Approximate Limits of Groundwater with HVOC Concentration Above MTCA
Wash's Auto Repair (Closed)
5021 Rainier Avenue South
Parcel # 5649600130
Sump
Fuel Oil UST
MW-2
MW-6
MW-1
MW-9
MW-18
MW-10
MW-17
MW-4
MW-5
MW-13
MW-3
MW-4
MW-16
MW-8
MW-7
MW-12
MW-11
MW-14
MW-15
= Analytical Results in ug/L
Gas/DSL/Oil = Gasoline/Diesel/Heavy Oil Total Petroleum Hydrocarbons (TPH)
BTEX = Benzene, Toluene, Ethylbenzene, Xylenes
VOCs = Volatile Organic Compounds (TCE = Trichloroethene, EDC = 1,2-dichloroethane, DCE = Dichloroethene, VC = Vinyl Chloride)
x= The sample chromatographic pattern does not resemble the fuel standard used for quantitation.
Bold and Yellow Highlighted Results Exceed MTCA Method A or B Cleanup Levels
ND = Not Detected
---- = Not Analyzed
= Monitoring Well Installed by Others in 2006 or 2007
= Site Boundary
= Parcel Boundary
Approximate Scale: 1"=20'
0 10 20 40
N
The Riley Group, Inc.
17522 Bothell Way Northeast
Bothell, Washington 98011
Phone: 425.415.0551 ♦ Fax: 425.415.0311
Murakami Morningside Acres
Figure 4
RGI Project Number
2013-079A
Base Map with Groundwater Analytical Results
Date Drawn:
04/2013
Address: 5001, 5015, and 5021 Rainier Avenue South, Seattle, Washington 98118

Table 1. Summary of Groundwater Sample Results
Murakami Morningside Acres
5001, 5015, and 5021 Rainier Avenue South, Seattle, Washington 98118
The Riley Group, Inc. Project No. 2013-079A

Sample Number	Date	Sampler	TOC Elevation	Depth to Water	Groundwater Elevation	Gasoline TPH	BTEX				Diesel TPH	Mineral Oil TPH	Heavy Oil TPH	Mineral Spirits	1,2-Dichloropropane	TCE	EDC	cis-1,2-DCE	1,1-DCE	VC	Other VOCs/HVOCs	EDB	Dissolved Lead
							Benzene	Toluene	Ethyl Benzene	Xylenes													
MW-1 Screened Interval 8-18 ft bgs, Total boring depth 18 ft bgs																							
MW-1-021213	02/12/13	RGI	114.99	10.52	104.47	ND<100	ND<0.35	ND<1	ND<1	ND<2	72 x	----	ND<250	----	ND<1	ND<1	ND<1	ND<1	ND<1	ND<0.2	ND	ND<1	----
MW-100-021213 (Duplicate)	02/12/13	RGI	----	----	----	----	ND<0.35	ND<1	ND<1	ND<2	59 x	----	ND<250	----	ND<1	ND<1	ND<1	ND<1	ND<1	ND<0.2	ND	ND<1	----
MW-1	02/20/07	G-Logics	114.99	10.41	104.58	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
MW-1	01/10/07	G-Logics	114.99	9.99	105.00	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
MW-1	01/08/07	G-Logics	114.99	----	----	ND	ND	ND	ND	ND	----	----	----	ND	ND	ND	ND	ND	ND	ND	ND	----	----
MW-1	01/05/07	G-Logics	114.99	9.91	105.08	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
MW-1	05/30/06	Kleinfelder	114.99	----	----	ND	ND	ND	ND	ND	ND	----	ND	----	ND	ND	ND	ND	ND	ND	ND	----	ND
MW-2 Screened Interval 8-18 ft bgs, Total boring depth 18 ft bgs																							
MW-2-021213	02/12/13	RGI	114.38	9.43	104.95	ND<100	ND<0.35	ND<1	ND<1	ND<2	190 x	----	ND<250	----	ND<1	ND<1	ND<1	ND<1	ND<1	ND<0.2	ND	ND<1	----
MW-2	02/20/07	G-Logics	114.38	15.66	98.72	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
MW-2	01/10/07	G-Logics	114.38	Dry	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
MW-2	01/08/07	G-Logics	114.38	----	----	ND	ND	ND	ND	ND	----	----	----	ND	ND	ND	ND	ND	ND	ND	ND	----	----
MW-2	01/05/07	G-Logics	114.38	16.07	98.31	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
MW-3 Screened Interval 8-18 ft bgs, Total boring depth 18 ft bgs																							
MW-3-021213	02/12/13	RGI	114.97	9.48	105.49	ND<100	ND<0.35	ND<1	ND<1	ND<2	ND<50	----	ND<250	----	----	ND<1	ND<1	1.4	ND<1	ND<0.2	ND	----	----
MW-3	02/20/07	G-Logics	114.97	10.55	104.42	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
MW-3	01/10/07	G-Logics	114.97	12.11	102.86	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
MW-3	01/08/07	G-Logics	114.97	----	----	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	3.3	ND	**0.46**	Chloroethane = 11.2	----	----
MW-3	01/05/07	G-Logics	114.97	9.79	105.18	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
MW-3	08/04/06	Kleinfelder	114.97	----	----	----	ND	ND	ND	ND	----	----	----	----	ND	ND	ND	ND	ND	**0.72**	ND	----	----
MW-4 Screened Interval 6.5-16.5 ft bgs, Total boring depth 16.5 ft bgs																							
MW-4-021213	02/12/13	RGI	112.99	7.44	105.55	ND<100	ND<0.35	ND<1	ND<1	ND<2	ND<50	----	ND<250	----	----	ND<1	ND<1	1.3	ND<1	**7.0**	ND	----	----
MW-4	02/20/07	G-Logics	112.99	7.39	105.60	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
MW-4	01/10/07	G-Logics	112.99	7.25	105.74	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
MW-4	01/08/07	G-Logics	112.99	----	----	ND	ND	ND	ND	ND	----	----	----	ND	ND	ND	ND	0.79 J	ND	**4**	ND	----	----
MW-4	01/05/07	G-Logics	112.99	7.26	105.73	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
MW-4	06/14/06	Kleinfelder	112.99	----	----	----	ND	ND	ND	ND	----	----	----	----	ND	1.8	ND	2.7	ND	**16**	ND	----	----
MW-4	05/30/06	Kleinfelder	112.99	----	----	ND	ND	ND	ND	ND	ND	----	ND	----	ND	ND	ND	ND	ND	**2.1**	ND	----	ND
MW-5 Screened Interval 9-13 ft bgs, Total boring depth 13 ft bgs																							
MW-5	02/12/13	RGI	114.85	NM	Unable to Locate																		
MW-5	01/05/07	G-Logics	114.85	9.89	104.96	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
MW-5	06/14/06	Kleinfelder	114.85	----	----	ND	ND	ND	ND	ND	ND	----	ND	----	ND	2.2	ND	13	ND	**24**	Chloroethane = 12	----	ND
MW-6 Screened Interval 9.5-14.5 ft bgs, Total boring depth 14.5 ft bgs																							
MW-6-021213	02/12/13	RGI	115.15	10.51	104.64	100	ND<0.35	ND<1	ND<1	ND<2	ND<50[3]	----	ND<250[3]	----	ND<1	ND<1	ND<1	ND<1	ND<1	ND<0.2	ND	ND<1	----
MW-6	01/10/07	G-Logics	115.15	10.04	105.11	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
MW-6	01/08/07	G-Logics	115.15	----	----	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	----	----
MW-6	01/05/07	G-Logics	115.15	10.04	105.11	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
MW-6	08/04/06	Kleinfelder	115.15	----	----	ND	ND	ND	ND	ND	ND	----	ND	----	ND	ND	ND	ND	ND	ND	1,2,4-Trimethylbenzene = 1.6	----	ND
MW-7 Screened Interval 6.5-11.5 ft bgs, Total boring depth 11.5 ft bgs																							
MW-7-021213	02/12/13	RGI	108.29	1.07	107.22	ND<100	0.55	ND<1	ND<1	ND<2	ND<50	----	ND<250	----	ND<1	**25**	**6.1**	**220**	3.5	**290**	trans-1,2-Dichloroethene = 3.7	----	----
MW-7	02/20/07	G-Logics	108.29	1.09	107.20	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
MW-7	01/10/07	G-Logics	108.29	0.98	107.31	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
MW-7	01/08/07	G-Logics	108.29	----	----	ND	1.4	2.0	ND	ND	ND	ND	ND	ND	ND	**16**	**8.2**	**173**	6.1	**593**	trans-1,2-Dichlorothene = 2.6	----	----
MW-7	01/05/07	G-Logics	108.29	1.10	107.19	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
MW-7	08/04/06	Kleinfelder	108.29	----	----	ND	ND	2.2	ND	ND	ND	----	ND	----	3.4	**51**	**11**	**160**	2.5	**260**	ND	----	ND
MTCA Method A Cleanup Levels for Ground Water						**800/1,000[1]**	**5**	**1,000**	**700**	**1,000**	**500**	**500**	**500**	**500**	**n/a**	**5**	**5**	**16[2]**	**400[2]**	**0.2**	**1,2,4-Trimethylbenzene = n/a Chloroethane = n/a trans-1,2-Dichlorothene = 160[2]**	**0.01**	**15**

Table 1 Continued. Summary of Groundwater Sample Results
Murakami Morningside Acres
5001, 5015, and 5021 Rainier Avenue South, Seattle, Washington 98118
The Riley Group, Inc. Project No. 2013-079A

Sample Number	Date	Sampler	TOC Elevation	Depth to Water	Groundwater Elevation	Gasoline TPH	BTEX				Diesel TPH	Mineral Oil TPH	Heavy Oil TPH	Mineral Spirits	1,2-Dichloropropane	TCE	EDC	cis-1,2-DCE	1,1-DCE	VC	Other VOCs/HVOCs	EDB	Dissolved Lead
							Benzene	Toluene	Ethyl Benzene	Xylenes													
MW-8 Screened Interval 9.5-14.5 ft bgs, Total boring depth 14.5 ft bgs																							
MW-8-021213	02/12/13	RGI	116.28	10.21	106.07	ND<100	ND<0.35	ND<1	ND<1	ND<2	ND<85	----	ND<430	----	----	ND<1	ND<1	ND<1	ND<1	ND<0.2	ND	----	----
MW-8	02/20/07	G-Logics	116.28	10.46	105.82	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
MW-8	01/10/07	G-Logics	116.28	10.41	105.87	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
MW-8	01/08/07	G-Logics	116.28	----	----	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	----	----
MW-8	01/05/07	G-Logics	116.28	10.01	106.27	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
MW-8	08/04/06	Kleinfelder	116.28	----	----	----	ND	ND	ND	ND	----	----	----	----	ND	ND	ND	ND	ND	ND	ND	----	----
MW-9 Screened Interval 9-19 ft bgs, Total boring depth 19 ft bgs																							
MW-9-021213	02/12/13	RGI	114.70	9.51	105.19	ND<100	ND<0.35	ND<1	ND<1	ND<2	ND<50[3]	----	ND<250[3]	----	ND<1	ND<1	ND<1	ND<1	ND<1	ND<0.2	sec-Butylbenzene = 1.4	ND<1	----
MW-9	02/20/07	G-Logics	114.70	9.75	104.95	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
MW-9	01/10/07	G-Logics	114.70	9.25	105.45	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
MW-9	01/08/07	G-Logics	114.70	----	----	ND	ND	ND	ND	ND	----	----	----	ND	ND	ND	ND	ND	ND	ND	ND	----	----
MW-9	01/05/07	G-Logics	114.70	9.36	105.34	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
MW-10 Screened Interval 9-19 ft bgs, Total boring depth 19 ft bgs																							
MW-10-021213	02/12/13	RGI	114.68	9.74	104.94	**1,700**	ND<0.35	ND<1	ND<1	ND<2	**39,000**	----	**53,000**	----	ND<1	ND<1	ND<1	ND<1	ND<1	ND<0.2	Isopropylbenzene = 3.4 n-Propylbenzene = 5.4 2-Chlorotoluene = 2.6 tert-Butylbenzene = 1.0 sec-Butylbenzene = 6.2	ND<0.01	----
MW-10	02/20/07	G-Logics	114.68	9.35	105.33	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
MW-10	01/10/07	G-Logics	114.68	8.65	106.03	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
MW-10	01/08/07	G-Logics	114.68	----	----	ND	ND	ND	ND	ND	**283,000**	ND	**230,000**	**298,000**	ND	ND	ND	ND	ND	ND	Chloroform = 1.2 Isopropylbenzene = 15.5 n-Propylbenzene = 22.3 tert-Butylbenzene = 3.3 1,2,4-Trimethylbenzene = 9.8 sec-Butylbenzene = 56.7 Isopropyltoluene = 3.3 n-Butylbenzene = 33.4	----	----
MW-10	01/05/07	G-Logics	114.68	8.58	106.10	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
MW-11 Screened Interval 3-13 ft bgs, Total boring depth 13 ft bgs																							
MW-11-021213	02/12/13	RGI	108.47	0.53	107.94	ND<100	ND<0.35	ND<1	ND<1	ND<2	230 x	----	ND<250	----	----	ND<1	ND<1	ND<1	ND<1	ND<0.2	ND	----	----
MW-11	02/20/07	G-Logics	108.47	0.51	107.96	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
MW-11	01/10/07	G-Logics	108.47	0.48	107.99	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
MW-11	01/08/07	G-Logics	108.47	----	----	ND	1.2	3.2	ND	3.2	ND	ND	ND	ND	ND	0.9 J	ND	1.2	ND	**1.4**	ND	----	----
MW-12 Screened Interval 3-8 ft bgs, Total boring depth 8 ft bgs																							
MW-12-021213	02/12/13	RGI	109.17	1.96	107.21	ND<100	ND<0.35	ND<1	ND<1	ND<2	88 x	----	ND<250	----	----	**8.3**	ND<1	6.7	ND<1	**0.26**	ND	----	----
MW-12	02/20/07	G-Logics	109.17	1.96	107.21	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
MW-12	01/10/07	G-Logics	109.17	1.61	107.56	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
MW-12	01/08/07	G-Logics	109.17	----	----	ND	ND	ND	ND	ND	----	----	----	ND	ND	**12.2**	ND	6.2	ND	**1.2**	ND	----	----
MW-13 Screened Interval 5-15 ft bgs, Total boring depth 15 ft bgs																							
MW-13-021213	02/12/13	RGI	111.82	6.49	105.33	ND<100	ND<0.35	ND<1	ND<1	ND<2	ND<50	----	ND<250	----	----	ND<1	ND<1	ND<1	ND<1	ND<0.2	ND	----	----
MW-13	02/20/07	G-Logics	111.82	6.44	105.38	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
MW-13	01/10/07	G-Logics	111.82	6.22	105.60	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
MW-13	01/08/07	G-Logics	111.82	----	----	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	----	----
MTCA Method A Cleanup Levels for Ground Water						**800/1,000[1]**	**5**	**1,000**	**700**	**1,000**	**500**	**500**	**500**	**500**	**n/a**	**5**	**5**	**16[2]**	**400[2]**	**0.2**	**1,2,4-Trimethylbenzene = n/a 2-Chlorotoluene = 160[2] Chloroform = 80[2] Isopropylbenzene = 800[2] Isopropyltoluene = n/a n-Butylbenzene = n/a n-Propylbenzene = 800[2] sec-Butylbenzene = n/a tert-Butylbenzene = n/a**	**0.01**	**15**

Table 1 Continued. Summary of Groundwater Sample Results
Murakami Morningside Acres
5001, 5015, and 5021 Rainier Avenue South, Seattle, Washington 98118
The Riley Group, Inc. Project No. 2013-079A

