

SITE INVESTIGATION REPORT

RIDGEFIELD SCHOOL DISTRICT
MAINTENANCE FACILITY (BUS BARN)
304 PIONEER STREET, RIDGEFIELD, WASHINGTON
GRANT #G1400560



Prepared for
CITY OF RIDGEFIELD
RIDGEFIELD, WASHINGTON
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304 PIONEER STREET, RIDGEFIELD, WASHINGTON

*The material and data in this report were prepared
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ACRONYMS AND ABBREVIATIONS

bgs	below ground surface
the City	City of Ridgefield
Ecology	Washington State Department of Ecology
HCID	hydrocarbon identification
MFA	Maul Foster & Alongi, Inc.
MTCA	Model Toxics Control Act
NWTPH	Northwest Total Petroleum Hydrocarbons
the Property	304 Pioneer Street, Ridgefield, Washington
RSD	Ridgefield School District
UST	underground storage tank

1 INTRODUCTION

Maul Foster & Alongi, Inc. (MFA) has prepared this report for the City of Ridgefield (Ridgefield) and Ridgefield School District (RSD), summarizing environmental conditions on the property located at 304 Pioneer Street in Ridgefield, Washington (the Property) (see Figure 1).

A geophysical survey indicated that former underground storage tanks (USTs) may be present adjacent south-southwest of the Property and also north of the building (Appendix B of MFA, 2014). In addition, there is one UST that is currently in use on the northwest corner of the Property. This investigation, conducted in September 2014 and April 2015, focused on those current and former UST locations (see Figure 2) which were the only identified potential sources of contamination on the Property. The field investigation was completed consistent with the methods and protocol described in the MFA Site Investigation Work Plan (MFA, 2014) and as discussed with Ecology on March 12, 2015.

1.1 Regulatory Framework

This investigation was conducted using an Integrated Planning Grant issued to Ridgefield by the Washington State Department of Ecology (Ecology). This investigation was designed to meet the requirements of the Model Toxics Control Act (MTCA; Washington Administrative Code 173-340) for performing a site investigation. The purpose of the site investigation was to evaluate potential environmental impacts from historic uses of the Property.

2 BACKGROUND AND PHYSICAL SETTING

The Property is zoned as Downtown Mixed Use and is approximately 150 feet long (north-south) and 100 feet wide (east-west). The Property is surrounded by commercial uses and is located on Pioneer Street at the corner of S 3rd Avenue in downtown Ridgefield.

The Property is currently owned and operated by RSD and used as a maintenance facility. The building is commonly referred to in the community as the “Bus Barn.” The Property includes an approximately 10,000-square-foot, single-story masonry structure, which is on an approximately one-quarter block bounded by Third Avenue and Pioneer Street. The building is an iconic landmark in downtown Ridgefield. Currently, the building is used for maintenance staff facilities and for storage of dry goods, school-related supplies and archives, and facilities maintenance and repair equipment. The rest of the Property is used for access and parking. See Figure 2 for site features and surrounding area.

The building was formerly used for vehicle sales and maintenance and was a service station. There is a compliant gasoline UST in use on the Property, located at the NW corner of the exterior parking

area, with an associated aboveground fuel dispenser used by RSD for fueling maintenance equipment.

2.1 Site History

Before 1920, the Property was occupied by the Chas H. Greely Garage, which housed a gasoline engine repair shop in the northernmost part of the building. Historical Sanborne maps (MFA, 2014) showed two gasoline USTs outside the southern part of the building (see Figure 2). The area north of the Property was undeveloped, there was an auto repair shop to the east, a tire shop and two adjacent domestic buildings to the southeast, a combined business (cobbler) and domestic residence to the south, another combined business (tailor) and domestic residence to the southwest, and a bank to the west.

Between 1920 and 1930, the auto repair shop was changed to an electric supply office on the east side of the Property. To the south, a lodging establishment had been developed and, adjacent to it, a domestic residence with attached garage. To the southeast, a hand laundry was established, and to the southwest there was an adjoined post office and grocery store.

Environmental records (provided by Environmental Data Resources, Inc.) indicated that a Site Characterization and Independent Cleanup Action Report had been prepared for the site in 1991; however, Ecology has no record of this (MFA, 2014).

2.2 Site Geology and Hydrogeology

Shallow borings were completed on and near the Property (see Appendix A for geologic boring logs). Typically, fine sands and silty sands were observed from the surface to depths of 14 to 15 feet below ground surface (bgs). As documented at the Park Laundry Site unsaturated, low-permeability clay underlies the sand and perches groundwater above it. Deeper borings advanced by MFA on the nearby former Park Laundry property indicate that the bottom of the clay perching layer is around 50 feet bgs. The clay is underlain by silty gravels and sandy gravels of the Upper Troutdale Formation underlie the low-permeability clay.

On the Property, perched groundwater was first observed at approximately 9 feet bgs in September 2014 and at approximately 6 feet bgs in April 2015. Based on investigations completed for the former Park Laundry site, shallow groundwater closely follows the topography. The groundwater flow direction at Park Laundry is to the west and northwest. Based on local topography (see Figure 3), shallow groundwater flow at the Property may be similar to Park Laundry.

3 INVESTIGATION RESULTS

3.1 Field Procedures

As described above, groundwater is shallow, perched, and the uppermost saturated zone only extends to approximately 11 feet bgs. For this investigation, borings were advanced from the ground surface to the bottom of the shallow saturated zone for B1 through B7, and from the ground surface to ten feet bgs for BW7 through BW16 (see Figures 4 and 5). In addition, one sub-slab soil vapor sampling location beneath the interior building floor was completed to evaluate for possible impacts to indoor air.

During the September 2014 investigation, two soil samples from the unsaturated zone were collected from each boring location and analyzed for hazardous substances (0 to 3 feet bgs and immediately above the water table). A groundwater sample was also collected from just below the water table. During the April 2015 investigation, among the nine borings that were advanced, five soil samples were analyzed from the unsaturated zone and six soil samples were analyzed from the saturated zone. A groundwater sample was collected from just below the water table for four boring locations. A sub-slab soil vapor sample beneath the interior building floor directly west of B8 was collected.

For the September 2014 investigation, soil and groundwater samples were analyzed for petroleum hydrocarbons by the Northwest Total Petroleum Hydrocarbons-Hydrocarbon Identification (NWTPH-HCID) method. Follow-up analyses depended on the potential type of petroleum hydrocarbons identified. If gasoline-range hydrocarbons were detected, follow-up analyses were conducted for gasoline; BTEX (benzene, toluene, ethylbenzene, and total xylenes); and lead. If diesel-range hydrocarbons were detected, follow-up analyses included analysis for diesel.

One groundwater sample from a location in the vicinity of former maintenance activities (boring B6) was also analyzed for volatile organic compounds. For the April 2015 investigation, soil and groundwater samples were analyzed for gasoline-range petroleum hydrocarbons by the NWTPH-Gx, for diesel and lube oil-range petroleum hydrocarbons by NWTPH-Dx, and for BTEX by U.S. Environmental Protection Agency (USEPA) 8021B. The sub-slab soil vapor sample was analyzed for gasoline and BTEX by USEPA TO-15, for natural gases in soil vapor by American Society for Testing and Materials D-1946 Modified, and for volatile petroleum hydrocarbon fractions by USEPA TO-15 Modified air-phase hydrocarbons. See Appendices B, C, and D for the field sampling data sheets, the laboratory analytical reports, and the data validation memorandum, respectively.

3.2 Results

Concentrations of petroleum and petroleum-related constituents detected during this investigation were screened against MTCA Method A cleanup levels for both groundwater and soil. In addition,

groundwater and sub-slab soil vapor results were screened against Method B screening levels to evaluate potential impacts to indoor air. The results of the investigation are summarized in Tables 1, 2, and 3, and exceedances are shown on Figures 4 and 5.

3.2.1 Soil

For the September 2014 investigation, NWTPH-HCID detected gasoline in soil in borings B2, B3, and B4 (near former USTs along the south and southwest of the building), and in boring B7 (near a former UST along the north side of the building). Follow-up analysis for gasoline concentrations indicated that all exceeded Method A cleanup levels. Among the April 2015 soil samples, gasoline was detected in B12 at 8.0 feet bgs and B16 at 8.0 feet bgs, both of which had gasoline concentrations that exceed Method A cleanup levels.

Soil samples with gasoline exceedances from B2, B3, B7, B12, and B16 were in deeper soil samples, from 7 to 8.5 feet bgs. Although B2, B3, and B7 were collected above the water table, the September 2014 investigation was conducted during low water conditions and it is likely that these locations are in an area where fluctuating groundwater levels may cause smearing of contamination in the seasonally unsaturated zone. B12 and B16 were collected in April 2015 during seasonally higher water conditions; both of these samples were in the saturated zone at 8.0 feet bgs. In light of this, it appears that these samples could be affected by concentrations in a groundwater smear zone and are not indicative of the source of gasoline. However, shallow soil (3 feet bgs) in B4 was impacted with gasoline above MTCA Method A, and could be an indication of a source. B4 soil, both shallow and deeper, also had exceedances of ethylbenzene.

For the September 2014 investigation, NWTPH-HCID detected diesel in soil in borings B3, B4, and B7; follow-up analysis for diesel concentrations indicated that only B4 and B7 had concentrations above Method A cleanup levels. Among the April 2015 soil samples, diesel was detected in B12 at 8.0 feet bgs and B16 at 8.0 feet bgs, both of which had diesel concentrations that exceed Method A cleanup levels. As with several of the gasoline detections, the diesel exceedances were from deeper soil samples that may be within the smear zone or saturated zone and therefore influenced by concentrations migrating in groundwater. From these data, it is not clear exactly where the diesel originates. The highest concentration of diesel is from B7, which is near the eastern boundary of the Property.

While there were some detections of lead, there were no exceedances in any of the soil samples.

3.2.2 Groundwater

There was only one detection in groundwater that exceeded MTCA Method A cleanup levels: a diesel concentration in boring B7. No concentrations were above MTCA Method B screening criteria for the protection of indoor air quality.

3.2.3 Sub-Slab Soil Vapor

The sub-slab soil vapor sample at SS1 did not exceed MTCA Method B screening criteria for the protection of indoor air quality for BTEX, gasoline, and additional air-phase petroleum hydrocarbons.

4 CONCLUSIONS

Several concentrations of gasoline in soil exceeded MTCA criteria, primarily on the south side of the building and adjacent to former USTs, but also two exceedances on the north side of the building, also adjacent to a former UST.

However, gasoline was not detected in any of the groundwater samples. There was, however, one detection/exceedance of diesel in groundwater at the sample location adjacent to the building on the north side.

Based on the data, we can still conclude that there is some gasoline and diesel contamination on the Property and directly adjacent to the south, likely associated with former USTs. There are no exceedances in either soil or groundwater that trigger a vapor intrusion concern. The sub-slab vapor location in the southern section of the building floor had no exceedances.

LIMITATIONS

The services undertaken in completing this report were performed consistent with generally accepted professional consulting principles and practices. No other warranty, express or implied, is made. These services were performed consistent with our agreement with our client. This report is solely for the use and information of our client unless otherwise noted. Any reliance on this report by a third party is at such party's sole risk.

Opinions and recommendations contained in this report apply to conditions existing when services were performed and are intended only for the client, purposes, locations, time frames, and project parameters indicated. We are not responsible for the impacts of any changes in environmental standards, practices, or regulations subsequent to performance of services. We do not warrant the accuracy of information supplied by others, or the use of segregated portions of this report.

REFERENCES

MFA. 2014a. Memorandum (re: environmental screening for Bus Barn property, 304 Pioneer Street, Ridgefield, WA) to file, from A. Johnson and M. D'Andrea, Maul Foster & Alongi, Inc., Vancouver, Washington. July 24.

MFA. 2014b. Site investigation work plan, Ridgefield School District Maintenance Facility (Bus Barn), 304 Pioneer Street. Maul Foster & Alongi, Inc., Vancouver, Washington. October 1.

MFA. 2015. Memorandum (re: Ridgefield School District – Bus Barn) to N. McCann and S. Stuart, from J. Maul and M. D'Andrea, Maul Foster & Alongi, Inc., Vancouver, Washington. March 26.

TABLES



Table 1
Groundwater Analytical Results
Bus Barn Site
City of Ridgefield
Ridgefield, Washington

Location: Sample Name: Collection Date:			B1 B1-W 09/15/2014	B2 B2-W 09/15/2014	B3 B3-W 09/15/2014	B4 B4-W 09/15/2014	B5 B5-W 09/16/2014	B6 B6-W 09/17/2014	B6 B6-W-DUP 09/17/2014	B7 B7-W 09/16/2014
	Vapor Intrusion, Method B, Groundwater	MTCA A								
Dissolved Metals (ug/L)										
Lead	NV	15	--	--	--	--	--	--	--	0.1 U
VOCs (ug/L)										
1,1,1,2-Tetrachloroethane	7.4	NV	--	--	--	--	--	0.5 U	0.5 U	--
1,1,1-Trichloroethane	11000	200	--	--	--	--	--	0.5 U	0.5 U	--
1,1,2,2-Tetrachloroethane	6.2	NV	--	--	--	--	--	1 U	1 U	--
1,1,2-Trichloroethane	7.9	NV	--	--	--	--	--	1 U	1 U	--
1,1-Dichloroethane	2300	NV	--	--	--	--	--	0.3 U	0.3 U	--
1,1-Dichloroethene	130	NV	--	--	--	--	--	0.5 U	0.5 U	--
1,1-Dichloropropene	NV	NV	--	--	--	--	--	0.3 U	0.3 U	--
1,2,3-Trichlorobenzene	NV	NV	--	--	--	--	--	1 U	1 U	--
1,2,3-Trichloropropane	NV	NV	--	--	--	--	--	0.5 U	0.5 U	--
1,2,4-Trichlorobenzene	3900	NV	--	--	--	--	--	1 U	1 U	--
1,2,4-Trimethylbenzene	24	NV	--	--	--	--	--	0.5 U	1.53	--
1,2-Dibromo-3-chloropropane	NV	NV	--	--	--	--	--	1 U	1 U	--
1,2-Dibromoethane	0.74	0.01	--	--	--	--	--	1 U	1 U	--
1,2-Dichlorobenzene	1800	NV	--	--	--	--	--	1 U	1 U	--
1,2-Dichloroethane	4.2	NV	--	--	--	--	--	0.5 U	0.5 U	--
1,2-Dichloropropane	28	NV	--	--	--	--	--	0.3 U	0.3 U	--
1,3,5-Trimethylbenzene	25	NV	--	--	--	--	--	0.5 U	0.5 U	--
1,3-Dichlorobenzene	NV	NV	--	--	--	--	--	0.5 U	0.5 U	--
1,3-Dichloropropane	NV	NV	--	--	--	--	--	0.5 U	0.5 U	--
1,4-Dichlorobenzene	7900	NV	--	--	--	--	--	1 U	1 U	--
2,2-Dichloropropane	NV	NV	--	--	--	--	--	0.3 U	0.3 U	--
2-Butanone	NV	NV	--	--	--	--	--	10 U	10 U	--
2-Chlorotoluene	NV	NV	--	--	--	--	--	0.5 U	0.5 U	--
2-Hexanone	NV	NV	--	--	--	--	--	10 U	10 U	--
4-Chlorotoluene	NV	NV	--	--	--	--	--	0.5 U	0.5 U	--
4-Isopropyltoluene	NV	NV	--	--	--	--	--	0.5 U	0.5 U	--
4-Methyl-2-pentanone	11000	NV	--	--	--	--	--	20 U	20 U	--
Acetone	NV	NV	--	--	--	--	--	10 U	10 U	--
Acrylonitrile	NV	NV	--	--	--	--	--	5 U	5 U	--
Benzene	2.4	5	--	--	--	--	--	0.3 U	0.3 U	0.3 U
Bromobenzene	NV	NV	--	--	--	--	--	0.3 U	0.3 U	--
Bromodichloromethane	0.09	NV	--	--	--	--	--	0.5 U	0.5 U	--
Bromoform	200	NV	--	--	--	--	--	1 U	1 U	--
Bromomethane	13	NV	--	--	--	--	--	1 U	1 U	--

Table 1
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Bus Barn Site
City of Ridgefield
Ridgefield, Washington

Location: Sample Name: Collection Date:			B1 B1-W 09/15/2014	B2 B2-W 09/15/2014	B3 B3-W 09/15/2014	B4 B4-W 09/15/2014	B5 B5-W 09/16/2014	B6 B6-W 09/17/2014	B6 B6-W-DUP 09/17/2014	B7 B7-W 09/16/2014
	Vapor Intrusion, Method B, Groundwater	MTCA A								
Carbon disulfide	400	NV	--	--	--	--	--	1 U	1 U	--
Carbon tetrachloride	0.22	NV	--	--	--	--	--	0.5 U	0.5 U	--
Chlorobenzene	100	NV	--	--	--	--	--	0.5 U	0.5 U	--
Chlorobromomethane	NV	NV	--	--	--	--	--	1 U	1 U	--
Chloroethane	12	NV	--	--	--	--	--	1 U	1 U	--
Chloroform	1.2	NV	--	--	--	--	--	0.3 U	0.3 U	--
Chloromethane	5.2	NV	--	--	--	--	--	0.5 U	0.5 U	--
cis-1,2-Dichloroethene	160	NV	--	--	--	--	--	0.3 U	0.3 U	--
cis-1,3-Dichloropropene	NV	NV	--	--	--	--	--	0.5 U	0.5 U	--
Dibromochloromethane	0.22	NV	--	--	--	--	--	1 U	1 U	--
Dibromomethane	NV	NV	--	--	--	--	--	1 U	1 U	--
Dichlorodifluoromethane	9.9	NV	--	--	--	--	--	0.5 U	0.5 U	--
Ethylbenzene	2800	700	--	--	--	--	--	0.5 U	0.54	1.7
Freon 113	1100	NV	--	--	--	--	--	1 U	1 U	--
Hexachlorobutadiene	0.81	NV	--	--	--	--	--	1 U	1 U	--
Isopropylbenzene	720	NV	--	--	--	--	--	0.3 U	0.3 U	--
m,p-Xylene	NV	1000 ^a	--	--	--	--	--	1 U	1 U	--
Methyl tert-butyl ether	610	20	--	--	--	--	--	0.5 U	0.5 U	--
Methylene chloride	94	5	--	--	--	--	--	20 U	20 U	--
Naphthalene	170	160	--	--	--	--	--	1 U	1.22	--
n-Butylbenzene	NV	NV	--	--	--	--	--	0.5 U	0.5 U	--
n-Propylbenzene	NV	NV	--	--	--	--	--	0.5 U	0.5 U	--
o-Xylene	440	1000 ^a	--	--	--	--	--	0.3 U	0.3 U	--
sec-Butylbenzene	NV	NV	--	--	--	--	--	0.5 U	0.5 U	--
Styrene	78	NV	--	--	--	--	--	0.5 U	0.5 U	--
tert-Butylbenzene	NV	NV	--	--	--	--	--	0.5 U	0.5 U	--
Tetrachloroethene	1	5	--	--	--	--	--	1 U	1 U	--
Toluene	15000	1000	--	--	--	--	--	0.5 U	0.5 U	0.93
trans-1,2-dichloroethene	130	NV	--	--	--	--	--	0.5 U	0.5 U	--
trans-1,3-Dichloropropene	NV	NV	--	--	--	--	--	0.5 U	0.5 U	--
Trichloroethene	0.42	200	--	--	--	--	--	0.3 U	0.3 U	--
Trichlorofluoromethane	120	NV	--	--	--	--	--	1 U	1 U	--
Vinyl chloride	0.35	NV	--	--	--	--	--	0.3 U	0.3 U	--
Xylenes, Total	NV	1000	--	--	--	--	--	--	--	4.69

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Groundwater Analytical Results
Bus Barn Site
City of Ridgefield
Ridgefield, Washington

Location: Sample Name: Collection Date:			B1 B1-W 09/15/2014	B2 B2-W 09/15/2014	B3 B3-W 09/15/2014	B4 B4-W 09/15/2014	B5 B5-W 09/16/2014	B6 B6-W 09/17/2014	B6 B6-W-DUP 09/17/2014	B7 B7-W 09/16/2014
	Vapor Intrusion, Method B, Groundwater	MTCA A								
Hydrocarbon Identification (Presence/Absence)										
Diesel	NV	NV	ND	ND	ND	ND	ND	ND	ND	DETECT
Gasoline/Mineral Spirits	NV	NV	ND	ND	ND	ND	ND	ND	ND	ND
Kerosene	NV	NV	ND	ND	ND	ND	ND	ND	ND	ND
Lube Oil	NV	NV	ND	ND	ND	ND	ND	ND	ND	ND
TPH (ug/L)										
Gasoline	NV	1000	--	--	--	--	--	--	--	100 U
Diesel	NV	500	--	--	--	--	--	--	--	853 J
Lube Oil	NV	500	--	--	--	--	--	--	--	482
NOTES: Detections are in bold font. Results that exceed MTCA cleanup levels are shaded. Non-detect results are not evaluated. Results are shaded according to exceedance of highest evaluated cleanup levels. -- = not analyzed. DUP = field duplicate. J = Result is an estimated value. Method B = Washington screening level in groundwater protective of indoor air, for Method B. From Table B-1, Draft Guidance for Evaluating Soil Vapor Intrusion in Washington State, 2009. MTCA = Model Toxics Control Act. MTCA A = MTCA Method A unrestricted land use. ND = non-detect. NV = no value. TPH = total petroleum hydrocarbons. U = Result is non-detect at or above method reporting limit. ug/L = micrograms per liter. VOC = volatile organic compound. ^aTotal xylenes cleanup level is used.										

Table 2
Soil Analytical Results
Bus Barn Site
City of Ridgefield
Ridgefield, Washington

Location:		B1	B1	B2	B2	B3	B3	B4	B4	B5	B5	B6	B6	B7
Sample Name:		B1-S-2.0	B1-S-8.5	B2-S-2.0	B2-S-8.0	B3-S-2.0	B3-S-7.0	B4-S-3.0	B4-S-7.0	B5-S-2.0	B5-S-7.0	B6-S-2.0	B6-S-8.5	B7-S-1.5
Collection Date:		09/15/2014	09/15/2014	09/15/2014	09/15/2014	09/15/2014	09/15/2014	09/15/2014	09/15/2014	09/16/2014	09/16/2014	09/16/2014	09/16/2014	09/16/2014
Collection Depth (ft bgs):		2.0	8.5	2.0	8.0	2.0	7.0	3.0	7.0	2.0	7.0	2.0	8.5	1.5
	MTCA A													
Metals (mg/kg)														
Lead	250	--	--	--	11	--	8.63	9.11	7.77	--	--	--	--	--
VOCs (mg/kg)														
Benzene	0.03	--	--	--	0.0193 U	--	0.0191 U	0.0183 U	0.0191 U	--	--	--	--	--
Ethylbenzene	6	--	--	--	0.0321 U	--	2.06 J	8.27 J	9.08 J	--	--	--	--	--
Toluene	7	--	--	--	0.0971	--	0.0395 J	0.364 J	1.18 J	--	--	--	--	--
Xylenes, Total	9	--	--	--	0.0964 U	--	0.0956 U	0.0913 U	4.49 J	--	--	--	--	--
Hydrocarbon Identification (Presence/Absence)														
Gasoline	NV	ND	ND	ND	DETECT	ND	DETECT	DETECT	DETECT	ND	ND	ND	ND	ND
Diesel	NV	ND	ND	ND	ND	ND	DETECT	DETECT	DETECT	ND	ND	ND	ND	ND
Hydraulic Oil	NV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Kerosene	NV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Lube Oil	NV	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TPH (mg/kg)														
Gasoline	100	--	--	--	444 J	--	1320 J	2990 J	4310 J	--	--	--	--	--
Diesel	2000	--	--	--	--	--	461 J	1970 J	4200 J	--	--	--	--	--
Lube Oil	2000	--	--	--	--	--	63.8 U	113 J	151 J	--	--	--	--	--

Table 2
Soil Analytical Results
Bus Barn Site
City of Ridgefield
Ridgefield, Washington

Location:		B8	B9	B10	B11	B12	B12	B13	B14	B15	B16	B16
Sample Name:		B8-S-7.5	B9-S-6.0	B10-S-5.5	B11-S-8.0	B12-S-5.5	B12-S-8.0	B13-S-8.0	B14-S-5.0	B15-S-8.0	B16-S-5.5	B16-S-8.0
Collection Date:		04/15/2015	04/15/2015	04/15/2015	04/15/2015	04/15/2015	04/15/2015	04/15/2015	04/15/2015	04/15/2015	04/15/2015	04/15/2015
Collection Depth (ft bgs):		7.5	6.0	5.5	8.0	5.5	8.0	8.0	5.0	8.0	5.5	8.0
	MTCA A											
Metals (mg/kg)												
Lead	250	--	--	--	--	--	--	--	--	--	--	--
VOCs (mg/kg)												
Benzene	0.03	0.02 U	0.0188 U	0.0196 U	0.0193 U	0.0192 U	0.0196 U	0.0191 U	0.018 U	0.0194 U	0.019 U	0.0194 U
Ethylbenzene	6	0.0334 U	0.0314 U	0.0327 U	0.0322 U	0.032 U	0.0327 U	0.0318 U	0.0301 U	0.0324 U	0.0317 U	0.0323 U
Toluene	7	0.0334 U	0.0314 U	0.0327 U	0.0322 U	0.122	0.109	0.0318 U	0.0301 U	0.0324 U	0.0317 U	0.0323 U
Xylenes, Total	9	0.1 U	0.0941 U	0.0982 U	0.0966 U	0.096 U	0.0981 U	0.0955 U	0.0902 U	0.0972 U	0.0952 U	0.0968 U
Hydrocarbon Identification (Pres)												
Gasoline	NV	--	--	--	--	--	--	--	--	--	--	--
Diesel	NV	--	--	--	--	--	--	--	--	--	--	--
Hydraulic Oil	NV	--	--	--	--	--	--	--	--	--	--	--
Kerosene	NV	--	--	--	--	--	--	--	--	--	--	--
Lube Oil	NV	--	--	--	--	--	--	--	--	--	--	--
TPH (mg/kg)												
Gasoline	100	3.34 U	3.14 U	3.27 U	3.22 U	615	718	3.18 U	3.01 U	3.24 U	3.17 U	955
Diesel	2000	20 U	18.8 U	19.6 U	19.3 U	50 J	548 J	19.1 U	18 U	19.4 U	111	6420
Lube Oil	2000	66.7 U	62.7 U	65.5 U	64.4 U	64 U	65.4 U	63.7 U	60.1 U	64.8 U	63.5 U	64.5 U

Table 3
Sub-Slab Soil Vapor Analytical Results
Bus Barn Site
City of Ridgefield
Ridgefield, Washington

Location:		SS-1
Sample Date:		4/15/2015
	MTCA B Sub-Slab	
VOCs (ug/m3)		
Benzene	10.7	3.2
Ethylbenzene	15200	6.7
Toluene	76200	20
m,p-Xylene	1520 ^a	24
o-Xylene	1520	13
TPH (ug/m3)		
Gasoline	NV	3300 J
APH (ug/m3)^b		
C5-C6 Aliphatic + >C6-C8 Aliphatic	90000	205.5
>C8-C10 Aliphatic + >C10-C12 Aliphatic	4700	1800
>C8-C10 Aromatic	6000	160
>C10-C12 Aromatic	NV	86 U

NOTES:

Detections are in **bold** font.

Results that exceed MTCA B cleanup levels are shaded. Non-detect results are not evaluated against cleanup levels.

The lower of available MTCA B carcinogen or non-carcinogen value is used.

APH = air-phase petroleum hydrocarbons.

J = the result is an estimated value.

MTCA B = Model Toxics Control Act Method B.

TPH = total petroleum hydrocarbons.

U = the result is non-detect.

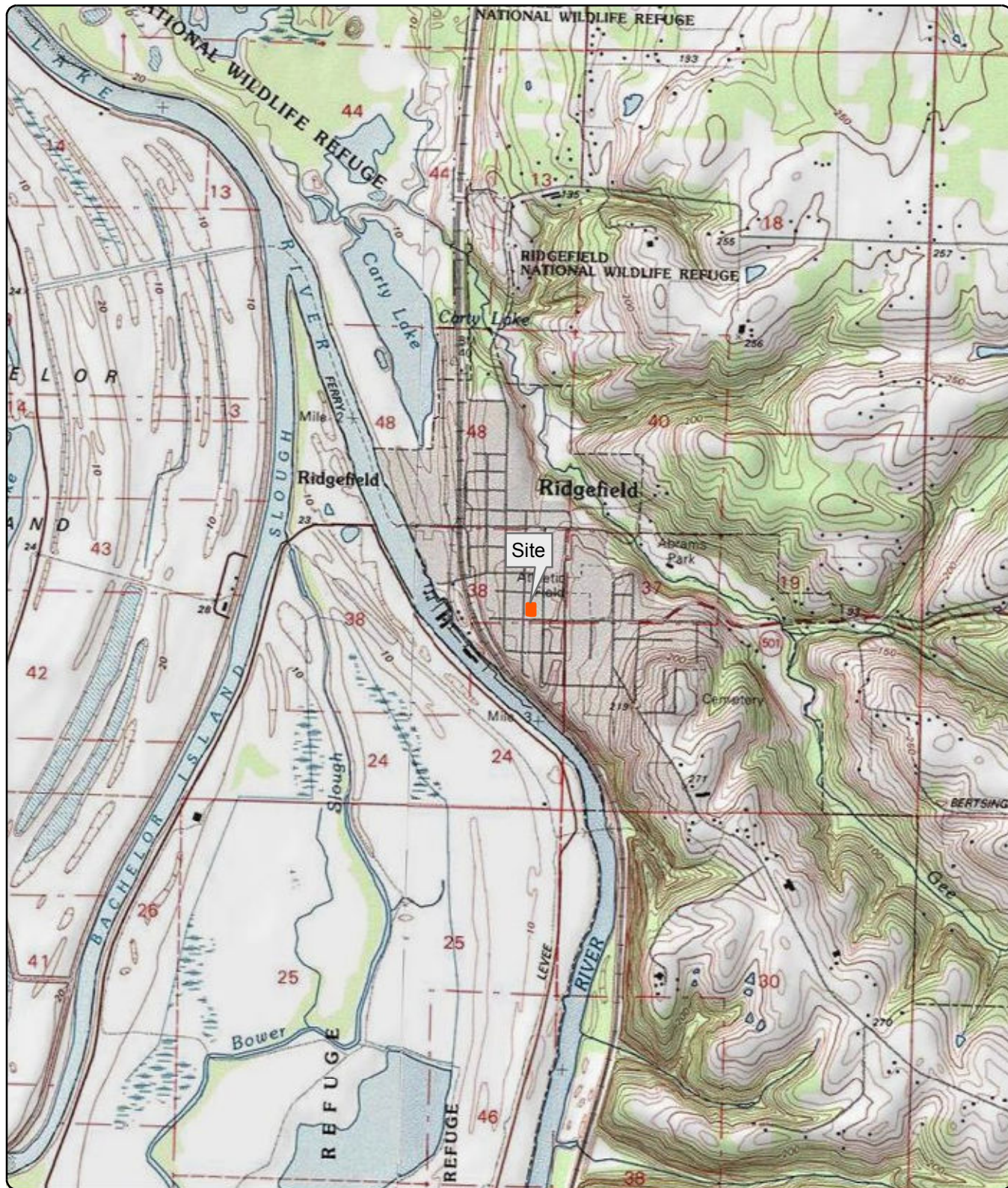
ug/m3 = micrograms per cubic meter.

^aMTCA B value for m-xylene.

^bVPH results are the sum of indicated aliphatic or aromatic fractions. Non-detect results are summed as one-half the reporting limit.

FIGURES





Site Address: Pioneer St & Main St, Ridgefield, Clark County, Washington
 Source: US Geological Survey (1990) 7.5-minute
 topographic quadrangle: Ridgefield
 DLC 38/Section 24, Township 4 North, Range 1 West

Figure 1
Site Location

Bus Barn Property
 City of Ridgefield
 Ridgefield, Washington



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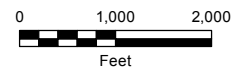


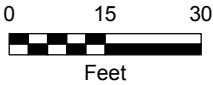


Figure 2
Site Features

Bus Barn Property
City of Ridgefield
Ridgefield, Washington

Legend

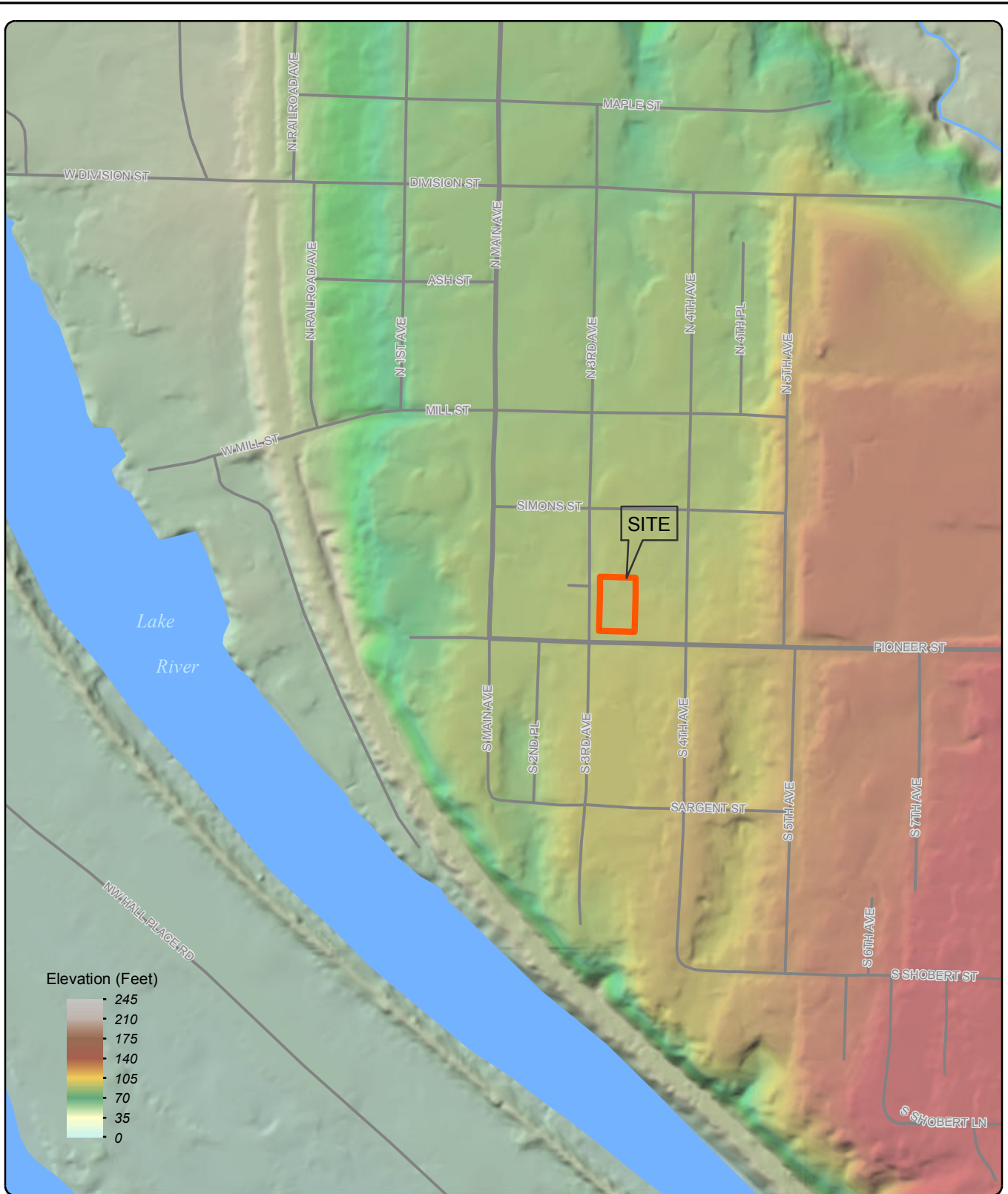
-  Light Pole
-  Potential Historical UST
-  UST Currently in Use
-  Underground Pipeline
-  Property Boundary



Source: Aerial photograph (2014) obtained from Clark County GIS. Site features are approximate. Bus barn layout inset provided by Group Mackenzie.

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Source: Topographic surface generated from LiDAR-derived contours obtained from Clark County

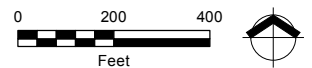
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Legend
 Property Boundary

Figure 3
Area Topography

Bus Barn Property
City of Ridgefield
Ridgefield, Washington



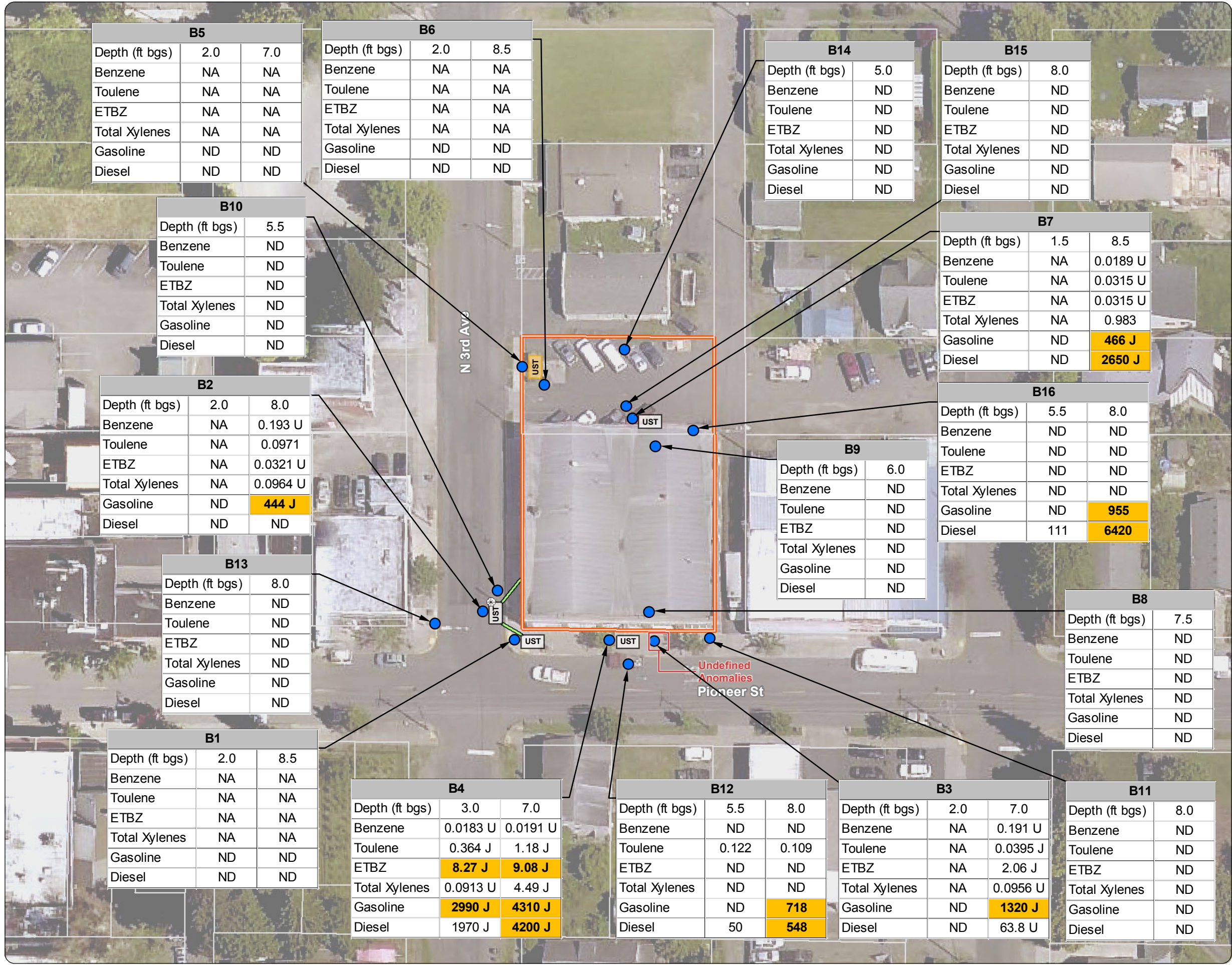




Figure 5
Groundwater and
Sub-Slab Vapor Results

Bus Barn Property
City of Ridgefield
Ridgefield, Washington

Legend

Boring Location

- Groundwater Exceedance Found (with results in ug/L)
- No Exceedance Found

Sub-Slab Soil Vapor Location

- No Exceedance Found
- Light Pole
- Potential Historical UST
- UST Currently in Use
- Underground Pipeline
- Fence
- Property Boundary

Notes:
ug/L = micrograms per liter
ug/m³ micrograms per cubic meter
MTCA = Model Toxics Control Act
J = estimated value

MTCA A Exceedance

0 25 50
Feet



Source: Aerial photograph (2014) obtained from Clark County GIS. Site features are approximate.

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APPENDIX A

BORING LOGS



Maul Foster & Alongi, Inc.

Geologic Borehole Log/Well Construction

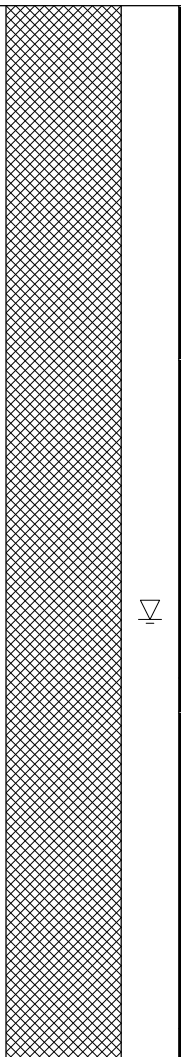
Project Number
0239.28.05

Well Number
B1

Sheet
1 of 1

Project Name **Ridgefield IPG Bus Barn**
Project Location **Ridgefield, Washington**
Start/End Date **09/15/14 to 09/15/14**
Driller/Equipment **Cascade Drilling, Inc./Geoprobe**
Geologist/Engineer **S. Harvester**
Sample Method **Geoprobe**

TOC Elevation (feet)
Surface Elevation (feet)
Northing
Easting
Hole Depth **15.0-feet**
Outer Hole Diam **2-inch**

Depth (feet, BGS)	Well Details	Interval	Percent Recovery	Sample Data			Blows/6"	Lithologic Column	Soil Description
				Collection Method	Number	Name (Type)			
1		80	GP						0.0 to 0.5 feet: CONCRETE.
2									0.5 to 4.0 feet: SANDY SILT WITH GRAVEL (ML); reddish brown with yellowish orange mottling; 60% fines, low plasticity; 30% sand, fine to coarse; 10% gravel; moist.
3									
4									
5		100	GP						4.0 to 15.0 feet: SILTY SAND (SM); reddish brown; 40% fines, low plasticity; 60% sand, fine, poorly graded; moist.
6									
7									
8									
9									
10		100	GW GP						@ 9.0 feet: Color change to brown with reddish mottling; decrease in fines to 20%; increase in sand to 80%; wet.
11									
12									
13									
14									
15									

Total Depth = 15.0 feet below ground surface.

Temporary 1-inch PVC screen set from 9.5 to 14.5 feet below ground surface.

NOTES: 1) GP = Geoprobe. 2) ppm = parts per million. 3) PID = Photo ionization detector, soil head space reading in parts per million (ppm). 4) PVC = poly vinyl chloride. 5) BGS = below ground surface.



Depth to water = 8.70 feet below ground surface.

Maul Foster & Alongi, Inc.

Geologic Borehole Log/Well Construction

Project Number
0239.28.05

Well Number
B2

Sheet
1 of 1

Project Name **Ridgefield IPG Bus Barn**
Project Location **Ridgefield, Washington**
Start/End Date **09/15/14 to 09/15/14**
Driller/Equipment **Cascade Drilling, Inc./Geoprobe**
Geologist/Engineer **S. Harvester**
Sample Method **Geoprobe**

TOC Elevation (feet)
Surface Elevation (feet)
Northing
Easting
Hole Depth **15.0-feet**
Outer Hole Diam **2-inch**

Depth (feet, BGS)	Well Details	Interval	Percent Recovery	Sample Data			Blows/6"	Lithologic Column	Soil Description
				Collection Method	Number	Name (Type)			
1		80	GP						0.0 to 0.5 feet: CONCRETE.
2						B2-S-2.0 PID = 3.8 ppm			0.5 to 4.0 feet: SANDY SILT WITH GRAVEL (ML); reddish brown with yellowish orange mottling; 60% fines, low plasticity, low toughness; 30% sand, fine, poorly graded; 10% gravel, fine, round to subrounded; dry.
3									
4									@ 3.5 feet: Color change to gray; petroleum hydrocarbon-like odor.
5		100	GP						4.0 to 5.0 feet: No recovery.
6									5.0 to 14.0 feet: SAND WITH SILT (SP-SM); gray; 15% fines, nonplastic; 85% sand, fine to medium, poorly graded; petroleum hydrocarbon-like odor; dry to moist.
7									
8						B2-S-8.0 PID = 260 ppm			
9									
10		100	GP GW						@ 9.5 feet: Color change to reddish brown.
11									
12									
13						B2-W			
14									
15									14.0 to 15.0 feet: CLAY (CL); light brown with yellowish orange mottling; 100% fines, medium plasticity, medium toughness; wet.

Total Depth = 15.0 feet below ground surface.

Temporary 1-inch PVC screen set from 10.0 to 15.0 feet below ground surface.

NOTES: 1) GP = Geoprobe. 2) ppm = parts per million. 3) PID = Photo ionization detector, soil head space reading in parts per million (ppm). 4) PVC = poly vinyl chloride. 5) BGS = below ground surface.

▽ Depth to water = 8.62 feet below ground surface.

Maul Foster & Alongi, Inc.

Geologic Borehole Log/Well Construction

Project Number
0239.28.05

Well Number
B5

Sheet
1 of 1

Project Name **Ridgefield IPG Bus Barn**
Project Location **Ridgefield, Washington**
Start/End Date **09/16/14 to 09/16/14**
Driller/Equipment **Cascade Drilling, Inc./Geoprobe**
Geologist/Engineer **S. Harvester**
Sample Method **Geoprobe**

TOC Elevation (feet)
Surface Elevation (feet)
Northing
Easting
Hole Depth **15.0-feet**
Outer Hole Diam **2-inch**

Depth (feet, BGS)	Well Details	Interval	Percent Recovery	Sample Data				Blows/6"	Lithologic Column	Soil Description
				Collection Method	Number	Name (Type)				
1		100	GP							0 to 0.5 feet: SAND WITH GRAVEL (SW); 90% sand, fine to coarse, well graded; 10% gravel, fine, subangular; trace fines; dry.
2										0.5 to 15.0 feet: SILTY SAND (SM); brown with dark red and brown mottling; 25% fines, nonplastic; 75% sand, fine, well graded; trace tan fines; dry to moist.
3										
4										
5		100	GP							
6										
7										
8										
9										
10		100	GP GW							
11										
12										
13										
14										
15										

B5-S-2.0
PID = 1.0 ppm

B5-S-7.0
PID = 1.0 ppm

B5-W

@ 8.5 feet: Wet.

Total Depth = 15.0 feet below ground surface.

Temporary 1-inch PVC screen set from 10.0 to 15.0 feet below ground surface.

NOTES: 1) GP = Geoprobe. 2) ppm = parts per million. 3) PID = Photo ionization detector, soil head space reading in parts per million (ppm). 4) PVC = poly vinyl chloride. 5) BGS = below ground surface.

Maul Foster & Alongi, Inc.

Geologic Borehole Log/Well Construction

Project Number
0239.28.05

Well Number
B6

Sheet
1 of 1

Project Name **Ridgefield IPG Bus Barn**
Project Location **Ridgefield, Washington**
Start/End Date **09/16/14 to 09/17/14**
Driller/Equipment **Cascade Drilling, Inc./Geoprobe**
Geologist/Engineer **S. Harvester**
Sample Method **Geoprobe**

TOC Elevation (feet)
Surface Elevation (feet)
Northing
Easting
Hole Depth **15.0-feet**
Outer Hole Diam **2-inch**

Depth (feet, BGS)	Well Details	Interval	Percent Recovery	Sample Data				Blows/6"	Lithologic Column	Soil Description
				Collection Method	Number	Name (Type)				
1		100	GP							0.0 to 0.5 feet: ASPHALT.
2										0.5 to 0.8 feet: GRAVEL (GP); gray; 100% gravel, coarse, subangular.
3										0.8 to 7.5 feet: SILTY SAND (SM); reddish brown; 25% fines, nonplastic; 75% sand, fine, well graded; trace tan fines; dry.
4										
5		100	GP							@ 4.0 feet: Color change to reddish brown mottled with tan.
6										
7										
8										7.5 to 15.0 feet: SAND with SILT (SP-SM); brown; 10% fines, nonplastic; 90% sand, medium, poorly graded; dry to moist.
9										
10		100	GP GW							@ 9.0 feet: Wet.
11										
12										
13										@ 12.5 feet: Color change to brown with reddish brown mottling.
14										
15										

Total Depth = 15.0 feet below ground surface.

Temporary 1-inch PVC screen set from 10.0 to 15.0 feet below ground surface.

NOTES: 1) GP = Geoprobe. 2) ppm = parts per million. 3) PID = Photo ionization detector, soil head space reading in parts per million (ppm). 4) PVC = poly vinyl chloride. 5) BGS = below ground surface.

Maul Foster & Alongi, Inc.

Geologic Borehole Log/Well Construction

Project Number
0239.28.05

Well Number
B8

Sheet
1 of 1

Project Name **Ridgefield IPG Bus Barn**
Project Location **Ridgefield, Washington**
Start/End Date **4/15/15 to 4/15/15**
Driller/Equipment **Pacific Soil and Water/Geoprobe**
Geologist/Engineer **E. Hess**
Sample Method **Geoprobe**

TOC Elevation (feet)
Surface Elevation (feet)
Northing
Easting
Hole Depth **10.0-feet**
Outer Hole Diam **2.25-inch**

Depth (feet, BGS)	Well Details	Interval	Percent Recovery	Sample Data				Blows/6"	Lithologic Column	Soil Description
				Collection Method	Number	Name (Type)				
1			100%	GP						0.0 to 0.5 feet: CONCRETE.
2										0.5 to 1.6 feet: SANDY SILT (ML); yellowish brown; 85% fines, low plasticity; 15% sand, fine; dry.
3										@ 1.6 to 1.8 feet: Grey angular gravel and charcoal.
4										1.6 to 6.0 feet: SANDY SILT (ML); orangish brown; 85% fines, low plasticity; 15% sand, fine; dry to moist.
5										@ 3.3 to 6.0 feet: Mottling.
6			100%	GP						
7				GW		B8-S-5.5 PID = 0 ppm				6.0 to 7.8 feet: SANDY SILT (ML); orangish brown with mottling; 60% fines; 40% sand, fine to medium; wet.
8						B8-S-7.5 PID = 0.3 ppm				
9						B8-W-8.0 PID = 132 ppm				7.8 to 10.0 feet: SAND with SILT (SP-SM); gray; 10% fines; 90% sand, fine to medium; micaceous; petroleum hydrocarbon-like odor; wet.
10										@ 8.5 to 9.0 feet: Sheen test on soil produced an iridescent sheen.

Total Depth = 10.0 feet below ground surface.

NOTES: 1) GP = Geoprobe. 2) ppm = parts per million. 3) PID = Photo ionization detector, soil head space reading in parts per million (ppm). 4) Geoprobe stainless-steel water sampler set from 6.0 to 10.0 feet below ground surface.



Depth to water = 7.5 feet below ground surface.

Maul Foster & Alongi, Inc.

Geologic Borehole Log/Well Construction

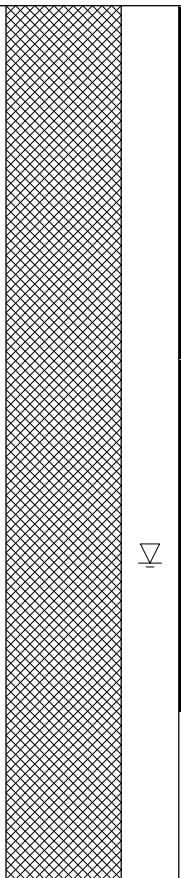
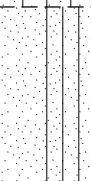
Project Number
0239.28.05

Well Number
B9

Sheet
1 of 1

Project Name **Ridgefield IPG Bus Barn**
Project Location **Ridgefield, Washington**
Start/End Date **4/15/15 to 4/15/15**
Driller/Equipment **Pacific Soil and Water/Geoprobe**
Geologist/Engineer **E. Hess**
Sample Method **Geoprobe**

TOC Elevation (feet)
Surface Elevation (feet)
Northing
Easting
Hole Depth **12.5-feet**
Outer Hole Diam **2.25-inch**

Depth (feet, BGS)	Well Details	Interval	Percent Recovery	Sample Data				Blows/6"	Lithologic Column	Soil Description
				Collection Method	Number	Name (Type)				
1		80%	GP							0.0 to 0.4 feet: CONCRETE; multiple concrete and gravel slabs.
2										0.4 to 1.5 feet: SILT (ML); brown; 90% fines, low plasticity, stiff; 10% sand, fine; dry.
3										1.5 to 4.0 feet: SANDY SILT (ML); reddish brown; 85% fines, low plasticity; 15% sand, fine; dry to moist.
4										@ 3.5 feet: Mottling; micaceous.
5		100%	GP							4.0 to 5.0 feet: No recovery.
6										5.0 to 7.5 feet: SANDY SILT (ML); reddish brown with mottling; 85% fines, low plasticity; 15% sand, fine; micaceous; moist.
7										
8										7.5 to 10.0 feet: SILTY SAND (SM); orangish brown; 30% fines; 70% sand, fine to medium; micaceous; wet.
9			GW							
10										
11										
12										

Total Depth = 12.5 feet below ground surface.

NOTES: 1) GP = Geoprobe. 2) ppm = parts per million. 3) PID = Photo ionization detector, soil head space reading in parts per million (ppm). 4) Geoprobe stainless-steel water sampler set from 8.5 to 12.5 feet below ground surface.



Depth to water = 7.9 feet below ground surface.

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Geologic Borehole Log/Well Construction

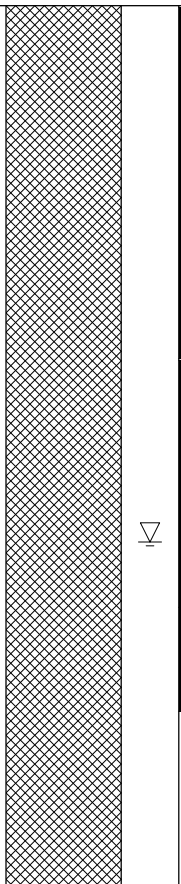
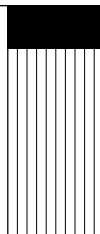
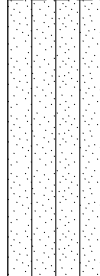
Project Number
0239.28.05

Well Number
B10

Sheet
1 of 1

Project Name **Ridgefield IPG Bus Barn**
Project Location **Ridgefield, Washington**
Start/End Date **4/15/15 to 4/15/15**
Driller/Equipment **Pacific Soil and Water/Geoprobe**
Geologist/Engineer **E. Hess**
Sample Method **Geoprobe**

TOC Elevation (feet)
Surface Elevation (feet)
Northing
Easting
Hole Depth **12.5-feet**
Outer Hole Diam **2.25-inch**

Depth (feet, BGS)	Well Details	Interval	Percent Recovery	Sample Data				Blows/6"	Lithologic Column	Soil Description
				Collection Method	Number	Name (Type)				
1		75%	GP							0.0 to 0.3 feet: ASPHALT; black.
2										0.3 to 0.6 feet: ASPHALT SUBBASE; blackish brown; 15% sand; 85% gravel, angular.
3										0.6 to 3.3 feet: SANDY SILT (ML); reddish brown; 85% fines, low plasticity; 15% sand, fine to medium; dry to moist.
4		80%	GP							@ 2.2 feet: Mottling.
5										3.3 to 5.0 feet: No recovery.
6										5.0 to 9.0 feet: SILTY SAND (SM); reddish brown with mottling; 30% fines, low plasticity; 70% sand, fine to medium; micaceous; moist to wet.
7										@ 5.5 feet: Wet.
8										@ 8.0 to 8.5 feet: Gray; petroleum hydrocarbon-like odor.
9										9.0 to 10.0 feet: No recovery.
10		GW								
11										
12										

Total Depth = 12.5 feet below ground surface.

NOTES: 1) GP = Geoprobe. 2) ppm = parts per million. 3) PID = Photo ionization detector, soil head space reading in parts per million (ppm). 4) Geoprobe stainless-steel water sampler set from 8.5 to 12.5 feet below ground surface.



Depth to water = 7.6 feet below ground surface.

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Geologic Borehole Log/Well Construction

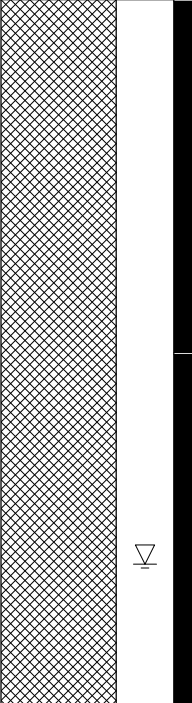
Project Number
0239.28.05

Well Number
B11

Sheet
1 of 1

Project Name **Ridgefield IPG Bus Barn**
Project Location **Ridgefield, Washington**
Start/End Date **4/15/15 to 4/15/15**
Driller/Equipment **Pacific Soil and Water/Geoprobe**
Geologist/Engineer **E. Hess**
Sample Method **Geoprobe**

TOC Elevation (feet)
Surface Elevation (feet)
Northing
Easting
Hole Depth **10.0-feet**
Outer Hole Diam **2.25-inch**

Depth (feet, BGS)	Well Details	Interval	Percent Recovery	Sample Data			Blows/6"	Lithologic Column	Soil Description
				Collection Method	Number	Name (Type)			
1		60%	GP						0.0 to 1.0 feet: CONCRETE; gray.
2									1.0 to 2.5 feet: SANDY SILT (ML); orangish brown; 75% fines, low plasticity; 20% sand, fine to coarse; 5% gravel; micaceous; dry.
3									@ 1.9 to 2.0 feet: Gray lense.
4									2.5 to 3.0 feet: SANDY SILT (ML); reddish brown with gray mottling; 75% fines, low plasticity; 25% sand, coarse; trace gravel; micaceous; dry.
5		66%	GP						3.0 to 5.0 feet: No recovery.
6									5.0 to 6.5 feet: SANDY SILT (ML); reddish brown with gray mottling; 75% fines, low plasticity; 25% sand, coarse; trace gravel; micaceous; moist.
7									6.5 to 8.25 feet: SILTY SAND (SM); reddish brown with mottling; 40% fines, low plasticity; 60% sand, fine to medium; trace gravel; micaceous; wet.
8									8.25 to 10.0 feet: No recovery.
9									
10									

Total Depth = 10.0 feet below ground surface.

Drill rod was at a 10 degree angle pointed to the west.

NOTES: 1) GP = Geoprobe. 2) ppm = parts per million. 3) PID = Photo ionization detector, soil head space reading in parts per million (ppm).



Depth to water = 8 feet below ground surface.

Maul Foster & Alongi, Inc.

Geologic Borehole Log/Well Construction

Project Number
0239.28.05

Well Number
B12

Sheet
1 of 1

Project Name **Ridgefield IPG Bus Barn**
Project Location **Ridgefield, Washington**
Start/End Date **4/15/15 to 4/15/15**
Driller/Equipment **Pacific Soil and Water/Geoprobe**
Geologist/Engineer **E. Hess**
Sample Method **Geoprobe**

TOC Elevation (feet)
Surface Elevation (feet)
Northing
Easting
Hole Depth **10.0-feet**
Outer Hole Diam **2.25-inch**

Depth (feet, BGS)	Well Details	Interval	Percent Recovery	Sample Data				Blows/6"	Lithologic Column	Soil Description
				Collection Method	Number	Name (Type)				
1			80%	GP						0.0 to 0.5 feet: ASPHALT; black.
2										0.5 to 1.9 feet: SANDY SILT (ML); grayish brown; 80% fines, low plasticity, stiff; 20% sand, fine; petroleum hydrocarbon-like odor; dry.
3										1.9 to 2.7 feet: SANDY SILT (ML); reddish brown with mottling; 80% fines, low plasticity; 20% sand, fine to medium; petroleum hydrocarbon-like odor; dry.
4										2.7 to 4.0 feet: SANDY SILT (ML); greenish gray with mottling; 80% fines, low plasticity; 20% sand, fine to medium; petroleum hydrocarbon-like odor; dry to moist.
5										@ 4.0 to 5.0 feet: No recovery.
6			100%	GP		B12-S-5.5 PID = 47.5 ppm				5.0 to 6.4 feet: SANDY SILT (ML); greenish gray with mottling; 80% fines, low plasticity; 20% sand, fine to medium; petroleum hydrocarbon-like odor; moist.
7										6.4 to 10.0 feet: SILTY SAND (SM); gray; 20% fines, low plasticity; 80% sand, medium, well sorted; petroleum hydrocarbon-like odor; wet.
8										
9						B12-S-8.0 PID = 231.2 ppm				
10										

Total Depth = 10.0 feet below ground surface.

NOTES: 1) GP = Geoprobe. 2) ppm = parts per million. 3) PID = Photo ionization detector, soil head space reading in parts per million (ppm).

Depth to water = 6.75 feet below ground surface.

Maul Foster & Alongi, Inc.

Geologic Borehole Log/Well Construction

Project Number
0239.28.05

Well Number
B13

Sheet
1 of 1

Project Name **Ridgefield IPG Bus Barn**
Project Location **Ridgefield, Washington**
Start/End Date **4/15/15 to 4/15/15**
Driller/Equipment **Pacific Soil and Water/Geoprobe**
Geologist/Engineer **E. Hess**
Sample Method **Geoprobe**

TOC Elevation (feet)
Surface Elevation (feet)
Northing
Easting
Hole Depth **10.0-feet**
Outer Hole Diam **2.25-inch**

Depth (feet, BGS)	Well Details	Interval	Percent Recovery	Sample Data				Blows/6"	Lithologic Column	Soil Description
				Collection Method	Number	Name (Type)				
1			80%	GP						0.0 to 0.8 feet: ASPHALT and SUBBASE.
2										0.8 to 6.0 feet: SANDY SILT (ML); reddish brown with gray mottling; 70% fines, low plasticity; 30% sand, fine to medium; micaceous; dry.
3										
4										
5			100%	GP						@ 5.0 feet: Moist.
6						B13-S-5.0 PID = 0 ppm				6.0 to 10.0 feet: SILTY SAND (SM); reddish brown; 40% fines, low plasticity; 60% sand, fine to coarse; wet.
7										
8						B13-S-8.0 PID = 0 ppm				@ 8.5 to 9.0 feet: Brick red color.
9										
10										

Total Depth = 10.0 feet below ground surface.

NOTES: 1) GP = Geoprobe. 2) ppm = parts per million. 3) PID = Photo ionization detector, soil head space reading in parts per million (ppm).



Depth to water = 6 feet below ground surface.

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Geologic Borehole Log/Well Construction

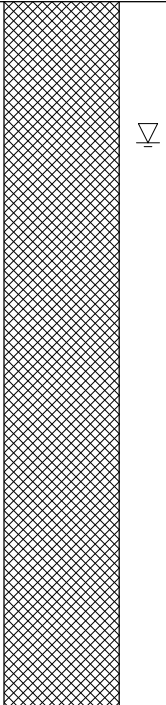
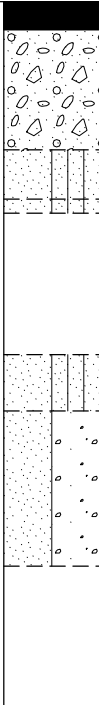
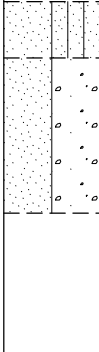
Project Number
0239.28.05

Well Number
B14

Sheet
1 of 1

Project Name **Ridgefield IPG Bus Barn**
Project Location **Ridgefield, Washington**
Start/End Date **4/15/15 to 4/15/15**
Driller/Equipment **Pacific Soil and Water/Geoprobe**
Geologist/Engineer **E. Hess**
Sample Method **Geoprobe**

TOC Elevation (feet)
Surface Elevation (feet)
Northing
Easting
Hole Depth **10.0-feet**
Outer Hole Diam **2.25-inch**

Depth (feet, BGS)	Well Details	Interval	Percent Recovery	Sample Data			Blows/6"	Lithologic Column	Soil Description			
				Collection Method	Number	Name (Type)						
1		60%	GP					0.0 to 0.4 feet: ASPHALT; dry.				
2								0.4 to 2.1 feet: GRAVEL (GW); blackish brown; 10% sand, fine to coarse; 90% gravel, black, angular; dry.				
3								2.1 to 2.8 feet: SAND with SILT (SM); gray; 10% fines, low plasticity; 90% sand, fine to coarse; micaceous.				
4								2.8 to 3.0 feet: SILTY SAND (SM); reddish brown with mottling; 20% fines; 80% sand, fine to coarse; micaceous.				
5		60%	GP		B14-S-5.0 PID = 0.6 ppm		3.0 to 5.0 feet: No recovery.					
6							5.0 to 5.8 feet: SILTY SAND (SM); reddish brown with mottling; 20% fines; 80% sand, fine to coarse; micaceous.					
7			GW						5.8 to 8.0 feet: SILTY SAND with GRAVEL (SW); reddish brown; 20% fines, low plasticity; 65% sand, fine to coarse; 15% gravel, rounded to subangular, fine to coarse; micaceous; wet.			
8									8.0 to 10.0 feet: No recovery.			
9			B14-S-7.5 PID = 0.7 ppm B14-W-8.0									
10												

Total Depth = 10.0 feet below ground surface.

NOTES: 1) GP = Geoprobe. 2) ppm = parts per million. 3) PID = Photo ionization detector, soil head space reading in parts per million (ppm). 4) Geoprobe stainless-steel water sampler set from 6.0 to 10.0 feet below ground surface.

 Depth to water = 2 feet below ground surface.

Maul Foster & Alongi, Inc.

Geologic Borehole Log/Well Construction

Project Number
0239.28.05

Well Number
B15

Sheet
1 of 1

Project Name **Ridgefield IPG Bus Barn**
Project Location **Ridgefield, Washington**
Start/End Date **4/15/15 to 4/15/15**
Driller/Equipment **Pacific Soil and Water/Geoprobe**
Geologist/Engineer **E. Hess**
Sample Method **Geoprobe**

TOC Elevation (feet)
Surface Elevation (feet)
Northing
Easting
Hole Depth **10.0-feet**
Outer Hole Diam **2.25-inch**

Depth (feet, BGS)	Well Details	Interval	Percent Recovery	Sample Data				Blows/6"	Lithologic Column	Soil Description
				Collection Method	Number	Name (Type)				
1			90%	GP						0.0 to 1.0 feet: ASPHALT and SUBBASE; black and gray brown.
2										1.0 to 5.7 feet: SANDY SILT (ML); reddish brown with mottling; 85% fines, low plasticity; 15% sand, fine to coarse; trace gravel; micaceous; dry to moist.
3										
4										@ 3.5 feet: Moist.
5			80%	GP						
6						B15-S-5.5 PID = 0.3 ppm				5.7 to 9.0 feet: SILTY SAND (SM); orangish brown; 30% fines, low plasticity; 70% sand, fine to coarse; micaceous; moist to wet.
7										@ 6.5 feet: Wet.
8						B15-S-8.0 PID = 0.3 ppm				
9										9.0 to 10.0 feet: No recovery.
10										

Total Depth = 10.0 feet below ground surface.

NOTES: 1) GP = Geoprobe. 2) ppm = parts per million. 3) PID = Photo ionization detector, soil head space reading in parts per million (ppm).



Depth to water = 7.9 feet below ground surface.

Maul Foster & Alongi, Inc.

Geologic Borehole Log/Well Construction

Project Number
0239.28.05

Well Number
B16

Sheet
1 of 1

Project Name **Ridgefield IPG Bus Barn**
Project Location **Ridgefield, Washington**
Start/End Date **4/15/15 to 4/15/15**
Driller/Equipment **Pacific Soil and Water/Geoprobe**
Geologist/Engineer **E. Hess**
Sample Method **Geoprobe**

TOC Elevation (feet)
Surface Elevation (feet)
Northing
Easting
Hole Depth **10.0-feet**
Outer Hole Diam **2.25-inch**

Depth (feet, BGS)	Well Details	Interval	Percent Recovery	Sample Data			Blows/6"	Lithologic Column	Soil Description
				Collection Method	Number	Name (Type)			
1			70%	GP					0.0 to 0.4 feet: CONCRETE.
2									0.4 to 0.7 feet: BRICK.
3									0.7 to 6.6 feet: SANDY SILT (ML); orangish brown; 80% fines, low plasticity; 20% sand, fine to medium; dry to moist.
4									@ 2.7 to 6.6 feet: Mottling.
5			80%	GP					@ 5.3 feet: Moist.
6						B16-S-5.5			
7									6.6 to 9.0 feet: SILTY SAND (SM); gray; 30% fines, low plasticity; 70% sand, fine to medium; petroleum hydrocarbon-like odor; wet.
8									
9						B16-S-8.0 PID = 205.8 ppm			
10									9.0 to 10.0 feet: No recovery.

Total Depth = 10.0 feet below ground surface.

NOTES: 1) GP = Geoprobe. 2) ppm = parts per million. 3) PID = Photo ionization detector, soil head space reading in parts per million (ppm).



Depth to water = 7.9 feet below ground surface.

APPENDIX B

FIELD SAMPLING DATA SHEETS



Maul Foster & Alongi, Inc.

400 E. Mill Plain Blvd, Suite 400, Vancouver, WA 98660 (360) 694-2691 Fax. (360) 906-1958

Soil Field Sampling Data Sheet

Client Name	City of Ridgefield	Sample Location	B1				
Project Number	0239.28.05	Sampler	SVH				
Project Name	Bus Barn Property - IPG	Sampling Date	09/15/2014				
Sampling Event		Sample Name	B1-S-8.5				
Sub Area		Sample Depth	8.5				
FSDS QA:	VAU 10/14/14	Easting		Northing		TOC	

Sample Information

Sampling Method	Sample Type	Sample Category	PID/FID	Sampling Time	Container Code	#
(4) GeoProbe	Soil	Discrete		12:42:00 PM	2 oz. soil	
					4 oz. soil	1
					8 oz. soil	1
					Other	
					Total Containers	2

Sample Description:

--

General Sampling Comment

--

Sampling Method Code:

(1) Backhoe, (2) Hand Auger, (3) Drill Bit Cutting Head, (4) Geoprobe, (5) Split Spoon, (6) Shelby Tube, (7) Grab, (8) Other (Specify)

Signature_____

Maul Foster & Alongi, Inc.

400 E. Mill Plain Blvd, Suite 400, Vancouver, WA 98660 (360) 694-2691 Fax. (360) 906-1958

Soil Field Sampling Data Sheet

Client Name	City of Ridgefield	Sample Location	B1				
Project Number	0239.28.05	Sampler	SVH				
Project Name	Bus Barn Property - IPG	Sampling Date	09/15/2014				
Sampling Event		Sample Name	B1-S 2.0				
Sub Area		Sample Depth	2				
FSDS QA:	VAU 10/14/14	Easting		Northing		TOC	

Sample Information

Sampling Method	Sample Type	Sample Category	PID/FID	Sampling Time	Container Code	#
(4) GeoProbe	Soil	Discrete		12:40:00 PM	2 oz. soil	
					4 oz. soil	1
					8 oz. soil	1
					Other	
					Total Containers	2

Sample Description:

--

General Sampling Comment

--

Sampling Method Code:

(1) Backhoe, (2) Hand Auger, (3) Drill Bit Cutting Head, (4) Geoprobe, (5) Split Spoon, (6) Shelby Tube, (7) Grab, (8) Other (Specify)

Signature_____

Maul Foster & Alongi, Inc.

400 E. Mill Plain Blvd, Suite 400, Vancouver, WA 98660 (360) 694-2691 Fax. (360) 906-1958

Soil Field Sampling Data Sheet

Client Name	City of Ridgefield	Sample Location	B2				
Project Number	0239.28.05	Sampler	SVH				
Project Name	Bus Barn Property - IPG	Sampling Date	09/15/2014				
Sampling Event		Sample Name	B2-S 8.0				
Sub Area		Sample Depth	8				
FSDS QA:	VAU 10/14/14	Easting		Northing		TOC	

Sample Information

Sampling Method	Sample Type	Sample Category	PID/FID	Sampling Time	Container Code	#
(4) GeoProbe	Soil	Discrete	260	1:10:00 PM	2 oz. soil	
					4 oz. soil	1
					8 oz. soil	1
					Other	
					Total Containers	2

Sample Description:

--

General Sampling Comment

--

Sampling Method Code:

(1) Backhoe, (2) Hand Auger, (3) Drill Bit Cutting Head, (4) Geoprobe, (5) Split Spoon, (6) Shelby Tube, (7) Grab, (8) Other (Specify)

Signature_____

Maul Foster & Alongi, Inc.

400 E. Mill Plain Blvd, Suite 400, Vancouver, WA 98660 (360) 694-2691 Fax. (360) 906-1958

Soil Field Sampling Data Sheet

Client Name	City of Ridgefield	Sample Location	B2				
Project Number	0239.28.05	Sampler	SVH				
Project Name	Bus Barn Property - IPG	Sampling Date	09/15/2014				
Sampling Event		Sample Name	B2-S 2.0				
Sub Area		Sample Depth	2				
FSDS QA:	VAU 10/14/14	Easting		Northing		TOC	

Sample Information

Sampling Method	Sample Type	Sample Category	PID/FID	Sampling Time	Container Code	#
(4) GeoProbe	Soil	Discrete	3.8	1:00:00 PM	2 oz. soil	
					4 oz. soil	1
					8 oz. soil	1
					Other	
					Total Containers	2

Sample Description:

--

General Sampling Comment

--

Sampling Method Code:

(1) Backhoe, (2) Hand Auger, (3) Drill Bit Cutting Head, (4) Geoprobe, (5) Split Spoon, (6) Shelby Tube, (7) Grab, (8) Other (Specify)

Signature_____

Maul Foster & Alongi, Inc.

400 E. Mill Plain Blvd, Suite 400, Vancouver, WA 98660 (360) 694-2691 Fax. (360) 906-1958

Soil Field Sampling Data Sheet

Client Name	City of Ridgefield	Sample Location	B3				
Project Number	0239.28.05	Sampler	SVH				
Project Name	Bus Barn Property - IPG	Sampling Date	09/15/2014				
Sampling Event		Sample Name	B3-S 7.0				
Sub Area		Sample Depth	7				
FSDS QA:	VAU 10/14/14	Easting		Northing		TOC	

Sample Information

Sampling Method	Sample Type	Sample Category	PID/FID	Sampling Time	Container Code	#
(4) GeoProbe	Soil	Discrete	74.2	3:10:00 PM	2 oz. soil	
					4 oz. soil	1
					8 oz. soil	1
					Other	
					Total Containers	2

Sample Description:

--

General Sampling Comment

--

Sampling Method Code:

(1) Backhoe, (2) Hand Auger, (3) Drill Bit Cutting Head, (4) Geoprobe, (5) Split Spoon, (6) Shelby Tube, (7) Grab, (8) Other (Specify)

Signature_____

Maul Foster & Alongi, Inc.

400 E. Mill Plain Blvd, Suite 400, Vancouver, WA 98660 (360) 694-2691 Fax. (360) 906-1958

Soil Field Sampling Data Sheet

Client Name	City of Ridgefield	Sample Location	B3				
Project Number	0239.28.05	Sampler	SVH				
Project Name	Bus Barn Property - IPG	Sampling Date	09/15/2014				
Sampling Event		Sample Name	B3-S 2.0				
Sub Area		Sample Depth	2				
FSDS QA:	VAU 10/14/14	Easting		Northing		TOC	

Sample Information

Sampling Method	Sample Type	Sample Category	PID/FID	Sampling Time	Container Code	#
(4) GeoProbe	Soil	Discrete	6.9	2:20:00 PM	2 oz. soil	
					4 oz. soil	1
					8 oz. soil	1
					Other	
					Total Containers	2

Sample Description:

--

General Sampling Comment

--

Sampling Method Code:

(1) Backhoe, (2) Hand Auger, (3) Drill Bit Cutting Head, (4) Geoprobe, (5) Split Spoon, (6) Shelby Tube, (7) Grab, (8) Other (Specify)

Signature_____

Maul Foster & Alongi, Inc.

400 E. Mill Plain Blvd, Suite 400, Vancouver, WA 98660 (360) 694-2691 Fax. (360) 906-1958

Soil Field Sampling Data Sheet

Client Name	City of Ridgefield	Sample Location	B4				
Project Number	0239.28.05	Sampler	SVH				
Project Name	Bus Barn Property - IPG	Sampling Date	09/15/2014				
Sampling Event		Sample Name	B4-S 7.0				
Sub Area		Sample Depth	7				
FSDS QA:	VAU 10/14/14	Easting		Northing		TOC	

Sample Information

Sampling Method	Sample Type	Sample Category	PID/FID	Sampling Time	Container Code	#
(4) GeoProbe	Soil	Discrete	802.3	3:45:00 PM	2 oz. soil	
					4 oz. soil	1
					8 oz. soil	1
					Other	
					Total Containers	2

Sample Description:

--

General Sampling Comment

--

Sampling Method Code:

(1) Backhoe, (2) Hand Auger, (3) Drill Bit Cutting Head, (4) Geoprobe, (5) Split Spoon, (6) Shelby Tube, (7) Grab, (8) Other (Specify)

Signature_____

Maul Foster & Alongi, Inc.

400 E. Mill Plain Blvd, Suite 400, Vancouver, WA 98660 (360) 694-2691 Fax. (360) 906-1958

Soil Field Sampling Data Sheet

Client Name	City of Ridgefield	Sample Location	B4				
Project Number	0239.28.05	Sampler	SVH				
Project Name	Bus Barn Property - IPG	Sampling Date	09/15/2014				
Sampling Event		Sample Name	B4-S 3.0				
Sub Area		Sample Depth	3				
FSDS QA:	VAU 10/14/14	Easting		Northing		TOC	

Sample Information

Sampling Method	Sample Type	Sample Category	PID/FID	Sampling Time	Container Code	#
(4) GeoProbe	Soil	Discrete	1.0	3:40:00 PM	2 oz. soil	
					4 oz. soil	1
					8 oz. soil	1
					Other	
					Total Containers	2

Sample Description:

--

General Sampling Comment

--

Sampling Method Code:

(1) Backhoe, (2) Hand Auger, (3) Drill Bit Cutting Head, (4) Geoprobe, (5) Split Spoon, (6) Shelby Tube, (7) Grab, (8) Other (Specify)

Signature_____

Maul Foster & Alongi, Inc.

400 E. Mill Plain Blvd, Suite 400, Vancouver, WA 98660 (360) 694-2691 Fax. (360) 906-1958

Soil Field Sampling Data Sheet

Client Name	City of Ridgefield	Sample Location	B5				
Project Number	0239.28.05	Sampler	SVH				
Project Name	Bus Barn Property - IPG	Sampling Date	09/15/2014				
Sampling Event		Sample Name	B5-S 7.0				
Sub Area		Sample Depth	7				
FSDS QA:	VAU 10/14/14	Easting		Northing		TOC	

Sample Information

Sampling Method	Sample Type	Sample Category	PID/FID	Sampling Time	Container Code	#
(4) GeoProbe	Soil	Discrete	1.0	2:00:00 PM	2 oz. soil	
					4 oz. soil	1
					8 oz. soil	1
					Other	
					Total Containers	2

Sample Description:

--

General Sampling Comment

--

Sampling Method Code:

(1) Backhoe, (2) Hand Auger, (3) Drill Bit Cutting Head, (4) Geoprobe, (5) Split Spoon, (6) Shelby Tube, (7) Grab, (8) Other (Specify)

Signature_____

Maul Foster & Alongi, Inc.

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Soil Field Sampling Data Sheet

Client Name	City of Ridgefield	Sample Location	B5				
Project Number	0239.28.05	Sampler	SVH				
Project Name	Bus Barn Property - IPG	Sampling Date	09/15/2014				
Sampling Event		Sample Name	B5-S 2.0				
Sub Area		Sample Depth	2				
FSDS QA:	VAU 10/14/14	Easting		Northing		TOC	

Sample Information

Sampling Method	Sample Type	Sample Category	PID/FID	Sampling Time	Container Code	#
(4) GeoProbe	Soil	Discrete	1.1	1:50:00 PM	2 oz. soil	
					4 oz. soil	1
					8 oz. soil	1
					Other	
					Total Containers	2

Sample Description:

--

General Sampling Comment

--

Sampling Method Code:

(1) Backhoe, (2) Hand Auger, (3) Drill Bit Cutting Head, (4) Geoprobe, (5) Split Spoon, (6) Shelby Tube, (7) Grab, (8) Other (Specify)

Signature_____

Maul Foster & Alongi, Inc.

400 E. Mill Plain Blvd, Suite 400, Vancouver, WA 98660 (360) 694-2691 Fax. (360) 906-1958

Soil Field Sampling Data Sheet

Client Name	City of Ridgefield	Sample Location	B6				
Project Number	0239.28.05	Sampler	SVH				
Project Name	Bus Barn Property - IPG	Sampling Date	09/15/2014				
Sampling Event		Sample Name	B6-S 2.0				
Sub Area		Sample Depth	2				
FSDS QA:	VAU 10/14/14	Easting		Northing		TOC	

Sample Information

Sampling Method	Sample Type	Sample Category	PID/FID	Sampling Time	Container Code	#
(4) GeoProbe	Soil	Discrete	5.2	3:30:00 PM	2 oz. soil	
					4 oz. soil	1
					8 oz. soil	1
					Other	
					Total Containers	2

Sample Description:

--

General Sampling Comment

--

Sampling Method Code:

(1) Backhoe, (2) Hand Auger, (3) Drill Bit Cutting Head, (4) Geoprobe, (5) Split Spoon, (6) Shelby Tube, (7) Grab, (8) Other (Specify)

Signature_____

Maul Foster & Alongi, Inc.

400 E. Mill Plain Blvd, Suite 400, Vancouver, WA 98660 (360) 694-2691 Fax. (360) 906-1958

Soil Field Sampling Data Sheet

Client Name	City of Ridgefield	Sample Location	B6				
Project Number	0239.28.05	Sampler	SVH				
Project Name	Bus Barn Property - IPG	Sampling Date	09/15/2014				
Sampling Event		Sample Name	B6-S-8.5				
Sub Area		Sample Depth	8.5				
FSDS QA:	VAU 10/14/14	Easting		Northing		TOC	

Sample Information

Sampling Method	Sample Type	Sample Category	PID/FID	Sampling Time	Container Code	#
(4) GeoProbe	Soil	Discrete	2.1	3:40:00 PM	2 oz. soil	
					4 oz. soil	1
					8 oz. soil	1
					Other	
					Total Containers	2

Sample Description:

--

General Sampling Comment

--

Sampling Method Code:

(1) Backhoe, (2) Hand Auger, (3) Drill Bit Cutting Head, (4) Geoprobe, (5) Split Spoon, (6) Shelby Tube, (7) Grab, (8) Other (Specify)

Signature_____

Maul Foster & Alongi, Inc.

400 E. Mill Plain Blvd, Suite 400, Vancouver, WA 98660 (360) 694-2691 Fax. (360) 906-1958

Soil Field Sampling Data Sheet

Client Name	City of Ridgefield	Sample Location	B7				
Project Number	0239.28.05	Sampler	SVH				
Project Name	Bus Barn Property - IPG	Sampling Date	09/15/2014				
Sampling Event		Sample Name	B7-S-8.5				
Sub Area		Sample Depth	8.5				
FSDS QA:	VAU 10/14/14	Easting		Northing		TOC	

Sample Information

Sampling Method	Sample Type	Sample Category	PID/FID	Sampling Time	Container Code	#
(4) GeoProbe	Soil	Discrete	105.3	4:15:00 PM	2 oz. soil	
					4 oz. soil	1
					8 oz. soil	1
					Other	
					Total Containers	2

Sample Description:

--

General Sampling Comment

--

Sampling Method Code:

(1) Backhoe, (2) Hand Auger, (3) Drill Bit Cutting Head, (4) Geoprobe, (5) Split Spoon, (6) Shelby Tube, (7) Grab, (8) Other (Specify)

Signature_____

Maul Foster & Alongi, Inc.

400 E. Mill Plain Blvd, Suite 400, Vancouver, WA 98660 (360) 694-2691 Fax. (360) 906-1958

Soil Field Sampling Data Sheet

Client Name	City of Ridgefield	Sample Location	B7				
Project Number	0239.28.05	Sampler	SVH				
Project Name	Bus Barn Property - IPG	Sampling Date	09/15/2014				
Sampling Event		Sample Name	B7-S-1.5				
Sub Area		Sample Depth	1.5				
FSDS QA:	VAU 10/14/14	Easting		Northing		TOC	

Sample Information

Sampling Method	Sample Type	Sample Category	PID/FID	Sampling Time	Container Code	#
(4) GeoProbe	Soil	Discrete	8.2	4:00:00 PM	2 oz. soil	
					4 oz. soil	1
					8 oz. soil	1
					Other	
					Total Containers	2

Sample Description:

--

General Sampling Comment

--

Sampling Method Code:

(1) Backhoe, (2) Hand Auger, (3) Drill Bit Cutting Head, (4) Geoprobe, (5) Split Spoon, (6) Shelby Tube, (7) Grab, (8) Other (Specify)

Signature_____

Maul Foster & Alongi, Inc.

400 E. Mill Plain Blvd, Suite 400, Vancouver, WA 98660 (360) 694-2691 Fax. (360) 906-1958

Soil Field Sampling Data Sheet

Client Name	City of Ridgefield	Sample Location	B8				
Project Number	0239.28.05	Sampler	ENH				
Project Name	Bus Barn Property - IPG	Sampling Date	04/15/2015				
Sampling Event	April 2015	Sample Name	B8-S-5.5				
Sub Area		Sample Depth	5.5				
FSDS QA:	CBS	Easting		Northing		TOC	

Sample Information

Sampling Method	Sample Type	Sample Category	PID/FID	Sampling Time	Container Code	#
(4) GeoProbe	Soil	Discrete	0	9:30:00 AM	2 oz. soil	
					4 oz. soil	
					8 oz. soil	1
					Other	
					Total Containers	1

Sample Description:

85% fines, 15% sand; orangish brown.

General Sampling Comment

Sampling Method Code:

(1) Backhoe, (2) Hand Auger, (3) Drill Bit Cutting Head, (4) Geoprobe, (5) Split Spoon, (6) Shelby Tube, (7) Grab, (8) Other (Specify)

Signature_____

Maul Foster & Alongi, Inc.

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Soil Field Sampling Data Sheet

Client Name	City of Ridgefield	Sample Location	B8				
Project Number	0239.28.05	Sampler	ENH				
Project Name	Bus Barn Property - IPG	Sampling Date	04/15/2015				
Sampling Event	April 2015	Sample Name	B8-S-7.5				
Sub Area		Sample Depth	7.5				
FSDS QA:	CBS	Easting		Northing		TOC	

Sample Information

Sampling Method	Sample Type	Sample Category	PID/FID	Sampling Time	Container Code	#
(4) GeoProbe	Soil	Discrete	0.3	9:35:00 AM	2 oz. soil	
					4 oz. soil	
					8 oz. soil	1
					Other	
					Total Containers	1

Sample Description:

60% fines, 40% sand; orangish brown.

General Sampling Comment

Sampling Method Code:

(1) Backhoe, (2) Hand Auger, (3) Drill Bit Cutting Head, (4) Geoprobe, (5) Split Spoon, (6) Shelby Tube, (7) Grab, (8) Other (Specify)

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Soil Field Sampling Data Sheet

Client Name	City of Ridgefield	Sample Location	B9				
Project Number	0239.28.05	Sampler	ENH				
Project Name	Bus Barn Property - IPG	Sampling Date	04/15/2015				
Sampling Event	April 2015	Sample Name	B9-S-8.5				
Sub Area		Sample Depth	8.5				
FSDS QA:	CBS	Easting		Northing		TOC	

Sample Information

Sampling Method	Sample Type	Sample Category	PID/FID	Sampling Time	Container Code	#
(4) GeoProbe	Soil	Discrete	0	10:00:00 AM	2 oz. soil	
					4 oz. soil	
					8 oz. soil	1
					Other	
					Total Containers	1

Sample Description:

30% fines, 70% sand; orangish yellowish brown.

General Sampling Comment

Sampling Method Code:

(1) Backhoe, (2) Hand Auger, (3) Drill Bit Cutting Head, (4) Geoprobe, (5) Split Spoon, (6) Shelby Tube, (7) Grab, (8) Other (Specify)

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Soil Field Sampling Data Sheet

Client Name	City of Ridgefield	Sample Location	B9				
Project Number	0239.28.05	Sampler	ENH				
Project Name	Bus Barn Property - IPG	Sampling Date	04/15/2015				
Sampling Event	April 2015	Sample Name	B9-S-6.0				
Sub Area		Sample Depth	6				
FSDS QA:	CBS	Easting		Northing		TOC	

Sample Information

Sampling Method	Sample Type	Sample Category	PID/FID	Sampling Time	Container Code	#
(4) GeoProbe	Soil	Discrete	0	10:05:00 AM	2 oz. soil	
					4 oz. soil	
					8 oz. soil	1
					Other	
					Total Containers	1

Sample Description:

85% fines, 15% sand; reddish brown.

General Sampling Comment

Sampling Method Code:

(1) Backhoe, (2) Hand Auger, (3) Drill Bit Cutting Head, (4) Geoprobe, (5) Split Spoon, (6) Shelby Tube, (7) Grab, (8) Other (Specify)

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Soil Field Sampling Data Sheet

Client Name	City of Ridgefield	Sample Location	B10				
Project Number	0239.28.05	Sampler	ENH				
Project Name	Bus Barn Property - IPG	Sampling Date	04/15/2015				
Sampling Event	April 2015	Sample Name	B10-S-8.0				
Sub Area		Sample Depth	8				
FSDS QA:	CBS	Easting		Northing		TOC	

Sample Information

Sampling Method	Sample Type	Sample Category	PID/FID	Sampling Time	Container Code	#
(4) GeoProbe	Soil	Discrete	7.2	11:40:00 AM	2 oz. soil	
					4 oz. soil	2
					8 oz. soil	
					Other	
					Total Containers	2

Sample Description:

30% fines, 70% sand; gray.

General Sampling Comment

Sampling Method Code:

(1) Backhoe, (2) Hand Auger, (3) Drill Bit Cutting Head, (4) Geoprobe, (5) Split Spoon, (6) Shelby Tube, (7) Grab, (8) Other (Specify)

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Soil Field Sampling Data Sheet

Client Name	City of Ridgefield	Sample Location	B10				
Project Number	0239.28.05	Sampler	ENH				
Project Name	Bus Barn Property - IPG	Sampling Date	04/15/2015				
Sampling Event	April 2015	Sample Name	B10-S-5.5				
Sub Area		Sample Depth	5.5				
FSDS QA:	CBS	Easting		Northing		TOC	

Sample Information

Sampling Method	Sample Type	Sample Category	PID/FID	Sampling Time	Container Code	#
(4) GeoProbe	Soil	Discrete	0.3	11:45:00 AM	2 oz. soil	
					4 oz. soil	
					8 oz. soil	1
					Other	
					Total Containers	1

Sample Description:

30% fines, 70% sand; reddish brown.