Sample Number	Date	Sampler	TOC Elevation	Depth to Water	Groundwater Elevation	Gasoline TPH	BTEX				Diesel TPH	Mineral Oil TPH	Heavy Oil TPH	Mineral Spirits	1,2-Dichloropropane	TCE	EDC	cis-1,2-DCE	1,1-DCE	VC	Other VOCs/HVOCs	EDB	Dissolved Lead
							Benzene	Toluene	Ethyl Benzene	Xylenes													
MW-14 Screened Interval 16-26 ft bgs, Total boring depth 26 ft bgs																							
MW-14-021213	02/12/13	RGI	115.89	9.16	106.73	ND<100	ND<0.35	ND<1	ND<1	ND<2	ND<50	----	ND<250	----	----	ND<1	ND<1	ND<1	ND<1	ND<0.2	ND	----	----
MW-14	02/20/07	G-Logics	115.89	9.20	106.69	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
MW-14	02/16/07	G-Logics	115.89	----	----	----	ND	ND	ND	ND	ND	ND	ND	----	ND	ND	ND	ND	ND	ND	ND	----	----
MW-15 Screened Interval 7-17 ft bgs, Total boring depth 17 ft bgs																							
MW-15-021213	02/12/13	RGI	115.92	9.47	106.45	ND<100	ND<0.35	ND<1	ND<1	ND<2	ND<50	----	ND<250	----	----	ND<1	ND<1	ND<1	ND<1	ND<0.2	ND	----	----
MW-15	02/20/07	G-Logics	115.92	9.69	106.23	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
MW-15	02/16/07	G-Logics	115.92	----	----	----	ND	ND	ND	ND	ND	ND	ND	----	ND	ND	ND	ND	ND	ND	ND	----	----
MW-16 Screened Interval 2-6 ft bgs, Total boring depth 6 ft bgs																							
MW-16-021213	02/12/13	RGI	108.68	1.65	107.03	ND<100	ND<0.35	ND<1	ND<1	ND<2	ND<50	----	ND<250	----	----	2.4	ND<1	**24**	ND<1	**6.6**	trans-1,2-Dichloroethene = 6.1	----	----
MW-16	02/20/07	G-Logics	108.68	1.65	107.03	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
MW-16	02/16/07	G-Logics	108.68	----	----	ND	ND	ND	ND	ND	ND	ND	ND	----	ND	**30.2**	ND	**27.9**	ND	**7.0**	ND	----	----
MW-17 Screened Interval 6-16 ft bgs, Total boring depth 16 ft bgs																							
MW-17-021213	02/12/13	RGI	113.61	8.63	104.98	ND<100	ND<0.35	ND<1	ND<1	ND<2	ND<50	----	ND<250	----	----	**48**	ND<1	**41**	2.5	**76**	Chloroethane = 9.2 trans-1,2-Dichloroethene = 17	----	----
MW-17	02/20/07	G-Logics	113.61	8.62	104.99	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
MW-17	02/16/07	G-Logics	113.61	----	----	----	ND	ND	ND	ND	ND	ND	ND	----	ND	**109**	ND	**77.3**	**5.6**	**155**	1,2,4-Trimethylbenzene = 2.3 n-Butylbenzene = 1.2	----	----
MW-18 Screened Interval 7-17 ft bgs, Total boring depth 17 ft bgs																							
MW-18-021213	02/12/13	RGI	114.90	10.47	104.43	ND<100	ND<0.35	ND<1	ND<1	ND<2	83 x	----	ND<250	----	ND<1	ND<1	ND<1	ND<1	ND<1	ND<0.2	ND	ND<1	----
MW-18	02/20/07	G-Logics	114.90	10.38	104.52	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
MW-18	02/16/07	G-Logics	114.90	----	----	ND	ND	ND	ND	ND	ND	ND	ND	----	ND	ND	ND	ND	ND	ND	ND	----	----
Other																							
Trip Blank	02/12/13	RGI	----	----	----	ND<100	ND<0.35	ND<1	ND<1	ND<2	----	----	----	----	----	ND<1	ND<1	ND<1	ND<1	ND<0.2 pr	ND	----	----
MTCA Method A Cleanup Levels for Ground Water						**800/1,000[1]**	**5**	**1,000**	**700**	**1,000**	**500**	**500**	**500**	**500**	**n/a**	**5**	**5**	**16[2]**	**400[2]**	**0.2**	**1,2,4-Trimethylbenzene = n/a Chloroethane = n/a n-Butylbenzene = n/a trans-1,2-Dichlorothene = 1602**	**0.01**	**15**

Notes:
Samples collected by RGI field staff under low flow conditions.
TOC = Top of casing elevation based on City of Seattle Datum, NAVD88, brass cap at South Hudson Street and Rainier Avenue South (as previously reported by others).
Depth to Water = Measured in feet below TOC using an electronic water level meter.
Unless otherwise noted, all analytical results are given in micrograms per liter (ug/L), equivalent to parts per billion (ppb).
The analytical methods reported below are for samples by RGI and may not reflect the method used by others.
Gasoline-range TPH (total petroleum hydrocarbons) determined using Northwest Test Method NWTPH-Gx.
BTEX (benzene, toluene, ethyl benzene, and xylenes) determined using EPA Test Method 8260C.
Diesel and oil TPH (total petroleum hydrocarbons) determined using Northwest Test Method NWTPH-Dx.
1,2-Dichloropropane, TCE (trichloroethene), EDC (1,2-dichloroethane), cis-1,2-DCE (cis-1,2-dichloroethene), 1,1-DCE (1,1-dichloroethene), VC (vinyl chloride), VOCs (volatile organic compounds), and HVOCs (halogenated volatile organic compounds) determined using EPA Test Method 8260C.
EBD (1,2-dibromoethane) determined using EPA Test Method 8011.
J = Estimated concentration.
n/a = Not applicable.
ND = Not detected at noted analytical detection limit.
NM = Not measured.
pr = The sample was received with incorrect preservation. The value reported should be considered an estimate.
x = The sample chromatographic pattern does not resemble the fuel standard used for quantitation.
---- = Not analyzed or not applicable.
[1] The higher cleanup level is applicable if no benzene is detected in groundwater.
[2] Method A Cleanup Level was not available. Therefore, the MTCA Method B Cleanup Level is referenced.
[3] Sample extracts passed through a silica gel column prior to analysis.
MTCA Cleanup Level = Ecology Model Toxics Control Act Method A Cleanup Levels for Ground Water (WAC 173-340-900, Table 720-1).
Bold and yellow highlighted results indicate concentrations (if any) that exceed MTCA Method A or B Cleanup Levels for Ground Water.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

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February 26, 2013

Mike Noll, Project Manager
The Riley Group, Inc.
17522 Bothell Way NE
Bothell, WA 98011

Dear Mr. Noll:

Included are the results from the testing of material submitted on February 13, 2013 from the Murakami Morningside Acres 2013-079A, F&BI 302171 project. There are 41 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
TRG0226R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on February 13, 2013 by Friedman & Bruya, Inc. from the The Riley Group Murakami Morningside Acres 2013-079A, F&BI 302171 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	The Riley Group
302171 -01	MW-1-021213
302171 -02	MW-2-021213
302171 -03	MW-3-021213
302171 -04	MW-4-021213
302171 -05	MW-6-021213
302171 -06	MW-7-021213
302171 -07	MW-8-021213
302171 -08	MW-9-021213
302171 -09	MW-10-021213
302171 -10	MW-11-021213
302171 -11	MW-12-021213
302171 -12	MW-13-021213
302171 -13	MW-14-021213
302171 -14	MW-15-021213
302171 -15	MW-16-021213
302171 -16	MW-17-021213
302171 -17	MW-18-021213
302171 -18	MW-100-021213
302171-19	Trip Blank

The 8260C vinyl chloride concentrations were flagged due to hydrochloric acid preservation per EPA SW-846 table 4-1 in the trip blank sample.

All other quality control requirements were acceptable.

Date of Report: 02/26/13
Date Received: 02/13/13
Project: Murakami Morningside Acres 2013-079A, F&BI 302171
Date Extracted: 02/15/13
Date Analyzed: 02/15/13 and 02/16/13

RESULTS FROM THE ANALYSIS OF WATER SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS GASOLINE USING METHOD NWTPH-Gx

Results Reported as ug/L (ppb)

Sample ID Laboratory ID	Gasoline Range	Surrogate (% Recovery) (Limit 51-134)
MW-1-021213 302171-01	<100	100
MW-2-021213 302171-02	<100	97
MW-3-021213 302171-03	<100	102
MW-4-021213 302171-04	<100	100
MW-6-021213 302171-05	100	104
MW-7-021213 302171-06	<100	98
MW-8-021213 302171-07	<100	101
MW-9-021213 302171-08	<100	103
MW-10-021213 302171-09	1,700	134
MW-11-021213 302171-10	<100	101
MW-12-021213 302171-11	<100	99

Date of Report: 02/26/13
Date Received: 02/13/13
Project: Murakami Morningside Acres 2013-079A, F&BI 302171
Date Extracted: 02/15/13
Date Analyzed: 02/15/13 and 02/16/13

RESULTS FROM THE ANALYSIS OF WATER SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS GASOLINE USING METHOD NWTPH-Gx

Results Reported as ug/L (ppb)

Sample ID Laboratory ID	Gasoline Range	Surrogate (% Recovery) (Limit 51-134)
MW-13-021213 302171-12	<100	101
MW-14-021213 302171-13	<100	98
MW-15-021213 302171-14	<100	96
MW-16-021213 302171-15	<100	102
MW-17-021213 302171-16	<100	99
MW-18-021213 302171-17	<100	99
MW-100-021213 302171-18	<100	100
Trip Blank 302171-19	<100	101
Method Blank 03-0268 MB	<100	101

Date of Report: 02/26/13
Date Received: 02/13/13
Project: Murakami Morningside Acres 2013-079A, F&BI 302171
Date Extracted: 02/15/13
Date Analyzed: 02/25/13 and 02/26/13

RESULTS FROM THE ANALYSIS OF WATER SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL AND MOTOR OIL USING METHOD NWTPH-Dx
Sample Extracts Passed Through a Silica Gel Column Prior to Analysis
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)
MW-6-021213 302171-05	<50	<250	98
MW-9-021213 302171-08	<50	<250	84
Method Blank 03-279 MB	<50	<250	85

Date of Report: 02/26/13
Date Received: 02/13/13
Project: Murakami Morningside Acres 2013-079A, F&BI 302171
Date Extracted: 02/15/13
Date Analyzed: 02/15/13 and 02/18/13

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 51-134)
MW-1-021213 302171-01	72 x	<250	97
MW-2-021213 302171-02	190 x	<250	105
MW-3-021213 302171-03	<50	<250	80
MW-4-021213 302171-04	<50	<250	98
MW-6-021213 302171-05	600 x	430 x	106
MW-7-021213 302171-06	<50	<250	99
MW-8-021213 302171-07 1/1.7	<85	<430	97
MW-9-021213 302171-08	430 x	280 x	96
MW-10-021213 302171-09 1/10	39,000	53,000	68
MW-11-021213 302171-10	230 x	<250	96
MW-12-021213 302171-11	88 x	<250	85

Date of Report: 02/26/13
Date Received: 02/13/13
Project: Murakami Morningside Acres 2013-079A, F&BI 302171
Date Extracted: 02/15/13
Date Analyzed: 02/15/13 and 02/18/13

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 51-134)
MW-13-021213 302171-12	<50	<250	88
MW-14-021213 302171-13	<50	<250	91
MW-15-021213 302171-14	<50	<250	85
MW-16-021213 302171-15	<50	<250	84
MW-17-021213 302171-16	<50	<250	87
MW-18-021213 302171-17	83 x	<250	80
MW-100-021213 302171-18	59 x	<250	90
Method Blank 03-279 MB	<50	<250	95

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW-1-021213	Client:	The Riley Group
Date Received:	02/13/13	Project:	Murakami Morningside Acres 2013-079A
Date Extracted:	02/14/13	Lab ID:	302171-01
Date Analyzed:	02/14/13	Data File:	021410.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	101	57	121
Toluene-d8	101	63	127
4-Bromofluorobenzene	100	60	133

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Dichlorodifluoromethane	<1	1,3-Dichloropropane	<1
Chloromethane	<10	Tetrachloroethene	<1
Vinyl chloride	<0.2	Dibromochloromethane	<1
Bromomethane	<1	1,2-Dibromoethane (EDB)	<1
Chloroethane	<1	Chlorobenzene	<1
Trichlorofluoromethane	<1	Ethylbenzene	<1
Acetone	<10	1,1,1,2-Tetrachloroethane	<1
1,1-Dichloroethene	<1	m,p-Xylene	<2
Methylene chloride	<5	o-Xylene	<1
Methyl t-butyl ether (MTBE)	<1	Styrene	<1
trans-1,2-Dichloroethene	<1	Isopropylbenzene	<1
1,1-Dichloroethane	<1	Bromoform	<1
2,2-Dichloropropane	<1	n-Propylbenzene	<1
cis-1,2-Dichloroethene	<1	Bromobenzene	<1
Chloroform	<1	1,3,5-Trimethylbenzene	<1
2-Butanone (MEK)	<10	1,1,2,2-Tetrachloroethane	<1
1,2-Dichloroethane (EDC)	<1	1,2,3-Trichloropropane	<1
1,1,1-Trichloroethane	<1	2-Chlorotoluene	<1
1,1-Dichloropropene	<1	4-Chlorotoluene	<1
Carbon tetrachloride	<1	tert-Butylbenzene	<1
Benzene	<0.35	1,2,4-Trimethylbenzene	<1
Trichloroethene	<1	sec-Butylbenzene	<1
1,2-Dichloropropane	<1	p-Isopropyltoluene	<1
Bromodichloromethane	<1	1,3-Dichlorobenzene	<1
Dibromomethane	<1	1,4-Dichlorobenzene	<1
4-Methyl-2-pentanone	<10	1,2-Dichlorobenzene	<1
cis-1,3-Dichloropropene	<1	1,2-Dibromo-3-chloropropane	<10
Toluene	<1	1,2,4-Trichlorobenzene	<1
trans-1,3-Dichloropropene	<1	Hexachlorobutadiene	<1
1,1,2-Trichloroethane	<1	Naphthalene	<1
2-Hexanone	<10	1,2,3-Trichlorobenzene	<1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW-2-021213	Client:	The Riley Group
Date Received:	02/13/13	Project:	Murakami Morningside Acres 2013-079A
Date Extracted:	02/14/13	Lab ID:	302171-02
Date Analyzed:	02/14/13	Data File:	021411.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	99	57	121
Toluene-d8	100	63	127
4-Bromofluorobenzene	100	60	133