General Sampling Comment

Sampling Method Code:

(1) Backhoe, (2) Hand Auger, (3) Drill Bit Cutting Head, (4) Geoprobe, (5) Split Spoon, (6) Shelby Tube, (7) Grab, (8) Other (Specify)

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Soil Field Sampling Data Sheet

Client Name	City of Ridgefield	Sample Location	B11				
Project Number	0239.28.05	Sampler	ENH				
Project Name	Bus Barn Property - IPG	Sampling Date	04/15/2015				
Sampling Event	April 2015	Sample Name	B11-S-5.5				
Sub Area		Sample Depth	5.5				
FSDS QA:	CBS	Easting		Northing		TOC	

Sample Information

Sampling Method	Sample Type	Sample Category	PID/FID	Sampling Time	Container Code	#
(4) GeoProbe	Soil	Discrete	0	1:10:00 PM	2 oz. soil	
					4 oz. soil	
					8 oz. soil	1
					Other	
					Total Containers	1

Sample Description:

75% fines, 25% sand; gray reddish brown.

General Sampling Comment

Sampling Method Code:

(1) Backhoe, (2) Hand Auger, (3) Drill Bit Cutting Head, (4) Geoprobe, (5) Split Spoon, (6) Shelby Tube, (7) Grab, (8) Other (Specify)

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Soil Field Sampling Data Sheet

Client Name	City of Ridgefield	Sample Location	B11				
Project Number	0239.28.05	Sampler	ENH				
Project Name	Bus Barn Property - IPG	Sampling Date	04/15/2015				
Sampling Event	April 2015	Sample Name	B11-S-8.0				
Sub Area		Sample Depth	8				
FSDS QA:	CBS	Easting		Northing		TOC	

Sample Information

Sampling Method	Sample Type	Sample Category	PID/FID	Sampling Time	Container Code	#
(4) GeoProbe	Soil	Discrete	0	1:15:00 PM	2 oz. soil	
					4 oz. soil	
					8 oz. soil	1
					Other	
					Total Containers	1

Sample Description:

40% fines, 60% sand; reddish brown.

General Sampling Comment

Sampling Method Code:

(1) Backhoe, (2) Hand Auger, (3) Drill Bit Cutting Head, (4) Geoprobe, (5) Split Spoon, (6) Shelby Tube, (7) Grab, (8) Other (Specify)

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Soil Field Sampling Data Sheet

Client Name	City of Ridgefield	Sample Location	B12				
Project Number	0239.28.05	Sampler	ENH				
Project Name	Bus Barn Property - IPG	Sampling Date	04/15/2015				
Sampling Event	April 2015	Sample Name	B12-S-8.0				
Sub Area		Sample Depth	8				
FSDS QA:	CBS	Easting		Northing		TOC	

Sample Information

Sampling Method	Sample Type	Sample Category	PID/FID	Sampling Time	Container Code	#
(4) GeoProbe	Soil	Discrete	231.2	1:35:00 PM	2 oz. soil	
					4 oz. soil	
					8 oz. soil	1
					Other	
					Total Containers	1

Sample Description:

20% fines, 80% sand; gray.

General Sampling Comment

Sampling Method Code:

(1) Backhoe, (2) Hand Auger, (3) Drill Bit Cutting Head, (4) Geoprobe, (5) Split Spoon, (6) Shelby Tube, (7) Grab, (8) Other (Specify)

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Soil Field Sampling Data Sheet

Client Name	City of Ridgefield	Sample Location	B12				
Project Number	0239.28.05	Sampler	ENH				
Project Name	Bus Barn Property - IPG	Sampling Date	04/15/2015				
Sampling Event	April 2015	Sample Name	B12-S-5.5				
Sub Area		Sample Depth	5.5				
FSDS QA:	CBS	Easting		Northing		TOC	

Sample Information

Sampling Method	Sample Type	Sample Category	PID/FID	Sampling Time	Container Code	#
(4) GeoProbe	Soil	Discrete	47.5	1:30:00 PM	2 oz. soil	
					4 oz. soil	
					8 oz. soil	1
					Other	
					Total Containers	1

Sample Description:

80% fines, 20% sand; greenish gray.

General Sampling Comment

Sampling Method Code:

(1) Backhoe, (2) Hand Auger, (3) Drill Bit Cutting Head, (4) Geoprobe, (5) Split Spoon, (6) Shelby Tube, (7) Grab, (8) Other (Specify)

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Soil Field Sampling Data Sheet

Client Name	City of Ridgefield	Sample Location	B13				
Project Number	0239.28.05	Sampler	ENH				
Project Name	Bus Barn Property - IPG	Sampling Date	04/15/2015				
Sampling Event	April 2015	Sample Name	B13-S-5.0				
Sub Area		Sample Depth	5				
FSDS QA:	CBS	Easting		Northing		TOC	

Sample Information

Sampling Method	Sample Type	Sample Category	PID/FID	Sampling Time	Container Code	#
(4) GeoProbe	Soil	Discrete	0	2:30:00 PM	2 oz. soil	
					4 oz. soil	
					8 oz. soil	1
					Other	
					Total Containers	1

Sample Description:

70% fines, 30% sand; reddish brown.

General Sampling Comment

Sampling Method Code:

(1) Backhoe, (2) Hand Auger, (3) Drill Bit Cutting Head, (4) Geoprobe, (5) Split Spoon, (6) Shelby Tube, (7) Grab, (8) Other (Specify)

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Soil Field Sampling Data Sheet

Client Name	City of Ridgefield	Sample Location	B13				
Project Number	0239.28.05	Sampler	ENH				
Project Name	Bus Barn Property - IPG	Sampling Date	04/15/2015				
Sampling Event	April 2015	Sample Name	B13-S-8.0				
Sub Area		Sample Depth	8				
FSDS QA:	CBS	Easting		Northing		TOC	

Sample Information

Sampling Method	Sample Type	Sample Category	PID/FID	Sampling Time	Container Code	#
(4) GeoProbe	Soil	Discrete	0	2:35:00 PM	2 oz. soil	
					4 oz. soil	
					8 oz. soil	1
					Other	
					Total Containers	1

Sample Description:

40% fines, 60% sand; reddish brown.

General Sampling Comment

Sampling Method Code:

(1) Backhoe, (2) Hand Auger, (3) Drill Bit Cutting Head, (4) Geoprobe, (5) Split Spoon, (6) Shelby Tube, (7) Grab, (8) Other (Specify)

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Soil Field Sampling Data Sheet

Client Name	City of Ridgefield	Sample Location	B14				
Project Number	0239.28.05	Sampler	ENH				
Project Name	Bus Barn Property - IPG	Sampling Date	04/15/2015				
Sampling Event	April 2015	Sample Name	B14-S-7.5				
Sub Area		Sample Depth	7.5				
FSDS QA:	CBS	Easting		Northing		TOC	

Sample Information

Sampling Method	Sample Type	Sample Category	PID/FID	Sampling Time	Container Code	#
(4) GeoProbe	Soil	Discrete	0.7	3:05:00 PM	2 oz. soil	
					4 oz. soil	
					8 oz. soil	1
					Other	
					Total Containers	1

Sample Description:

20% fines, 65% sand, 15% gravel; reddish brown.

General Sampling Comment

Sampling Method Code:

(1) Backhoe, (2) Hand Auger, (3) Drill Bit Cutting Head, (4) Geoprobe, (5) Split Spoon, (6) Shelby Tube, (7) Grab, (8) Other (Specify)

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Soil Field Sampling Data Sheet

Client Name	City of Ridgefield	Sample Location	B14				
Project Number	0239.28.05	Sampler	ENH				
Project Name	Bus Barn Property - IPG	Sampling Date	04/15/2015				
Sampling Event	April 2015	Sample Name	B14-S-5.0				
Sub Area		Sample Depth	5				
FSDS QA:	CBS	Easting		Northing		TOC	

Sample Information

Sampling Method	Sample Type	Sample Category	PID/FID	Sampling Time	Container Code	#
(4) GeoProbe	Soil	Discrete	0.6	3:00:00 PM	2 oz. soil	
					4 oz. soil	
					8 oz. soil	1
					Other	
					Total Containers	1

Sample Description:

20% fines, 80% sand; reddish brown.

General Sampling Comment

Sampling Method Code:

(1) Backhoe, (2) Hand Auger, (3) Drill Bit Cutting Head, (4) Geoprobe, (5) Split Spoon, (6) Shelby Tube, (7) Grab, (8) Other (Specify)

Signature_____

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Soil Field Sampling Data Sheet

Client Name	City of Ridgefield	Sample Location	B15				
Project Number	0239.28.05	Sampler	ENH				
Project Name	Bus Barn Property - IPG	Sampling Date	04/15/2015				
Sampling Event	April 2015	Sample Name	B15-S-5.5				
Sub Area		Sample Depth	5.5				
FSDS QA:	CBS	Easting		Northing		TOC	

Sample Information

Sampling Method	Sample Type	Sample Category	PID/FID	Sampling Time	Container Code	#
(4) GeoProbe	Soil	Discrete	0.3	3:55:00 PM	2 oz. soil	
					4 oz. soil	
					8 oz. soil	1
					Other	
					Total Containers	1

Sample Description:

85% fines, 15% sand, trace gravel; reddish brown.

General Sampling Comment

Sampling Method Code:

(1) Backhoe, (2) Hand Auger, (3) Drill Bit Cutting Head, (4) Geoprobe, (5) Split Spoon, (6) Shelby Tube, (7) Grab, (8) Other (Specify)

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Soil Field Sampling Data Sheet

Client Name	City of Ridgefield	Sample Location	B15				
Project Number	0239.28.05	Sampler	ENH				
Project Name	Bus Barn Property - IPG	Sampling Date	04/15/2015				
Sampling Event	April 2015	Sample Name	B15-S-8.0				
Sub Area		Sample Depth	8				
FSDS QA:	CBS	Easting		Northing		TOC	

Sample Information

Sampling Method	Sample Type	Sample Category	PID/FID	Sampling Time	Container Code	#
(4) GeoProbe	Soil	Discrete	0.3	4:00:00 PM	2 oz. soil	
					4 oz. soil	
					8 oz. soil	1
					Other	
					Total Containers	1

Sample Description:

30% fines, 70% sand; orangish brown.

General Sampling Comment

Sampling Method Code:

(1) Backhoe, (2) Hand Auger, (3) Drill Bit Cutting Head, (4) Geoprobe, (5) Split Spoon, (6) Shelby Tube, (7) Grab, (8) Other (Specify)

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Soil Field Sampling Data Sheet

Client Name	City of Ridgefield	Sample Location	B16				
Project Number	0239.28.05	Sampler	ENH				
Project Name	Bus Barn Property - IPG	Sampling Date	04/15/2015				
Sampling Event	April 2015	Sample Name	B16-S-8.0				
Sub Area		Sample Depth	8				
FSDS QA:	CBS	Easting		Northing		TOC	

Sample Information

Sampling Method	Sample Type	Sample Category	PID/FID	Sampling Time	Container Code	#
(4) GeoProbe	Soil	Discrete	205.8	4:35:00 PM	2 oz. soil	
					4 oz. soil	
					8 oz. soil	1
					Other	
					Total Containers	1

Sample Description:

30% fines, 70% sand; gray.

General Sampling Comment

Sampling Method Code:

(1) Backhoe, (2) Hand Auger, (3) Drill Bit Cutting Head, (4) Geoprobe, (5) Split Spoon, (6) Shelby Tube, (7) Grab, (8) Other (Specify)

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Soil Field Sampling Data Sheet

Client Name	City of Ridgefield	Sample Location	B16				
Project Number	0239.28.05	Sampler	ENH				
Project Name	Bus Barn Property - IPG	Sampling Date	04/15/2015				
Sampling Event	April 2015	Sample Name	B16-S-5.5				
Sub Area		Sample Depth	5.5				
FSDS QA:	CBS	Easting		Northing		TOC	

Sample Information

Sampling Method	Sample Type	Sample Category	PID/FID	Sampling Time	Container Code	#
(4) GeoProbe	Soil	Discrete		4:30:00 PM	2 oz. soil	
					4 oz. soil	
					8 oz. soil	1
					Other	
					Total Containers	1

Sample Description:

80% fines, 20% sand; orangish brown.

General Sampling Comment

Sampling Method Code:

(1) Backhoe, (2) Hand Auger, (3) Drill Bit Cutting Head, (4) Geoprobe, (5) Split Spoon, (6) Shelby Tube, (7) Grab, (8) Other (Specify)

Signature_____

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Water Field Sampling Data Sheet

Client Name	City of Ridgefield	Sample Location	B4				
Project #	0239.28.05	Sampler	SVH				
Project Name	Bus Barn IPG	Sampling Date	9/15/2014				
Sampling Event		Sample Name	B4-W				
Sub Area		Sample Depth	12.5				
FSDS QA:	MD 10/13/14	Easting		Northing		TOC	

Hydrology/Level Measurements

Date	Time	DT-Bottom	DT-Product	DT-Water	(Product Thickness)	(Water Column)	(Gallons/ft x Water Column)
					DTP-DTW	DTB-DTW	Pore Volume
9/15/2014	16:00	15		9.43		5.57	0.91

(0.75" = 0.023 gal/ft) (1" = 0.041 gal/ft) (1.5" = 0.092 gal/ft) (2" = 0.163 gal/ft) (3" = 0.367 gal/ft) (4" = 0.653 gal/ft) (6" = 1.469 gal/ft) (8" = 2.611 gal/ft)

Water Quality Data

Purge Method	Time	Purge Vol (gal)	Flowrate l/min	pH	Temp (C)	E Cond (uS/cm)	DO (mg/L)	EH	Turbidity
(2) Peristaltic Pump									
Final Field Parameters									
	5:45:00 PM	2	0.2	7.08	19.42	264	1.79	-17.8	40.93

Methods: (1) Submersible Pump (2) Peristaltic Pump (3) Disposable Bailer (4) Vacuum Pump (5) Dedicated Bailer (6) Inertia Pump (7) Other (specify)

Water Quality Observations: Clear and colorless.

Sample Information

Sampling Method	Sample Type	Sampling Time	Container Code/Preservative	#	Filtered
(2) Peristaltic Pump	Groundwater	5:45:00 PM	VOA-Glass	4	No
			Amber Glass	2	No
			White Poly		
			Yellow Poly		
			Green Poly		
			Red Total Poly		
			Red Dissolved Poly	1	Yes
			Total Bottles	7	

General Sampling Comments

Signature _____

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Water Field Sampling Data Sheet

Client Name	City of Ridgefield	Sample Location	B3				
Project #	0239.28.05	Sampler	SVH				
Project Name	Bus Barn IPG	Sampling Date	9/15/2014				
Sampling Event		Sample Name	B3-W				
Sub Area		Sample Depth	12.5				
FSDS QA:	MD 10/13/14	Easting		Northing		TOC	

Hydrology/Level Measurements

Date	Time	DT-Bottom	DT-Product	DT-Water	(Product Thickness)	(Water Column)	(Gallons/ft x Water Column)
					DTP-DTW	DTB-DTW	Pore Volume
9/15/2014	15:20	15		9.35		5.65	0.92

(0.75" = 0.023 gal/ft) (1" = 0.041 gal/ft) (1.5" = 0.092 gal/ft) (2" = 0.163 gal/ft) (3" = 0.367 gal/ft) (4" = 0.653 gal/ft) (6" = 1.469 gal/ft) (8" = 2.611 gal/ft)

Water Quality Data

Purge Method	Time	Purge Vol (gal)	Flowrate l/min	pH	Temp (C)	E Cond (uS/cm)	DO (mg/L)	EH	Turbidity
(2) Peristaltic Pump									
Final Field Parameters									
	4:50:00 PM	2	0.6	6.68	24.89	159	6.88	14.8	102.3

Methods: (1) Submersible Pump (2) Peristaltic Pump (3) Disposable Bailer (4) Vacuum Pump (5) Dedicated Bailer (6) Inertia Pump (7) Other (specify)

Water Quality Observations: Slight yellowish tint. Sediment in samples sinks to bottom. Slightly turbid.

Sample Information

Sampling Method	Sample Type	Sampling Time	Container Code/Preservative	#	Filtered
(2) Peristaltic Pump	Groundwater	4:50:00 PM	VOA-Glass	5	No
			Amber Glass	2	No
			White Poly		
			Yellow Poly		
			Green Poly		
			Red Total Poly		
			Red Dissolved Poly	1	Yes
			Total Bottles	8	

General Sampling Comments

Signature _____

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Water Field Sampling Data Sheet

Client Name	City of Ridgefield	Sample Location	B2				
Project #	0239.28.05	Sampler	SVH				
Project Name	Bus Barn IPG	Sampling Date	9/15/2014				
Sampling Event		Sample Name	B2-W				
Sub Area		Sample Depth	12.5				
FSDS QA:	MD 10/13/14	Easting		Northing		TOC	

Hydrology/Level Measurements

Date	Time	DT-Bottom	DT-Product	DT-Water	(Product Thickness)	(Water Column)	(Gallons/ft x Water Column)
					DTP-DTW	DTB-DTW	Pore Volume
9/15/2014	14:00	15		8.62		6.38	1.04

(0.75" = 0.023 gal/ft) (1" = 0.041 gal/ft) (1.5" = 0.092 gal/ft) (2" = 0.163 gal/ft) (3" = 0.367 gal/ft) (4" = 0.653 gal/ft) (6" = 1.469 gal/ft) (8" = 2.611 gal/ft)

Water Quality Data

Purge Method	Time	Purge Vol (gal)	Flowrate l/min	pH	Temp (C)	E Cond (uS/cm)	DO (mg/L)	EH	Turbidity
(2) Peristaltic Pump									
Final Field Parameters	4:30:00 PM	4	1	6.65	23.07	177	7.08	64.9	77.89

Methods: (1) Submersible Pump (2) Peristaltic Pump (3) Disposable Bailer (4) Vacuum Pump (5) Dedicated Bailer (6) Inertia Pump (7) Other (specify)

Water Quality Observations: Turbid.

Sample Information

Sampling Method	Sample Type	Sampling Time	Container Code/Preservative	#	Filtered
(2) Peristaltic Pump	Groundwater	4:30:00 PM	VOA-Glass	5	No
			Amber Glass	2	No
			White Poly		
			Yellow Poly		
			Green Poly		
			Red Total Poly		
			Red Dissolved Poly	1	Yes
			Total Bottles	8	

General Sampling Comments

Purged for approximately 1 hour with little success in getting turbidity lower than 20 NTUs.

Signature _____

Maul Foster & Alongi, Inc.

400 E. Mill Plain Blvd, Suite 400, Vancouver, WA 98660 (360) 694-2691 Fax. (360) 906-1958

Water Field Sampling Data Sheet

Client Name	City of Ridgefield	Sample Location	B1				
Project #	0239.28.05	Sampler	SVH				
Project Name	Bus Barn IPG	Sampling Date	9/15/2014				
Sampling Event		Sample Name	B1-W				
Sub Area		Sample Depth	12.5				
FSDS QA:	MD 10/13/14	Easting		Northing		TOC	

Hydrology/Level Measurements

Date	Time	DT-Bottom	DT-Product	DT-Water	(Product Thickness)	(Water Column)	(Gallons/ft x Water Column)
					DTP-DTW	DTB-DTW	Pore Volume
9/15/2014	13:15	15		8.7		6.3	1.03

(0.75" = 0.023 gal/ft) (1" = 0.041 gal/ft) (1.5" = 0.092 gal/ft) (2" = 0.163 gal/ft) (3" = 0.367 gal/ft) (4" = 0.653 gal/ft) (6" = 1.469 gal/ft) (8" = 2.611 gal/ft)

Water Quality Data

Purge Method	Time	Purge Vol (gal)	Flowrate l/min	pH	Temp (C)	E Cond (uS/cm)	DO (mg/L)	EH	Turbidity
(2) Peristaltic Pump	1:30:00 PM	2	0.1	9.53	22.57	240	7.78	-47	63.17
	1:50:00 PM	3	0.08	9.4	22.71	233	6.63	-62.7	22.75
Final Field Parameters	2:20:00 PM	4	0.08	9.26	23.58	228	6.69	-64.2	15.97

Methods: (1) Submersible Pump (2) Peristaltic Pump (3) Disposable Bailer (4) Vacuum Pump (5) Dedicated Bailer (6) Inertia Pump (7) Other (specify)

Water Quality Observations: Clear and colorless.

Sample Information

Sampling Method	Sample Type	Sampling Time	Container Code/Preservative	#	Filtered
(2) Peristaltic Pump	Groundwater	2:20:00 PM	VOA-Glass	3	No
			Amber Glass	2	No
			White Poly		
			Yellow Poly		
			Green Poly		
			Red Total Poly		
			Red Dissolved Poly	1	Yes
			Total Bottles	6	

General Sampling Comments

Signature _____

Maul Foster & Alongi, Inc.

400 E. Mill Plain Blvd, Suite 400, Vancouver, WA 98660 (360) 694-2691 Fax. (360) 906-1958

Water Field Sampling Data Sheet

Client Name	City of Ridgefield	Sample Location	B7				
Project #	0239.28.05	Sampler	SVH				
Project Name	Bus Barn IPG	Sampling Date	9/16/2014				
Sampling Event		Sample Name	B7-W				
Sub Area		Sample Depth	12.5				
FSDS QA:	MD 10/13/14	Easting		Northing		TOC	

Hydrology/Level Measurements

Date	Time	DT-Bottom	DT-Product	DT-Water	(Product Thickness)	(Water Column)	(Gallons/ft x Water Column)
					DTP-DTW	DTB-DTW	Pore Volume
9/16/2014	17:00	15		10			

(0.75" = 0.023 gal/ft) (1" = 0.041 gal/ft) (1.5" = 0.092 gal/ft) (2" = 0.163 gal/ft) (3" = 0.367 gal/ft) (4" = 0.653 gal/ft) (6" = 1.469 gal/ft) (8" = 2.611 gal/ft)

Water Quality Data

Purge Method	Time	Purge Vol (gal)	Flowrate l/min	pH	Temp (C)	E Cond (uS/cm)	DO (mg/L)	EH	Turbidity
(2) Peristaltic Pump									
Final Field Parameters									
	5:30:00 PM	1.5	0.1	6.03	19.3	195	1.43	10.2	284.2

Methods: (1) Submersible Pump (2) Peristaltic Pump (3) Disposable Bailer (4) Vacuum Pump (5) Dedicated Bailer (6) Inertia Pump (7) Other (specify)

Water Quality Observations: Slight yellowish/gray tint; slightly turbid.

Sample Information

Sampling Method	Sample Type	Sampling Time	Container Code/Preservative	#	Filtered
(2) Peristaltic Pump	Groundwater	5:30:00 PM	VOA-Glass	5	No
			Amber Glass	2	No
			White Poly		
			Yellow Poly		
			Green Poly		
			Red Total Poly		
			Red Dissolved Poly	1	Yes
			Total Bottles	8	

General Sampling Comments

Signature _____

Maul Foster & Alongi, Inc.

400 E. Mill Plain Blvd, Suite 400, Vancouver, WA 98660 (360) 694-2691 Fax. (360) 906-1958

Water Field Sampling Data Sheet

Client Name	City of Ridgefield	Sample Location	B5				
Project #	0239.28.05	Sampler	SVH				
Project Name	Bus Barn IPG	Sampling Date	9/16/2014				
Sampling Event		Sample Name	B5-W				
Sub Area		Sample Depth	12.5				
FSDS QA:	MD 10/13/14	Easting		Northing		TOC	

Hydrology/Level Measurements

Date	Time	DT-Bottom	DT-Product	DT-Water	(Product Thickness)	(Water Column)	(Gallons/ft x Water Column)
					DTP-DTW	DTB-DTW	Pore Volume
9/16/2014		15					

(0.75" = 0.023 gal/ft) (1" = 0.041 gal/ft) (1.5" = 0.092 gal/ft) (2" = 0.163 gal/ft) (3" = 0.367 gal/ft) (4" = 0.653 gal/ft) (6" = 1.469 gal/ft) (8" = 2.611 gal/ft)

Water Quality Data

Purge Method	Time	Purge Vol (gal)	Flowrate l/min	pH	Temp (C)	E Cond (uS/cm)	DO (mg/L)	EH	Turbidity
(2) Peristaltic Pump									
Final Field Parameters									
	5:10:00 PM	1.5	0.05	6.44	23.95	193	7.73	68.9	32.22

Methods: (1) Submersible Pump (2) Peristaltic Pump (3) Disposable Bailer (4) Vacuum Pump (5) Dedicated Bailer (6) Inertia Pump (7) Other (specify)

Water Quality Observations: Clear and colorless.

Sample Information

Sampling Method	Sample Type	Sampling Time	Container Code/Preservative	#	Filtered
(2) Peristaltic Pump	Groundwater	5:10:00 PM	VOA-Glass	3	No
			Amber Glass	2	No
			White Poly		
			Yellow Poly		
			Green Poly		
			Red Total Poly		
			Red Dissolved Poly	1	Yes
			Total Bottles	6	

General Sampling Comments

Signature _____

Maul Foster & Alongi, Inc.

400 E. Mill Plain Blvd, Suite 400, Vancouver, WA 98660 (360) 694-2691 Fax. (360) 906-1958

Water Field Sampling Data Sheet

Client Name	City of Ridgefield	Sample Location	B6				
Project #	0239.28.05	Sampler	SVH/KRT				
Project Name	Bus Barn IPG	Sampling Date	9/17/2014				
Sampling Event		Sample Name	B6-W-DUP				
Sub Area		Sample Depth	12.5				
FSDS QA:	MD 10/13/14	Easting		Northing		TOC	

Hydrology/Level Measurements

Date	Time	DT-Bottom	DT-Product	DT-Water	(Product Thickness)	(Water Column)	(Gallons/ft x Water Column)
					DTP-DTW	DTB-DTW	Pore Volume

(0.75" = 0.023 gal/ft) (1" = 0.041 gal/ft) (1.5" = 0.092 gal/ft) (2" = 0.163 gal/ft) (3" = 0.367 gal/ft) (4" = 0.653 gal/ft) (6" = 1.469 gal/ft) (8" = 2.611 gal/ft)

Water Quality Data

Purge Method	Time	Purge Vol (gal)	Flowrate l/min	pH	Temp (C)	E Cond (uS/cm)	DO (mg/L)	EH	Turbidity
(2) Peristaltic Pump									
Final Field Parameters									
	11:42:00 AM	1.5	0.025	7.31	26.5	161	6.98	73.4	258.1

Methods: (1) Submersible Pump (2) Peristaltic Pump (3) Disposable Bailer (4) Vacuum Pump (5) Dedicated Bailer (6) Inertia Pump (7) Other (specify)

Water Quality Observations:

Cloudy; light brown/tan.

Sample Information

Sampling Method	Sample Type	Sampling Time	Container Code/Preservative	#	Filtered
(2) Peristaltic Pump	Groundwater	11:42:00 AM	VOA-Glass	5	No
			Amber Glass	2	No
			White Poly		
			Yellow Poly		
			Green Poly		
			Red Total Poly		
			Red Dissolved Poly	1	Yes
			Total Bottles	8	

General Sampling Comments

Duplicate sample collected at this location (B6-W-DUP). Screen set at 10 to 15 feet bgs. Water for turbidity reading collected directly from discharge tubing (not flow through cell).

Signature _____

Maul Foster & Alongi, Inc.

400 E. Mill Plain Blvd, Suite 400, Vancouver, WA 98660 (360) 694-2691 Fax. (360) 906-1958

Water Field Sampling Data Sheet

Client Name	City of Ridgefield	Sample Location	B6				
Project #	0239.28.05	Sampler	SVH/KRT				
Project Name	Bus Barn IPG	Sampling Date	9/17/2014				
Sampling Event		Sample Name	B6-W				
Sub Area		Sample Depth	12.5				
FSDS QA:	MD 10/13/14	Easting		Northing		TOC	

Hydrology/Level Measurements

Date	Time	DT-Bottom	DT-Product	DT-Water	(Product Thickness)	(Water Column)	(Gallons/ft x Water Column)
					DTP-DTW	DTB-DTW	Pore Volume

(0.75" = 0.023 gal/ft) (1" = 0.041 gal/ft) (1.5" = 0.092 gal/ft) (2" = 0.163 gal/ft) (3" = 0.367 gal/ft) (4" = 0.653 gal/ft) (6" = 1.469 gal/ft) (8" = 2.611 gal/ft)

Water Quality Data

Purge Method	Time	Purge Vol (gal)	Flowrate l/min	pH	Temp (C)	E Cond (uS/cm)	DO (mg/L)	EH	Turbidity
(2) Peristaltic Pump									
Final Field Parameters	11:42:00 AM	1.5	0.025	7.31	26.5	161	6.98	73.4	258.1

Methods: (1) Submersible Pump (2) Peristaltic Pump (3) Disposable Bailer (4) Vacuum Pump (5) Dedicated Bailer (6) Inertia Pump (7) Other (specify)

Water Quality Observations:

Cloudy; light brown/tan.

Sample Information

Sampling Method	Sample Type	Sampling Time	Container Code/Preservative	#	Filtered
(2) Peristaltic Pump	Groundwater	11:42:00 AM	VOA-Glass	5	No
			Amber Glass	2	No
			White Poly		
			Yellow Poly		
			Green Poly		
			Red Total Poly		
			Red Dissolved Poly	1	Yes
			Total Bottles	8	

General Sampling Comments

Duplicate sample collected at this location (B6-W-DUP). Screen set at 10 to 15 feet bgs. Water for turbidity reading collected directly from discharge tubing (not flow through cell).

Signature _____

Maul Foster & Alongi, Inc.

400 E. Mill Plain Blvd, Suite 400, Vancouver, WA 98660 (360) 694-2691 Fax. (360) 906-1958

Water Field Sampling Data Sheet

Client Name	City of Ridgefield	Sample Location	B8				
Project #	0239.28.05	Sampler	ENH/ARH				
Project Name	Bus Barn IPG	Sampling Date	4/15/2015				
Sampling Event	April 2015	Sample Name	B8-W-8.0				
Sub Area		Sample Depth	8				
FSDS QA:	CBS	Easting		Northing		TOC	

Hydrology/Level Measurements

Date	Time	DT-Bottom	DT-Product	DT-Water	(Product Thickness)	(Water Column)	(Gallons/ft x Water Column)
					DTP-DTW	DTB-DTW	Pore Volume
4/15/2015	9:30	10		7.5			

(0.75" = 0.023 gal/ft) (1" = 0.041 gal/ft) (1.5" = 0.092 gal/ft) (2" = 0.163 gal/ft) (3" = 0.367 gal/ft) (4" = 0.653 gal/ft) (6" = 1.469 gal/ft) (8" = 2.611 gal/ft)

Water Quality Data

Purge Method	Time	Purge Vol (gal)	Flowrate l/min	pH	Temp (C)	E Cond (uS/cm)	DO (mg/L)	EH	Turbidity
(2) Peristaltic Pump									
Final Field Parameters	10:00:00 AM	0.5		6.6	12.5	469			461

Methods: (1) Submersible Pump (2) Peristaltic Pump (3) Disposable Bailer (4) Vacuum Pump (5) Dedicated Bailer (6) Inertia Pump (7) Other (specify)

Water Quality Observations: Petroleum-like odor.

Sample Information

Sampling Method	Sample Type	Sampling Time	Container Code/Preservative	#	Filtered
(2) Peristaltic Pump	Groundwater	10:00:00 AM	VOA-Glass	3	No
			Amber Glass	1	No
			White Poly		
			Yellow Poly		
			Green Poly		
			Red Total Poly		
			Red Dissolved Poly		
			Total Bottles	4	

General Sampling Comments

Screen set at 6 to 10 feet bgs.

Signature _____

Maul Foster & Alongi, Inc.

400 E. Mill Plain Blvd, Suite 400, Vancouver, WA 98660 (360) 694-2691 Fax. (360) 906-1958

Water Field Sampling Data Sheet

Client Name	City of Ridgefield	Sample Location	B9				
Project #	0239.28.05	Sampler	ENH/ARH				
Project Name	Bus Barn IPG	Sampling Date	4/15/2015				
Sampling Event	April 2015	Sample Name	B9-W-10.5				
Sub Area		Sample Depth	10.5				
FSDS QA:	CBS	Easting		Northing		TOC	

Hydrology/Level Measurements

Date	Time	DT-Bottom	DT-Product	DT-Water	(Product Thickness)	(Water Column)	(Gallons/ft x Water Column)
					DTP-DTW	DTB-DTW	Pore Volume
4/15/2015	10:00	12.5		7.9			

(0.75" = 0.023 gal/ft) (1" = 0.041 gal/ft) (1.5" = 0.092 gal/ft) (2" = 0.163 gal/ft) (3" = 0.367 gal/ft) (4" = 0.653 gal/ft) (6" = 1.469 gal/ft) (8" = 2.611 gal/ft)

Water Quality Data

Purge Method	Time	Purge Vol (gal)	Flowrate l/min	pH	Temp (C)	E Cond (uS/cm)	DO (mg/L)	EH	Turbidity
(2) Peristaltic Pump									
Final Field Parameters									
	10:30:00 AM	0.5		6.71	13.6	269			252

Methods: (1) Submersible Pump (2) Peristaltic Pump (3) Disposable Bailer (4) Vacuum Pump (5) Dedicated Bailer (6) Inertia Pump (7) Other (specify)

Water Quality Observations:

Petroleum-like odor.

Sample Information

Sampling Method	Sample Type	Sampling Time	Container Code/Preservative	#	Filtered
(2) Peristaltic Pump	Groundwater	10:30:00 AM	VOA-Glass	3	No
			Amber Glass	1	No
			White Poly		
			Yellow Poly		
			Green Poly		
			Red Total Poly		
			Red Dissolved Poly		
			Total Bottles	4	

General Sampling Comments

Screen set at 8.5 to 12.5 feet bgs.

Signature _____

Maul Foster & Alongi, Inc.

400 E. Mill Plain Blvd, Suite 400, Vancouver, WA 98660 (360) 694-2691 Fax. (360) 906-1958

Water Field Sampling Data Sheet

Client Name	City of Ridgefield	Sample Location	B10				
Project #	0239.28.05	Sampler	ENH				
Project Name	Bus Barn IPG	Sampling Date	4/15/2015				
Sampling Event	April 2015	Sample Name	B10-W-10.5				
Sub Area		Sample Depth	10.5				
FSDS QA:	CBS	Easting		Northing		TOC	

Hydrology/Level Measurements

Date	Time	DT-Bottom	DT-Product	DT-Water	(Product Thickness)	(Water Column)	(Gallons/ft x Water Column)
					DTP-DTW	DTB-DTW	Pore Volume
4/15/2015	11:45	12.5		6.3			

(0.75" = 0.023 gal/ft) (1" = 0.041 gal/ft) (1.5" = 0.092 gal/ft) (2" = 0.163 gal/ft) (3" = 0.367 gal/ft) (4" = 0.653 gal/ft) (6" = 1.469 gal/ft) (8" = 2.611 gal/ft)

Water Quality Data

Purge Method	Time	Purge Vol (gal)	Flowrate l/min	pH	Temp (C)	E Cond (uS/cm)	DO (mg/L)	EH	Turbidity
(2) Peristaltic Pump									
Final Field Parameters									
	12:10:00 AM	0.5		6.75	14	137.1			339.8

Methods: (1) Submersible Pump (2) Peristaltic Pump (3) Disposable Bailer (4) Vacuum Pump (5) Dedicated Bailer (6) Inertia Pump (7) Other (specify)

Water Quality Observations:

Turbidity did not decrease.

Sample Information

Sampling Method	Sample Type	Sampling Time	Container Code/Preservative	#	Filtered
(2) Peristaltic Pump	Groundwater	12:10:00 PM	VOA-Glass	3	No
			Amber Glass	1	No
			White Poly		
			Yellow Poly		
			Green Poly		
			Red Total Poly		
			Red Dissolved Poly		
			Total Bottles	4	

General Sampling Comments

Screen set at 8.5 to 12.5 feet bgs. Well was going dry so had to pump at a slow rate to fill sample bottles.

Signature _____

Maul Foster & Alongi, Inc.

400 E. Mill Plain Blvd, Suite 400, Vancouver, WA 98660 (360) 694-2691 Fax. (360) 906-1958

Water Field Sampling Data Sheet

Client Name	City of Ridgefield	Sample Location	B14				
Project #	0239.28.05	Sampler	ENH				
Project Name	Bus Barn IPG	Sampling Date	4/15/2015				
Sampling Event	April 2015	Sample Name	B14-W-8.0				
Sub Area		Sample Depth	8				
FSDS QA:	CBS	Easting		Northing		TOC	

Hydrology/Level Measurements

Date	Time	DT-Bottom	DT-Product	DT-Water	(Product Thickness)	(Water Column)	(Gallons/ft x Water Column)
					DTP-DTW	DTB-DTW	Pore Volume
4/15/2015	15:15	10		2			

(0.75" = 0.023 gal/ft) (1" = 0.041 gal/ft) (1.5" = 0.092 gal/ft) (2" = 0.163 gal/ft) (3" = 0.367 gal/ft) (4" = 0.653 gal/ft) (6" = 1.469 gal/ft) (8" = 2.611 gal/ft)

Water Quality Data

Purge Method	Time	Purge Vol (gal)	Flowrate l/min	pH	Temp (C)	E Cond (uS/cm)	DO (mg/L)	EH	Turbidity
(2) Peristaltic Pump									
Final Field Parameters	3:20:00 PM	1		6.27	16.2	210			43.67

Methods: (1) Submersible Pump (2) Peristaltic Pump (3) Disposable Bailer (4) Vacuum Pump (5) Dedicated Bailer (6) Inertia Pump (7) Other (specify)

Water Quality Observations:

Sample Information

Sampling Method	Sample Type	Sampling Time	Container Code/Preservative	#	Filtered
(2) Peristaltic Pump	Groundwater	3:20:00 PM	VOA-Glass	3	No
			Amber Glass	1	No
			White Poly		
			Yellow Poly		
			Green Poly		
			Red Total Poly		
			Red Dissolved Poly		
			Total Bottles	4	

General Sampling Comments

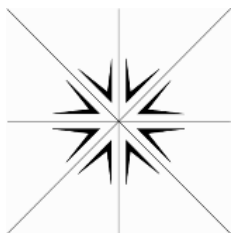
Screen set at 6 to 10 feet bgs.

Signature _____

APPENDIX C

LABORATORY REPORTS





Specialty Analytical

11711 SE Capps Road, Ste B
Clackamas, Oregon 97015
TEL: 503-607-1331 FAX: 503-607-1336
Website: www.specialtyanalytical.com

September 30, 2014

Merideth D'Andrea
Maul Foster & Alongi
400 E. Mill Plain Blvd.
Suite 400
Vancouver, WA 98660
TEL: (503) 501-5216
FAX (360) 906-1958
RE: Bus Barn / 0239.28.05

Dear Merideth D'Andrea:

Order No.: 1409099

Specialty Analytical received 5 sample(s) on 9/17/2014 for the analyses presented in the following report.

There were no problems with the analysis and all data for associated QC met EPA or laboratory specifications, except where noted in the Case Narrative, or as qualified with flags. Results apply only to the samples analyzed. Without approval of the laboratory, the reproduction of this report is only permitted in its entirety.

If you have any questions regarding these tests, please feel free to call.

Sincerely,

A handwritten signature in black ink, appearing to read "Marty French".

Marty French
Lab Director

Specialty Analytical

Date Reported: 30-Sep-14

CLIENT: Maul Foster & Alongi
Project: Bus Barn / 0239.28.05

Lab Order: 1409099

Lab ID: 1409099-001

Collection Date: 9/15/2014 2:20:00 PM

Client Sample ID: B1-W

Matrix: WATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
NWTPH HCID		NWHCID				Analyst: BS
Diesel	ND	0.619		mg/L	1	9/17/2014 3:42:53 PM
Gasoline	ND	0.246		mg/L	1	9/17/2014 3:42:53 PM
Kerosene	ND	0.619		mg/L	1	9/17/2014 3:42:53 PM
Lube Oil	ND	0.619		mg/L	1	9/17/2014 3:42:53 PM
Mineral Spirits	ND	0.246		mg/L	1	9/17/2014 3:42:53 PM
Surr: BFB	100	30.2-133		%REC	1	9/17/2014 3:42:53 PM
Surr: o-Terphenyl	86.5	50-150		%REC	1	9/17/2014 3:42:53 PM

Lab ID: 1409099-002

Collection Date: 9/15/2014 4:30:00 PM

Client Sample ID: B2-W

Matrix: WATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
NWTPH HCID		NWHCID				Analyst: BS
Diesel	ND	0.634		mg/L	1	9/17/2014 4:12:53 PM
Gasoline	ND	0.252		mg/L	1	9/17/2014 4:12:53 PM
Kerosene	ND	0.634		mg/L	1	9/17/2014 4:12:53 PM
Lube Oil	ND	0.634		mg/L	1	9/17/2014 4:12:53 PM
Mineral Spirits	ND	0.252		mg/L	1	9/17/2014 4:12:53 PM
Surr: BFB	104	30.2-133		%REC	1	9/17/2014 4:12:53 PM
Surr: o-Terphenyl	84.7	50-150		%REC	1	9/17/2014 4:12:53 PM

Lab ID: 1409099-003

Collection Date: 9/15/2014 4:50:00 PM

Client Sample ID: B3-W

Matrix: WATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
NWTPH HCID		NWHCID				Analyst: BS
Diesel	ND	0.634		mg/L	1	9/17/2014 4:42:53 PM
Gasoline	ND	0.252		mg/L	1	9/17/2014 4:42:53 PM
Kerosene	ND	0.634		mg/L	1	9/17/2014 4:42:53 PM
Lube Oil	ND	0.634		mg/L	1	9/17/2014 4:42:53 PM
Mineral Spirits	ND	0.252		mg/L	1	9/17/2014 4:42:53 PM
Surr: BFB	79.5	30.2-133		%REC	1	9/17/2014 4:42:53 PM
Surr: o-Terphenyl	92.5	50-150		%REC	1	9/17/2014 4:42:53 PM

Specialty Analytical

Date Reported: 30-Sep-14

CLIENT: Maul Foster & Alongi
Project: Bus Barn / 0239.28.05

Lab Order: 1409099

Lab ID: 1409099-004

Collection Date: 9/15/2014 5:45:00 PM

Client Sample ID: B4-W

Matrix: WATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
NWTPH HCID		NWHCID				Analyst: BS
Diesel	ND	0.661		mg/L	1	9/17/2014 5:12:53 PM
Gasoline	ND	0.262		mg/L	1	9/17/2014 5:12:53 PM
Kerosene	ND	0.661		mg/L	1	9/17/2014 5:12:53 PM
Lube Oil	ND	0.661		mg/L	1	9/17/2014 5:12:53 PM
Mineral Spirits	ND	0.262		mg/L	1	9/17/2014 5:12:53 PM
Surr: BFB	113	30.2-133		%REC	1	9/17/2014 5:12:53 PM
Surr: o-Terphenyl	94.9	50-150		%REC	1	9/17/2014 5:12:53 PM

QC SUMMARY REPORT

WO#: 1409099

30-Sep-14

Specialty Analytical

Client: Maul Foster & Alongi

Project: Bus Barn / 0239.28.05

TestCode: NWTPHHCID_W

Sample ID: MB-8188	SampType: MBLK	TestCode: NWTPHHCID_ Units: mg/L				Prep Date: 9/17/2014			RunNo: 16853		
Client ID: PBW	Batch ID: 8188	TestNo: NWHCID		HCID_W		Analysis Date: 9/17/2014			SeqNo: 222535		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel	ND	0.630									
Gasoline	ND	0.250									
Kerosene	ND	0.630									
Lube Oil	ND	0.630									
Mineral Spirits	ND	0.250									
Surr: BFB	0.796		1.000		79.6	30.2	133				
Surr: o-Terphenyl	0.905		1.000		90.4	50	150				

Qualifiers: B Analyte detected in the associated Method Blank
O RSD is greater than RSDlimit

H Holding times for preparation or analysis exceeded
R RPD outside accepted recovery limits

ND Not Detected at the Reporting Limit
S Spike Recovery outside accepted recovery

Page 7 of 7

11711 SE Capps Road
Clackamas, OR 97015
Phone: 503-607-1331
Fax: 503-607-1336

Printed SHARLENE HARTZ

Printed:

☐ Rush

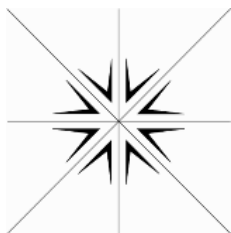
Rush Analyses Must Be Scheduled With The Lab In Advance

Relinquished By: <u>Shawn Hunter</u>	Date: <u>9/15</u>	Time: <u>1:00</u>
Company: <u>MFA</u>		

Unless Reclaimed, Samples Will Be Disposed of 60 Days After Receipt.
Samples held beyond 60 days subject to storage fee(s)

[illegible]

Invoice To MEF P.O. No. 6



Specialty Analytical

11711 SE Capps Road, Ste B
Clackamas, Oregon 97015
TEL: 503-607-1331 FAX: 503-607-1336
Website: www.specialtyanalytical.com

October 15, 2014

Merideth D'Andrea
Maul Foster & Alongi
400 E. Mill Plain Blvd.
Suite 400
Vancouver, WA 98660
TEL: (503) 501-5216
FAX (360) 906-1958
RE: Bus Barn / 0239.28.05

Dear Merideth D'Andrea:

Order No.: 1409113

Specialty Analytical received 5 sample(s) on 9/18/2014 for the analyses presented in the following report.

There were no problems with the analysis and all data for associated QC met EPA or laboratory specifications, except where noted in the Case Narrative, or as qualified with flags. Results apply only to the samples analyzed. Without approval of the laboratory, the reproduction of this report is only permitted in its entirety.

If you have any questions regarding these tests, please feel free to call.

Sincerely,

A handwritten signature in black ink, appearing to read "Marty French".

Marty French
Lab Director

Specialty Analytical

Date Reported: 15-Oct-14

CLIENT: Maul Foster & Alongi

Collection Date: 9/16/2014 5:10:00 PM

Project: Bus Barn / 0239.28.05

Lab ID: 1409113-001

Client Sample ID: B5-W

Matrix: WATER

Analyses	Result	RL	Qual	Unit	DF	Date Analyzed
NWTPH HCID		NWHCID				Analyst: BS
Diesel	ND	0.631		mg/L	1	9/20/2014 7:36:57 PM
Gasoline	ND	0.251		mg/L	1	9/20/2014 7:36:57 PM
Kerosene	ND	0.631		mg/L	1	9/20/2014 7:36:57 PM
Lube Oil	ND	0.631		mg/L	1	9/20/2014 7:36:57 PM
Mineral Spirits	ND	0.251		mg/L	1	9/20/2014 7:36:57 PM
Surr: BFB	67.2	30.2-133		%REC	1	9/20/2014 7:36:57 PM
Surr: o-Terphenyl	62.1	50-150		%REC	1	9/20/2014 7:36:57 PM

Specialty Analytical

Date Reported: 15-Oct-14

CLIENT: Maul Foster & Alongi

Collection Date: 9/16/2014 5:30:00 PM

Project: Bus Barn / 0239.28.05

Lab ID: 1409113-002

Client Sample ID: B7-W

Matrix: WATER

Analyses	Result	RL	Qual	Unit	DF	Date Analyzed
NWTPH-DX - RBC		NWTPH-DX				Analyst: BS
Diesel	0.853	0.0800	A4	mg/L	1	9/22/2014 3:14:11 PM
Lube Oil	0.482	0.200		mg/L	1	9/22/2014 3:14:11 PM
Surr: o-Terphenyl	117	50-150		%REC	1	9/22/2014 3:14:11 PM
NWTPH HCID		NWHCID				Analyst: BS
Diesel	DIESEL	0.640		mg/L	1	9/20/2014 8:06:57 PM
Gasoline	ND	0.254		mg/L	1	9/20/2014 8:06:57 PM
Kerosene	ND	0.640		mg/L	1	9/20/2014 8:06:57 PM
Lube Oil	ND	0.640		mg/L	1	9/20/2014 8:06:57 PM
Mineral Spirits	ND	0.254		mg/L	1	9/20/2014 8:06:57 PM
Surr: BFB	118	30.2-133		%REC	1	9/20/2014 8:06:57 PM
Surr: o-Terphenyl	84.0	50-150		%REC	1	9/20/2014 8:06:57 PM
BTEX - RBC		SW8021B				Analyst: BS
Benzene	ND	0.300		µg/L	1	9/24/2014 4:37:36 PM
Toluene	0.930	0.500		µg/L	1	9/24/2014 4:37:36 PM
Ethylbenzene	1.70	0.500		µg/L	1	9/24/2014 4:37:36 PM
Xylenes, Total	4.69	1.50		µg/L	1	9/24/2014 4:37:36 PM
Surr: 4-Bromofluorobenzene	102	74.8-126		%REC	1	9/24/2014 4:37:36 PM
NWTPH-GX		NWTPH-GX				Analyst: BS
Gasoline	ND	100		µg/L	1	9/24/2014 4:38:57 PM
Surr: 4-Bromofluorobenzene	112	50-150		%REC	1	9/24/2014 4:38:57 PM
ICP/MS METALS-DISSOLVED RECOVERABLE		SW6020A				Analyst: KP
Lead	ND	0.100		µg/L	1	10/10/2014 11:06:00 AM

Specialty Analytical

Date Reported: 15-Oct-14

CLIENT: Maul Foster & Alongi

Collection Date: 9/17/2014 11:42:00 AM

Project: Bus Barn / 0239.28.05

Lab ID: 1409113-003

Client Sample ID: B6-W

Matrix: WATER

Analyses	Result	RL	Qual	Unit	DF	Date Analyzed
NWTPH HCID		NWHCID		Analyst: BS		
Diesel	ND	0.613		mg/L	1	9/20/2014 8:36:57 PM
Gasoline	ND	0.243		mg/L	1	9/20/2014 8:36:57 PM
Kerosene	ND	0.613		mg/L	1	9/20/2014 8:36:57 PM
Lube Oil	ND	0.613		mg/L	1	9/20/2014 8:36:57 PM
Mineral Spirits	ND	0.243		mg/L	1	9/20/2014 8:36:57 PM
Surr: BFB	101	30.2-133		%REC	1	9/20/2014 8:36:57 PM
Surr: o-Terphenyl	61.4	50-150		%REC	1	9/20/2014 8:36:57 PM
VOLATILE ORGANICS BY GC/MS		SW8260B		Analyst: CK		
1,1,1,2-Tetrachloroethane	ND	0.500		µg/L	1	9/23/2014 3:20:00 PM
1,1,1-Trichloroethane	ND	0.500		µg/L	1	9/23/2014 3:20:00 PM
1,1,2,2-Tetrachloroethane	ND	1.00		µg/L	1	9/23/2014 3:20:00 PM
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.00		µg/L	1	9/23/2014 3:20:00 PM
1,1,2-Trichloroethane	ND	1.00		µg/L	1	9/23/2014 3:20:00 PM
1,1-Dichloroethane	ND	0.300		µg/L	1	9/23/2014 3:20:00 PM
1,1-Dichloroethene	ND	0.500		µg/L	1	9/23/2014 3:20:00 PM
1,1-Dichloropropene	ND	0.300		µg/L	1	9/23/2014 3:20:00 PM
1,2,3-Trichlorobenzene	ND	1.00		µg/L	1	9/23/2014 3:20:00 PM
1,2,3-Trichloropropane	ND	0.500		µg/L	1	9/23/2014 3:20:00 PM
1,2,4-Trichlorobenzene	ND	1.00		µg/L	1	9/23/2014 3:20:00 PM
1,2,4-Trimethylbenzene	ND	0.500		µg/L	1	9/23/2014 3:20:00 PM
1,2-Dibromo-3-chloropropane	ND	1.00		µg/L	1	9/23/2014 3:20:00 PM
1,2-Dibromoethane	ND	1.00		µg/L	1	9/23/2014 3:20:00 PM
1,2-Dichlorobenzene	ND	1.00		µg/L	1	9/23/2014 3:20:00 PM
1,2-Dichloroethane	ND	0.500		µg/L	1	9/23/2014 3:20:00 PM
1,2-Dichloropropane	ND	0.300		µg/L	1	9/23/2014 3:20:00 PM
1,3,5-Trimethylbenzene	ND	0.500		µg/L	1	9/23/2014 3:20:00 PM
1,3-Dichlorobenzene	ND	0.500		µg/L	1	9/23/2014 3:20:00 PM
1,3-Dichloropropane	ND	0.500		µg/L	1	9/23/2014 3:20:00 PM
1,4-Dichlorobenzene	ND	1.00		µg/L	1	9/23/2014 3:20:00 PM
2,2-Dichloropropane	ND	0.300		µg/L	1	9/23/2014 3:20:00 PM
2-Butanone	ND	10.0		µg/L	1	9/23/2014 3:20:00 PM
2-Chlorotoluene	ND	0.500		µg/L	1	9/23/2014 3:20:00 PM
2-Hexanone	ND	10.0		µg/L	1	9/23/2014 3:20:00 PM
4-Chlorotoluene	ND	0.500		µg/L	1	9/23/2014 3:20:00 PM
4-Isopropyltoluene	ND	0.500		µg/L	1	9/23/2014 3:20:00 PM
4-Methyl-2-pentanone	ND	20.0		µg/L	1	9/23/2014 3:20:00 PM
Acetone	ND	10.0		µg/L	1	9/23/2014 3:20:00 PM
Acrylonitrile	ND	5.00		µg/L	1	9/23/2014 3:20:00 PM

Specialty Analytical

Date Reported: 15-Oct-14

CLIENT: Maul Foster & Alongi

Collection Date: 9/17/2014 11:42:00 AM

Project: Bus Barn / 0239.28.05

Lab ID: 1409113-003

Client Sample ID: B6-W

Matrix: WATER

Analyses	Result	RL	Qual	Unit	DF	Date Analyzed
VOLATILE ORGANICS BY GC/MS		SW8260B		Analyst: CK		
Benzene	ND	0.300		µg/L	1	9/23/2014 3:20:00 PM
Bromobenzene	ND	0.300		µg/L	1	9/23/2014 3:20:00 PM
Bromochloromethane	ND	1.00		µg/L	1	9/23/2014 3:20:00 PM
Bromodichloromethane	ND	0.500		µg/L	1	9/23/2014 3:20:00 PM
Bromoform	ND	1.00		µg/L	1	9/23/2014 3:20:00 PM
Bromomethane	ND	1.00		µg/L	1	9/23/2014 3:20:00 PM
Carbon Disulfide	ND	1.00		µg/L	1	9/23/2014 3:20:00 PM
Carbon tetrachloride	ND	0.500		µg/L	1	9/23/2014 3:20:00 PM
Chlorobenzene	ND	0.500		µg/L	1	9/23/2014 3:20:00 PM
Chloroethane	ND	1.00		µg/L	1	9/23/2014 3:20:00 PM
Chloroform	ND	0.300		µg/L	1	9/23/2014 3:20:00 PM
Chloromethane	ND	0.500		µg/L	1	9/23/2014 3:20:00 PM
cis-1,2-Dichloroethene	ND	0.300		µg/L	1	9/23/2014 3:20:00 PM
cis-1,3-Dichloropropene	ND	0.500		µg/L	1	9/23/2014 3:20:00 PM
Dibromochloromethane	ND	1.00		µg/L	1	9/23/2014 3:20:00 PM
Dibromomethane	ND	1.00		µg/L	1	9/23/2014 3:20:00 PM
Dichlorodifluoromethane	ND	0.500		µg/L	1	9/23/2014 3:20:00 PM
Ethylbenzene	ND	0.500		µg/L	1	9/23/2014 3:20:00 PM
Hexachlorobutadiene	ND	1.00		µg/L	1	9/23/2014 3:20:00 PM
Isopropylbenzene	ND	0.300		µg/L	1	9/23/2014 3:20:00 PM
m,p-Xylene	ND	1.00		µg/L	1	9/23/2014 3:20:00 PM
Methyl tert-butyl ether	ND	0.500		µg/L	1	9/23/2014 3:20:00 PM
Methylene Chloride	ND	20.0		µg/L	1	9/23/2014 3:20:00 PM
Naphthalene	ND	1.00		µg/L	1	9/23/2014 3:20:00 PM
n-Butylbenzene	ND	0.500		µg/L	1	9/23/2014 3:20:00 PM
n-Propylbenzene	ND	0.500		µg/L	1	9/23/2014 3:20:00 PM
o-Xylene	ND	0.300		µg/L	1	9/23/2014 3:20:00 PM
sec-Butylbenzene	ND	0.500		µg/L	1	9/23/2014 3:20:00 PM
Styrene	ND	0.500		µg/L	1	9/23/2014 3:20:00 PM
tert-Butylbenzene	ND	0.500		µg/L	1	9/23/2014 3:20:00 PM
Tetrachloroethene	ND	1.00		µg/L	1	9/23/2014 3:20:00 PM
Toluene	ND	0.500		µg/L	1	9/23/2014 3:20:00 PM
trans-1,2-Dichloroethene	ND	0.500		µg/L	1	9/23/2014 3:20:00 PM
trans-1,3-Dichloropropene	ND	0.500		µg/L	1	9/23/2014 3:20:00 PM
Trichloroethene	ND	0.300		µg/L	1	9/23/2014 3:20:00 PM
Trichlorofluoromethane	ND	1.00		µg/L	1	9/23/2014 3:20:00 PM
Vinyl Chloride	ND	0.300		µg/L	1	9/23/2014 3:20:00 PM
Surr: 1,2-Dichloroethane-d4	103	72.2-129		%REC	1	9/23/2014 3:20:00 PM
Surr: 4-Bromofluorobenzene	90.0	73.5-125		%REC	1	9/23/2014 3:20:00 PM

Specialty Analytical

Date Reported: 15-Oct-14

CLIENT: Maul Foster & Alongi

Collection Date: 9/17/2014 11:42:00 AM

Project: Bus Barn / 0239.28.05

Lab ID: 1409113-003

Client Sample ID: B6-W

Matrix: WATER

Analyses	Result	RL	Qual	Unit	DF	Date Analyzed
VOLATILE ORGANICS BY GC/MS		SW8260B				Analyst: CK
Surr: Dibromofluoromethane	108	58.8-148		%REC	1	9/23/2014 3:20:00 PM
Surr: Toluene-d8	104	79.8-137		%REC	1	9/23/2014 3:20:00 PM

Specialty Analytical

Date Reported: 15-Oct-14

CLIENT: Maul Foster & Alongi

Collection Date: 9/17/2014 11:42:00 AM

Project: Bus Barn / 0239.28.05

Lab ID: 1409113-004

Client Sample ID: B6-W-DUP

Matrix: WATER

Analyses	Result	RL	Qual	Unit	DF	Date Analyzed
NWTPH HCID		NWHCID		Analyst: BS		
Diesel	ND	0.640		mg/L	1	9/20/2014 9:06:57 PM
Gasoline	ND	0.254		mg/L	1	9/20/2014 9:06:57 PM
Kerosene	ND	0.640		mg/L	1	9/20/2014 9:06:57 PM
Lube Oil	ND	0.640		mg/L	1	9/20/2014 9:06:57 PM
Mineral Spirits	ND	0.254		mg/L	1	9/20/2014 9:06:57 PM
Surr: BFB	97.3	30.2-133		%REC	1	9/20/2014 9:06:57 PM
Surr: o-Terphenyl	81.4	50-150		%REC	1	9/20/2014 9:06:57 PM
VOLATILE ORGANICS BY GC/MS		SW8260B		Analyst: CK		
1,1,1,2-Tetrachloroethane	ND	0.500		µg/L	1	9/23/2014 2:46:00 PM
1,1,1-Trichloroethane	ND	0.500		µg/L	1	9/23/2014 2:46:00 PM
1,1,2,2-Tetrachloroethane	ND	1.00		µg/L	1	9/23/2014 2:46:00 PM
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.00		µg/L	1	9/23/2014 2:46:00 PM
1,1,2-Trichloroethane	ND	1.00		µg/L	1	9/23/2014 2:46:00 PM
1,1-Dichloroethane	ND	0.300		µg/L	1	9/23/2014 2:46:00 PM
1,1-Dichloroethene	ND	0.500		µg/L	1	9/23/2014 2:46:00 PM
1,1-Dichloropropene	ND	0.300		µg/L	1	9/23/2014 2:46:00 PM
1,2,3-Trichlorobenzene	ND	1.00		µg/L	1	9/23/2014 2:46:00 PM
1,2,3-Trichloropropane	ND	0.500		µg/L	1	9/23/2014 2:46:00 PM
1,2,4-Trichlorobenzene	ND	1.00		µg/L	1	9/23/2014 2:46:00 PM
1,2,4-Trimethylbenzene	1.53	0.500		µg/L	1	9/23/2014 2:46:00 PM
1,2-Dibromo-3-chloropropane	ND	1.00		µg/L	1	9/23/2014 2:46:00 PM
1,2-Dibromoethane	ND	1.00		µg/L	1	9/23/2014 2:46:00 PM
1,2-Dichlorobenzene	ND	1.00		µg/L	1	9/23/2014 2:46:00 PM
1,2-Dichloroethane	ND	0.500		µg/L	1	9/23/2014 2:46:00 PM
1,2-Dichloropropane	ND	0.300		µg/L	1	9/23/2014 2:46:00 PM
1,3,5-Trimethylbenzene	ND	0.500		µg/L	1	9/23/2014 2:46:00 PM
1,3-Dichlorobenzene	ND	0.500		µg/L	1	9/23/2014 2:46:00 PM
1,3-Dichloropropane	ND	0.500		µg/L	1	9/23/2014 2:46:00 PM
1,4-Dichlorobenzene	ND	1.00		µg/L	1	9/23/2014 2:46:00 PM
2,2-Dichloropropane	ND	0.300		µg/L	1	9/23/2014 2:46:00 PM
2-Butanone	ND	10.0		µg/L	1	9/23/2014 2:46:00 PM
2-Chlorotoluene	ND	0.500		µg/L	1	9/23/2014 2:46:00 PM
2-Hexanone	ND	10.0		µg/L	1	9/23/2014 2:46:00 PM
4-Chlorotoluene	ND	0.500		µg/L	1	9/23/2014 2:46:00 PM
4-Isopropyltoluene	ND	0.500		µg/L	1	9/23/2014 2:46:00 PM
4-Methyl-2-pentanone	ND	20.0		µg/L	1	9/23/2014 2:46:00 PM
Acetone	ND	10.0		µg/L	1	9/23/2014 2:46:00 PM
Acrylonitrile	ND	5.00		µg/L	1	9/23/2014 2:46:00 PM

Specialty Analytical

Date Reported: 15-Oct-14

CLIENT: Maul Foster & Alongi

Collection Date: 9/17/2014 11:42:00 AM

Project: Bus Barn / 0239.28.05

Lab ID: 1409113-004

Client Sample ID: B6-W-DUP

Matrix: WATER

Analyses	Result	RL	Qual	Unit	DF	Date Analyzed
VOLATILE ORGANICS BY GC/MS		SW8260B		Analyst: CK		
Benzene	ND	0.300		µg/L	1	9/23/2014 2:46:00 PM
Bromobenzene	ND	0.300		µg/L	1	9/23/2014 2:46:00 PM
Bromochloromethane	ND	1.00		µg/L	1	9/23/2014 2:46:00 PM
Bromodichloromethane	ND	0.500		µg/L	1	9/23/2014 2:46:00 PM
Bromoform	ND	1.00		µg/L	1	9/23/2014 2:46:00 PM
Bromomethane	ND	1.00		µg/L	1	9/23/2014 2:46:00 PM
Carbon Disulfide	ND	1.00		µg/L	1	9/23/2014 2:46:00 PM
Carbon tetrachloride	ND	0.500		µg/L	1	9/23/2014 2:46:00 PM
Chlorobenzene	ND	0.500		µg/L	1	9/23/2014 2:46:00 PM
Chloroethane	ND	1.00		µg/L	1	9/23/2014 2:46:00 PM
Chloroform	ND	0.300		µg/L	1	9/23/2014 2:46:00 PM
Chloromethane	ND	0.500		µg/L	1	9/23/2014 2:46:00 PM
cis-1,2-Dichloroethene	ND	0.300		µg/L	1	9/23/2014 2:46:00 PM
cis-1,3-Dichloropropene	ND	0.500		µg/L	1	9/23/2014 2:46:00 PM
Dibromochloromethane	ND	1.00		µg/L	1	9/23/2014 2:46:00 PM
Dibromomethane	ND	1.00		µg/L	1	9/23/2014 2:46:00 PM
Dichlorodifluoromethane	ND	0.500		µg/L	1	9/23/2014 2:46:00 PM
Ethylbenzene	0.540	0.500		µg/L	1	9/23/2014 2:46:00 PM
Hexachlorobutadiene	ND	1.00		µg/L	1	9/23/2014 2:46:00 PM
Isopropylbenzene	ND	0.300		µg/L	1	9/23/2014 2:46:00 PM
m,p-Xylene	ND	1.00		µg/L	1	9/23/2014 2:46:00 PM
Methyl tert-butyl ether	ND	0.500		µg/L	1	9/23/2014 2:46:00 PM
Methylene Chloride	ND	20.0		µg/L	1	9/23/2014 2:46:00 PM
Naphthalene	1.22	1.00		µg/L	1	9/23/2014 2:46:00 PM
n-Butylbenzene	ND	0.500		µg/L	1	9/23/2014 2:46:00 PM
n-Propylbenzene	ND	0.500		µg/L	1	9/23/2014 2:46:00 PM
o-Xylene	ND	0.300		µg/L	1	9/23/2014 2:46:00 PM
sec-Butylbenzene	ND	0.500		µg/L	1	9/23/2014 2:46:00 PM
Styrene	ND	0.500		µg/L	1	9/23/2014 2:46:00 PM
tert-Butylbenzene	ND	0.500		µg/L	1	9/23/2014 2:46:00 PM
Tetrachloroethene	ND	1.00		µg/L	1	9/23/2014 2:46:00 PM
Toluene	ND	0.500		µg/L	1	9/23/2014 2:46:00 PM
trans-1,2-Dichloroethene	ND	0.500		µg/L	1	9/23/2014 2:46:00 PM
trans-1,3-Dichloropropene	ND	0.500		µg/L	1	9/23/2014 2:46:00 PM
Trichloroethene	ND	0.300		µg/L	1	9/23/2014 2:46:00 PM
Trichlorofluoromethane	ND	1.00		µg/L	1	9/23/2014 2:46:00 PM
Vinyl Chloride	ND	0.300		µg/L	1	9/23/2014 2:46:00 PM
Surr: 1,2-Dichloroethane-d4	100	72.2-129		%REC	1	9/23/2014 2:46:00 PM
Surr: 4-Bromofluorobenzene	90.5	73.5-125		%REC	1	9/23/2014 2:46:00 PM

Specialty Analytical

Date Reported: 15-Oct-14

CLIENT: Maul Foster & Alongi

Collection Date: 9/17/2014 11:42:00 AM

Project: Bus Barn / 0239.28.05

Lab ID: 1409113-004

Client Sample ID: B6-W-DUP

Matrix: WATER

Analyses	Result	RL	Qual	Unit	DF	Date Analyzed
VOLATILE ORGANICS BY GC/MS		SW8260B				Analyst: CK
Surr: Dibromofluoromethane	107	58.8-148		%REC	1	9/23/2014 2:46:00 PM
Surr: Toluene-d8	101	79.8-137		%REC	1	9/23/2014 2:46:00 PM

Specialty Analytical

Date Reported: 15-Oct-14

CLIENT: Maul Foster & Alongi

Collection Date: 9/17/2014

Project: Bus Barn / 0239.28.05

Lab ID: 1409113-005

Client Sample ID: Trip Blank

Matrix: WATER

Analyses	Result	RL	Qual	Unit	DF	Date Analyzed
VOLATILE ORGANICS BY GC/MS		SW8260B				Analyst: CK
1,1,1,2-Tetrachloroethane	ND	0.500		µg/L	1	9/23/2014 1:07:00 PM
1,1,1-Trichloroethane	ND	0.500		µg/L	1	9/23/2014 1:07:00 PM
1,1,2,2-Tetrachloroethane	ND	1.00		µg/L	1	9/23/2014 1:07:00 PM
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.00		µg/L	1	9/23/2014 1:07:00 PM
1,1,2-Trichloroethane	ND	1.00		µg/L	1	9/23/2014 1:07:00 PM
1,1-Dichloroethane	ND	0.300		µg/L	1	9/23/2014 1:07:00 PM
1,1-Dichloroethene	ND	0.500		µg/L	1	9/23/2014 1:07:00 PM
1,1-Dichloropropene	ND	0.300		µg/L	1	9/23/2014 1:07:00 PM
1,2,3-Trichlorobenzene	ND	1.00		µg/L	1	9/23/2014 1:07:00 PM
1,2,3-Trichloropropane	ND	0.500		µg/L	1	9/23/2014 1:07:00 PM
1,2,4-Trichlorobenzene	ND	1.00		µg/L	1	9/23/2014 1:07:00 PM
1,2,4-Trimethylbenzene	ND	0.500		µg/L	1	9/23/2014 1:07:00 PM
1,2-Dibromo-3-chloropropane	ND	1.00		µg/L	1	9/23/2014 1:07:00 PM
1,2-Dibromoethane	ND	1.00		µg/L	1	9/23/2014 1:07:00 PM
1,2-Dichlorobenzene	ND	1.00		µg/L	1	9/23/2014 1:07:00 PM
1,2-Dichloroethane	ND	0.500		µg/L	1	9/23/2014 1:07:00 PM
1,2-Dichloropropane	ND	0.300		µg/L	1	9/23/2014 1:07:00 PM
1,3,5-Trimethylbenzene	ND	0.500		µg/L	1	9/23/2014 1:07:00 PM
1,3-Dichlorobenzene	ND	0.500		µg/L	1	9/23/2014 1:07:00 PM
1,3-Dichloropropane	ND	0.500		µg/L	1	9/23/2014 1:07:00 PM
1,4-Dichlorobenzene	ND	1.00		µg/L	1	9/23/2014 1:07:00 PM
2,2-Dichloropropane	ND	0.300		µg/L	1	9/23/2014 1:07:00 PM
2-Butanone	ND	10.0		µg/L	1	9/23/2014 1:07:00 PM
2-Chlorotoluene	ND	0.500		µg/L	1	9/23/2014 1:07:00 PM
2-Hexanone	ND	10.0		µg/L	1	9/23/2014 1:07:00 PM
4-Chlorotoluene	ND	0.500		µg/L	1	9/23/2014 1:07:00 PM
4-Isopropyltoluene	ND	0.500		µg/L	1	9/23/2014 1:07:00 PM
4-Methyl-2-pentanone	ND	20.0		µg/L	1	9/23/2014 1:07:00 PM
Acetone	ND	10.0		µg/L	1	9/23/2014 1:07:00 PM
Acrylonitrile	ND	5.00		µg/L	1	9/23/2014 1:07:00 PM
Benzene	ND	0.300		µg/L	1	9/23/2014 1:07:00 PM
Bromobenzene	ND	0.300		µg/L	1	9/23/2014 1:07:00 PM
Bromochloromethane	ND	1.00		µg/L	1	9/23/2014 1:07:00 PM
Bromodichloromethane	ND	0.500		µg/L	1	9/23/2014 1:07:00 PM
Bromoform	ND	1.00		µg/L	1	9/23/2014 1:07:00 PM
Bromomethane	ND	1.00		µg/L	1	9/23/2014 1:07:00 PM
Carbon Disulfide	ND	1.00		µg/L	1	9/23/2014 1:07:00 PM
Carbon tetrachloride	ND	0.500		µg/L	1	9/23/2014 1:07:00 PM
Chlorobenzene	ND	0.500		µg/L	1	9/23/2014 1:07:00 PM

Specialty Analytical

Date Reported: 15-Oct-14

CLIENT: Maul Foster & Alongi

Collection Date: 9/17/2014

Project: Bus Barn / 0239.28.05

Lab ID: 1409113-005

Client Sample ID: Trip Blank

Matrix: WATER

Analyses	Result	RL	Qual	Unit	DF	Date Analyzed
VOLATILE ORGANICS BY GC/MS		SW8260B		Analyst: CK		
Chloroethane	ND	1.00		µg/L	1	9/23/2014 1:07:00 PM
Chloroform	ND	0.300		µg/L	1	9/23/2014 1:07:00 PM
Chloromethane	ND	0.500		µg/L	1	9/23/2014 1:07:00 PM
cis-1,2-Dichloroethene	ND	0.300		µg/L	1	9/23/2014 1:07:00 PM
cis-1,3-Dichloropropene	ND	0.500		µg/L	1	9/23/2014 1:07:00 PM
Dibromochloromethane	ND	1.00		µg/L	1	9/23/2014 1:07:00 PM
Dibromomethane	ND	1.00		µg/L	1	9/23/2014 1:07:00 PM
Dichlorodifluoromethane	ND	0.500		µg/L	1	9/23/2014 1:07:00 PM
Ethylbenzene	ND	0.500		µg/L	1	9/23/2014 1:07:00 PM
Hexachlorobutadiene	ND	1.00		µg/L	1	9/23/2014 1:07:00 PM
Isopropylbenzene	ND	0.300		µg/L	1	9/23/2014 1:07:00 PM
m,p-Xylene	ND	1.00		µg/L	1	9/23/2014 1:07:00 PM
Methyl tert-butyl ether	ND	0.500		µg/L	1	9/23/2014 1:07:00 PM
Methylene Chloride	ND	20.0		µg/L	1	9/23/2014 1:07:00 PM
Naphthalene	ND	1.00		µg/L	1	9/23/2014 1:07:00 PM
n-Butylbenzene	ND	0.500		µg/L	1	9/23/2014 1:07:00 PM
n-Propylbenzene	ND	0.500		µg/L	1	9/23/2014 1:07:00 PM
o-Xylene	ND	0.300		µg/L	1	9/23/2014 1:07:00 PM
sec-Butylbenzene	ND	0.500		µg/L	1	9/23/2014 1:07:00 PM
Styrene	ND	0.500		µg/L	1	9/23/2014 1:07:00 PM
tert-Butylbenzene	ND	0.500		µg/L	1	9/23/2014 1:07:00 PM
Tetrachloroethene	ND	1.00		µg/L	1	9/23/2014 1:07:00 PM
Toluene	ND	0.500		µg/L	1	9/23/2014 1:07:00 PM
trans-1,2-Dichloroethene	ND	0.500		µg/L	1	9/23/2014 1:07:00 PM
trans-1,3-Dichloropropene	ND	0.500		µg/L	1	9/23/2014 1:07:00 PM
Trichloroethene	ND	0.300		µg/L	1	9/23/2014 1:07:00 PM
Trichlorofluoromethane	ND	1.00		µg/L	1	9/23/2014 1:07:00 PM
Vinyl Chloride	ND	0.300		µg/L	1	9/23/2014 1:07:00 PM
Surr: 1,2-Dichloroethane-d4	105	72.2-129		%REC	1	9/23/2014 1:07:00 PM
Surr: 4-Bromofluorobenzene	87.1	73.5-125		%REC	1	9/23/2014 1:07:00 PM
Surr: Dibromofluoromethane	110	58.8-148		%REC	1	9/23/2014 1:07:00 PM
Surr: Toluene-d8	104	79.8-137		%REC	1	9/23/2014 1:07:00 PM

QC SUMMARY REPORT

WO#: 1409113

15-Oct-14

Specialty Analytical

Client: Maul Foster & Alongi
Project: Bus Barn / 0239.28.05

TestCode: 6020_WDISS

Sample ID: ICV		SampType: ICV		TestCode: 6020_WDISS		Units: µg/L		Prep Date:			RunNo: 17300		
Client ID: ICV		Batch ID: 8335		TestNo: SW6020A		Analysis Date: 10/10/2014			SeqNo: 227160				
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Lead 50.5 0.100 50.00 0 101 90 110

Sample ID: 1409141-001DDUP	SampType: DUP	TestCode: 6020_WDISS	Units: µg/L	Prep Date:				RunNo: 17300			
Client ID: ZZZZZZ	Batch ID: 8335	TestNo: SW6020A	Analysis Date: 10/10/2014				SeqNo: 227164				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Lead ND 0.500 0 0 20

Sample ID: 1409141-001DMS	SampType: MS	TestCode: 6020_WDISS	Units: µg/L	Prep Date:					RunNo: 17300		
Client ID: ZZZZZZ	Batch ID: 8335	TestNo: SW6020A	Analysis Date: 10/10/2014					SeqNo: 227165			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Lead 53.7 0.500 50.00 0 107 70 130

Sample ID: 1409141-001DMSD		SampType: MSD		TestCode: 6020_WDISS		Units: µg/L		Prep Date:			RunNo: 17300	
Client ID: ZZZZZZ		Batch ID: 8335		TestNo: SW6020A		Analysis Date: 10/10/2014			SeqNo: 227166			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	

Lead 53.4 0.500 50.00 0 107 70 130 53.70 0.467 20

Qualifiers: B Analyte detected in the associated Method Blank
O RSD is greater than RSDlimit

H Holding times for preparation or analysis exceeded
R RPD outside accepted recovery limits

ND Not Detected at the Reporting Limit
S Spike Recovery outside accepted recovery

QC SUMMARY REPORT

WO#: 1409113

15-Oct-14

Specialty Analytical

Client: Maul Foster & Alongi

Project: Bus Barn / 0239.28.05

TestCode: 6020_WDISS

Sample ID: CCV	SampType: CCV	TestCode: 6020_WDISS	Units: µg/L	Prep Date:	RunNo: 17300						
Client ID: CCV	Batch ID: 8335	TestNo: SW6020A		Analysis Date: 10/10/2014	SeqNo: 227170						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	50.3	0.100	50.00	0	101	90	110				

Qualifiers: B Analyte detected in the associated Method Blank
O RSD is greater than RSDlimit

H Holding times for preparation or analysis exceeded
R RPD outside accepted recovery limits

ND Not Detected at the Reporting Limit
S Spike Recovery outside accepted recovery

QC SUMMARY REPORT

WO#: 1409113

15-Oct-14

Specialty Analytical

Client: Maul Foster & Alongi

Project: Bus Barn / 0239.28.05

TestCode: 8260_25_W

Sample ID: CCV MSVWS-1997	SampType: CCV	TestCode: 8260_25_W	Units: µg/L	Prep Date:	RunNo: 16910						
Client ID: CCV	Batch ID: R16910	TestNo: SW8260B	Analysis Date: 9/23/2014	SeqNo: 223283							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1-Dichloroethene	63.6	0.500	60.00	0	106	80	120				
1,2-Dichloropropane	70.3	0.300	60.00	0	117	80	120				
Chloroform	65.1	0.300	60.00	0	108	80	120				
Ethylbenzene	65.5	0.500	60.00	0	109	80	120				
Toluene	66.4	0.500	60.00	0	111	80	120				
Vinyl Chloride	57.8	0.300	60.00	0	96.4	80	120				

Sample ID: LCS MSVWS-1998	SampType: LCS	TestCode: 8260_25_W	Units: µg/L	Prep Date:	RunNo: 16910						
Client ID: LCSW	Batch ID: R16910	TestNo: SW8260B	Analysis Date: 9/23/2014	SeqNo: 223284							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1-Dichloroethene	63.9	0.500	60.00	0	106	61.2	135				
Benzene	67.6	0.300	60.00	0	113	76.8	125				
Chlorobenzene	64.0	0.500	60.00	0	107	84.1	116				
Toluene	67.9	0.500	60.00	0	113	82	122				
Trichloroethene	67.5	0.300	60.00	0	113	68.5	124				

Sample ID: MB	SampType: MBLK	TestCode: 8260_25_W	Units: µg/L	Prep Date:	RunNo: 16910						
Client ID: PBW	Batch ID: R16910	TestNo: SW8260B	Analysis Date: 9/23/2014	SeqNo: 223285							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1,2-Tetrachloroethane	ND	0.500									
1,1,1-Trichloroethane	ND	0.500									

Qualifiers: B Analyte detected in the associated Method Blank
O RSD is greater than RSDlimit

H Holding times for preparation or analysis exceeded
R RPD outside accepted recovery limits

ND Not Detected at the Reporting Limit
S Spike Recovery outside accepted recovery

QC SUMMARY REPORT

WO#: 1409113

15-Oct-14

Specialty Analytical

Client: Maul Foster & Alongi

Project: Bus Barn / 0239.28.05

TestCode: 8260_25_W

Sample ID: MB	SampType: MBLK	TestCode: 8260_25_W	Units: µg/L	Prep Date:	RunNo: 16910						
Client ID: PBW	Batch ID: R16910	TestNo: SW8260B	Analysis Date: 9/23/2014	SeqNo: 223285							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,2,2-Tetrachloroethane	ND	1.00									
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.00									
1,1,2-Trichloroethane	ND	1.00									
1,1-Dichloroethane	ND	0.300									
1,1-Dichloroethene	ND	0.500									
1,1-Dichloropropene	ND	0.300									
1,2,3-Trichlorobenzene	ND	1.00									
1,2,3-Trichloropropane	ND	0.500									
1,2,4-Trichlorobenzene	ND	1.00									
1,2,4-Trimethylbenzene	ND	0.500									
1,2-Dibromo-3-chloropropane	ND	1.00									
1,2-Dibromoethane	ND	1.00									
1,2-Dichlorobenzene	ND	1.00									
1,2-Dichloroethane	ND	0.500									
1,2-Dichloropropane	ND	0.300									
1,3,5-Trimethylbenzene	ND	0.500									
1,3-Dichlorobenzene	ND	0.500									
1,3-Dichloropropane	ND	0.500									
1,4-Dichlorobenzene	ND	1.00									
2,2-Dichloropropane	ND	0.300									
2-Butanone	ND	10.0									
2-Chlorotoluene	ND	0.500									
2-Hexanone	ND	10.0									
4-Chlorotoluene	ND	0.500									
4-Isopropyltoluene	ND	0.500									
4-Methyl-2-pentanone	ND	20.0									

Qualifiers: B Analyte detected in the associated Method Blank
O RSD is greater than RSDlimit

H Holding times for preparation or analysis exceeded
R RPD outside accepted recovery limits

ND Not Detected at the Reporting Limit
S Spike Recovery outside accepted recovery

QC SUMMARY REPORT

WO#: 1409113

15-Oct-14

Specialty Analytical

Client: Maul Foster & Alongi

Project: Bus Barn / 0239.28.05

TestCode: 8260_25_W

Sample ID: MB	SampType: MBLK	TestCode: 8260_25_W	Units: µg/L	Prep Date:	RunNo: 16910						
Client ID: PBW	Batch ID: R16910	TestNo: SW8260B	Analysis Date: 9/23/2014	SeqNo: 223285							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Acetone	ND	10.0									
Acrylonitrile	ND	5.00									
Benzene	ND	0.300									
Bromobenzene	ND	0.300									
Bromochloromethane	ND	1.00									
Bromodichloromethane	ND	0.500									
Bromoform	ND	1.00									
Bromomethane	ND	1.00									
Carbon Disulfide	ND	1.00									
Carbon tetrachloride	ND	0.500									
Chlorobenzene	ND	0.500									
Chloroethane	ND	1.00									
Chloroform	ND	0.300									
Chloromethane	ND	0.500									
cis-1,2-Dichloroethene	ND	0.300									
cis-1,3-Dichloropropene	ND	0.500									
Dibromochloromethane	ND	1.00									
Dibromomethane	ND	1.00									
Dichlorodifluoromethane	ND	0.500									
Ethylbenzene	ND	0.500									
Hexachlorobutadiene	ND	1.00									
Isopropylbenzene	ND	0.300									
m,p-Xylene	ND	1.00									
Methyl tert-butyl ether	ND	0.500									
Methylene Chloride	ND	20.0									
Naphthalene	ND	1.00									

Qualifiers: B Analyte detected in the associated Method Blank
O RSD is greater than RSDlimit

H Holding times for preparation or analysis exceeded
R RPD outside accepted recovery limits

ND Not Detected at the Reporting Limit
S Spike Recovery outside accepted recovery

QC SUMMARY REPORT

WO#: 1409113

15-Oct-14

Specialty Analytical

Client: Maul Foster & Alongi

Project: Bus Barn / 0239.28.05

TestCode: 8260_25_W

Sample ID: MB	SampType: MBLK	TestCode: 8260_25_W	Units: µg/L	Prep Date:	RunNo: 16910						
Client ID: PBW	Batch ID: R16910	TestNo: SW8260B	Analysis Date: 9/23/2014	SeqNo: 223285							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
n-Butylbenzene	ND	0.500									
n-Propylbenzene	ND	0.500									
o-Xylene	ND	0.300									
sec-Butylbenzene	ND	0.500									
Styrene	ND	0.500									
tert-Butylbenzene	ND	0.500									
Tetrachloroethene	ND	1.00									
Toluene	ND	0.500									
trans-1,2-Dichloroethene	ND	0.500									
trans-1,3-Dichloropropene	ND	0.500									
Trichloroethene	ND	0.300									
Trichlorofluoromethane	ND	1.00									
Vinyl Chloride	ND	0.300									
Surr: 1,2-Dichloroethane-d4	98.8		100.0		98.8	72.2	129				
Surr: 4-Bromofluorobenzene	89.5		100.0		89.5	73.5	125				
Surr: Dibromofluoromethane	106		100.0		106	58.8	148				
Surr: Toluene-d8	101		100.0		101	79.8	137				

Sample ID: 1409113-003BMS	SampType: MS	TestCode: 8260_25_W	Units: µg/L	Prep Date:	RunNo: 16910						
Client ID: B6-W	Batch ID: R16910	TestNo: SW8260B		Analysis Date: 9/23/2014	SeqNo: 223562						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1-Dichloroethene	41.1	0.500	40.00	0	103	47.8	165				
Benzene	42.5	0.300	40.00	0	106	71.5	118				

Qualifiers: B Analyte detected in the associated Method Blank
O RSD is greater than RSDlimit

H Holding times for preparation or analysis exceeded
R RPD outside accepted recovery limits

ND Not Detected at the Reporting Limit
S Spike Recovery outside accepted recovery

QC SUMMARY REPORT

WO#: 1409113

15-Oct-14

Specialty Analytical

Client: Maul Foster & Alongi

Project: Bus Barn / 0239.28.05

TestCode: 8260_25_W

Sample ID: 1409113-003BMS	SampType: MS	TestCode: 8260_25_W	Units: µg/L	Prep Date:	RunNo: 16910						
Client ID: B6-W	Batch ID: R16910	TestNo: SW8260B	Analysis Date: 9/23/2014	SeqNo: 223562							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chlorobenzene	42.4	0.500	40.00	0	106	79.8	114				
Toluene	45.6	0.500	40.00	0.1000	114	79.6	121				
Trichloroethene	40.8	0.300	40.00	0	102	73.6	120				

Sample ID: 1409113-003BMSD	SampType: MSD	TestCode: 8260_25_W	Units: µg/L	Prep Date:					RunNo: 16910		
Client ID: B6-W	Batch ID: R16910	TestNo: SW8260B	Analysis Date: 9/23/2014					SeqNo: 223563			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1-Dichloroethene	42.4	0.500	40.00	0	106	47.8	165	41.09	3.26	20	
Benzene	43.7	0.300	40.00	0	109	71.5	118	42.53	2.74	20	
Chlorobenzene	43.9	0.500	40.00	0	110	79.8	114	42.36	3.66	20	
Toluene	47.4	0.500	40.00	0.1000	118	79.6	121	45.63	3.85	20	
Trichloroethene	41.8	0.300	40.00	0	105	73.6	120	40.82	2.49	20	

Qualifiers: B Analyte detected in the associated Method Blank
O RSD is greater than RSDlimit

H Holding times for preparation or analysis exceeded
R RPD outside accepted recovery limits

ND Not Detected at the Reporting Limit
S Spike Recovery outside accepted recovery

QC SUMMARY REPORT

WO#: 1409113

15-Oct-14

Specialty Analytical

Client: Maul Foster & Alongi

Project: Bus Barn / 0239.28.05

TestCode: BTEXRBC_W

Sample ID: LCS-R16924	SampType: LCS	TestCode: BTEXRBC_W Units: µg/L				Prep Date:			RunNo: 16924		
Client ID: LCSW	Batch ID: R16924	TestNo: SW8021B				Analysis Date: 9/24/2014			SeqNo: 223504		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	44.5	0.300	50.00	0	89.0	75.8	113				
Toluene	49.3	0.500	50.00	0	98.5	77	116				
Ethylbenzene	50.2	0.500	50.00	0	100	76.6	118				
Xylenes, Total	140	1.50	150.0	0	93.5	76.7	118				

Sample ID: MB-R16924	SampType: MBLK	TestCode: BTEXRBC_W	Units: µg/L	Prep Date:	RunNo: 16924						
Client ID: PBW	Batch ID: R16924	TestNo: SW8021B	Analysis Date: 9/24/2014	SeqNo: 223505							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	ND	0.300									
Toluene	ND	0.500									
Ethylbenzene	ND	0.500									
Xylenes, Total	ND	1.50									
Surr: 4-Bromofluorobenzene	97.5		100.0		97.5	74.8	126				

Sample ID: 1409115-001BMS	SampType: MS	TestCode: BTEXRBC_W Units: µg/L				Prep Date:			RunNo: 16924		
Client ID: ZZZZZZ	Batch ID: R16924	TestNo: SW8021B				Analysis Date: 9/24/2014			SeqNo: 223507		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	28.1	0.300	25.00	4.800	93.1	67.8	118				
Toluene	28.9	0.500	25.00	2.060	107	74.7	117				
Ethylbenzene	149	0.500	25.00	78.38	283	74.5	115				SMI
Xylenes, Total	227	1.50	75.00	96.86	174	76.8	120				SMI

Qualifiers: B Analyte detected in the associated Method Blank
O RSD is greater than RSDlimit

H Holding times for preparation or analysis exceeded
R RPD outside accepted recovery limits

ND Not Detected at the Reporting Limit
S Spike Recovery outside accepted recovery

QC SUMMARY REPORT

WO#: 1409113

15-Oct-14

Specialty Analytical

Client: Maul Foster & Alongi

Project: Bus Barn / 0239.28.05

TestCode: BTEXRBC_W

Sample ID: 1409115-001BMS	SampType: MS	TestCode: BTEXRBC_W	Units: µg/L	Prep Date:	RunNo: 16924						
Client ID: ZZZZZZ	Batch ID: R16924	TestNo: SW8021B		Analysis Date: 9/24/2014	SeqNo: 223507						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Sample ID: 1409115-001BMSD	SampType: MSD	TestCode: BTEXRBC_W	Units: µg/L	Prep Date:				RunNo: 16924			
Client ID: ZZZZZZ	Batch ID: R16924	TestNo: SW8021B	Analysis Date: 9/24/2014				SeqNo: 223508				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	26.2	0.300	25.00	4.800	85.8	67.8	118	28.07	6.70	20	
Toluene	27.4	0.500	25.00	2.060	101	74.7	117	28.89	5.26	20	
Ethylbenzene	148	0.500	25.00	78.38	277	74.5	115	149.1	1.05	20	SMI
Xylenes, Total	220	1.50	75.00	96.86	164	76.8	120	227.1	3.18	20	SMI

Qualifiers: B Analyte detected in the associated Method Blank
O RSD is greater than RSDlimit

H Holding times for preparation or analysis exceeded
R RPD outside accepted recovery limits

ND Not Detected at the Reporting Limit
S Spike Recovery outside accepted recovery