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Dichlorodifluoromethane	<1	1,3-Dichloropropane	<1
Chloromethane	<10	Tetrachloroethene	<1
Vinyl chloride	<0.2	Dibromochloromethane	<1
Bromomethane	<1	1,2-Dibromoethane (EDB)	<1
Chloroethane	<1	Chlorobenzene	<1
Trichlorofluoromethane	<1	Ethylbenzene	<1
Acetone	<10	1,1,1,2-Tetrachloroethane	<1
1,1-Dichloroethene	<1	m,p-Xylene	<2
Methylene chloride	<5	o-Xylene	<1
Methyl t-butyl ether (MTBE)	<1	Styrene	<1
trans-1,2-Dichloroethene	<1	Isopropylbenzene	<1
1,1-Dichloroethane	<1	Bromoform	<1
2,2-Dichloropropane	<1	n-Propylbenzene	<1
cis-1,2-Dichloroethene	<1	Bromobenzene	<1
Chloroform	<1	1,3,5-Trimethylbenzene	<1
2-Butanone (MEK)	<10	1,1,2,2-Tetrachloroethane	<1
1,2-Dichloroethane (EDC)	<1	1,2,3-Trichloropropane	<1
1,1,1-Trichloroethane	<1	2-Chlorotoluene	<1
1,1-Dichloropropene	<1	4-Chlorotoluene	<1
Carbon tetrachloride	<1	tert-Butylbenzene	<1
Benzene	<0.35	1,2,4-Trimethylbenzene	<1
Trichloroethene	<1	sec-Butylbenzene	<1
1,2-Dichloropropane	<1	p-Isopropyltoluene	<1
Bromodichloromethane	<1	1,3-Dichlorobenzene	<1
Dibromomethane	<1	1,4-Dichlorobenzene	<1
4-Methyl-2-pentanone	<10	1,2-Dichlorobenzene	<1
cis-1,3-Dichloropropene	<1	1,2-Dibromo-3-chloropropane	<10
Toluene	<1	1,2,4-Trichlorobenzene	<1
trans-1,3-Dichloropropene	<1	Hexachlorobutadiene	<1
1,1,2-Trichloroethane	<1	Naphthalene	<1
2-Hexanone	<10	1,2,3-Trichlorobenzene	<1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW-3-021213	Client:	The Riley Group
Date Received:	02/13/13	Project:	Murakami Morningside Acres 2013-079A
Date Extracted:	02/14/13	Lab ID:	302171-03
Date Analyzed:	02/14/13	Data File:	021422.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	99	57	121
Toluene-d8	101	63	127
4-Bromofluorobenzene	99	60	133

Compounds:	Concentration ug/L (ppb)
Benzene	<0.35
Toluene	<1
Ethylbenzene	<1
m,p-Xylene	<2
o-Xylene	<1
Vinyl chloride	<0.2
Chloroethane	<1
1,1-Dichloroethene	<1
Methylene chloride	<5
trans-1,2-Dichloroethene	<1
1,1-Dichloroethane	<1
cis-1,2-Dichloroethene	1.4
1,2-Dichloroethane (EDC)	<1
1,1,1-Trichloroethane	<1
Trichloroethene	<1
Tetrachloroethene	<1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW-4-021213	Client:	The Riley Group
Date Received:	02/13/13	Project:	Murakami Morningside Acres 2013-079A
Date Extracted:	02/14/13	Lab ID:	302171-04
Date Analyzed:	02/14/13	Data File:	021423.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	99	57	121
Toluene-d8	101	63	127
4-Bromofluorobenzene	101	60	133

Compounds:	Concentration ug/L (ppb)
Benzene	<0.35
Toluene	<1
Ethylbenzene	<1
m,p-Xylene	<2
o-Xylene	<1
Vinyl chloride	7.0
Chloroethane	<1
1,1-Dichloroethene	<1
Methylene chloride	<5
trans-1,2-Dichloroethene	<1
1,1-Dichloroethane	<1
cis-1,2-Dichloroethene	1.3
1,2-Dichloroethane (EDC)	<1
1,1,1-Trichloroethane	<1
Trichloroethene	<1
Tetrachloroethene	<1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW-6-021213	Client:	The Riley Group
Date Received:	02/13/13	Project:	Murakami Morningside Acres 2013-079A
Date Extracted:	02/14/13	Lab ID:	302171-05
Date Analyzed:	02/14/13	Data File:	021418.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	99	57	121
Toluene-d8	101	63	127
4-Bromofluorobenzene	99	60	133

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Dichlorodifluoromethane	<1	1,3-Dichloropropane	<1
Chloromethane	<10	Tetrachloroethene	<1
Vinyl chloride	<0.2	Dibromochloromethane	<1
Bromomethane	<1	1,2-Dibromoethane (EDB)	<1
Chloroethane	<1	Chlorobenzene	<1
Trichlorofluoromethane	<1	Ethylbenzene	<1
Acetone	<10	1,1,1,2-Tetrachloroethane	<1
1,1-Dichloroethene	<1	m,p-Xylene	<2
Methylene chloride	<5	o-Xylene	<1
Methyl t-butyl ether (MTBE)	<1	Styrene	<1
trans-1,2-Dichloroethene	<1	Isopropylbenzene	<1
1,1-Dichloroethane	<1	Bromoform	<1
2,2-Dichloropropane	<1	n-Propylbenzene	<1
cis-1,2-Dichloroethene	<1	Bromobenzene	<1
Chloroform	<1	1,3,5-Trimethylbenzene	<1
2-Butanone (MEK)	<10	1,1,2,2-Tetrachloroethane	<1
1,2-Dichloroethane (EDC)	<1	1,2,3-Trichloropropane	<1
1,1,1-Trichloroethane	<1	2-Chlorotoluene	<1
1,1-Dichloropropene	<1	4-Chlorotoluene	<1
Carbon tetrachloride	<1	tert-Butylbenzene	<1
Benzene	<0.35	1,2,4-Trimethylbenzene	<1
Trichloroethene	<1	sec-Butylbenzene	<1
1,2-Dichloropropane	<1	p-Isopropyltoluene	<1
Bromodichloromethane	<1	1,3-Dichlorobenzene	<1
Dibromomethane	<1	1,4-Dichlorobenzene	<1
4-Methyl-2-pentanone	<10	1,2-Dichlorobenzene	<1
cis-1,3-Dichloropropene	<1	1,2-Dibromo-3-chloropropane	<10
Toluene	<1	1,2,4-Trichlorobenzene	<1
trans-1,3-Dichloropropene	<1	Hexachlorobutadiene	<1
1,1,2-Trichloroethane	<1	Naphthalene	<1
2-Hexanone	<10	1,2,3-Trichlorobenzene	<1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW-7-021213	Client:	The Riley Group
Date Received:	02/13/13	Project:	Murakami Morningside Acres 2013-079A
Date Extracted:	02/14/13	Lab ID:	302171-06
Date Analyzed:	02/14/13	Data File:	021424.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	101	57	121
Toluene-d8	101	63	127
4-Bromofluorobenzene	99	60	133

Compounds:	Concentration ug/L (ppb)
Benzene	0.55
Toluene	<1
Ethylbenzene	<1
m,p-Xylene	<2
o-Xylene	<1
Vinyl chloride	290 ve
Chloroethane	<1
1,1-Dichloroethene	3.5
Methylene chloride	<5
trans-1,2-Dichloroethene	3.7
1,1-Dichloroethane	<1
cis-1,2-Dichloroethene	210 ve
1,2-Dichloroethane (EDC)	6.1
1,1,1-Trichloroethane	<1
Trichloroethene	25
Tetrachloroethene	<1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW-7-021213	Client:	The Riley Group
Date Received:	02/13/13	Project:	Murakami Morningside Acres 2013-079A
Date Extracted:	02/15/13	Lab ID:	302171-06 1/10
Date Analyzed:	02/15/13	Data File:	021530.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	101	57	121
Toluene-d8	101	63	127
4-Bromofluorobenzene	99	60	133

Compounds:	Concentration ug/L (ppb)
Benzene	<3.5
Toluene	<10
Ethylbenzene	<10
m,p-Xylene	<20
o-Xylene	<10
Vinyl chloride	290
Chloroethane	<10
1,1-Dichloroethene	<10
Methylene chloride	<50
trans-1,2-Dichloroethene	<10
1,1-Dichloroethane	<10
cis-1,2-Dichloroethene	220
1,2-Dichloroethane (EDC)	<10
1,1,1-Trichloroethane	<10
Trichloroethene	23
Tetrachloroethene	<10

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW-8-021213	Client:	The Riley Group
Date Received:	02/13/13	Project:	Murakami Morningside Acres 2013-079A
Date Extracted:	02/14/13	Lab ID:	302171-07
Date Analyzed:	02/14/13	Data File:	021425.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	99	57	121
Toluene-d8	101	63	127
4-Bromofluorobenzene	100	60	133

Compounds:	Concentration ug/L (ppb)
Benzene	<0.35
Toluene	<1
Ethylbenzene	<1
m,p-Xylene	<2
o-Xylene	<1
Vinyl chloride	<0.2
Chloroethane	<1
1,1-Dichloroethene	<1
Methylene chloride	<5
trans-1,2-Dichloroethene	<1
1,1-Dichloroethane	<1
cis-1,2-Dichloroethene	<1
1,2-Dichloroethane (EDC)	<1
1,1,1-Trichloroethane	<1
Trichloroethene	<1
Tetrachloroethene	<1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW-9-021213	Client:	The Riley Group
Date Received:	02/13/13	Project:	Murakami Morningside Acres 2013-079A
Date Extracted:	02/14/13	Lab ID:	302171-08
Date Analyzed:	02/14/13	Data File:	021419.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	99	57	121
Toluene-d8	101	63	127
4-Bromofluorobenzene	100	60	133

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Dichlorodifluoromethane	<1	1,3-Dichloropropane	<1
Chloromethane	<10	Tetrachloroethene	<1
Vinyl chloride	<0.2	Dibromochloromethane	<1
Bromomethane	<1	1,2-Dibromoethane (EDB)	<1
Chloroethane	<1	Chlorobenzene	<1
Trichlorofluoromethane	<1	Ethylbenzene	<1
Acetone	<10	1,1,1,2-Tetrachloroethane	<1
1,1-Dichloroethene	<1	m,p-Xylene	<2
Methylene chloride	<5	o-Xylene	<1
Methyl t-butyl ether (MTBE)	<1	Styrene	<1
trans-1,2-Dichloroethene	<1	Isopropylbenzene	<1
1,1-Dichloroethane	<1	Bromoform	<1
2,2-Dichloropropane	<1	n-Propylbenzene	<1
cis-1,2-Dichloroethene	<1	Bromobenzene	<1
Chloroform	<1	1,3,5-Trimethylbenzene	<1
2-Butanone (MEK)	<10	1,1,2,2-Tetrachloroethane	<1
1,2-Dichloroethane (EDC)	<1	1,2,3-Trichloropropane	<1
1,1,1-Trichloroethane	<1	2-Chlorotoluene	<1
1,1-Dichloropropene	<1	4-Chlorotoluene	<1
Carbon tetrachloride	<1	tert-Butylbenzene	<1
Benzene	<0.35	1,2,4-Trimethylbenzene	<1
Trichloroethene	<1	sec-Butylbenzene	1.4
1,2-Dichloropropane	<1	p-Isopropyltoluene	<1
Bromodichloromethane	<1	1,3-Dichlorobenzene	<1
Dibromomethane	<1	1,4-Dichlorobenzene	<1
4-Methyl-2-pentanone	<10	1,2-Dichlorobenzene	<1
cis-1,3-Dichloropropene	<1	1,2-Dibromo-3-chloropropane	<10
Toluene	<1	1,2,4-Trichlorobenzene	<1
trans-1,3-Dichloropropene	<1	Hexachlorobutadiene	<1
1,1,2-Trichloroethane	<1	Naphthalene	<1
2-Hexanone	<10	1,2,3-Trichlorobenzene	<1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW-10-021213	Client:	The Riley Group
Date Received:	02/13/13	Project:	Murakami Morningside Acres 2013-079A
Date Extracted:	02/15/13	Lab ID:	302171-09
Date Analyzed:	02/15/13	Data File:	021532.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	102	57	121
Toluene-d8	101	63	127
4-Bromofluorobenzene	99	60	133

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Dichlorodifluoromethane	<1	1,3-Dichloropropane	<1
Chloromethane	<10	Tetrachloroethene	<1
Vinyl chloride	<0.2	Dibromochloromethane	<1
Bromomethane	<1	1,2-Dibromoethane (EDB)	<1
Chloroethane	<1	Chlorobenzene	<1
Trichlorofluoromethane	<1	Ethylbenzene	<1
Acetone	<10	1,1,1,2-Tetrachloroethane	<1
1,1-Dichloroethene	<1	m,p-Xylene	<2
Methylene chloride	<5	o-Xylene	<1
Methyl t-butyl ether (MTBE)	<1	Styrene	<1
trans-1,2-Dichloroethene	<1	Isopropylbenzene	3.4
1,1-Dichloroethane	<1	Bromoform	<1
2,2-Dichloropropane	<1	n-Propylbenzene	5.4
cis-1,2-Dichloroethene	<1	Bromobenzene	<1
Chloroform	<1	1,3,5-Trimethylbenzene	<1
2-Butanone (MEK)	<10	1,1,2,2-Tetrachloroethane	<1
1,2-Dichloroethane (EDC)	<1	1,2,3-Trichloropropane	<1
1,1,1-Trichloroethane	<1	2-Chlorotoluene	2.6
1,1-Dichloropropene	<1	4-Chlorotoluene	<1
Carbon tetrachloride	<1	tert-Butylbenzene	1.0
Benzene	<0.35	1,2,4-Trimethylbenzene	<1
Trichloroethene	<1	sec-Butylbenzene	6.2
1,2-Dichloropropane	<1	p-Isopropyltoluene	<1
Bromodichloromethane	<1	1,3-Dichlorobenzene	<1
Dibromomethane	<1	1,4-Dichlorobenzene	<1
4-Methyl-2-pentanone	<10	1,2-Dichlorobenzene	<1
cis-1,3-Dichloropropene	<1	1,2-Dibromo-3-chloropropane	<10
Toluene	<1	1,2,4-Trichlorobenzene	<1
trans-1,3-Dichloropropene	<1	Hexachlorobutadiene	<1
1,1,2-Trichloroethane	<1	Naphthalene	<1
2-Hexanone	<10	1,2,3-Trichlorobenzene	<1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW-11-021213	Client:	The Riley Group
Date Received:	02/13/13	Project:	Murakami Morningside Acres 2013-079A
Date Extracted:	02/14/13	Lab ID:	302171-10
Date Analyzed:	02/14/13	Data File:	021426.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	101	57	121
Toluene-d8	101	63	127
4-Bromofluorobenzene	100	60	133

Compounds:	Concentration ug/L (ppb)
Benzene	<0.35
Toluene	<1
Ethylbenzene	<1
m,p-Xylene	<2
o-Xylene	<1
Vinyl chloride	<0.2
Chloroethane	<1
1,1-Dichloroethene	<1
Methylene chloride	<5
trans-1,2-Dichloroethene	<1
1,1-Dichloroethane	<1
cis-1,2-Dichloroethene	<1
1,2-Dichloroethane (EDC)	<1
1,1,1-Trichloroethane	<1
Trichloroethene	<1
Tetrachloroethene	<1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW-12-021213	Client:	The Riley Group
Date Received:	02/13/13	Project:	Murakami Morningside Acres 2013-079A
Date Extracted:	02/14/13	Lab ID:	302171-11
Date Analyzed:	02/14/13	Data File:	021427.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	101	57	121
Toluene-d8	101	63	127
4-Bromofluorobenzene	101	60	133

Compounds:	Concentration ug/L (ppb)
Benzene	<0.35
Toluene	<1
Ethylbenzene	<1
m,p-Xylene	<2
o-Xylene	<1
Vinyl chloride	0.26
Chloroethane	<1
1,1-Dichloroethene	<1
Methylene chloride	<5
trans-1,2-Dichloroethene	<1
1,1-Dichloroethane	<1
cis-1,2-Dichloroethene	6.7
1,2-Dichloroethane (EDC)	<1
1,1,1-Trichloroethane	<1
Trichloroethene	8.3
Tetrachloroethene	<1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW-13-021213	Client:	The Riley Group
Date Received:	02/13/13	Project:	Murakami Morningside Acres 2013-079A
Date Extracted:	02/14/13	Lab ID:	302171-12
Date Analyzed:	02/14/13	Data File:	021428.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	98	57	121
Toluene-d8	101	63	127
4-Bromofluorobenzene	100	60	133