QC SUMMARY REPORT

WO#: 1409113

15-Oct-14

Specialty Analytical

Client: Maul Foster & Alongi

Project: Bus Barn / 0239.28.05

TestCode: NWTPHDXLL_W

Sample ID: CCV	SampType: CCV	TestCode: NWTPHDXLL	Units: mg/L	Prep Date:	RunNo: 16899						
Client ID: CCV	Batch ID: 8207	TestNo: NWTPH-Dx	SW3510B	Analysis Date: 9/22/2014	SeqNo: 223114						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel	6.16	0.0800	6.000	0	103	85	115				
Lube Oil	3.05	0.200	3.000	0	102	85	115				

Sample ID: MB-8207	SampType: MBLK	TestCode: NWTPHDXLL	Units: mg/L	Prep Date: 9/19/2014	RunNo: 16899						
Client ID: PBW	Batch ID: 8207	TestNo: NWTPH-Dx	SW3510B	Analysis Date: 9/22/2014	SeqNo: 223115						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel	ND	0.0800									
Lube Oil	ND	0.200									
Surr: o-Terphenyl	0.296		0.2000		148	50	150				

Sample ID: LCS-8207	SampType: LCS	TestCode: NWTPHDXLL	Units: mg/L	Prep Date: 9/19/2014	RunNo: 16899						
Client ID: LCSW	Batch ID: 8207	TestNo: NWTPH-Dx	SW3510B	Analysis Date: 9/22/2014	SeqNo: 223116						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel	1.06	0.0800	1.000	0	106	60.7	121				
Lube Oil	1.09	0.200	1.000	0	109	64	126				

Sample ID: LCSD-8207	SampType: LCSD	TestCode: NWTPHDXLL	Units: mg/L	Prep Date: 9/19/2014	RunNo: 16899						
Client ID: LCSS02	Batch ID: 8207	TestNo: NWTPH-Dx	SW3510B	Analysis Date: 9/22/2014	SeqNo: 223117						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Qualifiers: B Analyte detected in the associated Method Blank
O RSD is greater than RSDlimit

H Holding times for preparation or analysis exceeded
R RPD outside accepted recovery limits

ND Not Detected at the Reporting Limit
S Spike Recovery outside accepted recovery

QC SUMMARY REPORT

WO#: 1409113

15-Oct-14

Specialty Analytical

Client: Maul Foster & Alongi

Project: Bus Barn / 0239.28.05

TestCode: NWTPHDXLL_W

Sample ID: LCSD-8207	SampType: LCSD	TestCode: NWTPHDXLL	Units: mg/L	Prep Date: 9/19/2014	RunNo: 16899						
Client ID: LCSS02	Batch ID: 8207	TestNo: NWTPH-Dx	SW3510B	Analysis Date: 9/22/2014	SeqNo: 223117						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel	1.04	0.0800	1.000	0	104	60.7	121	1.061	2.28	20	
Lube Oil	1.15	0.200	1.000	0	115	64	126	1.089	5.43	20	

Sample ID: CCV	SampType: CCV	TestCode: NWTPHDXLL	Units: mg/L	Prep Date:	RunNo: 16899						
Client ID: CCV	Batch ID: 8207	TestNo: NWTPH-Dx	SW3510B	Analysis Date: 9/24/2014	SeqNo: 223579						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel	7.18	0.0800	8.000	0	89.8	85	115				
Lube Oil	4.52	0.200	4.000	0	113	85	115				

Qualifiers: B Analyte detected in the associated Method Blank
O RSD is greater than RSDlimit

H Holding times for preparation or analysis exceeded
R RPD outside accepted recovery limits

ND Not Detected at the Reporting Limit
S Spike Recovery outside accepted recovery

QC SUMMARY REPORT

WO#: 1409113

15-Oct-14

Specialty Analytical

Client: Maul Foster & Alongi
Project: Bus Barn / 0239.28.05

TestCode: NWTPHGX_W

Sample ID: CCV	SampType: CCV	TestCode: NWTPHGX_W	Units: µg/L	Prep Date:	RunNo: 16925						
Client ID: CCV	Batch ID: R16925	TestNo: NWTPH-Gx	Analysis Date: 9/24/2014	SeqNo: 223513							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Gasoline	1840	100	2000	0	91.9	80	120				
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Sample ID: MB-R16925	SampType: MBLK	TestCode: NWTPHGX_W	Units: µg/L	Prep Date:	RunNo: 16925						
Client ID: PBW	Batch ID: R16925	TestNo: NWTPH-Gx		Analysis Date: 9/24/2014	SeqNo: 223514						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Gasoline	ND	100									
Surr: 4-Bromofluorobenzene	107		100.0		107	50	150				

Sample ID: LCS-R16925	SampType: LCS	TestCode: NWTPHGX_W	Units: µg/L	Prep Date:	RunNo: 16925						
Client ID: LCSW	Batch ID: R16925	TestNo: NWTPH-Gx	Analysis Date: 9/24/2014	SeqNo: 223515							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Gasoline	1050	100	1000	0	105	74.4	128				
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Sample ID: 1409115-001BDUP		SampType: DUP		TestCode: NWTPHGX_W		Units: µg/L		Prep Date:		RunNo: 16925			
Client ID: ZZZZZZ		Batch ID: R16925		TestNo: NWTPH-Gx				Analysis Date: 9/24/2014		SeqNo: 223517			
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Gasoline	1100	100						1171	6.02	20	
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Qualifiers:	B	Analyte detected in the associated Method Blank	H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit	Page 12 of 14
	O	RSD is greater than RSDlimit	R	RPD outside accepted recovery limits	S	Spike Recovery outside accepted recovery	

QC SUMMARY REPORT

WO#: 1409113

15-Oct-14

Specialty Analytical

Client: Maul Foster & Alongi

Project: Bus Barn / 0239.28.05

TestCode: NWTPHGX_W

Sample ID: CCV	SampType: CCV	TestCode: NWTPHGX_W Units: µg/L				Prep Date:			RunNo: 16925		
Client ID: CCV	Batch ID: R16925	TestNo: NWTPH-Gx				Analysis Date: 9/24/2014			SeqNo: 223523		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Gasoline	2010	100	2000	0	101	80	120				
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Sample ID: CCB	SampType: CCB	TestCode: NWTPHGX_W Units: µg/L				Prep Date:			RunNo: 16925		
Client ID: CCB	Batch ID: R16925	TestNo: NWTPH-Gx				Analysis Date: 9/24/2014			SeqNo: 223573		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Gasoline	ND	100									
Surr: 4-Bromofluorobenzene	111		100.0		111	50	150				

Sample ID: CCV	SampType: CCV	TestCode: NWTPHGX_W Units: µg/L				Prep Date:			RunNo: 16925		
Client ID: CCV	Batch ID: R16925	TestNo: NWTPH-Gx				Analysis Date: 9/24/2014			SeqNo: 223575		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Gasoline	2590	100	2500	0	104	80	120				
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Qualifiers: B Analyte detected in the associated Method Blank
O RSD is greater than RSDlimit

H Holding times for preparation or analysis exceeded
R RPD outside accepted recovery limits

ND Not Detected at the Reporting Limit
S Spike Recovery outside accepted recovery

QC SUMMARY REPORT

WO#: 1409113

15-Oct-14

Specialty Analytical

Client: Maul Foster & Alongi

Project: Bus Barn / 0239.28.05

TestCode: NWTPHHCID_W

Sample ID: MB-8201	SampType: MBLK	TestCode: NWTPHHCID_ Units: mg/L				Prep Date: 9/19/2014			RunNo: 16891		
Client ID: PBW	Batch ID: 8201	TestNo: NWHCID		HCID_W		Analysis Date: 9/20/2014			SeqNo: 223044		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel	ND	0.630									
Gasoline	ND	0.250									
Kerosene	ND	0.630									
Lube Oil	ND	0.630									
Mineral Spirits	ND	0.250									
Surr: BFB	1.32		1.000		132	30.2	133				
Surr: o-Terphenyl	1.33		1.000		133	50	150				

Qualifiers: B Analyte detected in the associated Method Blank
O RSD is greater than RSDlimit

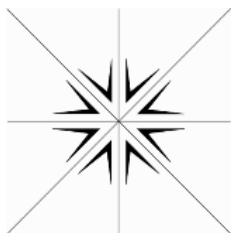
H Holding times for preparation or analysis exceeded
R RPD outside accepted recovery limits

ND Not Detected at the Reporting Limit
S Spike Recovery outside accepted recovery

KEY TO FLAGS

Rev. May 12, 2010

- A This sample contains a Gasoline Range Organic not identified as a specific hydrocarbon product. The result was quantified against gasoline calibration standards
- A1 This sample contains a Diesel Range Organic not identified as a specific hydrocarbon product. The result was quantified against diesel calibration standards.
- A2 This sample contains a Lube Oil Range Organic not identified as a specific hydrocarbon product. The result was quantified against a lube oil calibration standard.
- A3 The result was determined to be Non-Detect based on hydrocarbon pattern recognition. The product was carry-over from another hydrocarbon type.
- A4 The product appears to be aged or degraded diesel.
- B The blank exhibited a positive result great than the reporting limit for this compound.
- CN See Case Narrative.
- D Result is based from a dilution.
- E Result exceeds the calibration range for this compound. The result should be considered as estimate.
- F The positive result for this hydrocarbon is due to single component contamination. The product does not match any hydrocarbon in the fuels library.
- G Result may be biased high due to biogenic interferences. Clean up is recommended.
- H Sample was analyzed outside recommended holding time.
- HT At clients request, samples was analyzed outside of recommended holding time.
- J The result for this analyte is between the MDL and the PQL and should be considered as estimated concentration.
- K Diesel result is biased high due to amount of Oil contained in the sample.
- L Diesel result is biased high due to amount of Gasoline contained in the sample.
- M Oil result is biased high due to amount of Diesel contained in the sample.
- MC Sample concentration is greater than 4x the spiked value, the spiked value is considered insignificant.
- MI Result is outside control limits due to matrix interference.
- MSA Value determined by Method of Standard Addition.
- O Laboratory Control Standard (LCS) exceeded laboratory control limits, but meets CCV criteria. Data meets EPA requirements.
- Q Detection levels elevated due to sample matrix.
- R RPD control limits were exceeded.
- RF Duplicate failed due to result being at or near the method-reporting limit.
- RP Matrix spike values exceed established QC limits; post digestion spike is in control.
- S Recovery is outside control limits.
- SC Closing CCV or LCS exceeded high recovery control limits, but associated samples are non-detect. Data meets EPA requirements.
- * The result for this parameter was greater than the maximum contaminant level of the TCLP regulatory limit.



Specialty Analytical

11711 SE Capps Road, Ste B
Clackamas, Oregon 97015
TEL: 503-607-1331 FAX: 503-607-1336
Website: www.specialtyanalytical.com

October 10, 2014

Merideth D'Andrea
Maul Foster & Alongi
400 E. Mill Plain Blvd.
Suite 400
Vancouver, WA 98660
TEL: (503) 501-5216
FAX (360) 906-1958
RE: Bus Barn / 0239.28.05

Dear Merideth D'Andrea:

Order No.: 1409114

Specialty Analytical received 14 sample(s) on 9/18/2014 for the analyses presented in the following report.

There were no problems with the analysis and all data for associated QC met EPA or laboratory specifications, except where noted in the Case Narrative, or as qualified with flags. Results apply only to the samples analyzed. Without approval of the laboratory, the reproduction of this report is only permitted in its entirety.

If you have any questions regarding these tests, please feel free to call.

Sincerely,

A handwritten signature in black ink, appearing to read "Marty French".

Marty French
Lab Director

Specialty Analytical

Date Reported: 10-Oct-14

CLIENT: Maul Foster & Alongi

Collection Date: 9/15/2014 12:40:00 PM

Project: Bus Barn / 0239.28.05

Lab ID: 1409114-001

Client Sample ID: B1-S-2.0

Matrix: SOIL

Analyses	Result	RL	Qual	Unit	DF	Date Analyzed
NWTPH-HCID		NWHCID				Analyst: BS
Gasoline	ND	24.5		mg/Kg-dry	1	9/20/2014 2:50:24 AM
Mineral Spirits	ND	24.5		mg/Kg-dry	1	9/20/2014 2:50:24 AM
Kerosene	ND	61.3		mg/Kg-dry	1	9/20/2014 2:50:24 AM
Diesel	ND	61.3		mg/Kg-dry	1	9/20/2014 2:50:24 AM
Lube Oil	ND	123		mg/Kg-dry	1	9/20/2014 2:50:24 AM
Hydraulic Oil	ND	123		mg/Kg-dry	1	9/20/2014 2:50:24 AM
Surr: BFB	97.2	50-150		%REC	1	9/20/2014 2:50:24 AM
Surr: o-Terphenyl	54.3	50-150		%REC	1	9/20/2014 2:50:24 AM

Specialty Analytical

Date Reported: 10-Oct-14

CLIENT: Maul Foster & Alongi

Collection Date: 9/15/2014 12:42:00 PM

Project: Bus Barn / 0239.28.05

Lab ID: 1409114-002

Client Sample ID: B1-S-8.5

Matrix: SOIL

Analyses	Result	RL	Qual	Unit	DF	Date Analyzed
NWTPH-HCID		NWHCID				Analyst: BS
Gasoline	ND	26.3		mg/Kg-dry	1	9/20/2014 3:50:24 AM
Mineral Spirits	ND	26.3		mg/Kg-dry	1	9/20/2014 3:50:24 AM
Kerosene	ND	65.9		mg/Kg-dry	1	9/20/2014 3:50:24 AM
Diesel	ND	65.9		mg/Kg-dry	1	9/20/2014 3:50:24 AM
Lube Oil	ND	132		mg/Kg-dry	1	9/20/2014 3:50:24 AM
Hydraulic Oil	ND	132		mg/Kg-dry	1	9/20/2014 3:50:24 AM
Surr: BFB	93.1	50-150		%REC	1	9/20/2014 3:50:24 AM
Surr: o-Terphenyl	50.9	50-150		%REC	1	9/20/2014 3:50:24 AM

Specialty Analytical

Date Reported: 10-Oct-14

CLIENT: Maul Foster & Alongi

Collection Date: 9/15/2014 1:00:00 PM

Project: Bus Barn / 0239.28.05

Lab ID: 1409114-003

Client Sample ID: B2-S-2.0

Matrix: SOIL

Analyses	Result	RL	Qual	Unit	DF	Date Analyzed
NWTPH-HCID		NWHCID				Analyst: BS
Gasoline	ND	25.6		mg/Kg-dry	1	9/20/2014 4:20:24 AM
Mineral Spirits	ND	25.6		mg/Kg-dry	1	9/20/2014 4:20:24 AM
Kerosene	ND	64.0		mg/Kg-dry	1	9/20/2014 4:20:24 AM
Diesel	ND	64.0		mg/Kg-dry	1	9/20/2014 4:20:24 AM
Lube Oil	ND	128		mg/Kg-dry	1	9/20/2014 4:20:24 AM
Hydraulic Oil	ND	128		mg/Kg-dry	1	9/20/2014 4:20:24 AM
Surr: BFB	90.0	50-150		%REC	1	9/20/2014 4:20:24 AM
Surr: o-Terphenyl	52.0	50-150		%REC	1	9/20/2014 4:20:24 AM

Specialty Analytical

Date Reported: 10-Oct-14

CLIENT: Maul Foster & Alongi

Collection Date: 9/15/2014 1:10:00 PM

Project: Bus Barn / 0239.28.05

Lab ID: 1409114-004

Client Sample ID: B2-S-8.0

Matrix: SOIL

Analyses	Result	RL	Qual	Unit	DF	Date Analyzed
NWTPH-HCID		NWHCID				Analyst: BS
Gasoline	Gasoline	25.7		mg/Kg-dry	1	9/20/2014 4:50:24 AM
Mineral Spirits	ND	25.7		mg/Kg-dry	1	9/20/2014 4:50:24 AM
Kerosene	ND	64.3		mg/Kg-dry	1	9/20/2014 4:50:24 AM
Diesel	ND	64.3		mg/Kg-dry	1	9/20/2014 4:50:24 AM
Lube Oil	ND	129		mg/Kg-dry	1	9/20/2014 4:50:24 AM
Hydraulic Oil	ND	129		mg/Kg-dry	1	9/20/2014 4:50:24 AM
Surr: BFB	116	50-150		%REC	1	9/20/2014 4:50:24 AM
Surr: o-Terphenyl	52.5	50-150		%REC	1	9/20/2014 4:50:24 AM
BTEX - RBC		SW8021B				Analyst: BS
Benzene	ND	0.0193		mg/Kg-dry	1	9/23/2014 2:29:34 PM
Toluene	0.0971	0.0321		mg/Kg-dry	1	9/23/2014 2:29:34 PM
Ethylbenzene	ND	0.0321		mg/Kg-dry	1	9/23/2014 2:29:34 PM
Xylenes, Total	ND	0.0964		mg/Kg-dry	1	9/23/2014 2:29:34 PM
Surr: 4-Bromofluorobenzene	78.9	42.6-126		%REC	1	9/23/2014 2:29:34 PM
NWTPH-GX		NWTPH-GX				Analyst: BS
Gasoline	444	3.21		mg/Kg-dry	1	9/23/2014 2:01:17 PM
Surr: 4-Bromofluorobenzene	166	50-150	SMI	%REC	1	9/23/2014 2:01:17 PM
ICP/MS METALS-TOTAL RECOVERABLE		SW6020A				Analyst: KP
Lead	11000	282		µg/Kg-dry	10	10/6/2014 12:27:00 PM

Specialty Analytical

Date Reported: 10-Oct-14

CLIENT: Maul Foster & Alongi

Collection Date: 9/15/2014 2:20:00 PM

Project: Bus Barn / 0239.28.05

Lab ID: 1409114-005

Client Sample ID: B3-S-2.0

Matrix: SOIL

Analyses	Result	RL	Qual	Unit	DF	Date Analyzed
NWTPH-HCID		NWHCID				Analyst: BS
Gasoline	ND	25.9		mg/Kg-dry	1	9/20/2014 5:20:24 AM
Mineral Spirits	ND	25.9		mg/Kg-dry	1	9/20/2014 5:20:24 AM
Kerosene	ND	64.8		mg/Kg-dry	1	9/20/2014 5:20:24 AM
Diesel	ND	64.8		mg/Kg-dry	1	9/20/2014 5:20:24 AM
Lube Oil	ND	130		mg/Kg-dry	1	9/20/2014 5:20:24 AM
Hydraulic Oil	ND	130		mg/Kg-dry	1	9/20/2014 5:20:24 AM
Surr: BFB	97.6	50-150		%REC	1	9/20/2014 5:20:24 AM
Surr: o-Terphenyl	50.3	50-150		%REC	1	9/20/2014 5:20:24 AM

Specialty Analytical

Date Reported: 10-Oct-14

CLIENT: Maul Foster & Alongi

Collection Date: 9/15/2014 3:10:00 PM

Project: Bus Barn / 0239.28.05

Lab ID: 1409114-006

Client Sample ID: B3-S-7.0

Matrix: SOIL

Analyses	Result	RL	Qual	Unit	DF	Date Analyzed
NWTPH-HCID		NWHCID				Analyst: BS
Gasoline	GASOLINE	25.5		mg/Kg-dry	1	9/20/2014 5:50:24 AM
Mineral Spirits	ND	25.5		mg/Kg-dry	1	9/20/2014 5:50:24 AM
Kerosene	ND	63.8		mg/Kg-dry	1	9/20/2014 5:50:24 AM
Diesel	DIESEL	63.8		mg/Kg-dry	1	9/20/2014 5:50:24 AM
Lube Oil	ND	128		mg/Kg-dry	1	9/20/2014 5:50:24 AM
Hydraulic Oil	ND	128		mg/Kg-dry	1	9/20/2014 5:50:24 AM
Surr: BFB	147	50-150		%REC	1	9/20/2014 5:50:24 AM
Surr: o-Terphenyl	59.2	50-150		%REC	1	9/20/2014 5:50:24 AM
NWTPH-DX		NWTPH-DX				Analyst: BS
Diesel	461	19.1	A1	mg/Kg-dry	1	9/26/2014 12:24:03 AM
Lube Oil	ND	63.8		mg/Kg-dry	1	9/26/2014 12:24:03 AM
Surr: o-Terphenyl	107	50-150		%REC	1	9/26/2014 12:24:03 AM
BTEX - RBC		SW8021B				Analyst: BS
Benzene	ND	0.0191		mg/Kg-dry	1	9/23/2014 3:59:34 PM
Toluene	0.0395	0.0319		mg/Kg-dry	1	9/23/2014 3:59:34 PM
Ethylbenzene	2.06	0.0319		mg/Kg-dry	1	9/23/2014 3:59:34 PM
Xylenes, Total	ND	0.0956		mg/Kg-dry	1	9/23/2014 3:59:34 PM
Surr: 4-Bromofluorobenzene	135	42.6-126	SMI	%REC	1	9/23/2014 3:59:34 PM
NWTPH-GX		NWTPH-GX				Analyst: BS
Gasoline	1320	31.9		mg/Kg-dry	10	9/24/2014 12:01:17 AM
Surr: 4-Bromofluorobenzene	236	50-150	SMI	%REC	10	9/24/2014 12:01:17 AM
ICP/MS METALS-TOTAL RECOVERABLE		SW6020A				Analyst: KP
Lead	8630	290		µg/Kg-dry	10	10/6/2014 12:35:00 PM

Specialty Analytical

Date Reported: 10-Oct-14

CLIENT: Maul Foster & Alongi

Collection Date: 9/15/2014 3:40:00 PM

Project: Bus Barn / 0239.28.05

Lab ID: 1409114-007

Client Sample ID: B4-S-3.0

Matrix: SOIL

Analyses	Result	RL	Qual	Unit	DF	Date Analyzed
NWTPH-HCID		NWHCID				Analyst: BS
Gasoline	GASOLINE	24.4		mg/Kg-dry	1	9/20/2014 6:20:24 AM
Mineral Spirits	ND	24.4		mg/Kg-dry	1	9/20/2014 6:20:24 AM
Kerosene	ND	60.9		mg/Kg-dry	1	9/20/2014 6:20:24 AM
Diesel	DIESEL	60.9		mg/Kg-dry	1	9/20/2014 6:20:24 AM
Lube Oil	ND	122		mg/Kg-dry	1	9/20/2014 6:20:24 AM
Hydraulic Oil	ND	122		mg/Kg-dry	1	9/20/2014 6:20:24 AM
Surr: BFB	418	50-150	SMI	%REC	1	9/20/2014 6:20:24 AM
Surr: o-Terphenyl	62.6	50-150		%REC	1	9/20/2014 6:20:24 AM
NWTPH-DX		NWTPH-DX				Analyst: BS
Diesel	1970	18.3	A1	mg/Kg-dry	1	9/26/2014 1:24:03 AM
Lube Oil	113	60.9	M	mg/Kg-dry	1	9/26/2014 1:24:03 AM
Surr: o-Terphenyl	121	50-150		%REC	1	9/26/2014 1:24:03 AM
BTEX - RBC		SW8021B				Analyst: BS
Benzene	ND	0.0183		mg/Kg-dry	1	9/24/2014 11:18:34 PM
Toluene	0.364	0.0304		mg/Kg-dry	1	9/24/2014 11:18:34 PM
Ethylbenzene	8.27	0.0304		mg/Kg-dry	1	9/24/2014 11:18:34 PM
Xylenes, Total	ND	0.0913		mg/Kg-dry	1	9/24/2014 11:18:34 PM
Surr: 4-Bromofluorobenzene	391	42.6-126	SMI	%REC	1	9/24/2014 11:18:34 PM
NWTPH-GX		NWTPH-GX				Analyst: BS
Gasoline	2990	30.4		mg/Kg-dry	10	9/23/2014 2:31:17 PM
Surr: 4-Bromofluorobenzene	578	50-150	SMI	%REC	10	9/23/2014 2:31:17 PM
ICP/MS METALS-TOTAL RECOVERABLE		SW6020A				Analyst: KP
Lead	9110	293		µg/Kg-dry	10	10/6/2014 12:42:00 PM

Specialty Analytical

Date Reported: 10-Oct-14

CLIENT: Maul Foster & Alongi

Collection Date: 9/15/2014 3:45:00 PM

Project: Bus Barn / 0239.28.05

Lab ID: 1409114-008

Client Sample ID: B4-S-7.0

Matrix: SOIL

Analyses	Result	RL	Qual	Unit	DF	Date Analyzed
NWTPH-HCID		NWHCID				Analyst: BS
Gasoline	GASOLINE	25.4		mg/Kg-dry	1	9/20/2014 6:50:24 AM
Mineral Spirits	ND	25.4		mg/Kg-dry	1	9/20/2014 6:50:24 AM
Kerosene	ND	63.5		mg/Kg-dry	1	9/20/2014 6:50:24 AM
Diesel	DIESEL	63.5		mg/Kg-dry	1	9/20/2014 6:50:24 AM
Lube Oil	ND	127		mg/Kg-dry	1	9/20/2014 6:50:24 AM
Hydraulic Oil	ND	127		mg/Kg-dry	1	9/20/2014 6:50:24 AM
Surr: BFB	838	50-150	SMI	%REC	1	9/20/2014 6:50:24 AM
Surr: o-Terphenyl	79.7	50-150		%REC	1	9/20/2014 6:50:24 AM
NWTPH-DX		NWTPH-DX				Analyst: BS
Diesel	4200	19.1	A1	mg/Kg-dry	1	9/26/2014 1:54:03 AM
Lube Oil	151	63.5	M	mg/Kg-dry	1	9/26/2014 1:54:03 AM
Surr: o-Terphenyl	127	50-150		%REC	1	9/26/2014 1:54:03 AM
BTEX - RBC		SW8021B				Analyst: BS
Benzene	ND	0.0191		mg/Kg-dry	1	9/24/2014 11:46:34 PM
Toluene	1.18	0.0318		mg/Kg-dry	1	9/24/2014 11:46:34 PM
Ethylbenzene	9.08	0.0318		mg/Kg-dry	1	9/24/2014 11:46:34 PM
Xylenes, Total	4.49	0.0953		mg/Kg-dry	1	9/24/2014 11:46:34 PM
Surr: 4-Bromofluorobenzene	466	42.6-126	SMI	%REC	1	9/24/2014 11:46:34 PM
NWTPH-GX		NWTPH-GX				Analyst: BS
Gasoline	4310	31.8		mg/Kg-dry	10	9/23/2014 3:01:17 PM
Surr: 4-Bromofluorobenzene	922	50-150	SMI	%REC	10	9/23/2014 3:01:17 PM
ICP/MS METALS-TOTAL RECOVERABLE		SW6020A				Analyst: KP
Lead	7770	305		µg/Kg-dry	10	10/6/2014 12:50:00 PM

Specialty Analytical

Date Reported: 10-Oct-14

CLIENT: Maul Foster & Alongi

Collection Date: 9/16/2014 1:50:00 PM

Project: Bus Barn / 0239.28.05

Lab ID: 1409114-009

Client Sample ID: B5-S-2.0

Matrix: SOIL

Analyses	Result	RL	Qual	Unit	DF	Date Analyzed
NWTPH-HCID		NWHCID				Analyst: BS
Gasoline	ND	24.0		mg/Kg-dry	1	9/20/2014 7:20:24 AM
Mineral Spirits	ND	24.0		mg/Kg-dry	1	9/20/2014 7:20:24 AM
Kerosene	ND	59.9		mg/Kg-dry	1	9/20/2014 7:20:24 AM
Diesel	ND	59.9		mg/Kg-dry	1	9/20/2014 7:20:24 AM
Lube Oil	ND	120		mg/Kg-dry	1	9/20/2014 7:20:24 AM
Hydraulic Oil	ND	120		mg/Kg-dry	1	9/20/2014 7:20:24 AM
Surr: BFB	97.6	50-150		%REC	1	9/20/2014 7:20:24 AM
Surr: o-Terphenyl	50.9	50-150		%REC	1	9/20/2014 7:20:24 AM

Specialty Analytical

Date Reported: 10-Oct-14

CLIENT: Maul Foster & Alongi

Collection Date: 9/16/2014 2:00:00 PM

Project: Bus Barn / 0239.28.05

Lab ID: 1409114-010

Client Sample ID: B5-S-7.0

Matrix: SOIL

Analyses	Result	RL	Qual	Unit	DF	Date Analyzed
NWTPH-HCID		NWHCID				Analyst: BS
Gasoline	ND	25.3		mg/Kg-dry	1	9/20/2014 7:50:24 AM
Mineral Spirits	ND	25.3		mg/Kg-dry	1	9/20/2014 7:50:24 AM
Kerosene	ND	63.1		mg/Kg-dry	1	9/20/2014 7:50:24 AM
Diesel	ND	63.1		mg/Kg-dry	1	9/20/2014 7:50:24 AM
Lube Oil	ND	126		mg/Kg-dry	1	9/20/2014 7:50:24 AM
Hydraulic Oil	ND	126		mg/Kg-dry	1	9/20/2014 7:50:24 AM
Surr: BFB	92.4	50-150		%REC	1	9/20/2014 7:50:24 AM
Surr: o-Terphenyl	52.3	50-150		%REC	1	9/20/2014 7:50:24 AM

Specialty Analytical

Date Reported: 10-Oct-14

CLIENT: Maul Foster & Alongi

Collection Date: 9/16/2014 3:30:00 PM

Project: Bus Barn / 0239.28.05

Lab ID: 1409114-011

Client Sample ID: B6-S-2.0

Matrix: SOIL

Analyses	Result	RL	Qual	Unit	DF	Date Analyzed
NWTPH-HCID		NWHCID				Analyst: BS
Gasoline	ND	24.2		mg/Kg-dry	1	9/20/2014 8:20:24 AM
Mineral Spirits	ND	24.2		mg/Kg-dry	1	9/20/2014 8:20:24 AM
Kerosene	ND	60.6		mg/Kg-dry	1	9/20/2014 8:20:24 AM
Diesel	ND	60.6		mg/Kg-dry	1	9/20/2014 8:20:24 AM
Lube Oil	ND	121		mg/Kg-dry	1	9/20/2014 8:20:24 AM
Hydraulic Oil	ND	121		mg/Kg-dry	1	9/20/2014 8:20:24 AM
Surr: BFB	87.7	50-150		%REC	1	9/20/2014 8:20:24 AM
Surr: o-Terphenyl	51.4	50-150		%REC	1	9/20/2014 8:20:24 AM

Specialty Analytical

Date Reported: 10-Oct-14

CLIENT: Maul Foster & Alongi

Collection Date: 9/16/2014 3:40:00 PM

Project: Bus Barn / 0239.28.05

Lab ID: 1409114-012

Client Sample ID: B6-S-8.5

Matrix: SOIL

Analyses	Result	RL	Qual	Unit	DF	Date Analyzed
NWTPH-HCID		NWHCID				Analyst: BS
Gasoline	ND	25.4		mg/Kg-dry	1	9/20/2014 8:50:24 AM
Mineral Spirits	ND	25.4		mg/Kg-dry	1	9/20/2014 8:50:24 AM
Kerosene	ND	63.4		mg/Kg-dry	1	9/20/2014 8:50:24 AM
Diesel	ND	63.4		mg/Kg-dry	1	9/20/2014 8:50:24 AM
Lube Oil	ND	127		mg/Kg-dry	1	9/20/2014 8:50:24 AM
Hydraulic Oil	ND	127		mg/Kg-dry	1	9/20/2014 8:50:24 AM
Surr: BFB	87.3	50-150		%REC	1	9/20/2014 8:50:24 AM
Surr: o-Terphenyl	51.0	50-150		%REC	1	9/20/2014 8:50:24 AM

Specialty Analytical

Date Reported: 10-Oct-14

CLIENT: Maul Foster & Alongi

Collection Date: 9/16/2014 4:00:00 PM

Project: Bus Barn / 0239.28.05

Lab ID: 1409114-013

Client Sample ID: B7-S-1.5

Matrix: SOIL

Analyses	Result	RL	Qual	Unit	DF	Date Analyzed
NWTPH-HCID		NWHCID				Analyst: BS
Gasoline	ND	24.5		mg/Kg-dry	1	9/20/2014 9:20:24 AM
Mineral Spirits	ND	24.5		mg/Kg-dry	1	9/20/2014 9:20:24 AM
Kerosene	ND	61.3		mg/Kg-dry	1	9/20/2014 9:20:24 AM
Diesel	ND	61.3		mg/Kg-dry	1	9/20/2014 9:20:24 AM
Lube Oil	ND	123		mg/Kg-dry	1	9/20/2014 9:20:24 AM
Hydraulic Oil	ND	123		mg/Kg-dry	1	9/20/2014 9:20:24 AM
Surr: BFB	93.1	50-150		%REC	1	9/20/2014 9:20:24 AM
Surr: o-Terphenyl	52.6	50-150		%REC	1	9/20/2014 9:20:24 AM

Specialty Analytical

Date Reported: 10-Oct-14

CLIENT: Maul Foster & Alongi

Collection Date: 9/16/2014 4:15:00 PM

Project: Bus Barn / 0239.28.05

Lab ID: 1409114-014

Client Sample ID: B7-S-8.5

Matrix: SOIL

Analyses	Result	RL	Qual	Unit	DF	Date Analyzed
NWTPH-HCID		NWHCID				Analyst: BS
Gasoline	GASOLINE	25.2		mg/Kg-dry	1	9/20/2014 9:50:24 AM
Mineral Spirits	ND	25.2		mg/Kg-dry	1	9/20/2014 9:50:24 AM
Kerosene	ND	62.9		mg/Kg-dry	1	9/20/2014 9:50:24 AM
Diesel	DIESEL	62.9		mg/Kg-dry	1	9/20/2014 9:50:24 AM
Lube Oil	ND	126		mg/Kg-dry	1	9/20/2014 9:50:24 AM
Hydraulic Oil	ND	126		mg/Kg-dry	1	9/20/2014 9:50:24 AM
Surr: BFB	159	50-150	SMI	%REC	1	9/20/2014 9:50:24 AM
Surr: o-Terphenyl	91.7	50-150		%REC	1	9/20/2014 9:50:24 AM
NWTPH-DX		NWTPH-DX				Analyst: BS
Diesel	2650	18.9		mg/Kg-dry	1	9/26/2014 2:24:03 AM
Lube Oil	170	62.9	M	mg/Kg-dry	1	9/26/2014 2:24:03 AM
Surr: o-Terphenyl	182	50-150	SMI	%REC	1	9/26/2014 2:24:03 AM
BTEX - RBC		SW8021B				Analyst: BS
Benzene	ND	0.0189		mg/Kg-dry	1	9/23/2014 5:29:34 PM
Toluene	ND	0.0315		mg/Kg-dry	1	9/23/2014 5:29:34 PM
Ethylbenzene	ND	0.0315		mg/Kg-dry	1	9/23/2014 5:29:34 PM
Xylenes, Total	0.983	0.0944		mg/Kg-dry	1	9/23/2014 5:29:34 PM
Surr: 4-Bromofluorobenzene	82.8	42.6-126		%REC	1	9/23/2014 5:29:34 PM
NWTPH-GX		NWTPH-GX				Analyst: BS
Gasoline	466	3.15		mg/Kg-dry	1	9/23/2014 3:31:17 PM
Surr: 4-Bromofluorobenzene	151	50-150	SMI	%REC	1	9/23/2014 3:31:17 PM
ICP/MS METALS-TOTAL RECOVERABLE		SW6020A				Analyst: KP
Lead	8440	276		µg/Kg-dry	10	10/6/2014 12:57:00 PM

QC SUMMARY REPORT

WO#: 1409114

10-Oct-14

Specialty Analytical

Client: Maul Foster & Alongi

Project: Bus Barn / 0239.28.05

TestCode: 6020_S

Sample ID: ICV		SampType: ICV		TestCode: 6020_S		Units: µg/Kg		Prep Date:			RunNo: 17176		
Client ID: ICV		Batch ID: 8219		TestNo: SW6020A		SW3050B		Analysis Date: 10/6/2014			SeqNo: 225475		
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Lead 4530 25.0 5000 0 90.6 90 110

Sample ID: CCV	SampType: CCV	TestCode: 6020_S	Units: µg/Kg	Prep Date:	RunNo: 17176						
Client ID: CCV	Batch ID: 8219	TestNo: SW6020A	SW3050B	Analysis Date: 10/6/2014	SeqNo: 225476						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Lead 4510 25.0 5000 0 90.1 90 110

Sample ID: MBLK-8219	SampType: MBLK	TestCode: 6020_S	Units: µg/Kg	Prep Date:	RunNo: 17176						
Client ID: PBS	Batch ID: 8219	TestNo: SW6020A	SW3050B	Analysis Date: 10/6/2014	SeqNo: 225477						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Lead ND 25.0

Sample ID: LCS-8219	SampType: LCS	TestCode: 6020_S	Units: µg/Kg	Prep Date: 9/23/2014	RunNo: 17176						
Client ID: LCSS	Batch ID: 8219	TestNo: SW6020A	SW3050B	Analysis Date: 10/6/2014	SeqNo: 225478						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Lead 4640 25.0 5000 0 92.8 80 120

Qualifiers: B Analyte detected in the associated Method Blank
O RSD is greater than RSDlimit

H Holding times for preparation or analysis exceeded
R RPD outside accepted recovery limits

ND Not Detected at the Reporting Limit
S Spike Recovery outside accepted recovery

QC SUMMARY REPORT

WO#: 1409114

10-Oct-14

Specialty Analytical

Client: Maul Foster & Alongi

Project: Bus Barn / 0239.28.05

TestCode: 6020_S

Sample ID: CCV	SampType: CCV	TestCode: 6020_S	Units: µg/Kg	Prep Date:	RunNo: 17176						
Client ID: CCV	Batch ID: 8219	TestNo: SW6020A	SW3050B	Analysis Date: 10/6/2014	SeqNo: 225484						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Lead	4620	25.0	5000	0	92.5	90	110				
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Sample ID: 1409116-008BDUP	SampType: DUP	TestCode: 6020_S	Units: µg/Kg-dry	Prep Date: 9/23/2014	RunNo: 17176						
Client ID: ZZZZZZ	Batch ID: 8219	TestNo: SW6020A	SW3050B	Analysis Date: 10/6/2014	SeqNo: 225492						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Lead	7360	302						7062	4.10	20	
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Sample ID: 1409116-008BMS	SampType: MS	TestCode: 6020_S	Units: µg/Kg-dry	Prep Date: 9/23/2014	RunNo: 17176						
Client ID: ZZZZZZ	Batch ID: 8219	TestNo: SW6020A	SW3050B	Analysis Date: 10/6/2014	SeqNo: 225493						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Lead	13000	286	5712	7062	104	70	130				
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Sample ID: CCV	SampType: CCV	TestCode: 6020_S	Units: µg/Kg	Prep Date:	RunNo: 17176						
Client ID: CCV	Batch ID: 8219	TestNo: SW6020A	SW3050B	Analysis Date: 10/6/2014	SeqNo: 225495						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Lead	4620	25.0	5000	0	92.4	90	110				
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Qualifiers: B Analyte detected in the associated Method Blank
O RSD is greater than RSDlimit

H Holding times for preparation or analysis exceeded
R RPD outside accepted recovery limits

ND Not Detected at the Reporting Limit
S Spike Recovery outside accepted recovery

QC SUMMARY REPORT

WO#: 1409114

10-Oct-14

Specialty Analytical

Client: Maul Foster & Alongi

Project: Bus Barn / 0239.28.05

TestCode: 6020_S

Sample ID: 1409116-008BMSD	SampType: MSD	TestCode: 6020_S	Units: µg/Kg-dry	Prep Date: 9/23/2014	RunNo: 17176						
Client ID: ZZZZZZ	Batch ID: 8219	TestNo: SW6020A	SW3050B	Analysis Date: 10/6/2014	SeqNo: 225496						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Lead	12700	296	5923	7062	95.2	70	130	12990	2.25	20
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Sample ID: ICV	SampType: ICV	TestCode: 6020_S	Units: µg/Kg	Prep Date:	RunNo: 17176						
Client ID: ICV	Batch ID: 8219	TestNo: SW6020A	SW3050B	Analysis Date: 10/9/2014	SeqNo: 225827						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Lead	5060	25.0	5000	0	101	90	110
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Sample ID: CCV	SampType: CCV	TestCode: 6020_S	Units: µg/Kg	Prep Date:	RunNo: 17176						
Client ID: CCV	Batch ID: 8219	TestNo: SW6020A	SW3050B	Analysis Date: 10/9/2014	SeqNo: 225829						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Lead	5090	25.0	5000	0	102	90	110
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Qualifiers: B Analyte detected in the associated Method Blank
O RSD is greater than RSDlimit

H Holding times for preparation or analysis exceeded
R RPD outside accepted recovery limits

ND Not Detected at the Reporting Limit
S Spike Recovery outside accepted recovery

QC SUMMARY REPORT

WO#: 1409114

10-Oct-14

Specialty Analytical

Client: Maul Foster & Alongi

Project: Bus Barn / 0239.28.05

TestCode: BTEXRBC_S

Sample ID: CCV	SampType: CCV	TestCode: BTEXRBC_S	Units: mg/Kg	Prep Date:	RunNo: 16917						
Client ID: CCV	Batch ID: 8212	TestNo: SW8021B	5030	Analysis Date: 9/23/2014	SeqNo: 223359						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	2.38	0.0150	2.500	0	95.1	85	115				
Toluene	2.60	0.0250	2.500	0	104	85	115				
Ethylbenzene	2.65	0.0250	2.500	0	106	85	115				
Xylenes, Total	7.39	0.0750	7.500	0	98.5	85	115				

Sample ID: MB-8212	SampType: MBLK	TestCode: BTEXRBC_S	Units: mg/Kg	Prep Date: 9/23/2014	RunNo: 16917						
Client ID: PBS	Batch ID: 8212	TestNo: SW8021B	5030	Analysis Date: 9/23/2014	SeqNo: 223360						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	ND	0.0150									
Toluene	ND	0.0250									
Ethylbenzene	ND	0.0250									
Xylenes, Total	ND	0.0750									
Surr: 4-Bromofluorobenzene	2.75		5.000		55.0	42.6	126				

Sample ID: LCS-8212	SampType: LCS	TestCode: BTEXRBC_S	Units: mg/Kg	Prep Date: 9/23/2014	RunNo: 16917						
Client ID: LCSS	Batch ID: 8212	TestNo: SW8021B	5030	Analysis Date: 9/23/2014	SeqNo: 223361						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	0.973	0.0150	1.250	0	77.8	68.7	117				
Toluene	1.11	0.0250	1.250	0	88.4	71.4	115				
Ethylbenzene	0.991	0.0250	1.250	0	79.3	76.3	115				
Xylenes, Total	2.96	0.0750	3.750	0	78.9	70.1	116				

Qualifiers: B Analyte detected in the associated Method Blank
O RSD is greater than RSDlimit

H Holding times for preparation or analysis exceeded
R RPD outside accepted recovery limits

ND Not Detected at the Reporting Limit
S Spike Recovery outside accepted recovery

QC SUMMARY REPORT

WO#: 1409114

10-Oct-14

Specialty Analytical

Client: Maul Foster & Alongi

Project: Bus Barn / 0239.28.05

TestCode: BTEXRBC_S

Sample ID: LCS-8212	SampType: LCS	TestCode: BTEXRBC_S	Units: mg/Kg	Prep Date: 9/23/2014	RunNo: 16917						
Client ID: LCSS	Batch ID: 8212	TestNo: SW8021B	5030	Analysis Date: 9/23/2014	SeqNo: 223361						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Sample ID: 1409114-004AMS	SampType: MS	TestCode: BTEXRBC_S	Units: mg/Kg-dry	Prep Date: 9/23/2014	RunNo: 16917						
Client ID: B2-S-8.0	Batch ID: 8212	TestNo: SW8021B	5030	Analysis Date: 9/23/2014	SeqNo: 223363						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	1.26	0.0193	1.607	0.009000	77.6	32.2	108				
Toluene	1.41	0.0321	1.607	0.09707	81.7	56.7	110				
Ethylbenzene	1.48	0.0321	1.607	0	92.3	53.3	107				
Xylenes, Total	4.07	0.0964	4.821	0	84.4	47.5	119				

Sample ID: 1409114-004AMSD	SampType: MSD	TestCode: BTEXRBC_S	Units: mg/Kg-dry	Prep Date: 9/23/2014	RunNo: 16917						
Client ID: B2-S-8.0	Batch ID: 8212	TestNo: SW8021B	5030	Analysis Date: 9/23/2014	SeqNo: 223364						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	1.27	0.0193	1.607	0.009000	78.5	32.2	108	1.256	1.17	20	
Toluene	1.41	0.0321	1.607	0.09707	81.9	56.7	110	1.410	0.182	20	
Ethylbenzene	1.53	0.0321	1.607	0	95.1	53.3	107	1.484	2.99	20	
Xylenes, Total	4.09	0.0964	4.821	0	84.9	47.5	119	4.071	0.520	20	

Qualifiers: B Analyte detected in the associated Method Blank
O RSD is greater than RSDlimit

H Holding times for preparation or analysis exceeded
R RPD outside accepted recovery limits

ND Not Detected at the Reporting Limit
S Spike Recovery outside accepted recovery

QC SUMMARY REPORT

WO#: 1409114

10-Oct-14

Specialty Analytical

Client: Maul Foster & Alongi

Project: Bus Barn / 0239.28.05

TestCode: BTEXRBC_S

Sample ID: CCV	SampType: CCV	TestCode: BTEXRBC_S	Units: mg/Kg	Prep Date:	RunNo: 16917						
Client ID: CCV	Batch ID: 8212	TestNo: SW8021B	5030	Analysis Date: 9/24/2014	SeqNo: 223568						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	2.18	0.0150	2.500	0	87.3	85	115				
Toluene	2.15	0.0250	2.500	0	86.0	85	115				
Ethylbenzene	2.32	0.0250	2.500	0	92.7	85	115				
Xylenes, Total	6.50	0.0750	7.500	0	86.7	85	115				
Surr: 4-Bromofluorobenzene	5.11		5.000		102	42.6	126				

Sample ID: CCB	SampType: CCB	TestCode: BTEXRBC_S	Units: mg/Kg	Prep Date:				RunNo: 16917			
Client ID: CCB	Batch ID: 8212	TestNo: SW8021B	5030	Analysis Date: 9/24/2014				SeqNo: 223569			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	ND	0.0150									
Toluene	ND	0.0250									
Ethylbenzene	ND	0.0250									
Xylenes, Total	ND	0.0750									
Surr: 4-Bromofluorobenzene	2.92		5.000		58.3	42.6	126				

Qualifiers: B Analyte detected in the associated Method Blank
O RSD is greater than RSDlimit

H Holding times for preparation or analysis exceeded
R RPD outside accepted recovery limits

ND Not Detected at the Reporting Limit
S Spike Recovery outside accepted recovery

QC SUMMARY REPORT

WO#: 1409114

10-Oct-14

Specialty Analytical

Client: Maul Foster & Alongi

Project: Bus Barn / 0239.28.05

TestCode: HCID_NW

Sample ID: MB-8200	SampType: MBLK	TestCode: HCID_NW	Units: mg/Kg	Prep Date: 9/19/2014	RunNo: 16888						
Client ID: PBS	Batch ID: 8200	TestNo: NWHCID		Analysis Date: 9/20/2014	SeqNo: 223003						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline	ND	20.0									
Mineral Spirits	ND	20.0									
Kerosene	ND	50.0									
Diesel	ND	50.0									
Lube Oil	ND	100									
Hydraulic Oil	ND	100									
Surr: BFB	96.8		100.0		96.8	50	150				
Surr: o-Terphenyl	51.3		100.0		51.3	50	150				

Sample ID: 1409114-001ADUP	SampType: DUP	TestCode: HCID_NW	Units: mg/Kg-dry	Prep Date: 9/19/2014	RunNo: 16888						
Client ID: B1-S-2.0	Batch ID: 8200	TestNo: NWHCID		Analysis Date: 9/20/2014	SeqNo: 223005						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline	ND	24.5						0	0	20	
Mineral Spirits	ND	24.5						0	0	20	
Kerosene	ND	61.3						0	0	20	
Diesel	ND	61.3						0	0	20	
Lube Oil	ND	123						0	0	20	
Hydraulic Oil	ND	123						0	0	20	

Qualifiers: B Analyte detected in the associated Method Blank
O RSD is greater than RSDlimit

H Holding times for preparation or analysis exceeded
R RPD outside accepted recovery limits

ND Not Detected at the Reporting Limit
S Spike Recovery outside accepted recovery

QC SUMMARY REPORT

WO#: 1409114

10-Oct-14

Specialty Analytical

Client: Maul Foster & Alongi

Project: Bus Barn / 0239.28.05

TestCode: HCID_NW

Sample ID: 1409114-014ADUP	SampType: DUP	TestCode: HCID_NW	Units: mg/Kg-dry	Prep Date: 9/19/2014	RunNo: 16888						
Client ID: B7-S-8.5	Batch ID: 8200	TestNo: NWHCID		Analysis Date: 9/20/2014	SeqNo: 223019						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline	GASOLINE	25.2						157.4	0.401	20	
Mineral Spirits	ND	25.2						0	0	20	
Kerosene	ND	62.9						0	0	20	
Diesel	DIESEL	62.9						1409	6.60	20	
Lube Oil	ND	126						0	0	20	
Hydraulic Oil	ND	126						0	0	20	

Qualifiers: B Analyte detected in the associated Method Blank
O RSD is greater than RSDlimit

H Holding times for preparation or analysis exceeded
R RPD outside accepted recovery limits

ND Not Detected at the Reporting Limit
S Spike Recovery outside accepted recovery

QC SUMMARY REPORT

WO#: 1409114

10-Oct-14

Specialty Analytical

Client: Maul Foster & Alongi
Project: Bus Barn / 0239.28.05

TestCode: NWTPHDX_S

Sample ID: CCV	SampType: CCV	TestCode: NWTPHDX_S	Units: mg/Kg	Prep Date:	RunNo: 17022						
Client ID: CCV	Batch ID: 8233	TestNo: NWTPH-Dx	SW3545A	Analysis Date: 9/25/2014	SeqNo: 223693						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Diesel	1060	15.0	999.0	0	106	85	115				
Lube Oil	513	50.0	499.5	0	103	85	115				

Sample ID: MB-8233		SampType: MBLK		TestCode: NWTPHDX_S		Units: mg/Kg		Prep Date: 9/24/2014		RunNo: 17022			
Client ID: PBS		Batch ID: 8233		TestNo: NWTPH-Dx		SW3545A		Analysis Date: 9/25/2014		SeqNo: 223694			
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Diesel	ND	15.0									
Lube Oil	ND	50.0									
Surr: o-Terphenyl	35.9		33.33		108	50	150				

Sample ID: LCS-8233	SampType: LCS	TestCode: NWTPHDX_S	Units: mg/Kg	Prep Date: 9/24/2014	RunNo: 17022						
Client ID: LCSS	Batch ID: 8233	TestNo: NWTPH-Dx	SW3545A	Analysis Date: 9/25/2014	SeqNo: 223695						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Diesel	188	15.0	166.7	0	113	76.3	125				
Lube Oil	193	50.0	166.7	0	116	69.9	127				

Sample ID: 1409135-003ADUP	SampType: DUP	TestCode: NWTPHDX_S	Units: mg/Kg-dry	Prep Date: 9/24/2014	RunNo: 17022						
Client ID: ZZZZZZ	Batch ID: 8233	TestNo: NWTPH-Dx	SW3545A	Analysis Date: 9/25/2014	SeqNo: 223699						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Qualifiers: B Analyte detected in the associated Method Blank H Holding times for preparation or analysis exceeded ND Not Detected at the Reporting Limit
O RSD is greater than RSDlimit R RPD outside accepted recovery limits S Spike Recovery outside accepted recovery

QC SUMMARY REPORT

WO#: 1409114

10-Oct-14

Specialty Analytical

Client: Maul Foster & Alongi

Project: Bus Barn / 0239.28.05

TestCode: NWTPHDX_S

Sample ID: 1409135-003ADUP	SampType: DUP	TestCode: NWTPHDX_S	Units: mg/Kg-dry	Prep Date: 9/24/2014	RunNo: 17022						
Client ID: ZZZZZZ	Batch ID: 8233	TestNo: NWTPH-Dx	SW3545A	Analysis Date: 9/25/2014	SeqNo: 223699						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel	ND	16.6						0	0	20	
Lube Oil	ND	55.2						0	0	20	

Sample ID: CCV	SampType: CCV	TestCode: NWTPHDX_S	Units: mg/Kg	Prep Date:	RunNo: 17022						
Client ID: CCV	Batch ID: 8233	TestNo: NWTPH-Dx	SW3545A	Analysis Date: 9/25/2014	SeqNo: 223706						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel	1220	15.0	1332	0	91.5	85	115				
Lube Oil	671	50.0	666.0	0	101	85	115				

Sample ID: CCB	SampType: CCB	TestCode: NWTPHDX_S		Units: mg/Kg	Prep Date:				RunNo: 17022		
Client ID: CCB	Batch ID: 8233	TestNo: NWTPH-Dx		SW3545A	Analysis Date: 9/25/2014				SeqNo: 223707		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel	ND	15.0									
Lube Oil	ND	50.0									
Surr: o-Terphenyl	34.7		33.30		104	50	150				

Sample ID: 1409125-002ADUP	SampType: DUP	TestCode: NWTPHDX_S	Units: mg/Kg-dry	Prep Date: 9/25/2014	RunNo: 17022						
Client ID: ZZZZZZ	Batch ID: 8233	TestNo: NWTPH-Dx	SW3545A	Analysis Date: 9/26/2014	SeqNo: 223719						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Qualifiers: B Analyte detected in the associated Method Blank
O RSD is greater than RSDlimit

H Holding times for preparation or analysis exceeded
R RPD outside accepted recovery limits

ND Not Detected at the Reporting Limit
S Spike Recovery outside accepted recovery

QC SUMMARY REPORT

WO#: 1409114

10-Oct-14

Specialty Analytical

Client: Maul Foster & Alongi

Project: Bus Barn / 0239.28.05

TestCode: NWTPHDX_S

Sample ID: 1409125-002ADUP	SampType: DUP	TestCode: NWTPHDX_S	Units: mg/Kg-dry	Prep Date: 9/25/2014	RunNo: 17022						
Client ID: ZZZZZZ	Batch ID: 8233	TestNo: NWTPH-Dx	SW3545A	Analysis Date: 9/26/2014	SeqNo: 223719						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel	1730	90.7						1759	1.46	20	K
Lube Oil	3550	302						3807	6.90	20	

Sample ID: CCV	SampType: CCV	TestCode: NWTPHDX_S	Units: mg/Kg	Prep Date:	RunNo: 17022						
Client ID: CCV	Batch ID: 8233	TestNo: NWTPH-Dx	SW3545A	Analysis Date: 9/26/2014	SeqNo: 223720						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel	1130	15.0	999.0	0	113	85	115				
Lube Oil	528	50.0	499.5	0	106	85	115				

Qualifiers: B Analyte detected in the associated Method Blank
O RSD is greater than RSDlimit

H Holding times for preparation or analysis exceeded
R RPD outside accepted recovery limits

ND Not Detected at the Reporting Limit
S Spike Recovery outside accepted recovery

QC SUMMARY REPORT

WO#: 1409114

10-Oct-14

Specialty Analytical

Client: Maul Foster & Alongi

Project: Bus Barn / 0239.28.05

TestCode: NWTPHGX_S

Sample ID: CCV	SampType: CCV	TestCode: NWTPHGX_S	Units: mg/Kg	Prep Date:	RunNo: 16919						
Client ID: CCV	Batch ID: 8214	TestNo: NWTPH-Gx	5030_G_S	Analysis Date: 9/23/2014	SeqNo: 223411						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Gasoline	93.7	2.50	100.0	0	93.7	80	120				
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Sample ID: MB-8214	SampType: MBLK	TestCode: NWTPHGX_S	Units: mg/Kg	Prep Date: 9/23/2014	RunNo: 16919						
Client ID: PBS	Batch ID: 8214	TestNo: NWTPH-Gx	5030_G_S	Analysis Date: 9/23/2014	SeqNo: 223412						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Gasoline	ND	2.50									
Surr: 4-Bromofluorobenzene	3.55		5.000		71.0	50	150				

Sample ID: LCS-8214	SampType: LCS	TestCode: NWTPHGX_S	Units: mg/Kg	Prep Date: 9/23/2014	RunNo: 16919						
Client ID: LCSS	Batch ID: 8214	TestNo: NWTPH-Gx	5030_G_S	Analysis Date: 9/23/2014	SeqNo: 223413						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Gasoline	50.4	2.50	50.00	0	101	53.5	121				
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Sample ID: CCV	SampType: CCV	TestCode: NWTPHGX_S	Units: mg/Kg	Prep Date:	RunNo: 16919						
Client ID: CCV	Batch ID: 8214	TestNo: NWTPH-Gx	5030_G_S	Analysis Date: 9/23/2014	SeqNo: 223421						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Gasoline	113	2.50	125.0	0	90.7	80	120				
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Qualifiers: B Analyte detected in the associated Method Blank
O RSD is greater than RSDlimit

H Holding times for preparation or analysis exceeded
R RPD outside accepted recovery limits

ND Not Detected at the Reporting Limit
S Spike Recovery outside accepted recovery

QC SUMMARY REPORT

WO#: 1409114

10-Oct-14

Specialty Analytical

Client: Maul Foster & Alongi

Project: Bus Barn / 0239.28.05

TestCode: NWTPHGX_S

Sample ID: CCB	SampType: CCB	TestCode: NWTPHGX_S	Units: mg/Kg	Prep Date:	RunNo: 16919						
Client ID: CCB	Batch ID: 8214	TestNo: NWTPH-Gx	5030_G_S	Analysis Date: 9/23/2014	SeqNo: 223422						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Gasoline	ND	2.50									
Surr: 4-Bromofluorobenzene	3.25		5.000		65.0	50	150				

Sample ID: 1409136-002ADUP	SampType: DUP	TestCode: NWTPHGX_S	Units: mg/Kg-dry	Prep Date: 9/23/2014	RunNo: 16919						
Client ID: ZZZZZZ	Batch ID: 8214	TestNo: NWTPH-Gx	5030_G_S	Analysis Date: 9/23/2014	SeqNo: 223426						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Gasoline	ND	2.62						0	0	20	
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Sample ID: CCV	SampType: CCV	TestCode: NWTPHGX_S	Units: mg/Kg	Prep Date:	RunNo: 16919						
Client ID: CCV	Batch ID: 8214	TestNo: NWTPH-Gx	5030_G_S	Analysis Date: 9/23/2014	SeqNo: 223432						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Gasoline	91.9	2.50	100.0	0	91.9	80	120				
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Sample ID: CCB	SampType: CCB	TestCode: NWTPHGX_S	Units: mg/Kg	Prep Date:	RunNo: 16919						
Client ID: CCB	Batch ID: 8214	TestNo: NWTPH-Gx	5030_G_S	Analysis Date: 9/23/2014	SeqNo: 223433						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Gasoline	ND	2.50									
Surr: 4-Bromofluorobenzene	3.24		5.000		64.9	50	150				

Qualifiers: B Analyte detected in the associated Method Blank
O RSD is greater than RSDlimit

H Holding times for preparation or analysis exceeded
R RPD outside accepted recovery limits

ND Not Detected at the Reporting Limit
S Spike Recovery outside accepted recovery

QC SUMMARY REPORT

WO#: 1409114

10-Oct-14

Specialty Analytical

Client: Maul Foster & Alongi

Project: Bus Barn / 0239.28.05

TestCode: NWTPHGX_S

Sample ID: 1409114-006ADUP	SampType: DUP	TestCode: NWTPHGX_S	Units: mg/Kg-dry	Prep Date: 9/23/2014	RunNo: 16919						
Client ID: B3-S-7.0	Batch ID: 8214	TestNo: NWTPH-Gx	5030_G_S	Analysis Date: 9/24/2014	SeqNo: 223435						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Gasoline	1310	31.9						1322	0.695	20	
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Sample ID: CCV	SampType: CCV	TestCode: NWTPHGX_S	Units: mg/Kg	Prep Date:	RunNo: 16919						
Client ID: CCV	Batch ID: 8214	TestNo: NWTPH-Gx	5030_G_S	Analysis Date: 9/24/2014	SeqNo: 223440						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Gasoline	130	2.50	125.0	0	104	80	120				
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Sample ID: CCV	SampType: CCV	TestCode: NWTPHGX_S	Units: mg/Kg	Prep Date:				RunNo: 17067			
Client ID: CCV	Batch ID: 8214	TestNo: NWTPH-Gx	5030_G_S	Analysis Date: 9/30/2014				SeqNo: 224192			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Mineral Spirits	90.4	50.0	100.0	0	90.4	80	120				
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Sample ID: CCB	SampType: CCB	TestCode: NWTPHGX_S	Units: mg/Kg	Prep Date:	RunNo: 17067						
Client ID: CCB	Batch ID: 8214	TestNo: NWTPH-Gx	5030_G_S	Analysis Date: 9/30/2014	SeqNo: 224193						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Mineral Spirits	ND	50.0									
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Qualifiers: B Analyte detected in the associated Method Blank
O RSD is greater than RSDlimit

H Holding times for preparation or analysis exceeded
R RPD outside accepted recovery limits

ND Not Detected at the Reporting Limit
S Spike Recovery outside accepted recovery

QC SUMMARY REPORT

WO#: 1409114

10-Oct-14

Specialty Analytical

Client: Maul Foster & Alongi

Project: Bus Barn / 0239.28.05

TestCode: NWTPHGX_S

Sample ID: CCV	SampType: CCV	TestCode: NWTPHGX_S	Units: mg/Kg	Prep Date:	RunNo: 17067						
Client ID: CCV	Batch ID: 8214	TestNo: NWTPH-Gx	5030_G_S	Analysis Date: 9/30/2014	SeqNo: 224200						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mineral Spirits	122	50.0	125.0	0	97.8	80	120				

Qualifiers: B Analyte detected in the associated Method Blank
O RSD is greater than RSDlimit

H Holding times for preparation or analysis exceeded
R RPD outside accepted recovery limits

ND Not Detected at the Reporting Limit
S Spike Recovery outside accepted recovery

KEY TO FLAGS

Rev. May 12, 2010

- A This sample contains a Gasoline Range Organic not identified as a specific hydrocarbon product. The result was quantified against gasoline calibration standards
- A1 This sample contains a Diesel Range Organic not identified as a specific hydrocarbon product. The result was quantified against diesel calibration standards.
- A2 This sample contains a Lube Oil Range Organic not identified as a specific hydrocarbon product. The result was quantified against a lube oil calibration standard.
- A3 The result was determined to be Non-Detect based on hydrocarbon pattern recognition. The product was carry-over from another hydrocarbon type.
- A4 The product appears to be aged or degraded diesel.
- B The blank exhibited a positive result great than the reporting limit for this compound.
- CN See Case Narrative.
- D Result is based from a dilution.
- E Result exceeds the calibration range for this compound. The result should be considered as estimate.
- F The positive result for this hydrocarbon is due to single component contamination. The product does not match any hydrocarbon in the fuels library.
- G Result may be biased high due to biogenic interferences. Clean up is recommended.
- H Sample was analyzed outside recommended holding time.
- HT At clients request, samples was analyzed outside of recommended holding time.
- J The result for this analyte is between the MDL and the PQL and should be considered as estimated concentration.
- K Diesel result is biased high due to amount of Oil contained in the sample.
- L Diesel result is biased high due to amount of Gasoline contained in the sample.
- M Oil result is biased high due to amount of Diesel contained in the sample.
- MC Sample concentration is greater than 4x the spiked value, the spiked value is considered insignificant.
- MI Result is outside control limits due to matrix interference.
- MSA Value determined by Method of Standard Addition.
- O Laboratory Control Standard (LCS) exceeded laboratory control limits, but meets CCV criteria. Data meets EPA requirements.
- Q Detection levels elevated due to sample matrix.
- R RPD control limits were exceeded.
- RF Duplicate failed due to result being at or near the method-reporting limit.
- RP Matrix spike values exceed established QC limits; post digestion spike is in control.
- S Recovery is outside control limits.
- SC Closing CCV or LCS exceeded high recovery control limits, but associated samples are non-detect. Data meets EPA requirements.
- * The result for this parameter was greater than the maximum contaminant level of the TCLP regulatory limit.

CHAIN OF CUSTODY RECORD

Page 1 of 2

Specialty Analytical

11711 SE Capps Road
Clackamas, OR 97015
Phone: 503-607-1331
Fax: 503-607-1336

Collected By: [Signature]

Signature: [Signature]

Printed: SHARVENE HARVESTER

Signature: _____

Printed: _____

Turn Around Time _____

☒ Normal 5-7 Business Days

☐ Rush _____

Specify _____

Rush Analyses Must Be Scheduled With The Lab In Advance

Date	Time	Sample I.D.	Matrix	Received By:	Company	Date	Time
9/15	12:40	B1-S-2.0	S	[Signature]	[Signature]	9/18	7:15
	12:42	B1-S-8.5	S				
	13:00	B2-S-2.0	S				
	13:10	B2-S-8.0	S				
	14:20	B3-S-2.0	S				
	15:10	B3-S-7.0	S				
	15:40	B4-S-3.0	S				
	15:45	B4-S-7.0	S				
9/16	13:50	B5-S-2.0	S				
	14:00	B5-S-7.0	S				
	15:30	B6-S-2.0	S				
	15:40	B6-S-8.5	S				

Relinquished By: [Signature]
Company: AF A

Unless Reclaimed, Samples Will Be Disposed of 60 Days After Receipt.
Samples held beyond 60 days subject to storage fee(s)

Contact Person/Project Manager

Company

Address

Phone

Fax

Project No.

Project Name

Project Site Location

OR

WA

Other

Invoice To

P.O. No.

Merideth D'Andrea

Mail Foster & Alongi, Inc.

400 E Mill Plain Blvd Ste 400

Vancouver WA 98660

360 694-2691

0239.28.05

Bus Barn

MFA

For Laboratory Use

Lab Job No.

Shipped Via

Air Bill No.

Temperature On Receipt

Specialty Analytical Containers?

Specialty Analytical Trip Blanks?

Comments

Lab I.D.

Relinquished By: [Signature]
Company: [Signature]

Received For Lab By: [Signature]

Date

Time

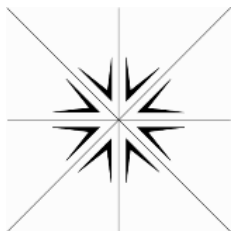
Page 2 of 2

Fax: 503-607-1336

Rush Analyses Must Be Scheduled With The Lab In Advance

Unless Reclaimed, Samples Will Be Disposed of 60 Days After Receipt.
Samples held beyond 60 days subject to storage fee(s)

2011



Specialty Analytical

11711 SE Capps Road, Ste B
Clackamas, Oregon 97015
TEL: 503-607-1331 FAX: 503-607-1336
Website: www.specialtyanalytical.com

April 27, 2015

Merideth D'Andrea
Maul Foster & Alongi
400 E. Mill Plain Blvd.
Suite 400
Vancouver, WA 98660
TEL: (503) 501-5216
FAX: (360) 906-1958
RE: Bus Barn / 0239.28.05

Dear Merideth D'Andrea:

Order No.: 1504161

Specialty Analytical received 23 sample(s) on 4/17/2015 for the analyses presented in the following report.

There were no problems with the analysis and all data for associated QC met EPA or laboratory specifications, except where noted in the Case Narrative, or as qualified with flags. Results apply only to the samples analyzed. Without approval of the laboratory, the reproduction of this report is only permitted in its entirety.

If you have any questions regarding these tests, please feel free to call.

Sincerely,

A handwritten signature in black ink, appearing to read "Marty French", written in a cursive style.

Marty French
Lab Director

Specialty Analytical

Date Reported: 27-Apr-15

CLIENT: Maul Foster & Alongi
Project: Bus Barn / 0239.28.05

Lab Order: 1504161

Lab ID: 1504161-001

Collection Date: 4/15/2015 9:30:00 AM

Client Sample ID: B8-S-5.5

Matrix: SOIL

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
HOLD PER CLIENT REQUEST		PER CLIENT				Analyst: knb
Hold	Hold	0			1	4/27/2015 9:57:23 AM

Lab ID: 1504161-002

Collection Date: 4/15/2015 9:35:00 AM

Client Sample ID: B8-S-7.5

Matrix: SOIL

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
NWTPH-DX		NWTPH-DX				Analyst: JRC
Diesel	ND	20.0		mg/Kg-dry	1	4/23/2015 4:15:00 AM
Lube Oil	ND	66.7		mg/Kg-dry	1	4/23/2015 4:15:00 AM
Surr: o-Terphenyl	96.1	50-150		%REC	1	4/23/2015 4:15:00 AM
BTEX - RBC		SW8021B				Analyst: BS
Benzene	ND	0.0200		mg/Kg-dry	1	4/23/2015 9:01:24 PM
Toluene	ND	0.0334		mg/Kg-dry	1	4/23/2015 9:01:24 PM
Ethylbenzene	ND	0.0334		mg/Kg-dry	1	4/23/2015 9:01:24 PM
Xylenes, Total	ND	0.100		mg/Kg-dry	1	4/23/2015 9:01:24 PM
Surr: 4-Bromofluorobenzene	60.2	42.6-126		%REC	1	4/23/2015 9:01:24 PM
NWTPH-GX		NWTPH-GX				Analyst: BS
Gasoline	ND	3.34		mg/Kg-dry	1	4/23/2015 9:01:38 PM
Surr: 4-Bromofluorobenzene	57.0	50-150		%REC	1	4/23/2015 9:01:38 PM

Specialty Analytical

Date Reported: 27-Apr-15

CLIENT: Maul Foster & Alongi
Project: Bus Barn / 0239.28.05

Lab Order: 1504161

Lab ID: 1504161-003

Collection Date: 4/15/2015 10:00:00 AM

Client Sample ID: B8-W-8.0

Matrix: WATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
NWTPH-DX - RBC		NWTPH-DX				Analyst: BS
Diesel	2.00	0.0784	A1	mg/L	1	4/24/2015 12:07:54 AM
Lube Oil	0.263	0.196		mg/L	1	4/24/2015 12:07:54 AM
Surr: o-Terphenyl	130	50-150		%REC	1	4/24/2015 12:07:54 AM
BTEX - RBC		SW8021B				Analyst: BS
Benzene	ND	0.300		µg/L	1	4/24/2015 4:20:19 AM
Toluene	ND	0.500		µg/L	1	4/24/2015 4:20:19 AM
Ethylbenzene	ND	0.500		µg/L	1	4/24/2015 4:20:19 AM
Xylenes, Total	ND	1.50		µg/L	1	4/24/2015 4:20:19 AM
Surr: 4-Bromofluorobenzene	109	74.8-126		%REC	1	4/24/2015 4:20:19 AM
NWTPH-GX		NWTPH-GX				Analyst: BS
Gasoline	322	100		µg/L	1	4/24/2015 4:20:37 AM
Surr: 4-Bromofluorobenzene	109	50-150		%REC	1	4/24/2015 4:20:37 AM

Lab ID: 1504161-004

Collection Date: 4/15/2015 10:00:00 AM

Client Sample ID: B9-S-8.5

Matrix: SOIL

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
HOLD PER CLIENT REQUEST		PER CLIENT				Analyst: knb
Hold	Hold	0			1	4/27/2015 9:57:23 AM

Specialty Analytical

Date Reported: 27-Apr-15

CLIENT: Maul Foster & Alongi
Project: Bus Barn / 0239.28.05

Lab Order: 1504161

Lab ID: 1504161-005

Collection Date: 4/15/2015 10:05:00 AM

Client Sample ID: B9-S-6.0

Matrix: SOIL

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
NWTPH-DX		NWTPH-DX				Analyst: JRC
Diesel	ND	18.8		mg/Kg-dry	1	4/23/2015 4:36:00 AM
Lube Oil	ND	62.7		mg/Kg-dry	1	4/23/2015 4:36:00 AM
Surr: o-Terphenyl	104	50-150		%REC	1	4/23/2015 4:36:00 AM
BTEX - RBC		SW8021B				Analyst: BS
Benzene	ND	0.0188		mg/Kg-dry	1	4/23/2015 9:28:24 PM
Toluene	ND	0.0314		mg/Kg-dry	1	4/23/2015 9:28:24 PM
Ethylbenzene	ND	0.0314		mg/Kg-dry	1	4/23/2015 9:28:24 PM
Xylenes, Total	ND	0.0941		mg/Kg-dry	1	4/23/2015 9:28:24 PM
Surr: 4-Bromofluorobenzene	54.2	42.6-126		%REC	1	4/23/2015 9:28:24 PM
NWTPH-GX		NWTPH-GX				Analyst: BS
Gasoline	ND	3.14		mg/Kg-dry	1	4/23/2015 9:28:38 PM
Surr: 4-Bromofluorobenzene	63.9	50-150		%REC	1	4/23/2015 9:28:38 PM

Lab ID: 1504161-006

Collection Date: 4/15/2015 10:30:00 AM

Client Sample ID: B9-W-10.5

Matrix: WATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
NWTPH-DX - RBC		NWTPH-DX				Analyst: BS
Diesel	0.174	0.0777		mg/L	1	4/24/2015 12:29:54 AM
Lube Oil	0.194	0.194		mg/L	1	4/24/2015 12:29:54 AM
Surr: o-Terphenyl	107	50-150		%REC	1	4/24/2015 12:29:54 AM
BTEX - RBC		SW8021B				Analyst: BS
Benzene	ND	0.300		µg/L	1	4/24/2015 4:48:19 AM
Toluene	ND	0.500		µg/L	1	4/24/2015 4:48:19 AM
Ethylbenzene	ND	0.500		µg/L	1	4/24/2015 4:48:19 AM
Xylenes, Total	ND	1.50		µg/L	1	4/24/2015 4:48:19 AM
Surr: 4-Bromofluorobenzene	106	74.8-126		%REC	1	4/24/2015 4:48:19 AM
NWTPH-GX		NWTPH-GX				Analyst: BS
Gasoline	ND	100		µg/L	1	4/24/2015 4:48:37 AM
Surr: 4-Bromofluorobenzene	106	50-150		%REC	1	4/24/2015 4:48:37 AM

Specialty Analytical

Date Reported: 27-Apr-15

CLIENT: Maul Foster & Alongi
Project: Bus Barn / 0239.28.05

Lab Order: 1504161

Lab ID: 1504161-007 **Collection Date:** 4/15/2015 11:40:00 AM
Client Sample ID: B10-S-8.0 **Matrix:** SOIL

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
HOLD PER CLIENT REQUEST		PER CLIENT				Analyst: knb
Hold	Hold	0			1	4/27/2015 9:57:23 AM

Lab ID: 1504161-008 **Collection Date:** 4/15/2015 11:45:00 AM
Client Sample ID: B10-S-5.5 **Matrix:** SOIL

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
NWTPH-DX		NWTPH-DX				Analyst: JRC
Diesel	ND	19.6		mg/Kg-dry	1	4/23/2015 4:58:00 AM
Lube Oil	ND	65.5		mg/Kg-dry	1	4/23/2015 4:58:00 AM
Surr: o-Terphenyl	104	50-150		%REC	1	4/23/2015 4:58:00 AM
BTEX - RBC		SW8021B				Analyst: BS
Benzene	ND	0.0196		mg/Kg-dry	1	4/23/2015 10:23:24 PM
Toluene	ND	0.0327		mg/Kg-dry	1	4/23/2015 10:23:24 PM
Ethylbenzene	ND	0.0327		mg/Kg-dry	1	4/23/2015 10:23:24 PM
Xylenes, Total	ND	0.0982		mg/Kg-dry	1	4/23/2015 10:23:24 PM
Surr: 4-Bromofluorobenzene	51.0	42.6-126		%REC	1	4/23/2015 10:23:24 PM
NWTPH-GX		NWTPH-GX				Analyst: BS
Gasoline	ND	3.27		mg/Kg-dry	1	4/23/2015 10:23:38 PM
Surr: 4-Bromofluorobenzene	63.3	50-150		%REC	1	4/23/2015 10:23:38 PM

Specialty Analytical

Date Reported: 27-Apr-15

CLIENT: Maul Foster & Alongi
Project: Bus Barn / 0239.28.05

Lab Order: 1504161

Lab ID: 1504161-009

Collection Date: 4/15/2015 12:10:00 PM

Client Sample ID: B10-W-10.5

Matrix: WATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
NWTPH-DX - RBC		NWTPH-DX				Analyst: BS
Diesel	0.267	0.0755		mg/L	1	4/24/2015 1:34:54 AM
Lube Oil	0.630	0.189		mg/L	1	4/24/2015 1:34:54 AM
Surr: o-Terphenyl	123	50-150		%REC	1	4/24/2015 1:34:54 AM
BTEX - RBC		SW8021B				Analyst: BS
Benzene	ND	0.300		µg/L	1	4/24/2015 5:15:19 AM
Toluene	ND	0.500		µg/L	1	4/24/2015 5:15:19 AM
Ethylbenzene	ND	0.500		µg/L	1	4/24/2015 5:15:19 AM
Xylenes, Total	ND	1.50		µg/L	1	4/24/2015 5:15:19 AM
Surr: 4-Bromofluorobenzene	108	74.8-126		%REC	1	4/24/2015 5:15:19 AM
NWTPH-GX		NWTPH-GX				Analyst: BS
Gasoline	ND	100		µg/L	1	4/24/2015 5:15:37 AM
Surr: 4-Bromofluorobenzene	106	50-150		%REC	1	4/24/2015 5:15:37 AM

Lab ID: 1504161-010

Collection Date: 4/15/2015 1:10:00 PM

Client Sample ID: B11-S-5.5

Matrix: SOIL

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
HOLD PER CLIENT REQUEST		PER CLIENT				Analyst: knb
Hold	Hold	0			1	4/27/2015 9:57:23 AM

Specialty Analytical

Date Reported: 27-Apr-15

CLIENT: Maul Foster & Alongi
Project: Bus Barn / 0239.28.05

Lab Order: 1504161

Lab ID: 1504161-011

Collection Date: 4/15/2015 1:15:00 PM

Client Sample ID: B11-S-8.0

Matrix: SOIL

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
NWTPH-DX		NWTPH-DX				Analyst: JRC
Diesel	ND	19.3		mg/Kg-dry	1	4/23/2015 5:20:00 AM
Lube Oil	ND	64.4		mg/Kg-dry	1	4/23/2015 5:20:00 AM
Surr: o-Terphenyl	87.9	50-150		%REC	1	4/23/2015 5:20:00 AM
BTEX - RBC		SW8021B				Analyst: BS
Benzene	ND	0.0193		mg/Kg-dry	1	4/23/2015 10:51:24 PM
Toluene	ND	0.0322		mg/Kg-dry	1	4/23/2015 10:51:24 PM
Ethylbenzene	ND	0.0322		mg/Kg-dry	1	4/23/2015 10:51:24 PM
Xylenes, Total	ND	0.0966		mg/Kg-dry	1	4/23/2015 10:51:24 PM
Surr: 4-Bromofluorobenzene	63.1	42.6-126		%REC	1	4/23/2015 10:51:24 PM
NWTPH-GX		NWTPH-GX				Analyst: BS
Gasoline	ND	3.22		mg/Kg-dry	1	4/23/2015 10:51:38 PM
Surr: 4-Bromofluorobenzene	60.9	50-150		%REC	1	4/23/2015 10:51:38 PM

Lab ID: 1504161-012

Collection Date: 4/15/2015 1:30:00 PM

Client Sample ID: B12-S-5.5

Matrix: SOIL

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
NWTPH-DX		NWTPH-DX				Analyst: JRC
Diesel	50.0	19.2	A1	mg/Kg-dry	1	4/23/2015 5:42:00 AM
Lube Oil	ND	64.0		mg/Kg-dry	1	4/23/2015 5:42:00 AM
Surr: o-Terphenyl	75.8	50-150		%REC	1	4/23/2015 5:42:00 AM
BTEX - RBC		SW8021B				Analyst: BS
Benzene	ND	0.0192		mg/Kg-dry	1	4/24/2015 7:59:24 AM
Toluene	0.122	0.0320		mg/Kg-dry	1	4/24/2015 7:59:24 AM
Ethylbenzene	ND	0.0320		mg/Kg-dry	1	4/24/2015 7:59:24 AM
Xylenes, Total	ND	0.0960		mg/Kg-dry	1	4/24/2015 7:59:24 AM
Surr: 4-Bromofluorobenzene	124	42.6-126		%REC	1	4/24/2015 7:59:24 AM
NWTPH-GX		NWTPH-GX				Analyst: BS
Gasoline	615	6.40		mg/Kg-dry	2	4/24/2015 1:00:38 PM
Surr: 4-Bromofluorobenzene	179	50-150	SMI	%REC	2	4/24/2015 1:00:38 PM

Specialty Analytical

Date Reported: 27-Apr-15

CLIENT: Maul Foster & Alongi
Project: Bus Barn / 0239.28.05

Lab Order: 1504161

Lab ID: 1504161-013

Collection Date: 4/15/2015 1:35:00 PM

Client Sample ID: B12-S-8.0

Matrix: SOIL

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
NWTPH-DX		NWTPH-DX				Analyst: JRC
Diesel	548	19.6	A1	mg/Kg-dry	1	4/23/2015 6:03:00 AM
Lube Oil	ND	65.4		mg/Kg-dry	1	4/23/2015 6:03:00 AM
Surr: o-Terphenyl	100	50-150		%REC	1	4/23/2015 6:03:00 AM
BTEX - RBC		SW8021B				Analyst: BS
Benzene	ND	0.0196		mg/Kg-dry	1	4/24/2015 8:26:24 AM
Toluene	0.109	0.0327		mg/Kg-dry	1	4/24/2015 8:26:24 AM
Ethylbenzene	ND	0.0327		mg/Kg-dry	1	4/24/2015 8:26:24 AM
Xylenes, Total	ND	0.0981		mg/Kg-dry	1	4/24/2015 8:26:24 AM
Surr: 4-Bromofluorobenzene	138	42.6-126	SMI	%REC	1	4/24/2015 8:26:24 AM
NWTPH-GX		NWTPH-GX				Analyst: BS
Gasoline	718	6.54		mg/Kg-dry	2	4/24/2015 1:30:38 PM
Surr: 4-Bromofluorobenzene	177	50-150	SMI	%REC	2	4/24/2015 1:30:38 PM

Lab ID: 1504161-014

Collection Date: 4/15/2015 2:30:00 PM

Client Sample ID: B13-S-5.0

Matrix: SOIL

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
HOLD PER CLIENT REQUEST		PER CLIENT				Analyst: knb
Hold	Hold	0			1	4/27/2015 9:57:23 AM

Specialty Analytical

Date Reported: 27-Apr-15

CLIENT: Maul Foster & Alongi
Project: Bus Barn / 0239.28.05

Lab Order: 1504161

Lab ID: 1504161-015

Collection Date: 4/15/2015 2:35:00 PM

Client Sample ID: B13-S-8.0

Matrix: SOIL

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
NWTPH-DX		NWTPH-DX				Analyst: JRC
Diesel	ND	19.1		mg/Kg-dry	1	4/23/2015 6:25:00 AM
Lube Oil	ND	63.7		mg/Kg-dry	1	4/23/2015 6:25:00 AM
Surr: o-Terphenyl	103	50-150		%REC	1	4/23/2015 6:25:00 AM
BTEX - RBC		SW8021B				Analyst: BS
Benzene	ND	0.0191		mg/Kg-dry	1	4/23/2015 11:18:24 PM
Toluene	ND	0.0318		mg/Kg-dry	1	4/23/2015 11:18:24 PM
Ethylbenzene	ND	0.0318		mg/Kg-dry	1	4/23/2015 11:18:24 PM
Xylenes, Total	ND	0.0955		mg/Kg-dry	1	4/23/2015 11:18:24 PM
Surr: 4-Bromofluorobenzene	52.2	42.6-126		%REC	1	4/23/2015 11:18:24 PM
NWTPH-GX		NWTPH-GX				Analyst: BS
Gasoline	ND	3.18		mg/Kg-dry	1	4/23/2015 11:18:38 PM
Surr: 4-Bromofluorobenzene	60.7	50-150		%REC	1	4/23/2015 11:18:38 PM

Lab ID: 1504161-016

Collection Date: 4/15/2015 3:00:00 PM

Client Sample ID: B14-S-5.0

Matrix: SOIL

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
NWTPH-DX		NWTPH-DX				Analyst: JRC
Diesel	ND	18.0		mg/Kg-dry	1	4/23/2015 8:14:00 AM
Lube Oil	ND	60.1		mg/Kg-dry	1	4/23/2015 8:14:00 AM
Surr: o-Terphenyl	94.2	50-150		%REC	1	4/23/2015 8:14:00 AM
BTEX - RBC		SW8021B				Analyst: BS
Benzene	ND	0.0180		mg/Kg-dry	1	4/23/2015 11:46:24 PM
Toluene	ND	0.0301		mg/Kg-dry	1	4/23/2015 11:46:24 PM
Ethylbenzene	ND	0.0301		mg/Kg-dry	1	4/23/2015 11:46:24 PM
Xylenes, Total	ND	0.0902		mg/Kg-dry	1	4/23/2015 11:46:24 PM
Surr: 4-Bromofluorobenzene	54.5	42.6-126		%REC	1	4/23/2015 11:46:24 PM
NWTPH-GX		NWTPH-GX				Analyst: BS
Gasoline	ND	3.01		mg/Kg-dry	1	4/23/2015 11:46:38 PM
Surr: 4-Bromofluorobenzene	63.0	50-150		%REC	1	4/23/2015 11:46:38 PM

Specialty Analytical

Date Reported: 27-Apr-15

CLIENT: Maul Foster & Alongi
Project: Bus Barn / 0239.28.05

Lab Order: 1504161

Lab ID: 1504161-017

Collection Date: 4/15/2015 3:05:00 PM

Client Sample ID: B14-S-7.5

Matrix: SOIL

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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HOLD PER CLIENT REQUEST

PER CLIENT

Analyst: **knb**

Hold	Hold	0			1	4/27/2015 9:57:23 AM
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Lab ID: 1504161-018

Collection Date: 4/15/2015 3:20:00 PM

Client Sample ID: B14-W-8.0

Matrix: WATER

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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NWTPH-DX - RBC

NWTPH-DX

Analyst: **BS**

Diesel	ND	0.0775		mg/L	1	4/24/2015 12:51:54 AM
Lube Oil	ND	0.194		mg/L	1	4/24/2015 12:51:54 AM
Surr: o-Terphenyl	77.2	50-150		%REC	1	4/24/2015 12:51:54 AM

BTEX - RBC

SW8021B

Analyst: **BS**

Benzene	ND	0.300		µg/L	1	4/24/2015 5:42:19 AM
Toluene	ND	0.500		µg/L	1	4/24/2015 5:42:19 AM
Ethylbenzene	ND	0.500		µg/L	1	4/24/2015 5:42:19 AM
Xylenes, Total	ND	1.50		µg/L	1	4/24/2015 5:42:19 AM
Surr: 4-Bromofluorobenzene	106	74.8-126		%REC	1	4/24/2015 5:42:19 AM

NWTPH-GX

NWTPH-GX

Analyst: **BS**

Gasoline	ND	100		µg/L	1	4/24/2015 5:42:37 AM
Surr: 4-Bromofluorobenzene	106	50-150		%REC	1	4/24/2015 5:42:37 AM

Lab ID: 1504161-019

Collection Date: 4/15/2015 3:55:00 PM

Client Sample ID: B15-S-5.5

Matrix: SOIL

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
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HOLD PER CLIENT REQUEST

PER CLIENT

Analyst: **knb**

Hold	Hold	0			1	4/27/2015 9:57:23 AM
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Specialty Analytical

Date Reported: 27-Apr-15

CLIENT: Maul Foster & Alongi
Project: Bus Barn / 0239.28.05

Lab Order: 1504161

Lab ID: 1504161-020

Collection Date: 4/15/2015 4:00:00 PM

Client Sample ID: B15-S-8.0

Matrix: SOIL

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
NWTPH-DX		NWTPH-DX				Analyst: JRC
Diesel	ND	19.4		mg/Kg-dry	1	4/23/2015 7:08:00 AM
Lube Oil	ND	64.8		mg/Kg-dry	1	4/23/2015 7:08:00 AM
Surr: o-Terphenyl	103	50-150		%REC	1	4/23/2015 7:08:00 AM
BTEX - RBC		SW8021B				Analyst: BS
Benzene	ND	0.0194		mg/Kg-dry	1	4/24/2015 12:13:24 AM
Toluene	ND	0.0324		mg/Kg-dry	1	4/24/2015 12:13:24 AM
Ethylbenzene	ND	0.0324		mg/Kg-dry	1	4/24/2015 12:13:24 AM
Xylenes, Total	ND	0.0972		mg/Kg-dry	1	4/24/2015 12:13:24 AM
Surr: 4-Bromofluorobenzene	53.2	42.6-126		%REC	1	4/24/2015 12:13:24 AM
NWTPH-GX		NWTPH-GX				Analyst: BS
Gasoline	ND	3.24		mg/Kg-dry	1	4/24/2015 12:13:38 AM
Surr: 4-Bromofluorobenzene	58.6	50-150		%REC	1	4/24/2015 12:13:38 AM

Lab ID: 1504161-021

Collection Date: 4/15/2015 4:30:00 PM

Client Sample ID: B16-S-5.5

Matrix: SOIL

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
NWTPH-DX		NWTPH-DX				Analyst: JRC
Diesel	111	19.0	A4	mg/Kg-dry	1	4/23/2015 7:30:00 AM
Lube Oil	ND	63.5		mg/Kg-dry	1	4/23/2015 7:30:00 AM
Surr: o-Terphenyl	126	50-150		%REC	1	4/23/2015 7:30:00 AM
BTEX - RBC		SW8021B				Analyst: BS
Benzene	ND	0.0190		mg/Kg-dry	1	4/24/2015 12:41:24 AM
Toluene	ND	0.0317		mg/Kg-dry	1	4/24/2015 12:41:24 AM
Ethylbenzene	ND	0.0317		mg/Kg-dry	1	4/24/2015 12:41:24 AM
Xylenes, Total	ND	0.0952		mg/Kg-dry	1	4/24/2015 12:41:24 AM
Surr: 4-Bromofluorobenzene	54.5	42.6-126		%REC	1	4/24/2015 12:41:24 AM
NWTPH-GX		NWTPH-GX				Analyst: BS
Gasoline	ND	3.17		mg/Kg-dry	1	4/24/2015 12:41:38 AM
Surr: 4-Bromofluorobenzene	62.2	50-150		%REC	1	4/24/2015 12:41:38 AM

Specialty Analytical

Date Reported: 27-Apr-15

CLIENT: Maul Foster & Alongi
Project: Bus Barn / 0239.28.05

Lab Order: 1504161

Lab ID: 1504161-022

Collection Date: 4/15/2015 4:35:00 PM

Client Sample ID: B16-S-8.0

Matrix: SOIL

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
NWTPH-DX		NWTPH-DX				Analyst: JRC
Diesel	6420	19.4		mg/Kg-dry	1	4/23/2015 7:52:00 AM
Lube Oil	ND	64.5		mg/Kg-dry	1	4/23/2015 7:52:00 AM
Surr: o-Terphenyl	215	50-150	SMI	%REC	1	4/23/2015 7:52:00 AM
BTEX - RBC		SW8021B				Analyst: BS
Benzene	ND	0.0194		mg/Kg-dry	1	4/24/2015 8:54:24 AM
Toluene	ND	0.0323		mg/Kg-dry	1	4/24/2015 8:54:24 AM
Ethylbenzene	ND	0.0323		mg/Kg-dry	1	4/24/2015 8:54:24 AM
Xylenes, Total	ND	0.0968		mg/Kg-dry	1	4/24/2015 8:54:24 AM
Surr: 4-Bromofluorobenzene	105	42.6-126		%REC	1	4/24/2015 8:54:24 AM
NWTPH-GX		NWTPH-GX				Analyst: BS
Gasoline	955	6.45		mg/Kg-dry	2	4/24/2015 9:33:38 AM
Surr: 4-Bromofluorobenzene	220	50-150	SMI	%REC	2	4/24/2015 9:33:38 AM