Compounds:	Concentration ug/L (ppb)
Benzene	<0.35
Toluene	<1
Ethylbenzene	<1
m,p-Xylene	<2
o-Xylene	<1
Vinyl chloride	<0.2
Chloroethane	<1
1,1-Dichloroethene	<1
Methylene chloride	<5
trans-1,2-Dichloroethene	<1
1,1-Dichloroethane	<1
cis-1,2-Dichloroethene	<1
1,2-Dichloroethane (EDC)	<1
1,1,1-Trichloroethane	<1
Trichloroethene	<1
Tetrachloroethene	<1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW-14-021213	Client:	The Riley Group
Date Received:	02/13/13	Project:	Murakami Morningside Acres 2013-079A
Date Extracted:	02/14/13	Lab ID:	302171-13
Date Analyzed:	02/14/13	Data File:	021429.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	101	57	121
Toluene-d8	101	63	127
4-Bromofluorobenzene	101	60	133

Compounds:	Concentration ug/L (ppb)
Benzene	<0.35
Toluene	<1
Ethylbenzene	<1
m,p-Xylene	<2
o-Xylene	<1
Vinyl chloride	<0.2
Chloroethane	<1
1,1-Dichloroethene	<1
Methylene chloride	<5
trans-1,2-Dichloroethene	<1
1,1-Dichloroethane	<1
cis-1,2-Dichloroethene	<1
1,2-Dichloroethane (EDC)	<1
1,1,1-Trichloroethane	<1
Trichloroethene	<1
Tetrachloroethene	<1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW-15-021213	Client:	The Riley Group
Date Received:	02/13/13	Project:	Murakami Morningside Acres 2013-079A
Date Extracted:	02/14/13	Lab ID:	302171-14
Date Analyzed:	02/14/13	Data File:	021430.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	100	57	121
Toluene-d8	102	63	127
4-Bromofluorobenzene	100	60	133

Compounds:	Concentration ug/L (ppb)
Benzene	<0.35
Toluene	<1
Ethylbenzene	<1
m,p-Xylene	<2
o-Xylene	<1
Vinyl chloride	<0.2
Chloroethane	<1
1,1-Dichloroethene	<1
Methylene chloride	<5
trans-1,2-Dichloroethene	<1
1,1-Dichloroethane	<1
cis-1,2-Dichloroethene	<1
1,2-Dichloroethane (EDC)	<1
1,1,1-Trichloroethane	<1
Trichloroethene	<1
Tetrachloroethene	<1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW-16-021213	Client:	The Riley Group
Date Received:	02/13/13	Project:	Murakami Morningside Acres 2013-079A
Date Extracted:	02/14/13	Lab ID:	302171-15
Date Analyzed:	02/14/13	Data File:	021431.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	100	57	121
Toluene-d8	101	63	127
4-Bromofluorobenzene	99	60	133

Compounds:	Concentration ug/L (ppb)
Benzene	<0.35
Toluene	<1
Ethylbenzene	<1
m,p-Xylene	<2
o-Xylene	<1
Vinyl chloride	6.6
Chloroethane	<1
1,1-Dichloroethene	<1
Methylene chloride	<5
trans-1,2-Dichloroethene	6.1
1,1-Dichloroethane	<1
cis-1,2-Dichloroethene	24
1,2-Dichloroethane (EDC)	<1
1,1,1-Trichloroethane	<1
Trichloroethene	2.4
Tetrachloroethene	<1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW-17-021213	Client:	The Riley Group
Date Received:	02/13/13	Project:	Murakami Morningside Acres 2013-079A
Date Extracted:	02/14/13	Lab ID:	302171-16
Date Analyzed:	02/14/13	Data File:	021432.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	101	57	121
Toluene-d8	101	63	127
4-Bromofluorobenzene	100	60	133

Compounds:	Concentration ug/L (ppb)
Benzene	<0.35
Toluene	<1
Ethylbenzene	<1
m,p-Xylene	<2
o-Xylene	<1
Vinyl chloride	76
Chloroethane	9.2
1,1-Dichloroethene	2.5
Methylene chloride	<5
trans-1,2-Dichloroethene	17
1,1-Dichloroethane	<1
cis-1,2-Dichloroethene	41
1,2-Dichloroethane (EDC)	<1
1,1,1-Trichloroethane	<1
Trichloroethene	48
Tetrachloroethene	<1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW-18-021213	Client:	The Riley Group
Date Received:	02/13/13	Project:	Murakami Morningside Acres 2013-079A
Date Extracted:	02/14/13	Lab ID:	302171-17
Date Analyzed:	02/14/13	Data File:	021420.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	99	57	121
Toluene-d8	100	63	127
4-Bromofluorobenzene	100	60	133

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Dichlorodifluoromethane	<1	1,3-Dichloropropane	<1
Chloromethane	<10	Tetrachloroethene	<1
Vinyl chloride	<0.2	Dibromochloromethane	<1
Bromomethane	<1	1,2-Dibromoethane (EDB)	<1
Chloroethane	<1	Chlorobenzene	<1
Trichlorofluoromethane	<1	Ethylbenzene	<1
Acetone	<10	1,1,1,2-Tetrachloroethane	<1
1,1-Dichloroethene	<1	m,p-Xylene	<2
Methylene chloride	<5	o-Xylene	<1
Methyl t-butyl ether (MTBE)	<1	Styrene	<1
trans-1,2-Dichloroethene	<1	Isopropylbenzene	<1
1,1-Dichloroethane	<1	Bromoform	<1
2,2-Dichloropropane	<1	n-Propylbenzene	<1
cis-1,2-Dichloroethene	<1	Bromobenzene	<1
Chloroform	<1	1,3,5-Trimethylbenzene	<1
2-Butanone (MEK)	<10	1,1,2,2-Tetrachloroethane	<1
1,2-Dichloroethane (EDC)	<1	1,2,3-Trichloropropane	<1
1,1,1-Trichloroethane	<1	2-Chlorotoluene	<1
1,1-Dichloropropene	<1	4-Chlorotoluene	<1
Carbon tetrachloride	<1	tert-Butylbenzene	<1
Benzene	<0.35	1,2,4-Trimethylbenzene	<1
Trichloroethene	<1	sec-Butylbenzene	<1
1,2-Dichloropropane	<1	p-Isopropyltoluene	<1
Bromodichloromethane	<1	1,3-Dichlorobenzene	<1
Dibromomethane	<1	1,4-Dichlorobenzene	<1
4-Methyl-2-pentanone	<10	1,2-Dichlorobenzene	<1
cis-1,3-Dichloropropene	<1	1,2-Dibromo-3-chloropropane	<10
Toluene	<1	1,2,4-Trichlorobenzene	<1
trans-1,3-Dichloropropene	<1	Hexachlorobutadiene	<1
1,1,2-Trichloroethane	<1	Naphthalene	<1
2-Hexanone	<10	1,2,3-Trichlorobenzene	<1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW-100-021213	Client:	The Riley Group
Date Received:	02/13/13	Project:	Murakami Morningside Acres 2013-079A
Date Extracted:	02/14/13	Lab ID:	302171-18
Date Analyzed:	02/14/13	Data File:	021421.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	100	57	121
Toluene-d8	102	63	127
4-Bromofluorobenzene	100	60	133

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Dichlorodifluoromethane	<1	1,3-Dichloropropane	<1
Chloromethane	<10	Tetrachloroethene	<1
Vinyl chloride	<0.2	Dibromochloromethane	<1
Bromomethane	<1	1,2-Dibromoethane (EDB)	<1
Chloroethane	<1	Chlorobenzene	<1
Trichlorofluoromethane	<1	Ethylbenzene	<1
Acetone	<10	1,1,1,2-Tetrachloroethane	<1
1,1-Dichloroethene	<1	m,p-Xylene	<2
Methylene chloride	<5	o-Xylene	<1
Methyl t-butyl ether (MTBE)	<1	Styrene	<1
trans-1,2-Dichloroethene	<1	Isopropylbenzene	<1
1,1-Dichloroethane	<1	Bromoform	<1
2,2-Dichloropropane	<1	n-Propylbenzene	<1
cis-1,2-Dichloroethene	<1	Bromobenzene	<1
Chloroform	<1	1,3,5-Trimethylbenzene	<1
2-Butanone (MEK)	<10	1,1,2,2-Tetrachloroethane	<1
1,2-Dichloroethane (EDC)	<1	1,2,3-Trichloropropane	<1
1,1,1-Trichloroethane	<1	2-Chlorotoluene	<1
1,1-Dichloropropene	<1	4-Chlorotoluene	<1
Carbon tetrachloride	<1	tert-Butylbenzene	<1
Benzene	<0.35	1,2,4-Trimethylbenzene	<1
Trichloroethene	<1	sec-Butylbenzene	<1
1,2-Dichloropropane	<1	p-Isopropyltoluene	<1
Bromodichloromethane	<1	1,3-Dichlorobenzene	<1
Dibromomethane	<1	1,4-Dichlorobenzene	<1
4-Methyl-2-pentanone	<10	1,2-Dichlorobenzene	<1
cis-1,3-Dichloropropene	<1	1,2-Dibromo-3-chloropropane	<10
Toluene	<1	1,2,4-Trichlorobenzene	<1
trans-1,3-Dichloropropene	<1	Hexachlorobutadiene	<1
1,1,2-Trichloroethane	<1	Naphthalene	<1
2-Hexanone	<10	1,2,3-Trichlorobenzene	<1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	Trip Blank	Client:	The Riley Group
Date Received:	02/13/13	Project:	Murakami Morningside Acres 2013-079A
Date Extracted:	02/14/13	Lab ID:	302171-19
Date Analyzed:	02/14/13	Data File:	021409.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	100	57	121
Toluene-d8	101	63	127
4-Bromofluorobenzene	100	60	133

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Dichlorodifluoromethane	<1	1,3-Dichloropropane	<1
Chloromethane	<10	Tetrachloroethene	<1
Vinyl chloride	<0.2 pr	Dibromochloromethane	<1
Bromomethane	<1	1,2-Dibromoethane (EDB)	<1
Chloroethane	<1	Chlorobenzene	<1
Trichlorofluoromethane	<1	Ethylbenzene	<1
Acetone	<10	1,1,1,2-Tetrachloroethane	<1
1,1-Dichloroethene	<1	m,p-Xylene	<2
Methylene chloride	<5	o-Xylene	<1
Methyl t-butyl ether (MTBE)	<1	Styrene	<1
trans-1,2-Dichloroethene	<1	Isopropylbenzene	<1
1,1-Dichloroethane	<1	Bromoform	<1
2,2-Dichloropropane	<1	n-Propylbenzene	<1
cis-1,2-Dichloroethene	<1	Bromobenzene	<1
Chloroform	<1	1,3,5-Trimethylbenzene	<1
2-Butanone (MEK)	<10	1,1,2,2-Tetrachloroethane	<1
1,2-Dichloroethane (EDC)	<1	1,2,3-Trichloropropane	<1
1,1,1-Trichloroethane	<1	2-Chlorotoluene	<1
1,1-Dichloropropene	<1	4-Chlorotoluene	<1
Carbon tetrachloride	<1	tert-Butylbenzene	<1
Benzene	<0.35	1,2,4-Trimethylbenzene	<1
Trichloroethene	<1	sec-Butylbenzene	<1
1,2-Dichloropropane	<1	p-Isopropyltoluene	<1
Bromodichloromethane	<1	1,3-Dichlorobenzene	<1
Dibromomethane	<1	1,4-Dichlorobenzene	<1
4-Methyl-2-pentanone	<10	1,2-Dichlorobenzene	<1
cis-1,3-Dichloropropene	<1	1,2-Dibromo-3-chloropropane	<10
Toluene	<1	1,2,4-Trichlorobenzene	<1
trans-1,3-Dichloropropene	<1	Hexachlorobutadiene	<1
1,1,2-Trichloroethane	<1	Naphthalene	<1
2-Hexanone	<10	1,2,3-Trichlorobenzene	<1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	Method Blank	Client:	The Riley Group
Date Received:	NA	Project:	Murakami Morningside Acres 2013-079A
Date Extracted:	02/14/13	Lab ID:	03-0138 MB
Date Analyzed:	02/14/13	Data File:	021417.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	100	57	121
Toluene-d8	101	63	127
4-Bromofluorobenzene	99	60	133

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Dichlorodifluoromethane	<1	1,3-Dichloropropane	<1
Chloromethane	<10	Tetrachloroethene	<1
Vinyl chloride	<0.2	Dibromochloromethane	<1
Bromomethane	<1	1,2-Dibromoethane (EDB)	<1
Chloroethane	<1	Chlorobenzene	<1
Trichlorofluoromethane	<1	Ethylbenzene	<1
Acetone	<10	1,1,1,2-Tetrachloroethane	<1
1,1-Dichloroethene	<1	m,p-Xylene	<2
Methylene chloride	<5	o-Xylene	<1
Methyl t-butyl ether (MTBE)	<1	Styrene	<1
trans-1,2-Dichloroethene	<1	Isopropylbenzene	<1
1,1-Dichloroethane	<1	Bromoform	<1
2,2-Dichloropropane	<1	n-Propylbenzene	<1
cis-1,2-Dichloroethene	<1	Bromobenzene	<1
Chloroform	<1	1,3,5-Trimethylbenzene	<1
2-Butanone (MEK)	<10	1,1,2,2-Tetrachloroethane	<1
1,2-Dichloroethane (EDC)	<1	1,2,3-Trichloropropane	<1
1,1,1-Trichloroethane	<1	2-Chlorotoluene	<1
1,1-Dichloropropene	<1	4-Chlorotoluene	<1
Carbon tetrachloride	<1	tert-Butylbenzene	<1
Benzene	<0.35	1,2,4-Trimethylbenzene	<1
Trichloroethene	<1	sec-Butylbenzene	<1
1,2-Dichloropropane	<1	p-Isopropyltoluene	<1
Bromodichloromethane	<1	1,3-Dichlorobenzene	<1
Dibromomethane	<1	1,4-Dichlorobenzene	<1
4-Methyl-2-pentanone	<10	1,2-Dichlorobenzene	<1
cis-1,3-Dichloropropene	<1	1,2-Dibromo-3-chloropropane	<10
Toluene	<1	1,2,4-Trichlorobenzene	<1
trans-1,3-Dichloropropene	<1	Hexachlorobutadiene	<1
1,1,2-Trichloroethane	<1	Naphthalene	<1
2-Hexanone	<10	1,2,3-Trichlorobenzene	<1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	Method Blank	Client:	The Riley Group
Date Received:	NA	Project:	Murakami Morningside Acres 2013-079A
Date Extracted:	02/14/13	Lab ID:	03-0137 MB
Date Analyzed:	02/14/13	Data File:	021406.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	103	57	121
Toluene-d8	102	63	127
4-Bromofluorobenzene	100	60	133

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Dichlorodifluoromethane	<1	1,3-Dichloropropane	<1
Chloromethane	<10	Tetrachloroethene	<1
Vinyl chloride	<0.2	Dibromochloromethane	<1
Bromomethane	<1	1,2-Dibromoethane (EDB)	<1
Chloroethane	<1	Chlorobenzene	<1
Trichlorofluoromethane	<1	Ethylbenzene	<1
Acetone	<10	1,1,1,2-Tetrachloroethane	<1
1,1-Dichloroethene	<1	m,p-Xylene	<2
Methylene chloride	<5	o-Xylene	<1
Methyl t-butyl ether (MTBE)	<1	Styrene	<1
trans-1,2-Dichloroethene	<1	Isopropylbenzene	<1
1,1-Dichloroethane	<1	Bromoform	<1
2,2-Dichloropropane	<1	n-Propylbenzene	<1
cis-1,2-Dichloroethene	<1	Bromobenzene	<1
Chloroform	<1	1,3,5-Trimethylbenzene	<1
2-Butanone (MEK)	<10	1,1,2,2-Tetrachloroethane	<1
1,2-Dichloroethane (EDC)	<1	1,2,3-Trichloropropane	<1
1,1,1-Trichloroethane	<1	2-Chlorotoluene	<1
1,1-Dichloropropene	<1	4-Chlorotoluene	<1
Carbon tetrachloride	<1	tert-Butylbenzene	<1
Benzene	<0.35	1,2,4-Trimethylbenzene	<1
Trichloroethene	<1	sec-Butylbenzene	<1
1,2-Dichloropropane	<1	p-Isopropyltoluene	<1
Bromodichloromethane	<1	1,3-Dichlorobenzene	<1
Dibromomethane	<1	1,4-Dichlorobenzene	<1
4-Methyl-2-pentanone	<10	1,2-Dichlorobenzene	<1
cis-1,3-Dichloropropene	<1	1,2-Dibromo-3-chloropropane	<10
Toluene	<1	1,2,4-Trichlorobenzene	<1
trans-1,3-Dichloropropene	<1	Hexachlorobutadiene	<1
1,1,2-Trichloroethane	<1	Naphthalene	<1
2-Hexanone	<10	1,2,3-Trichlorobenzene	<1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	Method Blank	Client:	The Riley Group
Date Received:	NA	Project:	Murakami Morningside Acres 2013-079A
Date Extracted:	02/15/13	Lab ID:	03-0139 MB
Date Analyzed:	02/15/13	Data File:	021506.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	99	57	121
Toluene-d8	101	63	127
4-Bromofluorobenzene	100	60	133

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Ethanol	<1,000	trans-1,3-Dichloropropene	<1
Dichlorodifluoromethane	<1	1,1,2-Trichloroethane	<1
Chloromethane	<10	2-Hexanone	<10
Vinyl chloride	<0.2	1,3-Dichloropropane	<1
Bromomethane	<1	Tetrachloroethene	<1
Chloroethane	<1	Dibromochloromethane	<1
Trichlorofluoromethane	<1	1,2-Dibromoethane (EDB)	<1
2-Propanol	<10	Chlorobenzene	<1
Acetone	<10	Ethylbenzene	<1
1,1-Dichloroethene	<1	1,1,1,2-Tetrachloroethane	<1
Hexane	<1	m,p-Xylene	<2
Methylene chloride	<5	o-Xylene	<1
t-Butyl alcohol (TBA)	<50	Styrene	<1
Methyl t-butyl ether (MTBE)	<1	Isopropylbenzene	<1
trans-1,2-Dichloroethene	<1	Bromoform	<1
Diisopropyl ether (DIPE)	<1	n-Propylbenzene	<1
1,1-Dichloroethane	<1	Bromobenzene	<1
Ethyl t-butyl ether (ETBE)	<1	1,3,5-Trimethylbenzene	<1
2,2-Dichloropropane	<1	1,1,2,2-Tetrachloroethane	<1
cis-1,2-Dichloroethene	<1	1,2,3-Trichloropropane	<1
Chloroform	<1	2-Chlorotoluene	<1
2-Butanone (MEK)	<10	4-Chlorotoluene	<1
t-Amyl methyl ether (TAME)	<1	tert-Butylbenzene	<1
1,2-Dichloroethane (EDC)	<1	1,2,4-Trimethylbenzene	<1
1,1,1-Trichloroethane	<1	sec-Butylbenzene	<1
1,1-Dichloropropene	<1	p-Isopropyltoluene	<1
Carbon tetrachloride	<1	1,3-Dichlorobenzene	<1
Benzene	<0.35	1,4-Dichlorobenzene	<1
Trichloroethene	<1	1,2-Dichlorobenzene	<1
1,2-Dichloropropane	<1	1,2-Dibromo-3-chloropropane	<10
Bromodichloromethane	<1	1,2,4-Trichlorobenzene	<1
Dibromomethane	<1	Hexachlorobutadiene	<1
4-Methyl-2-pentanone	<10	Naphthalene	<1
cis-1,3-Dichloropropene	<1	1,2,3-Trichlorobenzene	<1
Toluene	<1		

Date of Report: 02/26/13
Date Received: 02/13/13
Project: Murakami Morningside Acres 2013-079A, F&BI 302171
Date Extracted: 02/22/13
Date Analyzed: 02/22/13

RESULTS FROM THE ANALYSIS OF WATER SAMPLES
FOR 1,2-DIBROMOETHANE BY EPA METHOD 8011 MODIFIED
Results Reported as µg/L (ppb)

Sample ID Laboratory ID	EDB
MW-10-021213 302171-09	<0.01
Method Blank	<0.01

EDB 1,2-Dibromoethane

Date of Report: 02/26/13
Date Received: 02/13/13
Project: Murakami Morningside Acres 2013-079A, F&BI 302171

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR TPH AS GASOLINE USING METHOD NWTPH-Gx

Laboratory Code: 302171-01 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	Relative Percent Difference (Limit 20)
Gasoline	ug/L (ppb)	<100	<100	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Gasoline	ug/L (ppb)	1,000	99	69-134

Date of Report: 02/26/13
Date Received: 02/13/13
Project: Murakami Morningside Acres 2013-079A, F&BI 302171

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 Silica Gel

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	ug/L (ppb)	2,500	103	110	61-133	7

Date of Report: 02/26/13
Date Received: 02/13/13
Project: Murakami Morningside Acres 2013-079A, F&BI 302171

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	110	115	58-134	4

Date of Report: 02/26/13
Date Received: 02/13/13
Project: Murakami Morningside Acres 2013-079A, F&BI 302171

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR VOLATILES BY EPA METHOD 8260C

Laboratory Code: 302171-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Acceptance Criteria
Dichlorodifluoromethane	ug/L (ppb)	50	<10	102	10-172
Chloromethane	ug/L (ppb)	50	<10	98	25-166
Vinyl chloride	ug/L (ppb)	50	<0.2	104	36-166
Bromomethane	ug/L (ppb)	50	<1	105	47-169
Chloroethane	ug/L (ppb)	50	<1	106	46-160
Trichlorofluoromethane	ug/L (ppb)	50	<1	101	44-165
Acetone	ug/L (ppb)	250	<10	88	10-182
1,1-Dichloroethene	ug/L (ppb)	50	<1	99	60-136
Methylene chloride	ug/L (ppb)	50	<5	93	67-132
Methyl t-butyl ether (MTBE)	ug/L (ppb)	50	<1	96	74-127
trans-1,2-Dichloroethene	ug/L (ppb)	50	<1	97	72-129
1,1-Dichloroethane	ug/L (ppb)	50	<1	97	70-128
2,2-Dichloropropane	ug/L (ppb)	50	<1	98	36-154
cis-1,2-Dichloroethene	ug/L (ppb)	50	<1	96	71-127
Chloroform	ug/L (ppb)	50	<1	96	65-132
2-Butanone (MEK)	ug/L (ppb)	250	<10	93	10-129
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	<1	95	69-133
1,1,1-Trichloroethane	ug/L (ppb)	50	<1	96	60-146
1,1-Dichloropropene	ug/L (ppb)	50	<1	95	69-133
Carbon tetrachloride	ug/L (ppb)	50	<1	97	56-152
Benzene	ug/L (ppb)	50	<0.35	94	76-125
Trichloroethene	ug/L (ppb)	50	<1	94	66-135
1,2-Dichloropropane	ug/L (ppb)	50	<1	95	78-125
Bromodichloromethane	ug/L (ppb)	50	<1	96	61-150
Dibromomethane	ug/L (ppb)	50	<1	96	66-141
4-Methyl-2-pentanone	ug/L (ppb)	250	<10	97	10-185
cis-1,3-Dichloropropene	ug/L (ppb)	50	<1	98	72-132
Toluene	ug/L (ppb)	50	<1	94	76-122
trans-1,3-Dichloropropene	ug/L (ppb)	50	<1	97	76-130
1,1,2-Trichloroethane	ug/L (ppb)	50	<1	94	68-131
2-Hexanone	ug/L (ppb)	250	<10	94	10-185
1,3-Dichloropropane	ug/L (ppb)	50	<1	94	71-128
Tetrachloroethene	ug/L (ppb)	50	<1	93	73-129
Dibromochloromethane	ug/L (ppb)	50	<1	98	70-139
1,2-Dibromoethane (EDB)	ug/L (ppb)	50	<1	96	69-134
Chlorobenzene	ug/L (ppb)	50	<1	94	77-122
Ethylbenzene	ug/L (ppb)	50	<1	94	69-135
1,1,1,2-Tetrachloroethane	ug/L (ppb)	50	<1	97	73-137
m,p-Xylene	ug/L (ppb)	100	<2	94	69-135
o-Xylene	ug/L (ppb)	50	<1	94	68-137
Styrene	ug/L (ppb)	50	<1	94	71-133
Isopropylbenzene	ug/L (ppb)	50	<1	95	65-142
Bromoform	ug/L (ppb)	50	<1	101	65-142
n-Propylbenzene	ug/L (ppb)	50	<1	93	58-144
Bromobenzene	ug/L (ppb)	50	<1	93	75-124
1,3,5-Trimethylbenzene	ug/L (ppb)	50	<1	94	66-137
1,1,2,2-Tetrachloroethane	ug/L (ppb)	50	<1	97	51-154
1,2,3-Trichloropropane	ug/L (ppb)	50	<1	92	53-150
2-Chlorotoluene	ug/L (ppb)	50	<1	92	66-127
4-Chlorotoluene	ug/L (ppb)	50	<1	92	65-130
tert-Butylbenzene	ug/L (ppb)	50	<1	95	65-137
1,2,4-Trimethylbenzene	ug/L (ppb)	50	<1	93	59-146
sec-Butylbenzene	ug/L (ppb)	50	<1	94	64-140
p-Isopropyltoluene	ug/L (ppb)	50	<1	94	65-141
1,3-Dichlorobenzene	ug/L (ppb)	50	<1	92	72-123
1,4-Dichlorobenzene	ug/L (ppb)	50	<1	94	69-126
1,2-Dichlorobenzene	ug/L (ppb)	50	<1	93	69-128
1,2-Dibromo-3-chloropropane	ug/L (ppb)	50	<10	102	32-164
1,2,4-Trichlorobenzene	ug/L (ppb)	50	<1	99	76-132
Hexachlorobutadiene	ug/L (ppb)	50	<1	90	60-143
Naphthalene	ug/L (ppb)	50	<1	102	44-164
1,2,3-Trichlorobenzene	ug/L (ppb)	50	<1	95	69-148

Date of Report: 02/26/13
Date Received: 02/13/13
Project: Murakami Morningside Acres 2013-079A, F&BI 302171

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR VOLATILES BY EPA METHOD 8260C

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Dichlorodifluoromethane	ug/L (ppb)	50	113	104	25-158	8
Chloromethane	ug/L (ppb)	50	104	104	45-156	0
Vinyl chloride	ug/L (ppb)	50	110	106	50-154	4
Bromomethane	ug/L (ppb)	50	104	103	55-143	1
Chloroethane	ug/L (ppb)	50	105	102	58-146	3
Trichlorofluoromethane	ug/L (ppb)	50	105	102	50-150	3
Acetone	ug/L (ppb)	250	99	97	60-155	2
1,1-Dichloroethene	ug/L (ppb)	50	102	100	67-136	2
Methylene chloride	ug/L (ppb)	50	95	94	39-148	1
Methyl t-butyl ether (MTBE)	ug/L (ppb)	50	101	98	64-147	3
trans-1,2-Dichloroethene	ug/L (ppb)	50	101	99	68-128	2
1,1-Dichloroethane	ug/L (ppb)	50	100	99	79-121	1
2,2-Dichloropropane	ug/L (ppb)	50	104	102	55-143	2
cis-1,2-Dichloroethene	ug/L (ppb)	50	100	98	80-123	2
Chloroform	ug/L (ppb)	50	100	97	80-121	3
2-Butanone (MEK)	ug/L (ppb)	250	101	99	57-149	2
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	100	98	73-132	2
1,1,1-Trichloroethane	ug/L (ppb)	50	101	99	83-130	2
1,1-Dichloropropene	ug/L (ppb)	50	100	98	77-129	2
Carbon tetrachloride	ug/L (ppb)	50	103	102	75-158	1
Benzene	ug/L (ppb)	50	98	96	69-134	2
Trichloroethene	ug/L (ppb)	50	98	95	80-120	3
1,2-Dichloropropane	ug/L (ppb)	50	101	98	77-123	3
Bromodichloromethane	ug/L (ppb)	50	101	99	81-133	2
Dibromomethane	ug/L (ppb)	50	100	97	82-125	3
4-Methyl-2-pentanone	ug/L (ppb)	250	100	99	70-140	1
cis-1,3-Dichloropropene	ug/L (ppb)	50	103	101	82-132	2
Toluene	ug/L (ppb)	50	98	95	72-122	3
trans-1,3-Dichloropropene	ug/L (ppb)	50	102	100	80-136	2
1,1,2-Trichloroethane	ug/L (ppb)	50	98	95	75-124	3
2-Hexanone	ug/L (ppb)	250	97	96	64-152	1
1,3-Dichloropropane	ug/L (ppb)	50	98	95	76-126	3
Tetrachloroethene	ug/L (ppb)	50	97	94	76-121	3
Dibromochloromethane	ug/L (ppb)	50	103	101	84-133	2
1,2-Dibromoethane (EDB)	ug/L (ppb)	50	99	97	82-125	2
Chlorobenzene	ug/L (ppb)	50	98	95	83-114	3
Ethylbenzene	ug/L (ppb)	50	98	96	77-124	2
1,1,1,2-Tetrachloroethane	ug/L (ppb)	50	102	99	84-127	3
m,p-Xylene	ug/L (ppb)	100	98	95	83-125	3
o-Xylene	ug/L (ppb)	50	98	95	86-121	3
Styrene	ug/L (ppb)	50	99	96	85-127	3
Isopropylbenzene	ug/L (ppb)	50	98	96	87-122	2
Bromoform	ug/L (ppb)	50	105	102	74-136	3
n-Propylbenzene	ug/L (ppb)	50	99	95	74-126	4
Bromobenzene	ug/L (ppb)	50	99	95	80-121	4
1,3,5-Trimethylbenzene	ug/L (ppb)	50	100	96	80-126	4
1,1,2,2-Tetrachloroethane	ug/L (ppb)	50	101	98	66-126	3
1,2,3-Trichloropropane	ug/L (ppb)	50	97	93	67-124	4
2-Chlorotoluene	ug/L (ppb)	50	98	94	77-127	4
4-Chlorotoluene	ug/L (ppb)	50	99	95	78-128	4
tert-Butylbenzene	ug/L (ppb)	50	100	96	85-127	4
1,2,4-Trimethylbenzene	ug/L (ppb)	50	99	95	82-125	4
sec-Butylbenzene	ug/L (ppb)	50	101	96	80-125	5
p-Isopropyltoluene	ug/L (ppb)	50	100	97	82-127	3
1,3-Dichlorobenzene	ug/L (ppb)	50	98	95	85-116	3
1,4-Dichlorobenzene	ug/L (ppb)	50	99	95	84-121	4
1,2-Dichlorobenzene	ug/L (ppb)	50	99	96	85-116	3
1,2-Dibromo-3-chloropropane	ug/L (ppb)	50	109	106	57-141	3
1,2,4-Trichlorobenzene	ug/L (ppb)	50	105	103	72-130	2
Hexachlorobutadiene	ug/L (ppb)	50	99	97	53-141	2
Naphthalene	ug/L (ppb)	50	104	105	64-133	1
1,2,3-Trichlorobenzene	ug/L (ppb)	50	98	100	65-136	2