QC SUMMARY REPORT

WO#: 1504161

27-Apr-15

Specialty Analytical

Client: Maul Foster & Alongi

Project: Bus Barn / 0239.28.05

TestCode: BTEXRBC_S

Sample ID: CCV	SampType: CCV	TestCode: BTEXRBC_S	Units: mg/Kg	Prep Date:	RunNo: 19828						
Client ID: CCV	Batch ID: 9282	TestNo: SW8021B	5030	Analysis Date: 4/23/2015	SeqNo: 265303						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	2.29	0.0150	2.500	0	91.4	85	115				
Toluene	2.42	0.0250	2.500	0	96.8	85	115				
Ethylbenzene	2.50	0.0250	2.500	0	100	85	115				
Xylenes, Total	8.15	0.0750	7.500	0	109	85	115				

Sample ID: MB-9282	SampType: MBLK	TestCode: BTEXRBC_S	Units: mg/Kg	Prep Date: 4/17/2015	RunNo: 19828						
Client ID: PBS	Batch ID: 9282	TestNo: SW8021B	5030	Analysis Date: 4/23/2015	SeqNo: 265304						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	ND	0.0150									
Toluene	ND	0.0250									
Ethylbenzene	ND	0.0250									
Xylenes, Total	ND	0.0750									
Surr: 4-Bromofluorobenzene	4.00		5.000		80.0	42.6	126				

Sample ID: LCS-9282	SampType: LCS	TestCode: BTEXRBC_S	Units: mg/Kg	Prep Date: 4/17/2015	RunNo: 19828						
Client ID: LCSS	Batch ID: 9282	TestNo: SW8021B	5030	Analysis Date: 4/23/2015	SeqNo: 265305						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	0.996	0.0150	1.250	0	79.7	68.7	117				
Toluene	1.11	0.0250	1.250	0	88.6	71.4	115				
Ethylbenzene	1.26	0.0250	1.250	0	101	76.3	115				
Xylenes, Total	3.91	0.0750	3.750	0	104	70.1	116				

Qualifiers: B Analyte detected in the associated Method Blank
O RSD is greater than RSDlimit

H Holding times for preparation or analysis exceeded
R RPD outside accepted recovery limits

ND Not Detected at the Reporting Limit
S Spike Recovery outside accepted reco

QC SUMMARY REPORT

WO#: 1504161

27-Apr-15

Specialty Analytical

Client: Maul Foster & Alongi

Project: Bus Barn / 0239.28.05

TestCode: BTEXRBC_S

Sample ID: LCS-9282		SampType: LCS		TestCode: BTEXRBC_S		Units: mg/Kg		Prep Date: 4/17/2015		RunNo: 19828			
Client ID: LCSS		Batch ID: 9282		TestNo: SW8021B		5030		Analysis Date: 4/23/2015		SeqNo: 265305			
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Sample ID: 1504160-001AMS	SampType: MS	TestCode: BTEXRBC_S	Units: mg/Kg-dry	Prep Date: 4/17/2015	RunNo: 19828						
Client ID: ZZZZZZ	Batch ID: 9282	TestNo: SW8021B	5030	Analysis Date: 4/23/2015	SeqNo: 265306						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	1.20	0.0186	1.553	0	77.1	32.2	108				
Toluene	1.30	0.0311	1.553	0	83.6	56.7	110				
Ethylbenzene	1.70	0.0311	1.553	0	109	53.3	107				S
Xylenes, Total	4.95	0.0932	4.660	0	106	47.5	119				

Sample ID: 1504160-001AMSD	SampType: MSD	TestCode: BTEXRBC_S	Units: mg/Kg-dry	Prep Date: 4/17/2015	RunNo: 19828						
Client ID: ZZZZZZ	Batch ID: 9282	TestNo: SW8021B	5030	Analysis Date: 4/23/2015	SeqNo: 265307						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	1.25	0.0186	1.553	0	80.5	32.2	108	1.197	4.37	20	
Toluene	1.39	0.0311	1.553	0	89.7	56.7	110	1.298	7.11	20	
Ethylbenzene	1.54	0.0311	1.553	0	99.4	53.3	107	1.699	9.58	20	
Xylenes, Total	4.89	0.0932	4.660	0	105	47.5	119	4.946	1.14	20	

Qualifiers: B Analyte detected in the associated Method Blank
O RSD is greater than RSDlimit

H Holding times for preparation or analysis exceeded
R RPD outside accepted recovery limits

ND Not Detected at the Reporting Limit
S Spike Recovery outside accepted reco

QC SUMMARY REPORT

WO#: 1504161

27-Apr-15

Specialty Analytical

Client: Maul Foster & Alongi

Project: Bus Barn / 0239.28.05

TestCode: BTEXRBC_S

Sample ID: CCV	SampType: CCV	TestCode: BTEXRBC_S	Units: mg/Kg	Prep Date:	RunNo: 19828						
Client ID: CCV	Batch ID: 9282	TestNo: SW8021B	5030	Analysis Date: 4/24/2015	SeqNo: 265319						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	2.44	0.0150	2.500	0	97.6	85	115				
Toluene	2.56	0.0250	2.500	0	102	85	115				
Ethylbenzene	2.49	0.0250	2.500	0	99.5	85	115				
Xylenes, Total	7.29	0.0750	7.500	0	97.2	85	115				

Qualifiers: B Analyte detected in the associated Method Blank
O RSD is greater than RSDlimit

H Holding times for preparation or analysis exceeded
R RPD outside accepted recovery limits

ND Not Detected at the Reporting Limit
S Spike Recovery outside accepted reco

QC SUMMARY REPORT

WO#: 1504161

27-Apr-15

Specialty Analytical

Client: Maul Foster & Alongi

Project: Bus Barn / 0239.28.05

TestCode: BTEXRBC_W

Sample ID: CCV	SampType: CCV	TestCode: BTEXRBC_W Units: µg/L				Prep Date:			RunNo: 19831		
Client ID: CCV	Batch ID: R19831	TestNo: SW8021B				Analysis Date: 4/24/2015			SeqNo: 265358		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	48.8	0.300	50.00	0	97.6	85	115				
Toluene	51.1	0.500	50.00	0	102	85	115				
Ethylbenzene	49.8	0.500	50.00	0	99.5	85	115				
Xylenes, Total	146	1.50	150.0	0	97.2	85	115				

Sample ID: MB-R19831	SampType: MBLK	TestCode: BTEXRBC_W Units: µg/L			Prep Date:				RunNo: 19831		
Client ID: PBW	Batch ID: R19831	TestNo: SW8021B			Analysis Date: 4/24/2015				SeqNo: 265359		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	ND	0.300									
Toluene	ND	0.500									
Ethylbenzene	ND	0.500									
Xylenes, Total	ND	1.50									
Surr: 4-Bromofluorobenzene	88.4		100.0		88.4	74.8	126				

Sample ID: 1504161-009BMS	SampType: MS	TestCode: BTEXRBC_W Units: µg/L				Prep Date:			RunNo: 19831		
Client ID: B10-W-10.5	Batch ID: R19831	TestNo: SW8021B				Analysis Date: 4/24/2015			SeqNo: 265367		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	24.6	0.300	25.00	0	98.6	67.8	118				
Toluene	26.1	0.500	25.00	0	105	74.7	117				
Ethylbenzene	25.0	0.500	25.00	0	99.8	74.5	115				
Xylenes, Total	77.8	1.50	75.00	0	104	76.8	120				

Qualifiers: B Analyte detected in the associated Method Blank
O RSD is greater than RSDlimit

H Holding times for preparation or analysis exceeded
R RPD outside accepted recovery limits

ND Not Detected at the Reporting Limit
S Spike Recovery outside accepted reco

QC SUMMARY REPORT

WO#: 1504161

27-Apr-15

Specialty Analytical

Client: Maul Foster & Alongi

Project: Bus Barn / 0239.28.05

TestCode: BTEXRBC_W

Sample ID: 1504161-009BMS	SampType: MS	TestCode: BTEXRBC_W	Units: µg/L	Prep Date:	RunNo: 19831
Client ID: B10-W-10.5	Batch ID: R19831	TestNo: SW8021B	Analysis Date: 4/24/2015	SeqNo: 265367	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Sample ID: 1504161-009BMSD	SampType: MSD	TestCode: BTEXRBC_W	Units: µg/L	Prep Date:	RunNo: 19831
Client ID: B10-W-10.5	Batch ID: R19831	TestNo: SW8021B	Analysis Date: 4/24/2015	SeqNo: 265368	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Benzene	26.2	0.300	25.00	0	105 67.8 118 24.64 6.14 20
Toluene	27.5	0.500	25.00	0	110 74.7 117 26.14 4.93 20
Ethylbenzene	25.7	0.500	25.00	0	103 74.5 115 24.95 2.96 20
Xylenes, Total	78.4	1.50	75.00	0	105 76.8 120 77.76 0.820 20

Qualifiers: B Analyte detected in the associated Method Blank
O RSD is greater than RSDlimit

H Holding times for preparation or analysis exceeded
R RPD outside accepted recovery limits

ND Not Detected at the Reporting Limit
S Spike Recovery outside accepted reco

QC SUMMARY REPORT

WO#: 1504161

27-Apr-15

Specialty Analytical

Client: Maul Foster & Alongi

Project: Bus Barn / 0239.28.05

TestCode: NWTPHDX_S

Sample ID: MB-9289	SampType: MBLK	TestCode: NWTPHDX_S Units: mg/Kg			Prep Date: 4/20/2015			RunNo: 19789			
Client ID: PBS	Batch ID: 9289	TestNo: NWTPH-Dx		SW3545A		Analysis Date: 4/21/2015			SeqNo: 264759		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel	ND	15.0									
Lube Oil	ND	50.0									
Surr: o-Terphenyl	36.7		33.30		110	50	150				

Sample ID: LCS-9289	SampType: LCS	TestCode: NWTPHDX_S Units: mg/Kg				Prep Date: 4/20/2015			RunNo: 19789		
Client ID: LCSS	Batch ID: 9289	TestNo: NWTPH-Dx		SW3545A		Analysis Date: 4/21/2015			SeqNo: 264760		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel	180	15.0	166.5	0	108	76.3	125				
Lube Oil	168	50.0	166.5	0	101	69.9	127				

Sample ID: 1504165-013ADUP	SampType: DUP	TestCode: NWTPHDX_S	Units: mg/Kg-dry	Prep Date: 4/20/2015	RunNo: 19789						
Client ID: ZZZZZZ	Batch ID: 9289	TestNo: NWTPH-Dx	SW3545A	Analysis Date: 4/21/2015	SeqNo: 264764						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel	ND	19.2						0	0	20	
Lube Oil	ND	64.1						0	0	20	RF

Sample ID: CCV	SampType: CCV	TestCode: NWTPHDX_S	Units: mg/Kg	Prep Date:	RunNo: 19789						
Client ID: CCV	Batch ID: 9289	TestNo: NWTPH-Dx	SW3545A	Analysis Date: 4/21/2015	SeqNo: 264766						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Qualifiers: B Analyte detected in the associated Method Blank
O RSD is greater than RSDlimit

H Holding times for preparation or analysis exceeded
R RPD outside accepted recovery limits

ND Not Detected at the Reporting Limit
S Spike Recovery outside accepted reco

QC SUMMARY REPORT

WO#: 1504161

27-Apr-15

Specialty Analytical

Client: Maul Foster & Alongi
Project: Bus Barn / 0239.28.05

TestCode: NWTPHDX_S

Sample ID: CCV	SampType: CCV	TestCode: NWTPHDX_S Units: mg/Kg				Prep Date:			RunNo: 19789		
Client ID: CCV	Batch ID: 9289	TestNo: NWTPH-Dx		SW3545A		Analysis Date: 4/21/2015			SeqNo: 264766		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel	1250	15.0	999.0	0	125	85	115				SC
Lube Oil	558	50.0	499.5	0	112	85	115				

Sample ID: CCV	SampType: CCV	TestCode: NWTPHDX_S Units: mg/Kg				Prep Date:			RunNo: 19789		
Client ID: CCV	Batch ID: 9289	TestNo: NWTPH-Dx		SW3545A		Analysis Date: 4/22/2015			SeqNo: 265207		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel	1030	15.0	999.0	0	103	85	115				
Lube Oil	548	50.0	499.5	0	110	85	115				

Sample ID: CCB	SampType: CCB	TestCode: NWTPHDX_S Units: mg/Kg			Prep Date:			RunNo: 19789			
Client ID: CCB	Batch ID: 9289	TestNo: NWTPH-Dx		SW3545A		Analysis Date: 4/23/2015			SeqNo: 265208		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel	ND	15.0									
Lube Oil	ND	50.0									
Surr: o-Terphenyl	36.6		33.30		110	50	150				

Sample ID: 1504161-015ADUP	SampType: DUP	TestCode: NWTPHDX_S	Units: mg/Kg-dry	Prep Date: 4/20/2015	RunNo: 19789						
Client ID: B13-S-8.0	Batch ID: 9289	TestNo: NWTPH-Dx	SW3545A	Analysis Date: 4/23/2015	SeqNo: 265216						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Qualifiers: B Analyte detected in the associated Method Blank
O RSD is greater than RSDlimit

H Holding times for preparation or analysis exceeded
R RPD outside accepted recovery limits

ND Not Detected at the Reporting Limit
S Spike Recovery outside accepted reco

QC SUMMARY REPORT

WO#: 1504161

27-Apr-15

Specialty Analytical

Client: Maul Foster & Alongi

Project: Bus Barn / 0239.28.05

TestCode: NWTPHDX_S

Sample ID: 1504161-015ADUP	SampType: DUP	TestCode: NWTPHDX_S	Units: mg/Kg-dry	Prep Date: 4/20/2015	RunNo: 19789						
Client ID: B13-S-8.0	Batch ID: 9289	TestNo: NWTPH-Dx	SW3545A	Analysis Date: 4/23/2015	SeqNo: 265216						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel	ND	19.1						0	0	20	RF
Lube Oil	ND	63.7						0	200	20	RF

Sample ID: CCV	SampType: CCV	TestCode: NWTPHDX_S Units: mg/Kg				Prep Date:			RunNo: 19789		
Client ID: CCV	Batch ID: 9289	TestNo: NWTPH-Dx		SW3545A		Analysis Date: 4/23/2015			SeqNo: 265224		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel	1530	15.0	1332	0	115	85	115				
Lube Oil	765	50.0	666.0	0	115	85	115				

Qualifiers: B Analyte detected in the associated Method Blank
O RSD is greater than RSDlimit

H Holding times for preparation or analysis exceeded
R RPD outside accepted recovery limits

ND Not Detected at the Reporting Limit
S Spike Recovery outside accepted reco

QC SUMMARY REPORT

WO#: 1504161

27-Apr-15

Specialty Analytical

Client: Maul Foster & Alongi

Project: Bus Barn / 0239.28.05

TestCode: NWTPHDXLL_W

Sample ID: CCV	SampType: CCV	TestCode: NWTPHDXLL Units: mg/L				Prep Date:			RunNo: 19826		
Client ID: CCV	Batch ID: 9299	TestNo: NWTPH-Dx		SW3510B		Analysis Date: 4/23/2015			SeqNo: 265269		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel	9.18	0.0800	8.000	0	115	85	115				
Hydraulic Oil	4.57	0.200	4.000	0	114	85	115				
Lube Oil	4.60	0.200	4.000	0	115	85	115				

Sample ID: MB-9299	SampType: MBLK	TestCode: NWTPHDXLL Units: mg/L			Prep Date: 4/21/2015				RunNo: 19826		
Client ID: PBW	Batch ID: 9299	TestNo: NWTPH-Dx		SW3510B		Analysis Date: 4/23/2015				SeqNo: 265270	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel	ND	0.0800									
Lube Oil	ND	0.200									
Surr: o-Terphenyl	0.206		0.2000		103	50	150				

Sample ID: LCS-9299	SampType: LCS	TestCode: NWTPHDXLL	Units: mg/L	Prep Date: 4/21/2015	RunNo: 19826						
Client ID: LCSW	Batch ID: 9299	TestNo: NWTPH-Dx	SW3510B	Analysis Date: 4/23/2015	SeqNo: 265271						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel	0.858	0.0800	1.000	0	85.8	60.7	121				
Lube Oil	1.02	0.200	1.000	0	102	64	126				

Qualifiers: B Analyte detected in the associated Method Blank
O RSD is greater than RSDlimit

H Holding times for preparation or analysis exceeded
R RPD outside accepted recovery limits

ND Not Detected at the Reporting Limit
S Spike Recovery outside accepted reco

QC SUMMARY REPORT

WO#: 1504161

27-Apr-15

Specialty Analytical

Client: Maul Foster & Alongi

Project: Bus Barn / 0239.28.05

TestCode: NWTPHDXLL_W

Sample ID: LCSD-9299	SampType: LCSD	TestCode: NWTPHDXLL Units: mg/L				Prep Date: 4/21/2015			RunNo: 19826		
Client ID: LCSS02	Batch ID: 9299	TestNo: NWTPH-Dx SW3510B				Analysis Date: 4/23/2015			SeqNo: 265272		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel	0.877	0.0800	1.000	0	87.7	60.7	121	0.8582	2.18	20	
Lube Oil	1.14	0.200	1.000	0	114	64	126	1.018	11.4	20	

Sample ID: CCV	SampType: CCV	TestCode: NWTPHDXLL Units: mg/L				Prep Date:			RunNo: 19826		
Client ID: CCV	Batch ID: 9299	TestNo: NWTPH-Dx		SW3510B		Analysis Date: 4/24/2015			SeqNo: 265279		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel	6.21	0.0800	6.000	0	104	85	115				
Hydraulic Oil	3.33	0.200	3.000	0	111	85	115				
Lube Oil	3.27	0.200	3.000	0	109	85	115				

Qualifiers: B Analyte detected in the associated Method Blank
O RSD is greater than RSDlimit

H Holding times for preparation or analysis exceeded
R RPD outside accepted recovery limits

ND Not Detected at the Reporting Limit
S Spike Recovery outside accepted reco

QC SUMMARY REPORT

WO#: 1504161

27-Apr-15

Specialty Analytical

Client: Maul Foster & Alongi

Project: Bus Barn / 0239.28.05

TestCode: NWTPHGX_S

Sample ID: CCV	SampType: CCV	TestCode: NWTPHGX_S	Units: mg/Kg	Prep Date:	RunNo: 19832
Client ID: CCV	Batch ID: 9281	TestNo: NWTPH-Gx 5030_G_S	Analysis Date: 4/23/2015	SeqNo: 265370	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Gasoline 84.3 2.50 100.0 0 84.3 80 120

Sample ID: MB-9281	SampType: MBLK	TestCode: NWTPHGX_S	Units: mg/Kg	Prep Date: 4/17/2015	RunNo: 19832
Client ID: PBS	Batch ID: 9281	TestNo: NWTPH-Gx 5030_G_S	Analysis Date: 4/23/2015	SeqNo: 265371	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Gasoline ND 2.50
Surr: 4-Bromofluorobenzene 3.58 5.000 71.7 50 150

Sample ID: LCS-9281	SampType: LCS	TestCode: NWTPHGX_S	Units: mg/Kg	Prep Date: 4/17/2015	RunNo: 19832
Client ID: LCSS	Batch ID: 9281	TestNo: NWTPH-Gx 5030_G_S	Analysis Date: 4/23/2015	SeqNo: 265372	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Gasoline 59.0 2.50 50.00 0 118 53.5 121

Sample ID: 1504160-004ADUP	SampType: DUP	TestCode: NWTPHGX_S	Units: mg/Kg-dry	Prep Date: 4/17/2015	RunNo: 19832
Client ID: ZZZZZZ	Batch ID: 9281	TestNo: NWTPH-Gx 5030_G_S	Analysis Date: 4/23/2015	SeqNo: 265375	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Gasoline ND 3.11 0 0 20

Qualifiers: B Analyte detected in the associated Method Blank H Holding times for preparation or analysis exceeded ND Not Detected at the Reporting Limit Page 11 of 13
O RSD is greater than RSDlimit R RPD outside accepted recovery limits S Spike Recovery outside accepted reco

QC SUMMARY REPORT

WO#: 1504161

27-Apr-15

Specialty Analytical

Client: Maul Foster & Alongi

Project: Bus Barn / 0239.28.05

TestCode: NWTPHGX_S

Sample ID: 1504161-005ADUP	SampType: DUP	TestCode: NWTPHGX_S	Units: mg/Kg-dry	Prep Date: 4/17/2015	RunNo: 19832
Client ID: B9-S-6.0	Batch ID: 9281	TestNo: NWTPH-Gx 5030_G_S	Analysis Date: 4/23/2015	SeqNo: 265379	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Gasoline	ND	3.14			0 0 20

Sample ID: CCV	SampType: CCV	TestCode: NWTPHGX_S	Units: mg/Kg	Prep Date:	RunNo: 19832
Client ID: CCV	Batch ID: 9281	TestNo: NWTPH-Gx 5030_G_S	Analysis Date: 4/24/2015	SeqNo: 265387	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Gasoline	105	2.50	125.0	0	84.0 80 120

Sample ID: CCV	SampType: CCV	TestCode: NWTPHGX_S	Units: mg/Kg	Prep Date:	RunNo: 19832
Client ID: CCV	Batch ID: 9281	TestNo: NWTPH-Gx 5030_G_S	Analysis Date: 4/24/2015	SeqNo: 265395	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Gasoline	124	2.50	125.0	0	98.9 80 120

Qualifiers: B Analyte detected in the associated Method Blank
O RSD is greater than RSDlimit

H Holding times for preparation or analysis exceeded
R RPD outside accepted recovery limits

ND Not Detected at the Reporting Limit
S Spike Recovery outside accepted reco

QC SUMMARY REPORT

WO#: 1504161

27-Apr-15

Specialty Analytical

Client: Maul Foster & Alongi

Project: Bus Barn / 0239.28.05

TestCode: NWTPHGX_W

Sample ID: CCV	SampType: CCV	TestCode: NWTPHGX_	Units: µg/L	Prep Date:	RunNo: 19833
Client ID: CCV	Batch ID: R19833	TestNo: NWTPH-Gx	Analysis Date: 4/24/2015	SeqNo: 265403	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Gasoline	2100	100	2500	0	84.0	80	120
----------	------	-----	------	---	------	----	-----

Sample ID: MB-R19833	SampType: MBLK	TestCode: NWTPHGX_	Units: µg/L	Prep Date:	RunNo: 19833
Client ID: PBW	Batch ID: R19833	TestNo: NWTPH-Gx	Analysis Date: 4/24/2015	SeqNo: 265404	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Gasoline	ND	100					
Surr: 4-Bromofluorobenzene	104		100.0		104	50	150

Sample ID: 1504161-009BDUP	SampType: DUP	TestCode: NWTPHGX_	Units: µg/L	Prep Date:	RunNo: 19833
Client ID: B10-W-10.5	Batch ID: R19833	TestNo: NWTPH-Gx	Analysis Date: 4/24/2015	SeqNo: 265412	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Gasoline	ND	100					0	0	20
----------	----	-----	--	--	--	--	---	---	----

Sample ID: CCV	SampType: CCV	TestCode: NWTPHGX_	Units: µg/L	Prep Date:	RunNo: 19833
Client ID: CCV	Batch ID: R19833	TestNo: NWTPH-Gx	Analysis Date: 4/24/2015	SeqNo: 265413	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual

Gasoline	2470	100	2500	0	98.9	80	120
----------	------	-----	------	---	------	----	-----

Qualifiers:	B	Analyte detected in the associated Method Blank	H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit	Page 13 of 13
	O	RSD is greater than RSDlimit	R	RPD outside accepted recovery limits	S	Spike Recovery outside accepted reco	

KEY TO FLAGS

Rev. May 12, 2010

- A This sample contains a Gasoline Range Organic not identified as a specific hydrocarbon product. The result was quantified against gasoline calibration standards
- A1 This sample contains a Diesel Range Organic not identified as a specific hydrocarbon product. The result was quantified against diesel calibration standards.
- A2 This sample contains a Lube Oil Range Organic not identified as a specific hydrocarbon product. The result was quantified against a lube oil calibration standard.
- A3 The result was determined to be Non-Detect based on hydrocarbon pattern recognition. The product was carry-over from another hydrocarbon type.
- A4 The product appears to be aged or degraded diesel.
- B The blank exhibited a positive result great than the reporting limit for this compound.
- CN See Case Narrative.
- D Result is based from a dilution.
- E Result exceeds the calibration range for this compound. The result should be considered as estimate.
- F The positive result for this hydrocarbon is due to single component contamination. The product does not match any hydrocarbon in the fuels library.
- G Result may be biased high due to biogenic interferences. Clean up is recommended.
- H Sample was analyzed outside recommended holding time.
- HT At clients request, samples was analyzed outside of recommended holding time.
- J The result for this analyte is between the MDL and the PQL and should be considered as estimated concentration.
- K Diesel result is biased high due to amount of Oil contained in the sample.
- L Diesel result is biased high due to amount of Gasoline contained in the sample.
- M Oil result is biased high due to amount of Diesel contained in the sample.
- MC Sample concentration is greater than 4x the spiked value, the spiked value is considered insignificant.
- MI Result is outside control limits due to matrix interference.
- MSA Value determined by Method of Standard Addition.
- O Laboratory Control Standard (LCS) exceeded laboratory control limits, but meets CCV criteria. Data meets EPA requirements.
- Q Detection levels elevated due to sample matrix.
- R RPD control limits were exceeded.
- RF Duplicate failed due to result being at or near the method-reporting limit.
- RP Matrix spike values exceed established QC limits; post digestion spike is in control.
- S Recovery is outside control limits.
- SC Closing CCV or LCS exceeded high recovery control limits, but associated samples are non-detect. Data meets EPA requirements.
- * The result for this parameter was greater than the maximum contaminant level of the TCLP regulatory limit.

CHAIN OF CUSTODY RECORD

Page 1 of 2

Specialty Analytical
11711 SE Capps Road
Clackamas, OR 97015
Phone: 503-607-1331
Fax: 503-607-1336

Contact Person/Project Manager

Company MFA

Address 400 E. Mill Plain Blvd

Vancouver, WA 98660

Phone 360-694-2691 Fax

Project No 0239.28.05 Project Name Bus Barn

Project Site Location OR WA Other

Invoice To MFA P.O. No.

Collected By:

Signature Emily Hess
Printed Emily Hess

Signature

Printed

Turn Around Time

☒ Normal 5-7 Business Days

☐ Rush

Specify

Rush Analyses Must Be Scheduled With The Lab In Advance

Date	Time	Sample I.D.	Matrix
4/15/15	9:30	B8-S-5.5	S
	9:35	B8-S-7.5	S
	10:00	B8-W-8.0	W
	10:05	B9-S-8.5	S
	10:05	B9-S-6.0	S
	10:30	B9-W-10.5	W
	11:40	B10-S-8.0	S
	11:45	B10-S-5.5	S
	12:10	B10-W-10.5	W
	13:10	B11-S-5.5	S
	13:15	B11-S-8.0	S
	13:30	B12-S-5.5	S

Relinquished By: Emily Hess

Company: MFA

Date 4/15/15

Time 18:15

Unless Reclaimed, Samples Will Be Disposed of 60 Days After Receipt.
Samples held beyond 60 days subject to storage fee(s)

Analyses			For Laboratory Use		
No. of Containers			Lab Job No.	Shipped Via	Air Bill No.
1	BTFX (8021)	NWTPH-DX	1504161	Specialty	
1	X	X			
4	X	X			
1	X	X			
1	X	X			
4	X	X			
2	X	X			
1	X	X			
4	X	X			
1	X	X			
1	X	X			
1	X	X			

Temperature On Receipt 4 °C
Specialty Analytical Containers? Y/N
Specialty Analytical Trip Blanks? Y/N

Comments

Lab I.D.

Relinquished By: Emily Hess

Company: Specialty

Date 4/17/15

Time 11:35

Received For Lab By: Emily Hess

Date 4/17/15

Time 11:35

CHAIN OF CUSTODY RECORD

Page 2 of 2

Specialty Analytical

11711 SE Capps Road
Clackamas, OR 97015
Phone: 503-607-1331
Fax: 503-607-1336

Contact Person/Project Manager Mendeth O'Andrea

Company MFA

Address _____

Phone _____ Fax _____

Project No. 0239.28.05 Project Name Bus Barn

Project Site Location OR WA Other _____

Invoice To MFA P.O. No. _____

Collected By: Emily Hess
Signature _____
Printed Emily Hess

Signature _____
Printed _____

Turn Around Time _____

☒ Normal 5-7 Business Days

☐ Rush _____

Specify _____

Rush Analyses Must Be Scheduled With The Lab In Advance

Date	Time	Sample I.D.	Matrix
4/15/15	13:35	B12-S-8.0	S
	14:30	B13-S-5.0	S
	14:35	B13-S-8.0	S
	15:00	B14-S-5.0	S
	15:05	B14-S-7.5	S
	15:20	B14-W-8.0	W
	15:55	B15-S-5.5	S
	16:00	B15-S-8.0	S
	16:30	B16-S-5.5	S
	16:35	B16-S-8.0	S
		TRIP BLANK	W

Relinquished By: <u>Emily Hess</u>	Date	Time
Company: <u>MFA</u>	4/15/15	18:15

Unless Reclaimed, Samples Will Be Disposed of 60 Days After Receipt.
Samples held beyond 60 days subject to storage fee(s)

Analyses				For Laboratory Use	
No. of Containers				Lab Job No.	104161
	BTEX (8021)			Shipped Via	Specialty
	NWTPH-GX			Air Bill No.	
	NWTPH-OX			Temperature On Receipt	4 °C
				Specialty Analytical Containers?	Y/N
				Specialty Analytical Trip Blanks?	Y/N
				Comments	
				Lab I.D.	

Relinquished By: _____	Date	Time
Company: <u>Specialty</u>	4/17/15	11:35

Received For Lab By: Undy Hildyard

Date	Time
4/17/15	11:35

5/1/2015

Ms. Mary Benzinger
Maul Foster and Alongi Inc.
2001 NW 19th Ave
Suite 200
Portland OR 97209

Project Name: Bus Barn
Project #: 0239.28.05
Workorder #: 1504335A

Dear Ms. Mary Benzinger

The following report includes the data for the above referenced project for sample(s) received on 4/20/2015 at Air Toxics Ltd.

The data and associated QC analyzed by TO-15 are compliant with the project requirements or laboratory criteria with the exception of the deviations noted in the attached case narrative.

Thank you for choosing Air Toxics Ltd. for your air analysis needs. Air Toxics Ltd. is committed to providing accurate data of the highest quality. Please feel free to contact the Project Manager: Kelly Buettner at 916-985-1000 if you have any questions regarding the data in this report.

Regards,



Kelly Buettner
Project Manager

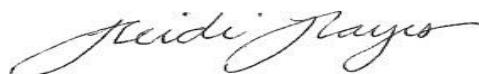
WORK ORDER #: 1504335A

Work Order Summary

CLIENT:	Ms. Mary Benzinger Maul Foster and Alongi Inc. 2001 NW 19th Ave Suite 200 Portland, OR 97209	BILL TO:	Accounts Payable Maul Foster and Alongi Inc. 400 E. Mill Plain Blvd Suite 400 Vancouver, WA 98660
PHONE:	971-544-2139	P.O. #	
FAX:	971-544-2140	PROJECT #	0239.28.05 Bus Barn
DATE RECEIVED:	04/20/2015	CONTACT:	Kelly Buettner
DATE COMPLETED:	05/01/2015		

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>	<u>FINAL PRESSURE</u>
01A	SS-1	TO-15	4.7 "Hg	4.8 psi
02A	Lab Blank	TO-15	NA	NA
03A	CCV	TO-15	NA	NA
04A	LCS	TO-15	NA	NA
04AA	LCSD	TO-15	NA	NA

CERTIFIED BY:



Technical Director

DATE: 05/01/15

Certification numbers: AZ Licensure AZ0775, NJ NELAP - CA016, NY NELAP - 11291,
TX NELAP - T104704343-14-7, UT NELAP CA009332014-5, VA NELAP - 460197, WA NELAP - C935
Name of Accreditation Body: NELAP/ORELAP (Oregon Environmental Laboratory Accreditation Program)
Accreditation number: CA300005, Effective date: 10/18/2014, Expiration date: 10/17/2015.

Eurofins Air Toxics Inc.. certifies that the test results contained in this report meet all requirements of the NELAC standards

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180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 9563
(916) 985-1000 . (800) 985-5955 . FAX (916) 985-1020

LABORATORY NARRATIVE
EPA Method TO-15
Maul Foster and Alongi Inc.
Workorder# 1504335A

One 6 Liter Summa Canister (100% Certified) sample was received on April 20, 2015. The laboratory performed analysis via EPA Method TO-15 using GC/MS in the full scan mode.

This workorder was independently validated prior to submittal using 'USEPA National Functional Guidelines' as generally applied to the analysis of volatile organic compounds in air. A rules-based, logic driven, independent validation engine was employed to assess completeness, evaluate pass/fail of relevant project quality control requirements and verification of all quantified amounts.

Receiving Notes

There were no receiving discrepancies.

Analytical Notes

A single point calibration for TPH referenced to Gasoline was performed for each daily analytical batch. Recovery is reported as 100% in the associated results for each CCV.

Definition of Data Qualifying Flags

Eight qualifiers may have been used on the data analysis sheets and indicates as follows:

B - Compound present in laboratory blank greater than reporting limit (background subtraction not performed).

J - Estimated value.

E - Exceeds instrument calibration range.

S - Saturated peak.

Q - Exceeds quality control limits.

U - Compound analyzed for but not detected above the reporting limit, LOD, or MDL value. See data page for project specific U-flag definition.

UJ- Non-detected compound associated with low bias in the CCV

N - The identification is based on presumptive evidence.

File extensions may have been used on the data analysis sheets and indicates as follows:

a-File was requantified

b-File was quantified by a second column and detector

r1-File was requantified for the purpose of reissue

Summary of Detected Compounds

EPA METHOD TO-15 GC/MS FULL SCAN

Client Sample ID: SS-1

Lab ID#: 1504335A-01A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Benzene	0.78	1.0	2.5	3.2
Toluene	0.78	5.2	3.0	20
Ethyl Benzene	0.78	1.5	3.4	6.7
m,p-Xylene	0.78	5.5	3.4	24
o-Xylene	0.78	3.0	3.4	13
TPH ref. to Gasoline (MW=100)	78	820	320	3300



Air Toxics

Client Sample ID: SS-1

Lab ID#: 1504335A-01A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	j042309	Date of Collection:	4/15/15 3:36:00 PM
Dil. Factor:	1.57	Date of Analysis:	4/23/15 03:48 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Benzene	0.78	1.0	2.5	3.2
Toluene	0.78	5.2	3.0	20
Ethyl Benzene	0.78	1.5	3.4	6.7
m,p-Xylene	0.78	5.5	3.4	24
o-Xylene	0.78	3.0	3.4	13
TPH ref. to Gasoline (MW=100)	78	820	320	3300

Container Type: 6 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
Toluene-d8	106	70-130
1,2-Dichloroethane-d4	100	70-130
4-Bromofluorobenzene	103	70-130



Air Toxics

Client Sample ID: Lab Blank

Lab ID#: 1504335A-02A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	j042307d	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	4/23/15 01:23 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Benzene	0.50	Not Detected	1.6	Not Detected
Toluene	0.50	Not Detected	1.9	Not Detected
Ethyl Benzene	0.50	Not Detected	2.2	Not Detected
m,p-Xylene	0.50	Not Detected	2.2	Not Detected
o-Xylene	0.50	Not Detected	2.2	Not Detected
TPH ref. to Gasoline (MW=100)	50	Not Detected	200	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	100	70-130
1,2-Dichloroethane-d4	101	70-130
4-Bromofluorobenzene	98	70-130

Client Sample ID: CCV

Lab ID#: 1504335A-03A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	j042302a	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 4/23/15 10:17 AM

Compound	%Recovery
Benzene	96
Toluene	97
Ethyl Benzene	99
m,p-Xylene	103
o-Xylene	106
TPH ref. to Gasoline (MW=100)	100

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	104	70-130
1,2-Dichloroethane-d4	104	70-130
4-Bromofluorobenzene	100	70-130



Air Toxics

Client Sample ID: LCS

Lab ID#: 1504335A-04A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	j042303a	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 4/23/15 10:50 AM

Compound	%Recovery	Method Limits
Benzene	101	70-130
Toluene	103	70-130
Ethyl Benzene	108	70-130
m,p-Xylene	112	70-130
o-Xylene	115	70-130
TPH ref. to Gasoline (MW=100)	Not Spiked	

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	104	70-130
1,2-Dichloroethane-d4	102	70-130
4-Bromofluorobenzene	105	70-130

Client Sample ID: LCSD

Lab ID#: 1504335A-04AA

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	j042304a	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 4/23/15 11:21 AM

Compound	%Recovery	Method Limits
Benzene	102	70-130
Toluene	103	70-130
Ethyl Benzene	109	70-130
m,p-Xylene	113	70-130
o-Xylene	116	70-130
TPH ref. to Gasoline (MW=100)	Not Spiked	

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	103	70-130
1,2-Dichloroethane-d4	100	70-130
4-Bromofluorobenzene	103	70-130

5/1/2015

Ms. Mary Benzinger
Maul Foster and Alongi Inc.
2001 NW 19th Ave
Suite 200
Portland OR 97209

Project Name: Bus Barn
Project #: 0239.28.05
Workorder #: 1504335B

Dear Ms. Mary Benzinger

The following report includes the data for the above referenced project for sample(s) received on 4/20/2015 at Air Toxics Ltd.

The data and associated QC analyzed by Modified ASTM D-1946 are compliant with the project requirements or laboratory criteria with the exception of the deviations noted in the attached case narrative.

Thank you for choosing Air Toxics Ltd. for your air analysis needs. Air Toxics Ltd. is committed to providing accurate data of the highest quality. Please feel free to contact the Project Manager: Kelly Buettner at 916-985-1000 if you have any questions regarding the data in this report.

Regards,



Kelly Buettner
Project Manager

WORK ORDER #: 1504335B

Work Order Summary

CLIENT: Ms. Mary Benzinger Maul Foster and Alongi Inc. 2001 NW 19th Ave Suite 200 Portland, OR 97209 PHONE: 971-544-2139 FAX: 971-544-2140 DATE RECEIVED: 04/20/2015 DATE COMPLETED: 05/01/2015	BILL TO: Accounts Payable Maul Foster and Alongi Inc. 400 E. Mill Plain Blvd Suite 400 Vancouver, WA 98660 P.O. # PROJECT # 0239.28.05 Bus Barn CONTACT: Kelly Buettner
---	--

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>	<u>FINAL PRESSURE</u>
01A	SS-1	Modified ASTM D-1946	4.7 "Hg	4.8 psi
02A	Lab Blank	Modified ASTM D-1946	NA	NA
03A	LCS	Modified ASTM D-1946	NA	NA
03AA	LCSD	Modified ASTM D-1946	NA	NA

CERTIFIED BY:



Technical Director

DATE: 05/01/15

Certification numbers: AZ Licensure AZ0775, NJ NELAP - CA016, NY NELAP - 11291,
 TX NELAP - T104704343-14-7, UT NELAP CA009332014-5, VA NELAP - 460197, WA NELAP - C935
 Name of Accreditation Body: NELAP/ORELAP (Oregon Environmental Laboratory Accreditation Program)
 Accreditation number: CA300005, Effective date: 10/18/2014, Expiration date: 10/17/2015.

Eurofins Air Toxics Inc., certifies that the test results contained in this report meet all requirements of the NELAC standards

This report shall not be reproduced, except in full, without the written approval of Eurofins Air Toxics, Inc.

180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 9563
 (916) 985-1000 . (800) 985-5955 . FAX (916) 985-1020

LABORATORY NARRATIVE
Modified ASTM D-1946
Maul Foster and Alongi Inc.
Workorder# 1504335B

One 6 Liter Summa Canister (100% Certified) sample was received on April 20, 2015. The laboratory performed analysis via Modified ASTM Method D-1946 for Helium in air using GC/TCD. The method involves direct injection of 1.0 mL of sample.

Method modifications taken to run these samples are summarized in the table below. Specific project requirements may over-ride the ATL modifications.

Requirement	ASTM D-1946	ATL Modifications
Calibration	A single point calibration is performed using a reference standard closely matching the composition of the unknown.	A minimum of 5-point calibration curve is performed. Quantitation is based on average Response Factor.
Reference Standard	The composition of any reference standard must be known to within 0.01 mol % for any component.	The standards used by ATL are blended to a $\geq 95\%$ accuracy.
Sample Injection Volume	Components whose concentrations are in excess of 5 % should not be analyzed by using sample volumes greater than 0.5 mL.	The sample container is connected directly to a fixed volume sample loop of 1.0 mL on the GC. Linear range is defined by the calibration curve. Bags are loaded by vacuum.
Normalization	Normalize the mole percent values by multiplying each value by 100 and dividing by the sum of the original values. The sum of the original values should not differ from 100% by more than 1.0%.	Results are not normalized. The sum of the reported values can differ from 100% by as much as 15%, either due to analytical variability or an unusual sample matrix.
Precision	Precision requirements established at each concentration level.	Duplicates should agree within 25% RPD for detections $> 5 \times$ the RL.

Receiving Notes

There were no receiving discrepancies.

Analytical Notes

There were no analytical discrepancies.

Definition of Data Qualifying Flags

Seven qualifiers may have been used on the data analysis sheets and indicate as follows:

B - Compound present in laboratory blank greater than reporting limit.

J - Estimated value.

E - Exceeds instrument calibration range.

S - Saturated peak.

Q - Exceeds quality control limits.

U - Compound analyzed for but not detected above the detection limit.

M - Reported value may be biased due to apparent matrix interferences.

File extensions may have been used on the data analysis sheets and indicates as follows:

a-File was requantified

b-File was quantified by a second column and detector

r1-File was requantified for the purpose of reissue

Summary of Detected Compounds
NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

Client Sample ID: SS-1

Lab ID#: 1504335B-01A

No Detections Were Found.

Client Sample ID: SS-1

Lab ID#: 1504335B-01A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	10042319c	Date of Collection: 4/15/15 3:36:00 PM
Dil. Factor:	1.57	Date of Analysis: 4/23/15 09:08 PM

Compound	Rpt. Limit (%)	Amount (%)
Helium	0.078	Not Detected

Container Type: 6 Liter Summa Canister (100% Certified)

Client Sample ID: Lab Blank

Lab ID#: 1504335B-02A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name: 10042303c
Dil. Factor: 1.00

Date of Collection: NA
Date of Analysis: 4/23/15 09:39 AM

Compound	Rpt. Limit (%)	Amount (%)
Helium	0.050	Not Detected

Container Type: NA - Not Applicable

Client Sample ID: LCS

Lab ID#: 1504335B-03A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	10042302c	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 4/23/15 08:57 AM

Compound	%Recovery	Method Limits
Helium	102	85-115

Container Type: NA - Not Applicable

Client Sample ID: LCSD

Lab ID#: 1504335B-03AA

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	10042320c	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 4/23/15 09:47 PM

Compound	%Recovery	Method Limits
Helium	102	85-115

Container Type: NA - Not Applicable

5/1/2015

Ms. Mary Benzinger
Maul Foster and Alongi Inc.
2001 NW 19th Ave
Suite 200
Portland OR 97209

Project Name: Bus Barn
Project #: 0239.28.05
Workorder #: 1504335C

Dear Ms. Mary Benzinger

The following report includes the data for the above referenced project for sample(s) received on 4/20/2015 at Air Toxics Ltd.

The data and associated QC analyzed by Modified TO-15 APH are compliant with the project requirements or laboratory criteria with the exception of the deviations noted in the attached case narrative.

Thank you for choosing Air Toxics Ltd. for your air analysis needs. Air Toxics Ltd. is committed to providing accurate data of the highest quality. Please feel free to contact the Project Manager: Kelly Buettner at 916-985-1000 if you have any questions regarding the data in this report.

Regards,



Kelly Buettner
Project Manager

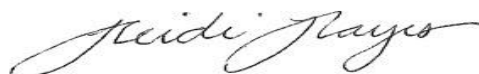
WORK ORDER #: 1504335C

Work Order Summary

CLIENT:	Ms. Mary Benzinger Maul Foster and Alongi Inc. 2001 NW 19th Ave Suite 200 Portland, OR 97209	BILL TO:	Accounts Payable Maul Foster and Alongi Inc. 400 E. Mill Plain Blvd Suite 400 Vancouver, WA 98660
PHONE:	971-544-2139	P.O. #	
FAX:	971-544-2140	PROJECT #	0239.28.05 Bus Barn
DATE RECEIVED:	04/20/2015	CONTACT:	Kelly Buettner
DATE COMPLETED:	05/01/2015		

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>	<u>FINAL PRESSURE</u>
01A	SS-1	Modified TO-15 APH	4.7 "Hg	4.8 psi
01B	SS-1	Modified TO-15 APH	4.7 "Hg	4.8 psi
02A	Lab Blank	Modified TO-15 APH	NA	NA
02B	Lab Blank	Modified TO-15 APH	NA	NA
03A	CCV	Modified TO-15 APH	NA	NA
03B	CCV	Modified TO-15 APH	NA	NA

CERTIFIED BY:



Technical Director

DATE: 05/01/15

Certification numbers: AZ Licensure AZ0775, NJ NELAP - CA016, NY NELAP - 11291,
TX NELAP - T104704343-14-7, UT NELAP CA009332014-5, VA NELAP - 460197, WA NELAP - C935
Name of Accreditation Body: NELAP/ORELAP (Oregon Environmental Laboratory Accreditation Program)
Accreditation number: CA300005, Effective date: 10/18/2014, Expiration date: 10/17/2015.