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Project: Murakami Morningside Acres 2013-079A, F&BI 302171

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR VOLATILES BY EPA METHOD 8260C

Laboratory Code: 302171-03 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Acceptance Criteria
Dichlorodifluoromethane	ug/L (ppb)	50	<10	97	10-172
Chloromethane	ug/L (ppb)	50	<10	98	25-166
Vinyl chloride	ug/L (ppb)	50	<0.2	100	36-166
Bromomethane	ug/L (ppb)	50	<1	97	47-169
Chloroethane	ug/L (ppb)	50	<1	98	46-160
Trichlorofluoromethane	ug/L (ppb)	50	<1	94	44-165
Acetone	ug/L (ppb)	250	<10	87	10-182
1,1-Dichloroethene	ug/L (ppb)	50	<1	95	60-136
Methylene chloride	ug/L (ppb)	50	<5	88	67-132
Methyl t-butyl ether (MTBE)	ug/L (ppb)	50	<1	90	74-127
trans-1,2-Dichloroethene	ug/L (ppb)	50	<1	94	72-129
1,1-Dichloroethane	ug/L (ppb)	50	<1	93	70-128
2,2-Dichloropropane	ug/L (ppb)	50	<1	79	36-154
cis-1,2-Dichloroethene	ug/L (ppb)	50	1.4	93	71-127
Chloroform	ug/L (ppb)	50	<1	93	65-132
2-Butanone (MEK)	ug/L (ppb)	250	<10	91	10-129
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	<1	93	69-133
1,1,1-Trichloroethane	ug/L (ppb)	50	<1	90	60-146
1,1-Dichloropropene	ug/L (ppb)	50	<1	92	69-133
Carbon tetrachloride	ug/L (ppb)	50	<1	89	56-152
Benzene	ug/L (ppb)	50	<0.35	91	76-125
Trichloroethene	ug/L (ppb)	50	<1	90	66-135
1,2-Dichloropropane	ug/L (ppb)	50	<1	93	78-125
Bromodichloromethane	ug/L (ppb)	50	<1	94	61-150
Dibromomethane	ug/L (ppb)	50	<1	94	66-141
4-Methyl-2-pentanone	ug/L (ppb)	250	<10	92	10-185
cis-1,3-Dichloropropene	ug/L (ppb)	50	<1	92	72-132
Toluene	ug/L (ppb)	50	<1	90	76-122
trans-1,3-Dichloropropene	ug/L (ppb)	50	<1	90	76-130
1,1,2-Trichloroethane	ug/L (ppb)	50	<1	91	68-131
2-Hexanone	ug/L (ppb)	250	<10	88	10-185
1,3-Dichloropropane	ug/L (ppb)	50	<1	90	71-128
Tetrachloroethene	ug/L (ppb)	50	<1	88	73-129
Dibromochloromethane	ug/L (ppb)	50	<1	93	70-139
1,2-Dibromoethane (EDB)	ug/L (ppb)	50	<1	92	69-134
Chlorobenzene	ug/L (ppb)	50	<1	90	77-122
Ethylbenzene	ug/L (ppb)	50	<1	89	69-135
1,1,1,2-Tetrachloroethane	ug/L (ppb)	50	<1	91	73-137
m,p-Xylene	ug/L (ppb)	100	<2	89	69-135
o-Xylene	ug/L (ppb)	50	<1	89	68-137
Styrene	ug/L (ppb)	50	<1	91	71-133
Isopropylbenzene	ug/L (ppb)	50	<1	88	65-142
Bromoform	ug/L (ppb)	50	<1	93	65-142
n-Propylbenzene	ug/L (ppb)	50	<1	90	58-144
Bromobenzene	ug/L (ppb)	50	<1	92	75-124
1,3,5-Trimethylbenzene	ug/L (ppb)	50	<1	91	66-137
1,1,2,2-Tetrachloroethane	ug/L (ppb)	50	<1	95	51-154
1,2,3-Trichloropropane	ug/L (ppb)	50	<1	89	53-150
2-Chlorotoluene	ug/L (ppb)	50	<1	91	66-127
4-Chlorotoluene	ug/L (ppb)	50	<1	91	65-130
tert-Butylbenzene	ug/L (ppb)	50	<1	91	65-137
1,2,4-Trimethylbenzene	ug/L (ppb)	50	<1	91	59-146
sec-Butylbenzene	ug/L (ppb)	50	<1	91	64-140
p-Isopropyltoluene	ug/L (ppb)	50	<1	90	65-141
1,3-Dichlorobenzene	ug/L (ppb)	50	<1	90	72-123
1,4-Dichlorobenzene	ug/L (ppb)	50	<1	91	69-126
1,2-Dichlorobenzene	ug/L (ppb)	50	<1	92	69-128
1,2-Dibromo-3-chloropropane	ug/L (ppb)	50	<10	101	32-164
1,2,4-Trichlorobenzene	ug/L (ppb)	50	<1	99	76-132
Hexachlorobutadiene	ug/L (ppb)	50	<1	89	60-143
Naphthalene	ug/L (ppb)	50	<1	101	44-164
1,2,3-Trichlorobenzene	ug/L (ppb)	50	<1	95	69-148

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Project: Murakami Morningside Acres 2013-079A, F&BI 302171

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR VOLATILES BY EPA METHOD 8260C

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Dichlorodifluoromethane	ug/L (ppb)	50	106	104	25-158	2
Chloromethane	ug/L (ppb)	50	101	101	45-156	0
Vinyl chloride	ug/L (ppb)	50	106	106	50-154	0
Bromomethane	ug/L (ppb)	50	103	105	55-143	2
Chloroethane	ug/L (ppb)	50	104	104	58-146	0
Trichlorofluoromethane	ug/L (ppb)	50	102	102	50-150	0
Acetone	ug/L (ppb)	250	94	94	60-155	0
1,1-Dichloroethene	ug/L (ppb)	50	97	98	67-136	1
Methylene chloride	ug/L (ppb)	50	93	93	39-148	0
Methyl t-butyl ether (MTBE)	ug/L (ppb)	50	96	97	64-147	1
trans-1,2-Dichloroethene	ug/L (ppb)	50	97	97	68-128	0
1,1-Dichloroethane	ug/L (ppb)	50	97	98	79-121	1
2,2-Dichloropropane	ug/L (ppb)	50	97	97	55-143	0
cis-1,2-Dichloroethene	ug/L (ppb)	50	96	97	80-123	1
Chloroform	ug/L (ppb)	50	96	97	80-121	1
2-Butanone (MEK)	ug/L (ppb)	250	96	95	57-149	1
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	96	97	73-132	1
1,1,1-Trichloroethane	ug/L (ppb)	50	97	97	83-130	0
1,1-Dichloropropene	ug/L (ppb)	50	96	96	77-129	0
Carbon tetrachloride	ug/L (ppb)	50	98	99	75-158	1
Benzene	ug/L (ppb)	50	93	94	69-134	1
Trichloroethene	ug/L (ppb)	50	95	96	80-120	1
1,2-Dichloropropane	ug/L (ppb)	50	96	97	77-123	1
Bromodichloromethane	ug/L (ppb)	50	97	98	81-133	1
Dibromomethane	ug/L (ppb)	50	97	97	82-125	0
4-Methyl-2-pentanone	ug/L (ppb)	250	97	96	70-140	1
cis-1,3-Dichloropropene	ug/L (ppb)	50	98	99	82-132	1
Toluene	ug/L (ppb)	50	94	95	72-122	1
trans-1,3-Dichloropropene	ug/L (ppb)	50	97	97	80-136	0
1,1,2-Trichloroethane	ug/L (ppb)	50	94	95	75-124	1
2-Hexanone	ug/L (ppb)	250	94	94	64-152	0
1,3-Dichloropropane	ug/L (ppb)	50	94	94	76-126	0
Tetrachloroethene	ug/L (ppb)	50	94	94	76-121	0
Dibromochloromethane	ug/L (ppb)	50	99	99	84-133	0
1,2-Dibromoethane (EDB)	ug/L (ppb)	50	96	96	82-125	0
Chlorobenzene	ug/L (ppb)	50	94	94	83-114	0
Ethylbenzene	ug/L (ppb)	50	94	94	77-124	0
1,1,1,2-Tetrachloroethane	ug/L (ppb)	50	97	98	84-127	1
m,p-Xylene	ug/L (ppb)	100	94	94	83-125	0
o-Xylene	ug/L (ppb)	50	94	94	86-121	0
Styrene	ug/L (ppb)	50	95	95	85-127	0
Isopropylbenzene	ug/L (ppb)	50	94	95	87-122	1
Bromoform	ug/L (ppb)	50	100	100	74-136	0
n-Propylbenzene	ug/L (ppb)	50	94	94	74-126	0
Bromobenzene	ug/L (ppb)	50	93	95	80-121	2
1,3,5-Trimethylbenzene	ug/L (ppb)	50	95	95	80-126	0
1,1,2,2-Tetrachloroethane	ug/L (ppb)	50	96	96	66-126	0
1,2,3-Trichloropropane	ug/L (ppb)	50	91	92	67-124	1
2-Chlorotoluene	ug/L (ppb)	50	93	93	77-127	0
4-Chlorotoluene	ug/L (ppb)	50	92	94	78-128	2
tert-Butylbenzene	ug/L (ppb)	50	95	96	85-127	1
1,2,4-Trimethylbenzene	ug/L (ppb)	50	94	94	82-125	0
sec-Butylbenzene	ug/L (ppb)	50	95	96	80-125	1
p-Isopropyltoluene	ug/L (ppb)	50	95	96	82-127	1
1,3-Dichlorobenzene	ug/L (ppb)	50	92	94	85-116	2
1,4-Dichlorobenzene	ug/L (ppb)	50	93	94	84-121	1
1,2-Dichlorobenzene	ug/L (ppb)	50	94	95	85-116	1
1,2-Dibromo-3-chloropropane	ug/L (ppb)	50	103	106	57-141	3
1,2,4-Trichlorobenzene	ug/L (ppb)	50	98	104	72-130	6
Hexachlorobutadiene	ug/L (ppb)	50	91	95	53-141	4
Naphthalene	ug/L (ppb)	50	99	107	64-133	8
1,2,3-Trichlorobenzene	ug/L (ppb)	50	92	101	65-136	9

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Project: Murakami Morningside Acres 2013-079A, F&BI 302171

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR VOLATILES BY EPA METHOD 8260C

Laboratory Code: 302212-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Acceptance Criteria
Dichlorodifluoromethane	ug/L (ppb)	50	<10	112	10-172
Chloromethane	ug/L (ppb)	50	<10	108	25-166
Vinyl chloride	ug/L (ppb)	50	<0.2	113	36-166
Bromomethane	ug/L (ppb)	50	<1	111	47-169
Chloroethane	ug/L (ppb)	50	<1	112	46-160
Trichlorofluoromethane	ug/L (ppb)	50	<1	109	44-165
Acetone	ug/L (ppb)	250	<10	91	10-182
1,1-Dichloroethene	ug/L (ppb)	50	<1	97	60-136
Methylene chloride	ug/L (ppb)	50	<5	95	67-132
Methyl t-butyl ether (MTBE)	ug/L (ppb)	50	<1	101	74-127
trans-1,2-Dichloroethene	ug/L (ppb)	50	<1	101	72-129
1,1-Dichloroethane	ug/L (ppb)	50	<1	100	70-128
2,2-Dichloropropane	ug/L (ppb)	50	<1	97	36-154
cis-1,2-Dichloroethene	ug/L (ppb)	50	<1	101	71-127
Chloroform	ug/L (ppb)	50	<1	101	65-132
2-Butanone (MEK)	ug/L (ppb)	250	<10	98	10-129
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	<1	115	69-133
1,1,1-Trichloroethane	ug/L (ppb)	50	<1	101	60-146
1,1-Dichloropropene	ug/L (ppb)	50	<1	100	69-133
Carbon tetrachloride	ug/L (ppb)	50	<1	101	56-152
Benzene	ug/L (ppb)	50	<0.35	98	76-125
Trichloroethene	ug/L (ppb)	50	<1	98	66-135
1,2-Dichloropropane	ug/L (ppb)	50	<1	100	78-125
Bromodichloromethane	ug/L (ppb)	50	<1	100	61-150
Dibromomethane	ug/L (ppb)	50	<1	101	66-141
4-Methyl-2-pentanone	ug/L (ppb)	250	<10	104	10-185
cis-1,3-Dichloropropene	ug/L (ppb)	50	<1	100	72-132
Toluene	ug/L (ppb)	50	<1	97	76-122
trans-1,3-Dichloropropene	ug/L (ppb)	50	<1	98	76-130
1,1,2-Trichloroethane	ug/L (ppb)	50	<1	98	68-131
2-Hexanone	ug/L (ppb)	250	<10	99	10-185
1,3-Dichloropropane	ug/L (ppb)	50	<1	98	71-128
Tetrachloroethene	ug/L (ppb)	50	<1	96	73-129
Dibromochloromethane	ug/L (ppb)	50	<1	102	70-139
1,2-Dibromoethane (EDB)	ug/L (ppb)	50	<1	99	69-134
Chlorobenzene	ug/L (ppb)	50	<1	97	77-122
Ethylbenzene	ug/L (ppb)	50	<1	97	69-135
1,1,1,2-Tetrachloroethane	ug/L (ppb)	50	<1	101	73-137
m,p-Xylene	ug/L (ppb)	100	<2	97	69-135
o-Xylene	ug/L (ppb)	50	<1	98	68-137
Styrene	ug/L (ppb)	50	<1	97	71-133
Isopropylbenzene	ug/L (ppb)	50	<1	99	65-142
Bromoform	ug/L (ppb)	50	<1	102	65-142
n-Propylbenzene	ug/L (ppb)	50	<1	95	58-144
Bromobenzene	ug/L (ppb)	50	<1	96	75-124
1,3,5-Trimethylbenzene	ug/L (ppb)	50	<1	96	66-137
1,1,2,2-Tetrachloroethane	ug/L (ppb)	50	<1	100	51-154
1,2,3-Trichloropropane	ug/L (ppb)	50	<1	95	53-150
2-Chlorotoluene	ug/L (ppb)	50	<1	95	66-127
4-Chlorotoluene	ug/L (ppb)	50	<1	95	65-130
tert-Butylbenzene	ug/L (ppb)	50	<1	97	65-137
1,2,4-Trimethylbenzene	ug/L (ppb)	50	<1	96	59-146
sec-Butylbenzene	ug/L (ppb)	50	<1	97	64-140
p-Isopropyltoluene	ug/L (ppb)	50	<1	96	65-141
1,3-Dichlorobenzene	ug/L (ppb)	50	<1	95	72-123
1,4-Dichlorobenzene	ug/L (ppb)	50	<1	96	69-126
1,2-Dichlorobenzene	ug/L (ppb)	50	<1	95	69-128
1,2-Dibromo-3-chloropropane	ug/L (ppb)	50	<10	97	32-164
1,2,4-Trichlorobenzene	ug/L (ppb)	50	<1	93	76-132
Hexachlorobutadiene	ug/L (ppb)	50	<1	85	60-143
Naphthalene	ug/L (ppb)	50	<1	96	44-164
1,2,3-Trichlorobenzene	ug/L (ppb)	50	<1	87	69-148

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Project: Murakami Morningside Acres 2013-079A, F&BI 302171

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR VOLATILES BY EPA METHOD 8260C

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Dichlorodifluoromethane	ug/L (ppb)	50	109	101	25-158	8
Chloromethane	ug/L (ppb)	50	105	101	45-156	4
Vinyl chloride	ug/L (ppb)	50	110	106	50-154	4
Bromomethane	ug/L (ppb)	50	113	103	55-143	9
Chloroethane	ug/L (ppb)	50	112	101	58-146	10
Trichlorofluoromethane	ug/L (ppb)	50	102	102	50-150	0
Acetone	ug/L (ppb)	250	89	97	60-155	9
1,1-Dichloroethene	ug/L (ppb)	50	94	96	67-136	2
Methylene chloride	ug/L (ppb)	50	87	93	39-148	7
Methyl t-butyl ether (MTBE)	ug/L (ppb)	50	99	97	64-147	2
trans-1,2-Dichloroethene	ug/L (ppb)	50	100	97	68-128	3
1,1-Dichloroethane	ug/L (ppb)	50	99	97	79-121	2
2,2-Dichloropropane	ug/L (ppb)	50	103	101	55-143	2
cis-1,2-Dichloroethene	ug/L (ppb)	50	100	97	80-123	3
Chloroform	ug/L (ppb)	50	98	96	80-121	2
2-Butanone (MEK)	ug/L (ppb)	250	102	99	57-149	3
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	99	97	73-132	2
1,1,1-Trichloroethane	ug/L (ppb)	50	99	96	83-130	3
1,1-Dichloropropene	ug/L (ppb)	50	100	97	77-129	3
Carbon tetrachloride	ug/L (ppb)	50	97	97	75-158	0
Benzene	ug/L (ppb)	50	98	95	69-134	3
Trichloroethene	ug/L (ppb)	50	98	95	80-120	3
1,2-Dichloropropane	ug/L (ppb)	50	100	97	77-123	3
Bromodichloromethane	ug/L (ppb)	50	99	97	81-133	2
Dibromomethane	ug/L (ppb)	50	99	98	82-125	1
4-Methyl-2-pentanone	ug/L (ppb)	250	98	98	70-140	0
cis-1,3-Dichloropropene	ug/L (ppb)	50	103	99	82-132	4
Toluene	ug/L (ppb)	50	98	95	72-122	3
trans-1,3-Dichloropropene	ug/L (ppb)	50	100	98	80-136	2
1,1,2-Trichloroethane	ug/L (ppb)	50	96	95	75-124	1
2-Hexanone	ug/L (ppb)	250	96	95	64-152	1
1,3-Dichloropropane	ug/L (ppb)	50	96	95	76-126	1
Tetrachloroethene	ug/L (ppb)	50	96	94	76-121	2
Dibromochloromethane	ug/L (ppb)	50	100	98	84-133	2
1,2-Dibromoethane (EDB)	ug/L (ppb)	50	98	97	82-125	1
Chlorobenzene	ug/L (ppb)	50	97	95	83-114	2
Ethylbenzene	ug/L (ppb)	50	98	96	77-124	2
1,1,1,2-Tetrachloroethane	ug/L (ppb)	50	98	98	84-127	0
m,p-Xylene	ug/L (ppb)	100	98	95	83-125	3
o-Xylene	ug/L (ppb)	50	97	96	86-121	1
Styrene	ug/L (ppb)	50	99	96	85-127	3
Isopropylbenzene	ug/L (ppb)	50	98	97	87-122	1
Bromoform	ug/L (ppb)	50	99	99	74-136	0
n-Propylbenzene	ug/L (ppb)	50	99	94	74-126	5
Bromobenzene	ug/L (ppb)	50	98	94	80-121	4
1,3,5-Trimethylbenzene	ug/L (ppb)	50	100	96	80-126	4
1,1,2,2-Tetrachloroethane	ug/L (ppb)	50	99	94	66-126	5
1,2,3-Trichloropropane	ug/L (ppb)	50	94	91	67-124	3
2-Chlorotoluene	ug/L (ppb)	50	97	92	77-127	5
4-Chlorotoluene	ug/L (ppb)	50	98	93	78-128	5
tert-Butylbenzene	ug/L (ppb)	50	99	96	85-127	3
1,2,4-Trimethylbenzene	ug/L (ppb)	50	98	95	82-125	3
sec-Butylbenzene	ug/L (ppb)	50	100	96	80-125	4
p-Isopropyltoluene	ug/L (ppb)	50	100	96	82-127	4
1,3-Dichlorobenzene	ug/L (ppb)	50	97	94	85-116	3
1,4-Dichlorobenzene	ug/L (ppb)	50	98	95	84-121	3
1,2-Dichlorobenzene	ug/L (ppb)	50	98	94	85-116	4
1,2-Dibromo-3-chloropropane	ug/L (ppb)	50	100	96	57-141	4
1,2,4-Trichlorobenzene	ug/L (ppb)	50	102	97	72-130	5
Hexachlorobutadiene	ug/L (ppb)	50	95	88	53-141	8
Naphthalene	ug/L (ppb)	50	102	97	64-133	5
1,2,3-Trichlorobenzene	ug/L (ppb)	50	96	92	65-136	4

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QUALITY ASSURANCE RESULTS FROM THE ANALYSIS OF WATER SAMPLES FOR 1,2-DIBROMOETHANE BY EPA METHOD 8011 MODIFIED

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 10)
1,2-Dibromoethane	ug/L (ppb)	0.10	99	99	70-130	0

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.

A1 – More than one compound of similar molecule structure was identified with equal probability.

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 this range fell outside of acceptance criteria. The value reported is an estimate.

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

d - The sample was diluted. Detection limits may be raised due to dilution.

ds - The sample was diluted. Detection limits are raised due to dilution and surrogate recoveries may not be meaningful.

dv - Insufficient sample was available to achieve normal reporting limits and limits are raised accordingly.

fb - Analyte present in the blank and the sample.

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. The variability is attributed to sample inhomogeneity.

ht - Analysis performed outside the method or client-specified holding time requirement.

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

j – The result is below normal reporting limits. 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 analyte result in the laboratory control sample is out of control limits. The reported concentration should be considered an estimate.

jr - The rpd result in laboratory control sample associated with the analyte is 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 compound indicated 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 in a container not approved by the method. The value reported should be considered an estimate.

pr – The sample was received with incorrect preservation. The value reported should be considered an estimate.

ve - 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.

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.

302171

SAMPLE CHAIN OF CUSTODY

ME 02-13-13

V4 / A05

Page # ____ of 2

Send Report To: Mike Noll MNoll@rileygroup.com
Company: The Riley Group, Inc.
Address: 17522 Bothell Way Northeast
City, State, ZIP: Bothell, WA 98011
Phone # (425) 415-0551 Fax # (425) 415-0311

SAMPLERS (signature): Michael B. Noll
PROJECT NAME/NO.: Muvalcami Morningside Park 2013-079A
PO #:
REMARKS: Include EDB and EDC in VOCs 8260

TURNAROUND TIME
- [x] Standard (2 Weeks)
- [ ] RUSH
- Rush charges authorized by:

SAMPLE DISPOSAL
- [ ] Dispose after 30 days
- [ ] Return samples
- [x] Will call with instructions

Sample ID	Lab ID	Date	Time	Sample Type	# of containers	TPH-Diesel	TPH-Gasoline	BTEX by 8021B	EDB + EDC VOCs by 8260	SVOCs by 8270	HFS	Halogenated VOCs 8010	EDB by 8011	Dx/xD			Notes
MW-1-021213	01 A-H	2/12/2013	1530	W	3	X	X	X	X								⊗ - per MN
MW-2-021213	02	2/12/2013	1645	W	8	X	X	X	X								02/14/13 EG
MW-3-021213	03	2/12/2013	1425	W	8	X	X	X				X					X - per MN
MW-4-021213	04	2/12/2013	1525	W	8	X	X	X				X					2/25/13
MW-6-021213	05	2/12/2013	1730	W	8	X	X	X	X					X			MG
MW-7-021213	06	2/12/2013	1030	W	8	X	X	X				X					
MW-8-021313	07	2/13/2013	1145	W	8	X	X	X				X					
MW-9-021213	08	2/12/2013	1600	W	3	X	X	X	X					X			
MW-10-021213	09	2/12/2013	1730	W	8	X	X	X	X				⊗				
MW-11-021213	10	2/12/2013	1125	W	8	X	X	X				X					

Friedman & Bruya, Inc.
3012 16th Avenue West
Seattle, WA 98119-2029
Ph. (206) 285-8282
Fax (206) 283-5044

FORMS\COC\COC.DOC

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by: Michael B. Noll - RGI 2/12/2013				
Received by:	Mike Gipson	RGI	2/13/13	10:00
Relinquished by:	Mike Gipson	RGI	2/13/13	15:07
Received by: Nhan Phan	Nhan Phan	FEBT	2/13/13	15:07

Samples received at 3 °C

30317 | **SAMPLE CHAIN OF CUSTODY** ME 02-13-13 | V4/A05

Page # 2 of 2

Send Report To: Mike Noll (MNoll@riley-group.com)
Company: The Riley Group, Inc.
Address: 17522 Bothell Way NE
City, State, ZIP: Bothell, WA 98011
Phone # (425) 415-0551 Fax # (425) 415-0311

SAMPLERS (signature): Michael D. Noll
PROJECT NAME/NO.: Nuya Kami Morningside Acres 2013-079A
PO #:
REMARKS: Include EDB & EDC in VOCs by 8260

TURNAROUND TIME
- [x] Standard (2 Weeks)
- [ ] RUSH
Rush charges authorized by:

SAMPLE DISPOSAL
- [ ] Dispose after 30 days
- [ ] Return samples
- [x] Will call with instructions

Sample ID	Lab ID	Date	Time	Sample Type	# of containers	TPH-Diesel	TPH-Gasoline	BTEX by 8021B	EDB & EDC VOCs by 8260	SVOCs by 8270	HFS	EDC Halogenated VOCs	Notes
MW-12-021213	11 A-H	2/12/2013	1135	W	8	X	X	X				X	
MW-13-021213	12	2/12/2013	1500		8	X	X	X				X	
MW-14-021313	13	2/13/2013	1345		8	X	X	X				X	
MW-15-021313	14	2/13/2013	1300		8	X	X	X				X	
MW-16-021213	15	2/12/2013	1120		8	X	X	X				X	
MW-17-021213	16	2/12/2013	1520		8	X	X	X				X	
MW-18-~~021~~ 021213	17	2/12/2013	1645		8	X	X	X	X				
MW-100-021213	18	2/12/2013	1200		8	X	X	X	X				
Trip Blank	19 A-B	2/12/2013	—		2		X	X	X				
~~Drum Water~~	~~Void~~	2/13/2013		W									

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by: Michael D. Noll - RGI			2/13/13	
Received by:	Mike Gipson	RGI	2/13/13	10:40
Relinquished by:	Mike Gipson	RGI	2/13/13	15:07
Received by:	Nhan Phan	FedEx	2/13/13	15:07

Samples received at 3 °C

Friedman & Bruya, Inc.
3012 16th Avenue West
Seattle, WA 98119-2029
Ph. (206) 285-8282
Fax (206) 283-5044

FORMS\COC\COC.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Yelena Aravkina, M.S.
Bradley T. Benson, B.S.
Kurt Johnson, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
TEL: (206) 285-8282
e-mail: fbi@isomedia.com

February 20, 2013

Mike Noll, Project Manager
The Riley Group, Inc.
17522 Bothell Way NE
Bothell, WA 98011

Dear Mr. Noll:

Included are the results from the testing of material submitted on February 13, 2013 from the Mirakami Morning Side Acres 2013-079A, F&BI 302170 project. There are 10 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
TRG0220R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on February 13, 2013 by Friedman & Bruya, Inc. from the The Riley Group Mirakami Morning Side Acres 2013-079A, F&BI 302170 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	The Riley Group
302170 -01	Drum021313

The NWTPH-Gx and 8260C sample were diluted due to the foamy nature of the sample. The reporting limits were raised accordingly.

All other quality control requirements were acceptable.

Date of Report: 02/20/13
Date Received: 02/13/13
Project: Mirakami Morning Side Acres 2013-079A, F&BI 302170
Date Extracted: 02/15/13
Date Analyzed: 02/15/13

RESULTS FROM THE ANALYSIS OF WATER SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS GASOLINE USING METHOD NWTPH-Gx

Results Reported as ug/L (ppb)

Sample ID Laboratory ID	Gasoline Range	Surrogate (% Recovery) (Limit 51-134)
Drum021313 302170-01 1/20	<2,000	97
Method Blank 03-0268 MB	<100	101

Date of Report: 02/20/13
Date Received: 02/13/13
Project: Mirakami Morning Side Acres 2013-079A, F&BI 302170
Date Extracted: 02/14/13
Date Analyzed: 02/15/13

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)
Drum021313 302170-01	2,700	3,300	62
Method Blank 03-263 MB	<50	<250	74

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	Drum021313	Client:	The Riley Group
Date Received:	02/13/13	Project:	Mirakami Morning Side Acres 2013-079A
Date Extracted:	02/14/13	Lab ID:	302170-01 1/20
Date Analyzed:	02/14/13	Data File:	021408.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	99	57	121
Toluene-d8	100	63	127
4-Bromofluorobenzene	99	60	133

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Dichlorodifluoromethane	<20	1,3-Dichloropropane	<20
Chloromethane	<200	Tetrachloroethene	<20
Vinyl chloride	10	Dibromochloromethane	<20
Bromomethane	<20	1,2-Dibromoethane (EDB)	<20
Chloroethane	<20	Chlorobenzene	<20
Trichlorofluoromethane	<20	Ethylbenzene	<20
Acetone	<200	1,1,1,2-Tetrachloroethane	<20
1,1-Dichloroethene	<20	m,p-Xylene	<40
Methylene chloride	<100	o-Xylene	<20
Methyl t-butyl ether (MTBE)	<20	Styrene	<20
trans-1,2-Dichloroethene	<20	Isopropylbenzene	<20
1,1-Dichloroethane	<20	Bromoform	<20
2,2-Dichloropropane	<20	n-Propylbenzene	<20
cis-1,2-Dichloroethene	<20	Bromobenzene	<20
Chloroform	<20	1,3,5-Trimethylbenzene	<20
2-Butanone (MEK)	<200	1,1,2,2-Tetrachloroethane	<20
1,2-Dichloroethane (EDC)	<20	1,2,3-Trichloropropane	<20
1,1,1-Trichloroethane	<20	2-Chlorotoluene	<20
1,1-Dichloropropene	<20	4-Chlorotoluene	<20
Carbon tetrachloride	<20	tert-Butylbenzene	<20
Benzene	<7	1,2,4-Trimethylbenzene	<20
Trichloroethene	<20	sec-Butylbenzene	<20
1,2-Dichloropropane	<20	p-Isopropyltoluene	<20
Bromodichloromethane	<20	1,3-Dichlorobenzene	<20
Dibromomethane	<20	1,4-Dichlorobenzene	<20
4-Methyl-2-pentanone	<200	1,2-Dichlorobenzene	<20
cis-1,3-Dichloropropene	<20	1,2-Dibromo-3-chloropropane	<200
Toluene	<20	1,2,4-Trichlorobenzene	<20
trans-1,3-Dichloropropene	<20	Hexachlorobutadiene	<20
1,1,2-Trichloroethane	<20	Naphthalene	<20
2-Hexanone	<200	1,2,3-Trichlorobenzene	<20