Eurofins Air Toxics Inc.. certifies that the test results contained in this report meet all requirements of the NELAC standards

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180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 9563
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LABORATORY NARRATIVE
Modified TO-15 & VPH Fractions
Maul Foster and Alongi Inc.
Workorder# 1504335C

One 6 Liter Summa Canister (100% Certified) sample was received on April 20, 2015. The laboratory performed analysis via EPA Method TO-15 and Air Toxics VPH (Volatile Petroleum Hydrocarbon) methods for the Determination of VPH Fractions using GC/MS in the full scan mode. The method involves concentrating up to 0.5 liters of air. The concentrated aliquot is then flash vaporized and swept through a water management system to remove water vapor. Following dehumidification, the sample passes directly into the GC/MS for analysis. This method is designed to measure gaseous phase aliphatic and aromatic compounds in ambient air and soil gas collected in stainless steel Summa canisters. Air Toxics VPH method is a hybrid of EPA TO-15, MADEP APM and WSDE VPH methods. Chromatographic peaks were identified via mass spectrum as either aliphatic or aromatic petroleum hydrocarbons and included in the appropriate range as defined by the method. The volatile Aliphatic hydrocarbons are collectively quantified within the C5 to C6 range, C6 to C8 range, C8 to C10 range and the C10 to C12 range. Additionally, the volatile Aromatic hydrocarbons are collectively quantified within the C8 to C10 range and the C10 to C12 range. The Aromatic ranges refer to the equivalent carbon (EC) ranges.

Aliphatic data is calculated from the Total Ion chromatogram which has been reprocessed in a duplicate file differentiated from the original by the addition of an alphanumeric extension. The Aromatic calculation also uses the information contained in the associated Extracted Ion file.

Receiving Notes

There were no receiving discrepancies.

Analytical Notes

There were no analytical discrepancies.

Definition of Data Qualifying Flags

Eight qualifiers may have been used on the data analysis sheets and indicates as follows:

B - Compound present in laboratory blank greater than reporting limit (background subtraction not performed).

J - Estimated value.

E - Exceeds instrument calibration range.

S - Saturated peak.

Q - Exceeds quality control limits.

U - Compound analyzed for but not detected above the reporting limit.

UJ- Non-detected compound associated with low bias in the CCV

N - The identification is based on presumptive evidence.

File extensions may have been used on the data analysis sheets and indicates as follows:

a-File was requantified

b-File was quantified by a second column and detector

r1-File was requantified for the purpose of reissue

Summary of Detected Compounds

MODIFIED METHOD TO-15 GC/MS FULL SCAN

Client Sample ID: SS-1

Lab ID#: 1504335C-01A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
>C6-C8 Aliphatic Hydrocarbons (ref. to Heptane)	16	44	64	180
>C8-C10 Aliphatic Hydrocarbons (ref. to Decane)	16	120	91	700
>C10-C12 Aliphatic Hydrocarbons (ref. to Dodecane)	16	160	110	1100

Client Sample ID: SS-1

Lab ID#: 1504335C-01B

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
>C8-C10 Aromatic Hydrocarbons	16	32	77	160

Client Sample ID: SS-1

Lab ID#: 1504335C-01A

MODIFIED METHOD TO-15 GC/MS FULL SCAN

File Name:	j042309a	Date of Collection: 4/15/15 3:36:00 PM
Dil. Factor:	1.57	Date of Analysis: 4/23/15 03:48 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
C5-C6 Aliphatic Hydrocarbons (ref. to Pentane + Hexane)	16	Not Detected	51	Not Detected
>C6-C8 Aliphatic Hydrocarbons (ref. to Heptane)	16	44	64	180
>C8-C10 Aliphatic Hydrocarbons (ref. to Decane)	16	120	91	700
>C10-C12 Aliphatic Hydrocarbons (ref. to Dodecane)	16	160	110	1100

Container Type: 6 Liter Summa Canister (100% Certified)

Client Sample ID: SS-1

Lab ID#: 1504335C-01B

MODIFIED METHOD TO-15 GC/MS FULL SCAN

File Name:	j042309c	Date of Collection:	4/15/15 3:36:00 PM	
Dil. Factor:	1.57	Date of Analysis:	4/23/15 03:48 PM	
Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
>C8-C10 Aromatic Hydrocarbons	16	32	77	160
>C10-C12 Aromatic Hydrocarbons	16	Not Detected	86	Not Detected

Container Type: 6 Liter Summa Canister (100% Certified)

Client Sample ID: Lab Blank

Lab ID#: 1504335C-02A

MODIFIED METHOD TO-15 GC/MS FULL SCAN

File Name:	j042307a	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 4/23/15 01:23 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
C5-C6 Aliphatic Hydrocarbons (ref. to Pentane + Hexane)	10	Not Detected	32	Not Detected
>C6-C8 Aliphatic Hydrocarbons (ref. to Heptane)	10	Not Detected	41	Not Detected
>C8-C10 Aliphatic Hydrocarbons (ref. to Decane)	10	Not Detected	58	Not Detected
>C10-C12 Aliphatic Hydrocarbons (ref. to Dodecane)	10	Not Detected	70	Not Detected

Container Type: NA - Not Applicable

Client Sample ID: Lab Blank

Lab ID#: 1504335C-02B

MODIFIED METHOD TO-15 GC/MS FULL SCAN

File Name:	j042307c	Date of Collection:	NA	
Dil. Factor:	1.00	Date of Analysis:	4/23/15 01:23 PM	
Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
>C8-C10 Aromatic Hydrocarbons	10	Not Detected	49	Not Detected
>C10-C12 Aromatic Hydrocarbons	10	Not Detected	55	Not Detected

Container Type: NA - Not Applicable

Client Sample ID: CCV

Lab ID#: 1504335C-03A

MODIFIED METHOD TO-15 GC/MS FULL SCAN

File Name:	j042305a	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 4/23/15 12:02 PM

Compound	%Recovery
C5-C6 Aliphatic Hydrocarbons (ref. to Pentane + Hexane)	97
>C6-C8 Aliphatic Hydrocarbons (ref. to Heptane)	98
>C8-C10 Aliphatic Hydrocarbons (ref. to Decane)	98
>C10-C12 Aliphatic Hydrocarbons (ref. to Dodecane)	101

Container Type: NA - Not Applicable

Client Sample ID: CCV

Lab ID#: 1504335C-03B

MODIFIED METHOD TO-15 GC/MS FULL SCAN

File Name:	j042305c	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 4/23/15 12:02 PM

Compound	%Recovery
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>C8-C10 Aromatic Hydrocarbons	104
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>C10-C12 Aromatic Hydrocarbons	106
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Container Type: NA - Not Applicable

APPENDIX D

DATA VALIDATION MEMORANDUM



DATA QUALITY ASSURANCE/QUALITY CONTROL REVIEW

PROJECT NO. 0239.28.05 | OCTOBER 9, 2014 | CITY OF RIDGEFIELD

This report reviews the analytical results for reconnaissance groundwater and soil samples collected by the Maul Foster & Alongi, Inc. (MFA) project team on the Bus Barn site in Ridgefield, Washington. The samples were collected on September 15, 2014 and April 15, 2015.

Specialty Analytical, Inc. (SA) performed the analyses. SA report numbers 1409099, 1409113, 1409114 and 1504161 were reviewed. The analyses performed and samples analyzed are listed below. Some samples were archived without analyses performed. Data validation tracking sheets associated with the analyses, documenting data review, are attached.

Analysis	Reference
BTEX	USEPA 8021B
Diesel and Lube Oil	NWTPH-Dx
Dissolved Metals	USEPA 6020A
Gasoline	NWTPH-Gx
HCID	NWTPH-HCID
Volatile Organic Compounds	USEPA 8260B

BTEX = benzene, toluene, ethylbenzene, and total xylenes.

HCID = Hydrocarbon Identification.

NWTPH = Northwest Total Petroleum Hydrocarbons.

USEPA = U.S. Environmental Protection Agency.

Samples Analyzed			
Report 1409099	Report 1409113	Report 1409114	Report 1504161
B1-W	B5-W	B1-S-2.0	B8-S-7.5
B2-W	B7-W	B1-S-8.5	B8-W-8.0
B3-W	B6-W	B2-S-2.0	B9-S-6.0
B4-W	B6-W-DUP	B2-S-8.0	B9-W-10.5
-	Trip Blank	B3-S-2.0	B10-S-5.5
-	-	B3-S-7.0	B8-S-5.5
-	-	B4-S-3.0	B9-S-8.5
-	-	B4-S-7.0	B10-S-8.0
-	-	B5-S-2.0	B10-W-10.5
-	-	B5-S-7.0	B11-S-5.5
-	-	B6-S-2.0	B11-S-8.0
-	-	B6-S-8.5	B12-S-5.5
-	-	B7-S-1.5	B12-S-8.0

Samples Analyzed			
Report 1409099	Report 1409113	Report 1409114	Report 1504161
-	-	B7-S-8.5	B13-S-5.0
			B13-S-8.0
			B14-S-5.0
			B14-S-7.5
			B14-W-8.0
			B15-S-5.5
			B15-S-8.0
			B16-S-5.5
			B16-S-8.0

DATA QUALIFICATIONS

Analytical results were evaluated according to applicable sections of USEPA procedures (USEPA, 2008, 2010) and appropriate laboratory and method-specific guidelines (SA, 2014; USEPA, 1986).

In reports 1409113, 1409114 and 1504161, various sample results for diesel by Method NWTPH-Dx were identified by the laboratory as containing compounds not identified as specific hydrocarbon products. Additionally, lube oil results for samples B4-S-3.0, B4-S-7.0, and B7-S-8.5 were biased because of diesel results. These results were quantified using the appropriate calibration standards. The results for diesel have been qualified with a "J" as estimated.

Report	Sample	Component	Original Result (ug/L)	Qualified Result (ug/L)
1409113	B7-W	Diesel	0.853	0.853 J
1504161	B8-W-8.0	Diesel	2.00	2.00 J

ug/L = micrograms per liter.

Report	Sample	Component	Original Result (mg/kg)	Qualified Result (mg/kg)
1409114	B3-S-7.0	Diesel	461	461 J
1409114	B4-S-3.0	Diesel	1970	1970 J
1409114	B4-S-3.0	Lube Oil	113	113 J
1409114	B4-S-7.0	Diesel	4200	4200 J
1409114	B4-S-7.0	Lube Oil	151	151 J
1409114	B7-S-8.5	Lube Oil	170	170 J
1504161	B12-S-5.5	Diesel	50.0	50.0 J
1504161	B12-S-8.0	Diesel	548	548 J

mg/kg = milligrams per kilogram.

The data are considered acceptable for their intended use, with the appropriate data qualifiers assigned.

HOLDING TIMES, PRESERVATION, AND SAMPLE STORAGE

Holding Times

Extractions and analyses were performed within the recommended holding time criteria.

Preservation and Sample Storage

The samples were preserved and stored appropriately.

BLANKS

Method Blanks

Laboratory method blank analyses were performed at the required frequencies. For purposes of data qualification, the method blanks were associated with all samples prepared in the analytical batch. All laboratory method blanks were non-detect for all target analytes.

Trip Blanks

Trip blanks were submitted with 1409113 for USEPA Method 8260B analysis. All target analytes were non-detect.

Equipment Rinse Blanks

Equipment rinse blanks were not required for this sampling event, as all samples were collected using dedicated, single-use equipment.

SURROGATE RECOVERY RESULTS

The samples were spiked with surrogate compounds to evaluate laboratory performance on individual samples. The laboratory appropriately documented and qualified surrogate outliers. Associated batch quality assurance/quality control for samples with surrogate outliers was within acceptance limits.

The reviewer took no action based on or surrogate percent recoveries that were outside acceptance limits due to dilutions necessary to quantify high concentrations of target analytes present in the samples. NWTPH-HCID surrogate percent recovery exceedances were not qualified because the results are not quantified and are reported as presence or absence.

In report 1409114, the NWTPH-Gx surrogate 4-bromofluorobenzene exceeded upper percent recovery acceptance limits for samples B2-S-8.0, B3-S-7.0, B4-S-3.0, B4-S-7.0, and B7-S-8.5 because of matrix interference. The USEPA Method 8021B surrogate 4-bromofluorobenzene also exceeded upper percent recovery acceptance limits for B3-S-7.0, B4-S-3.0, and B4-S-7.0 because of matrix interference. Associated detected sample results were qualified with “J” as estimated. Non-detect results were not qualified.

Report	Sample	Component	Original Result (mg/kg)	Qualified Result (mg/kg)
1409114	B2-S-8.0	Gasoline	444	444 J
1409114	B3-S-7.0	Gasoline	1320	1320 J
1409114	B3-S-7.0	Toluene	0.0395	0.0395 J
1409114	B3-S-7.0	Ethylbenzene	2.06	2.06 J
1409114	B4-S-3.0	Toluene	0.364	0.364 J
1409114	B4-S-3.0	Ethylbenzene	8.27	8.27 J
1409114	B4-S-3.0	Gasoline	2990	2990 J
1409114	B4-S-7.0	Gasoline	4310	4310 J
1409114	B4-S-7.0	Toluene	1.18	1.18 J
1409114	B4-S-7.0	Ethylbenzene	9.08	9.08 J
1409114	B4-S-7.0	Total Xylenes	4.49	4.49 J
1409114	B7-S-8.5	Gasoline	466	466 J

In report 1409114, the NWTPH-Dx surrogate o-terphenyl exceeded upper percent recovery acceptance limits for sample B7-S-8.5 (182%) because of matrix interference. Associated detected sample results were qualified with “J” as estimated. Non-detect results were not qualified. NWTPH-Dx results flagged by the laboratory because of carryover are qualified in the data qualifications section above.

Report	Sample	Component	Original Result (mg/kg)	Qualified Result (mg/kg)
1409114	B7-S-8.5	Diesel	2650	2650 J

In report 1504161, some NWTPH-Gx, NWTPH-Dx and BTEX surrogate results exceeded upper percent recovery acceptance limits due to matrix interference. Results were not qualified as the exceedances were minor, associated sample data was non-detect, or the target analyte results were significantly greater than the surrogate added.

All remaining surrogate recoveries were within acceptance limits.

MATRIX SPIKE/MATRIX SPIKE DUPLICATE RESULTS

Matrix spike/matrix spike duplicate (MS/MSD) results are used to evaluate laboratory precision and accuracy. All MS/MSD samples were extracted and analyzed at the required frequency.

In report 1409113, the USEPA Method 8021B MS/MSD exceeded percent recovery acceptance limits for ethylbenzene and total xylenes because of matrix interference. The MS/MSD were prepared with a sample from an unrelated project and remaining batch quality control met acceptance criteria; thus, no results were qualified.

In report 1504161, the MS for ethylbenzene exceeded the upper limit of percent recovery. No actions were taken as all associated results were non-detects.

All remaining MS/MSD results were within acceptance limits for percent recovery and relative percent differences (RPDs).

LABORATORY DUPLICATE RESULTS

Duplicate results are used to evaluate laboratory precision. All duplicate samples were extracted and analyzed at the required frequency. Some NWTPH-Dx duplicate results exceeded RPD criteria. No results were qualified as the detections were barely above the detection limit. All other RPDs were within acceptance limits.

LABORATORY CONTROL SAMPLE/LABORATORY CONTROL SAMPLE DUPLICATE RESULTS

A laboratory control sample/laboratory control sample duplicate (LCS/LCSD) is spiked with target analytes to provide information on laboratory precision and accuracy. The LCS/LCSD samples were extracted and analyzed at the required frequency. All LCS/LCSD analytes were within acceptance limits for percent recovery and RPD.

FIELD DUPLICATE RESULTS

Field duplicate samples measure both field and laboratory precision. One field duplicate was submitted for analysis in report 1409113 (B6-W/B6-W-DUP). MFA uses acceptance criteria of 100 percent RPD for results that are less than five times the method reporting limit (MRL), or 50 percent RPD for results that are greater than five times the MRL. Non-detect data are not used in the evaluation of field duplicate results. All analytes were within the acceptance criteria.

CONTINUING CALIBRATION VERIFICATION AND INITIAL CALIBRATION VERIFICATION RESULTS

Continuing calibration verification (CCV) and initial calibration verification (ICV) results are used to demonstrate instrument precision and accuracy through the end of the sample batch. A NWTPH-Dx CCV for diesel slightly exceeded the upper limits of acceptance criteria, but no results were qualified as all associated results were non-detect.

All remaining CCVs and ICVs were within acceptance limits for percent recovery.

REPORTING LIMITS

SA used routine reporting limits for non-detect results, except for samples requiring dilutions because of high analyte concentrations and/or matrix interferences.

DATA PACKAGE

The data packages were reviewed for transcription errors, omissions, and anomalies. In report 1409113, the chain of custody was submitted to the laboratory with a request for total lead analysis. The analysis request was changed to dissolved lead at the request of the MFA

project manager. The reviewer confirmed that the samples submitted for USEPA 6020A analysis were field filtered.

No additional issues were found.

REFERENCES

- USEPA. 1986. Test methods for evaluating solid waste: physical/chemical methods. EPA-530/SW-846. U.S. Environmental Protection Agency, Office of Solid Waste and Emergency Response. September (revision 6, February 2007).
- USEPA. 2008. USEPA contract laboratory program, national functional guidelines for organics data review. EPA 540/R-08/01. U.S. Environmental Protection Agency, Office of Emergency and Remedial Response. June.
- USEPA. 2010. USEPA contract laboratory program national functional guidelines for inorganic superfund data review. EPA 540/R-10/011. U.S. Environmental Protection Agency, Office of Superfund Remediation and Technology Innovation. January.

ATTACHMENT

DATA VALIDATION TRACKING



DATA VALIDATION TRACKING

This document tracks Stage 2A validation completion for the analysis indicated below.

Lab Report	1409099
Analysis/Method	NWTPH-HCID
Batch Number(s)	8188

Reviewer	MEB
Date	9/30/2014

	Validation Area	Acceptable Yes/No/NA/NR	Comments	Q
Sample	Temperature	Yes		
	Holding Time	Yes		
	Trip Blank	NA		
	Field/Eq. Blank	NA		
	Field Dup RPD	NA		
Calibr.	CCB	NA		
	ICV	NA		
	CCV	NA		
Batch	Method Blank	Yes		
	LCS/LCSD %	NA		
	LCS/LCSD RPD	NA		
	Lab Dup RPD	NA		
	MS/MSD %	NA		
	MS/MSD RPD	NA		
General	Dilution	Yes		
	Reporting Limit	Yes		
	MDL	NA		
	Surrogates	Yes		
Dioxins	Labeled Analog	NA		
	EMPC	NA		
	2378-TCDF	NA		

Samples reviewed (in bold font):			
B1-W	Trip Blank	-	-
B2-W	-	-	-
B3-W	-	-	-
B4-W	-	-	-

Notes:			
Definitions: Calibr. = calibration. CCB = continuing calibration blank. CCV = continuing calibration verification. EMPC = estimated maximum potential concentration. ICV = initial calibration verification.			
LCS/LCSD = laboratory control sample/laboratory control sample duplicate. MDL = method detection limit. MS/MSD = matrix spike/matrix spike duplicate.			
NA = not applicable. NR = not reported. Q = qualifier. RPD = relative percent difference.			

DATA VALIDATION TRACKING

This document tracks Stage 2A validation completion for the analysis indicated below.

Lab Report	1409113
Analysis/Method	NWTPH-HCID
Batch Number(s)	8201

Reviewer	MEB
Date	9/30/2014

	Validation Area	Acceptable Yes/No/NA/NR	Comments	Q
Sample	Temperature	Yes		
	Holding Time	Yes		
	Trip Blank	NA		
	Field/Eq. Blank	NA		
	Field Dup RPD	NA		
Calibr.	CCB	NA		
	ICV	NA		
	CCV	NA		
Batch	Method Blank	Yes		
	LCS/LCSD %	NA		
	LCS/LCSD RPD	NA		
	Lab Dup RPD	NA		
	MS/MSD %	NA		
	MS/MSD RPD	NA		
General	Dilution	No		
	Reporting Limit	Yes		
	MDL	NA		
	Surrogates	Yes		
Dioxins	Labeled Analog	NA		
	EMPC	NA		
	2378-TCDF	NA		

Samples reviewed (in bold font):			
B5-W	Trip Blank	-	-
B6-W	-	-	-
B7-W	-	-	-
B6-W-DUP	-	-	-

Notes:		
Definitions: Calibr. = calibration. CCB = continuing calibration blank. CCV = continuing calibration verification. EMPC = estimated maximum potential concentration. ICV = initial calibration verification. LCS/LCSD = laboratory control sample/laboratory control sample duplicate. MDL = method detection limit. MS/MSD = matrix spike/matrix spike duplicate. NA = not applicable. NR = not reported. Q = qualifier. RPD = relative percent difference.		

DATA VALIDATION TRACKING

This document tracks Stage 2A validation completion for the analysis indicated below.

Lab Report	1409113
Analysis/Method	NWTPH-DX
Batch Number(s)	8207

Reviewer	MEB
Date	9/30/2014

	Validation Area	Acceptable Yes/No/NA/NR	Comments	Q
Sample	Temperature	Yes		
	Holding Time	Yes		
	Trip Blank	NA		
	Field/Eq. Blank	NA		
	Field Dup RPD	NA		
Calibr.	CCB	Yes		
	ICV	NA		
	CCV	Yes		
Batch	Method Blank	Yes		
	LCS/LCSD %	Yes		
	LCS/LCSD RPD	Yes		
	Lab Dup RPD	yes		
	MS/MSD %	NA		
	MS/MSD RPD	NA		
General	Dilution	No		
	Reporting Limit	Yes		
	MDL	NA		
	Surrogates	Yes		
Dioxins	Labeled Analog	NA		
	EMPC	NA		
	2378-TCDF	NA		

Samples reviewed (in bold font):			
B5-W	Trip Blank	-	-
B6-W	-	-	-
B7-W	-	-	-
B6-W-DUP	-	-	-

Notes:		
Definitions: Calibr. = calibration. CCB = continuing calibration blank. CCV = continuing calibration verification. EMPC = estimated maximum potential concentration. ICV = initial calibration verification. LCS/LCSD = laboratory control sample/laboratory control sample duplicate. MDL = method detection limit. MS/MSD = matrix spike/matrix spike duplicate. NA = not applicable. NR = not reported. Q = qualifier. RPD = relative percent difference.		

DATA VALIDATION TRACKING

This document tracks Stage 2A validation completion for the analysis indicated below.

Lab Report	1409113
Analysis/Method	NWTPH-GX
Batch Number(s)	R16925

Reviewer	MEB
Date	9/30/2014

	Validation Area	Acceptable Yes/No/NA/NR	Comments	Q
Sample	Temperature	Yes		
	Holding Time	Yes		
	Trip Blank	NA		
	Field/Eq. Blank	NA		
	Field Dup RPD	NA		
Calibr.	CCB	Yes		
	ICV	NA		
	CCV	Yes		
Batch	Method Blank	Yes		
	LCS/LCSD %	Yes		
	LCS/LCSD RPD	Yes		
	Lab Dup RPD	Yes		
	MS/MSD %	NA		
	MS/MSD RPD	NA		
General	Dilution	No		
	Reporting Limit	Yes		
	MDL	NA		
	Surrogates	Yes		
Dioxins	Labeled Analog	NA		
	EMPC	NA		
	2378-TCDF	NA		

Samples reviewed (in bold font):			
B5-W	Trip Blank	-	-
B6-W	-	-	-
B7-W	-	-	-
B6-W-DUP	-	-	-

Notes:		
Definitions: Calibr. = calibration. CCB = continuing calibration blank. CCV = continuing calibration verification. EMPC = estimated maximum potential concentration. ICV = initial calibration verification.		
LCS/LCSD = laboratory control sample/laboratory control sample duplicate. MDL = method detection limit. MS/MSD = matrix spike/matrix spike duplicate.		
NA = not applicable. NR = not reported. Q = qualifier. RPD = relative percent difference.		

DATA VALIDATION TRACKING

This document tracks Stage 2A validation completion for the analysis indicated below.

Lab Report	1409113
Analysis/Method	BTEX
Batch Number(s)	R16924

Reviewer	MEB
Date	9/30/2014

	Validation Area	Acceptable Yes/No/NA/NR	Comments	Q
Sample	Temperature	Yes		
	Holding Time	Yes		
	Trip Blank	NA		
	Field/Eq. Blank	NA		
	Field Dup RPD	NA		
Calibr.	CCB	NA		
	ICV	NA		
	CCV	NA		
Batch	Method Blank	Yes		
	LCS/LCSD %	Yes		
	LCS/LCSD RPD	NA		
	Lab Dup RPD	NA		
	MS/MSD %	Yes		
	MS/MSD RPD	Yes		
General	Dilution	No		
	Reporting Limit	Yes		
	MDL	NA		
	Surrogates	Yes		
Dioxins	Labeled Analog	NA		
	EMPC	NA		
	2378-TCDF	NA		

Samples reviewed (in bold font):			
B5-W	Trip Blank	-	-
B6-W	-	-	-
B7-W	-	-	-
B6-W-DUP	-	-	-

Notes:			
Definitions: Calibr. = calibration. CCB = continuing calibration blank. CCV = continuing calibration verification. EMPC = estimated maximum potential concentration. ICV = initial calibration verification.			
LCS/LCSD = laboratory control sample/laboratory control sample duplicate. MDL = method detection limit. MS/MSD = matrix spike/matrix spike duplicate.			
NA = not applicable. NR = not reported. Q = qualifier. RPD = relative percent difference.			

DATA VALIDATION TRACKING

This document tracks Stage 2A validation completion for the analysis indicated below.

Lab Report	1409113
Analysis/Method	SW6020A
Batch Number(s)	8335

Reviewer	MEB
Date	9/30/2014

	Validation Area	Acceptable Yes/No/NA/NR	Comments	Q
Sample	Temperature	Yes		
	Holding Time	Yes		
	Trip Blank	NA		
	Field/Eq. Blank	NA		
	Field Dup RPD	NA		
Calibr.	CCB	NA		
	ICV	Yes		
	CCV	NA		
Batch	Method Blank	Yes		
	LCS/LCSD %	NA		
	LCS/LCSD RPD	NA		
	Lab Dup RPD	Yes		
	MS/MSD %	Yes		
	MS/MSD RPD	Yes		
General	Dilution	Yes		
	Reporting Limit	Yes		
	MDL	NA		
	Surrogates	Yes		
Dioxins	Labeled Analog	NA		
	EMPC	NA		
	2378-TCDF	NA		

Samples reviewed (in bold font):			
B5-W	Trip Blank	-	-
B6-W	-	-	-
B7-W	-	-	-
B6-W-DUP	-	-	-

Notes:			
Definitions: Calibr. = calibration. CCB = continuing calibration blank. CCV = continuing calibration verification. EMPC = estimated maximum potential concentration. ICV = initial calibration verification.			
LCS/LCSD = laboratory control sample/laboratory control sample duplicate. MDL = method detection limit. MS/MSD = matrix spike/matrix spike duplicate.			
NA = not applicable. NR = not reported. Q = qualifier. RPD = relative percent difference.			

DATA VALIDATION TRACKING

This document tracks Stage 2A validation completion for the analysis indicated below.

Lab Report	1409113
Analysis/Method	SW8260B
Batch Number(s)	R16910

Reviewer	MEB
Date	9/30/2014

	Validation Area	Acceptable Yes/No/NA/NR	Comments	Q
Sample	Temperature	Yes		
	Holding Time	Yes		
	Trip Blank	NA		
	Field/Eq. Blank	NA		
	Field Dup RPD	NA		
Calibr.	CCB	Yes		
	ICV	NA		
	CCV	Yes		
Batch	Method Blank	Yes		
	LCS/LCSD %	NA		
	LCS/LCSD RPD	NA		
	Lab Dup RPD	NA		
	MS/MSD %	Yes		
	MS/MSD RPD	Yes		
General	Dilution	No		
	Reporting Limit	Yes		
	MDL	NA		
	Surrogates	Yes		
Dioxins	Labeled Analog	NA		
	EMPC	NA		
	2378-TCDF	NA		

Samples reviewed (in bold font):			
B5-W	Trip Blank	-	-
B6-W	-	-	-
B7-W	-	-	-
B6-W-DUP	-	-	-

Notes:			
Definitions: Calibr. = calibration. CCB = continuing calibration blank. CCV = continuing calibration verification. EMPC = estimated maximum potential concentration. ICV = initial calibration verification.			
LCS/LCSD = laboratory control sample/laboratory control sample duplicate. MDL = method detection limit. MS/MSD = matrix spike/matrix spike duplicate.			
NA = not applicable. NR = not reported. Q = qualifier. RPD = relative percent difference.			

DATA VALIDATION TRACKING

This document tracks Stage 2A validation completion for the analysis indicated below.

Lab Report	1409114
Analysis/Method	NWTPH-HCID
Batch Number(s)	8200

Reviewer	MEB
Date	10/8/2014

	Validation Area	Acceptable Yes/No/NA/NR	Comments	Q
Sample	Temperature	Yes		
	Holding Time	Yes		
	Trip Blank	NA		
	Field/Eq. Blank	NA		
	Field Dup RPD	NA		
Calibr.	CCB	NA		
	ICV	NA		
	CCV	NA		
Batch	Method Blank	Yes		
	LCS/LCSD %	NA		
	LCS/LCSD RPD	NA		
	Lab Dup RPD	Yes		
	MS/MSD %	NA		
	MS/MSD RPD	NA		
General	Dilution	Yes		
	Reporting Limit	Yes		
	MDL	NA		
	Surrogates	No	No qualification necessary. See notes.	
Dioxins	Labeled Analog	NA		
	EMPC	NA		
	2378-TCDF	NA		

Samples reviewed (in bold font):			
B1-S-2.0	B3-S-2.0	B5-S-2.0	B7-S-1.5
B1-S-8.5	B3-S-7.0	B5-S-7.0	B7-S-8.5
B2-S-2.0	B4-S-3.0	B6-S-2.0	-
B2-S-8.0	B4-S-7.0	B6-S-8.5	-

Notes:
HCID method is qualitative.
Definitions:

DATA VALIDATION TRACKING

This document tracks Stage 2A validation completion for the analysis indicated below.

Lab Report	1409114
Analysis/Method	NWTPH-Dx
Batch Number(s)	8233

Reviewer	MEB
Date	10/8/2014

	Validation Area	Acceptable Yes/No/NA/NR	Comments	Q
Sample	Temperature	Yes		
	Holding Time	Yes		
	Trip Blank	NA		
	Field/Eq. Blank	NA		
	Field Dup RPD	NA		
Calibr.	CCB	Yes		
	ICV	NA		
	CCV	Yes		
Batch	Method Blank	Yes		
	LCS/LCSD %	Yes		
	LCS/LCSD RPD	NA		
	Lab Dup RPD	Yes		
	MS/MSD %	NA		
	MS/MSD RPD	NA		
General	Dilution	Yes		
	Reporting Limit	Yes		
	MDL	NA		
	Surrogates	Yes		
Dioxins	Labeled Analog	NA		
	EMPC	NA		
	2378-TCDF	NA		

Samples reviewed (in bold font):			
B1-S-2.0	B3-S-2.0	B5-S-2.0	B7-S-1.5
B1-S-8.5	B3-S-7.0	B5-S-7.0	B7-S-8.5
B2-S-2.0	B4-S-3.0	B6-S-2.0	-
B2-S-8.0	B4-S-7.0	B6-S-8.5	-

Notes:
Diesel chromatogram is not a standard pattern: samples B3-S-7.0, B4-S-3.0, B4-S-7.0. Lube oil result for B4-S-3.0, B4-S-7.0, and B7-S-8.5 is biased high because of diesel-range detections. Qualify result with "J."
Definitions:

DATA VALIDATION TRACKING

This document tracks Stage 2A validation completion for the analysis indicated below.

Lab Report	1409114
Analysis/Method	NWTPH-Gx
Batch Number(s)	8214

Reviewer	MEB
Date	10/8/2014

	Validation Area	Acceptable Yes/No/NA/NR	Comments	Q
Sample	Temperature	Yes		
	Holding Time	Yes		
	Trip Blank	NA		
	Field/Eq. Blank	NA		
	Field Dup RPD	NA		
Calibr.	CCB	Yes		
	ICV	NA		
	CCV	Yes		
Batch	Method Blank	Yes		
	LCS/LCSD %	Yes		
	LCS/LCSD RPD	NA		
	Lab Dup RPD	Yes		
	MS/MSD %	NA		
	MS/MSD RPD	NA		
General	Dilution	Yes		
	Reporting Limit	Yes		
	MDL	NA		
	Surrogates	No	See notes.	J
Dioxins	Labeled Analog	NA		
	EMPC	NA		
	2378-TCDF	NA		

Samples reviewed (in bold font):			
B1-S-2.0	B3-S-2.0	B5-S-2.0	B7-S-1.5
B1-S-8.5	B3-S-7.0	B5-S-7.0	B7-S-8.5
B2-S-2.0	B4-S-3.0	B6-S-2.0	-
B2-S-8.0	B4-S-7.0	B6-S-8.5	-

Notes:
High surrogate percent recovery for all sample results. B2-S-8.0 (166%), B3-S-7.0 (236%), B4-S-3.0 (578%), B4-S-7.0 (466%), and B7-S-8.5 (151%). Qualify all gasoline results with "J."
Definitions:

DATA VALIDATION TRACKING

This document tracks Stage 2A validation completion for the analysis indicated below.

Lab Report	1409114
Analysis/Method	BTEX / USEPA 8021
Batch Number(s)	8212

Reviewer	MEB
Date	10/8/2014

	Validation Area	Acceptable Yes/No/NA/NR	Comments	Q
Sample	Temperature	Yes		
	Holding Time	Yes		
	Trip Blank	NA		
	Field/Eq. Blank	NA		
	Field Dup RPD	NA		
Calibr.	CCB	NA		
	ICV	NA		
	CCV	Yes		
Batch	Method Blank	Yes		
	LCS/LCSD %	Yes		
	LCS/LCSD RPD	NA		
	Lab Dup RPD	NA		
	MS/MSD %	Yes		
	MS/MSD RPD	Yes		
General	Dilution	Yes		
	Reporting Limit	Yes		
	MDL	NA		
	Surrogates	No	See notes.	J
Dioxins	Labeled Analog	NA		
	EMPC	NA		
	2378-TCDF	NA		

Samples reviewed (in bold font):			
B1-S-2.0	B3-S-2.0	B5-S-2.0	B7-S-1.5
B1-S-8.5	B3-S-7.0	B5-S-7.0	B7-S-8.5
B2-S-2.0	B4-S-3.0	B6-S-2.0	-
B2-S-8.0	B4-S-7.0	B6-S-8.5	-

Notes:
High surrogate percent recovery for all samples. B3-S-7.0 (135%), B4-S-3.0 (391%), B4-S-7.0 (466%). Qualify all detected results with "J."
Definitions:

DATA VALIDATION TRACKING

This document tracks Stage 2A validation completion for the analysis indicated below.

Lab Report	1409114
Analysis/Method	USEPA 6020A (dissolved)
Batch Number(s)	8219

Reviewer	MEB
Date	10/8/2014

	Validation Area	Acceptable Yes/No/NA/NR	Comments	Q
Sample	Temperature	Yes		
	Holding Time	Yes		
	Trip Blank	NA		
	Field/Eq. Blank	NA		
	Field Dup RPD	NA		
Calibr.	CCB	NA		
	ICV	Yes		
	CCV	Yes		
Batch	Method Blank	Yes		
	LCS/LCSD %	Yes		
	LCS/LCSD RPD	NA		
	Lab Dup RPD	Yes		
	MS/MSD %	Yes		
	MS/MSD RPD	Yes		
General	Dilution	Yes		
	Reporting Limit	Yes		
	MDL	NA		
	Surrogates	NA		
Dioxins	Labeled Analog	NA		
	EMPC	NA		
	2378-TCDF	NA		

Samples reviewed (in bold font):			
B1-S-2.0	B3-S-2.0	B5-S-2.0	B7-S-1.5
B1-S-8.5	B3-S-7.0	B5-S-7.0	B7-S-8.5
B2-S-2.0	B4-S-3.0	B6-S-2.0	-
B2-S-8.0	B4-S-7.0	B6-S-8.5	-

Notes:
Definitions:

DATA VALIDATION TRACKING

This document tracks Stage 2A validation completion for the analysis indicated below.

Lab Report	1504161	Reviewer	EAN
Analysis/Method	BTEX / USEPA SW8021B	Date	5/13/2015
Batch Number(s)	9282 and R19831		

	Validation Area	Acceptable Yes/No/NA/NR	Comments	Q
Sample	Temperature	Yes		
	Holding Time	Yes		
	Trip Blank	NA		
	Field/Eq. Blank	NA		
	Field Dup RPD	NA		
Calibr.	CCB	NR		
	ICV	NR		
	CCV	Yes		
Batch	Method Blank	Yes		
	LCS/LCSD %	Yes		
	LCS/LCSD RPD	NA		
	Lab Dup RPD	NA		
	MS/MSD %	Yes	Minor exceedance – all associated data ND, no qualifications	
	MS/MSD RPD	Yes		
General	Dilution	Yes		
	Reporting Limit	Yes		
	MDL	NA		
	Surrogates	Yes	Minor exceedances from matrix interference, no qualifications	
Dioxins	Labeled Analog	NA		
	EMPC	NA		
	2378-TCDF	NA		

Samples reviewed (in bold font):			
B8-S-7.5	B9-W-10.5	B11-S-8.0	B13-S-8.0
B8-W-8.0	B10-S-5.5	B12-S-5.5	B14-S-5.0
B9-S-6.0	B10-W-10.5	B12-S-8.0	B16-S-8.0
B14-W-8.0	B15-S-8.0	B16-S-5.5	

Notes:
Definitions:

DATA VALIDATION TRACKING

This document tracks Stage 2A validation completion for the analysis indicated below.

Lab Report	1504161
Analysis/Method	NWTPH-DX
Batch Number(s)	9289 and 9299

Reviewer	EAN
Date	5/13/2015

	Validation Area	Acceptable Yes/No/NA/NR	Comments	Q
Sample	Temperature	Yes		
	Holding Time	Yes		
	Trip Blank	NA		
	Field/Eq. Blank	NA		
	Field Dup RPD	NA		
Calibr.	CCB	Yes		
	ICV	NR		
	CCV	Yes	Slight exceedance, all data ND, no qualifications	
Batch	Method Blank	Yes		
	LCS/LCSD %	Yes		
	LCS/LCSD RPD	Yes		
	Lab Dup RPD	Yes	Slight exceedances due to results near RL, no qualifications	
	MS/MSD %	NA		
	MS/MSD RPD	NA		
General	Dilution	Yes		
	Reporting Limit	Yes		
	MDL	NA		
	Surrogates	NA		
Dioxins	Labeled Analog	NA		
	EMPC	NA		
	2378-TCDF	NA		

Samples reviewed (in bold font):			
B8-S-7.5	B9-W-10.5	B11-S-8.0	B13-S-8.0
B8-W-8.0	B10-S-5.5	B12-S-5.5	B14-S-5.0
B9-S-6.0	B10-W-10.5	B12-S-8.0	B16-S-8.0
B14-W-8.0	B15-S-8.0	B16-S-5.5	

Notes:
Definitions:

DATA VALIDATION TRACKING

This document tracks Stage 2A validation completion for the analysis indicated below.

Lab Report	1504161
Analysis/Method	NWTPH-GX
Batch Number(s)	9281 and R19833

Reviewer	EAN
Date	5/13/2015

	Validation Area	Acceptable Yes/No/NA/NR	Comments	Q
Sample	Temperature	Yes		
	Holding Time	Yes		
	Trip Blank	NA		
	Field/Eq. Blank	NA		
	Field Dup RPD	NA		
Calibr.	CCB	NR		
	ICV	Yes		
	CCV	Yes		
Batch	Method Blank	Yes		
	LCS/LCSD %	Yes		
	LCS/LCSD RPD	NA		
	Lab Dup RPD	Yes		
	MS/MSD %	NA		
	MS/MSD RPD	NA		
General	Dilution	Yes		
	Reporting Limit	Yes		
	MDL	NA		
	Surrogates	NA		
Dioxins	Labeled Analog	NA		
	EMPC	NA		
	2378-TCDF	NA		

Samples reviewed (in bold font):			
B8-S-7.5	B9-W-10.5	B11-S-8.0	B13-S-8.0
B8-W-8.0	B10-S-5.5	B12-S-5.5	B14-S-5.0
B9-S-6.0	B10-W-10.5	B12-S-8.0	B16-S-8.0
B14-W-8.0	B15-S-8.0	B16-S-5.5	

Notes:
Definitions:

DATA QUALITY ASSURANCE/QUALITY CONTROL REVIEW

PROJECT NO. 0239.28.05 | MAY 4, 2015 | CITY OF RIDGEFIELD

This report reviews the analytical results for a sub-slab soil vapor sample collected by the Maul Foster & Alongi, Inc. (MFA) project team on the Bus Barn site in Ridgefield, Washington. The sample was collected on April 15, 2015.

Eurofins Air Toxics, Inc. (AT) performed the analyses. AT report numbers 1504335A, 1504335B, and 1504335C were reviewed. The analyses performed and samples analyzed are listed below.

Analysis	Reference
BTEX Compounds	USEPA TO-15
TPH Gasoline	USEPA TO-15
Natural Gases in Soil Vapor	ASTM D-1946 Modified
Volatile Petroleum Hydrocarbon (VPH) Fractions	USEPA TO-15 Modified APH

APH = air-phase hydrocarbons.

ASTM = American Society for Testing and Materials.

BTEX = benzene, toluene, ethylbenzene, and xylenes.

TPH = total petroleum hydrocarbons.

USEPA = U.S. Environmental Protection Agency.

Samples Analyzed
Report 1504335A-C
SS-1

DATA QUALIFICATIONS

Analytical results were evaluated according to applicable sections of USEPA procedures (USEPA, 2014) and appropriate laboratory and method-specific guidelines (AT 2014; USEPA, 1986, 1999).

The sample was collected under a helium shroud to detect leaks in the collection system. Helium was not detected in the sample.

Data validation procedures were modified, as appropriate, to accommodate quality-control requirements for methods not specifically addressed by the functional guidelines (e.g., USEPA Method TO-15).

In report 1504335A, AT noted that TPH gasoline was assessed against a single point calibration by USEPA TO-15. The associated CCVs for TPH as gasoline had acceptable recoveries. The results have been qualified as estimated with “J” by the reviewer due to quantification against a single point calibration.

Report	Sample	Component	Original Result (µg/m³)	Qualified Result (µg/m³)
1504335A	SS-1	TPH Gasoline	3300	3300 J

The data are considered acceptable for their intended use, with the appropriate data qualifiers assigned.

HOLDING TIMES, PRESERVATION, AND SAMPLE STORAGE

Holding Times

Extractions and analyses were performed within the recommended holding time criteria.

Preservation and Sample Storage

The samples were preserved and stored appropriately.

BLANKS

Method Blanks

Laboratory method blank analyses were performed at the required frequencies. For purposes of data qualification, the method blanks were associated with all samples prepared in the analytical batch. All laboratory method blanks were non-detect for all target analytes.

Trip Blanks

Trip blanks were not submitted for analysis.

Equipment Rinsate Blanks

Equipment rinsate blanks were not required for this sampling event, as all samples were collected using dedicated, single-use equipment.

SURROGATE RECOVERY RESULTS

The samples were spiked with surrogate compounds to evaluate laboratory performance on individual samples for USEPA Method TO-15 analysis. A surrogate is not required by ASTM D1946 or USEPA Method TO-15 APH Modified methods. All surrogates were within acceptance limits for percent recovery.

MATRIX SPIKE/MATRIX SPIKE DUPLICATE RESULTS

MS/MSD results are used to evaluate laboratory precision and accuracy. MS/MSDs are not required for soil vapor methods, so they were not analyzed for these reports.

LABORATORY DUPLICATE RESULTS

Duplicate results are used to evaluate laboratory precision. No laboratory duplicates were reported.

LABORATORY CONTROL SAMPLE/LABORATORY CONTROL SAMPLE DUPLICATE RESULTS

An LCS/LCSD is spiked with target analytes to provide information on laboratory precision and accuracy.

LCS/LCSD batch quality control samples were not reported for TPH gasoline by USEPA Method TO-15. The sample results were assessed against a single point calibration and have been qualified “J” as estimated by the reviewer.

LCS/ LCSD batch quality control samples were not reported for USEPA TO-15 Modified APH. All associated CCVs were within acceptance limits; thus, the results were not qualified.

The remaining LCS/LCSD samples were extracted and analyzed at the required frequency and were within acceptance limits for percent recovery and RPD.

FIELD DUPLICATE RESULTS

Field duplicate samples measure both field and laboratory precision. No field duplicate were submitted for analysis.

CONTINUING CALIBRATION VERIFICATION AND INITIAL CALIBRATION VERIFICATION RESULTS

Continuing calibration verification (CCV) results are used to demonstrate instrument precision and accuracy through the end of the sample batch. All CCVs were within acceptance limits.

REPORTING LIMITS

AT used routine reporting limits (RLs) for non-detect results. RLs were elevated because of canister dilution caused by residual canister vacuum.

DATA PACKAGE

The data packages were reviewed for transcription errors, omissions, and anomalies. No issues were found.

REFERENCES

- AT. 2014. Laboratory quality assurance manual. Eurofins Air Toxics, Inc. Folsom, California. March 5.
- USEPA. 1986. Test methods for evaluating solid waste: physical/chemical methods. EPA-530/SW-846. U.S. Environmental Protection Agency, Office of Solid Waste and Emergency Response. September (revision 6, February 2007).
- USEPA. 1999. Compendium Method TO-15. Determination of Volatile Organic Compounds (VOCs) in Air Collected in Specially-Prepared Canisters and Analyzed by Gas Chromatography/Mass Spectrometry (GC/MS). U.S. Environmental Protection Agency. Office of Research and Development. January.
- USEPA. 2014. USEPA contract laboratory program, national functional guidelines for Superfund organic methods data review. EPA 540/R-014/002. U.S. Environmental Protection Agency, Office of Superfund Remediation and Technology Innovation. August.