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	Method Blank	Client:	The Riley Group
Date Received:	NA	Project:	Mirakami Morning Side Acres 2013-079A
Date Extracted:	02/14/13	Lab ID:	03-0137 MB
Date Analyzed:	02/14/13	Data File:	021406.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	103	57	121
Toluene-d8	102	63	127
4-Bromofluorobenzene	100	60	133

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Dichlorodifluoromethane	<1	1,3-Dichloropropane	<1
Chloromethane	<10	Tetrachloroethene	<1
Vinyl chloride	<0.2	Dibromochloromethane	<1
Bromomethane	<1	1,2-Dibromoethane (EDB)	<1
Chloroethane	<1	Chlorobenzene	<1
Trichlorofluoromethane	<1	Ethylbenzene	<1
Acetone	<10	1,1,1,2-Tetrachloroethane	<1
1,1-Dichloroethene	<1	m,p-Xylene	<2
Methylene chloride	<5	o-Xylene	<1
Methyl t-butyl ether (MTBE)	<1	Styrene	<1
trans-1,2-Dichloroethene	<1	Isopropylbenzene	<1
1,1-Dichloroethane	<1	Bromoform	<1
2,2-Dichloropropane	<1	n-Propylbenzene	<1
cis-1,2-Dichloroethene	<1	Bromobenzene	<1
Chloroform	<1	1,3,5-Trimethylbenzene	<1
2-Butanone (MEK)	<10	1,1,2,2-Tetrachloroethane	<1
1,2-Dichloroethane (EDC)	<1	1,2,3-Trichloropropane	<1
1,1,1-Trichloroethane	<1	2-Chlorotoluene	<1
1,1-Dichloropropene	<1	4-Chlorotoluene	<1
Carbon tetrachloride	<1	tert-Butylbenzene	<1
Benzene	<0.35	1,2,4-Trimethylbenzene	<1
Trichloroethene	<1	sec-Butylbenzene	<1
1,2-Dichloropropane	<1	p-Isopropyltoluene	<1
Bromodichloromethane	<1	1,3-Dichlorobenzene	<1
Dibromomethane	<1	1,4-Dichlorobenzene	<1
4-Methyl-2-pentanone	<10	1,2-Dichlorobenzene	<1
cis-1,3-Dichloropropene	<1	1,2-Dibromo-3-chloropropane	<10
Toluene	<1	1,2,4-Trichlorobenzene	<1
trans-1,3-Dichloropropene	<1	Hexachlorobutadiene	<1
1,1,2-Trichloroethane	<1	Naphthalene	<1
2-Hexanone	<10	1,2,3-Trichlorobenzene	<1

Date of Report: 02/20/13
Date Received: 02/13/13
Project: Mirakami Morning Side Acres 2013-079A, F&BI 302170

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR TPH AS GASOLINE USING METHOD NWTPH-Gx

Laboratory Code: 302171-01 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	Relative Percent Difference (Limit 20)
Gasoline	ug/L (ppb)	<100	<100	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Gasoline	ug/L (ppb)	1,000	99	69-134

Date of Report: 02/20/13
Date Received: 02/13/13
Project: Mirakami Morning Side Acres 2013-079A, F&BI 302170

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	88	88	61-133	0

Date of Report: 02/20/13
Date Received: 02/13/13
Project: Mirakami Morning Side Acres 2013-079A, F&BI 302170

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR VOLATILES BY EPA METHOD 8260C

Laboratory Code: 302171-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Acceptance Criteria
Dichlorodifluoromethane	ug/L (ppb)	50	<10	102	10-172
Chloromethane	ug/L (ppb)	50	<10	98	25-166
Vinyl chloride	ug/L (ppb)	50	<0.2	104	36-166
Bromomethane	ug/L (ppb)	50	<1	105	47-169
Chloroethane	ug/L (ppb)	50	<1	106	46-160
Trichlorofluoromethane	ug/L (ppb)	50	<1	101	44-165
Acetone	ug/L (ppb)	250	<10	88	10-182
1,1-Dichloroethene	ug/L (ppb)	50	<1	99	60-136
Methylene chloride	ug/L (ppb)	50	<5	93	67-132
Methyl t-butyl ether (MTBE)	ug/L (ppb)	50	<1	96	74-127
trans-1,2-Dichloroethene	ug/L (ppb)	50	<1	97	72-129
1,1-Dichloroethane	ug/L (ppb)	50	<1	97	70-128
2,2-Dichloropropane	ug/L (ppb)	50	<1	98	36-154
cis-1,2-Dichloroethene	ug/L (ppb)	50	<1	96	71-127
Chloroform	ug/L (ppb)	50	<1	96	65-132
2-Butanone (MEK)	ug/L (ppb)	250	<10	93	10-129
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	<1	95	69-133
1,1,1-Trichloroethane	ug/L (ppb)	50	<1	96	60-146
1,1-Dichloropropene	ug/L (ppb)	50	<1	95	69-133
Carbon tetrachloride	ug/L (ppb)	50	<1	97	56-152
Benzene	ug/L (ppb)	50	<0.35	94	76-125
Trichloroethene	ug/L (ppb)	50	<1	94	66-135
1,2-Dichloropropane	ug/L (ppb)	50	<1	95	78-125
Bromodichloromethane	ug/L (ppb)	50	<1	96	61-150
Dibromomethane	ug/L (ppb)	50	<1	96	66-141
4-Methyl-2-pentanone	ug/L (ppb)	250	<10	97	10-185
cis-1,3-Dichloropropene	ug/L (ppb)	50	<1	98	72-132
Toluene	ug/L (ppb)	50	<1	94	76-122
trans-1,3-Dichloropropene	ug/L (ppb)	50	<1	97	76-130
1,1,2-Trichloroethane	ug/L (ppb)	50	<1	94	68-131
2-Hexanone	ug/L (ppb)	250	<10	94	10-185
1,3-Dichloropropane	ug/L (ppb)	50	<1	94	71-128
Tetrachloroethene	ug/L (ppb)	50	<1	93	73-129
Dibromochloromethane	ug/L (ppb)	50	<1	98	70-139
1,2-Dibromoethane (EDB)	ug/L (ppb)	50	<1	96	69-134
Chlorobenzene	ug/L (ppb)	50	<1	94	77-122
Ethylbenzene	ug/L (ppb)	50	<1	94	69-135
1,1,1,2-Tetrachloroethane	ug/L (ppb)	50	<1	97	73-137
m,p-Xylene	ug/L (ppb)	100	<2	94	69-135
o-Xylene	ug/L (ppb)	50	<1	94	68-137
Styrene	ug/L (ppb)	50	<1	94	71-133
Isopropylbenzene	ug/L (ppb)	50	<1	95	65-142
Bromoform	ug/L (ppb)	50	<1	101	65-142
n-Propylbenzene	ug/L (ppb)	50	<1	93	58-144
Bromobenzene	ug/L (ppb)	50	<1	93	75-124
1,3,5-Trimethylbenzene	ug/L (ppb)	50	<1	94	66-137
1,1,2,2-Tetrachloroethane	ug/L (ppb)	50	<1	97	51-154
1,2,3-Trichloropropane	ug/L (ppb)	50	<1	92	53-150
2-Chlorotoluene	ug/L (ppb)	50	<1	92	66-127
4-Chlorotoluene	ug/L (ppb)	50	<1	92	65-130
tert-Butylbenzene	ug/L (ppb)	50	<1	95	65-137
1,2,4-Trimethylbenzene	ug/L (ppb)	50	<1	93	59-146
sec-Butylbenzene	ug/L (ppb)	50	<1	94	64-140
p-Isopropyltoluene	ug/L (ppb)	50	<1	94	65-141
1,3-Dichlorobenzene	ug/L (ppb)	50	<1	92	72-123
1,4-Dichlorobenzene	ug/L (ppb)	50	<1	94	69-126
1,2-Dichlorobenzene	ug/L (ppb)	50	<1	93	69-128
1,2-Dibromo-3-chloropropane	ug/L (ppb)	50	<10	102	32-164
1,2,4-Trichlorobenzene	ug/L (ppb)	50	<1	99	76-132
Hexachlorobutadiene	ug/L (ppb)	50	<1	90	60-143
Naphthalene	ug/L (ppb)	50	<1	102	44-164
1,2,3-Trichlorobenzene	ug/L (ppb)	50	<1	95	69-148

Date of Report: 02/20/13
Date Received: 02/13/13
Project: Mirakami Morning Side Acres 2013-079A, F&BI 302170

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR VOLATILES BY EPA METHOD 8260C

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Dichlorodifluoromethane	ug/L (ppb)	50	104	104	25-158	0
Chloromethane	ug/L (ppb)	50	104	104	45-156	0
Vinyl chloride	ug/L (ppb)	50	106	106	50-154	0
Bromomethane	ug/L (ppb)	50	103	103	55-143	0
Chloroethane	ug/L (ppb)	50	102	102	58-146	0
Trichlorofluoromethane	ug/L (ppb)	50	102	102	50-150	0
Acetone	ug/L (ppb)	250	97	97	60-155	0
1,1-Dichloroethene	ug/L (ppb)	50	100	100	67-136	0
Methylene chloride	ug/L (ppb)	50	94	94	39-148	0
Methyl t-butyl ether (MTBE)	ug/L (ppb)	50	98	98	64-147	0
trans-1,2-Dichloroethene	ug/L (ppb)	50	99	99	68-128	0
1,1-Dichloroethane	ug/L (ppb)	50	99	99	79-121	0
2,2-Dichloropropane	ug/L (ppb)	50	102	102	55-143	0
cis-1,2-Dichloroethene	ug/L (ppb)	50	98	98	80-123	0
Chloroform	ug/L (ppb)	50	97	97	80-121	0
2-Butanone (MEK)	ug/L (ppb)	250	99	99	57-149	0
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	98	98	73-132	0
1,1,1-Trichloroethane	ug/L (ppb)	50	99	99	83-130	0
1,1-Dichloropropene	ug/L (ppb)	50	98	98	77-129	0
Carbon tetrachloride	ug/L (ppb)	50	102	102	75-158	0
Benzene	ug/L (ppb)	50	96	96	69-134	0
Trichloroethene	ug/L (ppb)	50	95	95	80-120	0
1,2-Dichloropropane	ug/L (ppb)	50	98	98	77-123	0
Bromodichloromethane	ug/L (ppb)	50	99	99	81-133	0
Dibromomethane	ug/L (ppb)	50	97	97	82-125	0
4-Methyl-2-pentanone	ug/L (ppb)	250	99	99	70-140	0
cis-1,3-Dichloropropene	ug/L (ppb)	50	101	101	82-132	0
Toluene	ug/L (ppb)	50	95	95	72-122	0
trans-1,3-Dichloropropene	ug/L (ppb)	50	100	100	80-136	0
1,1,2-Trichloroethane	ug/L (ppb)	50	95	95	75-124	0
2-Hexanone	ug/L (ppb)	250	96	96	64-152	0
1,3-Dichloropropane	ug/L (ppb)	50	95	95	76-126	0
Tetrachloroethene	ug/L (ppb)	50	94	94	76-121	0
Dibromochloromethane	ug/L (ppb)	50	101	101	84-133	0
1,2-Dibromoethane (EDB)	ug/L (ppb)	50	97	97	82-125	0
Chlorobenzene	ug/L (ppb)	50	95	95	83-114	0
Ethylbenzene	ug/L (ppb)	50	96	96	77-124	0
1,1,1,2-Tetrachloroethane	ug/L (ppb)	50	99	99	84-127	0
m,p-Xylene	ug/L (ppb)	100	95	95	83-125	0
o-Xylene	ug/L (ppb)	50	95	95	86-121	0
Styrene	ug/L (ppb)	50	96	96	85-127	0
Isopropylbenzene	ug/L (ppb)	50	96	96	87-122	0
Bromoform	ug/L (ppb)	50	102	102	74-136	0
n-Propylbenzene	ug/L (ppb)	50	95	95	74-126	0
Bromobenzene	ug/L (ppb)	50	95	95	80-121	0
1,3,5-Trimethylbenzene	ug/L (ppb)	50	96	96	80-126	0
1,1,2,2-Tetrachloroethane	ug/L (ppb)	50	98	98	66-126	0
1,2,3-Trichloropropane	ug/L (ppb)	50	93	93	67-124	0
2-Chlorotoluene	ug/L (ppb)	50	94	94	77-127	0
4-Chlorotoluene	ug/L (ppb)	50	95	95	78-128	0
tert-Butylbenzene	ug/L (ppb)	50	96	96	85-127	0
1,2,4-Trimethylbenzene	ug/L (ppb)	50	95	95	82-125	0
sec-Butylbenzene	ug/L (ppb)	50	96	96	80-125	0
p-Isopropyltoluene	ug/L (ppb)	50	97	97	82-127	0
1,3-Dichlorobenzene	ug/L (ppb)	50	95	95	85-116	0
1,4-Dichlorobenzene	ug/L (ppb)	50	95	95	84-121	0
1,2-Dichlorobenzene	ug/L (ppb)	50	96	96	85-116	0
1,2-Dibromo-3-chloropropane	ug/L (ppb)	50	106	106	57-141	0
1,2,4-Trichlorobenzene	ug/L (ppb)	50	103	103	72-130	0
Hexachlorobutadiene	ug/L (ppb)	50	97	97	53-141	0
Naphthalene	ug/L (ppb)	50	105	105	64-133	0
1,2,3-Trichlorobenzene	ug/L (ppb)	50	100	100	65-136	0

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.

A1 – More than one compound of similar molecule structure was identified with equal probability.

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 this range fell outside of acceptance criteria. The value reported is an estimate.

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

d - The sample was diluted. Detection limits may be raised due to dilution.

ds - The sample was diluted. Detection limits are raised due to dilution and surrogate recoveries may not be meaningful.

dv - Insufficient sample was available to achieve normal reporting limits and limits are raised accordingly.

fb - Analyte present in the blank and the sample.

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. The variability is attributed to sample inhomogeneity.

ht - Analysis performed outside the method or client-specified holding time requirement.

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

j – The result is below normal reporting limits. 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 analyte result in the laboratory control sample is out of control limits. The reported concentration should be considered an estimate.

jr - The rpd result in laboratory control sample associated with the analyte is 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 compound indicated 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 in a container not approved by the method. The value reported should be considered an estimate.

pr – The sample was received with incorrect preservation. The value reported should be considered an estimate.

ve - 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.

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.

302170

SAMPLE CHAIN OF CUSTODY

ME 02/13/13 V1 / AUS

Page # 1 of 1

Send Report To: Mike Noll MNoll@riley-group.com
Company: RGI
Address: 17522 Bothell Way NE Ste A
City, State, ZIP: Bothell, WA 98011
Phone #: 425-415-0551 Fax #: 425-415-0311

SAMPLERS (signature): Mike Gipson
PROJECT NAME/NO.: Miratami Morning Side Acres
PO #: 2013-079A
REMARKS:

TURNAROUND TIME
- [x] Standard (2 Weeks)
- [ ] RUSH
Rush charges authorized by:

SAMPLE DISPOSAL
- [ ] Dispose after 30 days
- [ ] Return samples
- [x] Will call with instructions

Sample ID	Lab ID	Date	Time	Sample Type	# of containers	TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by 8260	SVOCs by 8270	HFS						Notes
Drum 021313	01 A-H	2/13/13	12:00	W	8	X	X	X	X								

ANALYSES REQUESTED

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by: Mike Gipson	Mike Gipson	RGI	2/13/13	15:07
Received by: Nhan Phan	Nhan Phan	FEBI	2/13/13	15:07
Relinquished by:				
Received by:				

Friedman & Bruya, Inc.
3012 16th Avenue West
Seattle, WA 98119-2029
Ph. (206) 285-8282
Fax (206) 283-5044

FORMS\COC\COC.DOC

Samples received at 3 °C